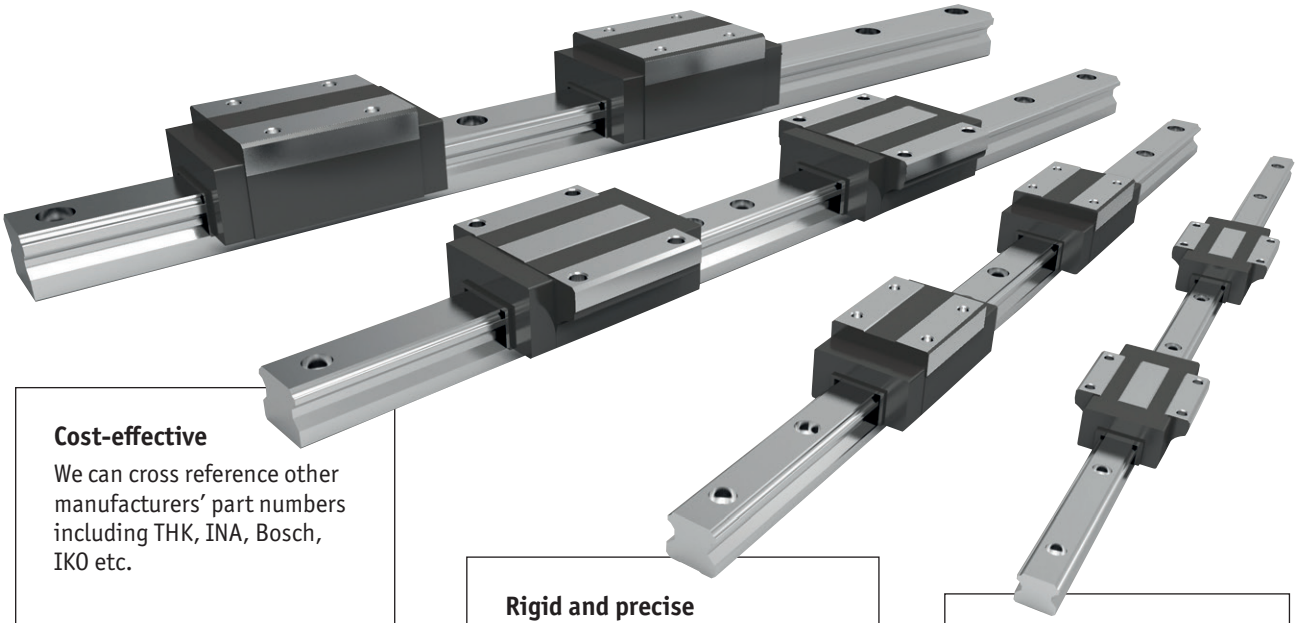
L1016 Linear guideways

Linear guideways are widely used throughout industry for heavy-duty and precise applications.

Precision high load rails

The use of steel balls and the design of the carriages and guideways mean that the rails can accept very heavy loads and significant moment loads. Our rails have circular as opposed to friction coefficient, lower driving resistance, lower wear and lower energy consumption.



Cost-effective

We can cross reference other manufacturers' part numbers including THK, INA, Bosch, IKO etc.

Rigid and precise

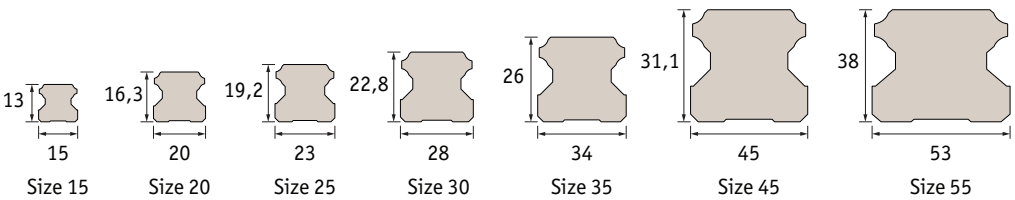
- High load rating.
- High moment load capacity.

Stocked

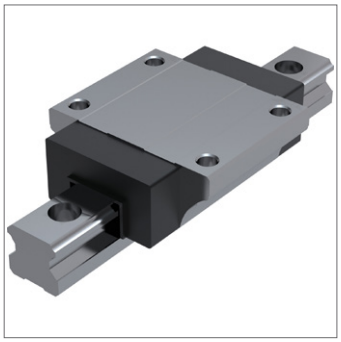
7 rail profiles ready for same day despatch.

Lengths up to 4 metres.

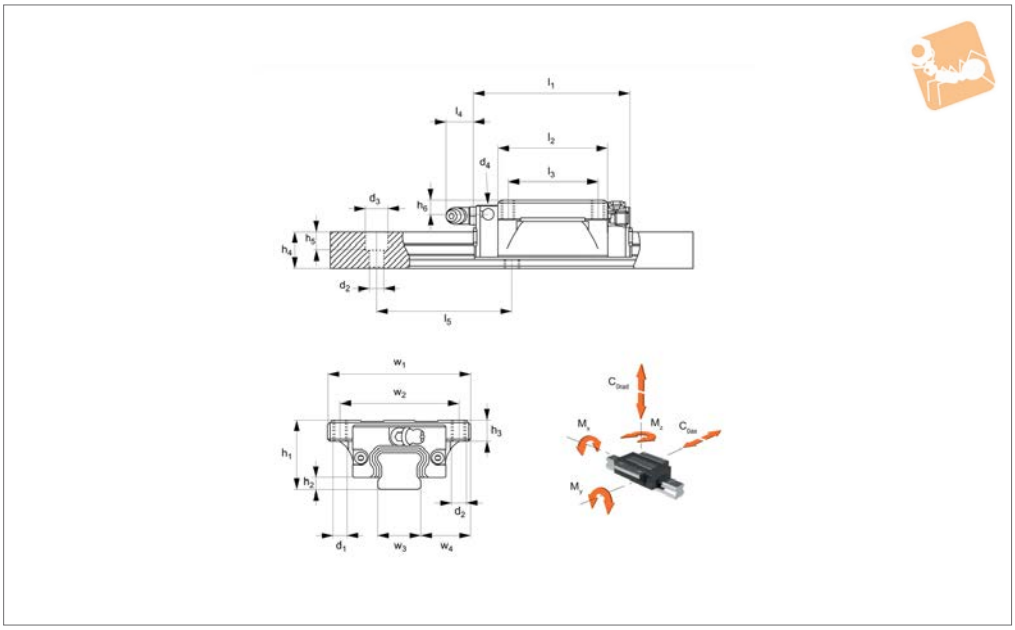
Rail sizes



Flanged Carriages - Standard
with retained ball cage



L1016.F



Material
Hardened and ground steel.

Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.55). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

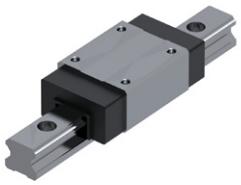
Tips
Improved version with ball cages allowing the carriages to be removed from the rail without the balls falling out.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight kg
L1016.F15	15	58.6	24	40.2	47	30	3.4	7.5	13.0	M5	5.5	4.4	5.5	38	15	16.0	5.7	0.21
L1016.F15-L	15	66.1	24	47.7	47	30	3.4	7.5	13.0	M5	5.5	4.4	5.5	38	15	16.0	5.7	0.23
L1016.F20	20	70.1	30	48.5	63	40	4.5	9.0	16.3	M6	8.5	5.4	7.1	53	20	21.5	12.3	0.40
L1016.F20-L	20	82.9	30	61.3	63	40	4.5	9.0	16.3	M6	8.5	5.4	7.1	53	20	21.5	12.3	0.46
L1016.F25	25	79.2	36	57.5	70	45	5.8	10.1	19.2	M8	9.0	6.8	10.2	57	23	23.5	12.2	0.57
L1016.F25-L	25	93.9	36	72.2	70	45	5.8	10.1	19.2	M8	9.0	6.8	10.2	57	23	23.5	12.2	0.72
L1016.F25-XL	25	108.6	36	86.9	70	45	5.8	10.1	19.2	M8	9.0	6.8	10.2	57	23	23.5	12.2	0.89
L1016.F30	30	94.8	42	67.8	90	52	7.0	12.0	22.8	M10	12.0	8.6	10.0	72	28	31.0	11.7	1.10
L1016.F30-L	30	105.0	42	78.0	90	52	7.0	12.0	22.8	M10	12.0	8.6	10.0	72	28	31.0	11.7	1.34
L1016.F30-XL	30	130.5	42	103.5	90	52	7.0	12.0	22.8	M10	12.0	8.6	10.0	72	28	31.0	11.7	1.66
L1016.F35	35	111.5	48	80.5	100	62	7.5	14.0	26.0	M10	12.0	8.6	11.5	82	34	33.0	11.5	1.50
L1016.F35-L	35	123.5	48	92.5	100	62	7.5	14.0	26.0	M10	12.0	8.6	11.5	82	34	33.0	11.5	1.90
L1016.F35-XL	35	153.5	48	122.5	100	62	7.5	14.0	26.0	M10	12.0	8.6	11.5	82	34	33.0	11.5	2.54
L1016.F45	45	129.0	60	94.0	120	80	8.9	16.0	31.1	M12	17.0	10.6	14.4	100	45	37.5	10.8	2.27
L1016.F45-L	45	145.0	60	110.0	120	80	8.9	16.0	31.1	M12	17.0	10.6	14.4	100	45	37.5	10.8	2.68
L1016.F45-XL	45	174.0	60	139.0	120	80	8.9	16.0	31.1	M12	17.0	10.6	14.4	100	45	37.5	10.8	3.42
L1016.F55	55	155.0	70	116.0	140	95	12.7	19.0	38.0	M14	20.0	12.6	14.0	116	53	43.5	10.8	3.44
L1016.F55-L	55	193.0	70	154.0	140	95	12.7	19.0	38.0	M14	20.0	12.6	14.0	116	53	43.5	10.8	4.63
L1016.F55-XL	55	210.0	70	171.0	140	95	12.7	19.0	38.0	M14	20.0	12.6	14.0	116	53	43.5	10.8	5.16

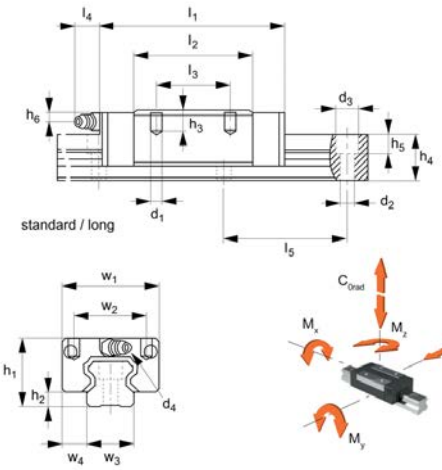
Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.F15	60	7.5	M3 x 0,5	137	120	120	11.67	19.90
L1016.F15-L	60	7.5	M3 x 0,5	166	171	171	14.12	24.05
L1016.F20	60	9.5	M6 x 1,0	289	224	224	17.98	30.96
L1016.F20-L	60	9.5	M6 x 1,0	376	366	366	23.30	40.11
L1016.F25	60	11.0	M6 x 1,0	447	358	358	25.25	41.73
L1016.F25-L	60	11.0	M6 x 1,0	576	577	577	32.44	53.63
L1016.F25-XL	60	11.0	M6 x 1,0	691	833	833	36.58	64.30
L1016.F30	80	14.0	M6 x 1,0	719	560	560	37.33	55.50
L1016.F30-L	80	14.0	M6 x 1,0	931	836	836	48.35	71.88
L1016.F30-XL	80	14.0	M6 x 1,0	1142	1361	1361	53.83	88.18

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.F35	80	14.0	M6 x 1,0	1307	991	991	53.31	82.66
L1016.F35-L	80	14.0	M6 x 1,0	1633	1424	1424	66.61	103.29
L1016.F35-XL	80	14.0	M6 x 1,0	2020	2330	2330	73.29	127.68
L1016.F45	105	20.0	M8 x 1,25	2353	1559	1559	73.14	111.30
L1016.F45-L	105	20.0	M8 x 1,25	2798	2170	2170	86.99	132.39
L1016.F45-XL	105	20.0	M8 x 1,25	3527	3455	3455	100.52	166.87
L1016.F55	120	23.0	M8 x 1,25	3385	2361	2361	88.26	136.62
L1016.F55-L	120	23.0	M8 x 1,25	4538	4202	4202	119.10	183.14
L1016.F55-XL	120	23.0	M8 x 1,25	6430	6617	6617	161.43	259.71

Unflanged Carriages - Standard
with retained ball cage



L1016.U



Material
Hardened and ground steel.

Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.55). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

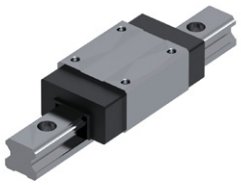
Tips
Improved version with ball cages allowing the carriages to be removed from the rail without the balls falling out.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight kg
L1016.U15	15	58.6	28	40.2	34	26	3.3	6.0	13.0	M 4	6.0	4.5	9.5	26	15	9.5	5.0	0.19
L1016.U20	20	69.3	30	48.5	44	36	4.5	6.5	16.3	M 5	8.5	6.0	7.1	32	20	12.0	15.6	0.31
L1016.U20-L	20	82.1	30	61.3	44	36	4.5	6.5	16.3	M 5	8.5	6.0	7.1	32	20	12.0	15.6	0.36
L1016.U25	25	79.2	40	57.5	48	35	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	0.45
L1016.U25-L	25	93.9	40	72.2	48	35	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	0.66
L1016.U25-XL	25	108.6	40	86.9	48	50	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	0.80
L1016.U30	30	94.8	45	67.8	60	40	7.0	12.0	22.8	M 8	12.0	9.0	13.0	40	28	16.0	15.6	0.91
L1016.U30-L	30	105.0	45	78.0	60	40	7.0	12.0	22.8	M 8	12.0	9.0	13.0	40	28	16.0	15.6	1.04
L1016.U30-XL	30	130.5	45	103.5	60	60	7.0	12.0	22.8	M 8	12.0	9.0	13.0	40	28	16.0	15.6	1.36
L1016.U35	35	111.5	55	80.5	70	50	7.5	12.0	26.0	M 8	12.0	9.0	18.5	50	34	18.0	15.6	1.50
L1016.U35-L	35	123.5	55	92.5	70	50	7.5	12.0	26.0	M 8	12.0	9.0	18.5	50	34	18.0	15.6	1.80
L1016.U35-XL	35	153.5	55	122.5	70	72	7.5	12.0	26.0	M 8	12.0	9.0	18.5	50	34	18.0	15.6	2.34
L1016.U45	45	129.0	70	94.0	86	60	8.9	18.0	31.1	M10	17.0	14.0	24.5	60	45	20.5	16.0	2.28
L1016.U45-L	45	145.0	70	110.0	86	60	8.9	18.0	31.1	M10	17.0	14.0	24.5	60	45	20.5	16.0	2.67
L1016.U45-XL	45	174.0	70	139.0	86	80	8.9	18.0	31.1	M10	17.0	14.0	24.5	60	45	20.5	16.0	3.35
L1016.U55	55	155.0	80	116.0	100	75	12.7	22.0	38.0	M12	20.0	16.0	24.0	75	53	23.5	16.0	3.42
L1016.U55-L	55	193.0	80	154.0	100	75	12.7	22.0	38.0	M12	20.0	16.0	24.0	75	53	23.5	16.0	4.57
L1016.U55-XL	55	210.0	80	171.0	100	95	12.7	22.0	38.0	M12	20.0	16.0	24.0	75	53	23.5	16.0	5.08

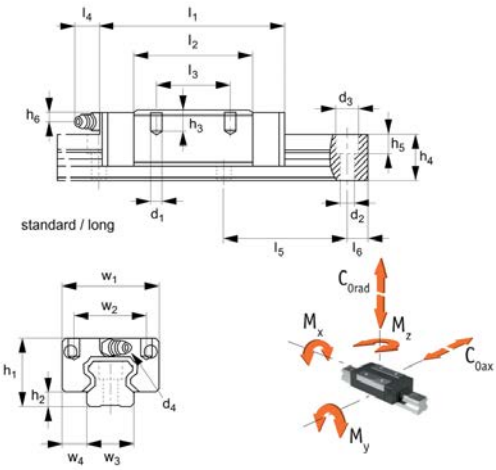
Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.U15	60	7.5	M3 x 0,5	137	120	120	11.67	19.90
L1016.U20	60	9.5	M6 x 1,0	289	224	224	17.98	30.96
L1016.U20-L	60	9.5	M6 x 1,0	376	366	366	23.30	40.11
L1016.U25	60	11.0	M6 x 1,0	447	358	358	25.25	41.73
L1016.U25-L	60	11.0	M6 x 1,0	576	577	577	32.44	53.63
L1016.U25-XL	60	11.0	M6 x 1,0	691	833	833	36.58	64.30
L1016.U30	80	14.0	M6 x 1,0	719	560	560	37.33	55.50
L1016.U30-L	80	14.0	M6 x 1,0	931	836	836	48.35	71.88
L1016.U30-XL	80	14.0	M6 x 1,0	1142	1361	1361	53.83	88.18
L1016.U35	80	14.0	M6 x 1,0	1307	991	991	53.31	82.66
L1016.U35-L	80	14.0	M6 x 1,0	1633	1424	1424	66.61	103.29

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.U35-XL	80	14.0	M6 x 1,0	2020	2330	2330	73.29	127.68
L1016.U45	105	20.0	M8 x 1,25	2353	1559	1559	73.14	111.30
L1016.U45-L	105	20.0	M8 x 1,25	2798	2170	2170	86.99	132.39
L1016.U45-XL	105	20.0	M8 x 1,25	3527	3455	3455	100.52	166.87
L1016.U55	120	23.0	M8 x 1,25	3385	2361	2361	88.26	136.62
L1016.U55-L	120	23.0	M8 x 1,25	4538	4202	4202	119.10	183.14
L1016.U55-XL	120	23.0	M8 x 1,25	6430	6617	6617	161.43	259.71

Unflanged Carriages - Low
with retained ball cage



L1016.UL



Material
Hardened and ground steel.

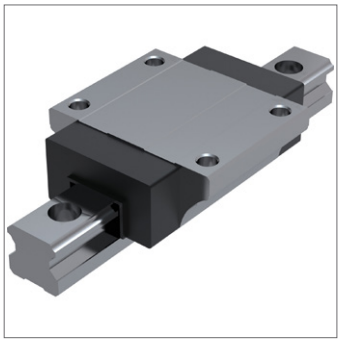
Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.55). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight kg
L1016.UL15-S	15	40.6	24	22.2	34	-	3.3	4.8	13.0	M 4	6.0	4.5	5.5	26	15	9.5	5.0	0.10
L1016.UL15	15	58.6	24	40.2	34	26	3.3	4.8	13.0	M 4	6.0	4.5	5.5	26	15	9.5	5.0	0.17
L1016.UL15-L	15	66.1	24	47.7	34	26	3.0	4.8	13.0	M 4	6.0	4.5	5.5	26	15	9.5	5.0	0.18
L1016.UL20-S	20	48.3	28	27.5	42	-	4.5	5.5	16.3	M 5	8.5	6.0	5.1	32	20	11.0	15.6	0.17
L1016.UL20	20	69.3	28	48.5	42	32	4.5	5.5	16.3	M 5	8.5	6.0	7.1	32	20	11.0	15.6	0.26
L1016.UL25-S	25	54.0	33	32.3	48	-	5.8	6.8	19.2	M 6	9.0	7.0	7.2	35	23	12.5	15.6	0.21
L1016.UL25	25	79.2	33	57.5	48	35	5.8	6.8	19.2	M 6	9.0	7.0	7.2	35	23	12.5	15.6	0.38
L1016.UL30-S	30	64.2	42	37.2	60	-	7.0	10.0	22.8	M 8	12.0	9.0	10.0	40	28	16.0	15.6	0.50
L1016.UL30	30	94.8	42	67.8	60	40	7.0	10.0	22.8	M 8	12.0	9.0	10.0	40	28	16.0	15.6	0.80
L1016.UL30-L	30	105.0	42	78.0	60	40	7.0	10.0	22.8	M 8	12.0	9.0	10.0	40	28	16.0	15.6	0.94
L1016.UL30-XL	30	130.5	42	103.5	60	60	7.0	10.0	22.8	M 8	12.0	9.0	10.0	40	28	16.0	15.6	1.16
L1016.UL35-S	35	75.5	48	44.5	70	-	7.5	10.0	26.0	M 8	12.0	9.0	11.5	50	34	18.0	16.0	0.80
L1016.UL35	35	111.5	48	80.5	70	50	7.5	10.0	26.0	M 8	12.0	9.0	11.5	50	34	18.0	16.0	1.20
L1016.UL35-L	35	123.5	48	92.5	70	50	7.5	10.0	26.0	M 8	12.0	9.0	11.5	50	34	18.0	16.0	1.40
L1016.UL35-XL	35	153.5	48	122.5	70	72	7.5	10.0	26.0	M 8	12.0	9.0	11.5	50	34	18.0	16.0	1.84
L1016.UL45	45	129.0	60	94.0	86	60	8.9	15.5	31.1	M10	17.0	14.0	14.4	60	45	20.5	16.0	1.64
L1016.UL45-L	45	145.0	60	110.0	86	60	8.9	15.5	31.1	M10	17.0	14.0	14.4	60	45	20.5	16.0	1.93
L1016.UL45-XL	45	174.0	60	139.0	86	80	8.9	15.5	31.1	M10	17.0	14.0	14.4	60	45	20.5	16.0	2.42
L1016.UL55	55	155.0	70	116.0	100	75	12.7	18.0	38.0	M12	20.0	16.0	14.0	75	53	23.5	16.0	2.67
L1016.UL55-L	55	193.0	70	154.0	100	75	12.7	18.0	38.0	M12	20.0	16.0	14.0	75	53	23.5	16.0	3.57
L1016.UL55-XL	55	210.0	70	171.0	100	95	12.7	18.0	38.0	M12	20.0	16.0	14.0	75	53	23.5	16.0	3.97

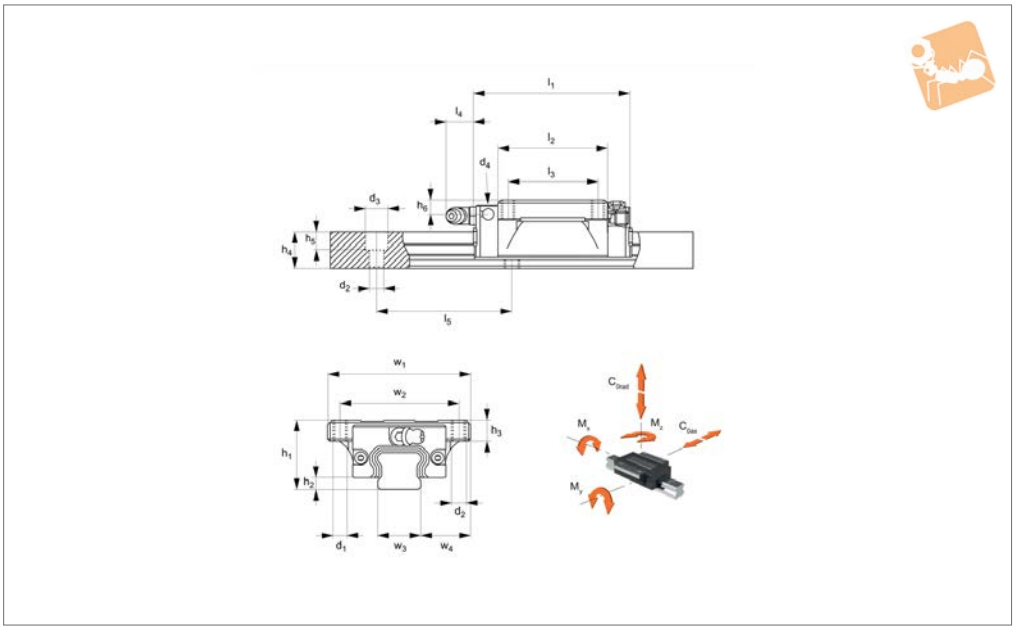
Order No.	l_5	l_6	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.UL15-S	60	20.0	7.5	M3x0,5	69	32	32	5.81	9.90
L1016.UL15	60	20.0	7.5	M3x0,5	137	120	120	11.67	19.90
L1016.UL15-L	60	20.0	7.5	M3x0,5	166	171	171	14.12	24.05
L1016.UL20-S	60	20.0	9.5	M6x1,0	148	66	66	9.25	15.93
L1016.UL20	60	20.0	9.5	M6x1,0	289	224	224	17.98	30.96
L1016.UL25-S	60	20.0	11.0	M6x1,0	230	103	103	12.87	21.34
L1016.UL25	60	20.0	11.0	M6x1,0	447	358	358	25.25	41.73
L1016.UL30-S	80	20.0	14.0	M6x1,0	356	153	153	18.50	27.51
L1016.UL30	80	20.0	14.0	M6x1,0	719	560	560	37.33	55.50

Order No.	l_5	l_6	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.UL30-L	80	20.0	14.0	M6x1,0	931	836	836	48.35	71.88
L1016.UL30-XL	80	20.0	14.0	M6x1,0	1142	1361	1361	53.83	88.18
L1016.UL35-S	80	20.0	14.0	M6x1,0	655	275	275	26.72	41.43
L1016.UL35	80	20.0	14.0	M6x1,0	1307	991	991	53.31	82.66
L1016.UL35-L	80	20.0	14.0	M6x1,0	1633	1424	1424	66.61	103.29
L1016.UL35-XL	80	20.0	14.0	M6x1,0	2020	2330	2330	73.29	127.68
L1016.UL45	105	22.5	20.0	M8x1,25	2353	1559	1559	73.14	111.30
L1016.UL45-L	105	22.5	20.0	M8x1,25	2798	2170	2170	86.99	132.39
L1016.UL45-XL	105	22.5	20.0	M8x1,25	3527	3455	3455	100.52	166.87
L1016.UL55	120	30.0	23.0	M8x1,25	3385	2361	2361	88.26	136.62
L1016.UL55-L	120	30.0	23.0	M8x1,25	4538	4202	4202	119.10	183.14
L1016.UL55-XL	120	30.0	23.0	M8x1,25	6430	6617	6617	161.43	259.71

Flanged Carriages - Standard
no ball cage



L1016.F-NC

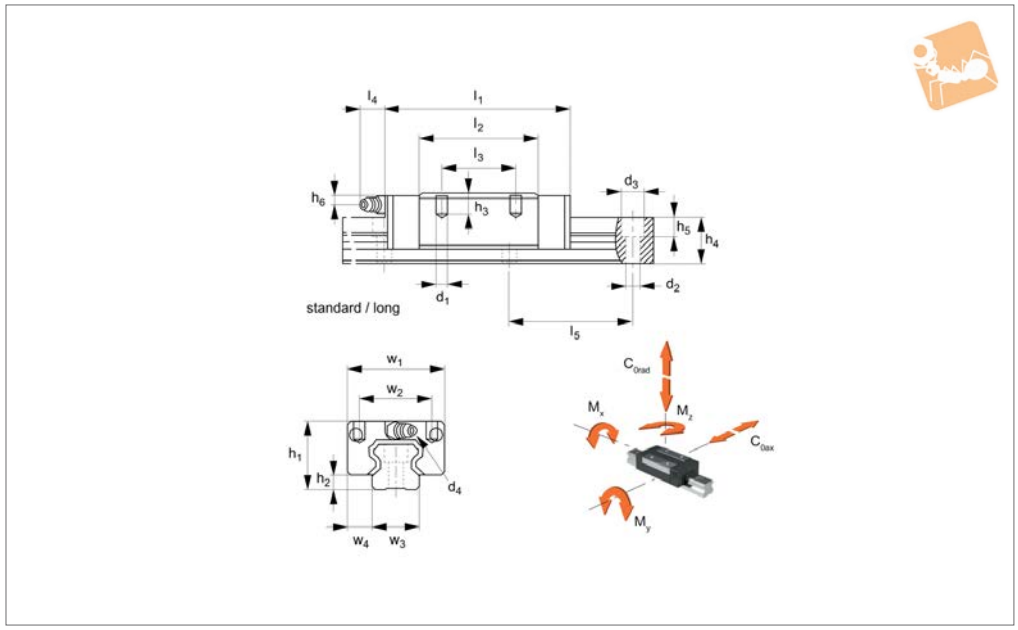


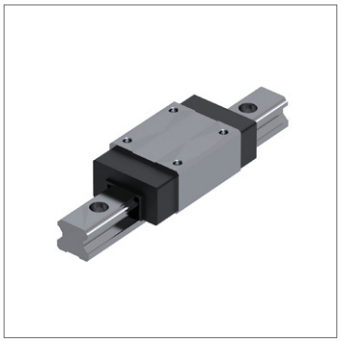
Material
Hardened and ground steel.

Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.30). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight g
L1016.F15-NC	15	58.6	24	40.2	47	30	3.4	7.5	13.0	M5	5.5	4.4	5.5	38	15	16.0	5.7	210
L1016.F20-NC	20	70.1	30	48.5	63	40	4.5	9.0	16.3	M6	8.5	5.4	7.1	53	20	21.5	12.3	400
L1016.F25-NC	25	79.2	36	57.5	70	45	5.8	10.1	19.2	M8	9.0	6.8	10.2	57	23	23.5	12.2	570
L1016.F30-NC	30	94.8	42	67.8	90	52	7.0	12.0	22.8	M10	12.0	8.6	10.0	72	28	31.0	11.7	1100

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load C kN	Static load $C_{0rad \& ax}$ kN
L1016.F15-NC	60	7.5	M3 x 0,5	137	120	120	11.67	19.90
L1016.F20-NC	60	9.5	M6 x 1,0	289	224	224	17.98	30.96
L1016.F25-NC	60	11.0	M6 x 1,0	447	358	358	25.25	41.73
L1016.F30-NC	80	14.0	M6 x 1,0	719	560	560	37.33	55.50





L1016.U-NC

Material
Hardened and ground steel.

Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.30)
Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

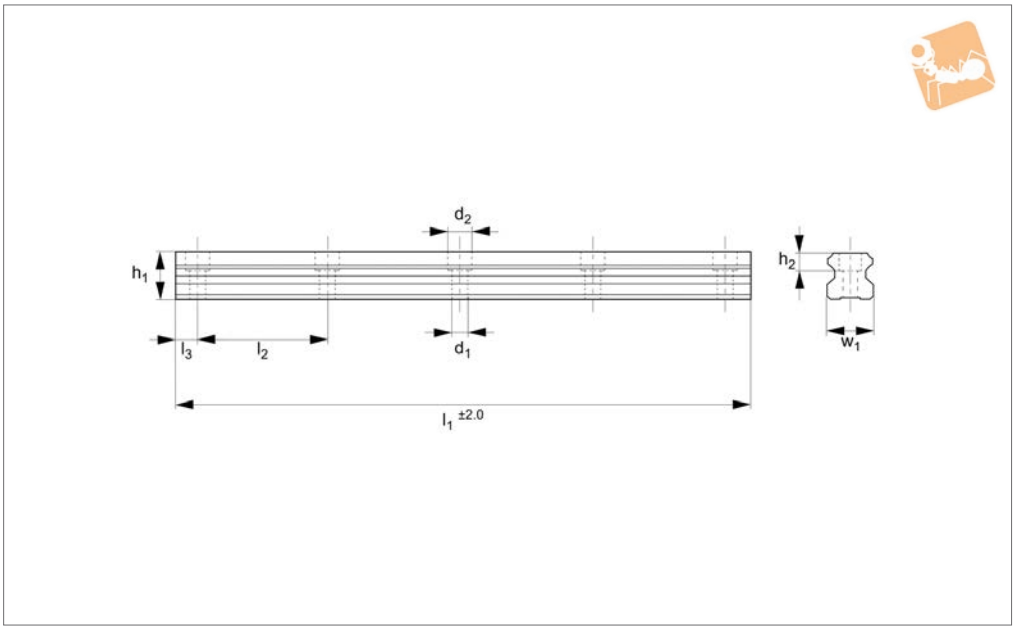
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight g
L1016.U15-NC	15	58.6	28	40.2	34	26	3.3	6.0	13.0	M 4	6.0	4.5	9.5	26	15	9.5	5.0	190
L1016.U20-NC	20	69.3	30	48.5	44	36	4.5	6.5	16.3	M 5	8.5	6.0	7.1	32	20	12.0	15.6	310
L1016.U25-NC	25	79.2	40	57.5	48	35	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	450
L1016.U30-NC	30	94.8	45	67.8	60	40	7.0	12.0	22.8	M 8	12.0	9.0	13.0	40	28	16.0	15.6	910

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load C kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.U15-NC	60	7.5	M 3x0,5	137	120	120	11.67	19.90
L1016.U20-NC	60	9.5	M 6x1,0	289	224	224	17.98	30.96
L1016.U25-NC	60	11.0	M 6x1,0	447	358	358	25.25	41.73
L1016.U30-NC	80	14.0	M 6x1,0	719	560	560	37.33	55.50

15mm Linear Guide Rail
standard



L1016.15

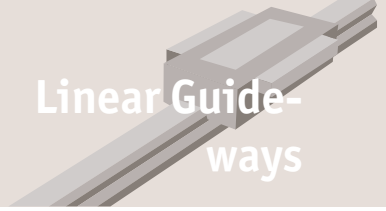


Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 1,4 Kg/m.

Tips
Plastic screw covers issued with the rails to protect screw holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.15-0220	15	220	13.0	60	15	20	6.0	4.5	7.5	M4	0.31
L1016.15-0280	15	280	13.0	60	15	20	6.0	4.5	7.5	M4	0.39
L1016.15-0340	15	340	13.0	60	15	20	6.0	4.5	7.5	M4	0.48
L1016.15-0400	15	400	13.0	60	15	20	6.0	4.5	7.5	M4	0.56
L1016.15-0460	15	460	13.0	60	15	20	6.0	4.5	7.5	M4	0.64
L1016.15-0520	15	520	13.0	60	15	20	6.0	4.5	7.5	M4	0.73
L1016.15-0580	15	580	13.0	60	15	20	6.0	4.5	7.5	M4	0.81
L1016.15-0640	15	640	13.0	60	15	20	6.0	4.5	7.5	M4	0.90
L1016.15-0700	15	700	13.0	60	15	20	6.0	4.5	7.5	M4	0.98
L1016.15-0760	15	760	13.0	60	15	20	6.0	4.5	7.5	M4	1.06
L1016.15-0820	15	820	13.0	60	15	20	6.0	4.5	7.5	M4	1.15
L1016.15-0880	15	880	13.0	60	15	20	6.0	4.5	7.5	M4	1.23
L1016.15-0940	15	940	13.0	60	15	20	6.0	4.5	7.5	M4	1.32
L1016.15-1000	15	1000	13.0	60	15	20	6.0	4.5	7.5	M4	1.40
L1016.15-1060	15	1060	13.0	60	15	20	6.0	4.5	7.5	M4	1.48
L1016.15-1120	15	1120	13.0	60	15	20	6.0	4.5	7.5	M4	1.57
L1016.15-1180	15	1180	13.0	60	15	20	6.0	4.5	7.5	M4	1.65
L1016.15-1240	15	1240	13.0	60	15	20	6.0	4.5	7.5	M4	1.74
L1016.15-1300	15	1300	13.0	60	15	20	6.0	4.5	7.5	M4	1.82
L1016.15-1360	15	1360	13.0	60	15	20	6.0	4.5	7.5	M4	1.90
L1016.15-1420	15	1420	13.0	60	15	20	6.0	4.5	7.5	M4	1.99
L1016.15-1480	15	1480	13.0	60	15	20	6.0	4.5	7.5	M4	2.07
L1016.15-1540	15	1540	13.0	60	15	20	6.0	4.5	7.5	M4	2.16
L1016.15-1600	15	1600	13.0	60	15	20	6.0	4.5	7.5	M4	2.24
L1016.15-1660	15	1660	13.0	60	15	20	6.0	4.5	7.5	M4	2.32
L1016.15-1720	15	1720	13.0	60	15	20	6.0	4.5	7.5	M4	2.41
L1016.15-1780	15	1780	13.0	60	15	20	6.0	4.5	7.5	M4	2.49
L1016.15-1840	15	1840	13.0	60	15	20	6.0	4.5	7.5	M4	2.58
L1016.15-1900	15	1900	13.0	60	15	20	6.0	4.5	7.5	M4	2.66
L1016.15-1960	15	1960	13.0	60	15	20	6.0	4.5	7.5	M4	2.74
L1016.15-2020	15	2020	13.0	60	15	20	6.0	4.5	7.5	M4	2.83
L1016.15-2080	15	2080	13.0	60	15	20	6.0	4.5	7.5	M4	2.91

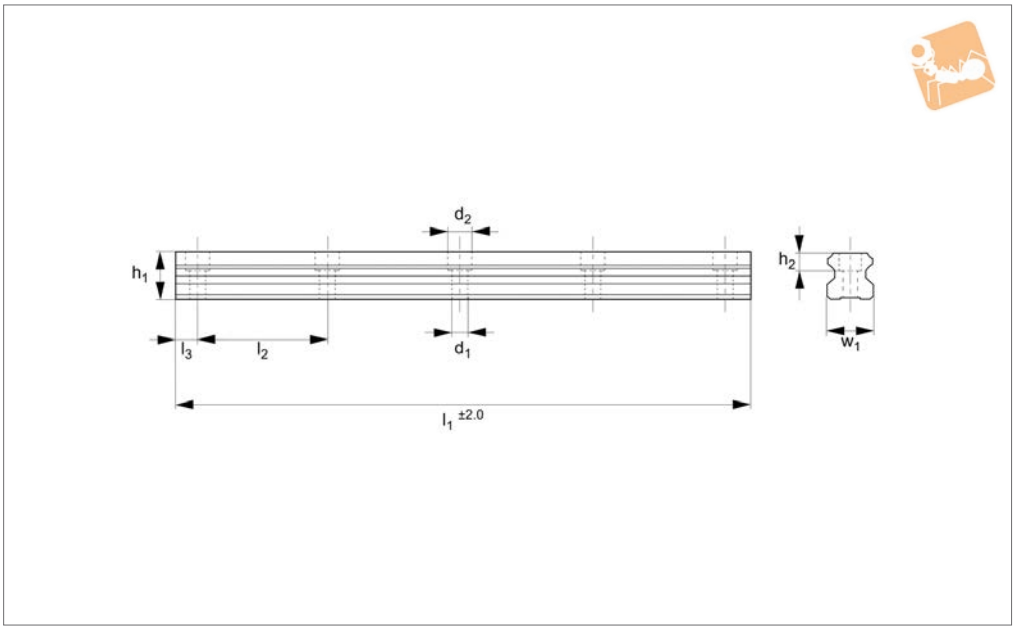


Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.15-2140	15	2140	13.0	60	15	20	6.0	4.5	7.5	M4	3.00
L1016.15-2200	15	2220	13.0	60	15	20	6.0	4.5	7.5	M4	3.08
L1016.15-2260	15	2260	13.0	60	15	20	6.0	4.5	7.5	M4	3.16
L1016.15-2320	15	2320	13.0	60	15	20	6.0	4.5	7.5	M4	3.25
L1016.15-2380	15	2380	13.0	60	15	20	6.0	4.5	7.5	M4	3.33
L1016.15-2440	15	2440	13.0	60	15	20	6.0	4.5	7.5	M4	3.42
L1016.15-2500	15	2500	13.0	60	15	20	6.0	4.5	7.5	M4	3.50
L1016.15-2560	15	2560	13.0	60	15	20	6.0	4.5	7.5	M4	3.58
L1016.15-2620	15	2620	13.0	60	15	20	6.0	4.5	7.5	M4	3.67
L1016.15-2680	15	2680	13.0	60	15	20	6.0	4.5	7.5	M4	3.75
L1016.15-2740	15	2740	13.0	60	15	20	6.0	4.5	7.5	M4	3.84
L1016.15-2800	15	2800	13.0	60	15	20	6.0	4.5	7.5	M4	3.92
L1016.15-2860	15	2860	13.0	60	15	20	6.0	4.5	7.5	M4	4.00
L1016.15-2920	15	2920	13.0	60	15	20	6.0	4.5	7.5	M4	4.09
L1016.15-2980	15	2980	13.0	60	15	20	6.0	4.5	7.5	M4	4.17
L1016.15-3040	15	3040	13.0	60	15	20	6.0	4.5	7.5	M4	4.26
L1016.15-3100	15	3100	13.0	60	15	20	6.0	4.5	7.5	M4	4.34
L1016.15-3160	15	3160	13.0	60	15	20	6.0	4.5	7.5	M4	4.42
L1016.15-3220	15	3220	13.0	60	15	20	6.0	4.5	7.5	M4	4.51
L1016.15-3280	15	3280	13.0	60	15	20	6.0	4.5	7.5	M4	4.59
L1016.15-3340	15	3340	13.0	60	15	20	6.0	4.5	7.5	M4	4.68
L1016.15-3400	15	3400	13.0	60	15	20	6.0	4.5	7.5	M4	4.76
L1016.15-3460	15	3460	13.0	60	15	20	6.0	4.5	7.5	M4	4.84
L1016.15-3520	15	3520	13.0	60	15	20	6.0	4.5	7.5	M4	4.93
L1016.15-3580	15	3580	13.0	60	15	20	6.0	4.5	7.5	M4	5.01
L1016.15-3640	15	3640	13.0	60	15	20	6.0	4.5	7.5	M4	5.10
L1016.15-3700	15	3700	13.0	60	15	20	6.0	4.5	7.5	M4	5.18
L1016.15-3760	15	3760	13.0	60	15	20	6.0	4.5	7.5	M4	5.26
L1016.15-3820	15	3820	13.0	60	15	20	6.0	4.5	7.5	M4	5.35
L1016.15-3880	15	3880	13.0	60	15	20	6.0	4.5	7.5	M4	5.43
L1016.15-3940	15	3940	13.0	60	15	20	6.0	4.5	7.5	M4	5.52
L1016.15-4000	15	4000	13.0	60	15	20	6.0	4.5	7.5	M4	5.60

20mm Linear Guide Rail
standard



L1016.20



Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 2,6 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

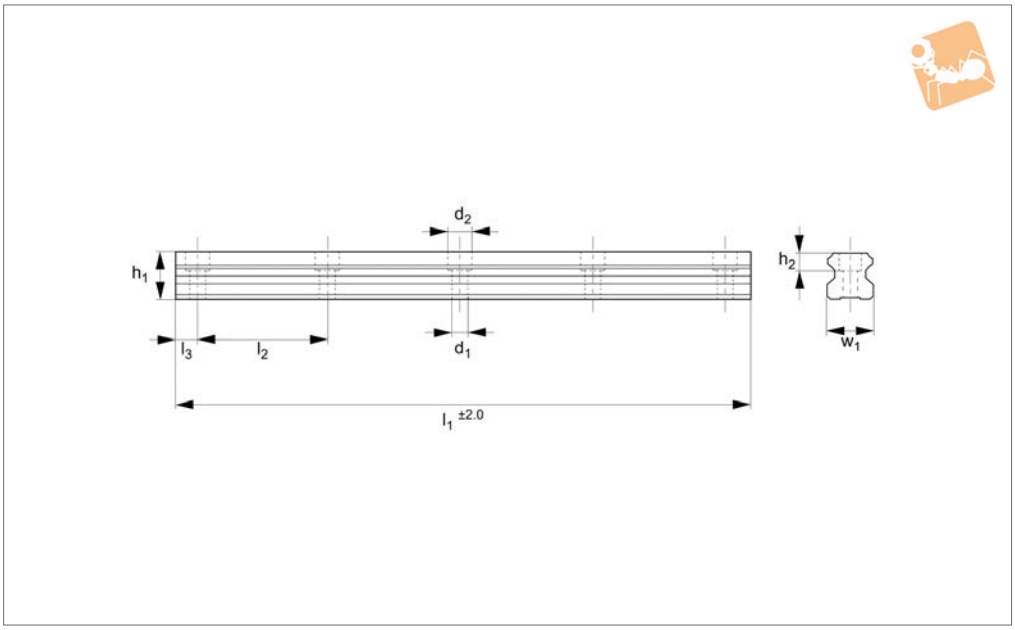
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.20-0160	20	160	16.3	60	20	20	8.5	6	9.5	M5	0.42
L1016.20-0220	20	220	16.3	60	20	20	8.5	6	9.5	M5	0.57
L1016.20-0280	20	280	16.3	60	20	20	8.5	6	9.5	M5	0.73
L1016.20-0340	20	340	16.3	60	20	20	8.5	6	9.5	M5	0.88
L1016.20-0400	20	400	16.3	60	20	20	8.5	6	9.5	M5	1.04
L1016.20-0460	20	460	16.3	60	20	20	8.5	6	9.5	M5	1.20
L1016.20-0520	20	520	16.3	60	20	20	8.5	6	9.5	M5	1.35
L1016.20-0580	20	580	16.3	60	20	20	8.5	6	9.5	M5	1.51
L1016.20-0640	20	640	16.3	60	20	20	8.5	6	9.5	M5	1.66
L1016.20-0700	20	700	16.3	60	20	20	8.5	6	9.5	M5	1.82
L1016.20-0760	20	760	16.3	60	20	20	8.5	6	9.5	M5	1.98
L1016.20-0820	20	820	16.3	60	20	20	8.5	6	9.5	M5	2.13
L1016.20-0880	20	880	16.3	60	20	20	8.5	6	9.5	M5	2.29
L1016.20-0940	20	940	16.3	60	20	20	8.5	6	9.5	M5	2.44
L1016.20-1000	20	1000	16.3	60	20	20	8.5	6	9.5	M5	2.60
L1016.20-1060	20	1060	16.3	60	20	20	8.5	6	9.5	M5	2.76
L1016.20-1120	20	1120	16.3	60	20	20	8.5	6	9.5	M5	2.91
L1016.20-1180	20	1180	16.3	60	20	20	8.5	6	9.5	M5	3.07
L1016.20-1240	20	1240	16.3	60	20	20	8.5	6	9.5	M5	3.22
L1016.20-1300	20	1300	16.3	60	20	20	8.5	6	9.5	M5	3.38
L1016.20-1360	20	1360	16.3	60	20	20	8.5	6	9.5	M5	3.54
L1016.20-1420	20	1420	16.3	60	20	20	8.5	6	9.5	M5	3.69
L1016.20-1480	20	1480	16.3	60	20	20	8.5	6	9.5	M5	3.85
L1016.20-1540	20	1540	16.3	60	20	20	8.5	6	9.5	M5	4.00
L1016.20-1600	20	1600	16.3	60	20	20	8.5	6	9.5	M5	4.16
L1016.20-1660	20	1660	16.3	60	20	20	8.5	6	9.5	M5	4.32
L1016.20-1720	20	1720	16.3	60	20	20	8.5	6	9.5	M5	4.47
L1016.20-1780	20	1780	16.3	60	20	20	8.5	6	9.5	M5	4.63
L1016.20-1840	20	1840	16.3	60	20	20	8.5	6	9.5	M5	4.78
L1016.20-1900	20	1900	16.3	60	20	20	8.5	6	9.5	M5	4.94
L1016.20-1960	20	1960	16.3	60	20	20	8.5	6	9.5	M5	5.10
L1016.20-2020	20	2020	16.3	60	20	20	8.5	6	9.5	M5	5.25

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.20-2080	20	2080	16.3	60	20	20	8.5	6	9.5	M5	5.41
L1016.20-2140	20	2140	16.3	60	20	20	8.5	6	9.5	M5	5.56
L1016.20-2200	20	2200	16.3	60	20	20	8.5	6	9.5	M5	5.72
L1016.20-2260	20	2260	16.3	60	20	20	8.5	6	9.5	M5	5.88
L1016.20-2320	20	2320	16.3	60	20	20	8.5	6	9.5	M5	6.03
L1016.20-2380	20	2380	16.3	60	20	20	8.5	6	9.5	M5	6.19
L1016.20-2440	20	2440	16.3	60	20	20	8.5	6	9.5	M5	6.34
L1016.20-2500	20	2500	16.3	60	20	20	8.5	6	9.5	M5	6.50
L1016.20-2560	20	2560	16.3	60	20	20	8.5	6	9.5	M5	6.66
L1016.20-2620	20	2620	16.3	60	20	20	8.5	6	9.5	M5	6.81
L1016.20-2680	20	2680	16.3	60	20	20	8.5	6	9.5	M5	6.97
L1016.20-2740	20	2740	16.3	60	20	20	8.5	6	9.5	M5	7.12
L1016.20-2800	20	2800	16.3	60	20	20	8.5	6	9.5	M5	7.28
L1016.20-2860	20	2860	16.3	60	20	20	8.5	6	9.5	M5	7.44
L1016.20-2920	20	2920	16.3	60	20	20	8.5	6	9.5	M5	7.59
L1016.20-2980	20	2980	16.3	60	20	20	8.5	6	9.5	M5	7.75
L1016.20-3040	20	3040	16.3	60	20	20	8.5	6	9.5	M5	7.90
L1016.20-3100	20	3100	16.3	60	20	20	8.5	6	9.5	M5	8.06
L1016.20-3160	20	3160	16.3	60	20	20	8.5	6	9.5	M5	8.22
L1016.20-3220	20	3220	16.3	60	20	20	8.5	6	9.5	M5	8.37
L1016.20-3280	20	3280	16.3	60	20	20	8.5	6	9.5	M5	8.53
L1016.20-3340	20	3340	16.3	60	20	20	8.5	6	9.5	M5	8.68
L1016.20-3400	20	3400	16.3	60	20	20	8.5	6	9.5	M5	8.84
L1016.20-3460	20	3460	16.3	60	20	20	8.5	6	9.5	M5	9.00
L1016.20-3520	20	3520	16.3	60	20	20	8.5	6	9.5	M5	9.15
L1016.20-3580	20	3580	16.3	60	20	20	8.5	6	9.5	M5	9.31
L1016.20-3640	20	3640	16.3	60	20	20	8.5	6	9.5	M5	9.46
L1016.20-3700	20	3700	16.3	60	20	20	8.5	6	9.5	M5	9.62
L1016.20-3760	20	3760	16.3	60	20	20	8.5	6	9.5	M5	9.78
L1016.20-3820	20	3820	16.3	60	20	20	8.5	6	9.5	M5	9.93
L1016.20-3880	20	3880	16.3	60	20	20	8.5	6	9.5	M5	10.09
L1016.20-3940	20	3940	16.3	60	20	20	8.5	6	9.5	M5	10.24
L1016.20-4000	20	4000	16.3	60	20	20	8.5	6	9.5	M5	10.40

25mm Linear Guide Rail
standard



L1016.25

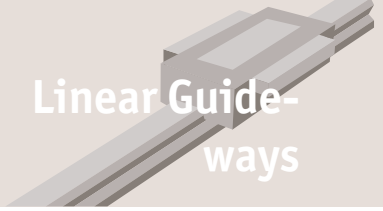


Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 3,6 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.25-0160	25	160	19.2	60	23	20	9	7	11	M6	0.58
L1016.25-0220	25	220	19.2	60	23	20	9	7	11	M6	0.79
L1016.25-0280	25	280	19.2	60	23	20	9	7	11	M6	1.01
L1016.25-0340	25	340	19.2	60	23	20	9	7	11	M6	1.22
L1016.25-0400	25	400	19.2	60	23	20	9	7	11	M6	1.44
L1016.25-0440	25	440	19.2	60	23	20	9	7	11	M6	1.44
L1016.25-0460	25	460	19.2	60	23	20	9	7	11	M6	1.66
L1016.25-0520	25	520	19.2	60	23	20	9	7	11	M6	1.87
L1016.25-0580	25	580	19.2	60	23	20	9	7	11	M6	2.09
L1016.25-0640	25	640	19.2	60	23	20	9	7	11	M6	2.30
L1016.25-0700	25	700	19.2	60	23	20	9	7	11	M6	2.52
L1016.25-0760	25	760	19.2	60	23	20	9	7	11	M6	2.74
L1016.25-0820	25	820	19.2	60	23	20	9	7	11	M6	2.95
L1016.25-0880	25	880	19.2	60	23	20	9	7	11	M6	3.17
L1016.25-0940	25	940	19.2	60	23	20	9	7	11	M6	3.38
L1016.25-1000	25	1000	19.2	60	23	20	9	7	11	M6	3.60
L1016.25-1060	25	1060	19.2	60	23	20	9	7	11	M6	3.82
L1016.25-1120	25	1120	19.2	60	23	20	9	7	11	M6	4.03
L1016.25-1180	25	1180	19.2	60	23	20	9	7	11	M6	4.25
L1016.25-1240	25	1240	19.2	60	23	20	9	7	11	M6	4.46
L1016.25-1300	25	1300	19.2	60	23	20	9	7	11	M6	4.68
L1016.25-1360	25	1360	19.2	60	23	20	9	7	11	M6	4.90
L1016.25-1420	25	1420	19.2	60	23	20	9	7	11	M6	5.11
L1016.25-1480	25	1480	19.2	60	23	20	9	7	11	M6	5.33
L1016.25-1540	25	1540	19.2	60	23	20	9	7	11	M6	5.54
L1016.25-1600	25	1600	19.2	60	23	20	9	7	11	M6	5.76
L1016.25-1660	25	1660	19.2	60	23	20	9	7	11	M6	5.98
L1016.25-1720	25	1720	19.2	60	23	20	9	7	11	M6	6.19
L1016.25-1780	25	1780	19.2	60	23	20	9	7	11	M6	6.41
L1016.25-1840	25	1840	19.2	60	23	20	9	7	11	M6	6.62
L1016.25-1900	25	1900	19.2	60	23	20	9	7	11	M6	6.84
L1016.25-1960	25	1960	19.2	60	23	20	9	7	11	M6	7.06

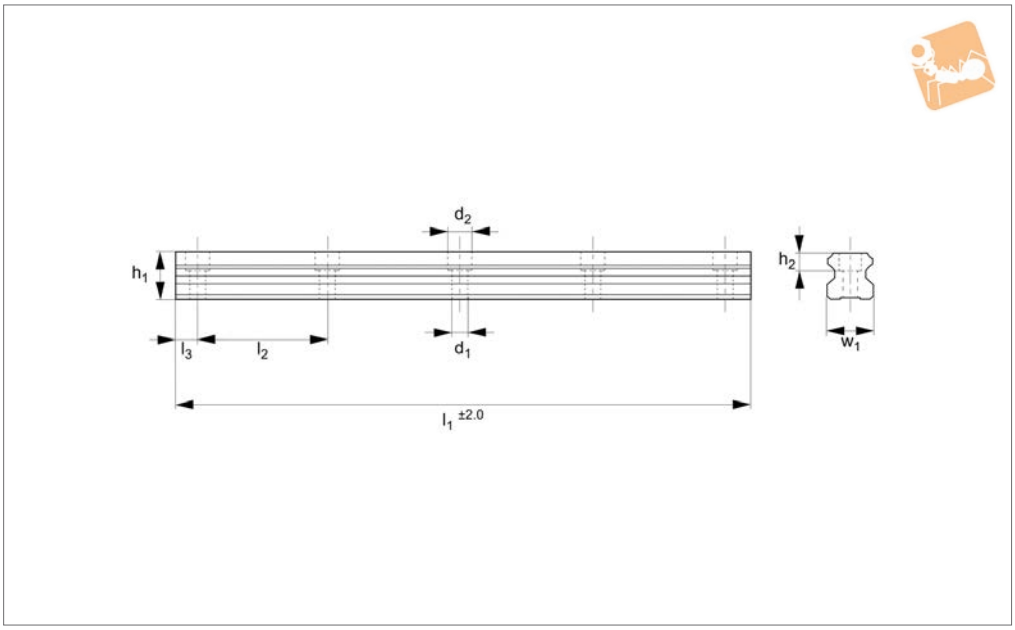


Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.25-2020	25	2020	19.2	60	23	20	9	7	11	M6	7.27
L1016.25-2080	25	2080	19.2	60	23	20	9	7	11	M6	7.49
L1016.25-2140	25	2140	19.2	60	23	20	9	7	11	M6	7.70
L1016.25-2200	25	2200	19.2	60	23	20	9	7	11	M6	7.92
L1016.25-2260	25	2260	19.2	60	23	20	9	7	11	M6	8.14
L1016.25-2320	25	2320	19.2	60	23	20	9	7	11	M6	8.35
L1016.25-2380	25	2380	19.2	60	23	20	9	7	11	M6	8.57
L1016.25-2440	25	2440	19.2	60	23	20	9	7	11	M6	8.78
L1016.25-2500	25	2500	19.2	60	23	20	9	7	11	M6	9.00
L1016.25-2560	25	2560	19.2	60	23	20	9	7	11	M6	9.22
L1016.25-2620	25	2620	19.2	60	23	20	9	7	11	M6	9.43
L1016.25-2680	25	2680	19.2	60	23	20	9	7	11	M6	9.65
L1016.25-2740	25	2740	19.2	60	23	20	9	7	11	M6	9.86
L1016.25-2800	25	2800	19.2	60	23	20	9	7	11	M6	10.08
L1016.25-2860	25	2860	19.2	60	23	20	9	7	11	M6	10.30
L1016.25-2920	25	2920	19.2	60	23	20	9	7	11	M6	10.51
L1016.25-2980	25	2980	19.2	60	23	20	9	7	11	M6	10.73
L1016.25-3040	25	3040	19.2	60	23	20	9	7	11	M6	10.94
L1016.25-3100	25	3100	19.2	60	23	20	9	7	11	M6	11.16
L1016.25-3160	25	3160	19.2	60	23	20	9	7	11	M6	11.38
L1016.25-3220	25	3220	19.2	60	23	20	9	7	11	M6	11.59
L1016.25-3280	25	3280	19.2	60	23	20	9	7	11	M6	11.81
L1016.25-3340	25	3340	19.2	60	23	20	9	7	11	M6	12.02
L1016.25-3400	25	3400	19.2	60	23	20	9	7	11	M6	12.24
L1016.25-3460	25	3460	19.2	60	23	20	9	7	11	M6	12.46
L1016.25-3520	25	3520	19.2	60	23	20	9	7	11	M6	12.67
L1016.25-3580	25	3580	19.2	60	23	20	9	7	11	M6	12.89
L1016.25-3640	25	3640	19.2	60	23	20	9	7	11	M6	13.10
L1016.25-3700	25	3700	19.2	60	23	20	9	7	11	M6	13.32
L1016.25-3760	25	3760	19.2	60	23	20	9	7	11	M6	13.54
L1016.25-3820	25	3820	19.2	60	23	20	9	7	11	M6	13.75
L1016.25-3880	25	3880	19.2	60	23	20	9	7	11	M6	13.97
L1016.25-3940	25	3940	19.2	60	23	20	9	7	11	M6	14.18
L1016.25-4000	25	4000	19.2	60	23	20	9	7	11	M6	14.40

30mm Linear Guide Rail
standard



L1016.30



Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 5,2 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

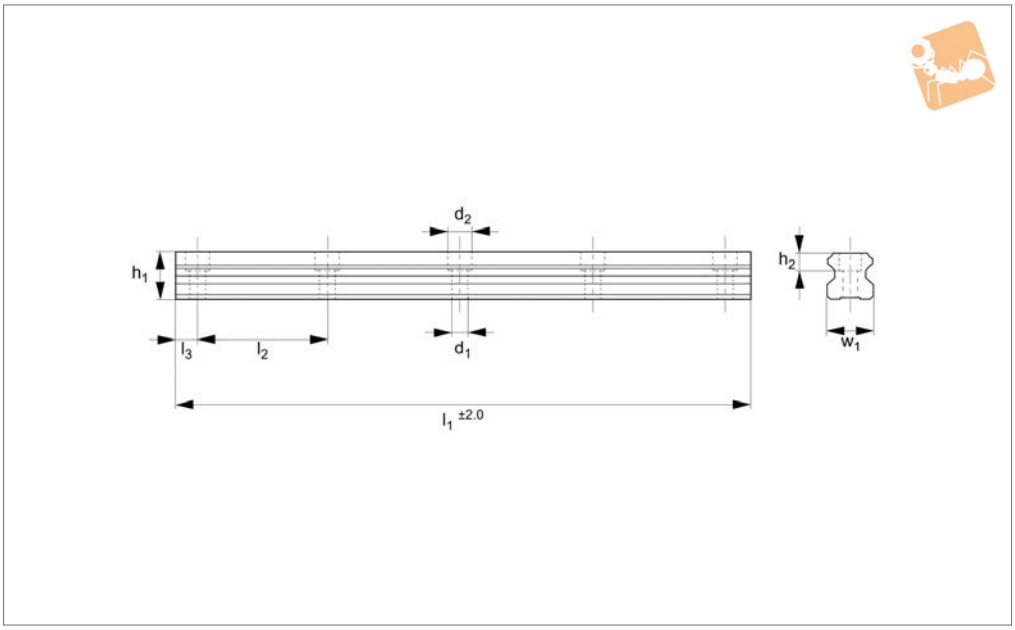
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.30-0200	30	200	22.8	80	28	20	12	9	14	M8	1.04
L1016.30-0280	30	280	22.8	80	28	20	12	9	14	M8	1.46
L1016.30-0360	30	360	22.8	80	28	20	12	9	14	M8	1.87
L1016.30-0440	30	440	22.8	80	28	20	12	9	14	M8	2.29
L1016.30-0520	30	520	22.8	80	28	20	12	9	14	M8	2.70
L1016.30-0600	30	600	22.8	80	28	20	12	9	14	M8	3.12
L1016.30-0680	30	680	22.8	80	28	20	12	9	14	M8	3.54
L1016.30-0760	30	760	22.8	80	28	20	12	9	14	M8	3.95
L1016.30-0840	30	840	22.8	80	28	20	12	9	14	M8	4.37
L1016.30-0920	30	920	22.8	80	28	20	12	9	14	M8	4.78
L1016.30-1000	30	1000	22.8	80	28	20	12	9	14	M8	5.20
L1016.30-1080	30	1080	22.8	80	28	20	12	9	14	M8	5.62
L1016.30-1160	30	1160	22.8	80	28	20	12	9	14	M8	6.03
L1016.30-1240	30	1240	22.8	80	28	20	12	9	14	M8	6.45
L1016.30-1320	30	1320	22.8	80	28	20	12	9	14	M8	6.86
L1016.30-1400	30	1400	22.8	80	28	20	12	9	14	M8	7.28
L1016.30-1480	30	1480	22.8	80	28	20	12	9	14	M8	7.70
L1016.30-1560	30	1560	22.8	80	28	20	12	9	14	M8	8.11
L1016.30-1640	30	1640	22.8	80	28	20	12	9	14	M8	8.53
L1016.30-1720	30	1720	22.8	80	28	20	12	9	14	M8	8.94
L1016.30-1800	30	1800	22.8	80	28	20	12	9	14	M8	9.36
L1016.30-1880	30	1880	22.8	80	28	20	12	9	14	M8	9.78
L1016.30-1960	30	1960	22.8	80	28	20	12	9	14	M8	10.19
L1016.30-2040	30	2040	22.8	80	28	20	12	9	14	M8	10.61
L1016.30-2120	30	2120	22.8	80	28	20	12	9	14	M8	11.02
L1016.30-2200	30	2200	22.8	80	28	20	12	9	14	M8	11.44
L1016.30-2280	30	2280	22.8	80	28	20	12	9	14	M8	11.86
L1016.30-2360	30	2360	22.8	80	28	20	12	9	14	M8	12.27
L1016.30-2440	30	2440	22.8	80	28	20	12	9	14	M8	12.69
L1016.30-2520	30	2520	22.8	80	28	20	12	9	14	M8	13.10
L1016.30-2600	30	2600	22.8	80	28	20	12	9	14	M8	13.52
L1016.30-2680	30	2680	22.8	80	28	20	12	9	14	M8	13.94

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.30-2760	30	2760	22.8	80	28	20	12	9	14	M8	14.35
L1016.30-2840	30	2840	22.8	80	28	20	12	9	14	M8	14.77
L1016.30-2920	30	2920	22.8	80	28	20	12	9	14	M8	15.18
L1016.30-3000	30	3000	22.8	80	28	20	12	9	14	M8	15.60
L1016.30-3080	30	3080	22.8	80	28	20	12	9	14	M8	16.02
L1016.30-3160	30	3160	22.8	80	28	20	12	9	14	M8	16.43
L1016.30-3240	30	3240	22.8	80	28	20	12	9	14	M8	16.85
L1016.30-3320	30	3320	22.8	80	28	20	12	9	14	M8	17.26
L1016.30-3400	30	3400	22.8	80	28	20	12	9	14	M8	17.68
L1016.30-3480	30	3480	22.8	80	28	20	12	9	14	M8	18.10
L1016.30-3560	30	3560	22.8	80	28	20	12	9	14	M8	18.51
L1016.30-3640	30	3640	22.8	80	28	20	12	9	14	M8	18.93
L1016.30-3720	30	3720	22.8	80	28	20	12	9	14	M8	19.34
L1016.30-3800	30	3800	22.8	80	28	20	12	9	14	M8	19.76
L1016.30-3880	30	3880	22.8	80	28	20	12	9	14	M8	20.18
L1016.30-3960	30	3960	22.8	80	28	20	12	9	14	M8	20.59
L1016.30-4000	30	4000	22.8	80	28	20	12	9	14	M8	20.80

35mm Linear Guide Rail
standard



L1016.35



Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 7,2 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

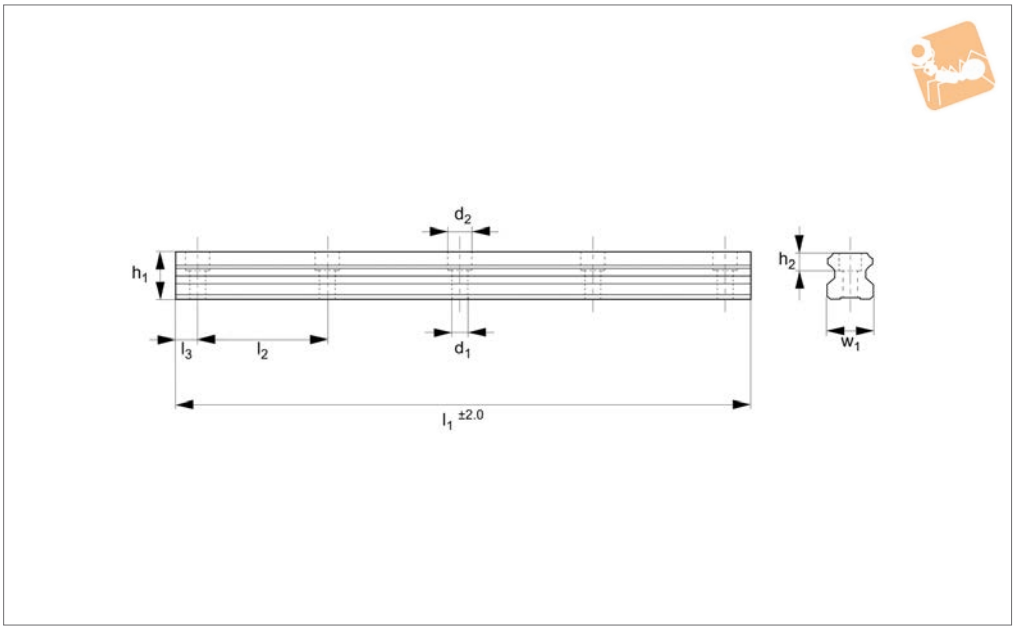
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.35-0200	35	200	26.0	80	34	20	12	9	14	M8	1.44
L1016.35-0280	35	280	26.0	80	34	20	12	9	14	M8	2.02
L1016.35-0360	35	360	26.0	80	34	20	12	9	14	M8	2.59
L1016.35-0440	35	440	26.0	80	34	20	12	9	14	M8	3.17
L1016.35-0520	35	520	26.0	80	34	20	12	9	14	M8	3.74
L1016.35-0600	35	600	26.0	80	34	20	12	9	14	M8	4.32
L1016.35-0680	35	680	26.0	80	34	20	12	9	14	M8	4.90
L1016.35-0760	35	760	26.0	80	34	20	12	9	14	M8	5.47
L1016.35-0840	35	840	26.0	80	34	20	12	9	14	M8	6.05
L1016.35-0920	35	920	26.0	80	34	20	12	9	14	M8	6.62
L1016.35-1000	35	1000	26.0	80	34	20	12	9	14	M8	7.20
L1016.35-1080	35	1080	26.0	80	34	20	12	9	14	M8	7.78
L1016.35-1160	35	1160	26.0	80	34	20	12	9	14	M8	8.35
L1016.35-1240	35	1240	26.0	80	34	20	12	9	14	M8	8.93
L1016.35-1320	35	1320	26.0	80	34	20	12	9	14	M8	9.50
L1016.35-1400	35	1400	26.0	80	34	20	12	9	14	M8	10.08
L1016.35-1480	35	1480	26.0	80	34	20	12	9	14	M8	10.66
L1016.35-1560	35	1560	26.0	80	34	20	12	9	14	M8	11.23
L1016.35-1640	35	1640	26.0	80	34	20	12	9	14	M8	11.81
L1016.35-1720	35	1720	26.0	80	34	20	12	9	14	M8	12.38
L1016.35-1800	35	1800	26.0	80	34	20	12	9	14	M8	12.96
L1016.35-1880	35	1880	26.0	80	34	20	12	9	14	M8	13.54
L1016.35-1960	35	1960	26.0	80	34	20	12	9	14	M8	14.11
L1016.35-2040	35	2040	26.0	80	34	20	12	9	14	M8	14.69
L1016.35-2120	35	2120	26.0	80	34	20	12	9	14	M8	15.26
L1016.35-2200	35	2200	26.0	80	34	20	12	9	14	M8	15.84
L1016.35-2280	35	2280	26.0	80	34	20	12	9	14	M8	16.42
L1016.35-2360	35	2360	26.0	80	34	20	12	9	14	M8	16.99
L1016.35-2440	35	2440	26.0	80	34	20	12	9	14	M8	17.57
L1016.35-2520	35	2520	26.0	80	34	20	12	9	14	M8	18.14
L1016.35-2600	35	2600	26.0	80	34	20	12	9	14	M8	18.72
L1016.35-2680	35	2680	26.0	80	34	20	12	9	14	M8	19.30

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.35-2760	35	2760	26.0	80	34	20	12	9	14	M8	19.87
L1016.35-2840	35	2840	26.0	80	34	20	12	9	14	M8	20.45
L1016.35-2920	35	2920	26.0	80	34	20	12	9	14	M8	21.02
L1016.35-3000	35	3000	26.0	80	34	20	12	9	14	M8	21.60
L1016.35-3080	35	3080	26.0	80	34	20	12	9	14	M8	22.18
L1016.35-3160	35	3160	26.0	80	34	20	12	9	14	M8	22.75
L1016.35-3240	35	3240	26.0	80	34	20	12	9	14	M8	23.33
L1016.35-3320	35	3320	26.0	80	34	20	12	9	14	M8	23.90
L1016.35-3400	35	3400	26.0	80	34	20	12	9	14	M8	24.48
L1016.35-3480	35	3480	26.0	80	34	20	12	9	14	M8	25.06
L1016.35-3560	35	3560	26.0	80	34	20	12	9	14	M8	25.63
L1016.35-3640	35	3640	26.0	80	34	20	12	9	14	M8	26.21
L1016.35-3720	35	3720	26.0	80	34	20	12	9	14	M8	26.78
L1016.35-3800	35	3800	26.0	80	34	20	12	9	14	M8	27.36
L1016.35-3880	35	3880	26.0	80	34	20	12	9	14	M8	27.94
L1016.35-3960	35	3960	26.0	80	34	20	12	9	14	M8	28.51
L1016.35-4000	35	4000	26.0	80	34	20	12	9	14	M8	28.80

45mm Linear Guide Rail
standard



L1016.45



Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 12,3 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

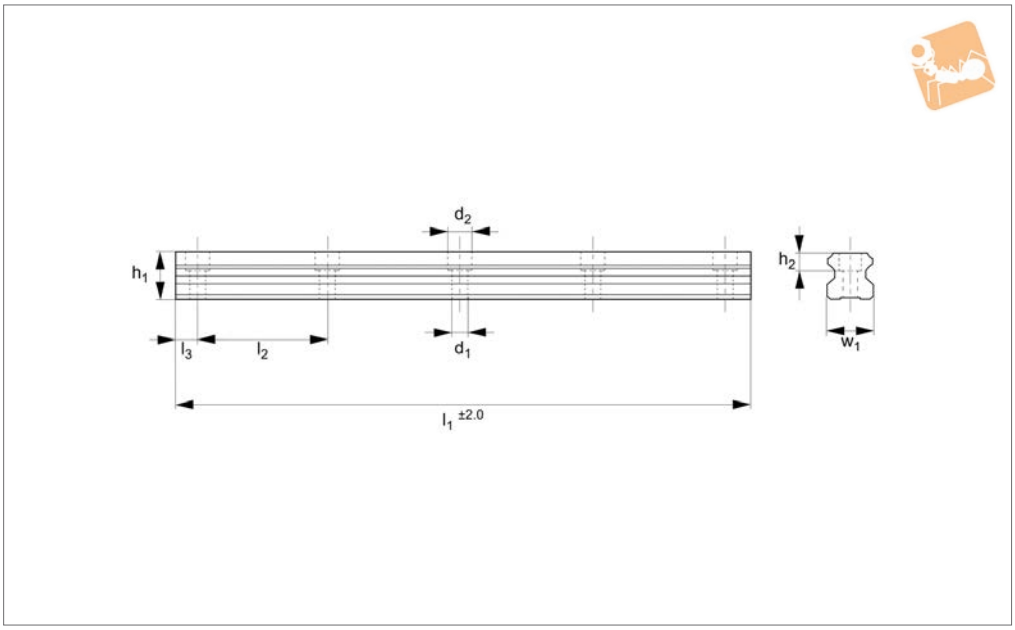
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.45-0255	45	255	31.1	105	45	22.5	17	14	20	M12	3.14
L1016.45-0360	45	360	31.1	105	45	22.5	17	14	20	M12	4.43
L1016.45-0465	45	465	31.1	105	45	22.5	17	14	20	M12	5.72
L1016.45-0570	45	570	31.1	105	45	22.5	17	14	20	M12	7.01
L1016.45-0675	45	675	31.1	105	45	22.5	17	14	20	M12	8.30
L1016.45-0780	45	780	31.1	105	45	22.5	17	14	20	M12	9.59
L1016.45-0885	45	885	31.1	105	45	22.5	17	14	20	M12	10.89
L1016.45-0990	45	990	31.1	105	45	22.5	17	14	20	M12	12.18
L1016.45-1095	45	1095	31.1	105	45	22.5	17	14	20	M12	13.47
L1016.45-1200	45	1200	31.1	105	45	22.5	17	14	20	M12	14.76
L1016.45-1305	45	1305	31.1	105	45	22.5	17	14	20	M12	16.05
L1016.45-1410	45	1410	31.1	105	45	22.5	17	14	20	M12	17.34
L1016.45-1515	45	1515	31.1	105	45	22.5	17	14	20	M12	18.63
L1016.45-1620	45	1620	31.1	105	45	22.5	17	14	20	M12	19.93
L1016.45-1725	45	1725	31.1	105	45	22.5	17	14	20	M12	21.22
L1016.45-1830	45	1830	31.1	105	45	22.5	17	14	20	M12	22.51
L1016.45-1935	45	1935	31.1	105	45	22.5	17	14	20	M12	23.80
L1016.45-2040	45	2040	31.1	105	45	22.5	17	14	20	M12	25.09
L1016.45-2145	45	2145	31.1	105	45	22.5	17	14	20	M12	26.38
L1016.45-2250	45	2250	31.1	105	45	22.5	17	14	20	M12	27.68
L1016.45-2355	45	2355	31.1	105	45	22.5	17	14	20	M12	28.97
L1016.45-2460	45	2460	31.1	105	45	22.5	17	14	20	M12	30.26
L1016.45-2565	45	2565	31.1	105	45	22.5	17	14	20	M12	31.55
L1016.45-2670	45	2670	31.1	105	45	22.5	17	14	20	M12	32.84
L1016.45-2775	45	2775	31.1	105	45	22.5	17	14	20	M12	34.13
L1016.45-2880	45	2880	31.1	105	45	22.5	17	14	20	M12	35.42
L1016.45-2985	45	2985	31.1	105	45	22.5	17	14	20	M12	36.72
L1016.45-3090	45	3090	31.1	105	45	22.5	17	14	20	M12	38.01
L1016.45-3195	45	3195	31.1	105	45	22.5	17	14	20	M12	39.30
L1016.45-3300	45	3300	31.1	105	45	22.5	17	14	20	M12	40.59
L1016.45-3405	45	3405	31.1	105	45	22.5	17	14	20	M12	41.88
L1016.45-3510	45	3510	31.1	105	45	22.5	17	14	20	M12	43.17

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.45-3615	45	3615	31.1	105	45	22.5	17	14	20	M12	44.46
L1016.45-3720	45	3720	31.1	105	45	22.5	17	14	20	M12	45.76
L1016.45-3825	45	3825	31.1	105	45	22.5	17	14	20	M12	47.05
L1016.45-3930	45	3930	31.1	105	45	22.5	17	14	20	M12	48.34
L1016.45-4000	45	4000	31.1	105	45	22.5	17	14	20	M12	49.20

55mm Linear Guide Rail
standard



L1016.55

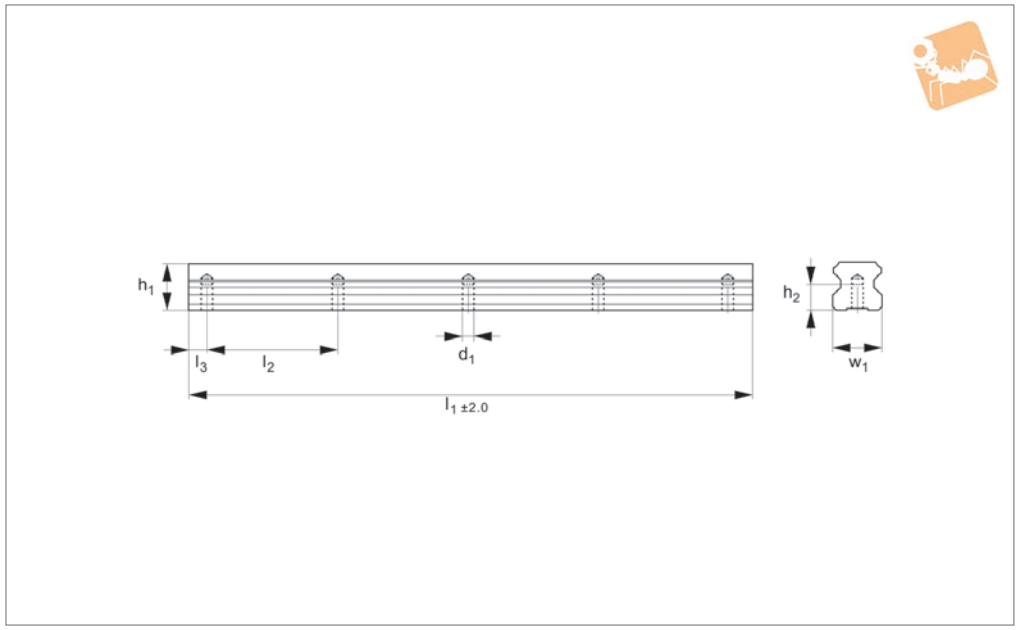


Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 14,5 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.55-0300	55	300	38.0	120	53	30	20	16	23	M14	4.35
L1016.55-0420	55	420	38.0	120	53	30	20	16	23	M14	6.09
L1016.55-0540	55	540	38.0	120	53	30	20	16	23	M14	7.83
L1016.55-0660	55	660	38.0	120	53	30	20	16	23	M14	9.57
L1016.55-0780	55	780	38.0	120	53	30	20	16	23	M14	11.31
L1016.55-0900	55	900	38.0	120	53	30	20	16	23	M14	13.05
L1016.55-1020	55	1020	38.0	120	53	30	20	16	23	M14	14.79
L1016.55-1140	55	1140	38.0	120	53	30	20	16	23	M14	16.53
L1016.55-1260	55	1260	38.0	120	53	30	20	16	23	M14	18.27
L1016.55-1380	55	1380	38.0	120	53	30	20	16	23	M14	20.01
L1016.55-1500	55	1500	38.0	120	53	30	20	16	23	M14	21.75
L1016.55-1620	55	1620	38.0	120	53	30	20	16	23	M14	23.49
L1016.55-1740	55	1740	38.0	120	53	30	20	16	23	M14	25.23
L1016.55-1860	55	1860	38.0	120	53	30	20	16	23	M14	26.97
L1016.55-1980	55	1980	38.0	120	53	30	20	16	23	M14	28.71
L1016.55-2100	55	2100	38.0	120	53	30	20	16	23	M14	30.45
L1016.55-2220	55	2220	38.0	120	53	30	20	16	23	M14	32.19
L1016.55-2340	55	2340	38.0	120	53	30	20	16	23	M14	33.93
L1016.55-2460	55	2460	38.0	120	53	30	20	16	23	M14	35.67
L1016.55-2580	55	2580	38.0	120	53	30	20	16	23	M14	37.41
L1016.55-2700	55	2700	38.0	120	53	30	20	16	23	M14	39.15
L1016.55-2820	55	2820	38.0	120	53	30	20	16	23	M14	40.89
L1016.55-2940	55	2940	38.0	120	53	30	20	16	23	M14	42.63
L1016.55-3060	55	3060	38.0	120	53	30	20	16	23	M14	44.37
L1016.55-3180	55	3180	38.0	120	53	30	20	16	23	M14	46.11
L1016.55-3300	55	3300	38.0	120	53	30	20	16	23	M14	47.85
L1016.55-3420	55	3420	38.0	120	53	30	20	16	23	M14	49.59
L1016.55-3540	55	3540	38.0	120	53	30	20	16	23	M14	51.33
L1016.55-3660	55	3660	38.0	120	53	30	20	16	23	M14	53.07
L1016.55-3780	55	3780	38.0	120	53	30	20	16	23	M14	54.81
L1016.55-3900	55	3900	38.0	120	53	30	20	16	23	M14	56.55
L1016.55-4000	55	4000	38.0	120	53	30	20	16	23	M14	58.00





L1016.RF15

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 1,4 Kg/m.

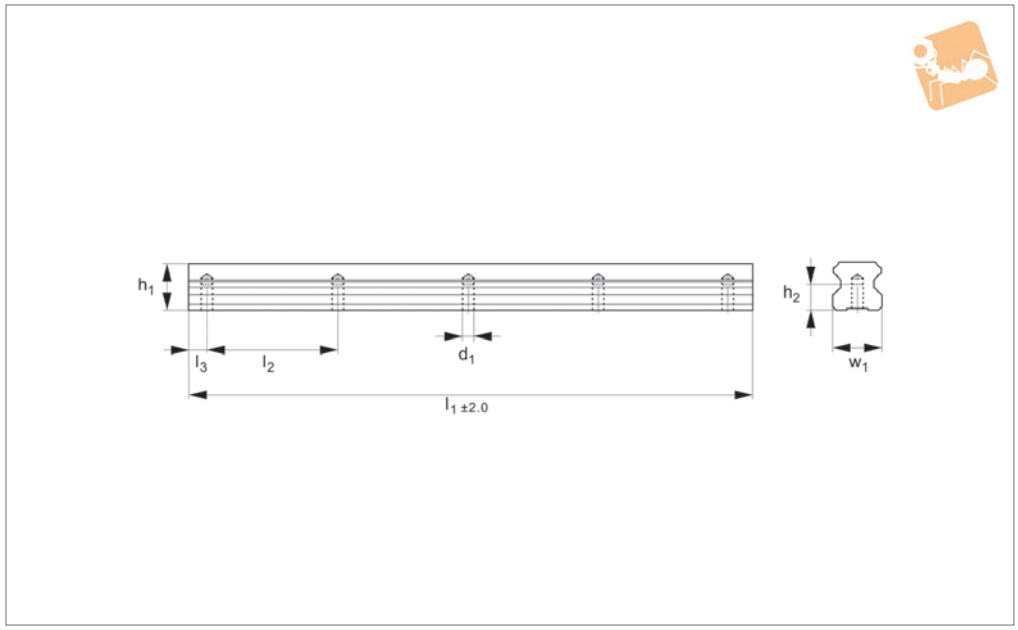
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF15-0160	15	160	13.0	60	15	20	8	M5	0.22
L1016.RF15-0220	15	220	13.0	60	15	20	8	M5	0.31
L1016.RF15-0280	15	280	13.0	60	15	20	8	M5	0.39
L1016.RF15-0340	15	340	13.0	60	15	20	8	M5	0.48
L1016.RF15-0400	15	400	13.0	60	15	20	8	M5	0.56
L1016.RF15-0460	15	460	13.0	60	15	20	8	M5	0.64
L1016.RF15-0520	15	520	13.0	60	15	20	8	M5	0.73
L1016.RF15-0580	15	580	13.0	60	15	20	8	M5	0.81
L1016.RF15-0640	15	640	13.0	60	15	20	8	M5	0.90
L1016.RF15-0700	15	700	13.0	60	15	20	8	M5	0.98
L1016.RF15-0760	15	760	13.0	60	15	20	8	M5	1.06
L1016.RF15-0820	15	820	13.0	60	15	20	8	M5	1.15
L1016.RF15-0880	15	880	13.0	60	15	20	8	M5	1.23
L1016.RF15-0940	15	940	13.0	60	15	20	8	M5	1.32
L1016.RF15-1000	15	1000	13.0	60	15	20	8	M5	1.40
L1016.RF15-1060	15	1060	13.0	60	15	20	8	M5	1.48
L1016.RF15-1120	15	1120	13.0	60	15	20	8	M5	1.57
L1016.RF15-1180	15	1180	13.0	60	15	20	8	M5	1.65
L1016.RF15-1240	15	1240	13.0	60	15	20	8	M5	1.74
L1016.RF15-1300	15	1300	13.0	60	15	20	8	M5	1.82
L1016.RF15-1360	15	1360	13.0	60	15	20	8	M5	1.90
L1016.RF15-1420	15	1420	13.0	60	15	20	8	M5	1.99
L1016.RF15-1480	15	1480	13.0	60	15	20	8	M5	2.07
L1016.RF15-1540	15	1540	13.0	60	15	20	8	M5	2.16
L1016.RF15-1600	15	1600	13.0	60	15	20	8	M5	2.24
L1016.RF15-1660	15	1660	13.0	60	15	20	8	M5	2.32
L1016.RF15-1720	15	1720	13.0	60	15	20	8	M5	2.41
L1016.RF15-1780	15	1780	13.0	60	15	20	8	M5	2.49
L1016.RF15-1840	15	1840	13.0	60	15	20	8	M5	2.58
L1016.RF15-1900	15	1900	13.0	60	15	20	8	M5	2.66
L1016.RF15-1960	15	1960	13.0	60	15	20	8	M5	2.74
L1016.RF15-2020	15	2020	13.0	60	15	20	8	M5	2.83

15mm Linear Guide Rail

rear fixing



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF15-2080	15	2080	13.0	60	15	20	8	M5	2.91
L1016.RF15-2140	15	2140	13.0	60	15	20	8	M5	3.00
L1016.RF15-2200	15	2220	13.0	60	15	20	8	M5	3.08
L1016.RF15-2260	15	2260	13.0	60	15	20	8	M5	3.16
L1016.RF15-2320	15	2320	13.0	60	15	20	8	M5	3.25
L1016.RF15-2380	15	2380	13.0	60	15	20	8	M5	3.33
L1016.RF15-2440	15	2440	13.0	60	15	20	8	M5	3.42
L1016.RF15-2500	15	2500	13.0	60	15	20	8	M5	3.50
L1016.RF15-2560	15	2560	13.0	60	15	20	8	M5	3.58
L1016.RF15-2620	15	2620	13.0	60	15	20	8	M5	3.67
L1016.RF15-2680	15	2680	13.0	60	15	20	8	M5	3.75
L1016.RF15-2740	15	2740	13.0	60	15	20	8	M5	3.84
L1016.RF15-2800	15	2800	13.0	60	15	20	8	M5	3.92
L1016.RF15-2860	15	2860	13.0	60	15	20	8	M5	4.00
L1016.RF15-2920	15	2920	13.0	60	15	20	8	M5	4.09
L1016.RF15-2980	15	2980	13.0	60	15	20	8	M5	4.17
L1016.RF15-3040	15	3040	13.0	60	15	20	8	M5	4.26
L1016.RF15-3100	15	3100	13.0	60	15	20	8	M5	4.34
L1016.RF15-3160	15	3160	13.0	60	15	20	8	M5	4.42
L1016.RF15-3220	15	3220	13.0	60	15	20	8	M5	4.51
L1016.RF15-3280	15	3280	13.0	60	15	20	8	M5	4.59
L1016.RF15-3340	15	3340	13.0	60	15	20	8	M5	4.68
L1016.RF15-3400	15	3400	13.0	60	15	20	8	M5	4.76
L1016.RF15-3460	15	3460	13.0	60	15	20	8	M5	4.84
L1016.RF15-3520	15	3520	13.0	60	15	20	8	M5	4.93
L1016.RF15-3580	15	3580	13.0	60	15	20	8	M5	5.01
L1016.RF15-3640	15	3640	13.0	60	15	20	8	M5	5.10
L1016.RF15-3700	15	3700	13.0	60	15	20	8	M5	5.18
L1016.RF15-3760	15	3760	13.0	60	15	20	8	M5	5.26
L1016.RF15-3820	15	3820	13.0	60	15	20	8	M5	5.35
L1016.RF15-3880	15	3880	13.0	60	15	20	8	M5	5.43
L1016.RF15-3940	15	3940	13.0	60	15	20	8	M5	5.52
L1016.RF15-4000	15	4000	13.0	60	15	20	8	M5	5.60





L1016.RF20

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 2,6 Kg/m.

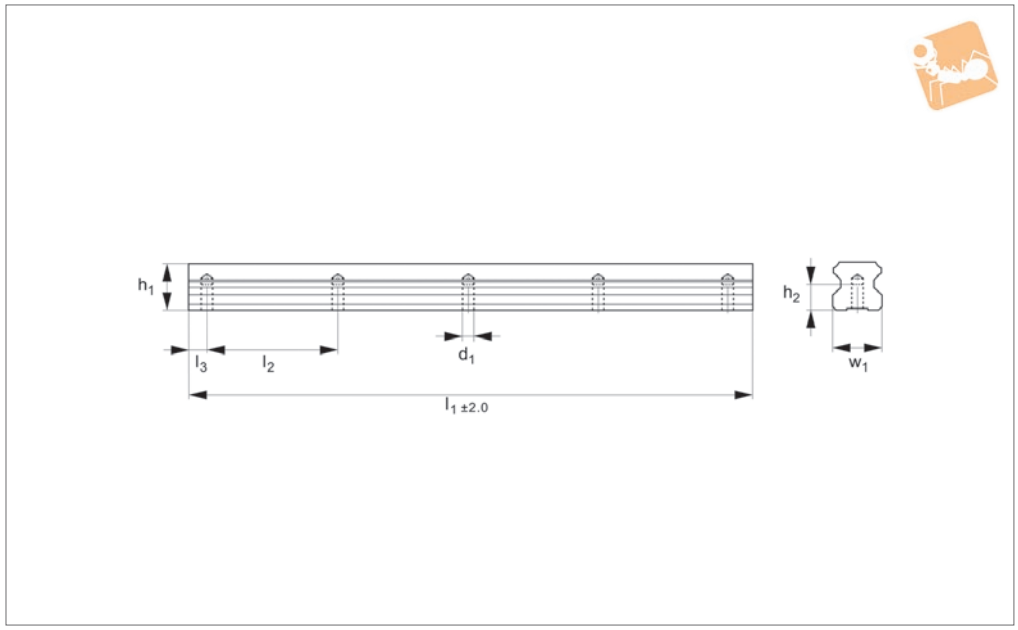
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF20-0160	20	160	16.3	60	20	20	10	M6	0.42
L1016.RF20-0220	20	220	16.3	60	20	20	10	M6	0.57
L1016.RF20-0280	20	280	16.3	60	20	20	10	M6	0.73
L1016.RF20-0340	20	340	16.3	60	20	20	10	M6	0.88
L1016.RF20-0400	20	400	16.3	60	20	20	10	M6	1.04
L1016.RF20-0460	20	460	16.3	60	20	20	10	M6	1.20
L1016.RF20-0520	20	520	16.3	60	20	20	10	M6	1.35
L1016.RF20-0580	20	580	16.3	60	20	20	10	M6	1.51
L1016.RF20-0640	20	640	16.3	60	20	20	10	M6	1.66
L1016.RF20-0700	20	700	16.3	60	20	20	10	M6	1.82
L1016.RF20-0760	20	760	16.3	60	20	20	10	M6	1.98
L1016.RF20-0820	20	820	16.3	60	20	20	10	M6	2.13
L1016.RF20-0880	20	880	16.3	60	20	20	10	M6	2.29
L1016.RF20-0940	20	940	16.3	60	20	20	10	M6	2.44
L1016.RF20-1000	20	1000	16.3	60	20	20	10	M6	2.60
L1016.RF20-1060	20	1060	16.3	60	20	20	10	M6	2.76
L1016.RF20-1120	20	1120	16.3	60	20	20	10	M6	2.91
L1016.RF20-1180	20	1180	16.3	60	20	20	10	M6	3.07
L1016.RF20-1240	20	1240	16.3	60	20	20	10	M6	3.22
L1016.RF20-1300	20	1300	16.3	60	20	20	10	M6	3.38
L1016.RF20-1360	20	1360	16.3	60	20	20	10	M6	3.54
L1016.RF20-1420	20	1420	16.3	60	20	20	10	M6	3.69
L1016.RF20-1480	20	1480	16.3	60	20	20	10	M6	3.85
L1016.RF20-1540	20	1540	16.3	60	20	20	10	M6	4.00
L1016.RF20-1600	20	1600	16.3	60	20	20	10	M6	4.16
L1016.RF20-1660	20	1660	16.3	60	20	20	10	M6	4.32
L1016.RF20-1720	20	1720	16.3	60	20	20	10	M6	4.47
L1016.RF20-1780	20	1780	16.3	60	20	20	10	M6	4.63
L1016.RF20-1840	20	1840	16.3	60	20	20	10	M6	4.78
L1016.RF20-1900	20	1900	16.3	60	20	20	10	M6	4.94
L1016.RF20-1960	20	1960	16.3	60	20	20	10	M6	5.10
L1016.RF20-2020	20	2020	16.3	60	20	20	10	M6	5.25

20mm Linear Guide Rail

rear fixing



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF20-2080	20	2080	16.3	60	20	20	10	M6	5.41
L1016.RF20-2140	20	2140	16.3	60	20	20	10	M6	5.56
L1016.RF20-2200	20	2200	16.3	60	20	20	10	M6	5.72
L1016.RF20-2260	20	2260	16.3	60	20	20	10	M6	5.88
L1016.RF20-2320	20	2320	16.3	60	20	20	10	M6	6.03
L1016.RF20-2380	20	2380	16.3	60	20	20	10	M6	6.19
L1016.RF20-2440	20	2440	16.3	60	20	20	10	M6	6.34
L1016.RF20-2500	20	2500	16.3	60	20	20	10	M6	6.50
L1016.RF20-2560	20	2560	16.3	60	20	20	10	M6	6.66
L1016.RF20-2620	20	2620	16.3	60	20	20	10	M6	6.81
L1016.RF20-2680	20	2680	16.3	60	20	20	10	M6	6.97
L1016.RF20-2740	20	2740	16.3	60	20	20	10	M6	7.12
L1016.RF20-2800	20	2800	16.3	60	20	20	10	M6	7.28
L1016.RF20-2860	20	2860	16.3	60	20	20	10	M6	7.44
L1016.RF20-2920	20	2920	16.3	60	20	20	10	M6	7.59
L1016.RF20-2980	20	2980	16.3	60	20	20	10	M6	7.75
L1016.RF20-3040	20	3040	16.3	60	20	20	10	M6	7.90
L1016.RF20-3100	20	3100	16.3	60	20	20	10	M6	8.06
L1016.RF20-3160	20	3160	16.3	60	20	20	10	M6	8.22
L1016.RF20-3220	20	3220	16.3	60	20	20	10	M6	8.37
L1016.RF20-3280	20	3280	16.3	60	20	20	10	M6	8.53
L1016.RF20-3340	20	3340	16.3	60	20	20	10	M6	8.68
L1016.RF20-3400	20	3400	16.3	60	20	20	10	M6	8.84
L1016.RF20-3460	20	3460	16.3	60	20	20	10	M6	9.00
L1016.RF20-3520	20	3520	16.3	60	20	20	10	M6	9.15
L1016.RF20-3580	20	3580	16.3	60	20	20	10	M6	9.31
L1016.RF20-3640	20	3640	16.3	60	20	20	10	M6	9.46
L1016.RF20-3700	20	3700	16.3	60	20	20	10	M6	9.62
L1016.RF20-3760	20	3760	16.3	60	20	20	10	M6	9.78
L1016.RF20-3820	20	3820	16.3	60	20	20	10	M6	9.93
L1016.RF20-3880	20	3880	16.3	60	20	20	10	M6	10.09
L1016.RF20-3940	20	3940	16.3	60	20	20	10	M6	10.24
L1016.RF20-4000	20	4000	16.3	60	20	20	10	M6	10.40





L1016.RF25

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 3,6 Kg/m.

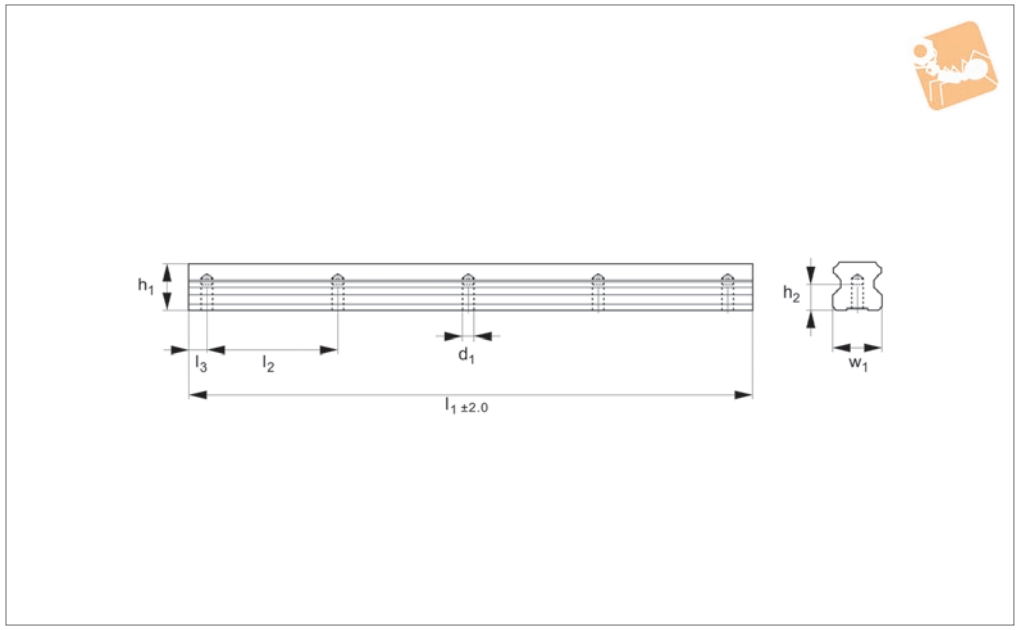
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF25-0160	25	160	19.2	60	23	20	12	M6	0.58
L1016.RF25-0220	25	220	19.2	60	23	20	12	M6	0.79
L1016.RF25-0280	25	280	19.2	60	23	20	12	M6	1.01
L1016.RF25-0340	25	340	19.2	60	23	20	12	M6	1.22
L1016.RF25-0400	25	400	19.2	60	23	20	12	M6	1.44
L1016.RF25-0460	25	460	19.2	60	23	20	12	M6	1.66
L1016.RF25-0520	25	520	19.2	60	23	20	12	M6	1.87
L1016.RF25-0580	25	580	19.2	60	23	20	12	M6	2.09
L1016.RF25-0640	25	640	19.2	60	23	20	12	M6	2.30
L1016.RF25-0700	25	700	19.2	60	23	20	12	M6	2.52
L1016.RF25-0760	25	760	19.2	60	23	20	12	M6	2.74
L1016.RF25-0820	25	820	19.2	60	23	20	12	M6	2.95
L1016.RF25-0880	25	880	19.2	60	23	20	12	M6	3.17
L1016.RF25-0940	25	940	19.2	60	23	20	12	M6	3.38
L1016.RF25-1000	25	1000	19.2	60	23	20	12	M6	3.60
L1016.RF25-1060	25	1060	19.2	60	23	20	12	M6	3.82
L1016.RF25-1120	25	1120	19.2	60	23	20	12	M6	4.03
L1016.RF25-1180	25	1180	19.2	60	23	20	12	M6	4.25
L1016.RF25-1240	25	1240	19.2	60	23	20	12	M6	4.46
L1016.RF25-1300	25	1300	19.2	60	23	20	12	M6	4.68
L1016.RF25-1360	25	1360	19.2	60	23	20	12	M6	4.90
L1016.RF25-1420	25	1420	19.2	60	23	20	12	M6	5.11
L1016.RF25-1480	25	1480	19.2	60	23	20	12	M6	5.33
L1016.RF25-1540	25	1540	19.2	60	23	20	12	M6	5.54
L1016.RF25-1600	25	1600	19.2	60	23	20	12	M6	5.76
L1016.RF25-1660	25	1660	19.2	60	23	20	12	M6	5.98
L1016.RF25-1720	25	1720	19.2	60	23	20	12	M6	6.19
L1016.RF25-1780	25	1780	19.2	60	23	20	12	M6	6.41
L1016.RF25-1840	25	1840	19.2	60	23	20	12	M6	6.62
L1016.RF25-1900	25	1900	19.2	60	23	20	12	M6	6.84
L1016.RF25-1960	25	1960	19.2	60	23	20	12	M6	7.06
L1016.RF25-2020	25	2020	19.2	60	23	20	12	M6	7.27

25mm Linear Guide Rail

rear fixing



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF25-2080	25	2080	19.2	60	23	20	12	M6	7.49
L1016.RF25-2140	25	2140	19.2	60	23	20	12	M6	7.70
L1016.RF25-2200	25	2200	19.2	60	23	20	12	M6	7.92
L1016.RF25-2260	25	2260	19.2	60	23	20	12	M6	8.14
L1016.RF25-2320	25	2320	19.2	60	23	20	12	M6	8.35
L1016.RF25-2380	25	2380	19.2	60	23	20	12	M6	8.57
L1016.RF25-2440	25	2440	19.2	60	23	20	12	M6	8.78
L1016.RF25-2500	25	2500	19.2	60	23	20	12	M6	9.00
L1016.RF25-2560	25	2560	19.2	60	23	20	12	M6	9.22
L1016.RF25-2620	25	2620	19.2	60	23	20	12	M6	9.43
L1016.RF25-2680	25	2680	19.2	60	23	20	12	M6	9.65
L1016.RF25-2740	25	2740	19.2	60	23	20	12	M6	9.86
L1016.RF25-2800	25	2800	19.2	60	23	20	12	M6	10.08
L1016.RF25-2860	25	2860	19.2	60	23	20	12	M6	10.30
L1016.RF25-2920	25	2920	19.2	60	23	20	12	M6	10.51
L1016.RF25-2980	25	2980	19.2	60	23	20	12	M6	10.73
L1016.RF25-3040	25	3040	19.2	60	23	20	12	M6	10.94
L1016.RF25-3100	25	3100	19.2	60	23	20	12	M6	11.16
L1016.RF25-3160	25	3160	19.2	60	23	20	12	M6	11.38
L1016.RF25-3220	25	3220	19.2	60	23	20	12	M6	11.59
L1016.RF25-3280	25	3280	19.2	60	23	20	12	M6	11.81
L1016.RF25-3340	25	3340	19.2	60	23	20	12	M6	12.02
L1016.RF25-3400	25	3400	19.2	60	23	20	12	M6	12.24
L1016.RF25-3460	25	3460	19.2	60	23	20	12	M6	12.46
L1016.RF25-3520	25	3520	19.2	60	23	20	12	M6	12.67
L1016.RF25-3580	25	3580	19.2	60	23	20	12	M6	12.89
L1016.RF25-3640	25	3640	19.2	60	23	20	12	M6	13.10
L1016.RF25-3700	25	3700	19.2	60	23	20	12	M6	13.32
L1016.RF25-3760	25	3760	19.2	60	23	20	12	M6	13.54
L1016.RF25-3820	25	3820	19.2	60	23	20	12	M6	13.75
L1016.RF25-3880	25	3880	19.2	60	23	20	12	M6	13.97
L1016.RF25-3940	25	3940	19.2	60	23	20	12	M6	14.18
L1016.RF25-4000	25	4000	19.2	60	23	20	12	M6	14.40





L1016.RF30

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 5,2 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF30-0200	30	200	22.8	80	28	20	15	M8	1.04
L1016.RF30-0280	30	280	22.8	80	28	20	15	M8	1.46
L1016.RF30-0360	30	360	22.8	80	28	20	15	M8	1.87
L1016.RF30-0440	30	440	22.8	80	28	20	15	M8	2.29
L1016.RF30-0520	30	520	22.8	80	28	20	15	M8	2.70
L1016.RF30-0600	30	600	22.8	80	28	20	15	M8	3.12
L1016.RF30-0680	30	680	22.8	80	28	20	15	M8	3.54
L1016.RF30-0760	30	760	22.8	80	28	20	15	M8	3.95
L1016.RF30-0840	30	840	22.8	80	28	20	15	M8	4.37
L1016.RF30-0920	30	920	22.8	80	28	20	15	M8	4.78
L1016.RF30-1000	30	1000	22.8	80	28	20	15	M8	5.20
L1016.RF30-1080	30	1080	22.8	80	28	20	15	M8	5.62
L1016.RF30-1160	30	1160	22.8	80	28	20	15	M8	6.03
L1016.RF30-1240	30	1240	22.8	80	28	20	15	M8	6.45
L1016.RF30-1320	30	1320	22.8	80	28	20	15	M8	6.86
L1016.RF30-1400	30	1400	22.8	80	28	20	15	M8	7.28
L1016.RF30-1480	30	1480	22.8	80	28	20	15	M8	7.70
L1016.RF30-1560	30	1560	22.8	80	28	20	15	M8	8.11
L1016.RF30-1640	30	1640	22.8	80	28	20	15	M8	8.53
L1016.RF30-1720	30	1720	22.8	80	28	20	15	M8	8.94
L1016.RF30-1800	30	1800	22.8	80	28	20	15	M8	9.36
L1016.RF30-1880	30	1880	22.8	80	28	20	15	M8	9.78
L1016.RF30-1960	30	1960	22.8	80	28	20	15	M8	10.19
L1016.RF30-2040	30	2040	22.8	80	28	20	15	M8	10.61
L1016.RF30-2120	30	2120	22.8	80	28	20	15	M8	11.02
L1016.RF30-2200	30	2200	22.8	80	28	20	15	M8	11.44
L1016.RF30-2280	30	2280	22.8	80	28	20	15	M8	11.86
L1016.RF30-2360	30	2360	22.8	80	28	20	15	M8	12.27
L1016.RF30-2440	30	2440	22.8	80	28	20	15	M8	12.69
L1016.RF30-2520	30	2520	22.8	80	28	20	15	M8	13.10
L1016.RF30-2600	30	2600	22.8	80	28	20	15	M8	13.52
L1016.RF30-2680	30	2680	22.8	80	28	20	15	M8	13.94

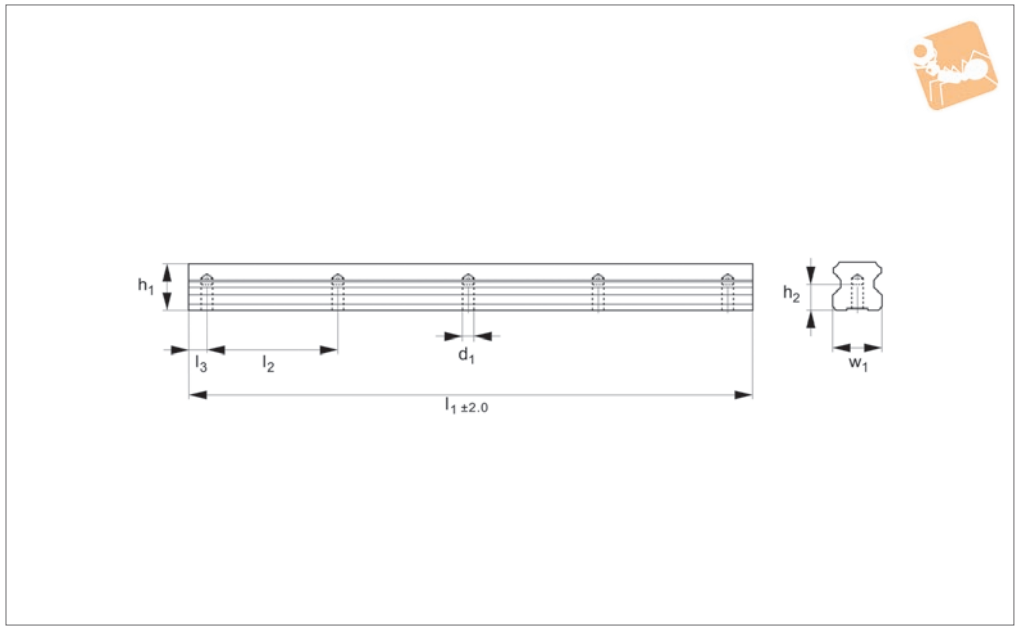


30mm Linear Guide Rail

rear fixing



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF30-2760	30	2760	22.8	80	28	20	15	M8	14.35
L1016.RF30-2840	30	2840	22.8	80	28	20	15	M8	14.77
L1016.RF30-2920	30	2920	22.8	80	28	20	15	M8	15.18
L1016.RF30-3000	30	3000	22.8	80	28	20	15	M8	15.60
L1016.RF30-3080	30	3080	22.8	80	28	20	15	M8	16.02
L1016.RF30-3160	30	3160	22.8	80	28	20	15	M8	16.43
L1016.RF30-3240	30	3240	22.8	80	28	20	15	M8	16.85
L1016.RF30-3320	30	3320	22.8	80	28	20	15	M8	17.26
L1016.RF30-3400	30	3400	22.8	80	28	20	15	M8	17.68
L1016.RF30-3480	30	3480	22.8	80	28	20	15	M8	18.10
L1016.RF30-3560	30	3560	22.8	80	28	20	15	M8	18.51
L1016.RF30-3640	30	3640	22.8	80	28	20	15	M8	18.93
L1016.RF30-3720	30	3720	22.8	80	28	20	15	M8	19.34
L1016.RF30-3800	30	3800	22.8	80	28	20	15	M8	19.76
L1016.RF30-3880	30	3880	22.8	80	28	20	15	M8	20.18
L1016.RF30-3960	30	3960	22.8	80	28	20	15	M8	20.59
L1016.RF30-4000	30	4000	22.8	80	28	20	15	M8	20.80





L1016.RF35

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 7,2 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF35-0200	35	200	26.0	80	34	20	15	M8	1.44
L1016.RF35-0280	35	280	26.0	80	34	20	15	M8	2.02
L1016.RF35-0360	35	360	26.0	80	34	20	15	M8	2.59
L1016.RF35-0440	35	440	26.0	80	34	20	15	M8	3.17
L1016.RF35-0520	35	520	26.0	80	34	20	15	M8	3.74
L1016.RF35-0600	35	600	26.0	80	34	20	15	M8	4.32
L1016.RF35-0680	35	680	26.0	80	34	20	15	M8	4.90
L1016.RF35-0760	35	760	26.0	80	34	20	15	M8	5.47
L1016.RF35-0840	35	840	26.0	80	34	20	15	M8	6.05
L1016.RF35-0920	35	920	26.0	80	34	20	15	M8	6.62
L1016.RF35-1000	35	1000	26.0	80	34	20	15	M8	7.20
L1016.RF35-1080	35	1080	26.0	80	34	20	15	M8	7.78
L1016.RF35-1160	35	1160	26.0	80	34	20	15	M8	8.35
L1016.RF35-1240	35	1240	26.0	80	34	20	15	M8	8.93
L1016.RF35-1320	35	1320	26.0	80	34	20	15	M8	9.50
L1016.RF35-1400	35	1400	26.0	80	34	20	15	M8	10.08
L1016.RF35-1480	35	1480	26.0	80	34	20	15	M8	10.66
L1016.RF35-1560	35	1560	26.0	80	34	20	15	M8	11.23
L1016.RF35-1640	35	1640	26.0	80	34	20	15	M8	11.81
L1016.RF35-1720	35	1720	26.0	80	34	20	15	M8	12.38
L1016.RF35-1800	35	1800	26.0	80	34	20	15	M8	12.96
L1016.RF35-1880	35	1880	26.0	80	34	20	15	M8	13.54
L1016.RF35-1960	35	1960	26.0	80	34	20	15	M8	14.11
L1016.RF35-2040	35	2040	26.0	80	34	20	15	M8	14.69
L1016.RF35-2120	35	2120	26.0	80	34	20	15	M8	15.26
L1016.RF35-2200	35	2200	26.0	80	34	20	15	M8	15.84
L1016.RF35-2280	35	2280	26.0	80	34	20	15	M8	16.42
L1016.RF35-2360	35	2360	26.0	80	34	20	15	M8	16.99
L1016.RF35-2440	35	2440	26.0	80	34	20	15	M8	17.57
L1016.RF35-2520	35	2520	26.0	80	34	20	15	M8	18.14
L1016.RF35-2600	35	2600	26.0	80	34	20	15	M8	18.72
L1016.RF35-2680	35	2680	26.0	80	34	20	15	M8	19.30

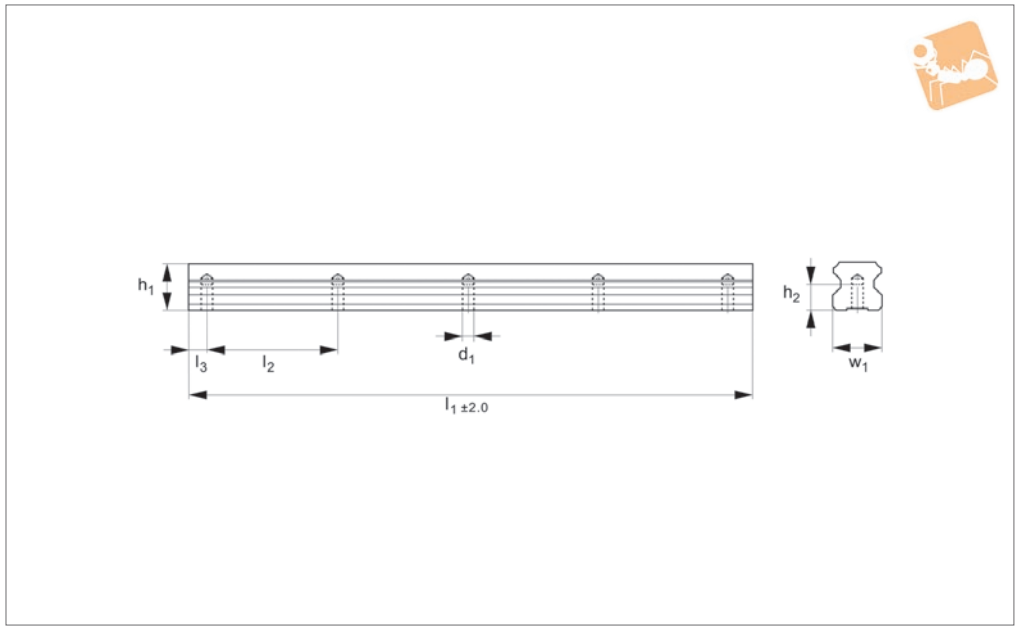


35mm Linear Guide Rail

rear fixing



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF35-2760	35	2760	26.0	80	34	20	15	M8	19.87
L1016.RF35-2840	35	2840	26.0	80	34	20	15	M8	20.45
L1016.RF35-2920	35	2920	26.0	80	34	20	15	M8	21.02
L1016.RF35-3000	35	3000	26.0	80	34	20	15	M8	21.60
L1016.RF35-3080	35	3080	26.0	80	34	20	15	M8	22.18
L1016.RF35-3160	35	3160	26.0	80	34	20	15	M8	22.75
L1016.RF35-3240	35	3240	26.0	80	34	20	15	M8	23.33
L1016.RF35-3320	35	3320	26.0	80	34	20	15	M8	23.90
L1016.RF35-3400	35	3400	26.0	80	34	20	15	M8	24.48
L1016.RF35-3480	35	3480	26.0	80	34	20	15	M8	25.06
L1016.RF35-3560	35	3560	26.0	80	34	20	15	M8	25.63
L1016.RF35-3640	35	3640	26.0	80	34	20	15	M8	26.21
L1016.RF35-3720	35	3720	26.0	80	34	20	15	M8	26.78
L1016.RF35-3800	35	3800	26.0	80	34	20	15	M8	27.36
L1016.RF35-3880	35	3880	26.0	80	34	20	15	M8	27.94
L1016.RF35-3960	35	3960	26.0	80	34	20	15	M8	28.51
L1016.RF35-4000	35	4000	26.0	80	34	20	15	M8	28.80





L1016.RF45

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 12,3 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF45-0255	45	255	31.1	105	45	22.5	24	M12	26.09
L1016.RF45-0360	45	360	31.1	105	45	22.5	24	M12	36.83
L1016.RF45-0465	45	465	31.1	105	45	22.5	24	M12	47.57
L1016.RF45-0570	45	570	31.1	105	45	22.5	24	M12	58.31
L1016.RF45-0675	45	675	31.1	105	45	22.5	24	M12	69.05
L1016.RF45-0780	45	780	31.1	105	45	22.5	24	M12	79.79
L1016.RF45-0885	45	885	31.1	105	45	22.5	24	M12	90.54
L1016.RF45-0990	45	990	31.1	105	45	22.5	24	M12	101.28
L1016.RF45-1095	45	1095	31.1	105	45	22.5	24	M12	13.47
L1016.RF45-1200	45	1200	31.1	105	45	22.5	24	M12	14.76
L1016.RF45-1305	45	1305	31.1	105	45	22.5	24	M12	16.05
L1016.RF45-1410	45	1410	31.1	105	45	22.5	24	M12	17.34
L1016.RF45-1515	45	1515	31.1	105	45	22.5	24	M12	18.63
L1016.RF45-1620	45	1620	31.1	105	45	22.5	24	M12	19.93
L1016.RF45-1725	45	1725	31.1	105	45	22.5	24	M12	21.22
L1016.RF45-1830	45	1830	31.1	105	45	22.5	24	M12	22.51
L1016.RF45-1935	45	1935	31.1	105	45	22.5	24	M12	23.80
L1016.RF45-2040	45	2040	31.1	105	45	22.5	24	M12	25.09
L1016.RF45-2145	45	2145	31.1	105	45	22.5	24	M12	26.38
L1016.RF45-2250	45	2250	31.1	105	45	22.5	24	M12	27.68
L1016.RF45-2355	45	2355	31.1	105	45	22.5	24	M12	28.97
L1016.RF45-2460	45	2460	31.1	105	45	22.5	24	M12	30.26
L1016.RF45-2565	45	2565	31.1	105	45	22.5	24	M12	31.55
L1016.RF45-2670	45	2670	31.1	105	45	22.5	24	M12	32.84
L1016.RF45-2775	45	2775	31.1	105	45	22.5	24	M12	34.13
L1016.RF45-2880	45	2880	31.1	105	45	22.5	24	M12	35.42
L1016.RF45-2985	45	2985	31.1	105	45	22.5	24	M12	36.72
L1016.RF45-3090	45	3090	31.1	105	45	22.5	24	M12	38.01
L1016.RF45-3195	45	3195	31.1	105	45	22.5	24	M12	39.30
L1016.RF45-3300	45	3300	31.1	105	45	22.5	24	M12	40.59
L1016.RF45-3405	45	3405	31.1	105	45	22.5	24	M12	41.88
L1016.RF45-3510	45	3510	31.1	105	45	22.5	24	M12	43.17

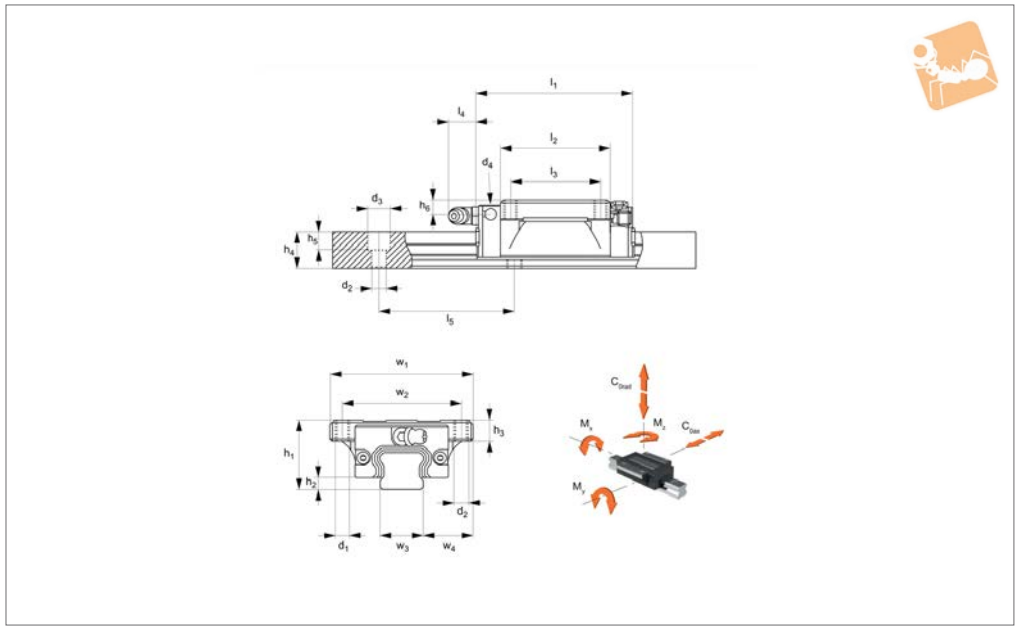


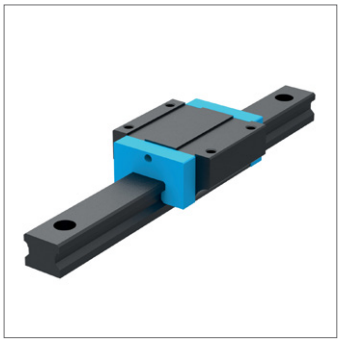
45mm Linear Guide Rail

rear fixing



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.RF45-3615	45	3615	31.1	105	45	22.5	24	M12	44.46
L1016.RF45-3720	45	3720	31.1	105	45	22.5	24	M12	45.76
L1016.RF45-3825	45	3825	31.1	105	45	22.5	24	M12	47.05
L1016.RF45-3930	45	3930	31.1	105	45	22.5	24	M12	48.34
L1016.RF45-4000	45	4000	31.1	105	45	22.5	24	M12	49.20





L1016.F-BC

Material

Hardened and ground steel. Matt black oxide ceramic layer, Thickness 2-10 µ. No deformation of the parts. Resistant to acids, alkalis and solvents. Relatively soft layer (up to 350 HV), which clears away by rolling over in the area of the raceways. Suitable for applications in the optic and medical industry.

Technical Notes

Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.55). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

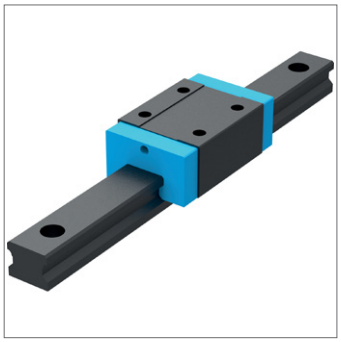
Tips

Improved version with ball cages allowing the carriages to be removed from the rail without the balls falling out.

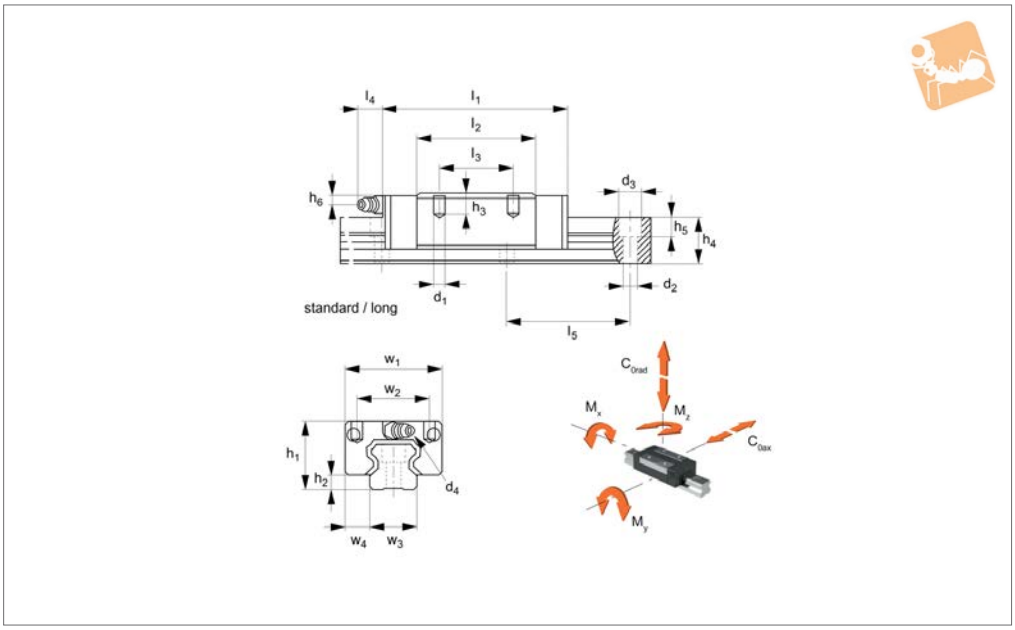
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight kg
L1016.F15-BC	15	58.6	24	40.2	47	30	3.3	8.0	13.0	M 5	6.0	4.5	5.5	38	15	16.0	5.0	0.21
L1016.F15-L-BC	15	66.1	24	47.7	47	30	3.3	8.0	13.0	M 5	6.0	4.5	5.5	38	15	16.0	5.0	0.23
L1016.F20-BC	20	69.3	30	48.5	63	40	4.5	9.0	16.3	M 6	8.5	6.0	7.1	53	20	21.5	15.6	0.40
L1016.F20-L-BC	20	82.1	30	61.3	63	40	4.5	9.0	16.3	M 6	8.5	6.0	7.1	53	20	21.5	15.6	0.46
L1016.F25-BC	25	79.2	36	57.5	70	45	5.8	10.0	19.2	M 8	9.0	7.0	10.2	57	23	23.5	15.6	0.57
L1016.F25-L-BC	25	93.9	36	72.2	70	45	5.8	10.0	19.2	M 8	9.0	7.0	10.2	57	23	23.5	15.6	0.72

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.F15-BC	60	7.5	M3 x 0,5	137	120	120	11.67	19.90
L1016.F15-L-BC	60	7.5	M3 x 0,5	166	171	171	14.12	24.05
L1016.F20-BC	60	9.5	M6 x 1,0	289	224	224	17.98	30.96
L1016.F20-L-BC	60	9.5	M6 x 1,0	376	366	366	23.30	40.11
L1016.F25-BC	60	11.0	M6 x 1,0	447	358	358	25.25	41.73
L1016.F25-L-BC	60	11.0	M6 x 1,0	576	577	577	32.44	53.63

Unflanged Carriages - Standard
blackened



L1016.U-BC



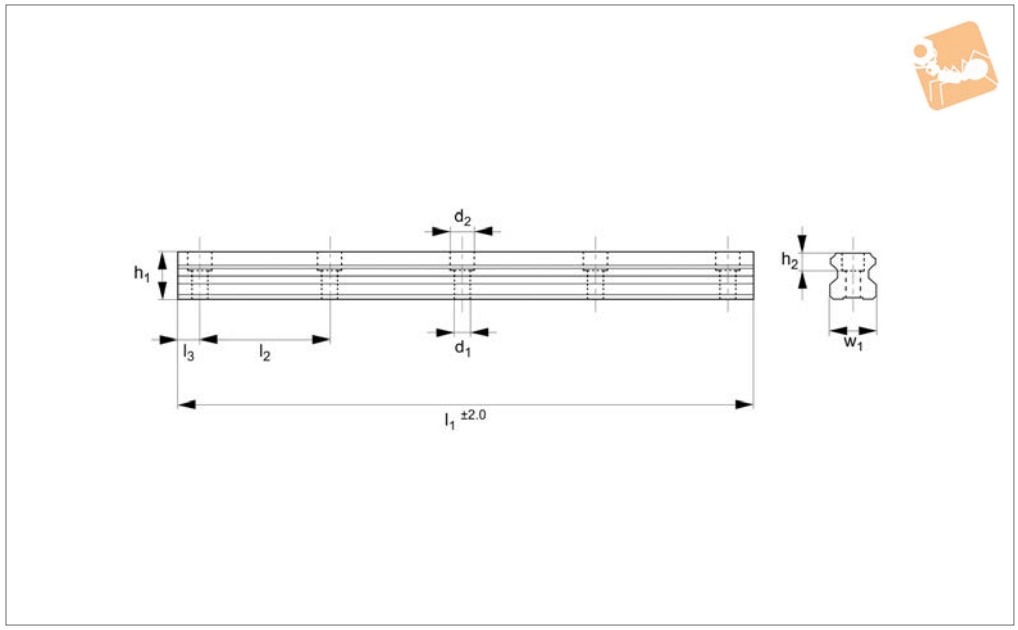
Material
Hardened and ground steel. Matt black oxide ceramic layer. Thickness 2-10 µ. No deformation of the parts. Resistant to acids, alkalis and solvents. Relatively soft layer (up to 350 HV), which clears away by rolling over in the area of the raceways. Suitable for applications in the optic and medical industry.

Technical Notes
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1016.15 through to L1016.55). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Tips
Improved version with ball cages allowing the carriages to be removed from the rail without the balls falling out.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	h_3	h_4	d_1	h_5	d_2	h_6	w_2	w_3	w_4	l_4	Weight kg
L1016.U15-BC	15	58.6	28	40.2	34	26	3.3	6.0	13.0	M 4	6.0	4.5	9.5	26	15	9.5	5.0	0.19
L1016.U20-BC	20	69.3	30	48.5	44	36	4.5	6.5	16.3	M 5	8.5	6.0	7.1	32	20	12.0	15.6	0.31
L1016.U20-L-BC	20	82.1	30	61.3	44	36	4.5	6.5	16.3	M 5	8.5	6.0	7.1	32	20	12.0	15.6	0.36
L1016.U25-BC	25	79.2	40	57.5	48	35	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	0.45
L1016.U25-L-BC	25	93.9	40	72.2	48	35	5.8	9.0	19.2	M 6	9.0	7.0	14.2	35	23	12.5	15.6	0.66

Order No.	l_5	d_3	d_4	M_x Nm	M_y Nm	M_z Nm	Dyn. load $C_{rad\ \&\ ax}$ kN	Static load $C_{0rad\ \&\ ax}$ kN
L1016.U15-BC	60	7.5	M 3x0,5	137	120	120	11.67	19.90
L1016.U20-BC	60	9.5	M 6x1,0	289	224	224	17.98	30.96
L1016.U20-L-BC	60	9.5	M 6x1,0	376	366	366	23.30	40.11
L1016.U25-BC	60	11.0	M 6x1,0	447	358	358	25.25	41.73
L1016.U25-L-BC	60	11.0	M 6x1,0	576	577	577	32.44	53.63





L1016.BL15

Material
Hardened and ground steel (typically 60 HRc). Black oxide.

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 1,4 Kg/m.

Tips
Plastic screw covers issued with the rails to protect screw holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL15-0160	15	160	13	60	15	20	6.0	4.5	7.5	M 4	0.22
L1016.BL15-0220	15	220	13	60	15	20	6.0	4.5	7.5	M 4	0.31
L1016.BL15-0280	15	280	13	60	15	20	6.0	4.5	7.5	M 4	0.39
L1016.BL15-0340	15	340	13	60	15	20	6.0	4.5	7.5	M 4	0.48
L1016.BL15-0400	15	400	13	60	15	20	6.0	4.5	7.5	M 4	0.56
L1016.BL15-0460	15	460	13	60	15	20	6.0	4.5	7.5	M 4	0.64
L1016.BL15-0520	15	520	13	60	15	20	6.0	4.5	7.5	M 4	0.73
L1016.BL15-0580	15	580	13	60	15	20	6.0	4.5	7.5	M 4	0.81
L1016.BL15-0640	15	640	13	60	15	20	6.0	4.5	7.5	M 4	0.90
L1016.BL15-0700	15	700	13	60	15	20	6.0	4.5	7.5	M 4	0.98
L1016.BL15-0760	15	760	13	60	15	20	6.0	4.5	7.5	M 4	1.06
L1016.BL15-0820	15	820	13	60	15	20	6.0	4.5	7.5	M 4	1.15
L1016.BL15-0880	15	880	13	60	15	20	6.0	4.5	7.5	M 4	1.23
L1016.BL15-0940	15	940	13	60	15	20	6.0	4.5	7.5	M 4	1.32
L1016.BL15-1000	15	1000	13	60	15	20	6.0	4.5	7.5	M 4	1.40
L1016.BL15-1060	15	1060	13	60	15	20	6.0	4.5	7.5	M 4	1.48
L1016.BL15-1120	15	1120	13	60	15	20	6.0	4.5	7.5	M 4	1.57
L1016.BL15-1180	15	1180	13	60	15	20	6.0	4.5	7.5	M 4	1.65
L1016.BL15-1240	15	1240	13	60	15	20	6.0	4.5	7.5	M 4	1.74
L1016.BL15-1300	15	1300	13	60	15	20	6.0	4.5	7.5	M 4	1.82
L1016.BL15-1360	15	1360	13	60	15	20	6.0	4.5	7.5	M 4	1.90
L1016.BL15-1420	15	1420	13	60	15	20	6.0	4.5	7.5	M 4	1.99
L1016.BL15-1480	15	1480	13	60	15	20	6.0	4.5	7.5	M 4	2.07
L1016.BL15-1540	15	1540	13	60	15	20	6.0	4.5	7.5	M 4	2.16
L1016.BL15-1600	15	1600	13	60	15	20	6.0	4.5	7.5	M 4	2.24
L1016.BL15-1660	15	1660	13	60	15	20	6.0	4.5	7.5	M 4	2.32
L1016.BL15-1720	15	1720	13	60	15	20	6.0	4.5	7.5	M 4	2.41
L1016.BL15-1780	15	1780	13	60	15	20	6.0	4.5	7.5	M 4	2.49
L1016.BL15-1840	15	1840	13	60	15	20	6.0	4.5	7.5	M 4	2.58
L1016.BL15-1900	15	1900	13	60	15	20	6.0	4.5	7.5	M 4	2.66
L1016.BL15-1960	15	1960	13	60	15	20	6.0	4.5	7.5	M 4	2.74
L1016.BL15-2020	15	2020	13	60	15	20	6.0	4.5	7.5	M 4	2.83

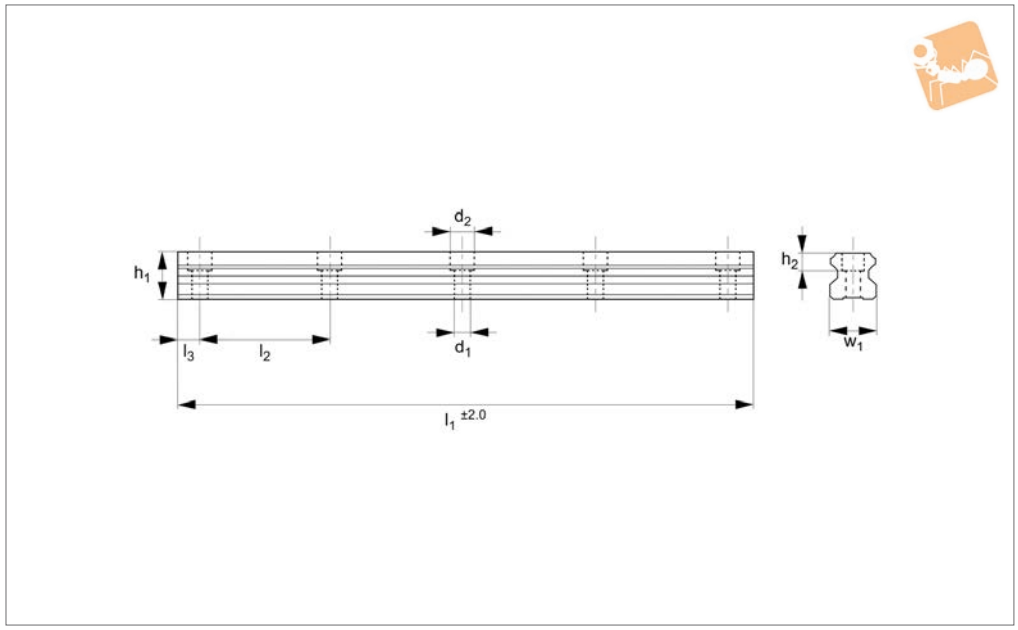


15mm Linear Guide Rail

standard, blackened



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL15-2080	15	2080	13	60	15	20	6.0	4.5	7.5	M 4	2.91
L1016.BL15-2140	15	2140	13	60	15	20	6.0	4.5	7.5	M 4	3.00
L1016.BL15-2200	15	2220	13	60	15	20	6.0	4.5	7.5	M 4	3.08
L1016.BL15-2260	15	2260	13	60	15	20	6.0	4.5	7.5	M 4	3.16
L1016.BL15-2320	15	2320	13	60	15	20	6.0	4.5	7.5	M 4	3.25
L1016.BL15-2380	15	2380	13	60	15	20	6.0	4.5	7.5	M 4	3.33
L1016.BL15-2440	15	2440	13	60	15	20	6.0	4.5	7.5	M 4	3.42
L1016.BL15-2500	15	2500	13	60	15	20	6.0	4.5	7.5	M 4	3.50
L1016.BL15-2560	15	2560	13	60	15	20	6.0	4.5	7.5	M 4	3.58
L1016.BL15-2620	15	2620	13	60	15	20	6.0	4.5	7.5	M 4	3.67
L1016.BL15-2680	15	2680	13	60	15	20	6.0	4.5	7.5	M 4	3.75
L1016.BL15-2740	15	2740	13	60	15	20	6.0	4.5	7.5	M 4	3.84
L1016.BL15-2800	15	2800	13	60	15	20	6.0	4.5	7.5	M 4	3.92
L1016.BL15-2860	15	2860	13	60	15	20	6.0	4.5	7.5	M 4	4.00
L1016.BL15-2920	15	2920	13	60	15	20	6.0	4.5	7.5	M 4	4.09
L1016.BL15-2980	15	2980	13	60	15	20	6.0	4.5	7.5	M 4	4.17
L1016.BL15-3040	15	3040	13	60	15	20	6.0	4.5	7.5	M 4	4.26
L1016.BL15-3100	15	3100	13	60	15	20	6.0	4.5	7.5	M 4	4.34
L1016.BL15-3160	15	3160	13	60	15	20	6.0	4.5	7.5	M 4	4.42
L1016.BL15-3220	15	3220	13	60	15	20	6.0	4.5	7.5	M 4	4.51
L1016.BL15-3280	15	3280	13	60	15	20	6.0	4.5	7.5	M 4	4.59
L1016.BL15-3340	15	3340	13	60	15	20	6.0	4.5	7.5	M 4	4.68
L1016.BL15-3400	15	3400	13	60	15	20	6.0	4.5	7.5	M 4	4.76
L1016.BL15-3460	15	3460	13	60	15	20	6.0	4.5	7.5	M 4	4.84
L1016.BL15-3520	15	3520	13	60	15	20	6.0	4.5	7.5	M 4	4.93
L1016.BL15-3580	15	3580	13	60	15	20	6.0	4.5	7.5	M 4	5.01
L1016.BL15-3640	15	3640	13	60	15	20	6.0	4.5	7.5	M 4	5.10
L1016.BL15-3700	15	3700	13	60	15	20	6.0	4.5	7.5	M 4	5.18
L1016.BL15-3760	15	3760	13	60	15	20	6.0	4.5	7.5	M 4	5.26
L1016.BL15-3820	15	3820	13	60	15	20	6.0	4.5	7.5	M 4	5.35
L1016.BL15-3880	15	3880	13	60	15	20	6.0	4.5	7.5	M 4	5.43
L1016.BL15-3940	15	3940	13	60	15	20	6.0	4.5	7.5	M 4	5.52
L1016.BL15-4000	15	4000	13	60	15	20	6.0	4.5	7.5	M 4	5.60





L1016.BL20

Material
Hardened and ground steel (typically 60 HRc). Black oxide.

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 2,6 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL20-0160	20	160	16.3	60	20	20	8.5	6	9.5	M 5	0.42
L1016.BL20-0220	20	220	16.3	60	20	20	8.5	6	9.5	M 5	0.57
L1016.BL20-0280	20	280	16.3	60	20	20	8.5	6	9.5	M 5	0.73
L1016.BL20-0340	20	340	16.3	60	20	20	8.5	6	9.5	M 5	0.88
L1016.BL20-0400	20	400	16.3	60	20	20	8.5	6	9.5	M 5	1.04
L1016.BL20-0460	20	460	16.3	60	20	20	8.5	6	9.5	M 5	1.20
L1016.BL20-0520	20	520	16.3	60	20	20	8.5	6	9.5	M 5	1.35
L1016.BL20-0580	20	580	16.3	60	20	20	8.5	6	9.5	M 5	1.51
L1016.BL20-0640	20	640	16.3	60	20	20	8.5	6	9.5	M 5	1.66
L1016.BL20-0700	20	700	16.3	60	20	20	8.5	6	9.5	M 5	1.82
L1016.BL20-0760	20	760	16.3	60	20	20	8.5	6	9.5	M 5	1.98
L1016.BL20-0820	20	820	16.3	60	20	20	8.5	6	9.5	M 5	2.13
L1016.BL20-0880	20	880	16.3	60	20	20	8.5	6	9.5	M 5	2.29
L1016.BL20-0940	20	940	16.3	60	20	20	8.5	6	9.5	M 5	2.44
L1016.BL20-1000	20	1000	16.3	60	20	20	8.5	6	9.5	M 5	2.60
L1016.BL20-1060	20	1060	16.3	60	20	20	8.5	6	9.5	M 5	2.76
L1016.BL20-1120	20	1120	16.3	60	20	20	8.5	6	9.5	M 5	2.91
L1016.BL20-1180	20	1180	16.3	60	20	20	8.5	6	9.5	M 5	3.07
L1016.BL20-1240	20	1240	16.3	60	20	20	8.5	6	9.5	M 5	3.22
L1016.BL20-1300	20	1300	16.3	60	20	20	8.5	6	9.5	M 5	3.38
L1016.BL20-1360	20	1360	16.3	60	20	20	8.5	6	9.5	M 5	3.54
L1016.BL20-1420	20	1420	16.3	60	20	20	8.5	6	9.5	M 5	3.69
L1016.BL20-1480	20	1480	16.3	60	20	20	8.5	6	9.5	M 5	3.85
L1016.BL20-1540	20	1540	16.3	60	20	20	8.5	6	9.5	M 5	4.00
L1016.BL20-1600	20	1600	16.3	60	20	20	8.5	6	9.5	M 5	4.16
L1016.BL20-1660	20	1660	16.3	60	20	20	8.5	6	9.5	M 5	4.32
L1016.BL20-1720	20	1720	16.3	60	20	20	8.5	6	9.5	M 5	4.47
L1016.BL20-1780	20	1780	16.3	60	20	20	8.5	6	9.5	M 5	4.63
L1016.BL20-1840	20	1840	16.3	60	20	20	8.5	6	9.5	M 5	4.78
L1016.BL20-1900	20	1900	16.3	60	20	20	8.5	6	9.5	M 5	4.94
L1016.BL20-1960	20	1960	16.3	60	20	20	8.5	6	9.5	M 5	5.10
L1016.BL20-2020	20	2020	16.3	60	20	20	8.5	6	9.5	M 5	5.25

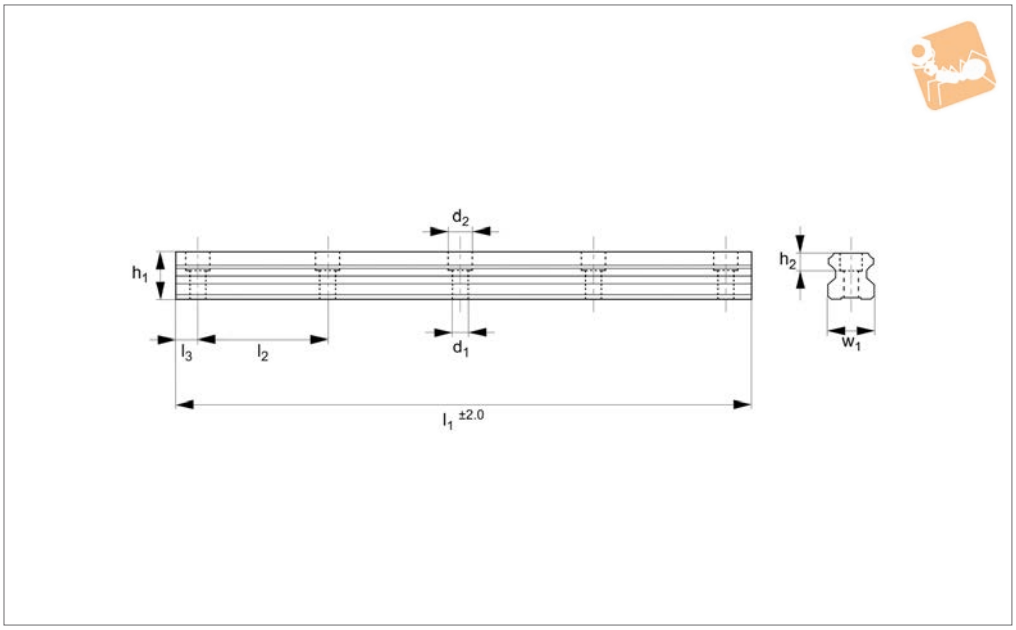


20mm Linear Guide Rail

standard, blackened



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL20-2080	20	2080	16.3	60	20	20	8.5	6	9.5	M 5	5.41
L1016.BL20-2140	20	2140	16.3	60	20	20	8.5	6	9.5	M 5	5.56
L1016.BL20-2200	20	2200	16.3	60	20	20	8.5	6	9.5	M 5	5.72
L1016.BL20-2260	20	2260	16.3	60	20	20	8.5	6	9.5	M 5	5.88
L1016.BL20-2320	20	2320	16.3	60	20	20	8.5	6	9.5	M 5	6.03
L1016.BL20-2380	20	2380	16.3	60	20	20	8.5	6	9.5	M 5	6.19
L1016.BL20-2440	20	2440	16.3	60	20	20	8.5	6	9.5	M 5	6.34
L1016.BL20-2500	20	2500	16.3	60	20	20	8.5	6	9.5	M 5	6.50
L1016.BL20-2560	20	2560	16.3	60	20	20	8.5	6	9.5	M 5	6.66
L1016.BL20-2620	20	2620	16.3	60	20	20	8.5	6	9.5	M 5	6.81
L1016.BL20-2680	20	2680	16.3	60	20	20	8.5	6	9.5	M 5	6.97
L1016.BL20-2740	20	2740	16.3	60	20	20	8.5	6	9.5	M 5	7.12
L1016.BL20-2800	20	2800	16.3	60	20	20	8.5	6	9.5	M 5	7.28
L1016.BL20-2860	20	2860	16.3	60	20	20	8.5	6	9.5	M 5	7.44
L1016.BL20-2920	20	2920	16.3	60	20	20	8.5	6	9.5	M 5	7.59
L1016.BL20-2980	20	2980	16.3	60	20	20	8.5	6	9.5	M 5	7.75
L1016.BL20-3040	20	3040	16.3	60	20	20	8.5	6	9.5	M 5	7.90
L1016.BL20-3100	20	3100	16.3	60	20	20	8.5	6	9.5	M 5	8.06
L1016.BL20-3160	20	3160	16.3	60	20	20	8.5	6	9.5	M 5	8.22
L1016.BL20-3220	20	3220	16.3	60	20	20	8.5	6	9.5	M 5	8.37
L1016.BL20-3280	20	3280	16.3	60	20	20	8.5	6	9.5	M 5	8.53
L1016.BL20-3340	20	3340	16.3	60	20	20	8.5	6	9.5	M 5	8.68
L1016.BL20-3400	20	3400	16.3	60	20	20	8.5	6	9.5	M 5	8.84
L1016.BL20-3460	20	3460	16.3	60	20	20	8.5	6	9.5	M 5	9.00
L1016.BL20-3520	20	3520	16.3	60	20	20	8.5	6	9.5	M 5	9.15
L1016.BL20-3580	20	3580	16.3	60	20	20	8.5	6	9.5	M 5	9.31
L1016.BL20-3640	20	3640	16.3	60	20	20	8.5	6	9.5	M 5	9.46
L1016.BL20-3700	20	3700	16.3	60	20	20	8.5	6	9.5	M 5	9.62
L1016.BL20-3760	20	3760	16.3	60	20	20	8.5	6	9.5	M 5	9.78
L1016.BL20-3820	20	3820	16.3	60	20	20	8.5	6	9.5	M 5	9.93
L1016.BL20-3880	20	3880	16.3	60	20	20	8.5	6	9.5	M 5	10.09
L1016.BL20-3940	20	3940	16.3	60	20	20	8.5	6	9.5	M 5	10.24
L1016.BL20-4000	20	4000	16.3	60	20	20	8.5	6	9.5	M 5	10.40





L1016.BL25

Material
Hardened and ground steel (typically 60 HRc). Black oxide.

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 3,6 Kg/m.

Tips
Plastic screw covers issued with the rails to protect the holes from debris.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL25-0160	25	160	19.2	60	23	20	9	7	11	M 6	0.58
L1016.BL25-0220	25	220	19.2	60	23	20	9	7	11	M 6	0.79
L1016.BL25-0280	25	280	19.2	60	23	20	9	7	11	M 6	1.01
L1016.BL25-0340	25	340	19.2	60	23	20	9	7	11	M 6	1.22
L1016.BL25-0400	25	400	19.2	60	23	20	9	7	11	M 6	1.44
L1016.BL25-0460	25	460	19.2	60	23	20	9	7	11	M 6	1.66
L1016.BL25-0520	25	520	19.2	60	23	20	9	7	11	M 6	1.87
L1016.BL25-0580	25	580	19.2	60	23	20	9	7	11	M 6	2.09
L1016.BL25-0640	25	640	19.2	60	23	20	9	7	11	M 6	2.30
L1016.BL25-0700	25	700	19.2	60	23	20	9	7	11	M 6	2.52
L1016.BL25-0760	25	760	19.2	60	23	20	9	7	11	M 6	2.74
L1016.BL25-0820	25	820	19.2	60	23	20	9	7	11	M 6	2.95
L1016.BL25-0880	25	880	19.2	60	23	20	9	7	11	M 6	3.17
L1016.BL25-0940	25	940	19.2	60	23	20	9	7	11	M 6	3.38
L1016.BL25-1000	25	1000	19.2	60	23	20	9	7	11	M 6	3.60
L1016.BL25-1060	25	1060	19.2	60	23	20	9	7	11	M 6	3.82
L1016.BL25-1120	25	1120	19.2	60	23	20	9	7	11	M 6	4.03
L1016.BL25-1180	25	1180	19.2	60	23	20	9	7	11	M 6	4.25
L1016.BL25-1240	25	1240	19.2	60	23	20	9	7	11	M 6	4.46
L1016.BL25-1300	25	1300	19.2	60	23	20	9	7	11	M 6	4.68
L1016.BL25-1360	25	1360	19.2	60	23	20	9	7	11	M 6	4.90
L1016.BL25-1420	25	1420	19.2	60	23	20	9	7	11	M 6	5.11
L1016.BL25-1480	25	1480	19.2	60	23	20	9	7	11	M 6	5.33
L1016.BL25-1540	25	1540	19.2	60	23	20	9	7	11	M 6	5.54
L1016.BL25-1600	25	1600	19.2	60	23	20	9	7	11	M 6	5.76
L1016.BL25-1660	25	1660	19.2	60	23	20	9	7	11	M 6	5.98
L1016.BL25-1720	25	1720	19.2	60	23	20	9	7	11	M 6	6.19
L1016.BL25-1780	25	1780	19.2	60	23	20	9	7	11	M 6	6.41
L1016.BL25-1840	25	1840	19.2	60	23	20	9	7	11	M 6	6.62
L1016.BL25-1900	25	1900	19.2	60	23	20	9	7	11	M 6	6.84
L1016.BL25-1960	25	1960	19.2	60	23	20	9	7	11	M 6	7.06
L1016.BL25-2020	25	2020	19.2	60	23	20	9	7	11	M 6	7.27

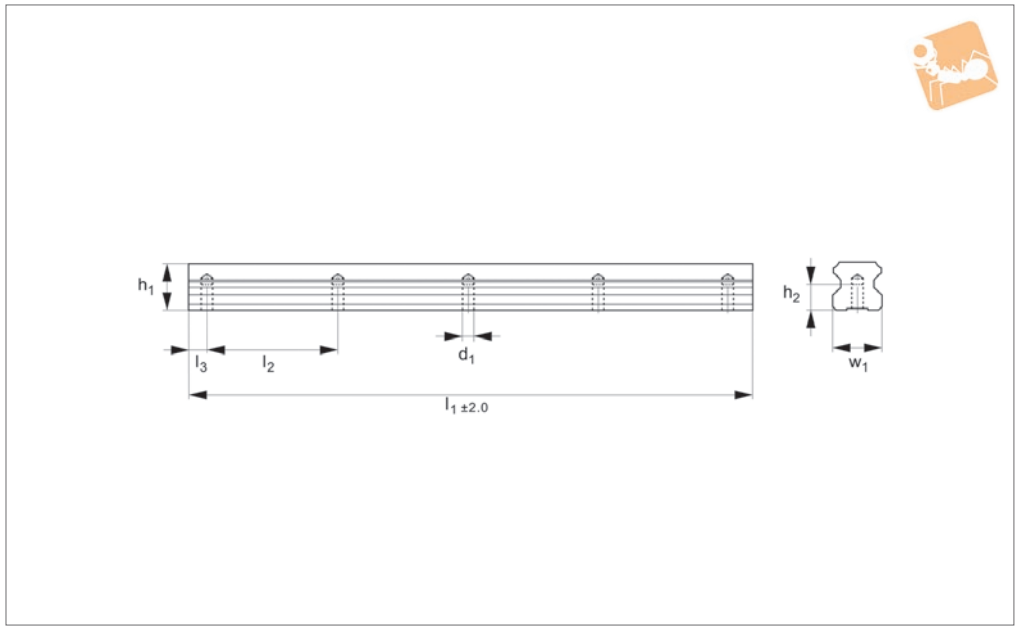


25mm Linear Guide Rail

standard, blackened



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	d_2	For screws	Weight kg
L1016.BL25-2080	25	2080	19.2	60	23	20	9	7	11	M 6	7.49
L1016.BL25-2140	25	2140	19.2	60	23	20	9	7	11	M 6	7.70
L1016.BL25-2200	25	2200	19.2	60	23	20	9	7	11	M 6	7.92
L1016.BL25-2260	25	2260	19.2	60	23	20	9	7	11	M 6	8.14
L1016.BL25-2320	25	2320	19.2	60	23	20	9	7	11	M 6	8.35
L1016.BL25-2380	25	2380	19.2	60	23	20	9	7	11	M 6	8.57
L1016.BL25-2440	25	2440	19.2	60	23	20	9	7	11	M 6	8.78
L1016.BL25-2500	25	2500	19.2	60	23	20	9	7	11	M 6	9.00
L1016.BL25-2560	25	2560	19.2	60	23	20	9	7	11	M 6	9.22
L1016.BL25-2620	25	2620	19.2	60	23	20	9	7	11	M 6	9.43
L1016.BL25-2680	25	2680	19.2	60	23	20	9	7	11	M 6	9.65
L1016.BL25-2740	25	2740	19.2	60	23	20	9	7	11	M 6	9.86
L1016.BL25-2800	25	2800	19.2	60	23	20	9	7	11	M 6	10.08
L1016.BL25-2860	25	2860	19.2	60	23	20	9	7	11	M 6	10.30
L1016.BL25-2920	25	2920	19.2	60	23	20	9	7	11	M 6	10.51
L1016.BL25-2980	25	2980	19.2	60	23	20	9	7	11	M 6	10.73
L1016.BL25-3040	25	3040	19.2	60	23	20	9	7	11	M 6	10.94
L1016.BL25-3100	25	3100	19.2	60	23	20	9	7	11	M 6	11.16
L1016.BL25-3160	25	3160	19.2	60	23	20	9	7	11	M 6	11.38
L1016.BL25-3220	25	3220	19.2	60	23	20	9	7	11	M 6	11.59
L1016.BL25-3280	25	3280	19.2	60	23	20	9	7	11	M 6	11.81
L1016.BL25-3340	25	3340	19.2	60	23	20	9	7	11	M 6	12.02
L1016.BL25-3400	25	3400	19.2	60	23	20	9	7	11	M 6	12.24
L1016.BL25-3460	25	3460	19.2	60	23	20	9	7	11	M 6	12.46
L1016.BL25-3520	25	3520	19.2	60	23	20	9	7	11	M 6	12.67





L1016.BRF15

Material
Hardened and ground steel (typically 60 HRc). Black Oxide

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 1,4 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF15-0160	15	160	13	60	15	20	8	M 5	0.22
L1016.BRF15-0220	15	220	13	60	15	20	8	M 5	0.31
L1016.BRF15-0280	15	280	13	60	15	20	8	M 5	0.39
L1016.BRF15-0340	15	340	13	60	15	20	8	M 5	0.48
L1016.BRF15-0400	15	400	13	60	15	20	8	M 5	0.56
L1016.BRF15-0460	15	460	13	60	15	20	8	M 5	0.64
L1016.BRF15-0520	15	520	13	60	15	20	8	M 5	0.73
L1016.BRF15-0580	15	580	13	60	15	20	8	M 5	0.81
L1016.BRF15-0640	15	640	13	60	15	20	8	M 5	0.90
L1016.BRF15-0700	15	700	13	60	15	20	8	M 5	0.98
L1016.BRF15-0760	15	760	13	60	15	20	8	M 5	1.06
L1016.BRF15-0820	15	820	13	60	15	20	8	M 5	1.15
L1016.BRF15-0880	15	880	13	60	15	20	8	M 5	1.23
L1016.BRF15-0940	15	940	13	60	15	20	8	M 5	1.32
L1016.BRF15-1000	15	1000	13	60	15	20	8	M 5	1.40
L1016.BRF15-1060	15	1060	13	60	15	20	8	M 5	1.48
L1016.BRF15-1120	15	1120	13	60	15	20	8	M 5	1.57
L1016.BRF15-1180	15	1180	13	60	15	20	8	M 5	1.65
L1016.BRF15-1240	15	1240	13	60	15	20	8	M 5	1.74
L1016.BRF15-1300	15	1300	13	60	15	20	8	M 5	1.82
L1016.BRF15-1360	15	1360	13	60	15	20	8	M 5	1.90
L1016.BRF15-1420	15	1420	13	60	15	20	8	M 5	1.99
L1016.BRF15-1480	15	1480	13	60	15	20	8	M 5	2.07
L1016.BRF15-1540	15	1540	13	60	15	20	8	M 5	2.16
L1016.BRF15-1600	15	1600	13	60	15	20	8	M 5	2.24
L1016.BRF15-1660	15	1660	13	60	15	20	8	M 5	2.32
L1016.BRF15-1720	15	1720	13	60	15	20	8	M 5	2.41
L1016.BRF15-1780	15	1780	13	60	15	20	8	M 5	2.49
L1016.BRF15-1840	15	1840	13	60	15	20	8	M 5	2.58
L1016.BRF15-1900	15	1900	13	60	15	20	8	M 5	2.66
L1016.BRF15-1960	15	1960	13	60	15	20	8	M 5	2.74
L1016.BRF15-2020	15	2020	13	60	15	20	8	M 5	2.83

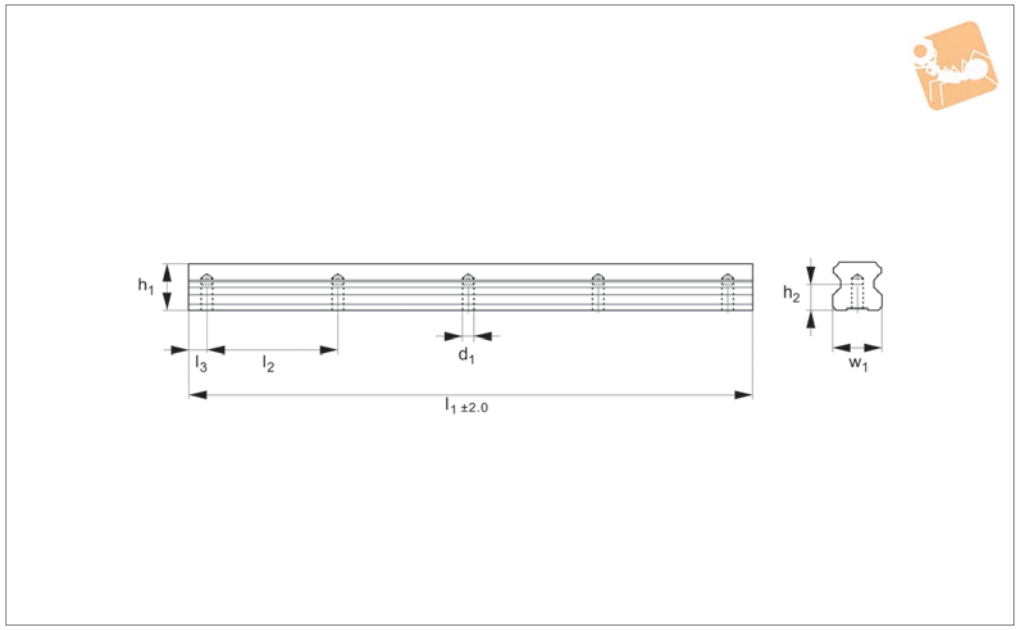


15mm Linear Guide Rail

rear fixing, blackened



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF15-2080	15	2080	13	60	15	20	8	M 5	2.91
L1016.BRF15-2140	15	2140	13	60	15	20	8	M 5	3.00
L1016.BRF15-2200	15	2220	13	60	15	20	8	M 5	3.08
L1016.BRF15-2260	15	2260	13	60	15	20	8	M 5	3.16
L1016.BRF15-2320	15	2320	13	60	15	20	8	M 5	3.25
L1016.BRF15-2380	15	2380	13	60	15	20	8	M 5	3.33
L1016.BRF15-2440	15	2440	13	60	15	20	8	M 5	3.42
L1016.BRF15-2500	15	2500	13	60	15	20	8	M 5	3.50
L1016.BRF15-2560	15	2560	13	60	15	20	8	M 5	3.58
L1016.BRF15-2620	15	2620	13	60	15	20	8	M 5	3.67
L1016.BRF15-2680	15	2680	13	60	15	20	8	M 5	3.75
L1016.BRF15-2740	15	2740	13	60	15	20	8	M 5	3.84
L1016.BRF15-2800	15	2800	13	60	15	20	8	M 5	3.92
L1016.BRF15-2860	15	2860	13	60	15	20	8	M 5	4.00
L1016.BRF15-2920	15	2920	13	60	15	20	8	M 5	4.09
L1016.BRF15-2980	15	2980	13	60	15	20	8	M 5	4.17
L1016.BRF15-3040	15	3040	13	60	15	20	8	M 5	4.26
L1016.BRF15-3100	15	3100	13	60	15	20	8	M 5	4.34
L1016.BRF15-3160	15	3160	13	60	15	20	8	M 5	4.42
L1016.BRF15-3220	15	3220	13	60	15	20	8	M 5	4.51
L1016.BRF15-3280	15	3280	13	60	15	20	8	M 5	4.59
L1016.BRF15-3340	15	3340	13	60	15	20	8	M 5	4.68
L1016.BRF15-3400	15	3400	13	60	15	20	8	M 5	4.76
L1016.BRF15-3460	15	3460	13	60	15	20	8	M 5	4.84
L1016.BRF15-3520	15	3520	13	60	15	20	8	M 5	4.93
L1016.BRF15-3580	15	3580	13	60	15	20	8	M 5	5.01
L1016.BRF15-3640	15	3640	13	60	15	20	8	M 5	5.10
L1016.BRF15-3700	15	3700	13	60	15	20	8	M 5	5.18
L1016.BRF15-3760	15	3760	13	60	15	20	8	M 5	5.26
L1016.BRF15-3820	15	3820	13	60	15	20	8	M 5	5.35
L1016.BRF15-3880	15	3880	13	60	15	20	8	M 5	5.43
L1016.BRF15-3940	15	3940	13	60	15	20	8	M 5	5.52
L1016.BRF15-4000	15	4000	13	60	15	20	8	M 5	5.60





L1016.BRF20

Material
Hardened and ground steel (typically 60 HRc). Black Oxide

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 2,6 Kg/m.

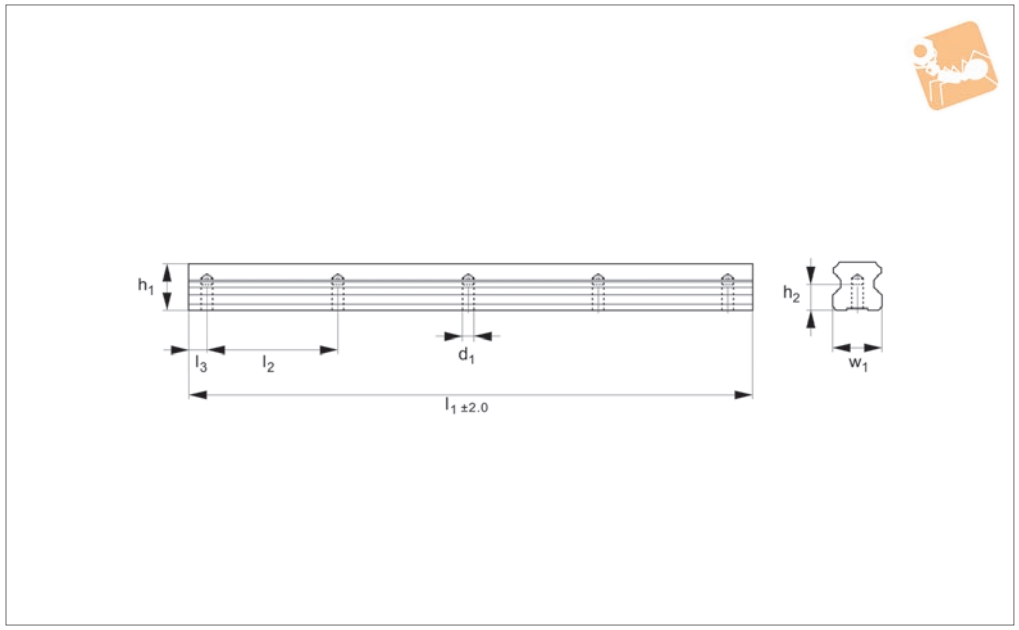
Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF20-0160	20	160	16.3	60	20	20	10	M 6	0.42
L1016.BRF20-0220	20	220	16.3	60	20	20	10	M 6	0.57
L1016.BRF20-0280	20	280	16.3	60	20	20	10	M 6	0.73
L1016.BRF20-0340	20	340	16.3	60	20	20	10	M 6	0.88
L1016.BRF20-0400	20	400	16.3	60	20	20	10	M 6	1.04
L1016.BRF20-0460	20	460	16.3	60	20	20	10	M 6	1.20
L1016.BRF20-0520	20	520	16.3	60	20	20	10	M 6	1.35
L1016.BRF20-0580	20	580	16.3	60	20	20	10	M 6	1.51
L1016.BRF20-0640	20	640	16.3	60	20	20	10	M 6	1.66
L1016.BRF20-0700	20	700	16.3	60	20	20	10	M 6	1.82
L1016.BRF20-0760	20	760	16.3	60	20	20	10	M 6	1.98
L1016.BRF20-0820	20	820	16.3	60	20	20	10	M 6	2.13
L1016.BRF20-0880	20	880	16.3	60	20	20	10	M 6	2.29
L1016.BRF20-0940	20	940	16.3	60	20	20	10	M 6	2.44
L1016.BRF20-1000	20	1000	16.3	60	20	20	10	M 6	2.60
L1016.BRF20-1060	20	1060	16.3	60	20	20	10	M 6	2.76
L1016.BRF20-1120	20	1120	16.3	60	20	20	10	M 6	2.91
L1016.BRF20-1180	20	1180	16.3	60	20	20	10	M 6	3.07
L1016.BRF20-1240	20	1240	16.3	60	20	20	10	M 6	3.22
L1016.BRF20-1300	20	1300	16.3	60	20	20	10	M 6	3.38
L1016.BRF20-1360	20	1360	16.3	60	20	20	10	M 6	3.54
L1016.BRF20-1420	20	1420	16.3	60	20	20	10	M 6	3.69
L1016.BRF20-1480	20	1480	16.3	60	20	20	10	M 6	3.85
L1016.BRF20-1540	20	1540	16.3	60	20	20	10	M 6	4.00
L1016.BRF20-1600	20	1600	16.3	60	20	20	10	M 6	4.16
L1016.BRF20-1660	20	1660	16.3	60	20	20	10	M 6	4.32
L1016.BRF20-1720	20	1720	16.3	60	20	20	10	M 6	4.47
L1016.BRF20-1780	20	1780	16.3	60	20	20	10	M 6	4.63
L1016.BRF20-1840	20	1840	16.3	60	20	20	10	M 6	4.78
L1016.BRF20-1900	20	1900	16.3	60	20	20	10	M 6	4.94
L1016.BRF20-1960	20	1960	16.3	60	20	20	10	M 6	5.10
L1016.BRF20-2020	20	2020	16.3	60	20	20	10	M 6	5.25

20mm Linear Guide Rail

rear fixing, blackened



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF20-2080	20	2080	16.3	60	20	20	10	M 6	5.41
L1016.BRF20-2140	20	2140	16.3	60	20	20	10	M 6	5.56
L1016.BRF20-2200	20	2200	16.3	60	20	20	10	M 6	5.72
L1016.BRF20-2260	20	2260	16.3	60	20	20	10	M 6	5.88
L1016.BRF20-2320	20	2320	16.3	60	20	20	10	M 6	6.03
L1016.BRF20-2380	20	2380	16.3	60	20	20	10	M 6	6.19
L1016.BRF20-2440	20	2440	16.3	60	20	20	10	M 6	6.34
L1016.BRF20-2500	20	2500	16.3	60	20	20	10	M 6	6.50
L1016.BRF20-2560	20	2560	16.3	60	20	20	10	M 6	6.66
L1016.BRF20-2620	20	2620	16.3	60	20	20	10	M 6	6.81
L1016.BRF20-2680	20	2680	16.3	60	20	20	10	M 6	6.97
L1016.BRF20-2740	20	2740	16.3	60	20	20	10	M 6	7.12
L1016.BRF20-2800	20	2800	16.3	60	20	20	10	M 6	7.28
L1016.BRF20-2860	20	2860	16.3	60	20	20	10	M 6	7.44
L1016.BRF20-2920	20	2920	16.3	60	20	20	10	M 6	7.59
L1016.BRF20-2980	20	2980	16.3	60	20	20	10	M 6	7.75
L1016.BRF20-3040	20	3040	16.3	60	20	20	10	M 6	7.90
L1016.BRF20-3100	20	3100	16.3	60	20	20	10	M 6	8.06
L1016.BRF20-3160	20	3160	16.3	60	20	20	10	M 6	8.22
L1016.BRF20-3220	20	3220	16.3	60	20	20	10	M 6	8.37
L1016.BRF20-3280	20	3280	16.3	60	20	20	10	M 6	8.53
L1016.BRF20-3340	20	3340	16.3	60	20	20	10	M 6	8.68
L1016.BRF20-3400	20	3400	16.3	60	20	20	10	M 6	8.84
L1016.BRF20-3460	20	3460	16.3	60	20	20	10	M 6	9.00
L1016.BRF20-3520	20	3520	16.3	60	20	20	10	M 6	9.15
L1016.BRF20-3580	20	3580	16.3	60	20	20	10	M 6	9.31
L1016.BRF20-3640	20	3640	16.3	60	20	20	10	M 6	9.46
L1016.BRF20-3700	20	3700	16.3	60	20	20	10	M 6	9.62
L1016.BRF20-3760	20	3760	16.3	60	20	20	10	M 6	9.78
L1016.BRF20-3820	20	3820	16.3	60	20	20	10	M 6	9.93
L1016.BRF20-3880	20	3880	16.3	60	20	20	10	M 6	10.09
L1016.BRF20-3940	20	3940	16.3	60	20	20	10	M 6	10.24
L1016.BRF20-4000	20	4000	16.3	60	20	20	10	M 6	10.40





L1016.BRF25

Material
Hardened and ground steel (typically 60 HRc) Black Oxide.

Technical Notes
For carriages to suit the required load see part nos. L1016.F (flanged) and L1016.U (unflanged).
Other rail lengths on request.
Weight: 3,6 Kg/m.

Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF25-0160	25	160	19.2	60	23	20	12	M6	0.58
L1016.BRF25-0220	25	220	19.2	60	23	20	12	M6	0.79
L1016.BRF25-0280	25	280	19.2	60	23	20	12	M6	1.01
L1016.BRF25-0340	25	340	19.2	60	23	20	12	M6	1.22
L1016.BRF25-0400	25	400	19.2	60	23	20	12	M6	1.44
L1016.BRF25-0460	25	460	19.2	60	23	20	12	M6	1.66
L1016.BRF25-0520	25	520	19.2	60	23	20	12	M6	1.87
L1016.BRF25-0580	25	580	19.2	60	23	20	12	M6	2.09
L1016.BRF25-0640	25	640	19.2	60	23	20	12	M6	2.30
L1016.BRF25-0700	25	700	19.2	60	23	20	12	M6	2.52
L1016.BRF25-0760	25	760	19.2	60	23	20	12	M6	2.74
L1016.BRF25-0820	25	820	19.2	60	23	20	12	M6	2.95
L1016.BRF25-0880	25	880	19.2	60	23	20	12	M6	3.17
L1016.BRF25-0940	25	940	19.2	60	23	20	12	M6	3.38
L1016.BRF25-1000	25	1000	19.2	60	23	20	12	M6	3.60
L1016.BRF25-1060	25	1060	19.2	60	23	20	12	M6	3.82
L1016.BRF25-1120	25	1120	19.2	60	23	20	12	M6	4.03
L1016.BRF25-1180	25	1180	19.2	60	23	20	12	M6	4.25
L1016.BRF25-1240	25	1240	19.2	60	23	20	12	M6	4.46
L1016.BRF25-1300	25	1300	19.2	60	23	20	12	M6	4.68
L1016.BRF25-1360	25	1360	19.2	60	23	20	12	M6	4.90
L1016.BRF25-1420	25	1420	19.2	60	23	20	12	M6	5.11
L1016.BRF25-1480	25	1480	19.2	60	23	20	12	M6	5.33
L1016.BRF25-1540	25	1540	19.2	60	23	20	12	M6	5.54
L1016.BRF25-1600	25	1600	19.2	60	23	20	12	M6	5.76
L1016.BRF25-1660	25	1660	19.2	60	23	20	12	M6	5.98
L1016.BRF25-1720	25	1720	19.2	60	23	20	12	M6	6.19
L1016.BRF25-1780	25	1780	19.2	60	23	20	12	M6	6.41
L1016.BRF25-1840	25	1840	19.2	60	23	20	12	M6	6.62
L1016.BRF25-1900	25	1900	19.2	60	23	20	12	M6	6.84
L1016.BRF25-1960	25	1960	19.2	60	23	20	12	M6	7.06
L1016.BRF25-2020	25	2020	19.2	60	23	20	12	M6	7.27



25mm Linear Guide Rail

rear fixing, blackened



Order No.	Rail size	l_1	h_1	l_2	w_1	l_3	h_2	d_1	Weight kg
L1016.BRF25-2080	25	2080	19.2	60	23	20	12	M6	7.49
L1016.BRF25-2140	25	2140	19.2	60	23	20	12	M6	7.70
L1016.BRF25-2200	25	2200	19.2	60	23	20	12	M6	7.92
L1016.BRF25-2260	25	2260	19.2	60	23	20	12	M6	8.14
L1016.BRF25-2320	25	2320	19.2	60	23	20	12	M6	8.35
L1016.BRF25-2380	25	2380	19.2	60	23	20	12	M6	8.57
L1016.BRF25-2440	25	2440	19.2	60	23	20	12	M6	8.78
L1016.BRF25-2500	25	2500	19.2	60	23	20	12	M6	9.00
L1016.BRF25-2560	25	2560	19.2	60	23	20	12	M6	9.22
L1016.BRF25-2620	25	2620	19.2	60	23	20	12	M6	9.43
L1016.BRF25-2680	25	2680	19.2	60	23	20	12	M6	9.65
L1016.BRF25-2740	25	2740	19.2	60	23	20	12	M6	9.86
L1016.BRF25-2800	25	2800	19.2	60	23	20	12	M6	10.08
L1016.BRF25-2860	25	2860	19.2	60	23	20	12	M6	10.30
L1016.BRF25-2920	25	2920	19.2	60	23	20	12	M6	10.51
L1016.BRF25-2980	25	2980	19.2	60	23	20	12	M6	10.73
L1016.BRF25-3040	25	3040	19.2	60	23	20	12	M6	10.94
L1016.BRF25-3100	25	3100	19.2	60	23	20	12	M6	11.16
L1016.BRF25-3160	25	3160	19.2	60	23	20	12	M6	11.38
L1016.BRF25-3220	25	3220	19.2	60	23	20	12	M6	11.59
L1016.BRF25-3280	25	3280	19.2	60	23	20	12	M6	11.81
L1016.BRF25-3340	25	3340	19.2	60	23	20	12	M6	12.02
L1016.BRF25-3400	25	3400	19.2	60	23	20	12	M6	12.24
L1016.BRF25-3460	25	3460	19.2	60	23	20	12	M6	12.46
L1016.BRF25-3520	25	3520	19.2	60	23	20	12	M6	12.67
L1016.BRF25-3580	25	3580	19.2	60	23	20	12	M6	12.89
L1016.BRF25-3640	25	3640	19.2	60	23	20	12	M6	13.10
L1016.BRF25-3700	25	3700	19.2	60	23	20	12	M6	13.32
L1016.BRF25-3760	25	3760	19.2	60	23	20	12	M6	13.54
L1016.BRF25-3820	25	3820	19.2	60	23	20	12	M6	13.75
L1016.BRF25-3880	25	3880	19.2	60	23	20	12	M6	13.97
L1016.BRF25-3940	25	3940	19.2	60	23	20	12	M6	14.18
L1016.BRF25-4000	25	4000	19.2	60	23	20	12	M6	14.40

Manual rail clamps

- Many of our customers wish to lock their moving element in position on the rails. Whilst this can be relatively simply achieved with the use of an adjustable clamping handle and thrust pad, we also offer a clamping element which can be integrated into your rail/system design.
- This is available in the standard manual version as well as (on request) a pneumatic version for linear guideways only (not compact rail systems).
- These manual clamps have a holding force of up to 2,000N.
- They are relatively compact in shape. Please bear in mind the extra space required for the clamping element when calculating the total stroke you require.

Applications

- Table cross beams.
- Sliding beds.
- Width adjustment stops.
- Positioning of optical equipment.



The manual rail clamps are used alongside the standard flanged or unflanged rail carriages. When selecting ensure:

a) the rail clamp suits the rail that you are using.

b) that the total assembly height of the rail clamp is the same as that of the rail carriage L1016.U or L1016.F.

Linear Guideways from Automotion Components

Linear Guideways

Overview

Linear Guideways from Automotion Components

- **Carriage types**

Flanged





Unflanged

Carriage lengths







Long Standard Short

Rail types

Standard - stocked

(Counterbore holes in top face)



Bottom threaded - on request

(No holes in top face)

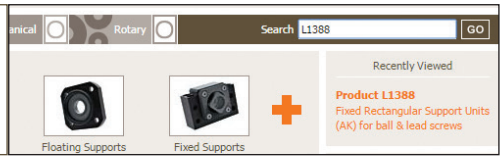


CAD - Download in 3 easy steps

Most of our products are available to download directly from our website. Get the CAD you need for your application in minutes, no registration required.

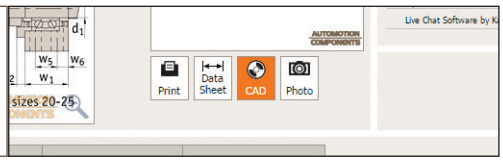
Step: 1 find the part you need

Find the part or enter the Automotion part number into the search bar.



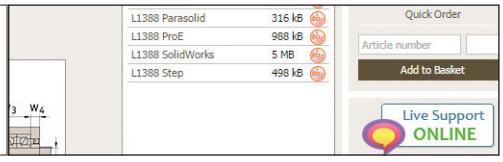
Step 2: Choose the CAD option

Click on the CAD button below the product window to the right of the drawing.



Step 3: Download your format

Choose the the format you require, and download it to your computer.



Load capacities – explained

- A number of load figures are stated for load capacity:

  Dynamic Load – this is the main figure considered for linear guideways. It is the moving load that the system can bear. It takes account of the total moving load as well as considerations such as impact, vibration and fatigue.

  Static Load – this is a load that is constant for an extended time (i.e. the dead load the system can bear before any movement). It can be in tension or compression.

  For these linear guideways the radial and axial load capacities are the same.

  Moment loads are twisting loads generated by offset loads in either X, Y or Z planes. Moment loads can be reduced by adding further carriages or rails to reduce any twisting of the carriage due to the load offset.

Straightness of rails

- The measurements of the straightness of the system are taken from the running accuracy of the sliders over the length of the rails (given in microns) – see system precision page.
- For standard accuracy this equates to around 20 microns for a metre length, increasing to 35 microns for a 4 metre length.

What lengths can be provided?

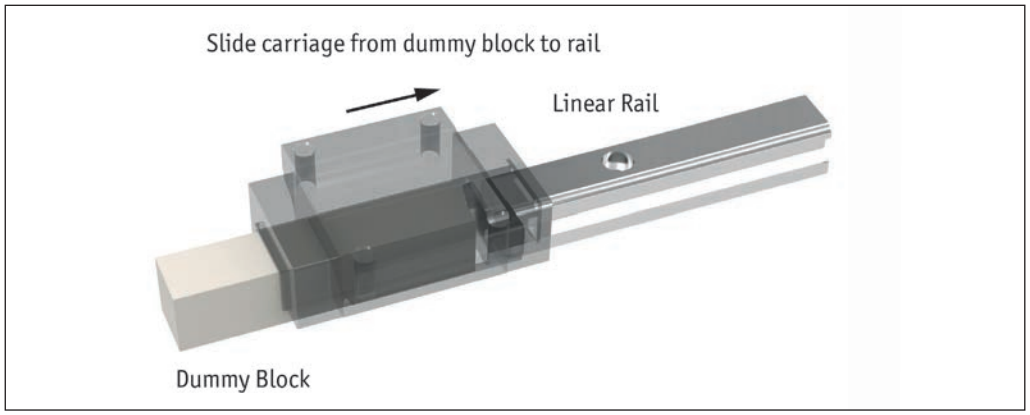
- We have standard rail lengths. These are based on the hole pitch of the rails and end machining to provide an equidistant length to the first and last hole centre.
- However we can cut the rail (from stock) to any length required – we just need to know the distance required to the first hole.
- In general our cutting procedures allow for a ±2mm accuracy on the overall rail length. If greater accuracy than this is required then we have to machine the end accurately (rather than cut it) and this involves extra time and cost.
- Standard maximum length for each rail size is around 4 metres. Rails can be joined together but the preparation needs to be made in our workshop. The rails will be marked clearly with the ends to be placed adjacent to each other.

Installation

- The linear guideways are very accurate and as a result need to be installed on accurately prepared surfaces – please see installation instructions. If the two rails are installed parallel to each other, they need to be accurately aligned – see assembly precision page.
- If you are not able to prepare the surface as accurately as required you might want to consider using our Compact Rail system, as this has a master rail (T rail) and a slave rail (U rail) that allows for structural inaccuracies.

Mounting the carriages to the rails

- In general the carriages will be supplied separately to the rails. To install the carriage onto the rails, offer the carriage up to the rails and slide it onto the rail itself.



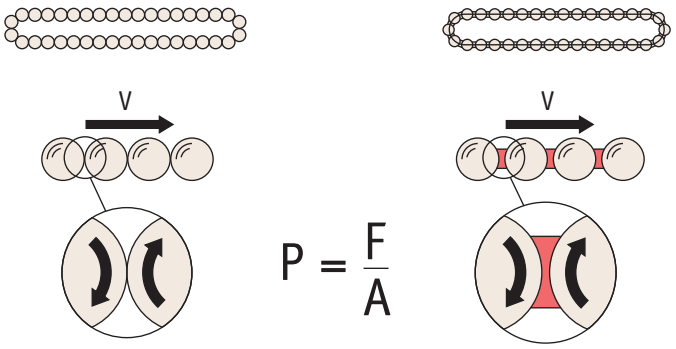


Linear Guideways from Automotion Components

New ball chain technology

Our new and improved linear guideway systems include the latest "ball chain" technology with the following benefits:

- Higher maximum velocity.
- Lower heat generation
- Lower noise generation.
- Very smooth running.
- Optimised lubrication system
- Even load distribution
- Longer service life

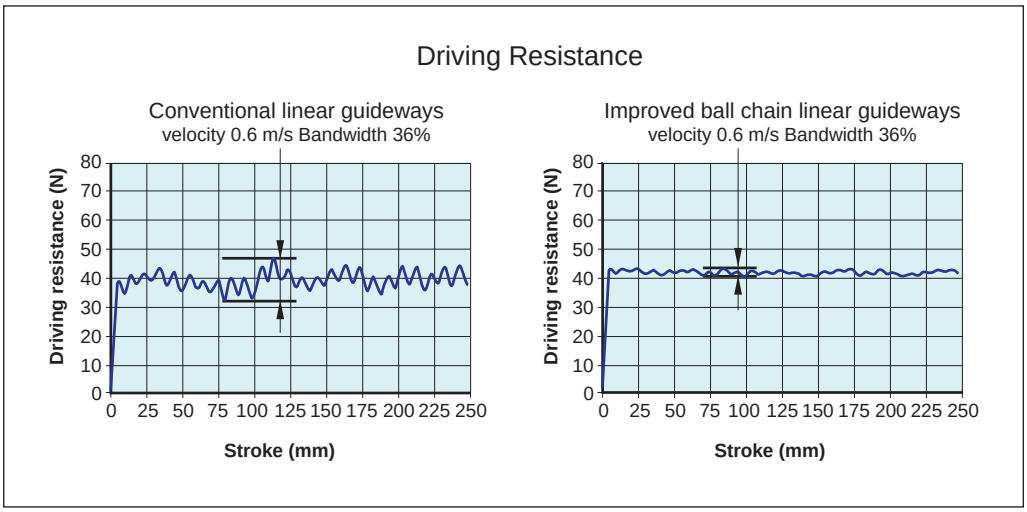


P = surface pressure F = force between balls A = contact area

The rotating balls in conventional profile rail guides have point contact between each other. The rotation speed at the contact point is double the speed of the balls. The contact area (A) is so small that the surface pressure (P) tends towards infinity. This leads to heating and wear of the balls and the linear guide system.

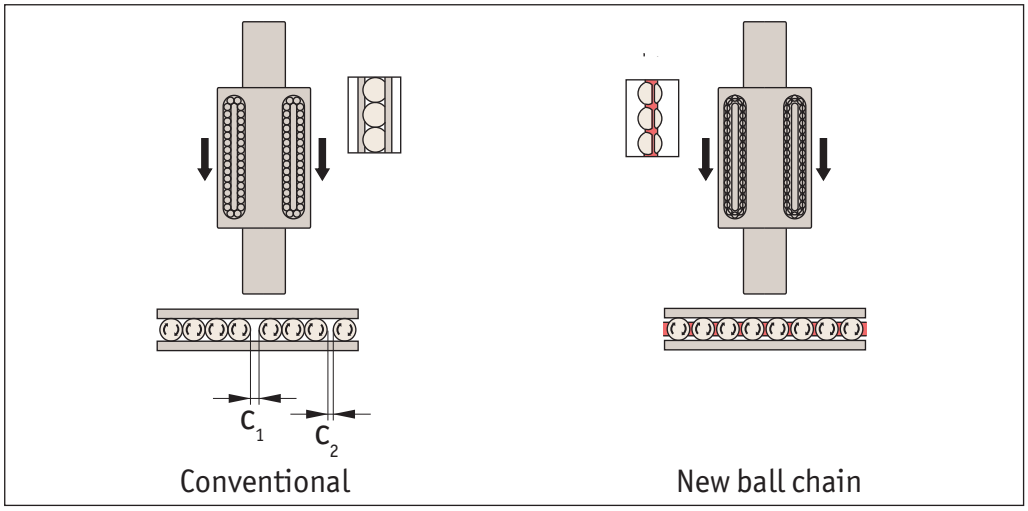
The chain system in our new linear guides have a relatively large contact area (A), this significantly reduces the surface area pressure (P). The rotation speeds at the contact surfaces of ball and chain are the same. The ball chain is used to transport the lubricant and to create a lubrication film on the balls. The design of the carriage allows effective supply of lubricant from the lubricant connection to the circulation areas of the ball chains.

This design of the of the ball chain ends in connection with the spacer ball closes the circulation and makes the movement of the carriage smooth and quiet.



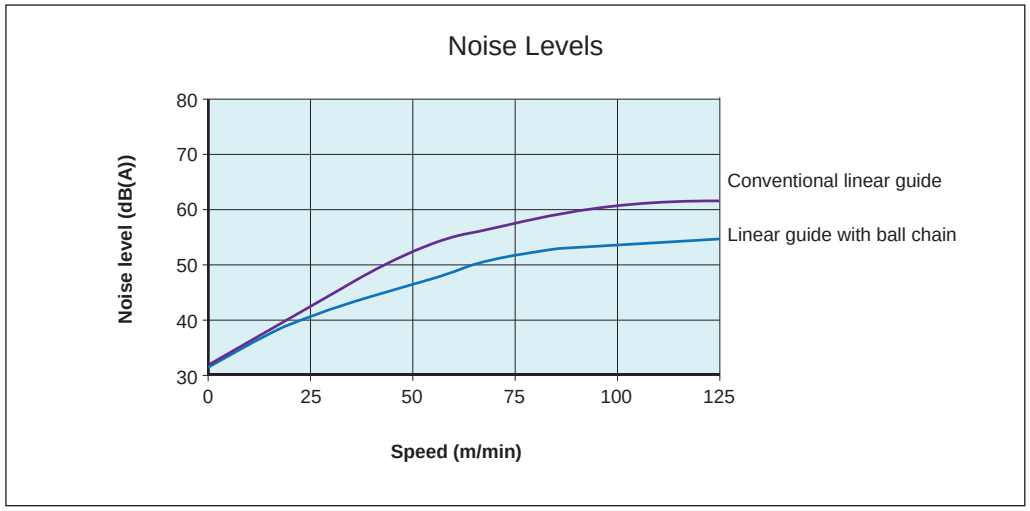
ov-linear-guideways-technical-ball-chain-technology-a-lmh - Updated - 23-02-2023

New technology



It is not possible to keep the distance of the balls (C_1, C_2) constant in conventional linear guides. These irregular distances between the balls lead to uneven running behaviour.

The new ball chain system also allows the balls to be continuously supplied with lubricant, which reduces wear of the metal. This significantly extends the service life of the system and reduces lubricant and the maintenance intervals.



We can coat our rail wih two types of corrosion protective finishes:

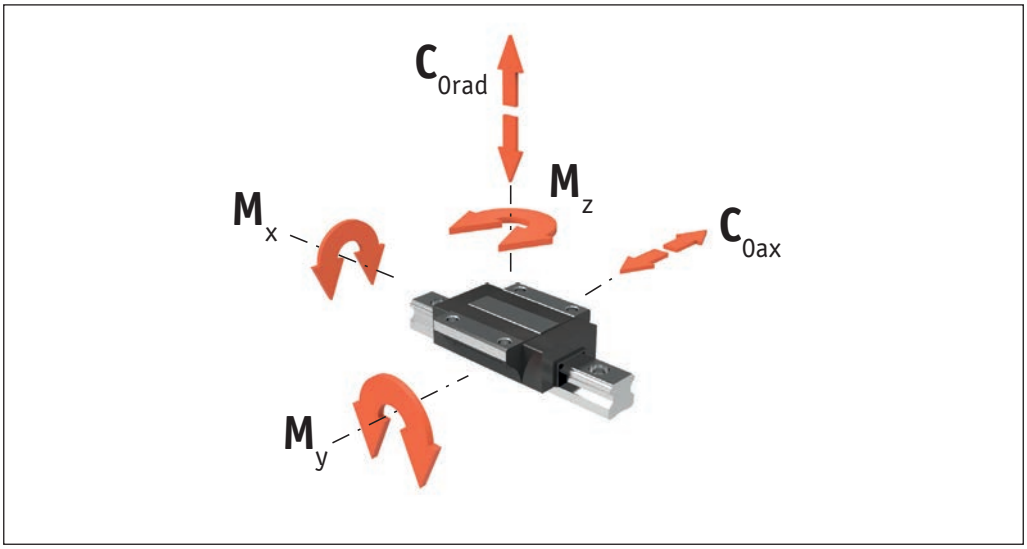
- Raydent coating; this is an electro-chemical process that applies a black oxide-ceramic layer (approx. 1 micron thick) that penetrates into the metal. As coating takes place at OC the parts are not deformed. Good resistance against acids, bases and solvents.
- Chemical nickel coating; this offers a good resistance to corrosion, abrasion and chemicals. Black finish.

  Please ask our technical department to help you select the best coating.

All of our rails are issued with oil-resistant plastic caps used to cover the screw holes. If there are aggressive chemicals present we can also provide brass versions of these caps.

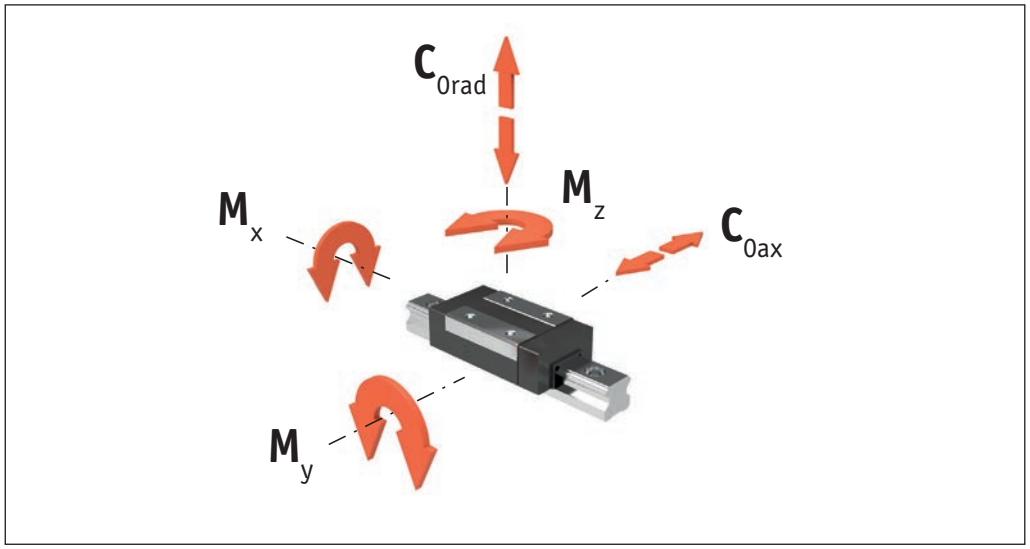
Where there may be a high level of dust, dirt, weld splatters etc. we can provide bellows covers to protect the rails.

Load capacity overview - L1016.F Flanged carriages



Part no.	Type	Length	Max. load capacities kN		Max. static moments Nm		
			Dynamic Load C kN	Static load $C_{0rad+ax}$ kN	M_x Nm	M_y Nm	M_z Nm
L1016.F15	Flanged	Standard	11,67	19,90	137	120	120
L1016.F15-L	Flanged	Long	14,12	24,05	166	171	171
L1016.F20	Flanged	Standard	17,98	30,96	289	224	224
L1016.F20-L	Flanged	Long	23,30	40,11	376	366	366
L1016.F25	Flanged	Standard	25,25	41,73	447	358	358
L1016.F25-L	Flanged	Long	32,44	53,63	576	577	577
L1016.F25-XL	Flanged	Extra Long	36,58	64,30	691	833	833
L1016.F30	Flanged	Standard	37,33	55,50	719	560	560
L1016.F30-L	Flanged	Long	48,35	71,88	931	836	836
L1016.F30-XL	Flanged	Extra Long	53,83	88,18	1142	1361	1361
L1016.F35	Flanged	Standard	53,31	82,66	1307	991	991
L1016.F35-L	Flanged	Long	66,61	103,29	1633	1424	1424
L1016.F35-XL	Flanged	Extra Long	73,29	127,68	2020	2330	2330
L1016.F45	Flanged	Standard	73,14	111,30	2353	1559	1559
L1016.F45-L	Flanged	Long	86,99	132,39	2798	2170	2170
L1016.F45-XL	Flanged	Extra Long	100,52	166,87	3527	3455	3455
L1016.F55	Flanged	Standard	88,26	136,62	3385	2361	2361
L1016.F55-L	Flanged	Long	119,10	183,14	4538	4202	4202
L1016.F55-XL	Flanged	Extra Long	161,43	259,71	6430	6617	6617

Load capacity overview - L1016.U Unflanged carriages

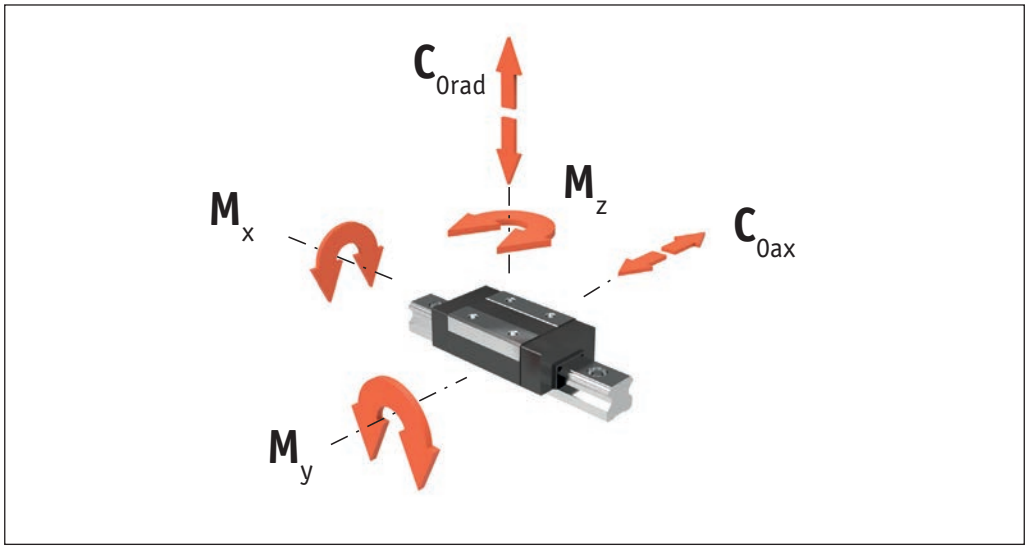


Part no.	Type	Length	Max. load capacities kN		Max. static moments Nm		
			dyn. C_{rad} dyn. C_{ax}	stat. C_{0rad} stat. C_{0ax}	M_x	M_y	M_z
L1016.U15	Unflanged	Standard	11,67	19,90	137	120	120
L1016.U20	Unflanged	Standard	17,98	30,96	289	224	224
L1016.U20-L	Unflanged	Long	23,30	40,11	376	366	366
L1016.U25	Unflanged	Standard	25,25	41,73	447	358	358
L1016.U25-L	Unflanged	Long	32,44	53,63	576	577	577
L1016.U25-XL	Unflanged	Extra Long	36,58	64,30	691	833	833
L1016.U30	Unflanged	Standard	37,33	55,50	719	560	560
L1016.U30-L	Unflanged	Long	48,35	71,88	931	836	836
L1016.U30-XL	Unflanged	Extra Long	53,83	88,18	1142	1361	1361
L1016.U35	Unflanged	Standard	53,31	82,66	1307	991	991
L1016.U35-L	Unflanged	Long	66,61	103,29	1633	1424	1424
L1016.U35-XL	Unflanged	Extra Long	73,29	127,68	2020	2330	2330
L1016.U45	Unflanged	Standard	73,14	111,30	2353	1559	1559
L1016.U45-L	Unflanged	Long	86,99	132,39	2798	2170	2170
L1016.U45-XL	Unflanged	Extra Long	100,52	166,87	3527	3455	3455
L1016.U55	Unflanged	Standard	88,26	136,62	3385	2361	2361
L1016.U55-L	Unflanged	Long	119,10	183,14	4538	4202	4202
L1016.U55-XL	Unflanged	Extra Long	161,43	259,71	6430	6617	6617

Linear Guideways from Automotion Components



Load capacity overview - L1016.UL Unflanged low height carriages



Part no.	Type	Length	Max. load capacities kN		Max. static moments Nm		
			dyn. C_{rad} dyn. C_{ax}	stat. C_{0rad} stat. C_{0ax}	M_x	M_y	M_z
L1016.UL15-S	Unflanged	Short	5,81	9,90	69	32	32
L1016.UL15	Unflanged	Standard	11,67	19,90	137	120	120
L1016.UL15-L	Unflanged	Long	14,12	24,05	166	171	171
L1016.UL20-S	Unflanged	Short	9,25	15,63	148	66	66
L1016.UL20	Unflanged	Standard	17,98	30,96	289	224	224
L1016.UL25-S	Unflanged	Short	12,87	21,34	230	103	103
L1016.UL25	Unflanged	Standard	25,25	41,73	447	358	358
L1016.UL30-S	Unflanged	Short	18,50	27,51	356	153	153
L1016.UL30	Unflanged	Standard	37,33	55,50	719	560	560
L1016.UL30-L	Unflanged	Long	48,35	71,88	931	836	836
L1016.UL30-XL	Unflanged	Extra Long	53,83	88,18	1142	1361	1361
L1016.UL35-S	Unflanged	Short	26,72	41,43	655	275	275
L1016.UL35	Unflanged	Standard	53,31	82,66	1307	991	991
L1016.UL35-L	Unflanged	Long	66,61	103,29	1633	1424	1424
L1016.UL35-XL	Unflanged	Extra Long	73,29	127,68	2020	2330	2330
L1016.UL45	Unflanged	Standard	73,14	111,30	2353	1559	1559
L1016.UL45-L	Unflanged	Long	86,99	132,39	2798	2170	2170
L1016.UL45-XL	Unflanged	Extra Long	100,52	166,87	3527	3455	3455
L1016.UL55	Unflanged	Standard	88,26	136,62	3385	2361	2361
L1016.UL55-L	Unflanged	Long	119,10	183,14	4538	4202	4202
L1016.UL55-XL	Unflanged	Extra Long	161,43	259,71	6430	6617	6617

Radial clearance/preload

Radial clearance describes the value for the radial movement of the carriage at a constant vertical load, while the carriage moves in longitudinal direction.

Preload is defined as an effective load on the rolling element in the interior of the carriage in order to remove an existing clearance or to increase the rigidity.

The linear guideways are available in the two different preload classes K_0 or K_1, see table below.

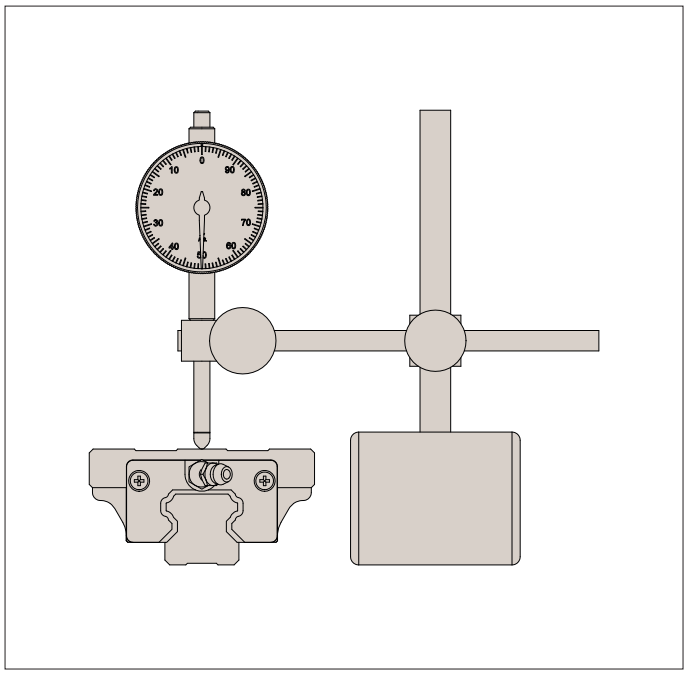
The preload influences the rigidity, precision and torque resistance and also affects the service life and displacement force.

The radial clearance for the respective preload classes are listed below.

Degree of preload	Preload class	Preload
No clearance	K_0	0
Small preload	K_1	0,02 x C*

*C is the dynamic load capacity.

Size	Radial clearance of the preload classes µ	
	K_0 Impact free and easy movement	K_1 Small moments, one rail application, low vibrations
15	-3 to +3	-8 to -4
20	-3 to +3	-8 to -4
25	-4 to +4	-10 to -5
30	-4 to +4	-11 to -5
35	-5 to +5	-12 to -6
45	-6 to +6	-15 to -7
55	-7 to +7	-19 to -8

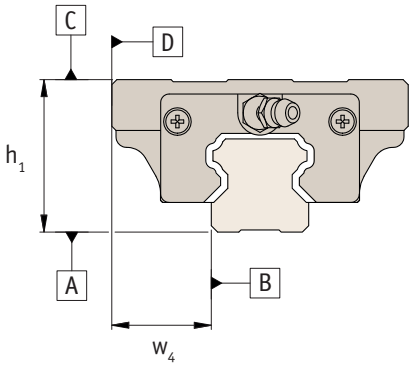


Linear Guideways from Automotion Components

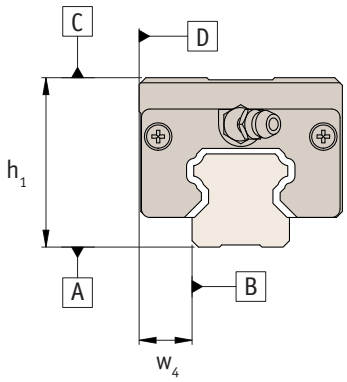
Linear Guideways from Automotion Components

Precision means the guide accuracy or the maximum deviation of the carriage based on the side and support surfaces during the movement along the rails.

Flanged

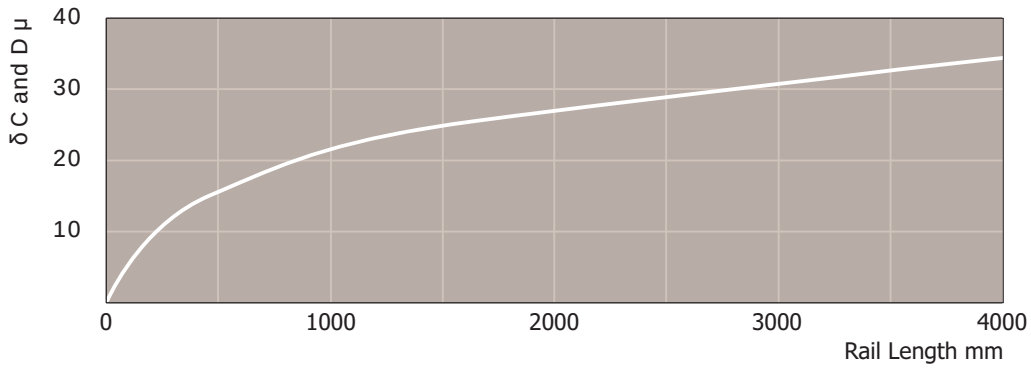


Unflanged



	Normal Precision (N)	H Precision (H)	P Precision (P)
Height tolerance h_1	±0,1	±0,4	0
Width tolerance w_4			-0,04
Guide accuracy of raceway C based on surface A	δ C see graph below		
Guide accuracy of raceway D based on surface B	δ D see graph below		

Running tolerances



Lubrication

Linear guideway rails must generally be lubricated before commissioning. They can be lubricated with oil or grease. The correct lubricant selection has a large influence on the service life and the function of the rail, insufficient lubrication and tribocorrosion can ultimately lead to total failure.

As well as reducing friction and wear, lubricants also serve as sealant, noise reducer and corrosion protection for the linear guide. Different lubricants for special applications are available upon request (e.g. lubricant with FDA approval for use in the food industry).

Our linear guideways are coated with an anti-corrosion resistant oil at the factory.
This coating needs to be removed prior to installation, then lubricated as follows:

Important instructions for lubrication

- Linear guideways must be lubricated for operation.
- The carriage must be moved back and forth during lubrication.
- The lubricant is inserted through a lubrication nipple.
- There should be a thin film of lubricant on the rail surface at all times.
- Primary lubricated systems have an increased displacement resistance.
- Please contact us if oil lubrication is used for vertical use.
- If the stroke is <2 or >15 times the carriage length, the lubrication intervals should be reduced.

Grease lubrication

We recommend the use of a lithium emulsified lubricant NLGI Class 2 for lubrication.

Oil lubrication

We recommend a synthetic oil for operating temperatures between 0°C and +70°C.

Relubrication

- Relubrication of the system must be done before the lubricant used has become dirty or shows signs of discolouration.
- Relubrication should be performed at operating temperature. The carriage must be moved back and forth during re-lubrication.
- If the stroke is <2 or >15 times the carriage length, the lubrication intervals should be more frequent.

Lubrication intervals

Operating speed, stroke length and ambient conditions influence the selection of time between lubrication intervals. Establishing a safe lubrication interval is based solely on the applications and conditions. However, a lubrication interval should not be longer than one year.

Linear Guideways from Automotion Components

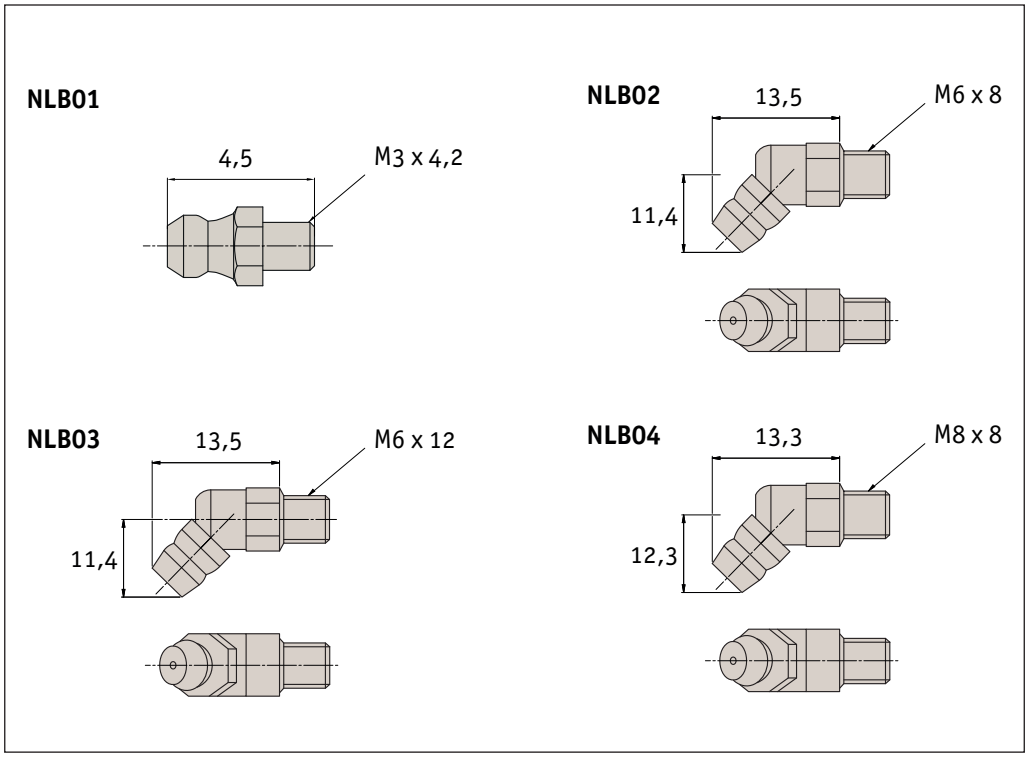


Lubrication nipple

The following lubrication nipples are supplied.

Other lubrication nipples, such as lubrication adapters with hose inlet or with quick-coupling, are available on request.

Lubrication nipple	Size
NLB01	15
NLB02	20
	25
NLB03	30
	35
NLB04	45
	55



Surface treatment

There are numerous application-specific surface treatments available for profile rails of the linear guideway product family, for example, black oxide coating (X), hard chrome plating (XC) or nickel plating (NIC) and an FDA-approval type for use in the food industry. For more information please contact us on 0845 850 99 40.

ov-linear-guideways-lubrication-b -Inh- Updated - 27-02-2023

Linear guideways have a low friction characteristic and thus low displacement resistance. The low start-up friction (breakaway force) is almost identical to the moving friction (running resistance).

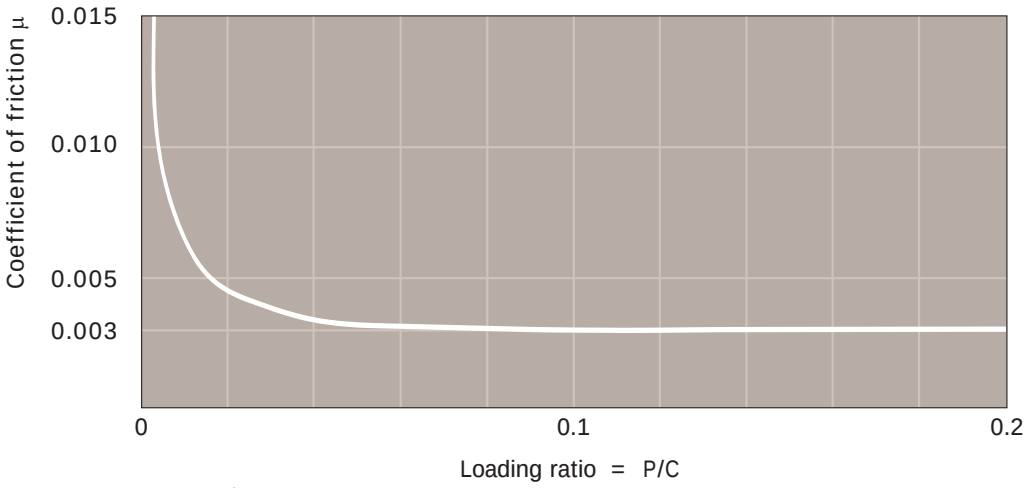
The displacement resistance (F_m) is dependent upon several factors:

- Friction of the sealing system.
- Friction of the balls with each other.
- Friction between balls and redirection.
- Rolling resistance of the balls in the running grooves.
- Resistance of lubricant in the carriage.
- Resistance caused by contamination in the lubricant.
- Preload for increased rigidity.
- Moment load.

Resistance of the seals f

Type	Max. seal resistance N
L1016.15	2,5 N
L1016.20	3,5 N
L1016.25	5,0 N
L1016.30	10,0 N
L1016.35	12,0 N
L1016.45	20,0 N
L1016.55	22,0 N

Coefficient of friction μ



P = Load
C = Dynamic load capacity

Displacement resistance F_m

The following formula is used for approximate calculation of the displacement resistance. Please note that the level of preload or the viscosity of the lubricant used can also influence the displacement resistance.

$$F_m = \mu \cdot F + n.f$$

F_m = Displacement resistance (N)
μ = Coefficient of friction
F = Load (N)
f = Resistance of the seals (N)
n = Number of sliders

Linear guideways have a coefficient of friction of approx. μ = 0.002 - 0.003

Technical Information

Loading



The given static load capacity (C_0) for each carriage represents the maximum permissible load value, which if exceeded causes permanent deformations of the raceways and adversely affects the operating performance.

Checking the load must be done as follows:

- Through determination of the simultaneously occurring forces and moments for each carriage.
- By checking these values with the corresponding load capacities.

$$S_0 > \frac{C_0}{(F_x \cdot f_c)} \quad S_0 > \frac{C_0}{(F_y \cdot f_c)} \quad S_0 > \frac{M_x}{(M_1 \cdot f_c)} \quad S_0 > \frac{M_y}{(M_2 \cdot f_c)} \quad S_0 > \frac{M_z}{(M_3 \cdot f_c)}$$

F_x, F_y	=	radial and axial resultants of external forces (N)	M_x, M_y, M_z	=	maximum permissible moments in the different loading directions (Nm)
M_1, M_2, M_3	=	external moments (Nm)	f_c	=	contact factor (see next page)
C_0	=	static load capacity (N)	S_0	=	safety factor

The safety factors

The safety factor S_0 can lie on the lower given limit if the forces can be determined with sufficient precision. If impacts and vibrations affect the system, overloads might occur, then the higher value should be selected.

Reduced safety results from simultaneously occurring forces and moments.

For more information please contact our technical department.

Operating conditions	S_0
Normal operation	1,0 ~ 1,5
Loading with vibration or shock effect	1,5 ~ 2,0
Loading with strong vibration or impacts	2,0 ≥ 3,5

Linear Guideways from Automotion Components

Calculation of service life

The dynamic load capacity C is a conventional variable used for calculating the service life. This load corresponds to a nominal service life of 50 Km. The relationship between calculated service life L_{Km} (in Km), dynamic load capacity C (in N) and equivalent load P (in N) is given in the formula below.

$$L_{Km} = \left(\frac{C}{P} \cdot \frac{f_c \cdot f_t}{f_i} \right)^3 \cdot 50\ Km$$

f_c = Contact factor
f_i = Application coefficient
f_t = Temperature factor

C = Dynamic load (N)
P = See below (N)

The equivalent load P corresponds in its effects to the sum of the forces and moments working simultaneously on a slider. If these different load components are known, P results from the formula below.

$$P = |F_X| + |F_Y| + \left(\frac{|M_1|}{M_x} + \frac{|M_2|}{M_y} + \frac{|M_3|}{M_z} \right) C_0$$

Contact factor f_c

The contact factor f_c refers to applications in which several carriages pass the same rail section. If two or more carriages are moved over the same point on a rail, the static and dynamic loading values must be multiplied with the numbers from the table below.

Number of carriages	1	2	3	4	5
f_c	1	0,81	0,72	0,66	0,61

Application coefficient f_i

The application coefficient f_i can be understood as the dynamic safety factor.
Refer to the table below for the values.

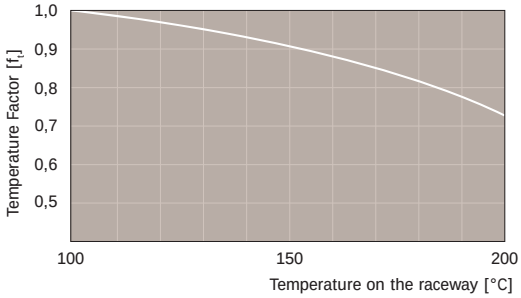
Operating conditions	Speed	f_i
Neither external impacts nor vibrations	Low speed V ≤ 15 m/min.	1 - 1,5
Light impacts or vibrations	Average speed < V ≤ 60 m/min.	1,5 - 2
Average and high external impacts or vibration	High speed V > 60 m/min.	2 - 3,5

Temperature factor f_t

If the temperature affecting the system exceeds 100°C, the temperature factor f_t must be included in the service life calculation.

Note 1: For temperatures above 80°C, the seals and end caps must be designed for higher thermal resistance.

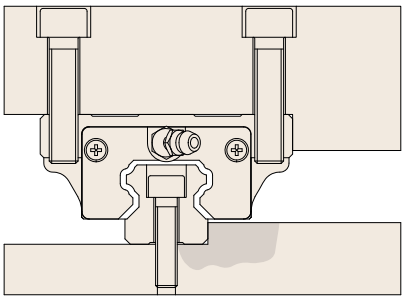
Note 2: Special processing to ensure the movement of the guides is required for temperatures above 120°C.



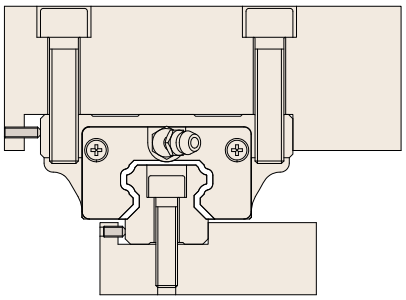
Linear Guideways from Automotion Components

Installation examples
The following drawings illustrate some assembly examples for rail/carriage combinations corresponding to the structure of various machine frames.

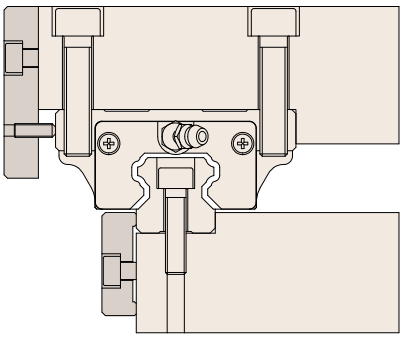
Example 1
Assembly of carriage and rail on shoulder edges



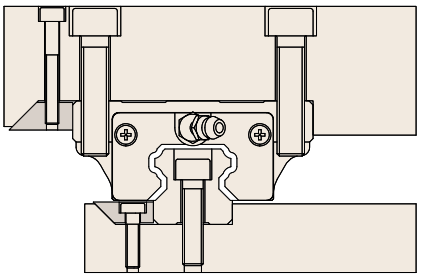
Example 2
Securing carriage and rail using set screws



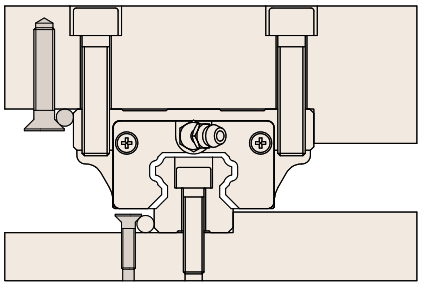
Example 3
Securing carriage and rail using pressure plates



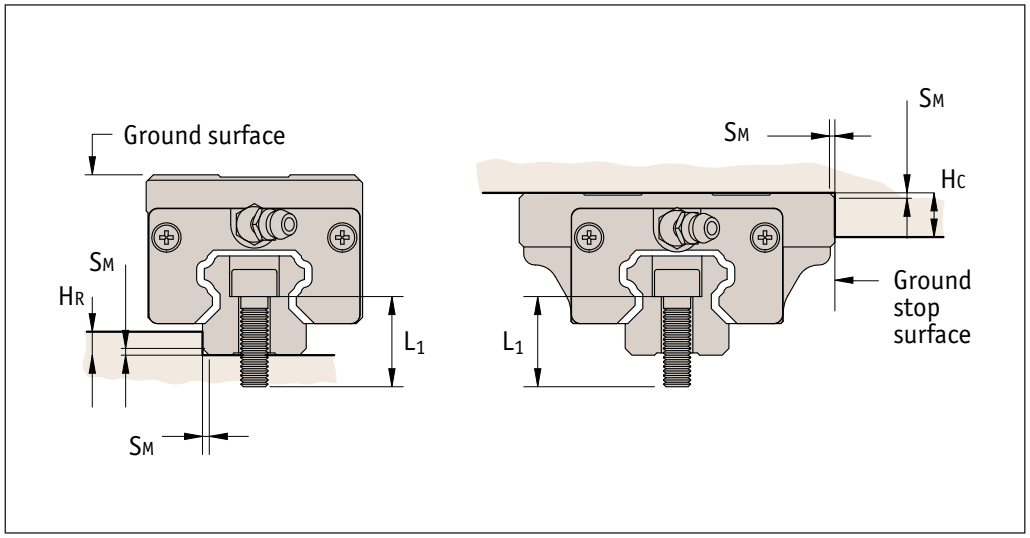
Example 4
Securing carriage and rail using taper gibs



Example 5
Securing carriage and rail using bolts



The given radii and shoulder heights in the table must be observed when assembling rails and carriages on the stop edges to ensure perfect seating of carriages or guideways.

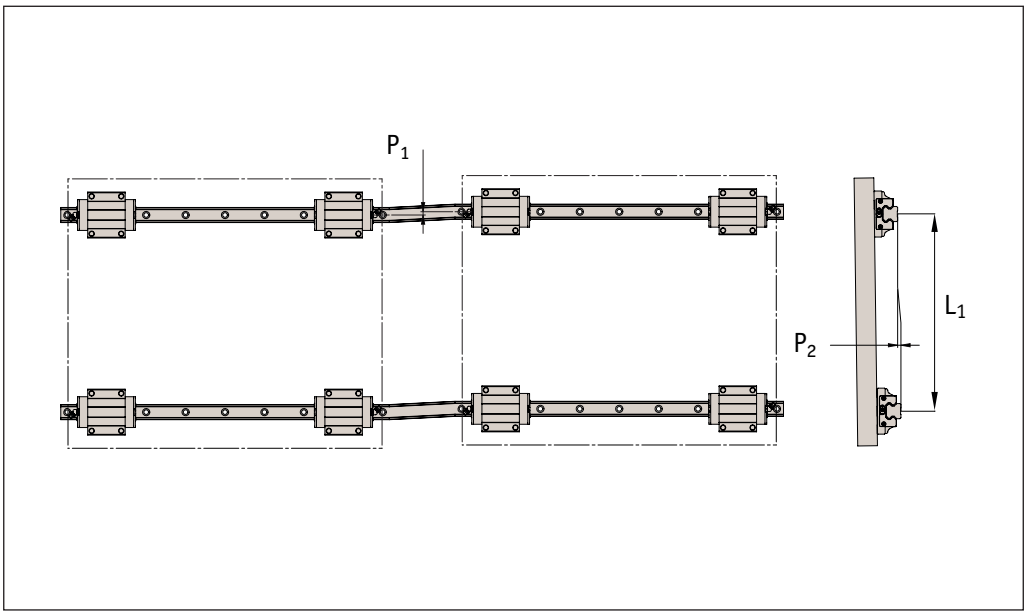


Size	SM	HR	HC	L_1
15	0,6	3,1	5	M4 x 16
20	0,9	4,3	6	M5 x 20
25	1,1	5,6	7	M6 x 25
30	1,4	6,8	8	M8 x 30
35	1,4	7,3	9	M8 x 30
45	1,6	8,7	11	M12 x 40
55	1,6	11,8	12	M14 x 45

Values in mm. HR* is the maximum height when using side seal on carriage.

Linear Guideways from Automotion Components

Assembly precision
The maximum permissible deviations of the rail surfaces for assembly are given in the following drawing and the table below.



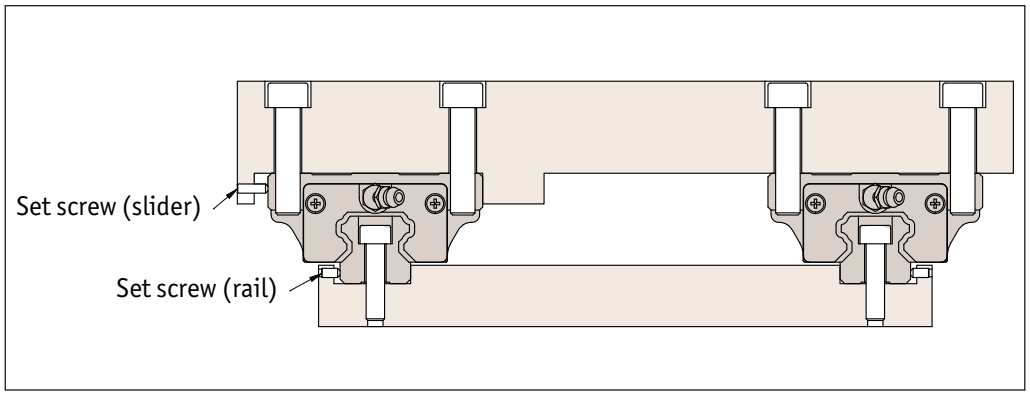
Size	Permissible tolerance for parallelism P_1 µ		$P_2 = L_1$ x (calculation factor) Calculator factor (x) P_2 µ	
	K_1	K_0	K_1	K_0
15	18	25	0,17	0,26
20	20	25	0,17	0,26
25	22	30	0,17	0,26
30	30	40	0,22	0,34
35	35	50	0,30	0,42
45	40	60	0,34	0,50
55	50	70	0,42	0,60

The bolt sizes to be used and optimum tightening torques for rail assembly are listed in the table below.

Bolt	Tightening torque M_t Nm	
	Steel 10,9	Steel 12,9
M 4	4,4	5,1
M 5	8,7	10
M 6	15	18
M 8	36	43
M12	125	145
M14	200	235

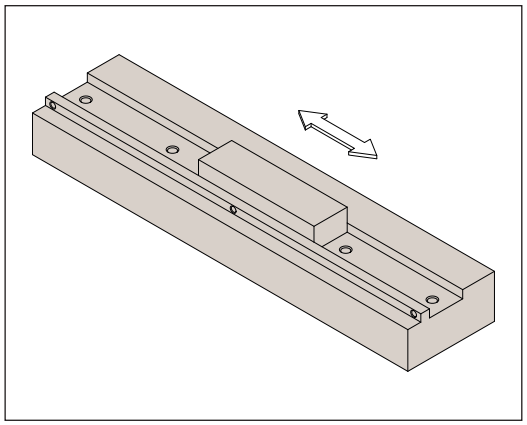
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Assembly process



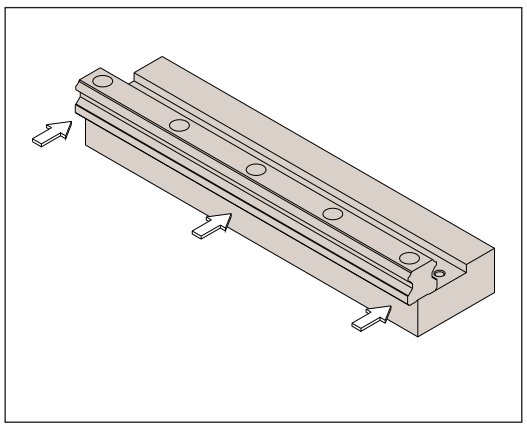
Fixing guide rails 1

Whet the assembly surface with a whetstone and also remove burrs, unevenness and dirt. Note: All linear guides are preserved with anti-corrosion oil at the factory. This protection must be removed before installation. In doing so, please ensure that the surfaces are coated with low-viscosity oil for the purpose of further protection against corrosion.

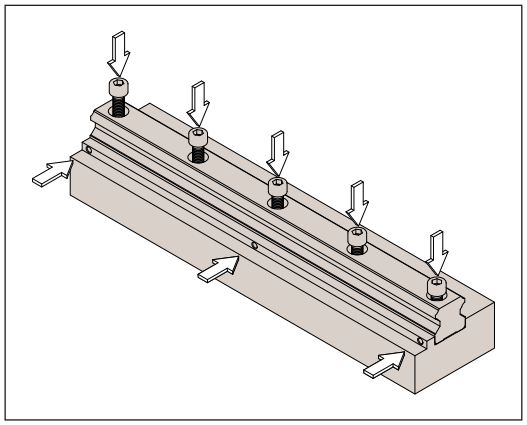


Fixing guide rails 2

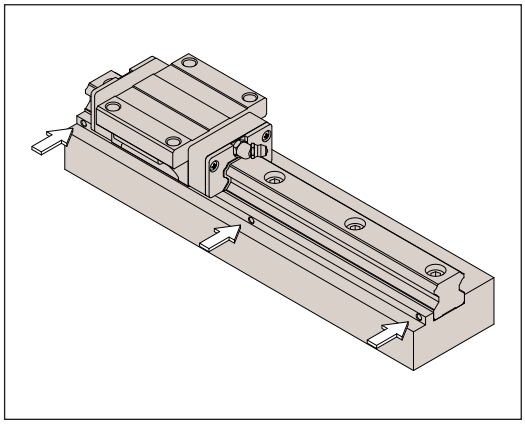
Carefully lay the guide rail on the assembly surface and slightly tighten the fixing screws so that the guide rail lightly touches the assembly surface (align the guide rail along the shoulder edge of the assembly surface). Note: The fixing screws of the linear guide must be clean. Check if the fixing holes are located in the correct place when you insert the bolts. A forced tightening of a fixing screw in an offset hole can negatively affect accuracy.



Fixing guide rails 2 continued



Fixing guide rails 3
Tighten the thrust bolts on the guide rail until there is close contact on the side stop surface.



Fixing guide rails 4
Tighten the fixing screws with a torque wrench to the prescribed torque.
Note: For a high degree of accuracy, the fixing screws of the guide rail must be tightened in sequence outward from the centre.

Fixing guide rails 5
Assemble the other rails in the same manner to complete the installation of the guide rails.

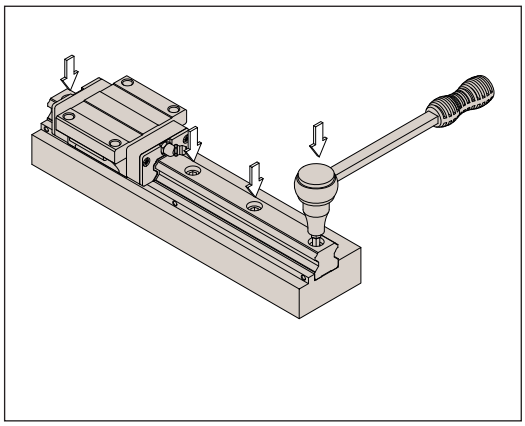
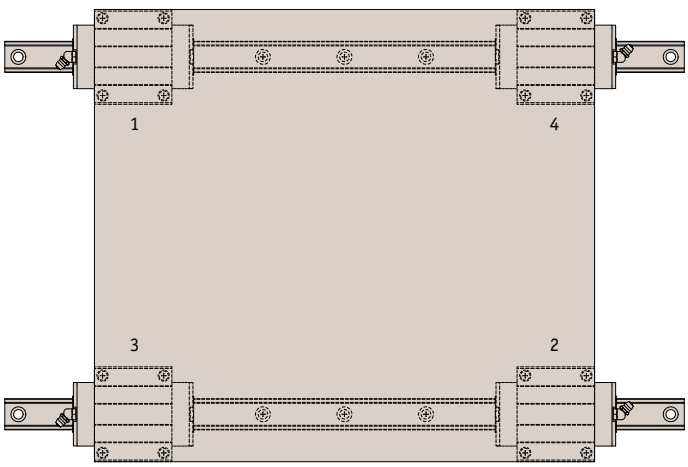


Table assembly 1
Set the table carefully on the carriage and tighten the fixing screws only lightly.

Table assembly 2
Press the carriage on the main guide side with the thrust bolts against the shoulder edge of the table and position the table.

Table assembly 3
Tighten the fixing screws on the main side and the lateral side completely tight to finish the installation. Note: To attach the table uniformly, tighten the fixing screws diagonally (1, 2, 3, 4).

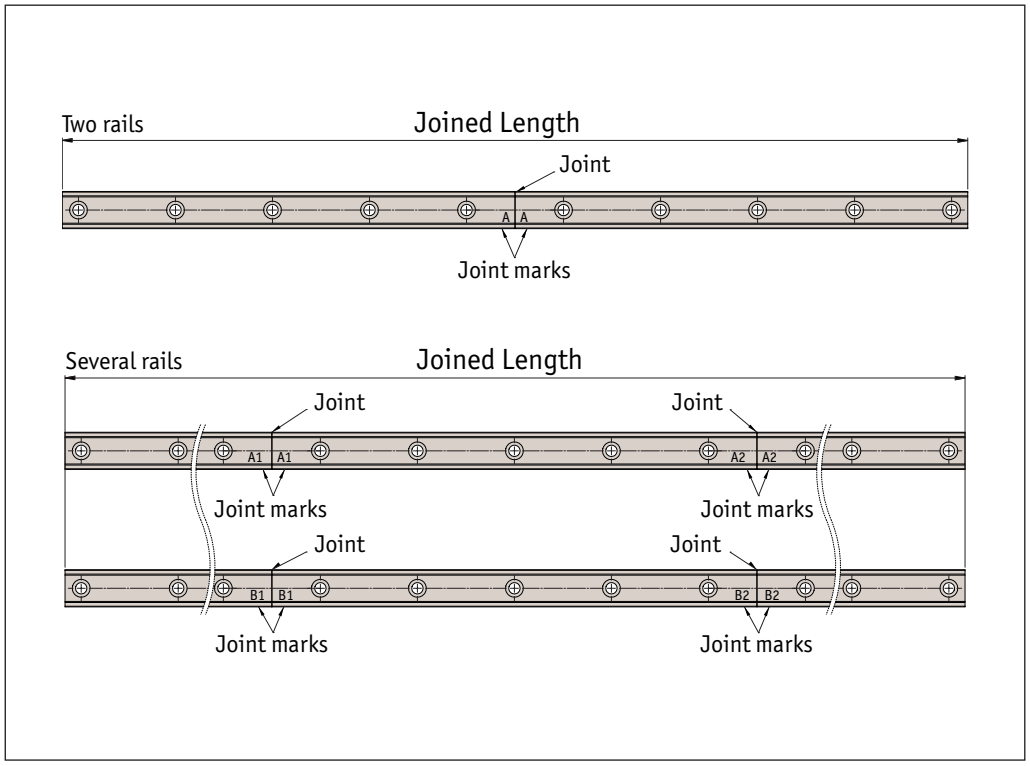
This method saves time when straightening the guide rail and makes the manufacture of positioning pins unnecessary, which considerably reduces assembly time.



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Joining rails

Guide rails longer than the one part maximum length are put together from two or more rails. When putting guide rails together, ensure the register marks are positioned correctly.



Linear Guideways from Automotion Components

Miniature Linear Guideways

Introduction

Miniature linear guideway systems are widely used throughout industry for precise, compact applications.

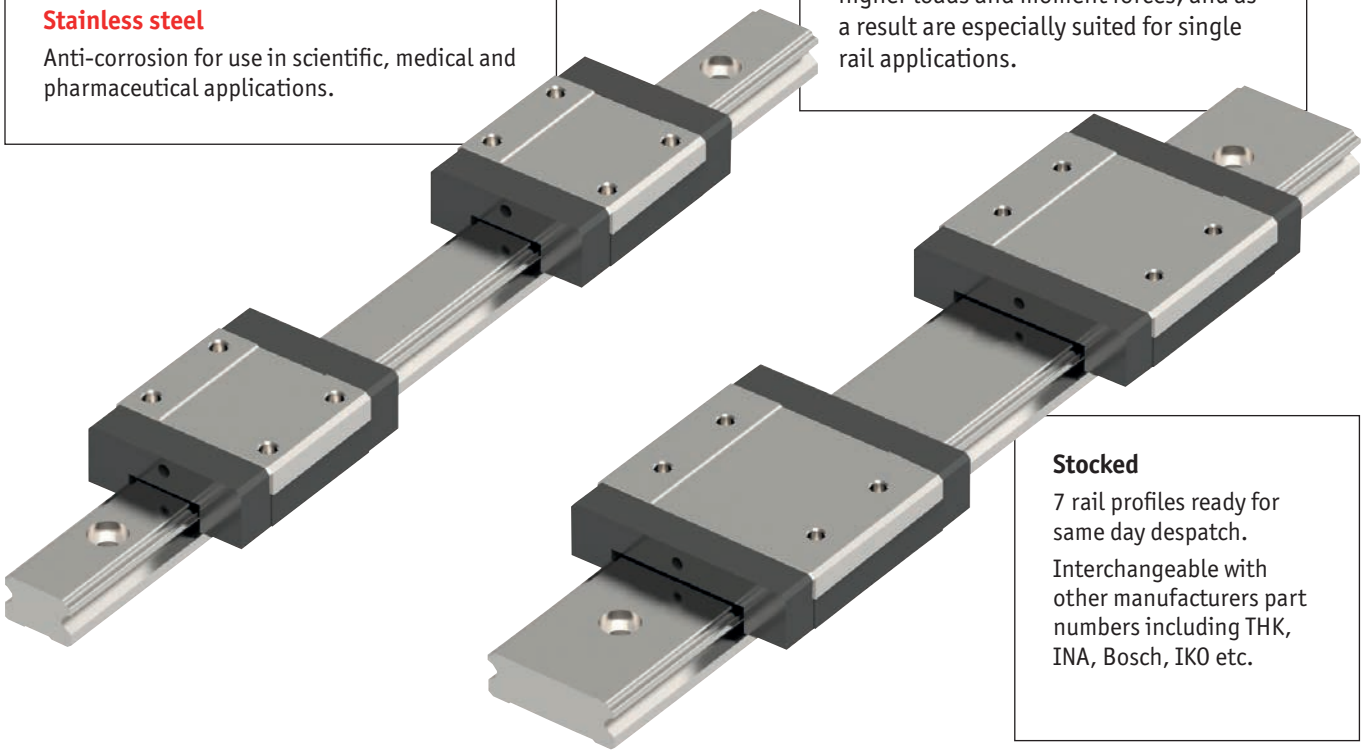
Precise and stainless

The gothic arch shape of the rails have a 45° contact ensuring similar load capacities in all directions. Use of a large number of stainless steel balls enables a high moment and load capacity within a compact space. These smooth running rails have low break-away forces and a low coefficient of friction.

Stainless steel
Anti-corrosion for use in scientific, medical and pharmaceutical applications.

Standard and wide versions
Our standard width is a compact, high performance rail in six sizes.

The wide version can generally accept higher loads and moment forces, and as a result are especially suited for single rail applications.

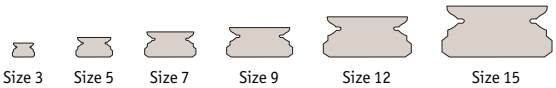


Stocked
7 rail profiles ready for same day despatch.

Interchangeable with other manufacturers part numbers including THK, INA, Bosch, IKO etc.

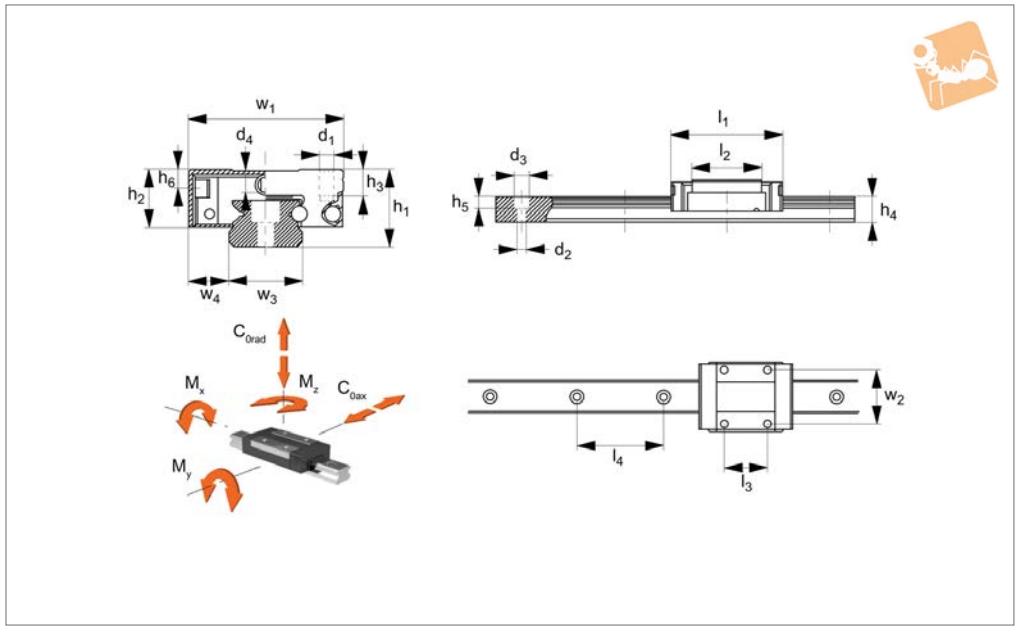
Rail sizes

L1010 Standard Version



L1012 Wide Version







L1010.C

Material
Corrosion resistant stainless steel body (440C), with hardened stainless steel ball bearings.
Black plastic end plates and ball bearing retainers.

Technical Notes
Max.speed 3 m/s. max. acceleration 40m/s^2.
Temperature range -40°C to +80°C.
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1010.07 through to L1010.15).

Tips
Carriages are supplied with a dummy plastic rail. When mounting carriages onto rail, slide directly from the dummy rail onto the steel rail. Do not simply remove the carriage from the dummy rail - the balls will become loose making the carriage unusable.

Important Notes
*Size 3 and Size 5 carriage must be ordered with rails.

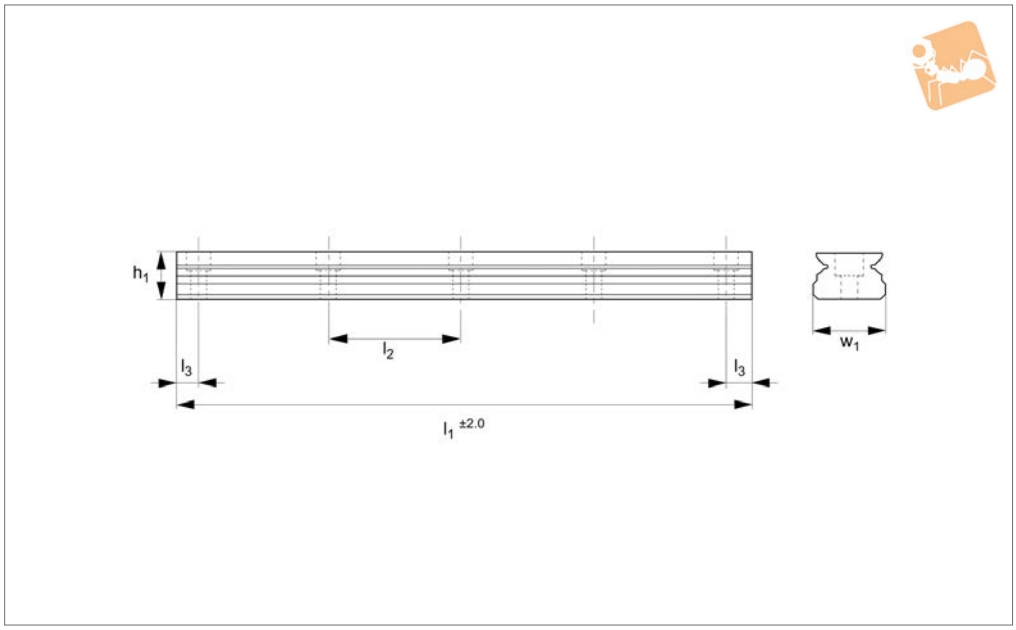
Order No.	For rail	l_1	l_2	l_3	l_4	h_1	h_2	h_3	h_4	h_5	h_6	d_2	d_3	d_4	For screws d_1	Weight g
L1010.C03	3*	11.9	6.7	3.5	10	4	3.2	1.1	2.6	-	1.5	-	M1,6	0.3	M1,6	0.9
L1010.C03L	3*	16.1	11.0	5.5	10	4	3.2	1.1	2.6	-	1.5	-	M1,6	0.3	M2	1.2
L1010.C05	5*	16.3	10.0	-	15	6	4.7	1.5	3.5	1.0	2.0	2.4	3.5	0.7	M2	3.5
L1010.C05L	5*	19.7	13.5	7	15	6	4.6	2.0	3.5	1.0	2.0	2.4	3.5	0.7	M2,6	4.0
L1010.C07	7	24.1	14.3	8	15	8	6.6	2.5	4.7	2.3	2.8	2.4	4.2	1.1	M2	8.0
L1010.C07L	7	31.5	21.8	13	15	8	6.7	2.5	4.7	2.3	2.8	2.4	4.2	1.1	M2	14.0
L1010.C09	9	30.9	20.5	10	20	10	7.9	3.0	5.5	3.5	3.3	3.5	6.0	1.3	M3	18.0
L1010.C09L	9	41.1	30.8	16	20	10	8.0	3.0	5.5	3.5	3.3	3.5	6.0	1.3	M3	28.0
L1010.C12	12	35.8	22.0	15	25	13	10.1	3.5	7.5	4.5	4.3	3.5	6.0	1.3	M3	34.0
L1010.C12L	12	47.8	34.0	20	25	13	10.2	3.5	7.5	4.5	4.3	3.5	6.0	1.3	M3	51.0
L1010.C15	15	43.4	27.0	20	40	16	12.2	5.5	9.5	4.5	4.3	3.5	6.0	1.8	M3	61.0
L1010.C15L	15	60.2	44.0	25	40	16	12.2	5.5	9.5	4.5	4.3	3.5	6.0	1.8	M3	90.0

Order No.	Static load $C_{0rad\ \&\ ax}$ N	w_1	w_2	w_3	w_4	Dyn. load $C_{rad\ \&\ ax}$ N	M_x Nm	M_y Nm	M_z Nm
L1010.C03	310	8	-	3	2.5	190	0.6	0.4	0.4
L1010.C03L	575	8	-	3	2.5	295	0.9	1.1	1.1
L1010.C05	550	12	8	5	3.5	335	1.7	1.0	1.0
L1010.C05L	900	12	-	5	3.5	470	2.4	2.1	2.1
L1010.C07	1440	17	12	7	5.0	890	5.2	3.3	3.3
L1010.C07L	2440	17	12	7	5.0	1310	9.0	7.7	7.7
L1010.C09	2495	20	15	9	5.5	1570	11.7	6.4	6.4
L1010.C09L	3880	20	15	9	5.5	2135	18.2	12.4	12.4
L1010.C12	3465	27	20	12	7.5	2308	21.5	12.9	12.9
L1010.C12L	5630	27	20	12	7.5	3240	34.9	30.2	30.2
L1010.C15	5590	32	25	15	8.5	3810	43.6	27.0	27.0
L1010.C15L	9080	32	25	15	8.5	5350	70.0	63.3	63.3

3mm Miniature Linear Rail
standard width



L1010.03



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Supplied with special low profile hex screws.
Select the size and number of carriages to suit the required load (see part L1010.C).
Other rail lengths on request.
Weight: 0,05 Kg/m.

Important Notes
This size rail has a through thread from underside.
Must be ordered with corresponding sized carriage.

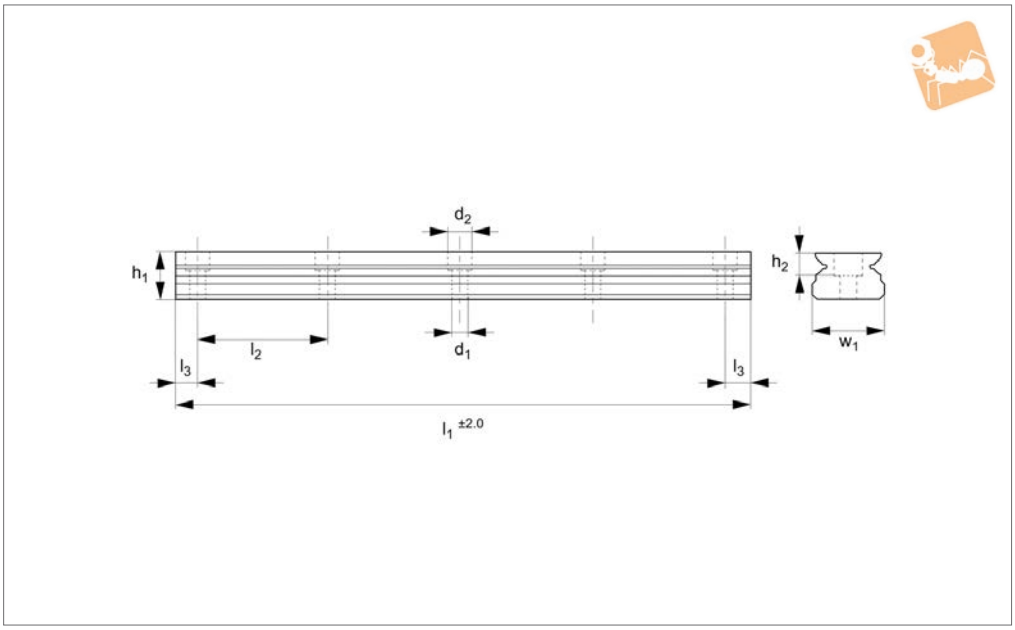
Order No.	l_1	l_2	l_3	h_1	For screws	w_1
L1010.03-0025	25	10	2.5	2.6	M1,6	3
L1010.03-0035	35	10	2.5	2.6	M1,6	3
L1010.03-0045	45	10	2.5	2.6	M1,6	3
L1010.03-0055	55	10	2.5	2.6	M1,6	3
L1010.03-0065	65	10	2.5	2.6	M1,6	3
L1010.03-0075	75	10	2.5	2.6	M1,6	3
L1010.03-0085	85	10	2.5	2.6	M1,6	3
L1010.03-0095	95	10	2.5	2.6	M1,6	3
L1010.03-0105	105	10	2.5	2.6	M1,6	3
L1010.03-0115	115	10	2.5	2.6	M1,6	3
L1010.03-0125	125	10	2.5	2.6	M1,6	3
L1010.03-0135	135	10	2.5	2.6	M1,6	3
L1010.03-0145	145	10	2.5	2.6	M1,6	3
L1010.03-0155	155	10	2.5	2.6	M1,6	3
L1010.03-0165	165	10	2.5	2.6	M1,6	3
L1010.03-0175	175	10	2.5	2.6	M1,6	3
L1010.03-0185	185	10	2.5	2.6	M1,6	3
L1010.03-0195	195	10	2.5	2.6	M1,6	3
L1010.03-0205	205	10	2.5	2.6	M1,6	3
L1010.03-0215	215	10	2.5	2.6	M1,6	3
L1010.03-0225	225	10	2.5	2.6	M1,6	3
L1010.03-0235	235	10	2.5	2.6	M1,6	3
L1010.03-0245	245	10	2.5	2.6	M1,6	3
L1010.03-0255	255	10	2.5	2.6	M1,6	3
L1010.03-0265	265	10	2.5	2.6	M1,6	3
L1010.03-0275	275	10	2.5	2.6	M1,6	3
L1010.03-0285	285	10	2.5	2.6	M1,6	3
L1010.03-0295	295	10	2.5	2.6	M1,6	3
L1010.03-0305	305	10	2.5	2.6	M1,6	3
L1010.03-0315	315	10	2.5	2.6	M1,6	3
L1010.03-0325	325	10	2.5	2.6	M1,6	3
L1010.03-0335	335	10	2.5	2.6	M1,6	3
L1010.03-0345	345	10	2.5	2.6	M1,6	3

Order No.	l_1	l_2	l_3	h_1	For screws	w_1
L1010.03-0355	355	10	2.5	2.6	M1,6	3
L1010.03-0365	365	10	2.5	2.6	M1,6	3
L1010.03-0375	375	10	2.5	2.6	M1,6	3
L1010.03-0385	385	10	2.5	2.6	M1,6	3
L1010.03-0395	395	10	2.5	2.6	M1,6	3
L1010.03-0405	405	10	2.5	2.6	M1,6	3
L1010.03-0415	415	10	2.5	2.6	M1,6	3
L1010.03-0425	425	10	2.5	2.6	M1,6	3
L1010.03-0435	435	10	2.5	2.6	M1,6	3
L1010.03-0445	445	10	2.5	2.6	M1,6	3
L1010.03-0455	455	10	2.5	2.6	M1,6	3
L1010.03-0465	465	10	2.5	2.6	M1,6	3
L1010.03-0475	475	10	2.5	2.6	M1,6	3
L1010.03-0485	485	10	2.5	2.6	M1,6	3
L1010.03-0495	495	10	2.5	2.6	M1,6	3
L1010.03-0505	505	10	2.5	2.6	M1,6	3
L1010.03-0515	515	10	2.5	2.6	M1,6	3
L1010.03-0525	525	10	2.5	2.6	M1,6	3
L1010.03-0535	535	10	2.5	2.6	M1,6	3
L1010.03-0545	545	10	2.5	2.6	M1,6	3
L1010.03-0555	555	10	2.5	2.6	M1,6	3
L1010.03-0565	565	10	2.5	2.6	M1,6	3
L1010.03-0575	575	10	2.5	2.6	M1,6	3
L1010.03-0585	585	10	2.5	2.6	M1,6	3
L1010.03-0595	595	10	2.5	2.6	M1,6	3
L1010.03-0605	605	10	2.5	2.6	M1,6	3
L1010.03-0615	615	10	2.5	2.6	M1,6	3
L1010.03-0625	625	10	2.5	2.6	M1,6	3
L1010.03-0635	635	10	2.5	2.6	M1,6	3
L1010.03-0645	645	10	2.5	2.6	M1,6	3
L1010.03-0655	655	10	2.5	2.6	M1,6	3
L1010.03-0665	665	10	2.5	2.6	M1,6	3
L1010.03-0675	675	10	2.5	2.6	M1,6	3
L1010.03-0685	685	10	2.5	2.6	M1,6	3
L1010.03-0695	695	10	2.5	2.6	M1,6	3
L1010.03-0705	705	10	2.5	2.6	M1,6	3
L1010.03-0715	715	10	2.5	2.6	M1,6	3
L1010.03-0725	725	10	2.5	2.6	M1,6	3
L1010.03-0735	735	10	2.5	2.6	M1,6	3
L1010.03-0745	745	10	2.5	2.6	M1,6	3
L1010.03-0755	755	10	2.5	2.6	M1,6	3
L1010.03-0765	765	10	2.5	2.6	M1,6	3
L1010.03-0775	775	10	2.5	2.6	M1,6	3
L1010.03-0785	785	10	2.5	2.6	M1,6	3
L1010.03-0795	795	10	2.5	2.6	M1,6	3
L1010.03-0805	805	10	2.5	2.6	M1,6	3
L1010.03-0815	815	10	2.5	2.6	M1,6	3
L1010.03-0825	825	10	2.5	2.6	M1,6	3
L1010.03-0835	835	10	2.5	2.6	M1,6	3
L1010.03-0845	845	10	2.5	2.6	M1,6	3
L1010.03-0855	855	10	2.5	2.6	M1,6	3
L1010.03-0865	865	10	2.5	2.6	M1,6	3
L1010.03-0875	875	10	2.5	2.6	M1,6	3
L1010.03-0885	885	10	2.5	2.6	M1,6	3
L1010.03-0895	895	10	2.5	2.6	M1,6	3
L1010.03-0905	905	10	2.5	2.6	M1,6	3
L1010.03-0915	915	10	2.5	2.6	M1,6	3
L1010.03-0925	925	10	2.5	2.6	M1,6	3
L1010.03-0935	935	10	2.5	2.6	M1,6	3
L1010.03-0945	945	10	2.5	2.6	M1,6	3
L1010.03-0955	955	10	2.5	2.6	M1,6	3
L1010.03-0965	965	10	2.5	2.6	M1,6	3
L1010.03-0975	975	10	2.5	2.6	M1,6	3
L1010.03-0985	985	10	2.5	2.6	M1,6	3
L1010.03-0995	995	10	2.5	2.6	M1,6	3

5mm Miniature Linear Rail
standard width



L1010.05



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Supplied with special low profile hex screws.
Select the size and number of carriages to suit the required load (see part L1010.C).
Other rail lengths on request.
Weight: 0,12 Kg/m.

Important Notes
Must be ordered with corresponding sized carriage.

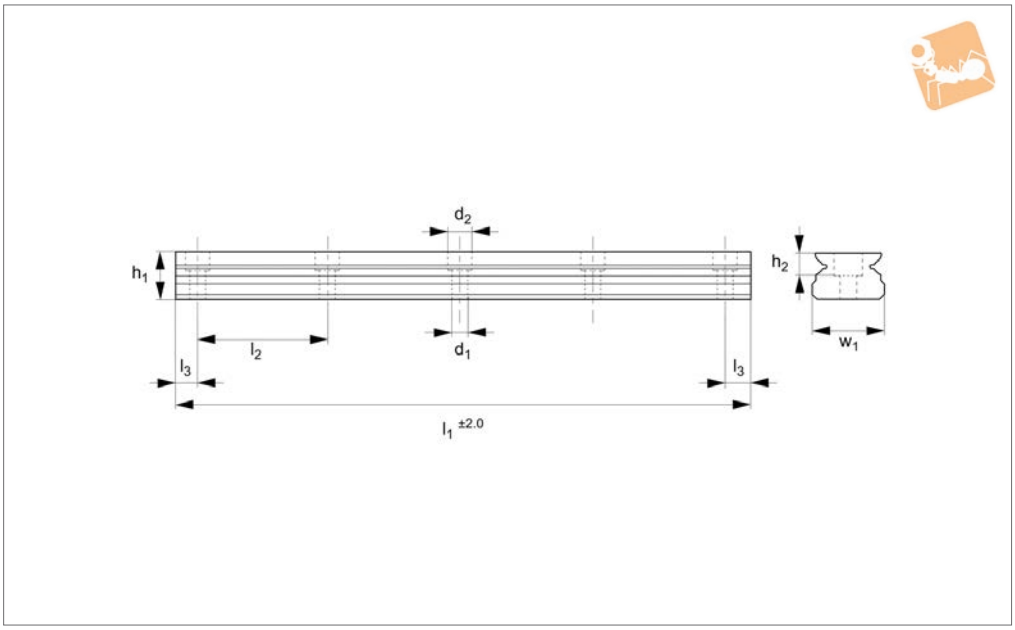
Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.05-0040	40	15	5	3.5	1	2.4	3.5	M2	5	4.8
L1010.05-0055	55	15	5	3.5	1	2.4	3.5	M2	5	6.6
L1010.05-0070	70	15	5	3.5	1	2.4	3.5	M2	5	8.4
L1010.05-0085	85	15	5	3.5	1	2.4	3.5	M2	5	10.2
L1010.05-0100	100	15	5	3.5	1	2.4	3.5	M2	5	12.0
L1010.05-0115	115	15	5	3.5	1	2.4	3.5	M2	5	13.8
L1010.05-0130	130	15	5	3.5	1	2.4	3.5	M2	5	15.6
L1010.05-0145	145	15	5	3.5	1	2.4	3.5	M2	5	17.4
L1010.05-0160	160	15	5	3.5	1	2.4	3.5	M2	5	19.2
L1010.05-0175	175	15	5	3.5	1	2.4	3.5	M2	5	21.0
L1010.05-0190	190	15	5	3.5	1	2.4	3.5	M2	5	22.8
L1010.05-0205	205	15	5	3.5	1	2.4	3.5	M2	5	24.6
L1010.05-0220	220	15	5	3.5	1	2.4	3.5	M2	5	26.4
L1010.05-0235	235	15	5	3.5	1	2.4	3.5	M2	5	28.2
L1010.05-0250	250	15	5	3.5	1	2.4	3.5	M2	5	30.0
L1010.05-0265	265	15	5	3.5	1	2.4	3.5	M2	5	31.8
L1010.05-0280	280	15	5	3.5	1	2.4	3.5	M2	5	33.6
L1010.05-0295	295	15	5	3.5	1	2.4	3.5	M2	5	35.4
L1010.05-0310	310	15	5	3.5	1	2.4	3.5	M2	5	37.2
L1010.05-0325	325	15	5	3.5	1	2.4	3.5	M2	5	39.0
L1010.05-0340	340	15	5	3.5	1	2.4	3.5	M2	5	40.8
L1010.05-0355	355	15	5	3.5	1	2.4	3.5	M2	5	42.6
L1010.05-0370	370	15	5	3.5	1	2.4	3.5	M2	5	44.4
L1010.05-0385	385	15	5	3.5	1	2.4	3.5	M2	5	46.2
L1010.05-0400	400	15	5	3.5	1	2.4	3.5	M2	5	48.0
L1010.05-0415	415	15	5	3.5	1	2.4	3.5	M2	5	49.8
L1010.05-0430	430	15	5	3.5	1	2.4	3.5	M2	5	51.6
L1010.05-0445	445	15	5	3.5	1	2.4	3.5	M2	5	53.4
L1010.05-0460	460	15	5	3.5	1	2.4	3.5	M2	5	55.2
L1010.05-0475	475	15	5	3.5	1	2.4	3.5	M2	5	57.0
L1010.05-0490	490	15	5	3.5	1	2.4	3.5	M2	5	58.8
L1010.05-0505	505	15	5	3.5	1	2.4	3.5	M2	5	60.6

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.05-0520	520	15	5	3.5	1	2.4	3.5	M2	5	62.4
L1010.05-0535	535	15	5	3.5	1	2.4	3.5	M2	5	64.2
L1010.05-0550	550	15	5	3.5	1	2.4	3.5	M2	5	66.0
L1010.05-0565	565	15	5	3.5	1	2.4	3.5	M2	5	67.8
L1010.05-0580	580	15	5	3.5	1	2.4	3.5	M2	5	69.6
L1010.05-0595	595	15	5	3.5	1	2.4	3.5	M2	5	71.4
L1010.05-0610	610	15	5	3.5	1	2.4	3.5	M2	5	73.2
L1010.05-0625	625	15	5	3.5	1	2.4	3.5	M2	5	75.0
L1010.05-0640	640	15	5	3.5	1	2.4	3.5	M2	5	76.8
L1010.05-0655	655	15	5	3.5	1	2.4	3.5	M2	5	78.6
L1010.05-0670	670	15	5	3.5	1	2.4	3.5	M2	5	80.4
L1010.05-0685	685	15	5	3.5	1	2.4	3.5	M2	5	82.2
L1010.05-0700	700	15	5	3.5	1	2.4	3.5	M2	5	84.0
L1010.05-0715	715	15	5	3.5	1	2.4	3.5	M2	5	85.8
L1010.05-0730	730	15	5	3.5	1	2.4	3.5	M2	5	87.6
L1010.05-0745	745	15	5	3.5	1	2.4	3.5	M2	5	89.4
L1010.05-0760	760	15	5	3.5	1	2.4	3.5	M2	5	91.2
L1010.05-0775	775	15	5	3.5	1	2.4	3.5	M2	5	93.0
L1010.05-0790	790	15	5	3.5	1	2.4	3.5	M2	5	94.8
L1010.05-0805	805	15	5	3.5	1	2.4	3.5	M2	5	96.6
L1010.05-0820	820	15	5	3.5	1	2.4	3.5	M2	5	98.4
L1010.05-0835	835	15	5	3.5	1	2.4	3.5	M2	5	100.2
L1010.05-0850	850	15	5	3.5	1	2.4	3.5	M2	5	102.0
L1010.05-0865	865	15	5	3.5	1	2.4	3.5	M2	5	103.8
L1010.05-0880	880	15	5	3.5	1	2.4	3.5	M2	5	105.6
L1010.05-0895	895	15	5	3.5	1	2.4	3.5	M2	5	107.4
L1010.05-0910	910	15	5	3.5	1	2.4	3.5	M2	5	109.2
L1010.05-0925	925	15	5	3.5	1	2.4	3.5	M2	5	111.0
L1010.05-0940	940	15	5	3.5	1	2.4	3.5	M2	5	112.8
L1010.05-0955	955	15	5	3.5	1	2.4	3.5	M2	5	114.6
L1010.05-0970	970	15	5	3.5	1	2.4	3.5	M2	5	116.4
L1010.05-0985	985	15	5	3.5	1	2.4	3.5	M2	5	118.2
L1010.05-1000	1000	15	5	3.5	1	2.4	3.5	M2	5	120.0

7mm Miniature Linear Rail
standard width



L1010.07



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1010.C).

Other rail lengths on request.
Weight: 0,22 Kg/m.

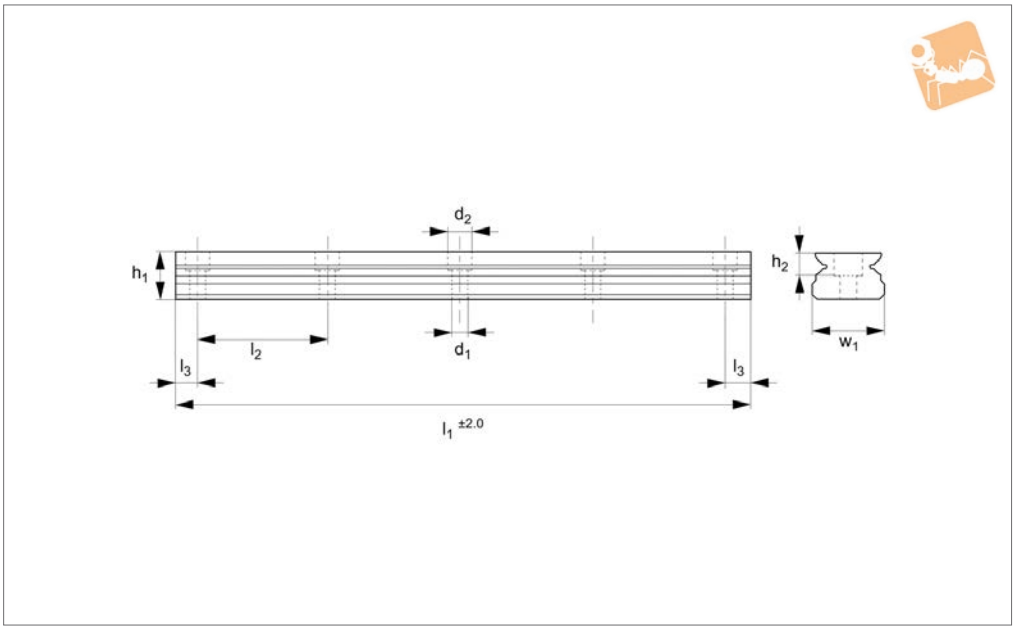
Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.07-0040	40	15	5	4.7	2.3	2.4	4.2	M2	7	8.8
L1010.07-0055	55	15	5	4.7	2.3	2.4	4.2	M2	7	12.1
L1010.07-0070	70	15	5	4.7	2.3	2.4	4.2	M2	7	15.4
L1010.07-0085	85	15	5	4.7	2.3	2.4	4.2	M2	7	18.7
L1010.07-0100	100	15	5	4.7	2.3	2.4	4.2	M2	7	22.0
L1010.07-0115	115	15	5	4.7	2.3	2.4	4.2	M2	7	25.3
L1010.07-0130	130	15	5	4.7	2.3	2.4	4.2	M2	7	28.6
L1010.07-0145	145	15	5	4.7	2.3	2.4	4.2	M2	7	31.9
L1010.07-0160	160	15	5	4.7	2.3	2.4	4.2	M2	7	35.2
L1010.07-0175	175	15	5	4.7	2.3	2.4	4.2	M2	7	38.5
L1010.07-0190	190	15	5	4.7	2.3	2.4	4.2	M2	7	41.8
L1010.07-0205	205	15	5	4.7	2.3	2.4	4.2	M2	7	45.1
L1010.07-0220	220	15	5	4.7	2.3	2.4	4.2	M2	7	48.4
L1010.07-0235	235	15	5	4.7	2.3	2.4	4.2	M2	7	51.7
L1010.07-0250	250	15	5	4.7	2.3	2.4	4.2	M2	7	55.0
L1010.07-0265	265	15	5	4.7	2.3	2.4	4.2	M2	7	58.3
L1010.07-0280	280	15	5	4.7	2.3	2.4	4.2	M2	7	61.6
L1010.07-0295	295	15	5	4.7	2.3	2.4	4.2	M2	7	64.9
L1010.07-0310	310	15	5	4.7	2.3	2.4	4.2	M2	7	68.2
L1010.07-0325	325	15	5	4.7	2.3	2.4	4.2	M2	7	71.5
L1010.07-0340	340	15	5	4.7	2.3	2.4	4.2	M2	7	74.8
L1010.07-0355	355	15	5	4.7	2.3	2.4	4.2	M2	7	78.1
L1010.07-0370	370	15	5	4.7	2.3	2.4	4.2	M2	7	81.4
L1010.07-0385	385	15	5	4.7	2.3	2.4	4.2	M2	7	84.7
L1010.07-0400	400	15	5	4.7	2.3	2.4	4.2	M2	7	88.0
L1010.07-0415	415	15	5	4.7	2.3	2.4	4.2	M2	7	91.3
L1010.07-0430	430	15	5	4.7	2.3	2.4	4.2	M2	7	94.6
L1010.07-0445	445	15	5	4.7	2.3	2.4	4.2	M2	7	97.9
L1010.07-0460	460	15	5	4.7	2.3	2.4	4.2	M2	7	101.2
L1010.07-0475	475	15	5	4.7	2.3	2.4	4.2	M2	7	104.5
L1010.07-0490	490	15	5	4.7	2.3	2.4	4.2	M2	7	107.8
L1010.07-0505	505	15	5	4.7	2.3	2.4	4.2	M2	7	111.1
L1010.07-0520	520	15	5	4.7	2.3	2.4	4.2	M2	7	114.4
L1010.07-0535	535	15	5	4.7	2.3	2.4	4.2	M2	7	117.7

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.07-0550	550	15	5	4.7	2.3	2.4	4.2	M2	7	121.0
L1010.07-0565	565	15	5	4.7	2.3	2.4	4.2	M2	7	124.3
L1010.07-0580	580	15	5	4.7	2.3	2.4	4.2	M2	7	127.6
L1010.07-0595	595	15	5	4.7	2.3	2.4	4.2	M2	7	130.9
L1010.07-0610	610	15	5	4.7	2.3	2.4	4.2	M2	7	134.2
L1010.07-0625	625	15	5	4.7	2.3	2.4	4.2	M2	7	137.5
L1010.07-0640	640	15	5	4.7	2.3	2.4	4.2	M2	7	140.8
L1010.07-0655	655	15	5	4.7	2.3	2.4	4.2	M2	7	144.1
L1010.07-0670	670	15	5	4.7	2.3	2.4	4.2	M2	7	147.4
L1010.07-0685	685	15	5	4.7	2.3	2.4	4.2	M2	7	150.7
L1010.07-0700	700	15	5	4.7	2.3	2.4	4.2	M2	7	154.0
L1010.07-0715	715	15	5	4.7	2.3	2.4	4.2	M2	7	157.3
L1010.07-0730	730	15	5	4.7	2.3	2.4	4.2	M2	7	160.6
L1010.07-0745	745	15	5	4.7	2.3	2.4	4.2	M2	7	163.9
L1010.07-0760	760	15	5	4.7	2.3	2.4	4.2	M2	7	167.2
L1010.07-0775	775	15	5	4.7	2.3	2.4	4.2	M2	7	170.5
L1010.07-0790	790	15	5	4.7	2.3	2.4	4.2	M2	7	173.8
L1010.07-0805	805	15	5	4.7	2.3	2.4	4.2	M2	7	177.1
L1010.07-0820	820	15	5	4.7	2.3	2.4	4.2	M2	7	180.4
L1010.07-0835	835	15	5	4.7	2.3	2.4	4.2	M2	7	183.7
L1010.07-0850	850	15	5	4.7	2.3	2.4	4.2	M2	7	187.0
L1010.07-0865	865	15	5	4.7	2.3	2.4	4.2	M2	7	190.3
L1010.07-0880	880	15	5	4.7	2.3	2.4	4.2	M2	7	193.6
L1010.07-0895	895	15	5	4.7	2.3	2.4	4.2	M2	7	196.9
L1010.07-0910	910	15	5	4.7	2.3	2.4	4.2	M2	7	200.2
L1010.07-0925	925	15	5	4.7	2.3	2.4	4.2	M2	7	203.5
L1010.07-0940	940	15	5	4.7	2.3	2.4	4.2	M2	7	206.8
L1010.07-0955	955	15	5	4.7	2.3	2.4	4.2	M2	7	210.1
L1010.07-0970	970	15	5	4.7	2.3	2.4	4.2	M2	7	213.4
L1010.07-0985	985	15	5	4.7	2.3	2.4	4.2	M2	7	216.7
L1010.07-1000	1000	15	5	4.7	2.3	2.4	4.2	M2	7	220.0

9mm Miniature Linear Rail
standard width



L1010.09



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1010.C).

Other rail lengths on request.
Weight: 0,30 Kg/m.

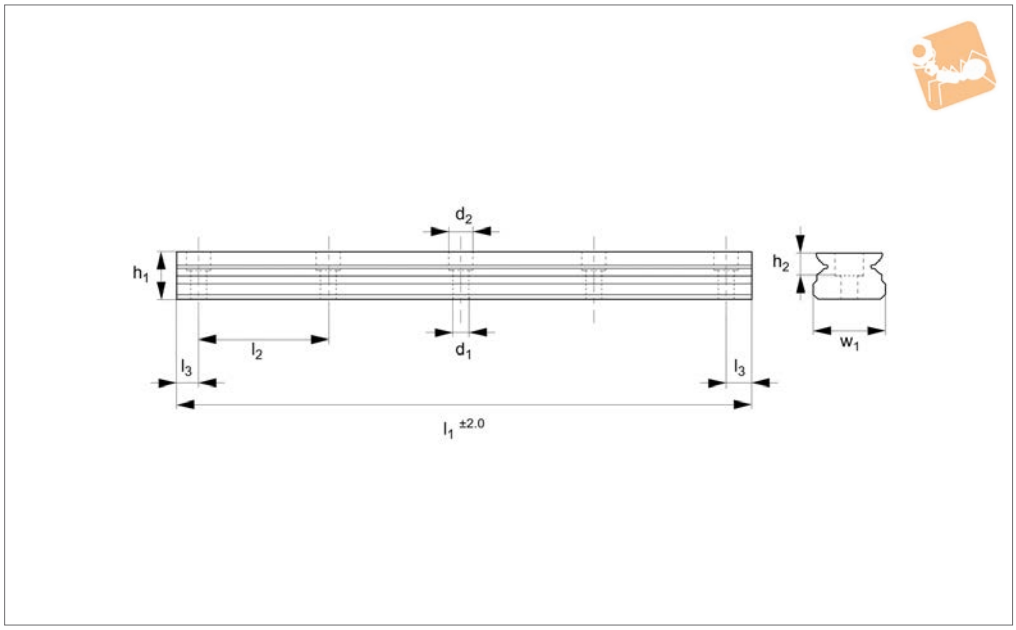
Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.09-0055	55	20	7.5	5.5	3.5	3.5	6	M3	9	16.5
L1010.09-0075	75	20	7.5	5.5	3.5	3.5	6	M3	9	22.5
L1010.09-0095	95	20	7.5	5.5	3.5	3.5	6	M3	9	28.5
L1010.09-0115	115	20	7.5	5.5	3.5	3.5	6	M3	9	34.5
L1010.09-0135	135	20	7.5	5.5	3.5	3.5	6	M3	9	40.5
L1010.09-0155	155	20	7.5	5.5	3.5	3.5	6	M3	9	46.5
L1010.09-0175	175	20	7.5	5.5	3.5	3.5	6	M3	9	52.5
L1010.09-0195	195	20	7.5	5.5	3.5	3.5	6	M3	9	58.5
L1010.09-0215	215	20	7.5	5.5	3.5	3.5	6	M3	9	64.5
L1010.09-0235	235	20	7.5	5.5	3.5	3.5	6	M3	9	70.5
L1010.09-0255	255	20	7.5	5.5	3.5	3.5	6	M3	9	76.5
L1010.09-0275	275	20	7.5	5.5	3.5	3.5	6	M3	9	82.5
L1010.09-0295	295	20	7.5	5.5	3.5	3.5	6	M3	9	88.5
L1010.09-0315	315	20	7.5	5.5	3.5	3.5	6	M3	9	94.5
L1010.09-0335	335	20	7.5	5.5	3.5	3.5	6	M3	9	100.5
L1010.09-0355	355	20	7.5	5.5	3.5	3.5	6	M3	9	106.5
L1010.09-0375	375	20	7.5	5.5	3.5	3.5	6	M3	9	112.5
L1010.09-0395	395	20	7.5	5.5	3.5	3.5	6	M3	9	118.5
L1010.09-0415	415	20	7.5	5.5	3.5	3.5	6	M3	9	124.5
L1010.09-0435	435	20	7.5	5.5	3.5	3.5	6	M3	9	130.5
L1010.09-0455	455	20	7.5	5.5	3.5	3.5	6	M3	9	136.5
L1010.09-0475	475	20	7.5	5.5	3.5	3.5	6	M3	9	142.5
L1010.09-0495	495	20	7.5	5.5	3.5	3.5	6	M3	9	148.5
L1010.09-0515	515	20	7.5	5.5	3.5	3.5	6	M3	9	154.5
L1010.09-0535	535	20	7.5	5.5	3.5	3.5	6	M3	9	160.5
L1010.09-0555	555	20	7.5	5.5	3.5	3.5	6	M3	9	166.5
L1010.09-0575	575	20	7.5	5.5	3.5	3.5	6	M3	9	172.5
L1010.09-0595	595	20	7.5	5.5	3.5	3.5	6	M3	9	178.5
L1010.09-0615	615	20	7.5	5.5	3.5	3.5	6	M3	9	184.5
L1010.09-0635	635	20	7.5	5.5	3.5	3.5	6	M3	9	190.5
L1010.09-0655	655	20	7.5	5.5	3.5	3.5	6	M3	9	196.5
L1010.09-0675	675	20	7.5	5.5	3.5	3.5	6	M3	9	202.5
L1010.09-0695	695	20	7.5	5.5	3.5	3.5	6	M3	9	208.5
L1010.09-0715	715	20	7.5	5.5	3.5	3.5	6	M3	9	214.5

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.09-0735	735	20	7.5	5.5	3.5	3.5	6	M3	9	220.5
L1010.09-0755	755	20	7.5	5.5	3.5	3.5	6	M3	9	226.5
L1010.09-0775	775	20	7.5	5.5	3.5	3.5	6	M3	9	232.5
L1010.09-0795	795	20	7.5	5.5	3.5	3.5	6	M3	9	238.5
L1010.09-0815	815	20	7.5	5.5	3.5	3.5	6	M3	9	244.5
L1010.09-0835	835	20	7.5	5.5	3.5	3.5	6	M3	9	250.5
L1010.09-0855	855	20	7.5	5.5	3.5	3.5	6	M3	9	256.5
L1010.09-0875	875	20	7.5	5.5	3.5	3.5	6	M3	9	262.5
L1010.09-0895	895	20	7.5	5.5	3.5	3.5	6	M3	9	268.5
L1010.09-0915	915	20	7.5	5.5	3.5	3.5	6	M3	9	274.5
L1010.09-0935	935	20	7.5	5.5	3.5	3.5	6	M3	9	280.5
L1010.09-0955	955	20	7.5	5.5	3.5	3.5	6	M3	9	286.5
L1010.09-0975	975	20	7.5	5.5	3.5	3.5	6	M3	9	292.5
L1010.09-0995	995	20	7.5	5.5	3.5	3.5	6	M3	9	298.5

12mm Miniature Linear Rail
standard width



L1010.12



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1010.C).

Other rail lengths on request.
Weight: 0,60 Kg/m.

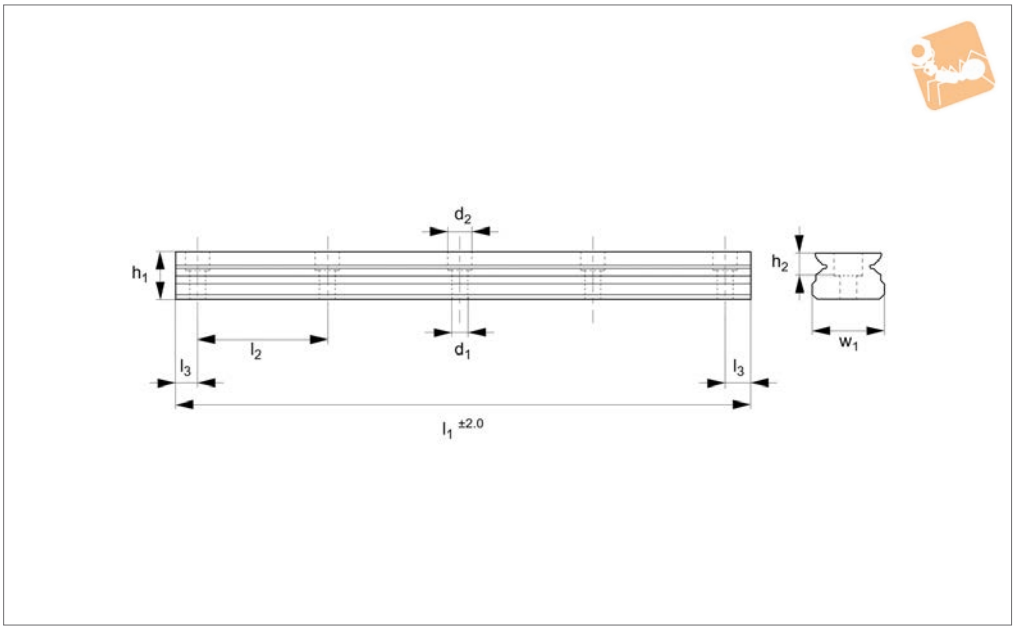
Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.12-0070	70	25	10	7.5	4.5	3.5	6	M3	12	42
L1010.12-0095	95	25	10	7.5	4.5	3.5	6	M3	12	57
L1010.12-0120	120	25	10	7.5	4.5	3.5	6	M3	12	72
L1010.12-0145	145	25	10	7.5	4.5	3.5	6	M3	12	87
L1010.12-0170	170	25	10	7.5	4.5	3.5	6	M3	12	102
L1010.12-0195	195	25	10	7.5	4.5	3.5	6	M3	12	117
L1010.12-0220	220	25	10	7.5	4.5	3.5	6	M3	12	132
L1010.12-0245	245	25	10	7.5	4.5	3.5	6	M3	12	147
L1010.12-0270	270	25	10	7.5	4.5	3.5	6	M3	12	162
L1010.12-0295	295	25	10	7.5	4.5	3.5	6	M3	12	177
L1010.12-0320	320	25	10	7.5	4.5	3.5	6	M3	12	192
L1010.12-0345	345	25	10	7.5	4.5	3.5	6	M3	12	207
L1010.12-0370	370	25	10	7.5	4.5	3.5	6	M3	12	222
L1010.12-0395	395	25	10	7.5	4.5	3.5	6	M3	12	237
L1010.12-0420	420	25	10	7.5	4.5	3.5	6	M3	12	252
L1010.12-0445	445	25	10	7.5	4.5	3.5	6	M3	12	267
L1010.12-0470	470	25	10	7.5	4.5	3.5	6	M3	12	282
L1010.12-0495	495	25	10	7.5	4.5	3.5	6	M3	12	297
L1010.12-0520	520	25	10	7.5	4.5	3.5	6	M3	12	312
L1010.12-0545	545	25	10	7.5	4.5	3.5	6	M3	12	327
L1010.12-0570	570	25	10	7.5	4.5	3.5	6	M3	12	342
L1010.12-0595	595	25	10	7.5	4.5	3.5	6	M3	12	357
L1010.12-0620	620	25	10	7.5	4.5	3.5	6	M3	12	372
L1010.12-0645	645	25	10	7.5	4.5	3.5	6	M3	12	387
L1010.12-0670	670	25	10	7.5	4.5	3.5	6	M3	12	402
L1010.12-0695	695	25	10	7.5	4.5	3.5	6	M3	12	417
L1010.12-0720	720	25	10	7.5	4.5	3.5	6	M3	12	432
L1010.12-0745	745	25	10	7.5	4.5	3.5	6	M3	12	447
L1010.12-0770	770	25	10	7.5	4.5	3.5	6	M3	12	462
L1010.12-0795	795	25	10	7.5	4.5	3.5	6	M3	12	477
L1010.12-0820	820	25	10	7.5	4.5	3.5	6	M3	12	492
L1010.12-0845	845	25	10	7.5	4.5	3.5	6	M3	12	507
L1010.12-0870	870	25	10	7.5	4.5	3.5	6	M3	12	522
L1010.12-0895	895	25	10	7.5	4.5	3.5	6	M3	12	537

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.12-0920	920	25	10	7.5	4.5	3.5	6	M3	12	552
L1010.12-0945	945	25	10	7.5	4.5	3.5	6	M3	12	567
L1010.12-0970	970	25	10	7.5	4.5	3.5	6	M3	12	582
L1010.12-0995	995	25	10	7.5	4.5	3.5	6	M3	12	597

15mm Miniature Linear Rail
standard width



L1010.15

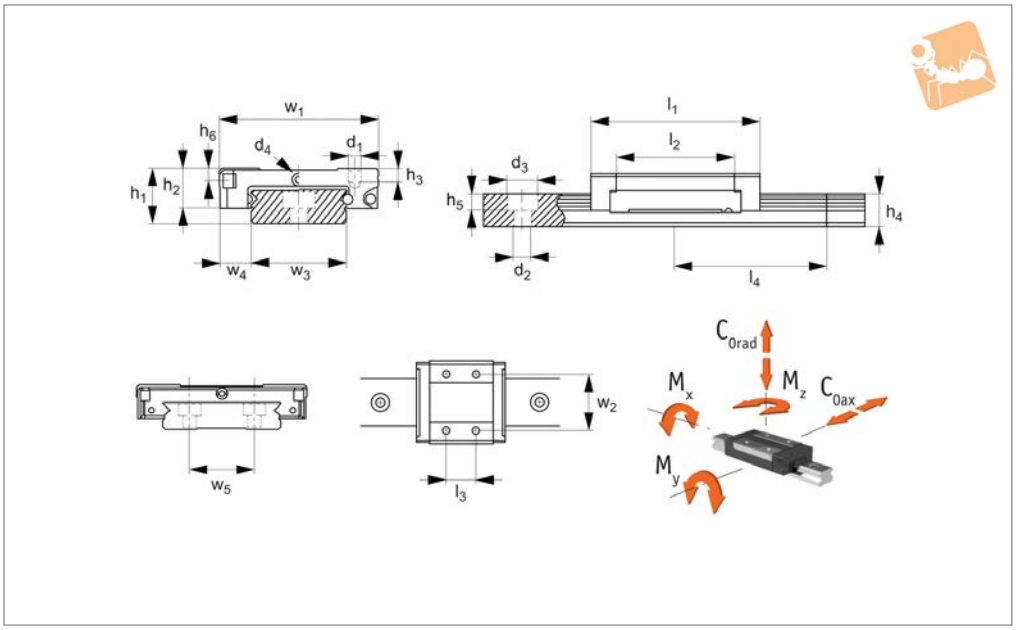


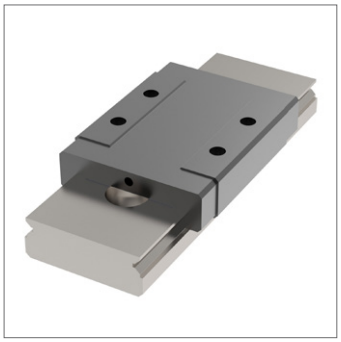
Material
Corrosion resistant stainless steel, hardened to 58-60 HRC (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1010.C).

Other rail lengths on request.
Weight: 0,93 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1010.15-0070	70	40	15	9.5	4.5	3.5	6	M3	15	65.1
L1010.15-0110	110	40	15	9.5	4.5	3.5	6	M3	15	102.3
L1010.15-0150	150	40	15	9.5	4.5	3.5	6	M3	15	139.5
L1010.15-0190	190	40	15	9.5	4.5	3.5	6	M3	15	176.7
L1010.15-0230	230	40	15	9.5	4.5	3.5	6	M3	15	213.9
L1010.15-0270	270	40	15	9.5	4.5	3.5	6	M3	15	251.1
L1010.15-0310	310	40	15	9.5	4.5	3.5	6	M3	15	288.3
L1010.15-0350	350	40	15	9.5	4.5	3.5	6	M3	15	325.5
L1010.15-0390	390	40	15	9.5	4.5	3.5	6	M3	15	362.7
L1010.15-0430	430	40	15	9.5	4.5	3.5	6	M3	15	399.9
L1010.15-0470	470	40	15	9.5	4.5	3.5	6	M3	15	437.1
L1010.15-0510	510	40	15	9.5	4.5	3.5	6	M3	15	474.3
L1010.15-0550	550	40	15	9.5	4.5	3.5	6	M3	15	511.5
L1010.15-0590	590	40	15	9.5	4.5	3.5	6	M3	15	548.7
L1010.15-0630	630	40	15	9.5	4.5	3.5	6	M3	15	585.9
L1010.15-0670	670	40	15	9.5	4.5	3.5	6	M3	15	623.1
L1010.15-0710	710	40	15	9.5	4.5	3.5	6	M3	15	660.3
L1010.15-0750	750	40	15	9.5	4.5	3.5	6	M3	15	697.5
L1010.15-0790	790	40	15	9.5	4.5	3.5	6	M3	15	734.7
L1010.15-0830	830	40	15	9.5	4.5	3.5	6	M3	15	771.9
L1010.15-0870	870	40	15	9.5	4.5	3.5	6	M3	15	809.1
L1010.15-0910	910	40	15	9.5	4.5	3.5	6	M3	15	846.3
L1010.15-0950	950	40	15	9.5	4.5	3.5	6	M3	15	883.5
L1010.15-0990	990	40	15	9.5	4.5	3.5	6	M3	15	920.7





L1012.C

Material
Corrosion resistant stainless steel body (440C), with hardened stainless steel ball bearings.
Black plastic end plates and ball bearing retainers.

Technical Notes
Max.speed 3 m/s. max. acceleration 40m/s^2.
Temperature range -40°C to +80°C.
Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1012.10 through to L1012.42).

Tips
Carriages are supplied with a dummy (plastic) rail. When mounting carriages onto rail, slide directly from the dummy rail onto the steel rail. Do not simply remove the carriage from the dummy rail - the balls will become loose making the carriage unusable.

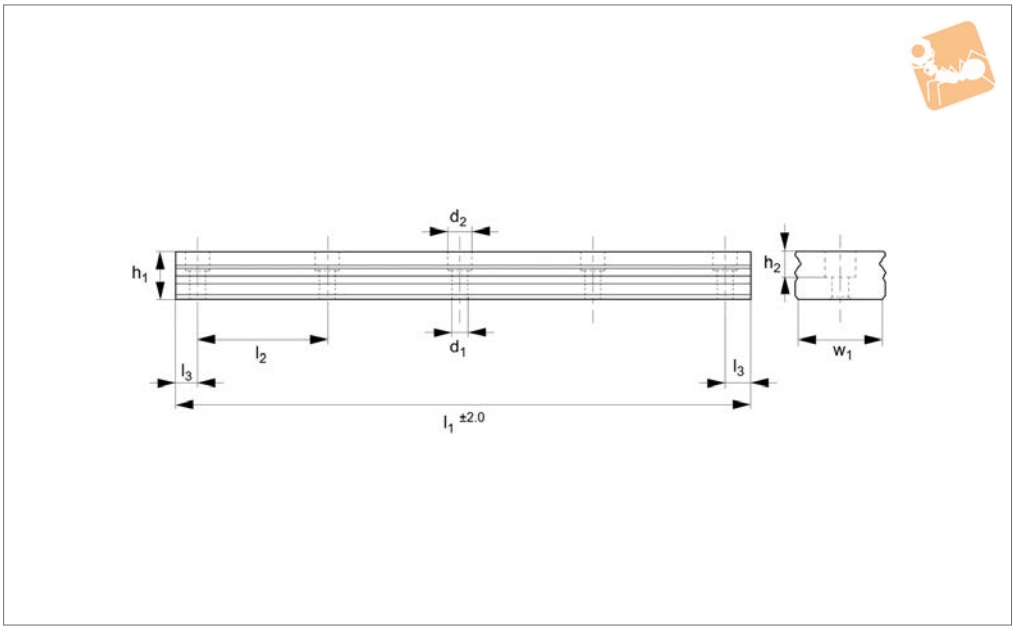
Order No.	For rail	l_1	l_2	l_3	l_4	h_1	h_2	h_3	h_4	h_5	h_6	d_1	d_2	d_3	d_4	Static load $C_{0rad\ \&\ ax}$ N	Weight g
L1012.C10	10	21.1	15.1	6.5	20	6.5	5.0	1.5	4	1.6	2.3	M2,5	3.0	5.5	0.9	900	8
L1012.C10L	10	27.2	21.2	11	20	6.5	5.0	1.5	4	1.6	2.3	M2,5	3.0	5.5	0.9	1315	19
L1012.C14	14	31.6	21.2	10	30	9	7.0	3	5.2	3.5	3.2	M3	3.5	6	1.1	2095	27
L1012.C14L	14	40.5	30.1	19	30	9	7.0	3	5.2	3.5	3.2	M3	3.5	6	1.1	3140	37
L1012.C18	18	39.1	27.9	12	30	12	8.6	3.0	7.3	4.5	4.0	M3	3.5	6	1.3	3605	37
L1012.C18L	18	50.7	39.5	24	30	12	8.6	3.0	7.3	4.5	4.0	M3	3.5	6	1.3	4990	57
L1012.C24	24	44.4	31.0	15	40	14	10.1	3.5	8.5	4.5	4.5	M3	4.5	8	1.3	5200	65
L1012.C24L	24	59.4	46.0	28	40	14	10.1	3.5	8.5	4.5	4.5	M3	4.5	8	1.3	7800	93
L1012.C42	42	55.3	38.5	20	40	16	12.0	4.5	9.5	4.5	4.5	M4	4.5	8	1.8	8385	137
L1012.C42L	42	74.4	57.6	35	40	16	12.0	4.5	9.5	4.5	4.5	M4	4.5	8	1.8	12580	200

Order No.	w_1	w_2	w_3	w_4	w_5	Dyn. load $C_{rad\ \&\ ax}$ N	M_x Nm	M_y Nm	M_z Nm
L1012.C10	17	13	10	3.5	-	475	4.6	2.2	2.2
L1012.C10L	17	13	10	3.5	-	615	6.8	4.1	4.1
L1012.C14	25	19	14	5.5	-	1180	15	7.3	7.3
L1012.C14L	25	19	14	5.5	-	1570	22.6	14.9	14.9
L1012.C18	30	21	18	6	-	2030	33.2	13.7	13.7
L1012.C18L	30	23	18	6	-	2550	45.9	26.7	26.7
L1012.C24	40	28	24	8	-	3065	63.7	26.3	26.3
L1012.C24L	40	28	24	8	-	4070	95.6	56.4	56.4
L1012.C42	60	45	42	9	23	5065	171.7	45.7	45.7
L1012.C42L	60	45	42	9	23	6725	257	93.1	93.1

10mm Miniature Linear Rail
wide version



L1012.10



Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1012.C).

Other rail lengths on request.
Weight: 0,3 Kg/m.

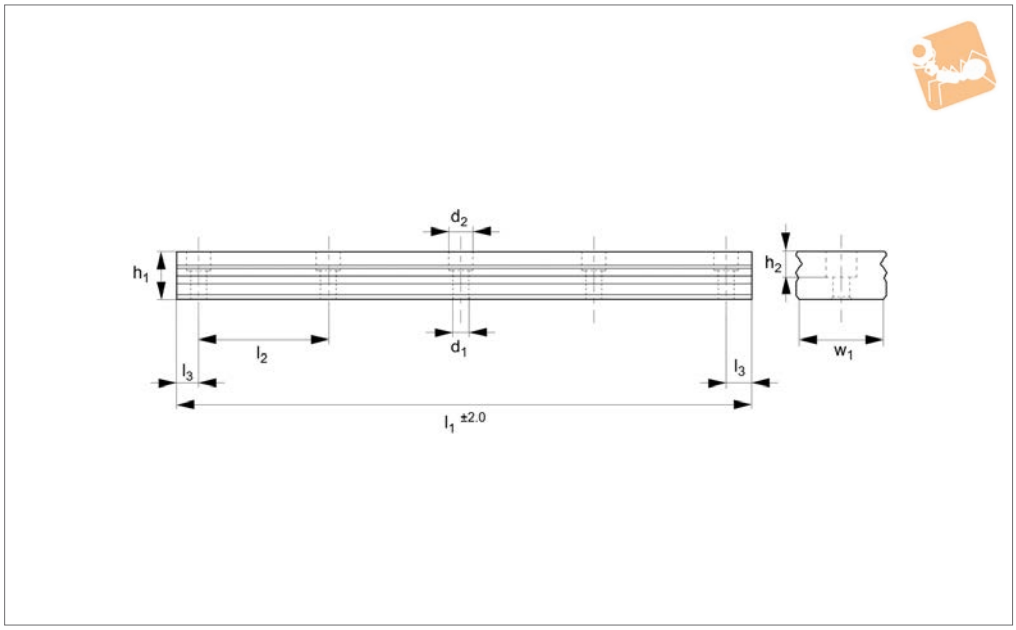
Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1012.10-0055	55	20	7.5	4	1.6	3	5.5	M2,5	10	16.5
L1012.10-0075	75	20	7.5	4	1.6	3	5.5	M2,5	10	22.5
L1012.10-0095	95	20	7.5	4	1.6	3	5.5	M2,5	10	28.5
L1012.10-0115	115	20	7.5	4	1.6	3	5.5	M2,5	10	34.5
L1012.10-0135	135	20	7.5	4	1.6	3	5.5	M2,5	10	40.5
L1012.10-0155	155	20	7.5	4	1.6	3	5.5	M2,5	10	46.5
L1012.10-0175	175	20	7.5	4	1.6	3	5.5	M2,5	10	52.5
L1012.10-0195	195	20	7.5	4	1.6	3	5.5	M2,5	10	58.5
L1012.10-0215	215	20	7.5	4	1.6	3	5.5	M2,5	10	64.5
L1012.10-0235	235	20	7.5	4	1.6	3	5.5	M2,5	10	70.5
L1012.10-0255	255	20	7.5	4	1.6	3	5.5	M2,5	10	76.5
L1012.10-0275	275	20	7.5	4	1.6	3	5.5	M2,5	10	82.5
L1012.10-0295	295	20	7.5	4	1.6	3	5.5	M2,5	10	88.5
L1012.10-0315	315	20	7.5	4	1.6	3	5.5	M2,5	10	94.5
L1012.10-0335	335	20	7.5	4	1.6	3	5.5	M2,5	10	100.5
L1012.10-0355	355	20	7.5	4	1.6	3	5.5	M2,5	10	106.5
L1012.10-0375	375	20	7.5	4	1.6	3	5.5	M2,5	10	112.5
L1012.10-0395	395	20	7.5	4	1.6	3	5.5	M2,5	10	118.5
L1012.10-0415	415	20	7.5	4	1.6	3	5.5	M2,5	10	124.5
L1012.10-0435	435	20	7.5	4	1.6	3	5.5	M2,5	10	130.5
L1012.10-0455	455	20	7.5	4	1.6	3	5.5	M2,5	10	136.5
L1012.10-0475	475	20	7.5	4	1.6	3	5.5	M2,5	10	142.5
L1012.10-0495	495	20	7.5	4	1.6	3	5.5	M2,5	10	148.5
L1012.10-0515	515	20	7.5	4	1.6	3	5.5	M2,5	10	154.5
L1012.10-0535	535	20	7.5	4	1.6	3	5.5	M2,5	10	160.5
L1012.10-0555	555	20	7.5	4	1.6	3	5.5	M2,5	10	166.5
L1012.10-0575	575	20	7.5	4	1.6	3	5.5	M2,5	10	172.5
L1012.10-0595	595	20	7.5	4	1.6	3	5.5	M2,5	10	178.5
L1012.10-0615	615	20	7.5	4	1.6	3	5.5	M2,5	10	184.5
L1012.10-0635	635	20	7.5	4	1.6	3	5.5	M2,5	10	190.5
L1012.10-0655	655	20	7.5	4	1.6	3	5.5	M2,5	10	196.5
L1012.10-0675	675	20	7.5	4	1.6	3	5.5	M2,5	10	202.5
L1012.10-0695	695	20	7.5	4	1.6	3	5.5	M2,5	10	208.5
L1012.10-0715	715	20	7.5	4	1.6	3	5.5	M2,5	10	214.5

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1012.10-0735	735	20	7.5	4	1.6	3	5.5	M2,5	10	220.5
L1012.10-0755	755	20	7.5	4	1.6	3	5.5	M2,5	10	226.5
L1012.10-0775	775	20	7.5	4	1.6	3	5.5	M2,5	10	232.5
L1012.10-0795	795	20	7.5	4	1.6	3	5.5	M2,5	10	238.5
L1012.10-0815	815	20	7.5	4	1.6	3	5.5	M2,5	10	244.5
L1012.10-0835	835	20	7.5	4	1.6	3	5.5	M2,5	10	250.5
L1012.10-0855	855	20	7.5	4	1.6	3	5.5	M2,5	10	256.5
L1012.10-0875	875	20	7.5	4	1.6	3	5.5	M2,5	10	262.5
L1012.10-0895	895	20	7.5	4	1.6	3	5.5	M2,5	10	268.5
L1012.10-0915	915	20	7.5	4	1.6	3	5.5	M2,5	10	274.5
L1012.10-0935	935	20	7.5	4	1.6	3	5.5	M2,5	10	280.5
L1012.10-0955	955	20	7.5	4	1.6	3	5.5	M2,5	10	286.5
L1012.10-0975	975	20	7.5	4	1.6	3	5.5	M2,5	10	292.5
L1012.10-0995	995	20	7.5	4	1.6	3	5.5	M2,5	10	298.5

14mm Miniature Linear Rail
wide version



L1012.14

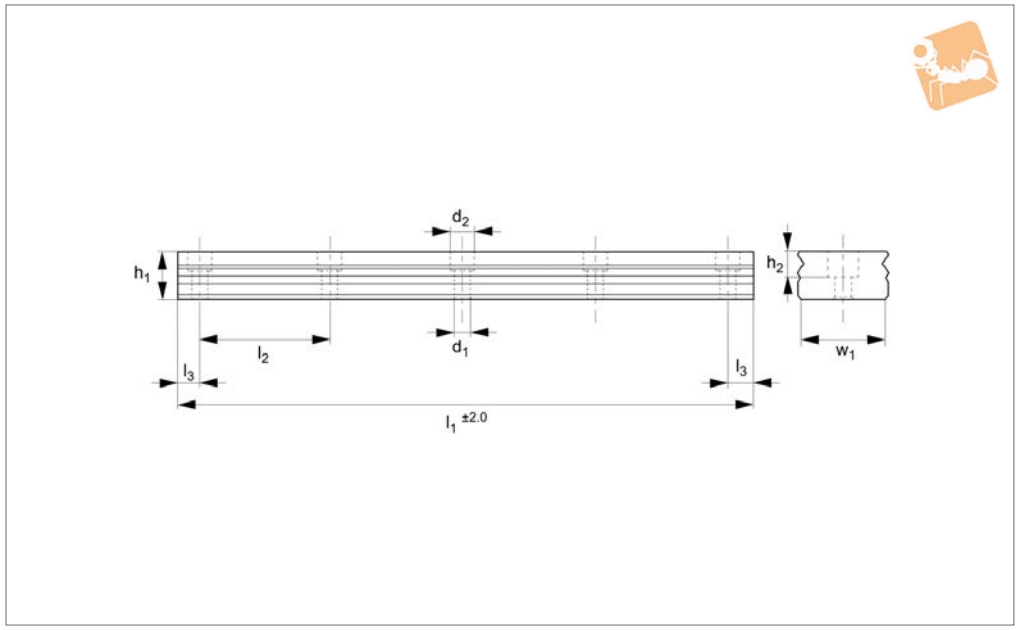


Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1012.C).

Other rail lengths on request.
Weight: 0,5 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1012.14-0050	50	30	10	5.2	3.5	3.5	6	M3	14	25
L1012.14-0080	80	30	10	5.2	3.5	3.5	6	M3	14	40
L1012.14-0110	110	30	10	5.2	3.5	3.5	6	M3	14	55
L1012.14-0140	140	30	10	5.2	3.5	3.5	6	M3	14	70
L1012.14-0170	170	30	10	5.2	3.5	3.5	6	M3	14	85
L1012.14-0200	200	30	10	5.2	3.5	3.5	6	M3	14	100
L1012.14-0230	230	30	10	5.2	3.5	3.5	6	M3	14	115
L1012.14-0260	260	30	10	5.2	3.5	3.5	6	M3	14	130
L1012.14-0290	290	30	10	5.2	3.5	3.5	6	M3	14	145
L1012.14-0320	320	30	10	5.2	3.5	3.5	6	M3	14	160
L1012.14-0350	350	30	10	5.2	3.5	3.5	6	M3	14	175
L1012.14-0380	380	30	10	5.2	3.5	3.5	6	M3	14	190
L1012.14-0410	410	30	10	5.2	3.5	3.5	6	M3	14	205
L1012.14-0440	440	30	10	5.2	3.5	3.5	6	M3	14	220
L1012.14-0470	470	30	10	5.2	3.5	3.5	6	M3	14	235
L1012.14-0500	500	30	10	5.2	3.5	3.5	6	M3	14	250
L1012.14-0530	530	30	10	5.2	3.5	3.5	6	M3	14	265
L1012.14-0560	560	30	10	5.2	3.5	3.5	6	M3	14	280
L1012.14-0590	590	30	10	5.2	3.5	3.5	6	M3	14	295
L1012.14-0620	620	30	10	5.2	3.5	3.5	6	M3	14	310
L1012.14-0650	650	30	10	5.2	3.5	3.5	6	M3	14	325
L1012.14-0680	680	30	10	5.2	3.5	3.5	6	M3	14	340
L1012.14-0710	710	30	10	5.2	3.5	3.5	6	M3	14	355
L1012.14-0740	740	30	10	5.2	3.5	3.5	6	M3	14	370
L1012.14-0770	770	30	10	5.2	3.5	3.5	6	M3	14	385
L1012.14-0800	800	30	10	5.2	3.5	3.5	6	M3	14	400
L1012.14-0830	830	30	10	5.2	3.5	3.5	6	M3	14	415
L1012.14-0860	860	30	10	5.2	3.5	3.5	6	M3	14	430
L1012.14-0890	890	30	10	5.2	3.5	3.5	6	M3	14	445
L1012.14-0920	920	30	10	5.2	3.5	3.5	6	M3	14	460
L1012.14-0950	950	30	10	5.2	3.5	3.5	6	M3	14	475
L1012.14-0980	980	30	10	5.2	3.5	3.5	6	M3	14	490





L1012.18

Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1012.C).

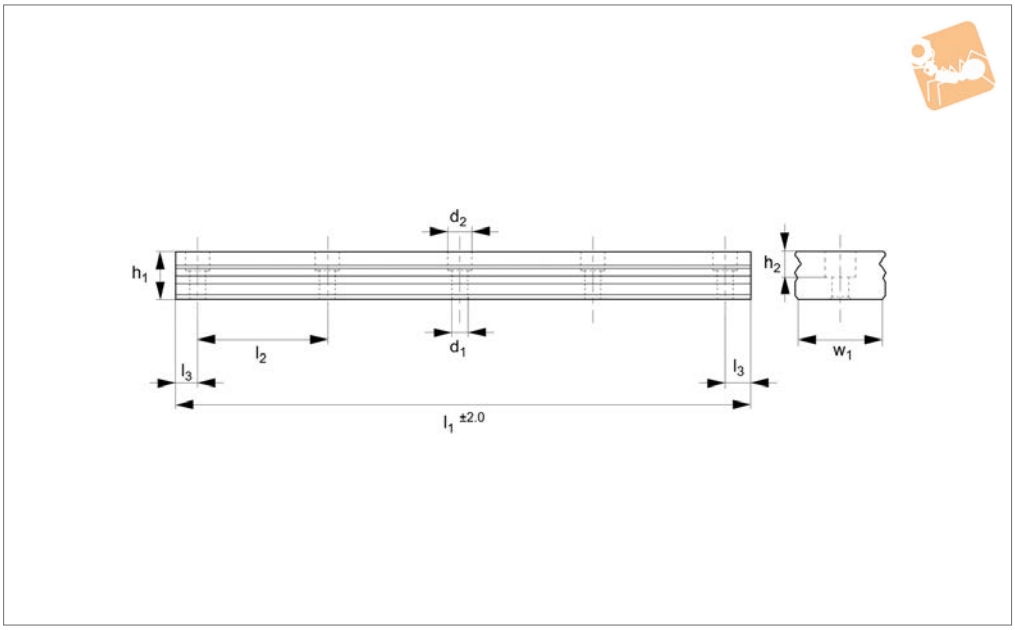
Other rail lengths on request.
Weight: 0,9 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1012.18-0050	50	30	10	7.3	4.5	3.5	6	M3	18	45
L1012.18-0080	80	30	10	7.3	4.5	3.5	6	M3	18	72
L1012.18-0110	110	30	10	7.3	4.5	3.5	6	M3	18	99
L1012.18-0140	140	30	10	7.3	4.5	3.5	6	M3	18	126
L1012.18-0170	170	30	10	7.3	4.5	3.5	6	M3	18	153
L1012.18-0200	200	30	10	7.3	4.5	3.5	6	M3	18	180
L1012.18-0230	230	30	10	7.3	4.5	3.5	6	M3	18	207
L1012.18-0260	260	30	10	7.3	4.5	3.5	6	M3	18	234
L1012.18-0290	290	30	10	7.3	4.5	3.5	6	M3	18	261
L1012.18-0320	320	30	10	7.3	4.5	3.5	6	M3	18	288
L1012.18-0350	350	30	10	7.3	4.5	3.5	6	M3	18	315
L1012.18-0380	380	30	10	7.3	4.5	3.5	6	M3	18	342
L1012.18-0410	410	30	10	7.3	4.5	3.5	6	M3	18	369
L1012.18-0440	440	30	10	7.3	4.5	3.5	6	M3	18	396
L1012.18-0470	470	30	10	7.3	4.5	3.5	6	M3	18	423
L1012.18-0500	500	30	10	7.3	4.5	3.5	6	M3	18	450
L1012.18-0530	530	30	10	7.3	4.5	3.5	6	M3	18	477
L1012.18-0560	560	30	10	7.3	4.5	3.5	6	M3	18	504
L1012.18-0590	590	30	10	7.3	4.5	3.5	6	M3	18	531
L1012.18-0620	620	30	10	7.3	4.5	3.5	6	M3	18	558
L1012.18-0650	650	30	10	7.3	4.5	3.5	6	M3	18	585
L1012.18-0680	680	30	10	7.3	4.5	3.5	6	M3	18	612
L1012.18-0710	710	30	10	7.3	4.5	3.5	6	M3	18	639
L1012.18-0740	740	30	10	7.3	4.5	3.5	6	M3	18	666
L1012.18-0770	770	30	10	7.3	4.5	3.5	6	M3	18	693
L1012.18-0800	800	30	10	7.3	4.5	3.5	6	M3	18	720
L1012.18-0830	830	30	10	7.3	4.5	3.5	6	M3	18	747
L1012.18-0860	860	30	10	7.3	4.5	3.5	6	M3	18	774
L1012.18-0890	890	30	10	7.3	4.5	3.5	6	M3	18	801
L1012.18-0920	920	30	10	7.3	4.5	3.5	6	M3	18	828
L1012.18-0950	950	30	10	7.3	4.5	3.5	6	M3	18	855
L1012.18-0980	980	30	10	7.3	4.5	3.5	6	M3	18	882

24mm Miniature Linear Rail
wide version



L1012.24

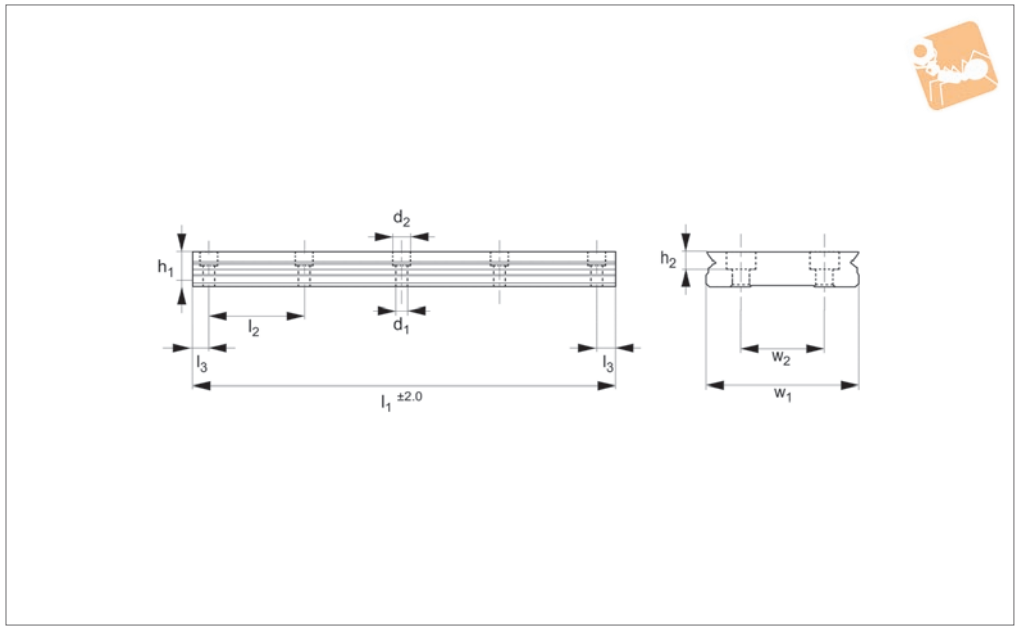


Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1012.C).

Other rail lengths on request.
Weight:1,5 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	Weight kg
L1012.24-0070	70	40	15	8.5	4.5	4.5	8	M4	24	0.105
L1012.24-0110	110	40	15	8.5	4.5	4.5	8	M4	24	0.165
L1012.24-0150	150	40	15	8.5	4.5	4.5	8	M4	24	0.225
L1012.24-0190	190	40	15	8.5	4.5	4.5	8	M4	24	0.285
L1012.24-0230	230	40	15	8.5	4.5	4.5	8	M4	24	0.345
L1012.24-0270	270	40	15	8.5	4.5	4.5	8	M4	24	0.405
L1012.24-0310	310	40	15	8.5	4.5	4.5	8	M4	24	0.465
L1012.24-0350	350	40	15	8.5	4.5	4.5	8	M4	24	0.525
L1012.24-0390	390	40	15	8.5	4.5	4.5	8	M4	24	0.585
L1012.24-0430	430	40	15	8.5	4.5	4.5	8	M4	24	0.645
L1012.24-0470	470	40	15	8.5	4.5	4.5	8	M4	24	0.705
L1012.24-0510	510	40	15	8.5	4.5	4.5	8	M4	24	0.765
L1012.24-0550	550	40	15	8.5	4.5	4.5	8	M4	24	0.825
L1012.24-0590	590	40	15	8.5	4.5	4.5	8	M4	24	0.885
L1012.24-0630	630	40	15	8.5	4.5	4.5	8	M4	24	0.945
L1012.24-0670	670	40	15	8.5	4.5	4.5	8	M4	24	1.005
L1012.24-0710	710	40	15	8.5	4.5	4.5	8	M4	24	1.065
L1012.24-0750	750	40	15	8.5	4.5	4.5	8	M4	24	1.125
L1012.24-0790	790	40	15	8.5	4.5	4.5	8	M4	24	1.185
L1012.24-0830	830	40	15	8.5	4.5	4.5	8	M4	24	1.245
L1012.24-0870	870	40	15	8.5	4.5	4.5	8	M4	24	1.305
L1012.24-0910	910	40	15	8.5	4.5	4.5	8	M4	24	1.365
L1012.24-0950	950	40	15	8.5	4.5	4.5	8	M4	24	1.425
L1012.24-0990	990	40	15	8.5	4.5	4.5	8	M4	24	1.485





L1012.42

Material
Corrosion resistant stainless steel, hardened (similar to 440C).

Technical Notes
Select the size and number of carriages to suit the required load (see part L1012.C).

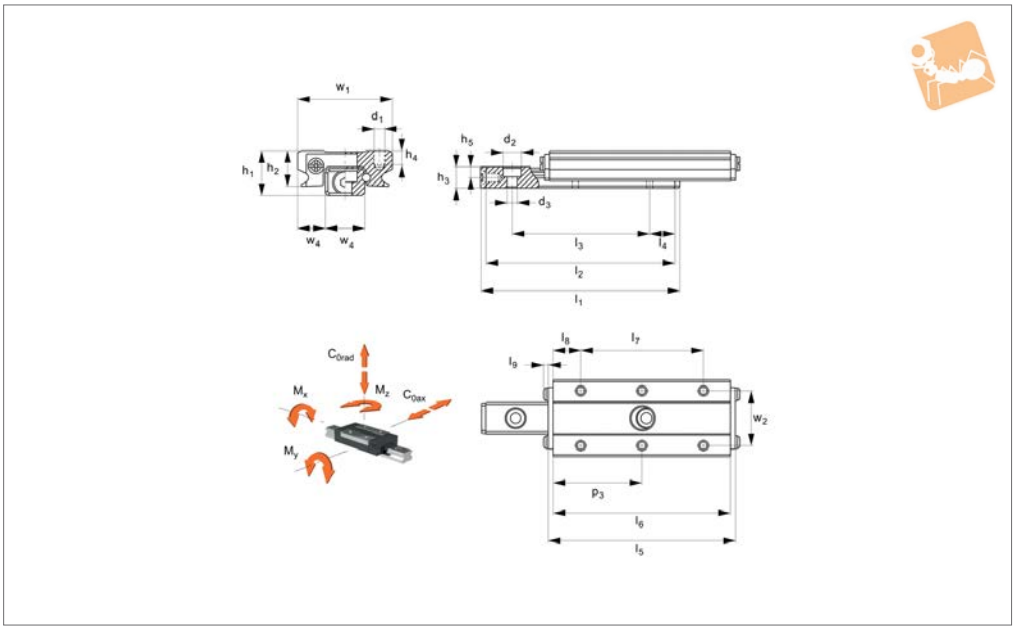
Other rail lengths on request.
Weight: 2.8 Kg/m.

Order No.	l_1	l_2	l_3	h_1	h_2	d_1	d_2	For screws	w_1	w_2	Weight kg
L1012.42-0110	110	40	15	9.5	4.5	4.5	8	M 4	42	23	0.308
L1012.42-0150	150	40	15	9.5	4.5	4.5	8	M 4	42	23	0.420
L1012.42-0190	190	40	15	9.5	4.5	4.5	8	M 4	42	23	0.532
L1012.42-0230	230	40	15	9.5	4.5	4.5	8	M 4	42	23	0.644
L1012.42-0270	270	40	15	9.5	4.5	4.5	8	M 4	42	23	0.756
L1012.42-0310	310	40	15	9.5	4.5	4.5	8	M 4	42	23	0.868
L1012.42-0350	350	40	15	9.5	4.5	4.5	8	M 4	42	23	0.980
L1012.42-0390	390	40	15	9.5	4.5	4.5	8	M 4	42	23	1.092
L1012.42-0430	430	40	15	9.5	4.5	4.5	8	M 4	42	23	1.204
L1012.42-0470	470	40	15	9.5	4.5	4.5	8	M 4	42	23	1.316
L1012.42-0510	510	40	15	9.5	4.5	4.5	8	M 4	42	23	1.428
L1012.42-0550	550	40	15	9.5	4.5	4.5	8	M 4	42	23	1.540
L1012.42-0590	590	40	15	9.5	4.5	4.5	8	M 4	42	23	1.652
L1012.42-0630	630	40	15	9.5	4.5	4.5	8	M 4	42	23	1.764
L1012.42-0670	670	40	15	9.5	4.5	4.5	8	M 4	42	23	1.876
L1012.42-0710	710	40	15	9.5	4.5	4.5	8	M 4	42	23	1.988
L1012.42-0750	750	40	15	9.5	4.5	4.5	8	M 4	42	23	2.100
L1012.42-0790	790	40	15	9.5	4.5	4.5	8	M 4	42	23	2.212
L1012.42-0830	830	40	15	9.5	4.5	4.5	8	M 4	42	23	2.324
L1012.42-0870	870	40	15	9.5	4.5	4.5	8	M 4	42	23	2.436
L1012.42-0910	910	40	15	9.5	4.5	4.5	8	M 4	42	23	2.548
L1012.42-0950	950	40	15	9.5	4.5	4.5	8	M 4	42	23	2.660
L1012.42-0990	990	40	15	9.5	4.5	4.5	8	M 4	42	23	2.772

Miniature Rail Assembly



L1013



Material

Rail and carriage: Hardened stainless steel.
Back plate and screws: Stainless steel.
Ball: Steel.

Technical Notes

The carriage has two rows of steel balls.
The ball track has a gothic profile with a 45° contact angle to achieve equal load capacity in a mono block.
This enables greater space to accommodate larger rolling elements.
The steel balls roll without recirculation resulting in smooth operation, low friction and no vibration.

Important Notes

Max. Temperature +150°C

Order No.	Stroke max.	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	h_1	h_2	h_3	h_4	h_5
L1013.07-030	27	30	28.0	15	6.5	30	28.0	15	6.5	1.0	8	6.5	4.7	2.5	2.3
L1013.07-045	41	45	43.0	30	6.5	45	43.0	30	6.5	1.0	8	6.5	4.7	2.5	2.3
L1013.07-060	55	60	58.0	45	6.5	60	58.0	45	6.5	1.0	8	6.5	4.7	2.5	2.3
L1013.09-040	38	40	38.0	20	9.0	40	38.0	20	9.0	1.3	10	7.8	5.5	3.0	3.5
L1013.09-060	58	60	58.0	40	9.0	60	58.0	40	9.0	1.3	10	7.8	5.5	3.0	3.5
L1013.09-080	78	80	78.0	60	9.0	80	78.0	60	9.0	1.3	10	7.8	5.5	3.0	3.5
L1013.12-050	44	50	47.4	25	11.2	50	47.4	25	11.2	1.3	13	10.0	7.5	3.5	4.5
L1013.12-075	69	75	72.4	50	11.2	75	72.4	50	11.2	1.3	13	10.0	7.5	3.5	4.5
L1013.12-100	94	100	97.4	75	11.2	100	97.4	75	11.2	1.3	13	10.0	7.5	3.5	4.5

Order No.	d_1	d_2	d_3	w_1	w_2	w_3	w_4	Static load C_0 N	M_y Nm	M_z Nm
L1013.07-030	M2	4.2	2.4	17	12	7	5.0	1580	5.9	3.4
L1013.07-045	M2	4.2	2.4	17	12	7	5.0	2500	3.1	8.0
L1013.07-060	M2	4.2	2.4	17	12	7	5.0	3330	12.4	14.6
L1013.09-040	M3	6.0	3.5	20	15	9	5.5	2773	13.1	6.8
L1013.09-060	M3	6.0	3.5	20	15	9	5.5	4170	19.7	16.0
L1013.09-080	M3	6.0	3.5	20	15	9	5.5	5547	26.2	29.2
L1013.12-050	M3	6.0	3.5	27	20	12	7.5	4340	27.0	16.0
L1013.12-075	M3	6.0	3.5	27	20	12	7.5	6510	40.1	35.6
L1013.12-100	M3	6.0	3.5	27	20	12	7.5	8670	54.0	62.8

Load capacities – explained

- A number of load figures are stated for load capacity:

  Dynamic loads – this is the main figure considered for miniature linear guideways. It is the moving load that the system can bear. It takes account of the total moving load as well as considerations such as impact, vibration and fatigue.

  Static loads – this is a load that is constant for an extended time (i.e. the dead load the system can bear before any movement). It can be in tension or compression.

  For these miniature linear guideways the radial and axial load capacities are the same.

  Moment loads are twisting loads generated by offset loads in either X, Y or Z planes. Moment loads can be reduced by adding further carriages or rails to reduce any twisting of the carriage due to the load offset.

Why is there a standard width and a wide version rail?

- The wider version system is generally used as a single rail system as it can accept higher loads and moment loads, whilst maintaining a very low height.
- The standard width rail can be used either as stand-alone rails or are more frequently used as a pair of rails in parallel.

Straightness of rails

- The measurements of the straightness of the system are taken from the running accuracy of the sliders over the length of the rails (given in microns) – see accuracy and preload page. For standard accuracy this equates to around 15µ for a 300mm length, increasing to 25µ for a 1 metre length.

What lengths can be provided?

- We have standard rail lengths. These are based on the hole pitch of the rails and end machining to provide an equidistant length to the first and last hole centre.
- However we can cut the rail (from stock) to any length required – we just need to know the distance required for the first hole.
- In general our cutting procedures allow for a ±2mm accuracy on the overall rail length. If greater accuracy than this is required then we have to machine the end accurately (rather than cut it) and this involves extra time and cost.
- Standard maximum length for each rail size is around 1 metre. Rails can be joined together but the preparation needs to be made in our workshop. The rails will be marked clearly with the ends to be placed adjacent to each other.

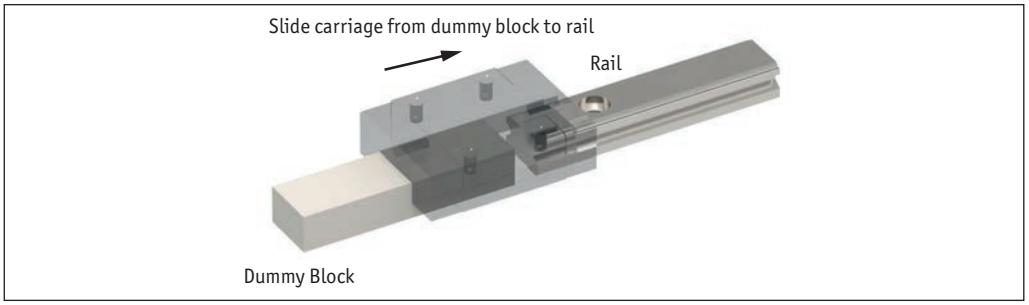
Installation

- The miniature linear guideways are very accurate and as a result need to be installed on accurately prepared surfaces - please see installation instructions. If two rails are installed in parallel, they need to be precisely aligned - see assembly precision page.

Mounting the carriages to the rails

- In general the carriages will be supplied separately to the rails. The carriages are supplied mounted on plastic "dummy" blocks. To install the carriage onto the rails, offer the carriage (still on its dummy block) up to the rails and slide off the dummy block and onto the rail itself.

Do not simply remove the carriage from the dummy block, as some of the bearings might become displaced, rendering the carriage unusable.





Precision

	Dimensions	µ
h_1	Height tolerance h_1	±40
h_1	Permissible height difference of different carriages at the same position on the rail	25
W_4	Width tolerance w_4	±40
W_4	Permissible width difference of different carriages at the same position on the rail	30

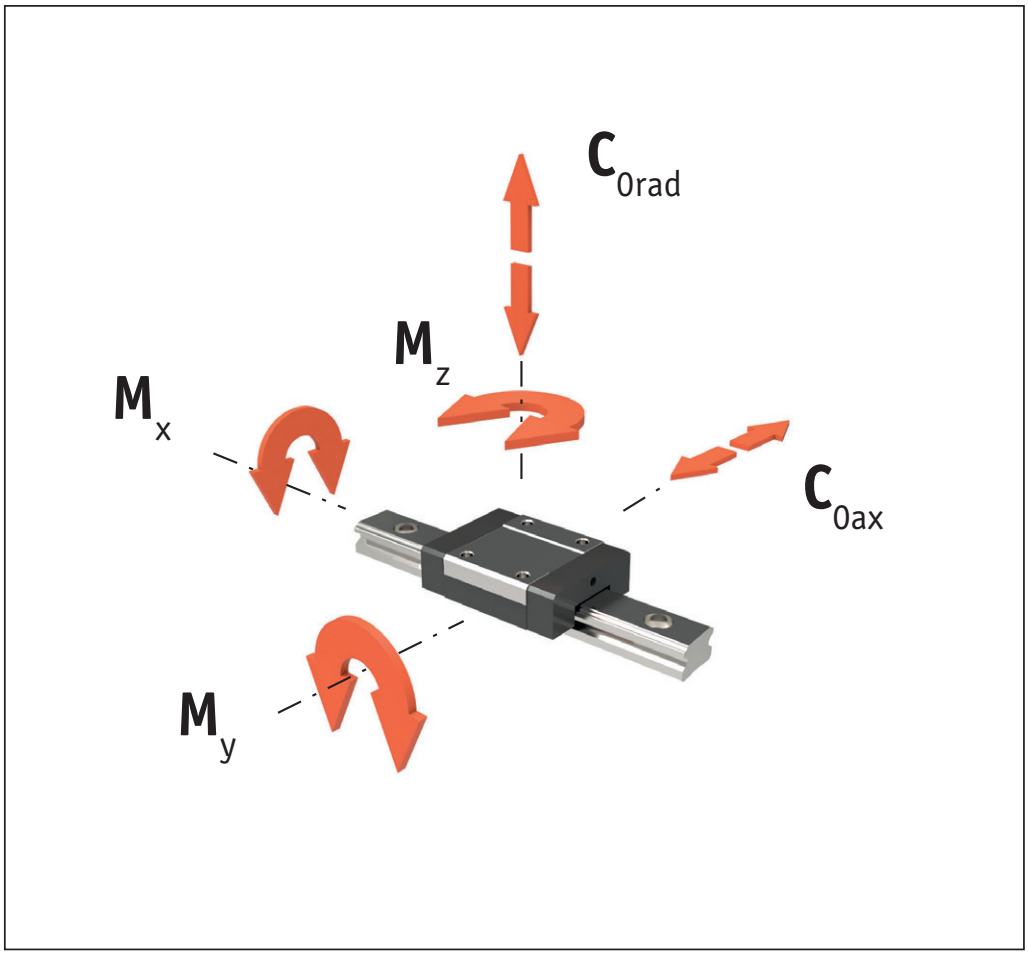
Running accuracy

Preload

The miniature linear guideways are available in the two different preload classes K_0 and K_s. The preload influences the rigidity, precision and torque resistance as well as offering the product service life and displacement force. The standard preload is K_0.

Type	Preload classes	
	Small K_0	Standard K_s
	Very quiet running (µ)	Quiet and precise running (µ)
L1010.03 & L1012.06	+3 to 0	+1 to 0
L1010.05 & L1012.10	+3 to 0	+1 to 0
L1010.07 & L1012.14	+4 to 0	+2 to 0
L1010.09 & L1012.18	+4 to 0	+2 to 0
L1010.12 & L1012.24	+5 to 0	+2 to 0
L1010.15 & L1012.42	+6 to 0	+3 to 0

L1010 - Standard width



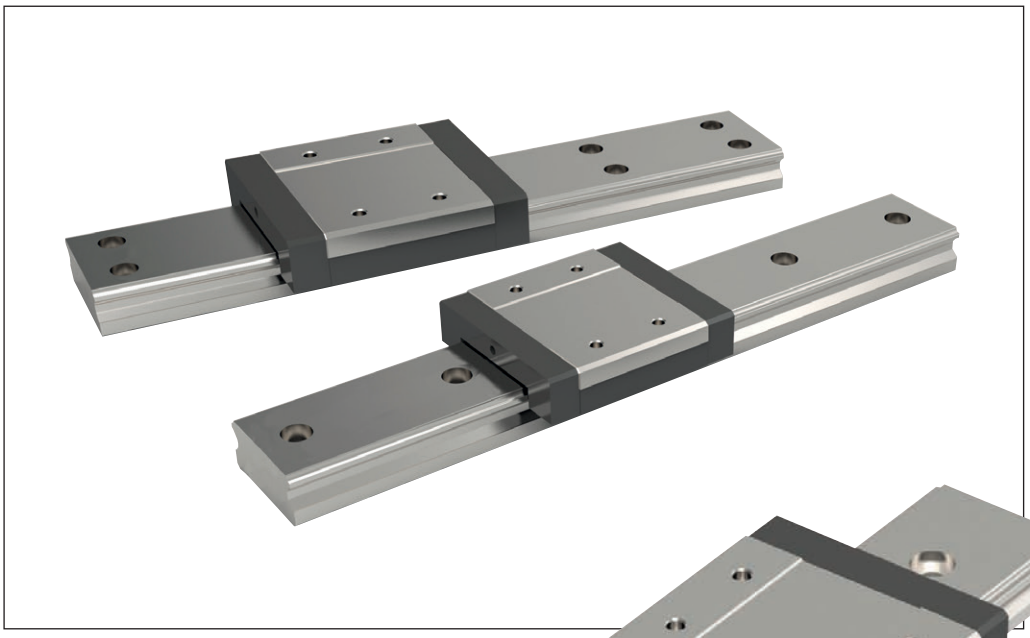
Type	Max. load capacities		Max. static moment loads		
	dyn. C_{rad} & C_{ax} N	stat. C_{0rad} & C_{0ax} N	M_x Nm	M_y Nm	M_z Nm
L1010.C03	190	310	0,6	0,4	0,4
L1010.C03L	295	575	0,9	1,1	1,1
L1010.C05	335	550	1,7	1,0	1,0
L1010.C05L	470	900	2,4	2,1	2,1
L1010.C07	890	1400	5,2	3,3	3,3
L1010.C07L	1310	2440	9,0	7,7	7,7
L1010.C09	1570	2495	11,7	6,4	6,4
L1010.C09L	2135	3880	18,2	12,4	12,4s
L1010.C12	2308	3465	21,5	12,9	12,9
L1010.C12L	3240	5630	34,9	30,2	30,2
L1010.C15	3810	5590	43,6	27,0	27,0
L1010.C15L	5350	9080	70,0	63,0	63,0

Miniature Linear Guideways

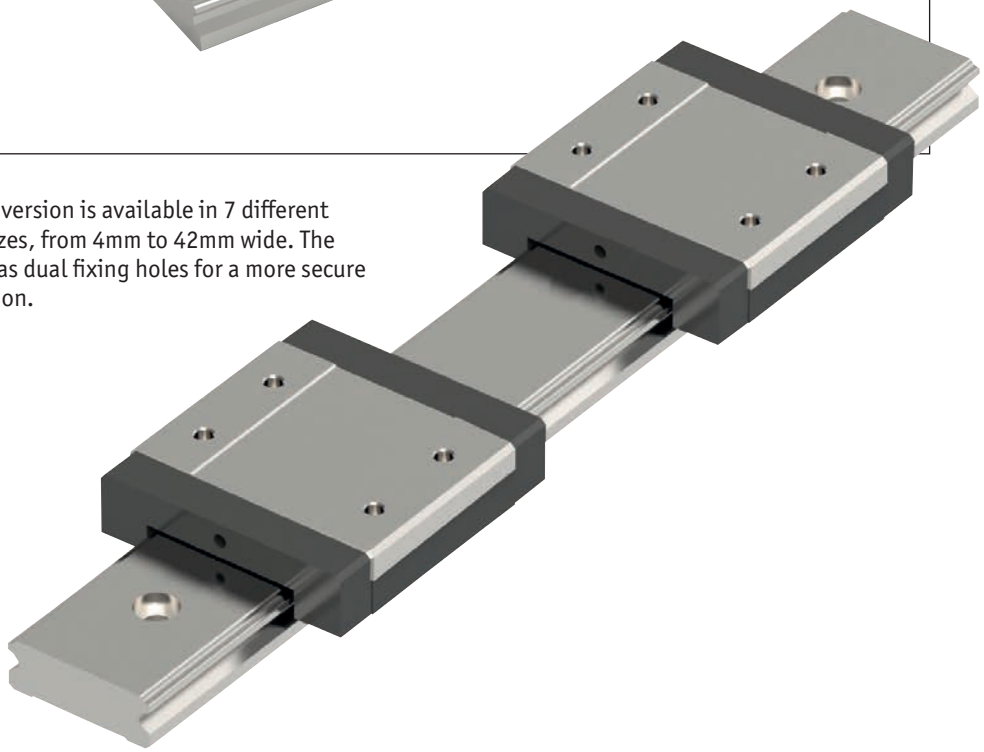
Wide version

Wide version

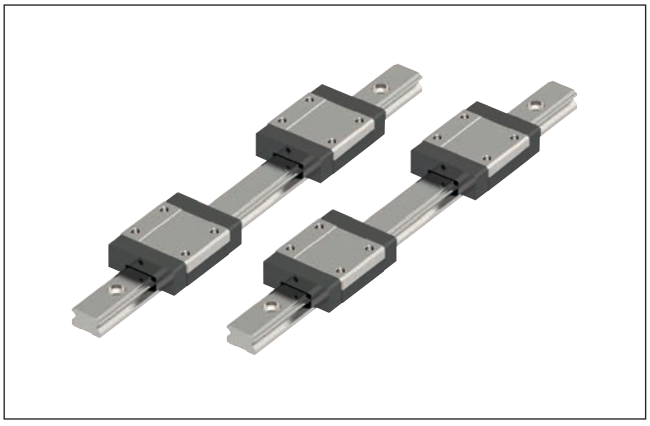
Miniature linear guideways come in two types - standard width and wide version. The standard width is a compact, high performance rail, often used in pairs as it takes smaller load forces than the wide version. For standard width products, please see part no. L1010.



The wide version is available in 7 different profile sizes, from 4mm to 42mm wide. The size 42 has dual fixing holes for a more secure installation.

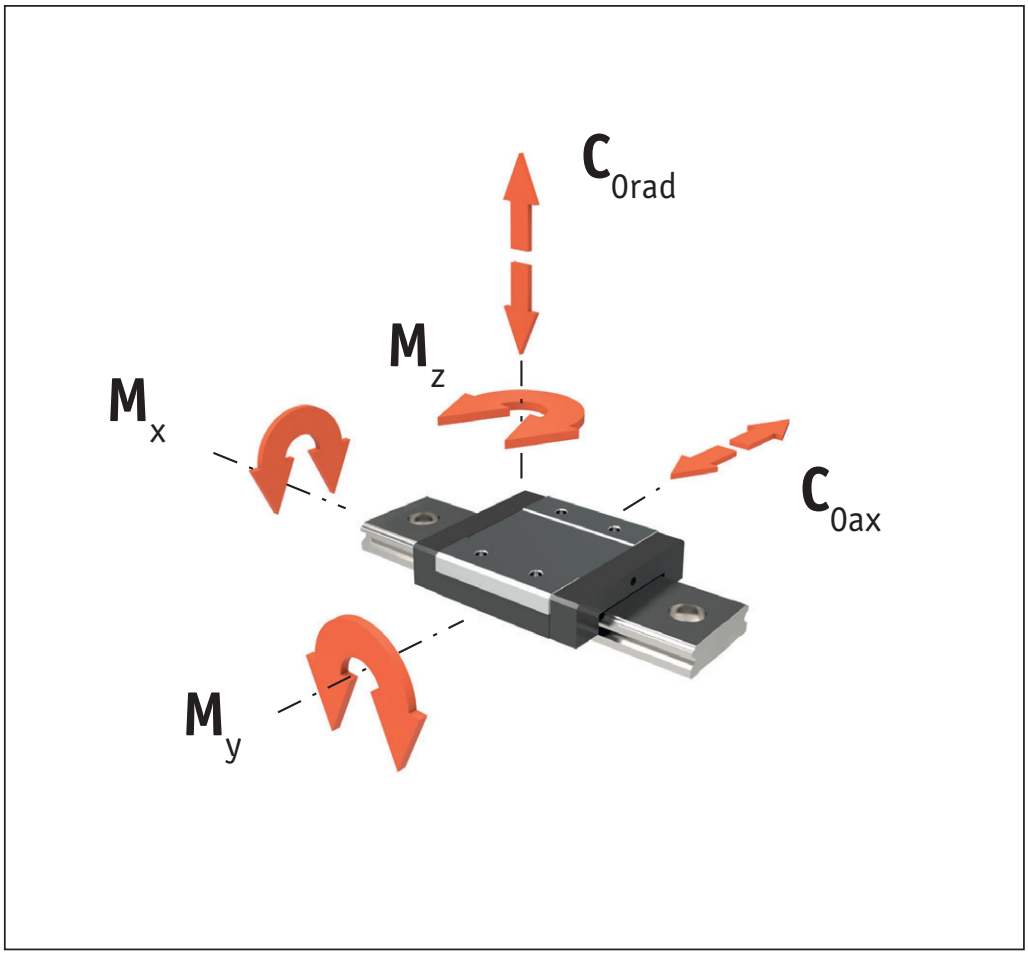


The wide version is often used in single rail applications due to its increase load capacities, unlike the standard width, which is predominately used in pairs.



ov-mlg-wide-version-lnh - Updated - 28-02-2023

L1012 - Wide version



Type	Max. load capacities		Max. static moment loads		
	dyn. C_{rad} & C_{ax} N	stat. C_{0rad} & C_{0ax} N	M_x Nm	M_y Nm	M_z Nm
L1012.C04L	310	625	1,6	1,2	1,2
L1012.C06	280	530	1,6	0,9	0,9
L1012.C06L	370	800	2,5	1,9	1,9
L1012.C10	475	900	4,6	2,2	2,2
L1012.C10L	615	1315	6,8	4,1	4,1
L1012.C14	1180	2095	15	7,3	7,3
L1012.C14L	1570	3140	22,6	14,9	14,9
L1012.C18	2030	3605	33,2	13,7	13,7
L1012.C18L	2550	4990	45,9	26,7	26,7
L1012.C24	3065	5200	63,7	26,3	26,3
L1012.C24L	4070	7800	33,2	13,7	13,7
L1012.C42	5065	8385	171,7	45,7	45,7
L1012.C42L	6725	12580	257	93,1	93,1



Friction

The miniature linear guideways profile system has a low friction characteristic with constant running resistance and low breakaway force.

Causes of friction

- Friction of the sealing system.
- Friction of the balls with each other.
- Friction between balls and redirection.
- Rolling resistance of the balls in the gothic arch running grooves.
- Resistance of lubricant in the carriage.
- Resistance caused by contamination in the lubricant.

Friction with lubricated end seal			
Type	$N_{max.}$	Type	$N_{max.}$
L1010.05	0,08	L1012.06	0,2
L1010.07	0,1	L1012.10	0,2
L1010.09	0,1	L1012.14	0,4
L1010.12	0,4	L1012.18	0,8
L1010.15	1,0	L1012.24	1,0
		L1012.42	1,0

$$F_m = \mu \bullet F$$

F_m = friction force (N)

F = load (N)

Miniature linear guideways rails have a coefficient of friction of approximately $\mu = 0{,}002 - 0{,}003$

Seal

The carriages of the miniature linear guideways are equipped with end seals on both sides.

The design of the end seal ensures a good and dust-proof seal. This extends the product service life, reduces the loss of lubricant and guarantees the optimum system lubrication over a long time. The special design of the stripper allows a low seal resistance and has no adverse influence on the running of the system.

Lubrication

The contact points between ball and track are separated from each other by a microscopically thin oil film. The lubrication ensures:

- Reduced friction.
- Reduced wear.
- Corrosion protection.
- Better thermal distribution and therefore increase in life.

Important instructions for lubrication

- The profile rails must be lubricated for operation.
- The carriage must be moved back and forth during lubrication.
- The lubricant can also be applied to the tracks.
- The lubricant can be injected into the lubrication holes on both sides of the carriage.
- There should be a thin film of lubricant on the rail surface at all times.
- If the stroke is <2 or >15 times the carriage length, the lubrication intervals should be more frequent.

Type	First lubrication cm^3
L1010.C05	0,04
L1010.C07	0,12
L1010.C09	0,23
L1010.C12	0,41
L1010.C15	0,78

Type	First lubrication cm^3
L1012.C10	0,05
L1012.C14	0,23
L1012.C18	0,30
L1012.C24	0,52
L1012.C42	0,87

Grease lubrication

When using grease lubrication, we recommend synthetic-oil based lithium grease with a viscosity according to ISO VG 32-100.

Oil lubrication

We recommend CLP or CGLP synthetic oil (DIN 51517) or HLP (DIN 51524) and a viscosity range conforming to ISO VG32-100 for operating temperatures between 0°C and +70°C. We recommend a viscosity according to ISO VG 10 for use at low temperatures. For application-specific special lubrication please contact the sales department.

Relubrication

- Relubrication of the system must be done before the lubricant has become dirty or shows signs of discolouration.
- An application of approx. 50% of the quantity used for first lubrication is sufficient for re-lubrication.
- Relubrication is performed at operating temperature. During relubrication, the carriage should be moved back and forth.
- If the stroke is <2 or >15 times the carriage length, the lubrication intervals should be more frequent.

Lubrication intervals

Operating speed, stroke length and ambient conditions influence the selection of time between lubrication intervals.

Establishing a safe lubrication interval is based on the specific applications and operating conditions. However, a lubrication interval should not be greater than one year.



Static Load (P_0) and static moment load (M_0)

Permissible static load

The permissible static load of the miniature linear guideways profile rail is limited by:

- Static load of each linear guide.
- Permissible load of the fixing screws.
- Permissible load of all components used in the surrounding construction.
- Static safety factor, which is required by the application.

The equivalent static load and the static moment are the largest load, or the largest moment load, which are calculated based on formulae 3 and 4.

Static load capacity C_0

The static load capacity C_0 of ball recirculating guides is defined according to DIN 636, Part 2 as the load which gives a Hertzian stress of 4,200 MPa with the existing lubrication between track and balls in the centre of the highest loaded contact surface.

Note: In the loading centre, there is a permanent deformation of approx. 0.01 % of the ball diameter under this load (according to DIN 636, Part 2).

Static safety factor S_0

When observing the static safety factor S_0 the miniature linear guideways profile rails allow a permissible operation and high running precision as is required for each application.

For calculation of the static safety factor S_0, see below.

Dynamic load capacity C

If the dynamic loads work vertically with equal size and direction, the calculated service life of the linear guide can theoretically reach 100 Km travel (as per DIN 636, Part 2).

Combined load in combination with a moment

If both load and moment loads work on the profile rails, the equivalent dynamic load is calculated with formula 9. According to DIN 636, Part 1, the equivalent load should not exceed 0.5 x C.

Equivalent dynamic load and speed

With changing load and speed, these must be considered individually since each parameter influences the service life.

Equivalent dynamic load

If only the load changes, the equivalent dynamic load can be calculated with formula 5.

Equivalent speed

If only the speed changes, the equivalent speed is calculated with formula 6.

If speed and load change, the equivalent dynamic load is calculated with formula 7.

Combined dynamic load

With combined exterior load in an arbitrary angle, the equivalent dynamic load is calculated with formula 8.

$$P = \sqrt[3]{\frac{q_1 \cdot F_1^{\,3} + q_2 \cdot F_2^{\,3} + \cdots q_n \cdot F_n^{\,3}}{100}}$$ **Formula 5**

$$\bar{v} = \frac{q_1 \cdot v_1 + q_2 \cdot v_2 + \ldots q_n \cdot v_n}{100}$$ **Formula 6**

$$P = \sqrt[3]{\frac{q_1 \cdot v_1 \cdot F_1^{\,3} + q_2 \cdot v_2 \cdot F_2^{\,3} + \cdots q_n \cdot v_n \cdot F_n^{\,3}}{100}}$$ **Formula 7**

$$P = |F_X| + |F_Y|$$ **Formula 8**

$$P = |F_X| + |F_Y| + \left(\frac{|M_1|}{M_x} + \frac{|M_2|}{M_y} + \frac{|M_3|}{M_z} \cdot C_0 \right)$$ **Formula 9**

P = equivalent dynamic load (N)
q = stroke (in %)
F_1 = individual load levels (N)
v = average speed (m/min)
$\bar{v}$ = individual speed levels (m/min)
F = external dynamic load (N)
F_Y = external dynamic load – vertical (N)
F_X = external dynamic load – horizontal (N)
C_0 = static load capacity (N)
M_1, M_2, M_3 = external moments (Nm)
M_x, M_y, M_z = maximum permissible moments in the different loading directions (Nm)



An example of a profile rail or a batch of identical profile rails under the same running conditions, which use ordinary materials with normal service life and operating conditions, can reach 90% of the calculated service life (as per DIN 636 Part 2).

By taking 50 Km travel as a basis, the dynamic load capacity is usually 20% over thevalues as per the DIN standard. The relationship between the two load capacities can be seen from formulae 10 and 11.

Calculation of service life

Formulae 12 and 13 are used for calculating the service life, if equivalent dynamic load and average speed are constant.

$$C_{(50)} = 1{,}26 \cdot C_{(100)}$$ **Formula 10**

$$C_{(100)} = 0{,}79 \cdot C_{(50)}$$ **Formula 11**

$$L = \left(\frac{C_{(100)}}{P}\right)^3 \cdot 10^5$$ **Formula 12**

$$L_h = \frac{L}{2 \cdot s \cdot n \cdot 60} = \frac{L}{V_m} \cdot \left(\frac{C}{P}\right)^3$$ **Formula 13**

L = service life based on 100,000 (m)
L_h = service life (h)
C = dynamic load capacity (N)
P = equivalent dynamic load (N)
s = stroke length (m)
n = stroke frequency (min^{-1})
V_m = average speed (m/min)

ov-miniature-service-life-lnh- Updated - 01-03-2023

$e1\ (mm) = b\ (mm) \cdot f_1 \cdot 10^{-4}$ **Formula 14**

$e2\ (mm) = d\ (mm) \cdot f_2 \cdot 10^{-5}$ **Formula 15**

$e3\ (mm) = f_3 \cdot 10^{-3}$ **Formula 16**

Type	f_1	f_2	f_3
L1010.C05	4	8	2
L1010.C05L	3	5	2
L1010.C07	5	11	4
L1010.C07L	4	6	4
L1010.C09	5	11	6
L1010.C09L	5	7	5
L1010.C12	6	13	8
L1010.C12L	5	8	8
L1010.C15	7	11	12
L1010.C15L	7	8	11
L1012.C04	2	5	2
L1012.C04L	2	3	1
L1012.C06	2	5	2
L1012.C06L	2	3	2
L1012.C10	2	6	4
L1012.C10L	2	4	4
L1012.C18	2	7	6
L1012.C18L	2	5	5
L1012.C24	3	8	8
L1012.C24L	2	5	7
L1012.C42	2	9	11
L1012.C42L	2	5	10

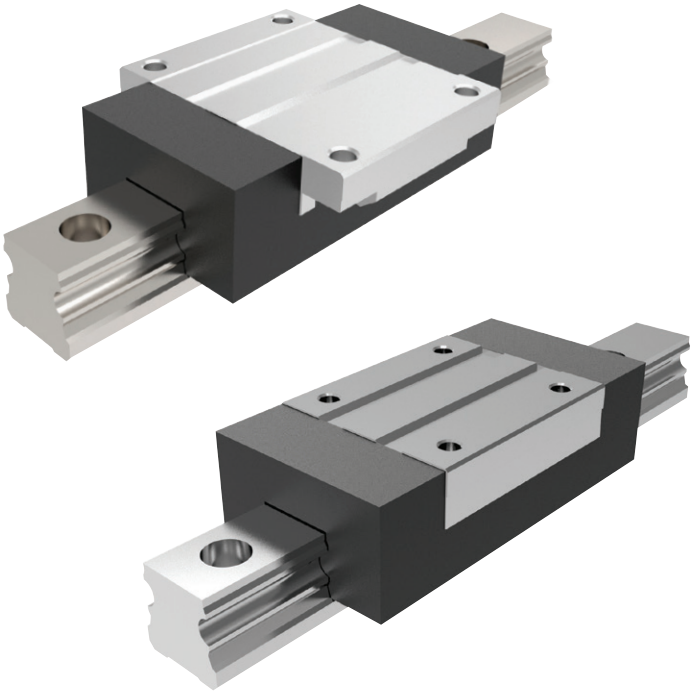
Tightening torque for fixing screws Nm			
Screw Quality 12,9	Steel	Cast iron	Non-ferrous metal
M2	0,6	0,4	0,3
M3	1,8	1,3	1,0
M4	4,0	2,5	2,0

Aluminium Linear Guideways

Introduction

Product overview

Automotion aluminium profile rails and ball bearing runner blocks are designed especially for all sorts of linear movements and are therefore suitable for use in most type of applications.
The rails consist of profiled aluminium, having two pressed-in hardened stainless steel shafts serving as the raceways for the balls of the runner blocks. Advantages are the light-weight and corrosive resistant materials. Fixing holes in the attachment surfaces enable machine parts to be directly mounted onto the runner blocks.
With this combination, it is possible for us to offer a guide system, which achieves a good price/performance ratio.



Product range

- There are two versions of our carriages: flanged and unflanged.
- There are two accuracies for our carriages: standard precision (0) and a high precision called “P” (available on request).
- The standard carriage is not pre-loaded.
- The dynamic load rating (C in the data tables) is based on a service life of 100 Km.

Advantages

- Compact, light-weight design with a weight saving of 60% compared to steel versions.
- Same fixing hole dimensions as steel, ball linear guideway systems.
- Much greater parallelism and height offsets of mounting bases possible, providing a degree of misalignment.
- Performs well in aggressive environments (dust, shavings etc.).
- Significantly better corrosion resistance compared to steel versions.
- Carriages initially greased in-factory, therefore provided with long-term lubrication.
- Due to ball retainers in the carriages, carriages can be removed from the rail without any loss of balls.
- Complete interchangeability between other manufacturers steel rail systems.
- Both sides of rail are reference edges. The carriages have one reference edge, which can be verified by turning it on the rail.

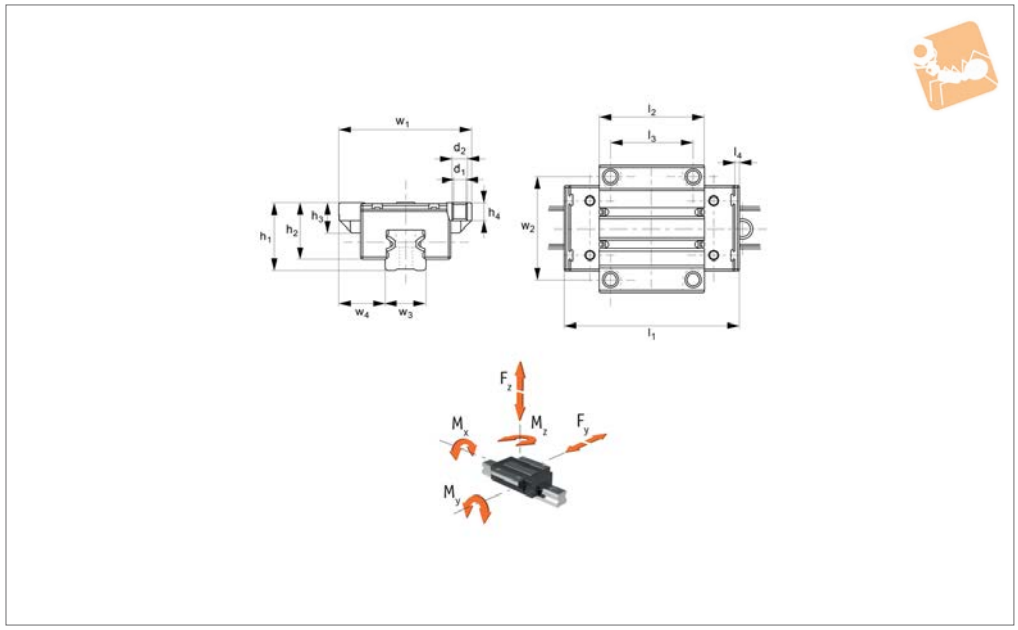
Application range:

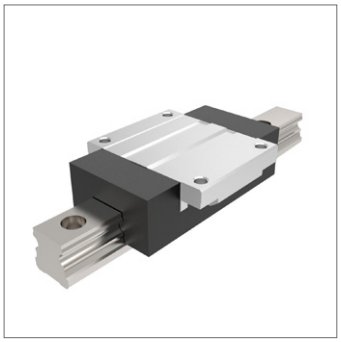
Speed	**v_{max} = 2 m/s**
Acceleration	**a_{max} = 30 m/s²**
Temperature	**T = 0° - 60°C**

Applications

Our rails can be used in a broad range of applications - especially in light machinery, handling technology, jigs and fixtures, assembly technology, manual displacement systems, machine enclosures, door – and window technology, display systems, aerospace, medical, food and many more.
Our aluminium rail guides cannot be used in the following applications:

- Main axis of a CNC or tooling machine.
- Aggressive and dusty enviroments.
- Oscillating conveyor systems.
- Danger of life or physical systems (for example unsecured overhead installation).





L1018.F

Material
Aluminium block (X46Cr13 hardened to F35), tensile strength 350N/mm².
Stainless steel inserts hardened, and stainless ball bearings (DIN 1.4034).

Technical Notes
Compact, light-weight design. 60% saving versus steel versions.
Select the size and number of carriages to suit the required load then select the required rail length, (see rail part nos. L1018). Standard carriages are not preloaded.
Mounting dimensions are identical to those of most steel linear guide rails, making them interchangeable.

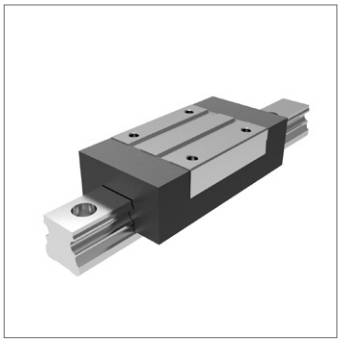
Tips
These are aluminium rail carriages and can only be used with corresponding aluminium linear rails L1018. For standard steel linear guideways and carriages see part no. L1016.

Important Notes
Static loads ratings are difficult to calculate clearly due to the combination of materials. Do not exceed $F_{max.}$ or maximum static moment load rating. See load calculations on technical pages.

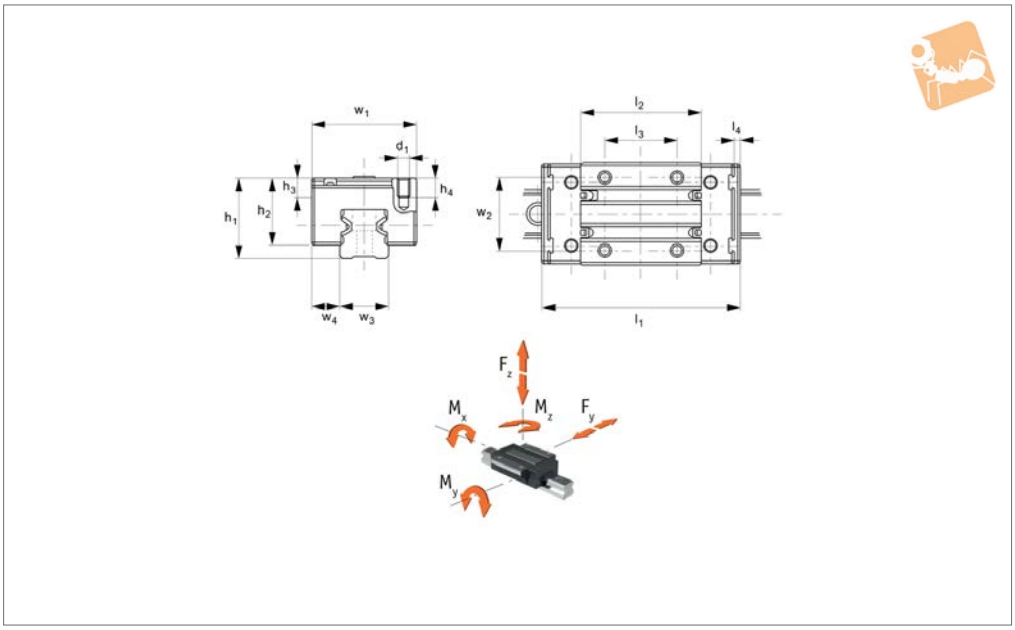
Order No.	Rail size	l_1	w_1	h_1 ±0.03	d_1	d_2	h_2	h_3	h_4	l_2	l_3	l_4	w_2	Weight kg
L1018.F15	15	64.0	47	24	4.3	M5	19.8	11	6.0	37.8	30	2.5	38	0.08
L1018.F20	20	85.9	63	30	5.3	M6	24.7	13	8.0	51.5	40	2.8	53	0.18
L1018.F25	25	96.0	70	36	6.7	M8	29.9	17	9.3	58.0	45	3.0	57	0.26

Order No.	w_3	w_4 ±0.05	F max. $C_{0\ rad\ \&\ ax}$ N	Dyn. load C N	Dyn. moment M_x Nm	Dyn. moment $M_{y\ \&\ z}$ Nm	Static moment M_x Nm	Static moment $M_{y\ \&\ z}$ Nm
L1018.F15	15	16.0	2.000	5.000	36	29	14	12
L1018.F20	20	21.5	4.400	11.000	101	89	40	35
L1018.F25	23	23.5	6.400	16.000	165	147	66	59

Unflanged Aluminium Carriages
with retained ball cage



L1018.U



Material
Aluminium block (X46Cr13 hardened to F35), tensile strength 350N/mm².
Stainless steel inserts hardened, and stainless ball bearings (DIN 1.4034).

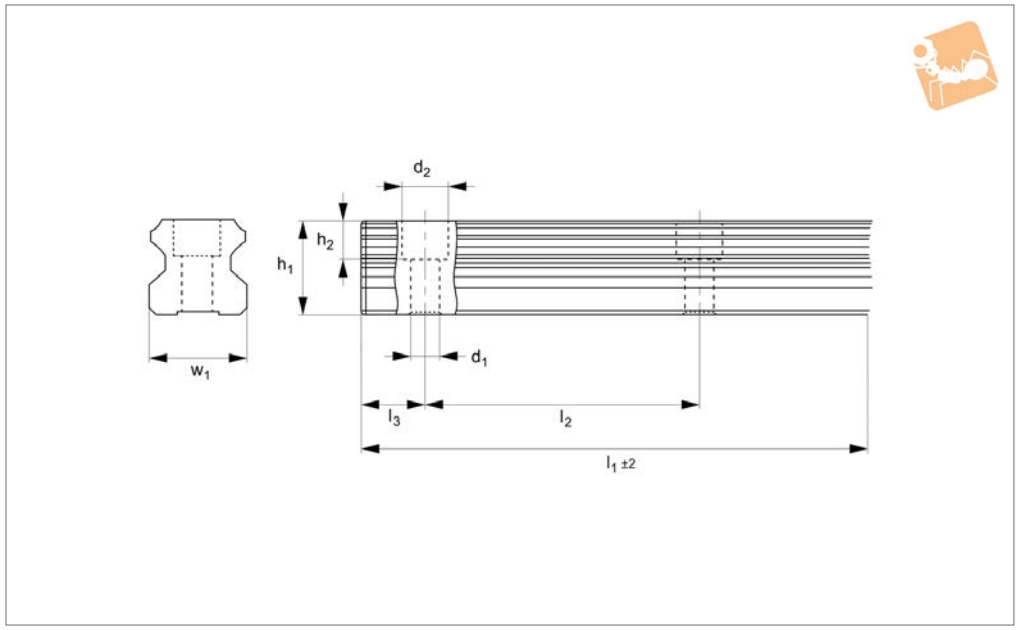
Technical Notes
Compact, light-weight design. 60% saving versus steel versions.
Select the size and number of carriages to suit the required load then select the required rail length, (see rail part nos. L1018). Standard carriages are not preloaded.
Mounting dimensions are identical to those of most steel linear guide rails, making them interchangeable.

Tips
These are aluminium rail carriages and can only be used with corresponding aluminium linear rails L1018. For standard steel linear guideways and carriages see part no. L1016.

Important Notes
Static loads ratings are difficult to calculate clearly due to the combination of materials. Do not exceed $F_{max.}$ or maximum static moment load rating. See load calculations on technical pages.

Order No.	Rail size	l_1	w_1	h_1 ±0.03	d_1	h_2	h_3	h_4	l_2	l_3	l_4	w_2	w_3	Weight kg
L1018.U15	15	64.0	34	24	M4	19.8	4.1	6.0	37.8	26	2.5	26	15	0.07
L1018.U20	20	85.9	44	30	M5	24.7	5.5	7.5	51.5	36	2.8	32	20	0.15
L1018.U25	25	96.0	48	36	M6	29.9	6.4	9.0	58.0	35	3.0	35	23	0.22

Order No.	w_4 ±0.05	F N max.	Dyn. load $C_{rad\ \&\ ax}$ N	M_x dyn. Nm	M_x static Nm max.	M_y +M_z dyn. Nm	M_y +M_z static Nm max.
L1018.U15	9.5	2.000	5.000	36	14	29	12
L1018.U20	12.0	4.400	11.000	101	40	89	35
L1018.U25	12.5	6.400	16.000	165	66	147	59





L1018.15

Material
Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes
Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

Tips
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

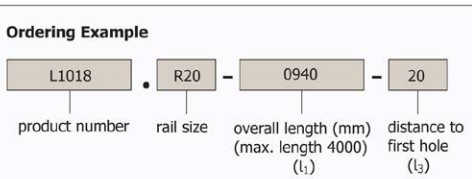
Order No.	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.15-0180	180	15	14.0	4.4	7.5	6.2	60	28	10.30
L1018.15-0240	240	15	14.0	4.4	7.5	6.2	60	28	13.70
L1018.15-0300	300	15	14.0	4.4	7.5	6.2	60	28	17.10
L1018.15-0360	360	15	14.0	4.4	7.5	6.2	60	28	20.50
L1018.15-0420	420	15	14.0	4.4	7.5	6.2	60	28	23.90
L1018.15-0480	480	15	14.0	4.4	7.5	6.2	60	28	27.40
L1018.15-0540	540	15	14.0	4.4	7.5	6.2	60	28	30.80
L1018.15-0600	600	15	14.0	4.4	7.5	6.2	60	28	34.20
L1018.15-0660	660	15	14.0	4.4	7.5	6.2	60	28	37.60
L1018.15-0720	720	15	14.0	4.4	7.5	6.2	60	28	41.00
L1018.15-0780	780	15	14.0	4.4	7.5	6.2	60	28	44.50
L1018.15-0840	840	15	14.0	4.4	7.5	6.2	60	28	47.90
L1018.15-0900	900	15	14.0	4.4	7.5	6.2	60	28	51.30
L1018.15-0960	960	15	14.0	4.4	7.5	6.2	60	28	54.70
L1018.15-1020	1020	15	14.0	4.4	7.5	6.2	60	28	58.14
L1018.15-1080	1080	15	14.0	4.4	7.5	6.2	60	28	61.56
L1018.15-1140	1140	15	14.0	4.4	7.5	6.2	60	28	64.98
L1018.15-1200	1200	15	14.0	4.4	7.5	6.2	60	28	68.40
L1018.15-1260	1260	15	14.0	4.4	7.5	6.2	60	28	71.82
L1018.15-1320	1320	15	14.0	4.4	7.5	6.2	60	28	75.24
L1018.15-1380	1380	15	14.0	4.4	7.5	6.2	60	28	78.66
L1018.15-1440	1440	15	14.0	4.4	7.5	6.2	60	28	82.08
L1018.15-1500	1550	15	14.0	4.4	7.5	6.2	60	28	88.35
L1018.15-1560	1560	15	14.0	4.4	7.5	6.2	60	28	88.92
L1018.15-1620	1620	15	14.0	4.4	7.5	6.2	60	28	92.34
L1018.15-1680	1680	15	14.0	4.4	7.5	6.2	60	28	95.76
L1018.15-1740	1740	15	14.0	4.4	7.5	6.2	60	28	99.18
L1018.15-1800	1800	15	14.0	4.4	7.5	6.2	60	28	102.60
L1018.15-1860	1860	15	14.0	4.4	7.5	6.2	60	28	106.02
L1018.15-1920	1920	15	14.0	4.4	7.5	6.2	60	28	109.44
L1018.15-1980	1980	15	14.0	4.4	7.5	6.2	60	28	112.86

15mm Aluminium Linear Guide Rail

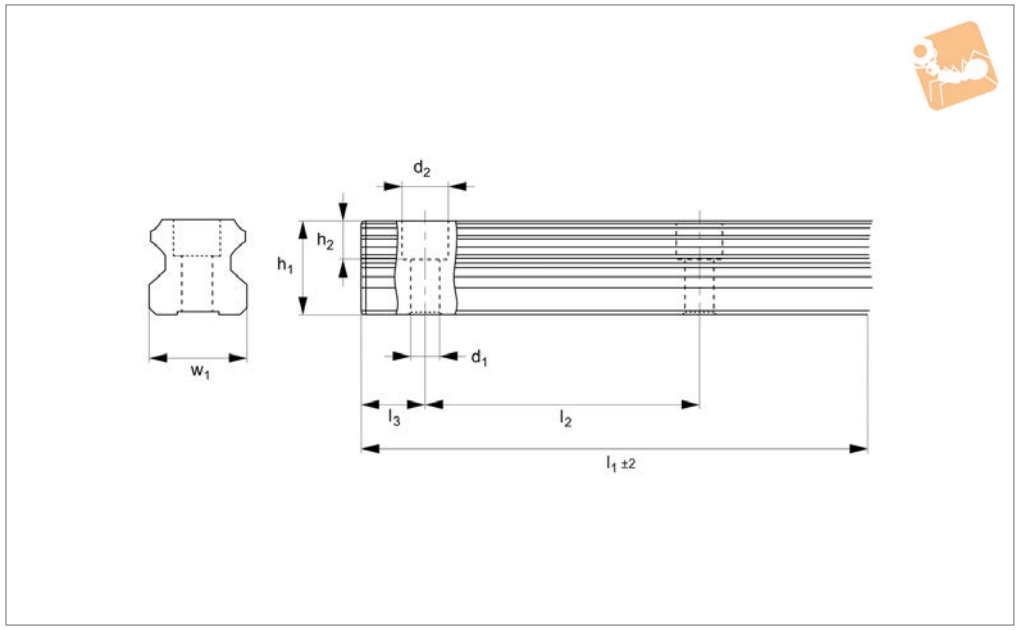
with stainless raceways

Order No.	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.15-2040	2040	15	14.0	4.4	7.5	6.2	60	28	116.28
L1018.15-2100	2100	15	14.0	4.4	7.5	6.2	60	28	119.70
L1018.15-2160	2160	15	14.0	4.4	7.5	6.2	60	28	123.12
L1018.15-2220	2220	15	14.0	4.4	7.5	6.2	60	28	126.54
L1018.15-2280	2280	15	14.0	4.4	7.5	6.2	60	28	129.96
L1018.15-2340	2340	15	14.0	4.4	7.5	6.2	60	28	133.38
L1018.15-2400	2400	15	14.0	4.4	7.5	6.2	60	28	136.80
L1018.15-2460	2460	15	14.0	4.4	7.5	6.2	60	28	140.22
L1018.15-2520	2520	15	14.0	4.4	7.5	6.2	60	28	143.64
L1018.15-2580	2580	15	14.0	4.4	7.5	6.2	60	28	147.06
L1018.15-2640	2640	15	14.0	4.4	7.5	6.2	60	28	150.48
L1018.15-2700	2700	15	14.0	4.4	7.5	6.2	60	28	153.90
L1018.15-2760	2760	15	14.0	4.4	7.5	6.2	60	28	157.32
L1018.15-2820	2820	15	14.0	4.4	7.5	6.2	60	28	160.74
L1018.15-2880	2880	15	14.0	4.4	7.5	6.2	60	28	164.16
L1018.15-2940	2940	15	14.0	4.4	7.5	6.2	60	28	167.58
L1018.15-3000	3000	15	14.0	4.4	7.5	6.2	60	28	171.00
L1018.15-3060	3060	15	14.0	4.4	7.5	6.2	60	28	174.42
L1018.15-3120	3120	15	14.0	4.4	7.5	6.2	60	28	177.84
L1018.15-3180	3180	15	14.0	4.4	7.5	6.2	60	28	181.26
L1018.15-3240	3240	15	14.0	4.4	7.5	6.2	60	28	184.68
L1018.15-3300	3300	15	14.0	4.4	7.5	6.2	60	28	188.10
L1018.15-3360	3360	15	14.0	4.4	7.5	6.2	60	28	191.52
L1018.15-3420	3420	15	14.0	4.4	7.5	6.2	60	28	194.94
L1018.15-3480	3480	15	14.0	4.4	7.5	6.2	60	28	198.36
L1018.15-3540	3540	15	14.0	4.4	7.5	6.2	60	28	201.78
L1018.15-3600	3600	15	14.0	4.4	7.5	6.2	60	28	205.20
L1018.15-3660	3660	15	14.0	4.4	7.5	6.2	60	28	208.62
L1018.15-3720	3720	15	14.0	4.4	7.5	6.2	60	28	212.04
L1018.15-3780	3780	15	14.0	4.4	7.5	6.2	60	28	215.46
L1018.15-3840	3840	15	14.0	4.4	7.5	6.2	60	28	218.88
L1018.15-3900	3900	15	14.0	4.4	7.5	6.2	60	28	222.30
L1018.15-3960	3960	15	14.0	4.4	7.5	6.2	60	28	225.72
L1018.15-4000	4000	15	14.0	4.4	7.5	6.2	60	28	228.00

Ordering Example



20mm Aluminium Linear Guide Rail
with stainless raceways





L1018.20

Material
Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes
Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

Tips
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

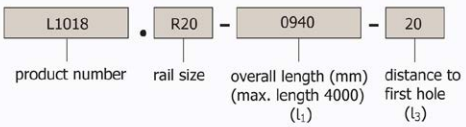
Order No.	Rail size	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.20-0180	20	180	20	19.3	6.0	9.4	7.7	60	30	0.1
L1018.20-0240	20	240	20	19.3	6.0	9.4	7.7	60	30	0.1
L1018.20-0300	20	300	20	19.3	6.0	9.4	7.7	60	30	0.2
L1018.20-0360	20	360	20	19.3	6.0	9.4	7.7	60	30	0.2
L1018.20-0420	20	420	20	19.3	6.0	9.4	7.7	60	30	0.2
L1018.20-0480	20	480	20	19.3	6.0	9.4	7.7	60	30	0.3
L1018.20-0540	20	540	20	19.3	6.0	9.4	7.7	60	30	0.3
L1018.20-0600	20	600	20	19.3	6.0	9.4	7.7	60	30	0.3
L1018.20-0660	20	660	20	19.3	6.0	9.4	7.7	60	30	0.4
L1018.20-0720	20	720	20	19.3	6.0	9.4	7.7	60	30	0.4
L1018.20-0780	20	780	20	19.3	6.0	9.4	7.7	60	30	0.4
L1018.20-0840	20	840	20	19.3	6.0	9.4	7.7	60	30	0.5
L1018.20-0900	20	900	20	19.3	6.0	9.4	7.7	60	30	0.5
L1018.20-0960	20	960	20	19.3	6.0	9.4	7.7	60	30	0.5
L1018.20-1020	20	1020	20	19.3	6.0	9.4	7.7	60	30	0.6
L1018.20-1080	20	1080	20	19.3	6.0	9.4	7.7	60	30	0.6
L1018.20-1140	20	1140	20	19.3	6.0	9.4	7.7	60	30	0.6
L1018.20-1200	20	1200	20	19.3	6.0	9.4	7.7	60	30	0.7
L1018.20-1260	20	1260	20	19.3	6.0	9.4	7.7	60	30	0.7
L1018.20-1320	20	1320	20	19.3	6.0	9.4	7.7	60	30	0.8
L1018.20-1380	20	1380	20	19.3	6.0	9.4	7.7	60	30	0.8
L1018.20-1440	20	1440	20	19.3	6.0	9.4	7.7	60	30	0.8
L1018.20-1500	20	1500	20	19.3	6.0	9.4	7.7	60	30	0.9
L1018.20-1560	20	1560	20	19.3	6.0	9.4	7.7	60	30	0.9
L1018.20-1620	20	1620	20	19.3	6.0	9.4	7.7	60	30	0.9
L1018.20-1680	20	1680	20	19.3	6.0	9.4	7.7	60	30	1.0
L1018.20-1740	20	1740	20	19.3	6.0	9.4	7.7	60	30	1.0
L1018.20-1800	20	1800	20	19.3	6.0	9.4	7.7	60	30	1.0
L1018.20-1860	20	1860	20	19.3	6.0	9.4	7.7	60	30	1.1
L1018.20-1920	20	1920	20	19.3	6.0	9.4	7.7	60	30	1.1
L1018.20-1980	20	1980	20	19.3	6.0	9.4	7.7	60	30	1.1

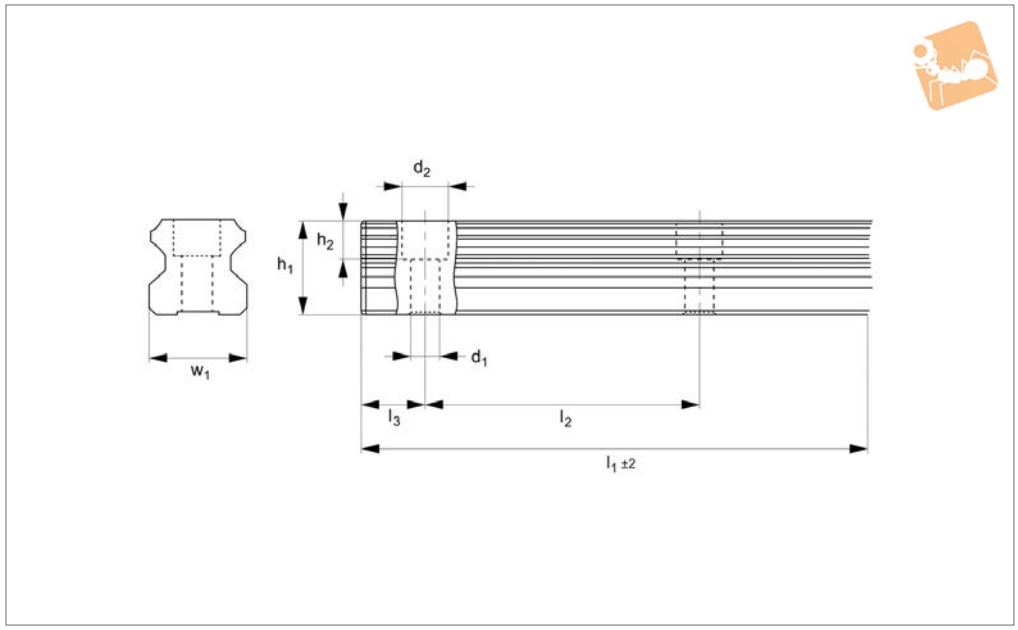
20mm Aluminium Linear Guide Rail

with stainless raceways

Order No.	Rail size	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.20-2040	20	2040	20	19.3	6.0	9.4	7.7	60	30	1.2
L1018.20-2100	20	2100	20	19.3	6.0	9.4	7.7	60	30	1.2
L1018.20-2160	20	2160	20	19.3	6.0	9.4	7.7	60	30	1.2
L1018.20-2220	20	2220	20	19.3	6.0	9.4	7.7	60	30	1.3
L1018.20-2280	20	2280	20	19.3	6.0	9.4	7.7	60	30	1.3
L1018.20-2340	20	2340	20	19.3	6.0	9.4	7.7	60	30	1.3
L1018.20-2400	20	2400	20	19.3	6.0	9.4	7.7	60	30	1.4
L1018.20-2460	20	2460	20	19.3	6.0	9.4	7.7	60	30	1.4
L1018.20-2520	20	2520	20	19.3	6.0	9.4	7.7	60	30	1.4
L1018.20-2580	20	2580	20	19.3	6.0	9.4	7.7	60	30	1.5
L1018.20-2640	20	2640	20	19.3	6.0	9.4	7.7	60	30	1.5
L1018.20-2700	20	2700	20	19.3	6.0	9.4	7.7	60	30	1.5
L1018.20-2760	20	2760	20	19.3	6.0	9.4	7.7	60	30	1.6
L1018.20-2820	20	2820	20	19.3	6.0	9.4	7.7	60	30	1.6
L1018.20-2880	20	2880	20	19.3	6.0	9.4	7.7	60	30	1.6
L1018.20-2940	20	2940	20	19.3	6.0	9.4	7.7	60	30	1.7
L1018.20-3000	20	3000	20	19.3	6.0	9.4	7.7	60	30	1.7
L1018.20-3060	20	3060	20	19.3	6.0	9.4	7.7	60	30	1.7
L1018.20-3120	20	3120	20	19.3	6.0	9.4	7.7	60	30	1.8
L1018.20-3180	20	3180	20	19.3	6.0	9.4	7.7	60	30	1.8
L1018.20-3240	20	3240	20	19.3	6.0	9.4	7.7	60	30	1.8
L1018.20-3300	20	3300	20	19.3	6.0	9.4	7.7	60	30	1.9
L1018.20-3360	20	3360	20	19.3	6.0	9.4	7.7	60	30	1.9
L1018.20-3420	20	3420	20	19.3	6.0	9.4	7.7	60	30	1.9
L1018.20-3480	20	3480	20	19.3	6.0	9.4	7.7	60	30	2.0
L1018.20-3540	20	3540	20	19.3	6.0	9.4	7.7	60	30	2.0
L1018.20-3600	20	3600	20	19.3	6.0	9.4	7.7	60	30	2.1
L1018.20-3660	20	3660	20	19.3	6.0	9.4	7.7	60	30	2.1
L1018.20-3720	20	3720	20	19.3	6.0	9.4	7.7	60	30	2.1
L1018.20-3780	20	3780	20	19.3	6.0	9.4	7.7	60	30	2.2
L1018.20-3840	20	3840	20	19.3	6.0	9.4	7.7	60	30	2.2
L1018.20-3900	20	3900	20	19.3	6.0	9.4	7.7	60	30	2.2
L1018.20-3960	20	3960	20	19.3	6.0	9.4	7.7	60	30	2.3
L1018.20-4000	20	4000	20	19.3	6.0	9.4	7.7	60	30	2.3

Ordering Example







L1018.25

Material
Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes
Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

Tips
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

Order No.	Rail size	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.25-0180	25	180	25	21.8	7.0	11.0	8.9	60	30	0.2
L1018.25-0240	25	240	25	21.8	7.0	11.0	8.9	60	30	0.3
L1018.25-0300	25	300	25	21.8	7.0	11.0	8.9	60	30	0.4
L1018.25-0360	25	360	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-0420	25	420	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-0480	25	480	25	21.8	7.0	11.0	8.9	60	30	0.6
L1018.25-0540	25	540	25	21.8	7.0	11.0	8.9	60	30	0.7
L1018.25-0600	25	600	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-0660	25	660	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-0720	25	720	25	21.8	7.0	11.0	8.9	60	30	0.9
L1018.25-0780	25	780	25	21.8	7.0	11.0	8.9	60	30	1.0
L1018.25-0840	25	840	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-0900	25	900	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-0960	25	960	25	21.8	7.0	11.0	8.9	60	30	1.2
L1018.25-1020	25	1020	25	21.8	7.0	11.0	8.9	60	30	0.0
L1018.25-1080	25	1080	25	21.8	7.0	11.0	8.9	60	30	0.1
L1018.25-1140	25	1140	25	21.8	7.0	11.0	8.9	60	30	0.2
L1018.25-1200	25	1200	25	21.8	7.0	11.0	8.9	60	30	0.3
L1018.25-1260	25	1260	25	21.8	7.0	11.0	8.9	60	30	0.3
L1018.25-1320	25	1320	25	21.8	7.0	11.0	8.9	60	30	0.4
L1018.25-1380	25	1380	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-1440	25	1440	25	21.8	7.0	11.0	8.9	60	30	0.6
L1018.25-1500	25	1500	25	21.8	7.0	11.0	8.9	60	30	0.6
L1018.25-1560	25	1560	25	21.8	7.0	11.0	8.9	60	30	0.7
L1018.25-1620	25	1620	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-1680	25	1680	25	21.8	7.0	11.0	8.9	60	30	0.9
L1018.25-1740	25	1740	25	21.8	7.0	11.0	8.9	60	30	0.9
L1018.25-1800	25	1800	25	21.8	7.0	11.0	8.9	60	30	1.0
L1018.25-1860	25	1860	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-1920	25	1920	25	21.8	7.0	11.0	8.9	60	30	1.2
L1018.25-1980	25	1980	25	21.8	7.0	11.0	8.9	60	30	1.2

25mm Aluminium Linear Guide Rail

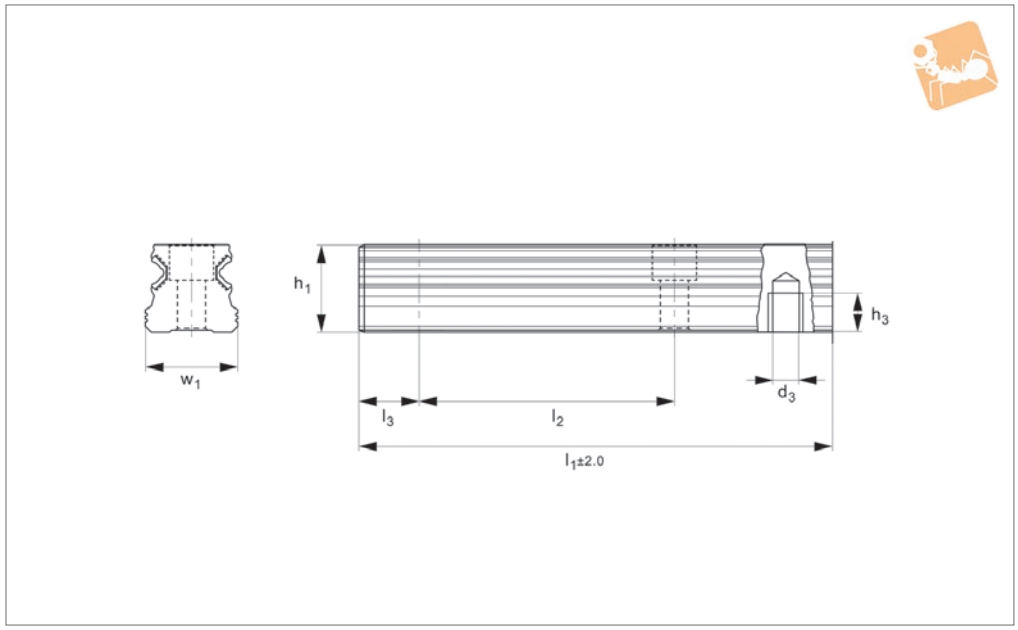
with stainless raceways

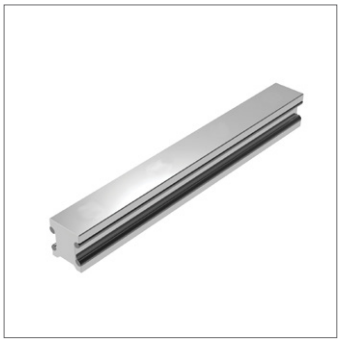
Order No.	Rail size	l_1	w_1	h_1	d_1	d_2	h_2	l_2	l_3	Weight kg
L1018.25-2040	25	2040	25	21.8	7.0	11.0	8.9	60	30	0.1
L1018.25-2100	25	2100	25	21.8	7.0	11.0	8.9	60	30	0.1
L1018.25-2160	25	2160	25	21.8	7.0	11.0	8.9	60	30	0.2
L1018.25-2220	25	2220	25	21.8	7.0	11.0	8.9	60	30	0.3
L1018.25-2280	25	2280	25	21.8	7.0	11.0	8.9	60	30	0.4
L1018.25-2340	25	2340	25	21.8	7.0	11.0	8.9	60	30	0.4
L1018.25-2400	25	2400	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-2460	25	2460	25	21.8	7.0	11.0	8.9	60	30	0.6
L1018.25-2520	25	2520	25	21.8	7.0	11.0	8.9	60	30	0.7
L1018.25-2580	25	2580	25	21.8	7.0	11.0	8.9	60	30	0.7
L1018.25-2640	25	2640	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-2700	25	2700	25	21.8	7.0	11.0	8.9	60	30	0.9
L1018.25-2760	25	2760	25	21.8	7.0	11.0	8.9	60	30	1.0
L1018.25-2820	25	2820	25	21.8	7.0	11.0	8.9	60	30	1.0
L1018.25-2880	25	2880	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-2940	25	2940	25	21.8	7.0	11.0	8.9	60	30	1.2
L1018.25-3000	25	3000	25	21.8	7.0	11.0	8.9	60	30	0.0
L1018.25-3060	25	3060	25	21.8	7.0	11.0	8.9	60	30	0.1
L1018.25-3120	25	3120	25	21.8	7.0	11.0	8.9	60	30	0.2
L1018.25-3180	25	3180	25	21.8	7.0	11.0	8.9	60	30	0.2
L1018.25-3240	25	3240	25	21.8	7.0	11.0	8.9	60	30	0.3
L1018.25-3300	25	3300	25	21.8	7.0	11.0	8.9	60	30	0.4
L1018.25-3360	25	3360	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-3420	25	3420	25	21.8	7.0	11.0	8.9	60	30	0.5
L1018.25-3480	25	3480	25	21.8	7.0	11.0	8.9	60	30	0.6
L1018.25-3540	25	3540	25	21.8	7.0	11.0	8.9	60	30	0.7
L1018.25-3600	25	3600	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-3660	25	3660	25	21.8	7.0	11.0	8.9	60	30	0.8
L1018.25-3720	25	3720	25	21.8	7.0	11.0	8.9	60	30	0.9
L1018.25-3780	25	3780	25	21.8	7.0	11.0	8.9	60	30	1.0
L1018.25-3840	25	3840	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-3900	25	3900	25	21.8	7.0	11.0	8.9	60	30	1.1
L1018.25-3960	25	3960	25	21.8	7.0	11.0	8.9	60	30	1.2
L1018.25-4000	25	4000	25	21.8	7.0	11.0	28	60	30	5.0

Ordering Example

L1018 • R20 – 0940 – 20

- L1018: product number
- R20: rail size
- 0940: overall length (mm) (max. length 4000) (l_1)
- 20: distance to first hole (l_3)





L1018.15R

Material
Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes
Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

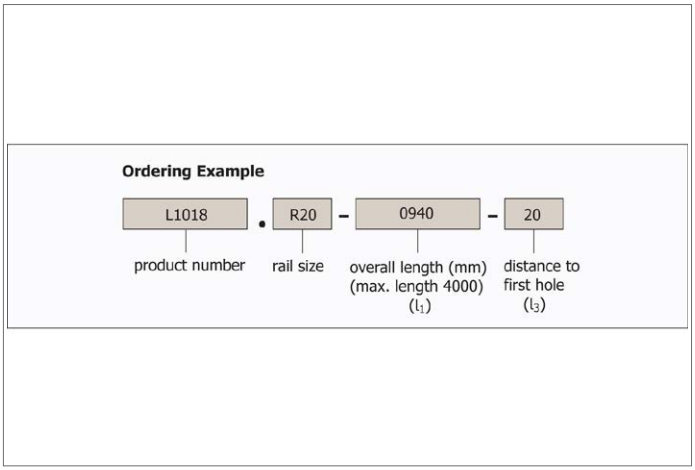
Tips
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

Order No.	Rail size	l_1	w_1	h_1	d_3	h_3	l_2	l_3	Weight kg
L1018.15-0180-R	15	180	15	14.3	M5	7	60	28	0.1
L1018.15-0240-R	15	240	15	14.3	M5	7	60	28	0.1
L1018.15-0300-R	15	300	15	14.3	M5	7	60	28	0.2
L1018.15-0360-R	15	360	15	14.3	M5	7	60	28	0.2
L1018.15-0420-R	15	420	15	14.3	M5	7	60	28	0.2
L1018.15-0480-R	15	480	15	14.3	M5	7	60	28	0.3
L1018.15-0540-R	15	540	15	14.3	M5	7	60	28	0.3
L1018.15-0600-R	15	600	15	14.3	M5	7	60	28	0.3
L1018.15-0660-R	15	660	15	14.3	M5	7	60	28	0.4
L1018.15-0720-R	15	720	15	14.3	M5	7	60	28	0.4
L1018.15-0780-R	15	780	15	14.3	M5	7	60	28	0.4
L1018.15-0840-R	15	840	15	14.3	M5	7	60	28	0.5
L1018.15-0900-R	15	900	15	14.3	M5	7	60	28	0.5
L1018.15-0960-R	15	960	15	14.3	M5	7	60	28	0.5
L1018.15-1020-R	15	1020	15	14.3	M5	7	60	28	0.6
L1018.15-1080-R	15	1080	15	14.3	M5	7	60	28	0.6
L1018.15-1140-R	15	1140	15	14.3	M5	7	60	28	0.6
L1018.15-1200-R	15	1200	15	14.3	M5	7	60	28	0.7
L1018.15-1260-R	15	1260	15	14.3	M5	7	60	28	0.7
L1018.15-1320-R	15	1320	15	14.3	M5	7	60	28	0.8
L1018.15-1380-R	15	1380	15	14.3	M5	7	60	28	0.8
L1018.15-1440-R	15	1440	15	14.3	M5	7	60	28	0.8
L1018.15-1500-R	15	1500	15	14.3	M5	7	60	28	0.9
L1018.15-1560-R	15	1560	15	14.3	M5	7	60	28	0.9
L1018.15-1620-R	15	1620	15	14.3	M5	7	60	28	0.9
L1018.15-1680-R	15	1680	15	14.3	M5	7	60	28	1.0
L1018.15-1740-R	15	1740	15	14.3	M5	7	60	28	1.0
L1018.15-1800-R	15	1800	15	14.3	M5	7	60	28	1.0
L1018.15-1860-R	15	1860	15	14.3	M5	7	60	28	1.1
L1018.15-1940-R	15	1940	15	14.3	M5	7	60	28	1.1
L1018.15-1980-R	15	1980	15	14.3	M5	7	60	28	1.1

15mm Aluminium Linear Guide Rail

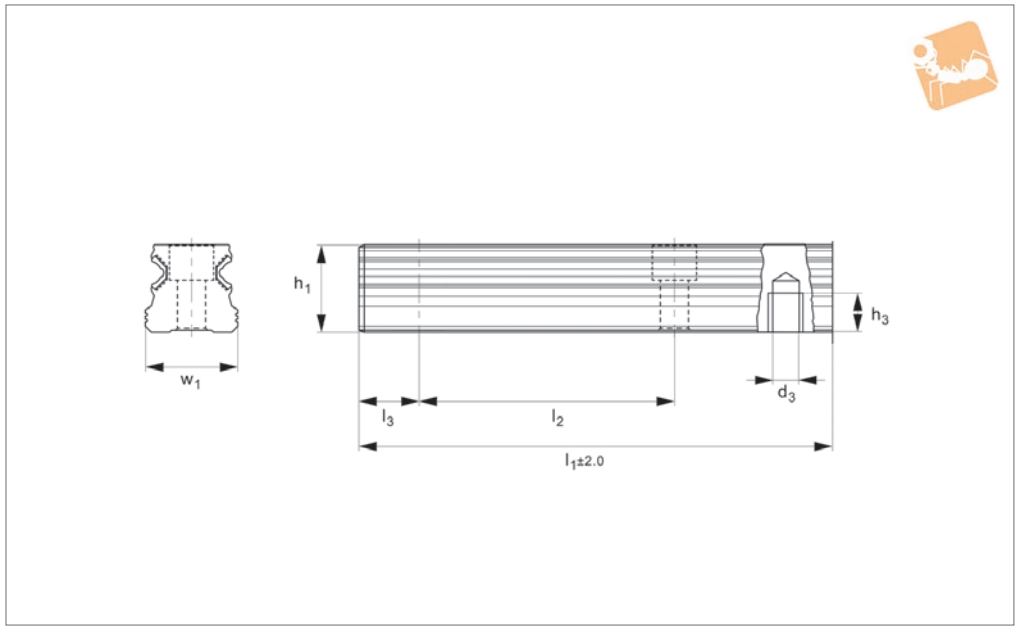
rear fixing with stainless raceways

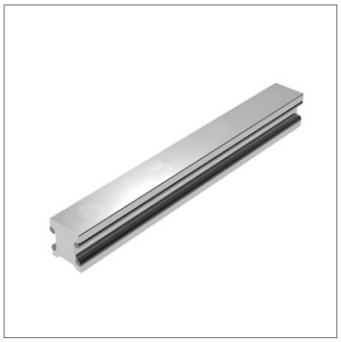
Order No.	Rail size	l_1	w_1	h_1	d_3	h_3	l_2	l_3	Weight kg
L1018.15-2040-R	15	2040	15	14.3	M5	7	60	28	1.2
L1018.15-2100-R	15	2100	15	14.3	M5	7	60	28	1.2
L1018.15-2160-R	15	2160	15	14.3	M5	7	60	28	1.2
L1018.15-2220-R	15	2220	15	14.3	M5	7	60	28	1.3
L1018.15-2280-R	15	2280	15	14.3	M5	7	60	28	1.3
L1018.15-2340-R	15	2340	15	14.3	M5	7	60	28	1.3
L1018.15-2400-R	15	2400	15	14.3	M5	7	60	28	1.4
L1018.15-2460-R	15	2460	15	14.3	M5	7	60	28	1.4
L1018.15-2520-R	15	2520	15	14.3	M5	7	60	28	1.4
L1018.15-2580-R	15	2580	15	14.3	M5	7	60	28	1.5
L1018.15-2640-R	15	2640	15	14.3	M5	7	60	28	1.5
L1018.15-2700-R	15	2700	15	14.3	M5	7	60	28	1.5
L1018.15-2760-R	15	2760	15	14.3	M5	7	60	28	1.6
L1018.15-2820-R	15	2820	15	14.3	M5	7	60	28	1.6
L1018.15-2880-R	15	2880	15	14.3	M5	7	60	28	1.6
L1018.15-2940-R	15	2940	15	14.3	M5	7	60	28	1.7
L1018.15-3000-R	15	3000	15	14.3	M5	7	60	28	1.7
L1018.15-3060-R	15	3060	15	14.3	M5	7	60	28	1.7
L1018.15-3120-R	15	3120	15	14.3	M5	7	60	28	1.8
L1018.15-3180-R	15	3180	15	14.3	M5	7	60	28	1.8
L1018.15-3240-R	15	3240	15	14.3	M5	7	60	28	1.8
L1018.15-3300-R	15	3300	15	14.3	M5	7	60	28	1.9
L1018.15-3360-R	15	3360	15	14.3	M5	7	60	28	1.9
L1018.15-3420-R	15	3420	15	14.3	M5	7	60	28	1.9
L1018.15-3480-R	15	3480	15	14.3	M5	7	60	28	2.0
L1018.15-3540-R	15	3540	15	14.3	M5	7	60	28	2.0
L1018.15-3600-R	15	3600	15	14.3	M5	7	60	28	2.1
L1018.15-3660-R	15	3660	15	14.3	M5	7	60	28	2.1
L1018.15-3720-R	15	3720	15	14.3	M5	7	60	28	2.1
L1018.15-3780-R	15	3780	15	14.3	M5	7	60	28	2.2
L1018.15-3840-R	15	3840	15	14.3	M5	7	60	28	2.2
L1018.15-3900-R	15	3900	15	14.3	M5	7	60	28	2.2
L1018.15-3960-R	15	3960	15	14.3	M5	7	60	28	2.3
L1018.15-4000-R	15	4000	15	14.3	M5	7	60	28	2.3



20mm Aluminium Linear Guide Rail

rear fixing with stainless raceways





L1018.20R

Material

Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes

Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

Tips

These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

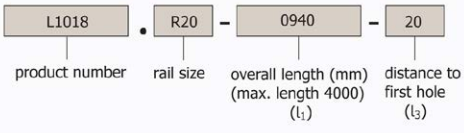
Order No.	Rail size	w_1	h_1	d_1	d_3	h_3	l_2	l_3	Weight kg
L1018.20-0180-R	20	20	19.3	180	M6	9	60	28	0.2
L1018.20-0240-R	20	20	19.3	240	M6	9	60	28	0.2
L1018.20-0300-R	20	20	19.3	300	M6	9	60	28	0.3
L1018.20-0360-R	20	20	19.3	360	M6	9	60	28	0.4
L1018.20-0420-R	20	20	19.3	420	M6	9	60	28	0.4
L1018.20-0480-R	20	20	19.3	480	M6	9	60	28	0.5
L1018.20-0540-R	20	20	19.3	540	M6	9	60	28	0.5
L1018.20-0600-R	20	20	19.3	600	M6	9	60	28	0.6
L1018.20-0660-R	20	20	19.3	660	M6	9	60	28	0.6
L1018.20-0720-R	20	20	19.3	720	M6	9	60	28	0.7
L1018.20-0780-R	20	20	19.3	780	M6	9	60	28	0.8
L1018.20-0840-R	20	20	19.3	840	M6	9	60	28	0.8
L1018.20-0900-R	20	20	19.3	900	M6	9	60	28	0.9
L1018.20-0960-R	20	20	19.3	960	M6	9	60	28	0.9
L1018.20-1020-R	20	20	19.3	1020	M6	9	60	28	1.0
L1018.20-1080-R	20	20	19.3	1080	M6	9	60	28	1.1
L1018.20-1140-R	20	20	19.3	1140	M6	9	60	28	1.1
L1018.20-1200-R	20	20	19.3	1200	M6	9	60	28	1.2
L1018.20-1260-R	20	20	19.3	1260	M6	9	60	28	1.2
L1018.20-1320-R	20	20	19.3	1320	M6	9	60	28	1.3
L1018.20-1380-R	20	20	19.3	1380	M6	9	60	28	1.4
L1018.20-1440-R	20	20	19.3	1440	M6	9	60	28	1.4
L1018.20-1500-R	20	20	19.3	1500	M6	9	60	28	1.5
L1018.20-1560-R	20	20	19.3	1560	M6	9	60	28	1.5
L1018.20-1620-R	20	20	19.3	1620	M6	9	60	28	1.6
L1018.20-1680-R	20	20	19.3	1680	M6	9	60	28	1.6
L1018.20-1740-R	20	20	19.3	1740	M6	9	60	28	1.7
L1018.20-1800-R	20	20	19.3	1800	M6	9	60	28	1.8
L1018.20-1860-R	20	20	19.3	1860	M6	9	60	28	1.8
L1018.20-1920-R	20	20	19.3	1920	M6	9	60	28	1.9
L1018.20-1980-R	20	20	19.3	1980	M6	9	60	28	1.9

20mm Aluminium Linear Guide Rail

rear fixing with stainless raceways

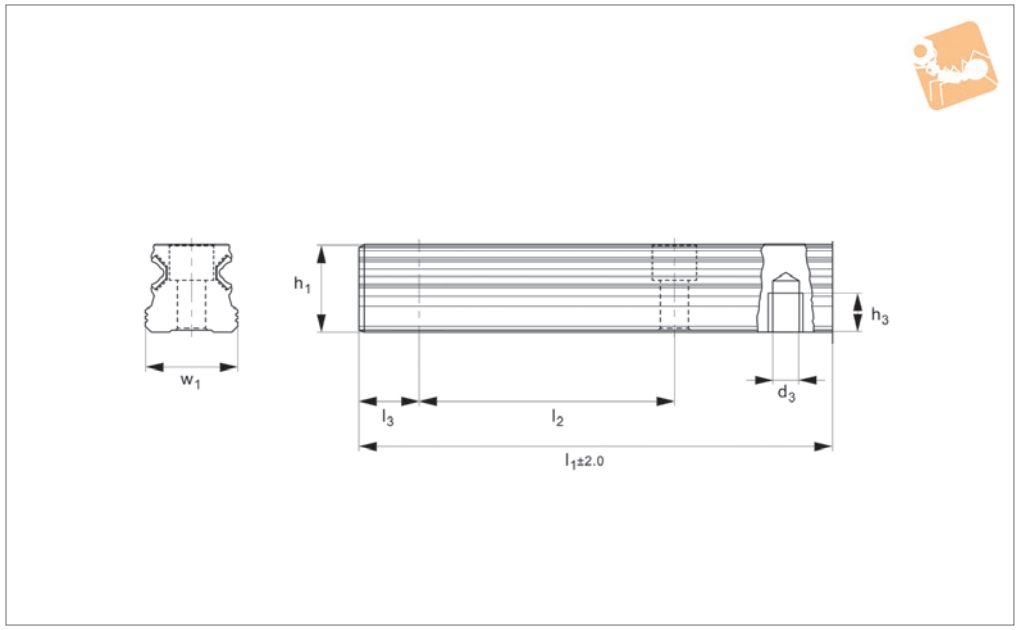
Order No.	Rail size	w_1	h_1	d_1	d_3	h_3	l_2	l_3	Weight kg
L1018.20-2040-R	20	20	19.3	2040	M6	9	60	28	2.0
L1018.20-2100-R	20	20	19.3	2100	M6	9	60	28	2.1
L1018.20-2160-R	20	20	19.3	2160	M6	9	60	28	2.1
L1018.20-2220-R	20	20	19.3	2220	M6	9	60	28	2.2
L1018.20-2280-R	20	20	19.3	2280	M6	9	60	28	2.2
L1018.20-2340-R	20	20	19.3	2340	M6	9	60	28	2.3
L1018.20-2400-R	20	20	19.3	2400	M6	9	60	28	2.4
L1018.20-2460-R	20	20	19.3	2460	M6	9	60	28	2.4
L1018.20-2520-R	20	20	19.3	2520	M6	9	60	28	2.5
L1018.20-2580-R	20	20	19.3	2580	M6	9	60	28	2.5
L1018.20-2640-R	20	20	19.3	2640	M6	9	60	28	2.6
L1018.20-2700-R	20	20	19.3	2700	M6	9	60	28	2.6
L1018.20-2760-R	20	20	19.3	2760	M6	9	60	28	2.7
L1018.20-2820-R	20	20	19.3	2820	M6	9	60	28	2.8
L1018.20-2880-R	20	20	19.3	2880	M6	9	60	28	2.8
L1018.20-2940-R	20	20	19.3	2940	M6	9	60	28	2.9
L1018.20-3000-R	20	20	19.3	3000	M6	9	60	28	2.9
L1018.20-3060-R	20	20	19.3	3060	M6	9	60	28	3.0
L1018.20-3120-R	20	20	19.3	3120	M6	9	60	28	3.1
L1018.20-3180-R	20	20	19.3	3180	M6	9	60	28	3.1
L1018.20-3240-R	20	20	19.3	3240	M6	9	60	28	3.2
L1018.20-3300-R	20	20	19.3	3300	M6	9	60	28	3.2
L1018.20-3360-R	20	20	19.3	3360	M6	9	60	28	3.3
L1018.20-3420-R	20	20	19.3	3420	M6	9	60	28	3.4
L1018.20-3480-R	20	20	19.3	3480	M6	9	60	28	3.4
L1018.20-3540-R	20	20	19.3	3540	M6	9	60	28	3.5
L1018.20-3600-R	20	20	19.3	3600	M6	9	60	28	3.5
L1018.20-3660-R	20	20	19.3	3660	M6	9	60	28	3.6
L1018.20-3720-R	20	20	19.3	3720	M6	9	60	28	3.6
L1018.20-3780-R	20	20	19.3	3780	M6	9	60	28	3.7
L1018.20-3840-R	20	20	19.3	3840	M6	9	60	28	3.8
L1018.20-3900-R	20	20	19.3	3900	M6	9	60	28	3.8
L1018.20-3960-R	20	20	19.3	3960	M6	9	60	28	3.9
L1018.20-4000-R	20	20	19.3	4000	M6	9	60	28	3.9

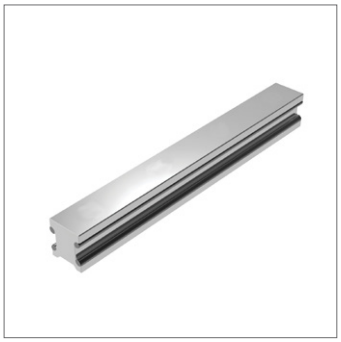
Ordering Example



25mm Aluminium Linear Guide Rail

rear fixing with stainless raceways





L1018.25R

Material

Aluminium profile (AlMgSi0.5,anodized 12-15µ). Raceway stainless steel (X46Cr13), hardened to 58-62HRC.

Technical Notes

Compact, light-weight design. 60% saving versus steel versions. The aluminium rails are made of high quality aluminium alloy with hardened stainless steel raceway.

Tips

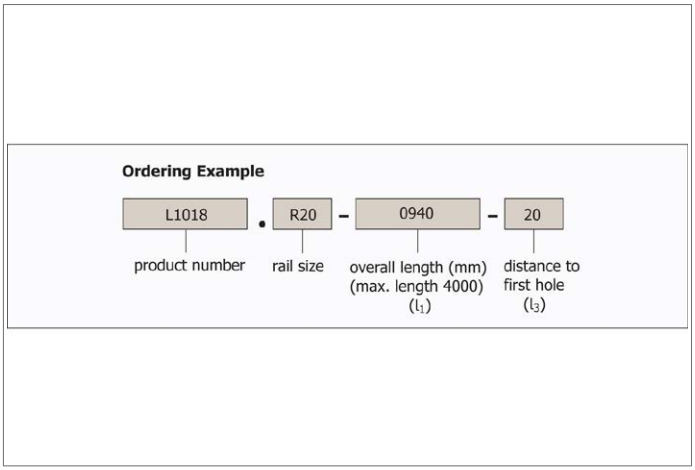
These are very lightweight aluminium rails and can only be used with our light-weight aluminium carriages. For standard steel linear guideways and carriages see part no. L1016.

Order No.	Rail size	l_1	w_1	h_1	d_3	h_3	l_2	l_3	Weight kg
L1018.25-0180-R	25	180	25	21.8	M6	12	60	28	0.2
L1018.25-0240-R	25	240	25	21.8	M6	12	60	28	0.3
L1018.25-0300-R	25	300	25	21.8	M6	12	60	28	0.4
L1018.25-0360-R	25	360	25	21.8	M6	12	60	28	0.5
L1018.25-0420-R	25	420	25	21.8	M6	12	60	28	0.5
L1018.25-0480-R	25	480	25	21.8	M6	12	60	28	0.6
L1018.25-0540-R	25	540	25	21.8	M6	12	60	28	0.7
L1018.25-0600-R	25	600	25	21.8	M6	12	60	28	0.8
L1018.25-0660-R	25	660	25	21.8	M6	12	60	28	0.8
L1018.25-0720-R	25	720	25	21.8	M6	12	60	28	0.9
L1018.25-0780-R	25	780	25	21.8	M6	12	60	28	1.0
L1018.25-0840-R	25	840	25	21.8	M6	12	60	28	1.1
L1018.25-0900-R	25	900	25	21.8	M6	12	60	28	1.1
L1018.25-0960-R	25	960	25	21.8	M6	12	60	28	1.2
L1018.25-1020-R	25	1020	25	21.8	M6	12	60	28	1.3
L1018.25-1080-R	25	1080	25	21.8	M6	12	60	28	1.4
L1018.25-1140-R	25	1140	25	21.8	M6	12	60	28	1.4
L1018.25-1200-R	25	1200	25	21.8	M6	12	60	28	1.5
L1018.25-1260-R	25	1260	25	21.8	M6	12	60	28	1.6
L1018.25-1320-R	25	1320	25	21.8	M6	12	60	28	1.7
L1018.25-1380-R	25	1380	25	21.8	M6	12	60	28	1.7
L1018.25-1440-R	25	1440	25	21.8	M6	12	60	28	1.8
L1018.25-1500-R	25	1500	25	21.8	M6	12	60	28	1.9
L1018.25-1560-R	25	1560	25	21.8	M6	12	60	28	2.0
L1018.25-1620-R	25	1620	25	21.8	M6	12	60	28	2.0
L1018.25-1680-R	25	1680	25	21.8	M6	12	60	28	2.1
L1018.25-1740-R	25	1740	25	21.8	M6	12	60	28	2.2
L1018.25-1800-R	25	1800	25	21.8	M6	12	60	28	2.3
L1018.25-1860-R	25	1860	25	21.8	M6	12	60	28	2.3
L1018.25-1920-R	25	1920	25	21.8	M6	12	60	28	2.4
L1018.25-1980-R	25	1980	25	21.8	M6	12	60	28	2.5

25mm Aluminium Linear Guide Rail

rear fixing with stainless raceways

Order No.	Rail size	l_1	w_1	h_1	d_3	h_3	l_2	l_3	Weight kg
L1018.25-2040-R	25	2040	25	21.8	M6	12	60	28	2.6
L1018.25-2100-R	25	2100	25	21.8	M6	12	60	28	2.6
L1018.25-2160-R	25	2160	25	21.8	M6	12	60	28	2.7
L1018.25-2220-R	25	2220	25	21.8	M6	12	60	28	2.8
L1018.25-2280-R	25	2280	25	21.8	M6	12	60	28	2.9
L1018.25-2340-R	25	2340	25	21.8	M6	12	60	28	2.9
L1018.25-2400-R	25	2400	25	21.8	M6	12	60	28	3.0
L1018.25-2460-R	25	2460	25	21.8	M6	12	60	28	3.1
L1018.25-2520-R	25	2520	25	21.8	M6	12	60	28	3.2
L1018.25-2580-R	25	2580	25	21.8	M6	12	60	28	3.2
L1018.25-2640-R	25	2640	25	21.8	M6	12	60	28	3.3
L1018.25-2700-R	25	2700	25	21.8	M6	12	60	28	3.4
L1018.25-2760-R	25	2760	25	21.8	M6	12	60	28	3.5
L1018.25-2820-R	25	2820	25	21.8	M6	12	60	28	3.5
L1018.25-2880-R	25	2880	25	21.8	M6	12	60	28	3.6
L1018.25-2940-R	25	2940	25	21.8	M6	12	60	28	3.7
L1018.25-3000-R	25	3000	25	21.8	M6	12	60	28	3.8
L1018.25-3060-R	25	3060	25	21.8	M6	12	60	28	3.8
L1018.25-3120-R	25	3120	25	21.8	M6	12	60	28	3.9
L1018.25-3180-R	25	3180	25	21.8	M6	12	60	28	4.0
L1018.25-3240-R	25	3240	25	21.8	M6	12	60	28	4.1
L1018.25-3300-R	25	3300	25	21.8	M6	12	60	28	4.1
L1018.25-3360-R	25	3360	25	21.8	M6	12	60	28	4.2
L1018.25-3420-R	25	3420	25	21.8	M6	12	60	28	4.3
L1018.25-3480-R	25	3480	25	21.8	M6	12	60	28	4.4
L1018.25-3540-R	25	3540	25	21.8	M6	12	60	28	4.4
L1018.25-3600-R	25	3600	25	21.8	M6	12	60	28	4.5
L1018.25-3660-R	25	3660	25	21.8	M6	12	60	28	4.6
L1018.25-3720-R	25	3720	25	21.8	M6	12	60	28	4.7
L1018.25-3780-R	25	3780	25	21.8	M6	12	60	28	4.7
L1018.25-3840-R	25	3840	25	21.8	M6	12	60	28	4.8
L1018.25-3900-R	25	3900	25	21.8	M6	12	60	28	4.9
L1018.25-3960-R	25	3960	25	21.8	M6	12	60	28	5.0
L1018.25-4000-R	25	4000	25	21.8	M6	12	60	28	5.0



Determination of the carriage size:

1. Pre-select the carriages
2. Determine F_{comb} (see below)
3. Calculate the ratio of the dynamic load capacity "C" of the selected carriages relative to F_{comb} (F_{comb} divided by "C")

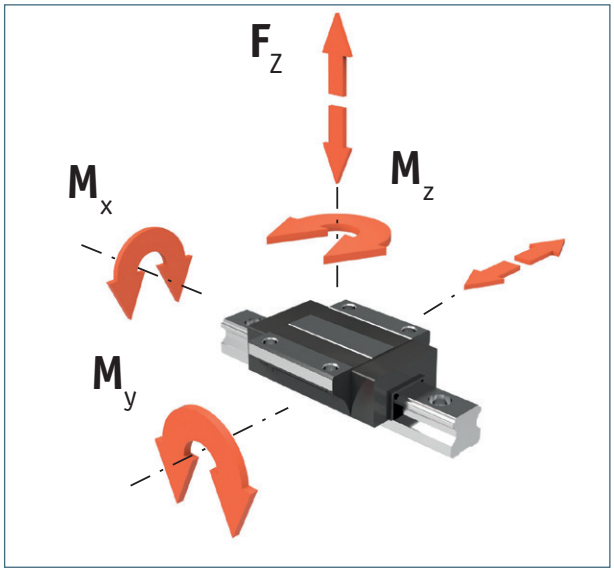
If F_{comb} /C > 0.4: carriages is sized too small, select the next largest size and repeat the calculation (step 2 and 3).

The ratio must always be F_{comb} / C≤ 0.4, otherwise F_{max} will be exceeded.

Note:
The load ratio F_{comb} / C is the quotient of the equivalent dynamic load on the bearing divided by the dynamic load capacity "C".

Calculation of load on bearing for a carriage:

$$F_{comb} = b \cdot \left(|F_Z| + |F_Y| + C \cdot \frac{|M_x|}{M_t} + C \cdot \frac{|M_y|}{M_L} + C \cdot \frac{|M_Z|}{M_L} \right)$$



F_{comb}	=	combined equivalent load	(N)	
F_Y, F_Z	=	Dynamic load	(N)	
M_X	=	torque of the X-axis [1]	(Nm)	
M_Y	=	torque of the Y-axis [2]	(Nm)	
M_Z	=	Moment um die Z-Achse [2]	(Nm)	
M_t	=	dynamic torsional moment load capacity	(Nm)	For values, see carriage data tables
M_L	=	dynamic longitudinal moment load capacity	(Nm)	For values, see carriage data tables
C	=	dynamic load capacity	(N)	For values, see carriage data tables
b	=	operating factor, (see below)		For values, see table "Recommended values for operating factors "b".

1) Torque M_X will only be fully effective in an application with a single guide rail.
2) Torque M_Y or M_X will only be fully effective when only a single carriage is mounted on one guide rail.

Recommended operating factors b:

Values for operating factors b	
1,0	Clean environment, low technical demands, manual operation
1,5	In a linear motion axis with ball screw drive
2,0	Linear motion axis with toothed belt drive
6,0	Linear motion axis with pneumatic drive
9,0	In very dirty environments

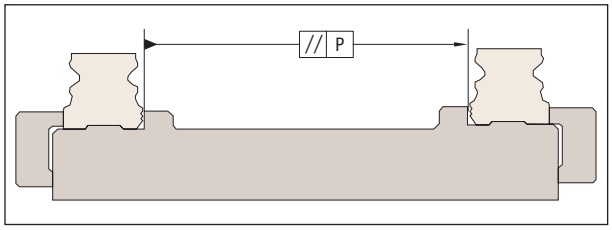
Static load rating

A static load rating can not be easily determined, because of the composite material (aluminium/stainless steel combination). Instead of this, you can find the values F_{max} and M_{max}.



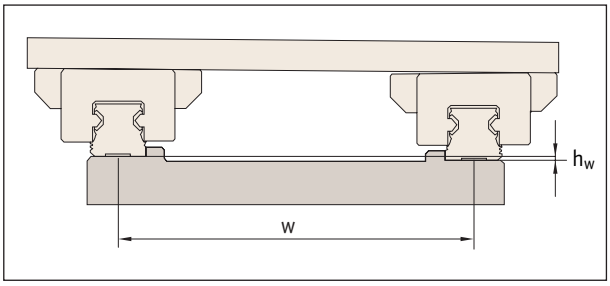
Parallelism

Please note the parallelism is required in the structure for correct installation. Parallelism of the installed rails is measured at the guide rails and the carriages.
Any parallelism offset will cause a slight increase in preload on one side of the assembly.
As long as values specified in the table are met, the effect of parallelism offsets on the service life can generally be neglected.



Size	Permissible deviation in parallelism P_{max}	
	Standard	Preload
15	0,027	0,018
20	0,031	0,021
25	0,034	0,022

mm



Calculation factor	Standard	Preload
f	$1,2 \cdot 10^{-3}$	$0,75 \cdot 10^{-3}$

Height deviation

Permissible height deviation in lateral direction "h_w"

$$h_w \leq w.f$$

h_w = Allowable height deviation (mm)
w = Distance between rails (mm)
f = Calculation factor

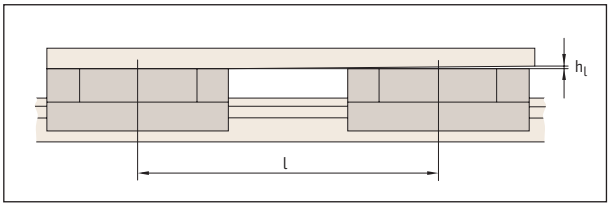
Allowable height deviation in longitudinal direction

Allowable height deviation in longitudinal direction "h_l"

$$h_l \leq b \cdot g$$

h_l = Permissible height deviation (mm)
b = Distance between carriages (mm)
g = Calculation factor

$$h_l = l \times [6 \times 10^{-4}]$$



Calculation factor	Standard	Preload
g	6×10^{-4}	$2,1 \times 10^{-4}$

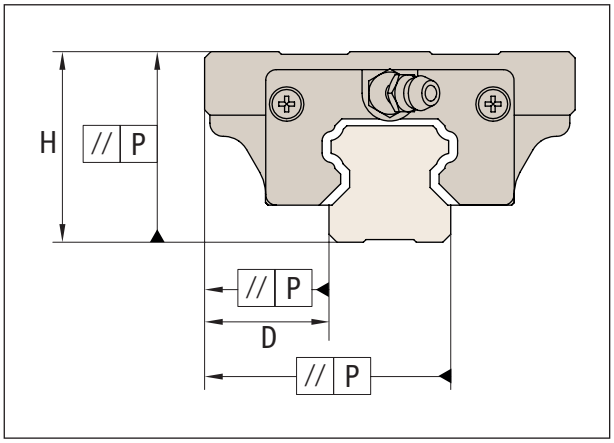
ov-aluminium-linear-mounting-lnh-Updated-23-02-2023

Height tolerance "H"

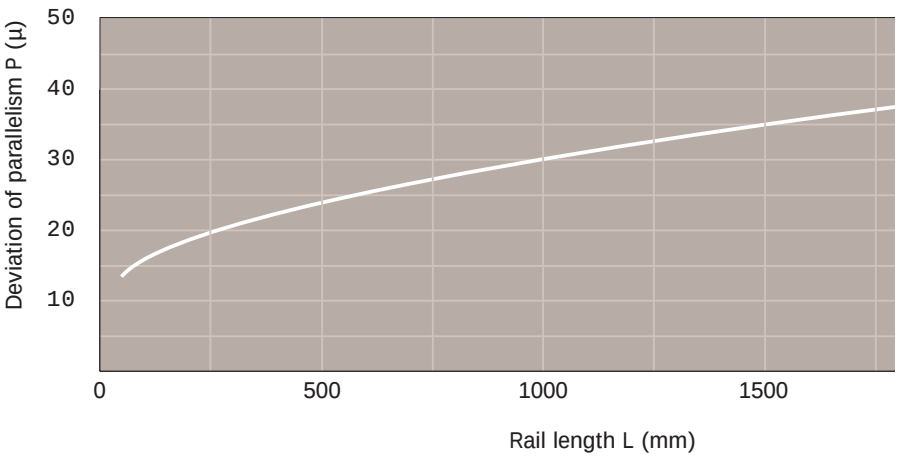
The height tolerance of several carriages on a rail is maximum ±30µ. In a combination of several carriages and rails the maximum is ±120µ.

Side tolerance "D"

The maximum side tolerance of several carriages on a rail is ±30 µ. In a combination of several carriages and rails, the maximum is ±70 µ.



Deviation of parallelism





We aim to achieve a lifetime lubrication, which we define as at least 30,000Km. The following conditions apply:

- Initial greasing with Dynalub 510
- Mounted seal unit
- No exposure to metal-working fluids
- Ambient temperature T = 20° to 30°C

First, the ratio F_{comb} / C is calculated with F_{comb} according to the formula on the previous page and the dynamic load rating C from the data tables. With this value you go then in to the diagram below.

If F_{comb} / C ≤ 0,15, it lies in the zone A of the diagram bellow.

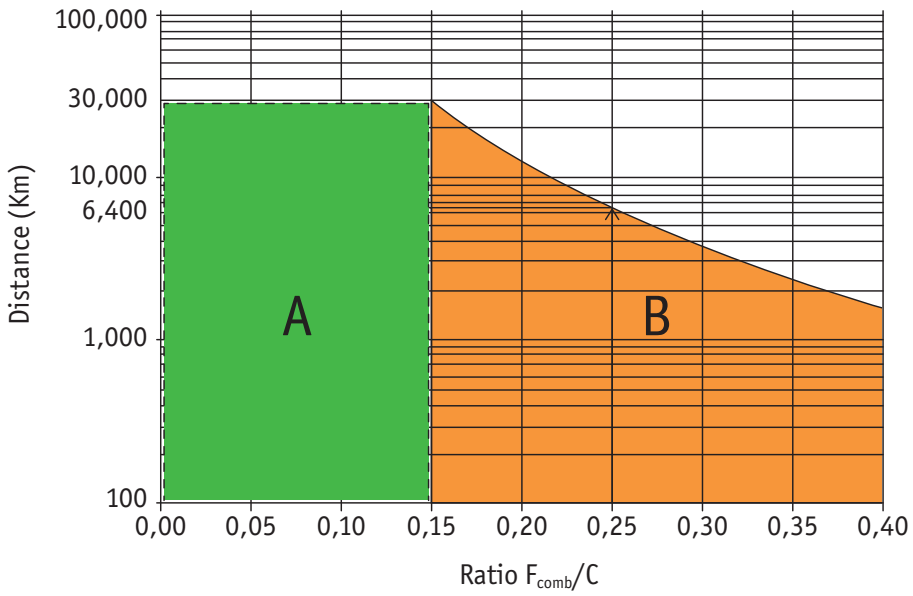
This means it will have lifetime lubrication.

With 0,15 < F_{comb}/C ≤ 0,4 it lies in the zone B of the diagram below.

For this you must distinguish two cases:
For example F_{comb} / C = 0,25 goes up to 6400km.

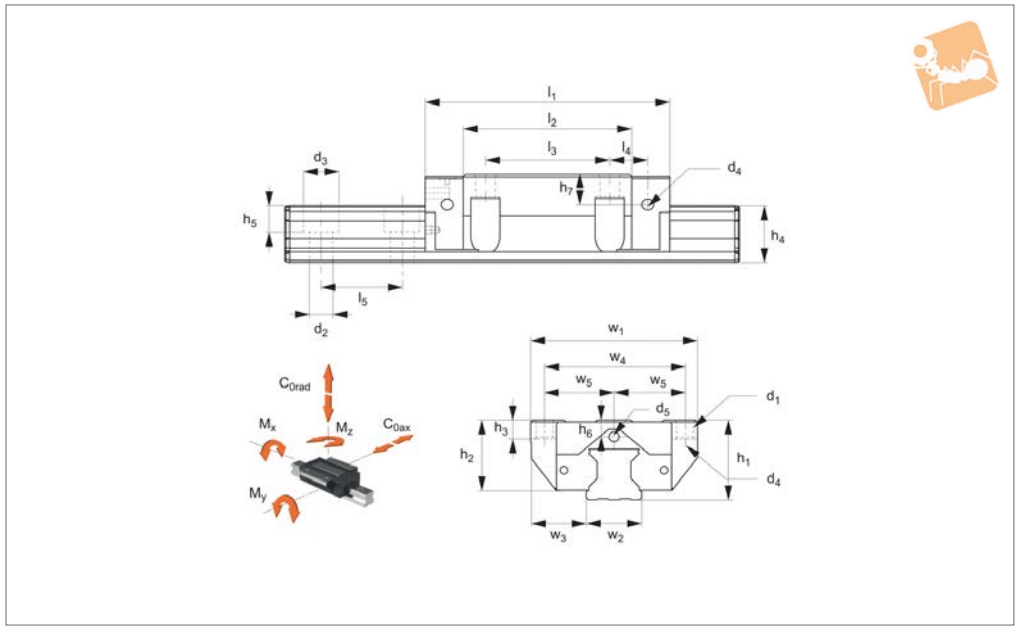
a) If the running distance required is < 6400 km, then there is a lifetime lubrication here.
b) If the running distance required is > 6400 km, then instead of the sealed unit, you should use the lubrication unit option.

If value F_{comb}/C > 0,4 then F_{max} is exceeded.



Note

- Take account of the general service life of lubricants.
- If other lubricants are used, this may lead to a reduction in the re-lubrication intervals, the achievable travel in short-stroke applications and the load capacities. Possible chemical interactions between the plastic materials, lubricants and preservative oils must also be taken into account.
- Do not use greases with solid particles such as graphite or MoS_2.
- If your application involves more demanding environmental requirements such as clean room, vacuum, food industry, increased exposure to fluids or aggressive media, extreme temperatures, please consult us. These situations must be investigated on a case by case basis and may require the use of a special lubricant.





L1017.F

Material
Hardened and ground steel.

Technical Notes
Needle roller linear guideways can take significantly higher loads than the same size standard (ball) linear guideways. Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1017.25 through to L1017.65). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Tips
These are very heavy duty needle roller rail carriages and can only be used with corresponding needle roller rails L1017. For standard linear guideways and carriages see part no. L1016.

Order No.	Rail size	w_1	w_2	h_1	l_1	l_2	h_2	h_3	h_4	h_5	h_6	h_7	d_1	Weight g
L1017.F35	35	100	34	48	122	84	42	13	31	17.0	5	16.4	M10	1700
L1017.F45	45	120	45	60	156	110	52	15	38	19.0	6	21.8	M12	3400

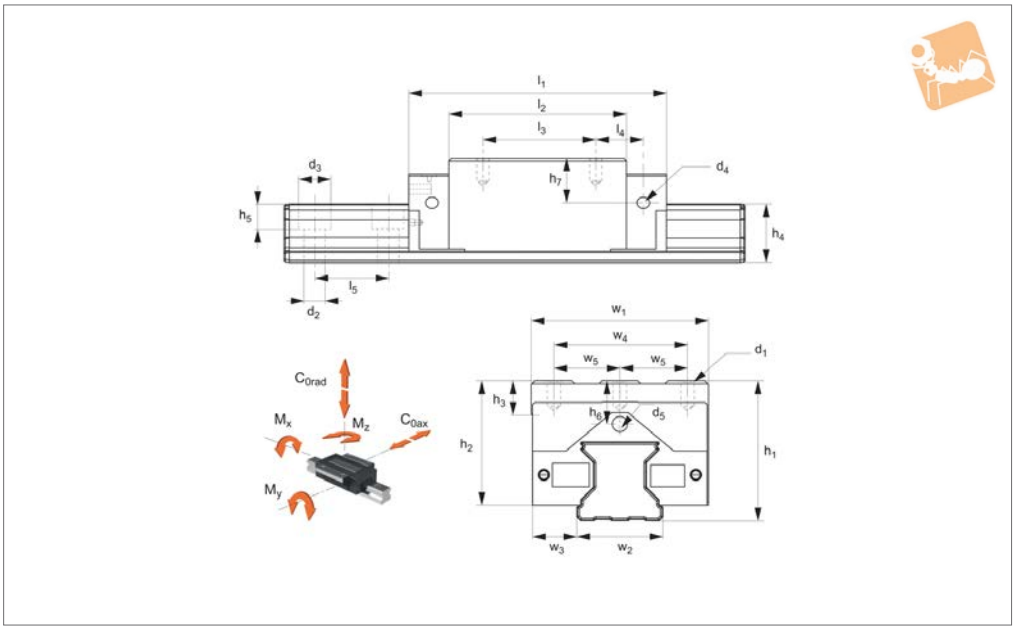
Order No.	d_2	d_3	l_3	l_4	l_5	w_3	w_4	w_5	Dyn. load $C_{rad\ \&\ ax}$ kN max.	Static load $C_{0rad\ \&\ ax}$ kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1017.F35	9	14	62	19	40	33	82	41	57	154	2742	1946	1946
L1017.F45	14	20	80	29.2	52.5	37.5	100	50	95.9	255	6350	4450	4450

Needle Roller - Unflanged Carriages

needle roller



L1017.U



Material

Hardened and ground steel.

Technical Notes

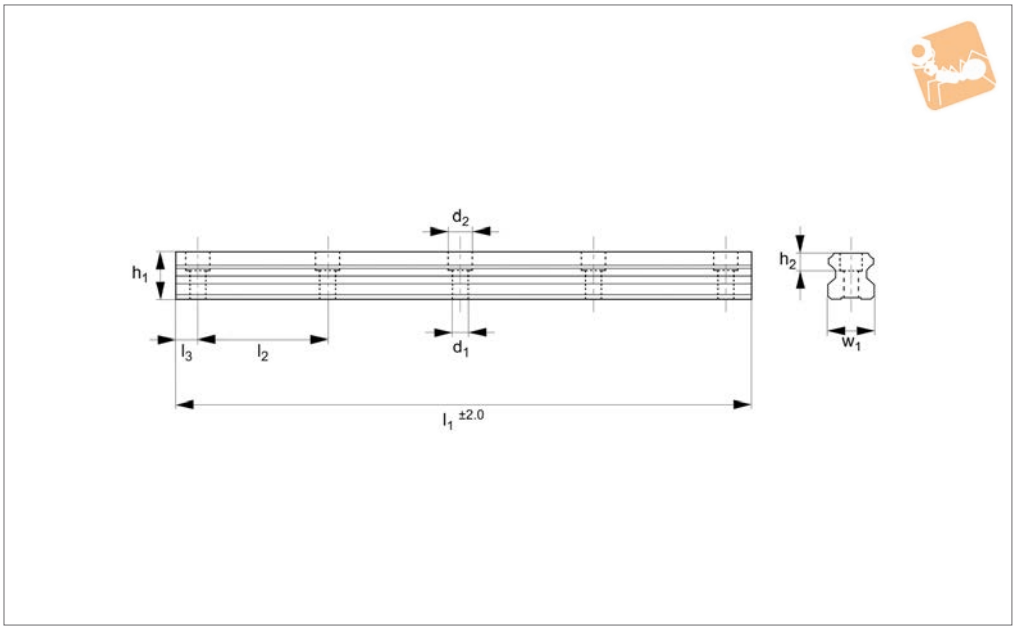
Needle roller linear guideways can take significantly higher loads than the same size standard (ball) linear guideways. Select the size and number of carriages to suit the required load then select the required rail length, (see part nos. L1017.25 through to L1017.65). Standard preload carriages are K_0 (no preload) or K_1 (0,02 x dynamic load capacity). Other preloads available on request.

Tips

These are very heavy duty needle roller rail carriages and can only be used with corresponding needle roller rails L1017. For standard linear guideways and carriages see part no. L1016.

Order No.	Rail size	w_1	w_2	h_1	l_1	l_2	h_2	h_3	h_4	h_5	h_6	h_7	d_1	d_2
L1017.U35	35	70	34	55	122	84	49	13	31	17.0	17	23.4	M8x16	9
L1017.U45	45	86	45	70	156	110	62	13	38	17.0	24.6	31.8	M10x20	14

Order No.	d_3	d_4	d_5	l_3	l_4	l_5	w_3	w_4	w_5	Dyn. load $C_{rad\ \&\ ax}$ kN max.	Static load $C_{0rad\ \&\ ax}$ kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1017.U35	14	M6x8	M6x12	50	25	40	18	50	25	57	154	2742	1946	1946
L1017.U45	20	M6x8	M6x12	60	39.2	52.5	20.5	60	30	95.9	255	6350	4450	4450





L1017.25

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1017.FN (flanged) and L1017.UN (unflanged).
Supplied with plastic covers for screws.

Tips
These are very heavy duty needle roller rails and can only be used with corresponding needle roller carriages L1017. For standard linear guideways and carriages see part no. L1016.

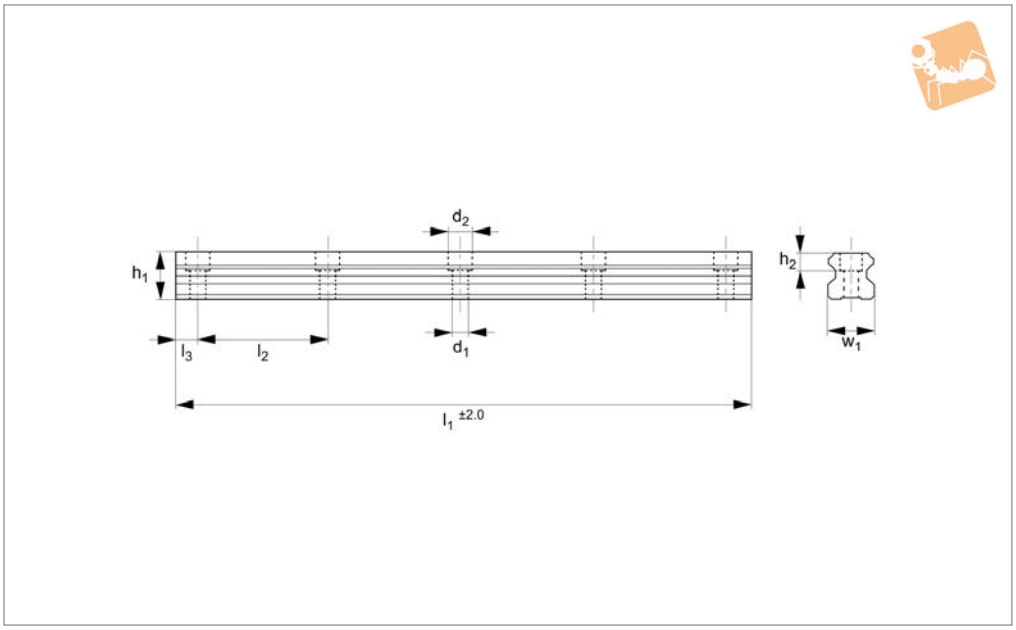
Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.25-0120	25	23	24.5	120	30	M6	9	7	11	14	0.41
L1017.25-0180	25	23	24.5	180	30	M6	9	7	11	14	0.61
L1017.25-0240	25	23	24.5	240	30	M6	9	7	11	14	0.82
L1017.25-0300	25	23	24.5	300	30	M6	9	7	11	14	1.02
L1017.25-0360	25	23	24.5	360	30	M6	9	7	11	14	1.22
L1017.25-0420	25	23	24.5	420	30	M6	9	7	11	14	1.43
L1017.25-0480	25	23	24.5	480	30	M6	9	7	11	14	1.63
L1017.25-0540	25	23	24.5	540	30	M6	9	7	11	14	1.84
L1017.25-0600	25	23	24.5	600	30	M6	9	7	11	14	2.04
L1017.25-0660	25	23	24.5	660	30	M6	9	7	11	14	2.24
L1017.25-0720	25	23	24.5	720	30	M6	9	7	11	14	2.45
L1017.25-0780	25	23	24.5	780	30	M6	9	7	11	14	2.65
L1017.25-0840	25	23	24.5	840	30	M6	9	7	11	14	2.86
L1017.25-0900	25	23	24.5	900	30	M6	9	7	11	14	3.06
L1017.25-0960	25	23	24.5	960	30	M6	9	7	11	14	3.26
L1017.25-1020	25	23	24.5	1020	30	M6	9	7	11	14	3.47
L1017.25-1080	25	23	24.5	1080	30	M6	9	7	11	14	3.67
L1017.25-1140	25	23	24.5	1140	30	M6	9	7	11	14	3.88
L1017.25-1200	25	23	24.5	1200	30	M6	9	7	11	14	4.08
L1017.25-1260	25	23	24.5	1260	30	M6	9	7	11	14	4.28
L1017.25-1320	25	23	24.5	1320	30	M6	9	7	11	14	4.49
L1017.25-1380	25	23	24.5	1380	30	M6	9	7	11	14	4.69
L1017.25-1440	25	23	24.5	1440	30	M6	9	7	11	14	4.90
L1017.25-1500	25	23	24.5	1500	30	M6	9	7	11	14	5.10
L1017.25-1560	25	23	24.5	1560	30	M6	9	7	11	14	5.30
L1017.25-1620	25	23	24.5	1620	30	M6	9	7	11	14	5.51
L1017.25-1680	25	23	24.5	1680	30	M6	9	7	11	14	5.71
L1017.25-1740	25	23	24.5	1740	30	M6	9	7	11	14	5.92
L1017.25-1800	25	23	24.5	1800	30	M6	9	7	11	14	6.12
L1017.25-1860	25	23	24.5	1860	30	M6	9	7	11	14	6.32
L1017.25-1920	25	23	24.5	1920	30	M6	9	7	11	14	6.53
L1017.25-1980	25	23	24.5	1980	30	M6	9	7	11	14	6.73

25mm Needle Roller Linear Rail

heavy duty



Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.25-2040	25	23	24.5	2040	30	M6	9	7	11	14	6.94
L1017.25-2100	25	23	24.5	2100	30	M6	9	7	11	14	7.14
L1017.25-2160	25	23	24.5	2160	30	M6	9	7	11	14	7.34
L1017.25-2220	25	23	24.5	2220	30	M6	9	7	11	14	7.55
L1017.25-2280	25	23	24.5	2280	30	M6	9	7	11	14	7.75
L1017.25-2340	25	23	24.5	2340	30	M6	9	7	11	14	7.96
L1017.25-2400	25	23	24.5	2400	30	M6	9	7	11	14	8.16
L1017.25-2460	25	23	24.5	2460	30	M6	9	7	11	14	8.36
L1017.25-2520	25	23	24.5	2520	30	M6	9	7	11	14	8.57
L1017.25-2580	25	23	24.5	2580	30	M6	9	7	11	14	8.77
L1017.25-2640	25	23	24.5	2640	30	M6	9	7	11	14	8.98
L1017.25-2700	25	23	24.5	2700	30	M6	9	7	11	14	9.18
L1017.25-2760	25	23	24.5	2760	30	M6	9	7	11	14	9.38
L1017.25-2820	25	23	24.5	2820	30	M6	9	7	11	14	9.59
L1017.25-2880	25	23	24.5	2880	30	M6	9	7	11	14	9.79
L1017.25-2940	25	23	24.5	2940	30	M6	9	7	11	14	10.00
L1017.25-3000	25	23	24.5	3000	30	M6	9	7	11	14	10.20
L1017.25-3060	25	23	24.5	3060	30	M6	9	7	11	14	10.40
L1017.25-3120	25	23	24.5	3120	30	M6	9	7	11	14	10.61
L1017.25-3180	25	23	24.5	3180	30	M6	9	7	11	14	10.81
L1017.25-3240	25	23	24.5	3240	30	M6	9	7	11	14	11.02
L1017.25-3300	25	23	24.5	3300	30	M6	9	7	11	14	11.22
L1017.25-3360	25	23	24.5	3360	30	M6	9	7	11	14	11.42
L1017.25-3420	25	23	24.5	3420	30	M6	9	7	11	14	11.63
L1017.25-3480	25	23	24.5	3480	30	M6	9	7	11	14	11.83
L1017.25-3540	25	23	24.5	3540	30	M6	9	7	11	14	12.04
L1017.25-3600	25	23	24.5	3600	30	M6	9	7	11	14	12.24
L1017.25-3660	25	23	24.5	3660	30	M6	9	7	11	14	12.44
L1017.25-3720	25	23	24.5	3720	30	M6	9	7	11	14	12.65
L1017.25-3780	25	23	24.5	3780	30	M6	9	7	11	14	12.85
L1017.25-3840	25	23	24.5	3840	30	M6	9	7	11	14	13.06
L1017.25-3900	25	23	24.5	3900	30	M6	9	7	11	14	13.26
L1017.25-3960	25	23	24.5	3960	30	M6	9	7	11	14	13.46





L1017.35

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1017.FN (flanged) and L1017.UN (unflanged).
Supplied with plastic covers for screws.

Tips
These are very heavy duty needle roller rails and can only be used with corresponding needle roller carriages L1017. For standard linear guideways and carriages see part no. L1016.

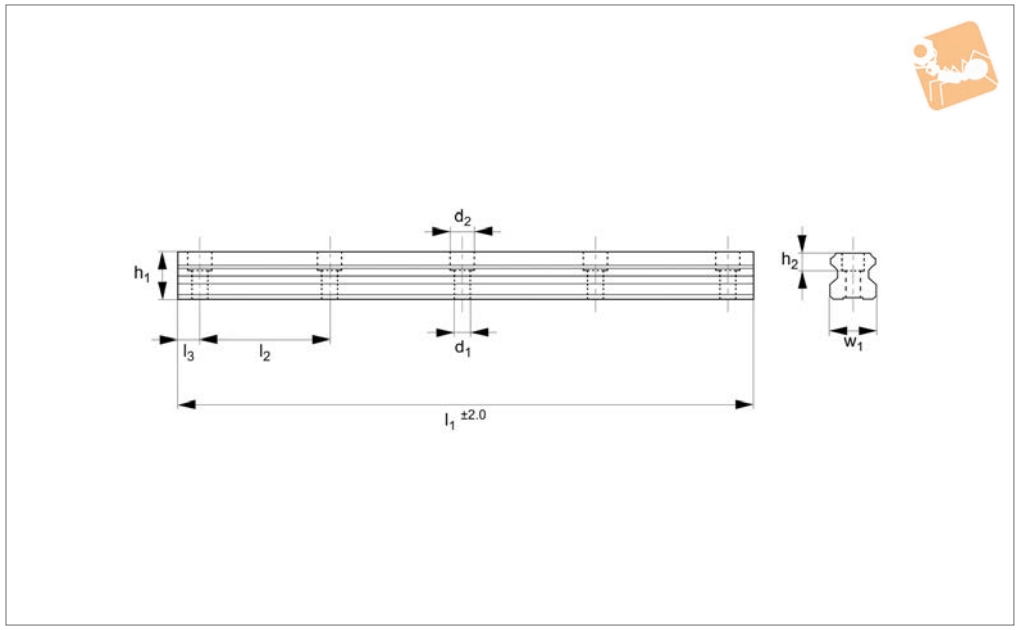
Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.35-0320	30	34	32	320	40	M8	17	9	15	20	18.4
L1017.35-0400	30	34	32	400	40	M8	17	9	15	20	23.0
L1017.35-0480	30	34	32	480	40	M8	17	9	15	20	27.6
L1017.35-0560	30	34	32	560	40	M8	17	9	15	20	32.1
L1017.35-0640	30	34	32	640	40	M8	17	9	15	20	36.7
L1017.35-0720	30	34	32	720	40	M8	17	9	15	20	41.3
L1017.35-0800	30	34	32	800	40	M8	17	9	15	20	45.9
L1017.35-0880	30	34	32	880	40	M8	17	9	15	20	50.5
L1017.35-0960	30	34	32	960	40	M8	17	9	15	20	55.1
L1017.35-1040	30	34	32	1040	40	M8	17	9	15	20	2.3
L1017.35-1120	30	34	32	1120	40	M8	17	9	15	20	6.9
L1017.35-1200	30	34	32	1200	40	M8	17	9	15	20	11.5
L1017.35-1280	30	34	32	1280	40	M8	17	9	15	20	16.1
L1017.35-1360	30	34	32	1360	40	M8	17	9	15	20	20.7
L1017.35-1440	30	34	32	1440	40	M8	17	9	15	20	25.3
L1017.35-1520	30	34	32	1520	40	M8	17	9	15	20	29.8
L1017.35-1600	30	34	32	1600	40	M8	17	9	15	20	34.4
L1017.35-1680	30	34	32	1680	40	M8	17	9	15	20	39.0
L1017.35-1760	30	34	32	1760	40	M8	17	9	15	20	43.6
L1017.35-1840	30	34	32	1840	40	M8	17	9	15	20	48.2
L1017.35-1920	30	34	32	1920	40	M8	17	9	15	20	52.8
L1017.35-2000	30	34	32	2000	40	M8	17	9	15	20	0.0
L1017.35-2080	30	34	32	2080	40	M8	17	9	15	20	4.6
L1017.35-2160	30	34	32	2160	40	M8	17	9	15	20	9.2
L1017.35-2240	30	34	32	2240	40	M8	17	9	15	20	13.8
L1017.35-2320	30	34	32	2320	40	M8	17	9	15	20	18.4
L1017.35-2400	30	34	32	2400	40	M8	17	9	15	20	23.0
L1017.35-2480	30	34	32	2480	40	M8	17	9	15	20	27.6
L1017.35-2560	30	34	32	2560	40	M8	17	9	15	20	32.1
L1017.35-2640	30	34	32	2640	40	M8	17	9	15	20	36.7
L1017.35-2720	30	34	32	2720	40	M8	17	9	15	20	41.3
L1017.35-2800	30	34	32	2800	40	M8	17	9	15	20	45.9

35mm Needle Roller Linear Rail

heavy duty



Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.35-2880	30	34	32	2880	40	M8	17	9	15	20	50.5
L1017.35-2960	30	34	32	2960	40	M8	17	9	15	20	55.1
L1017.35-3040	30	34	32	3040	40	M8	17	9	15	20	2.3
L1017.35-3120	30	34	32	3120	40	M8	17	9	15	20	6.9
L1017.35-3200	30	34	32	3200	40	M8	17	9	15	20	11.5
L1017.35-3280	30	34	32	3280	40	M8	17	9	15	20	16.1
L1017.35-3360	30	34	32	3360	40	M8	17	9	15	20	20.7
L1017.35-3440	30	34	32	3440	40	M8	17	9	15	20	25.3
L1017.35-3520	30	34	32	3520	40	M8	17	9	15	20	29.8
L1017.35-3600	30	34	32	3600	40	M8	17	9	15	20	34.4
L1017.35-3680	30	34	32	3680	40	M8	17	9	15	20	39.0
L1017.35-3760	30	34	32	3760	40	M8	17	9	15	20	43.6
L1017.35-3840	30	34	32	3840	40	M8	17	9	15	20	48.2
L1017.35-3920	30	34	32	3920	40	M8	17	9	15	20	52.8
L1017.35-4000	30	34	32	4000	40	M8	17	9	15	20	229.6





L1017.45

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1017.FN (flanged) and L1017.UN (unflanged).
Supplied with plastic covers for screws.

Tips
These are very heavy duty needle roller rails and can only be used with corresponding needle roller carriages L1017. For standard linear guideways and carriages see part no. L1016.

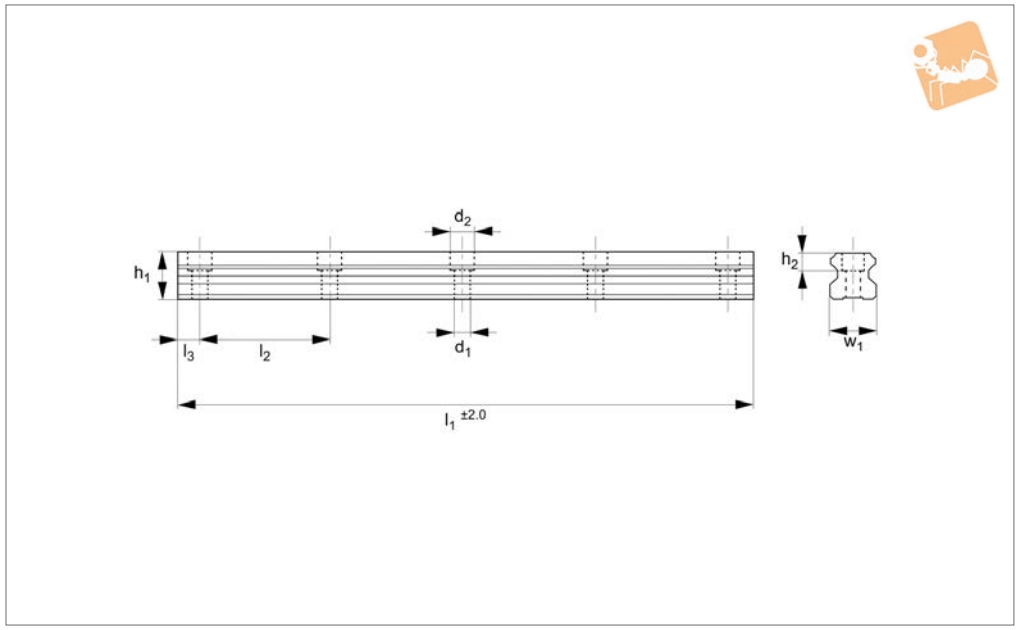
Order No.	Rail size	w_1	h_1	l_1	l_2	For screw	h_2	d_1	d_2	l_3	Weight kg
L1017.45-0320	45	45	40	320	52.5	M12	17	14	20	25	3.42
L1017.45-0400	45	45	40	400	52.5	M12	17	14	20	25	4.28
L1017.45-0480	45	45	40	480	52.5	M12	17	14	20	25	5.14
L1017.45-0560	45	45	40	560	52.5	M12	17	14	20	25	5.99
L1017.45-0640	45	45	40	640	52.5	M12	17	14	20	25	6.85
L1017.45-0720	45	45	40	720	52.5	M12	17	14	20	25	7.70
L1017.45-0800	45	45	40	800	52.5	M12	17	14	20	25	8.56
L1017.45-0880	45	45	40	880	52.5	M12	17	14	20	25	9.42
L1017.45-0960	45	45	40	960	52.5	M12	17	14	20	25	10.27
L1017.45-1040	45	45	40	1040	52.5	M12	17	14	20	25	11.13
L1017.45-1120	45	45	40	1120	52.5	M12	17	14	20	25	11.98
L1017.45-1200	45	45	40	1200	52.5	M12	17	14	20	25	12.84
L1017.45-1280	45	45	40	1280	52.5	M12	17	14	20	25	13.70
L1017.45-1360	45	45	40	1360	52.5	M12	17	14	20	25	14.55
L1017.45-1440	45	45	40	1440	52.5	M12	17	14	20	25	15.41
L1017.45-1520	45	45	40	1520	52.5	M12	17	14	20	25	16.26
L1017.45-1600	45	45	40	1600	52.5	M12	17	14	20	25	17.12
L1017.45-1680	45	45	40	1680	52.5	M12	17	14	20	25	17.98
L1017.45-1760	45	45	40	1760	52.5	M12	17	14	20	25	18.83
L1017.45-1840	45	45	40	1840	52.5	M12	17	14	20	25	19.69
L1017.45-1920	45	45	40	1920	52.5	M12	17	14	20	25	20.54
L1017.45-2000	45	45	40	2000	52.5	M12	17	14	20	25	21.40
L1017.45-2080	45	45	40	2080	52.5	M12	17	14	20	25	22.26
L1017.45-2160	45	45	40	2160	52.5	M12	17	14	20	25	23.11
L1017.45-2240	45	45	40	2240	52.5	M12	17	14	20	25	23.97
L1017.45-2320	45	45	40	2320	52.5	M12	17	14	20	25	24.82
L1017.45-2400	45	45	40	2400	52.5	M12	17	14	20	25	25.68
L1017.45-2480	45	45	40	2480	52.5	M12	17	14	20	25	26.54
L1017.45-2560	45	45	40	2560	52.5	M12	17	14	20	25	27.39
L1017.45-2640	45	45	40	2640	52.5	M12	17	14	20	25	28.25
L1017.45-2720	45	45	40	2720	52.5	M12	17	14	20	25	29.10
L1017.45-2800	45	45	40	2800	52.5	M12	17	14	20	25	29.96

45mm Needle Roller Linear Rail

heavy duty



Order No.	Rail size	w_1	h_1	l_1	l_2	For screw	h_2	d_1	d_2	l_3	Weight kg
L1017.45-2880	45	45	40	2880	52.5	M12	17	14	20	25	30.82
L1017.45-2960	45	45	40	2960	52.5	M12	17	14	20	25	31.67
L1017.45-3040	45	45	40	3040	52.5	M12	17	14	20	25	32.53
L1017.45-3120	45	45	40	3120	52.5	M12	17	14	20	25	33.38
L1017.45-3200	45	45	40	3200	52.5	M12	17	14	20	25	34.24
L1017.45-3280	45	45	40	3280	52.5	M12	17	14	20	25	35.10
L1017.45-3360	45	45	40	3360	52.5	M12	17	14	20	25	35.95
L1017.45-3440	45	45	40	3440	52.5	M12	17	14	20	25	36.81
L1017.45-3520	45	45	40	3520	52.5	M12	17	14	20	25	37.66
L1017.45-3600	45	45	40	3600	52.5	M12	17	14	20	25	38.52
L1017.45-3680	45	45	40	3680	52.5	M12	17	14	20	25	39.38
L1017.45-3760	45	45	40	3760	52.5	M12	17	14	20	25	40.23
L1017.45-3840	45	45	40	3840	52.5	M12	17	14	20	25	41.09
L1017.45-3920	45	45	40	3920	52.5	M12	17	14	20	25	41.94
L1017.45-4000	45	45	40	4000	52.5	M12	17	14	20	25	42.80





L1017.55

Material
Hardened and ground steel (typically 60 HRc).

Technical Notes
For carriages to suit the required load see part nos. L1017.FN (flanged) and L1017.UN (unflanged).
Supplied with plastic covers for screws.

Tips
These are very heavy duty needle roller rails and can only be used with corresponding needle roller carriages L1017. For standard linear guideways and carriages see part no. L1016.

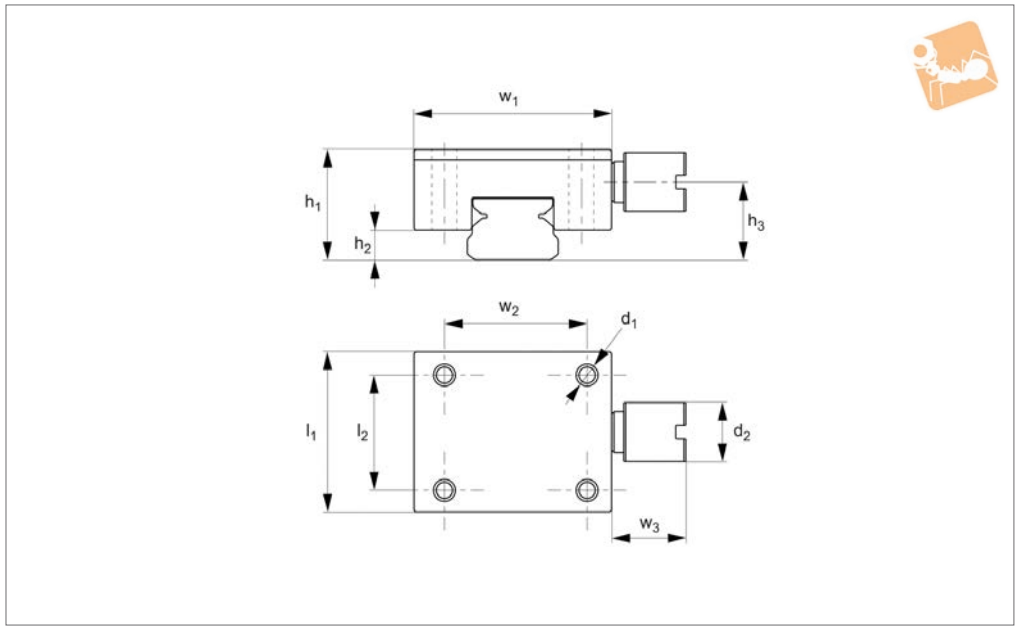
Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.55-0315	55	53	48	315	60	M14	20	16	24	29	4.79
L1017.55-0420	55	53	48	420	60	M14	20	16	24	29	6.38
L1017.55-0525	55	53	48	525	60	M14	20	16	24	29	7.98
L1017.55-0630	55	53	48	630	60	M14	20	16	24	29	9.58
L1017.55-0735	55	53	48	735	60	M14	20	16	24	29	11.17
L1017.55-0840	55	53	48	840	60	M14	20	16	24	29	12.77
L1017.55-0945	55	53	48	945	60	M14	20	16	24	29	14.36
L1017.55-0960	55	53	48	960	60	M14	20	16	24	29	14.59
L1017.55-1050	55	53	48	1050	60	M14	20	16	24	29	15.96
L1017.55-1155	55	53	48	1155	60	M14	20	16	24	29	17.56
L1017.55-1260	55	53	48	1260	60	M14	20	16	24	29	19.15
L1017.55-1365	55	53	48	1365	60	M14	20	16	24	29	20.75
L1017.55-1470	55	53	48	1470	60	M14	20	16	24	29	22.34
L1017.55-1575	55	53	48	1575	60	M14	20	16	24	29	23.94
L1017.55-1680	55	53	48	1680	60	M14	20	16	24	29	25.54
L1017.55-1785	55	53	48	1785	60	M14	20	16	24	29	27.13
L1017.55-1890	55	53	48	1890	60	M14	20	16	24	29	28.73
L1017.55-1995	55	53	48	1995	60	M14	20	16	24	29	30.32
L1017.55-2100	55	53	48	2100	60	M14	20	16	24	29	31.92
L1017.55-2205	55	53	48	2205	60	M14	20	16	24	29	33.52
L1017.55-2310	55	53	48	2310	60	M14	20	16	24	29	35.11
L1017.55-2415	55	53	48	2415	60	M14	20	16	24	29	36.71
L1017.55-2520	55	53	48	2520	60	M14	20	16	24	29	38.30
L1017.55-2625	55	53	48	2625	60	M14	20	16	24	29	39.90
L1017.55-2730	55	53	48	2730	60	M14	20	16	24	29	41.50
L1017.55-2835	55	53	48	2835	60	M14	20	16	24	29	43.09
L1017.55-2940	55	53	48	2940	60	M14	20	16	24	29	44.69
L1017.55-3045	55	53	48	3045	60	M14	20	16	24	29	46.28
L1017.55-3150	55	53	48	3150	60	M14	20	16	24	29	47.88
L1017.55-3255	55	53	48	3255	60	M14	20	16	24	29	49.48
L1017.55-3360	55	53	48	3360	60	M14	20	16	24	29	51.07
L1017.55-3465	55	53	48	3465	60	M14	20	16	24	29	52.67

55mm Needle Roller Linear Rail

heavy duty



Order No.	Rail size	w_1	h_1	l_1	l_2	For screws	h_2	d_1	d_2	l_3	Weight kg
L1017.55-3570	55	53	48	3570	60	M14	20	16	24	29	54.26
L1017.55-3675	55	53	48	3675	60	M14	20	16	24	29	55.86
L1017.55-3780	55	53	48	3780	60	M14	20	16	24	29	57.46
L1017.55-3885	55	53	48	3885	60	M14	20	16	24	29	59.05
L1017.55-3990	55	53	48	3990	60	M14	20	16	24	29	60.65





L1010.CL

Material
Corrosion resistant stainless steel, hardened (similar to 440C).

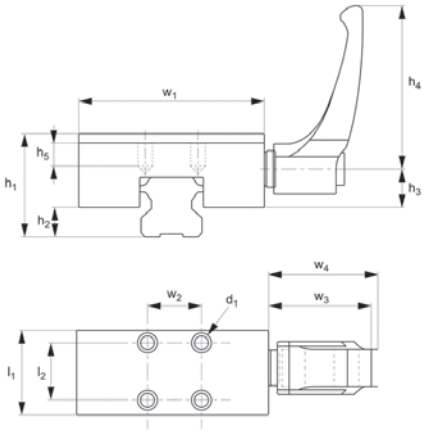
Technical Notes
The manual rail clamps are used alongside the rail carriges. Activating the clamping knob presses the clamp contact surfaces onto the rail, clamping it in place.

Order No.	For rail	h_1	l_1	w_1	h_2	h_3	l_2	w_2	w_3	d_1	d_2	Holding force kgf	Torque to Nm
L1010.CL07	L1010.07	8	12	17	2	4.3	8	12	7	M2	6	65	0.11
L1010.CL09	L1010.09	10	17	20	2.7	5.35	11	15	9	M3	8	100	0.17
L1010.CL12	L1010.12	13	19	27	3.5	7.15	13	20	10	M3	10	150	0.35
L1010.CL15	L1010.15	16	20	32	5	8.05	14	25	14	M3	12	180	0.75
L1012.CL14	L1012.14	9	12	25	3	4.3	8	19	6.65	M2	6	65	0.10
L1012.CL18	L1012.18	12	17	30	4.2	5.85	11	23	9	M3	8	100	0.17
L1012.CL24	L1012.24	14	19	40	4	7.65	13	30	10	M3	10	150	0.35
L1012.CL42	L1012.42	16	22	60	4.5	8.55	15	45	14.7	M4	12	180	0.75

Rail Clamp
manual



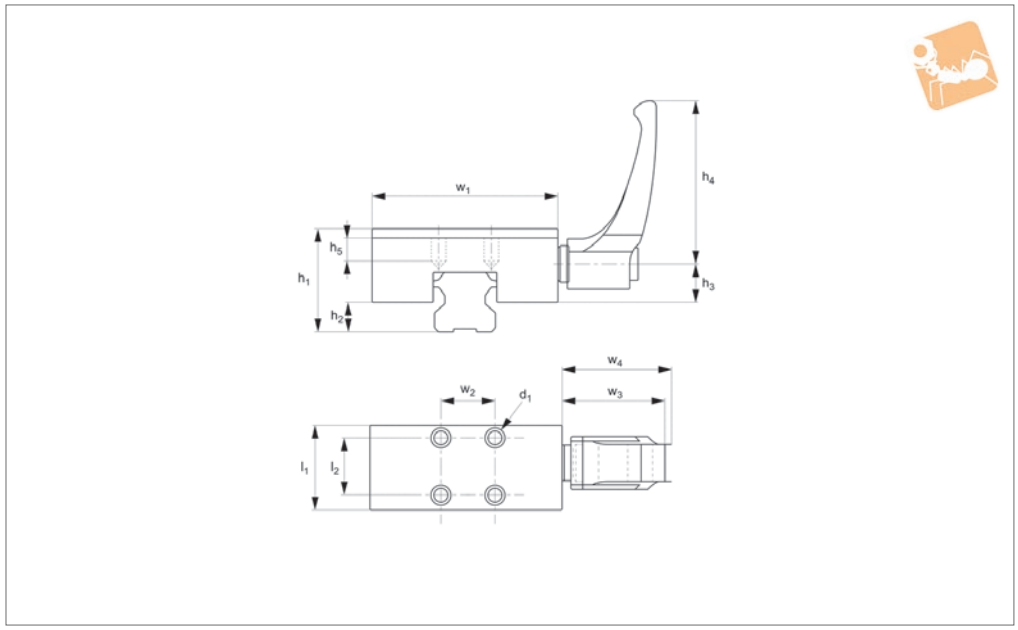
L1016.CL



Material
Aluminium body, steel contact faces.

Technical Notes
The manual rail clamps are used in conjunction with the rail carriages L1016.F and L1016.U (flanged and unflanged). By adjusting the clamping lever, the contact sections are pressed into contact with the rail, clamping the carriage in place.

Order No.	For rail	h_1	l_1	w_1	h_2	h_3	h_4	l_2	w_2	w_3	w_4	d_1	Holding force N	Torque to Nm
L1016.CL15-24	15	24	25	47	4.5	12.5	44	17	17	30.5	33.5	M 4	1200	5
L1016.CL15-28	15	28	25	47	4.5	12.5	44	17	17	30.5	33.5	M 4	1200	5
L1016.CL20-28	20	28	24	60	8.0	13.0	63	15	15	38.5	41.5	M 5	1200	7
L1016.CL20-30	20	30	24	60	8.0	13.0	63	15	15	38.5	41.5	M 5	1200	7
L1016.CL25-33	25	33	30	70	9.0	15.0	63	20	20	38.5	41.5	M 6	1200	7
L1016.CL25-36	25	36	30	70	9.0	15.0	63	20	20	38.5	41.5	M 6	1200	7
L1016.CL25-40	25	40	30	70	9.0	15.0	63	20	20	38.5	41.5	M 6	1200	7
L1016.CL30-42	30	42	39	90	12.0	21.5	78	22	22	46.5	50.5	M 6	2000	15
L1016.CL35-48	35	48	39	100	13.0	21.5	78	24	24	46.5	50.5	M 8	2000	15
L1016.CL45-60	45	60	44	120	12.0	26.5	78	26	26	46.5	50.5	M10	2000	15
L1016.CL55-70	55	70	49	140	17.0	31.0	95	30	30	56.5	61.5	M14	2000	22





L1018.CL

Material
Aluminium body, plastic contact faces.

Technical Notes
By adjusting the clamping lever, the contact sections are pressed into contact with the rail, clamping the carriage in place.
Suitable for our aluminium linear rails L1018.

Order No.	For rail	h_1	l_1	w_1	h_2	h_3	h_4	l_2	w_2	w_3	w_4	d_1	Holding force N	Torque to Nm max.
L1018.CL15-24	15	24	20	34	4.5	12.9	40	10	10	29.9	33.3	M 3	130	3
L1018.CL20-30	20	30	24	44	6.0	16.0	40	12	12	29.9	33.4	M 4	250	3
L1018.CL25-36	25	36	30	48	7.0	19.6	44	15	15	29.8	33.3	M 5	330	3



X Rails

Introduction

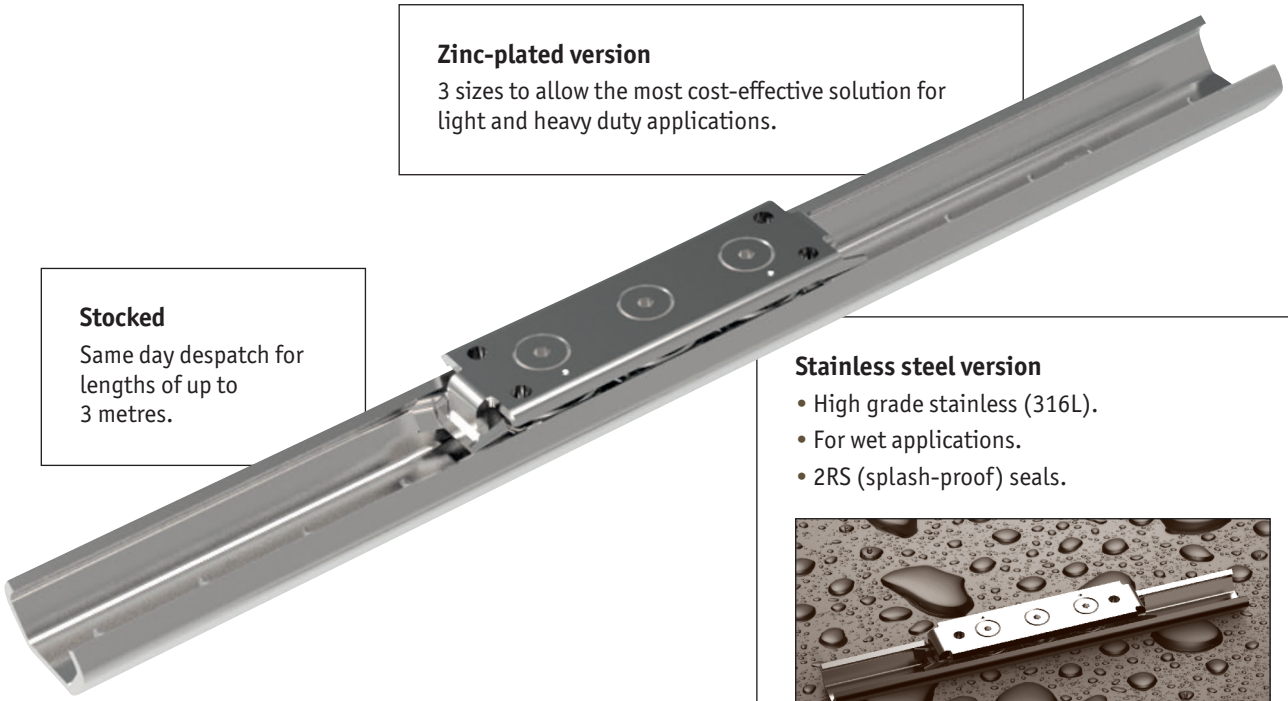
The X rail system is a highly cost-effective product made of zinc plated steel (L1970), the stainless steel version (L1971) has a high level of corrosion resistance.

Cost-effective and corrosion resistant

The X rail is relatively inexpensive as it is based on a rolled formed, steel section.
It allows for adjustments due to misalignment of the structure that it is being used on and with internal raceways is suited for robust use but is not suitable for applications having significant moment loads.

The stainless steel (316L) version uses FDA and USDA compliant materials.

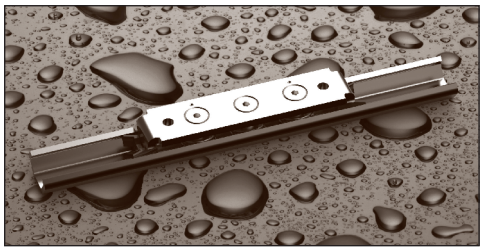
Zinc-plated version
3 sizes to allow the most cost-effective solution for light and heavy duty applications.



Stocked
Same day despatch for lengths of up to 3 metres.

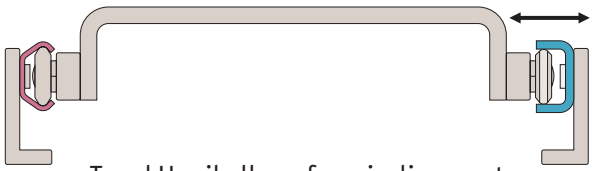
Stainless steel version

- High grade stainless (316L).
- For wet applications.
- 2RS (splash-proof) seals.

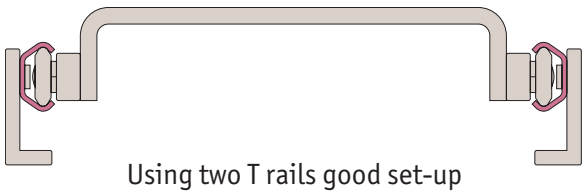


Flexibility in set-up

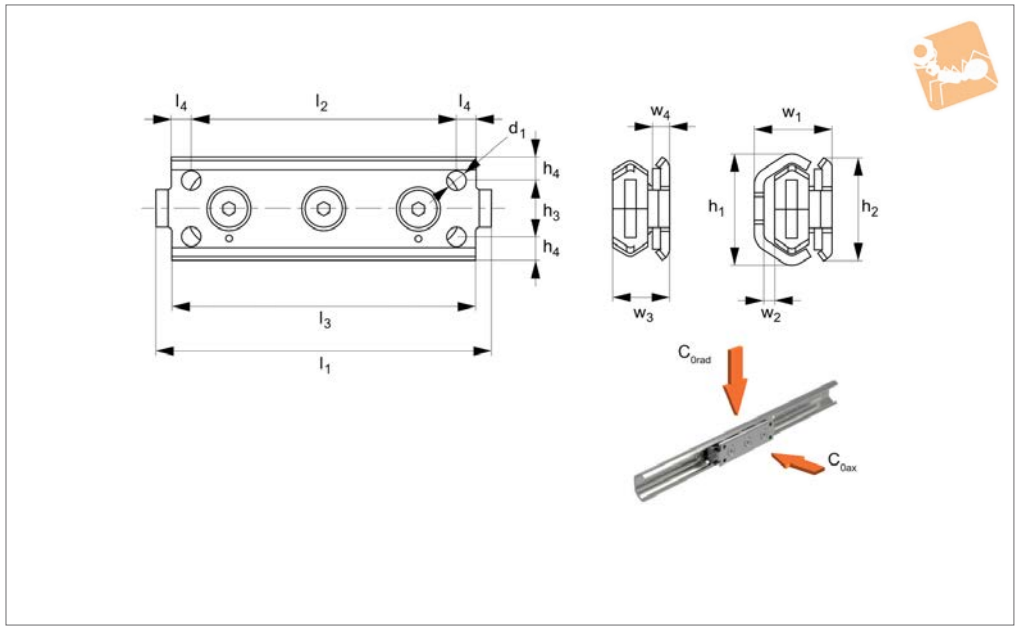
X rail allows the sliders one rail to remain fixed in place but allows some lateral movement of the sliders in the other rail to adapt to any misalignment.



T and U rail allows for misalignment



Using two T rails good set-up accuracy is required





L1970.LP

Material
Steel (BS1449-HR1), zinc plated.
Rollers with metal seals (2Z).

Technical Notes
The three sizes of sliders are suited to the relevant L1970.TES rail size.

Select the size and quantity to suit the required load.

Tips
The punched dot marked on the slider body indicates the orientation for the loading of the fixed rollers.

The middle roller is eccentric, allowing the preload to be easily adjusted when mounted inside the rail.
Coefficient of friction (without seals) 0.01.

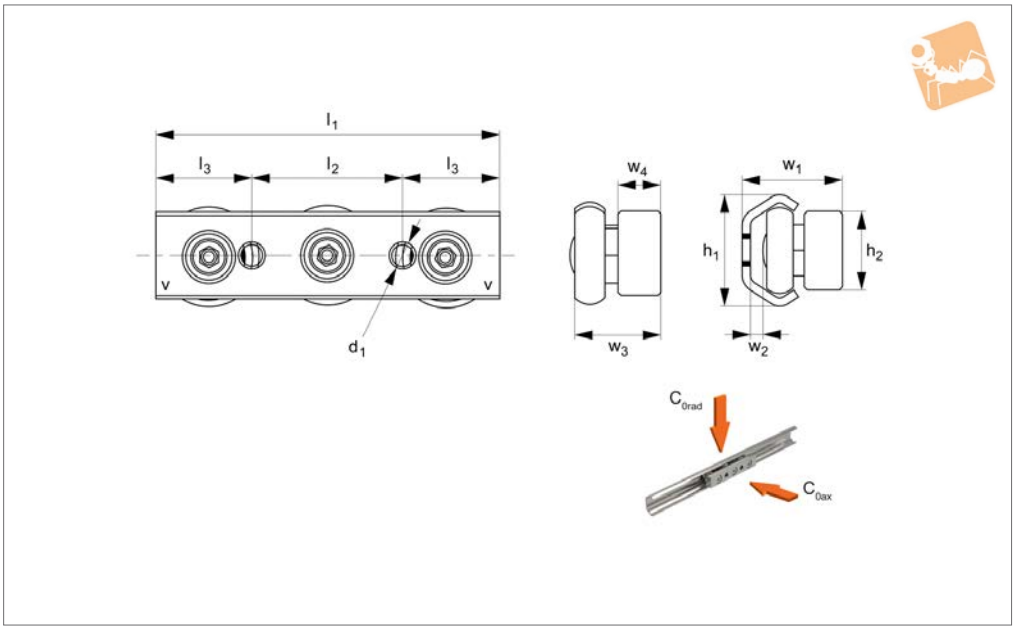
Order No.	Size	h_1	h_2	h_3	h_4	l_1	l_2	Weight kg
L1970.20T-080	20	19.2	18	-	9	80	60	0.05
L1970.30T-088	30	29.5	27	15	6	88	70	0.11
L1970.45T-150	45	46.4	40	23	8.5	150	120	0.40

Order No.	l_3	l_4	d_1	w_1	w_2	w_3	w_4	Load $C_{0\,ax}$ N max.	Load $C_{0\,rad}$ N max.
L1970.20T-080	71	10	M5	16	2.5	11.5	5.5	185	326
L1970.30T-088	80	5	M5	20.5	3.5	15	4.5	435	870
L1970.45T-150	135	7.5	M6	31	5	22	4	935	1740

Solid Body Steel Sliders
for T rail (master)



L1970.SBT



Material
Steel (BS1449-HR1), zinc plated.
Rollers with metal seals (2Z).

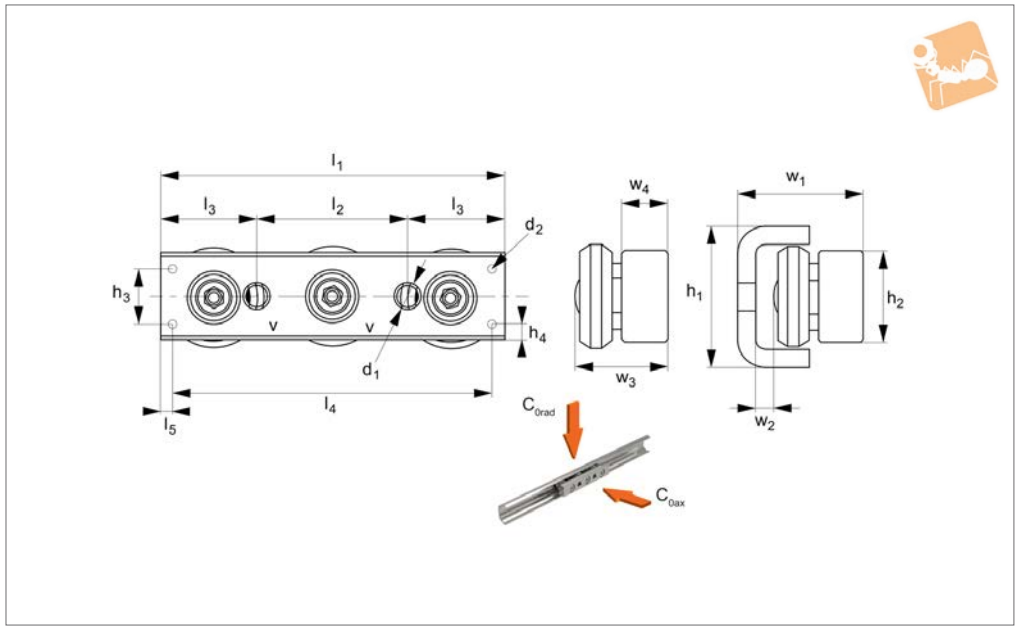
Technical Notes
The three sizes of sliders are suited to the relevant L1970.TES rail size.

For size 20 sliders there are two threaded holes on the centreline.
Select the size and quantity to suit the required load.

Tips
The „V“ marks on the slider body indicate the orientation for the loading of the fixed roller.
The middle roller is eccentric, allowing the preload to be easily adjusted when mounted inside the rail.
Coefficient of friction (without seals) 0.01.

Order No.	Size	h_1	h_2	h_3	h_4	l_1	l_2	Weight kg
L1970.20T-060	20	19.2	10	-	-	60	20	0.04
L1970.26T-080	26	26.1	25	-	12.5	80	30	0.10
L1970.30T-080	30	29.5	20	-	-	80	35	0.17
L1970.40T-135	40	39.5	35	23	6.0	135	-	0.45
L1970.45T-120	45	46.4	25	-	-	120	55	0.47

Order No.	l_3	l_4	d_1	d_2	w_1	w_2	w_3	w_4	Load $C_{0\,ax}$ N max.	Load $C_{0\,rad}$ N max.
L1970.20T-060	20	-	M5	-	17.8	2.6	13	6	185	326
L1970.26T-080	25.0	-	M 5	-	22.00	3.7	15.80	4	400	800
L1970.30T-080	22.5	-	M6	-	26.5	3.3	20.7	10	435	870
L1970.40T-135	7.5	120	-	M 6	28.65	5.0	20.65	6	800	1600
L1970.45T-120	32.5	-	M8	-	38.0	5.1	28.9	12	935	1740





L1970.SBU

Material
Steel (BS1449-HR1), zinc plated.
Rollers with metal seals (2Z).

Technical Notes
The three sizes of sliders are suited to the relevant L1970.UES rail size.

Select the size and quantity to suit the required load.

Tips
The „V" marks on the slider body indicate the orientation for the loading of the fixed rollers.

The middle roller is eccentric, allowing the preload to be easily adjusted when mounted inside the rail. Coefficient of friction (without seals) 0.01.

Important Notes
Sliders in U rails cannot accept axial loads.

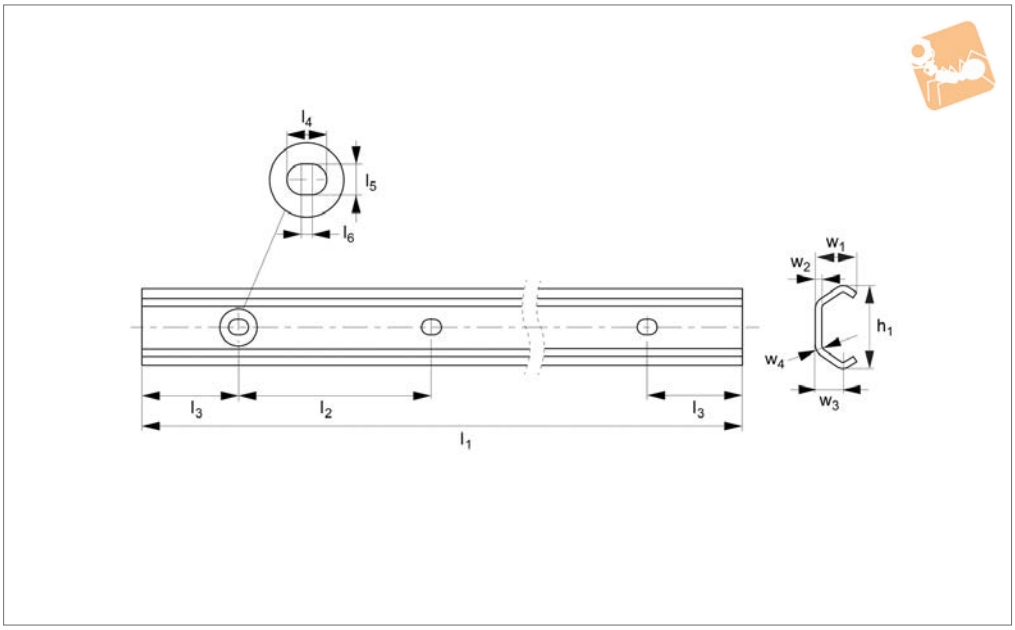
Order No.	Size	h_1	h_2	h_3	h_4	l_1	l_2	Weight kg
L1970.30U-080	30	31.8	20	-	-	80	35	0.16
L1970.40U-135	40	38.5	35	23	8	135	-	0.45
L1970.45U-120	45	44.8	25	-	-	120	55	0.45

Order No.	l_3	l_4	l_5	d_1	d_2	w_1	w_2	w_3	w_4	Load $C_{0\,rad}$ N max.
L1970.30U-080	22.5	-	-	M6	-	27,95 ± 1,00	3.5	19.2	10	870
L1970.40U-135	-	120	7.5	-	M 6	29.95 ± 1.60	-	-	6	1600
L1970.45U-120	32.5	-	-	M8	-	37,25 ± 1,75	5	25.5	12	1740

Steel X Rail
T rail (master)



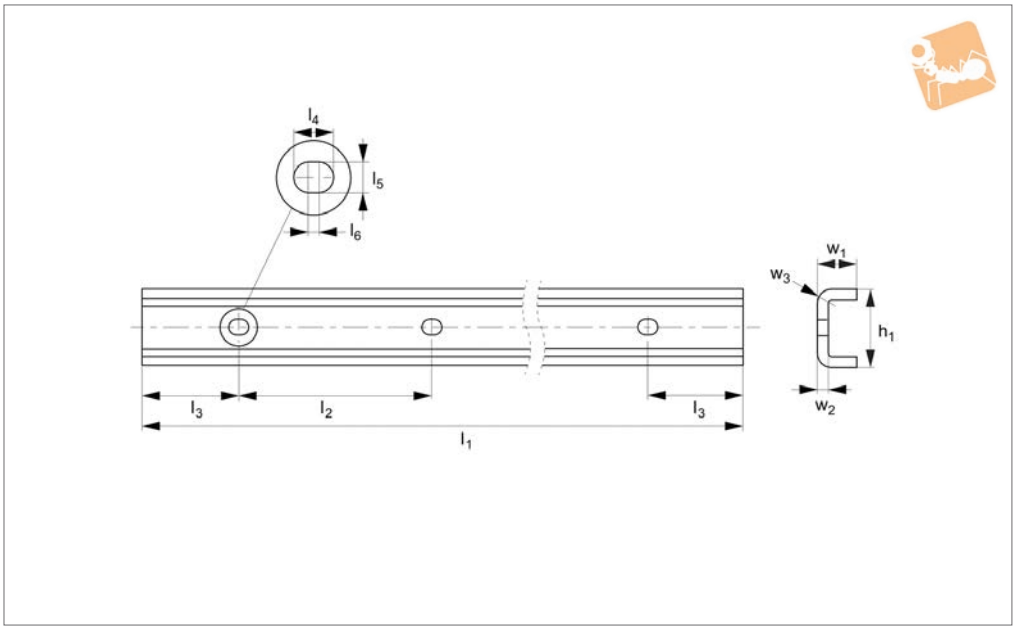
L1970.T

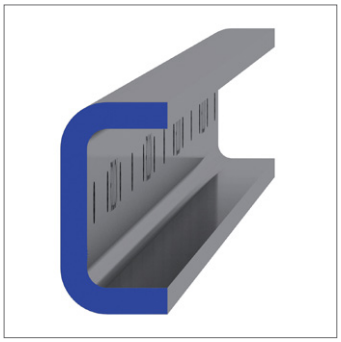


Material
Steel (BS1449-HR1), zinc plated.

Technical Notes
Use hex. socket oval head screws (ISO 7380) or Torx screws (see part no. L1970.S).

Order No.	Rail size	For screw	h_1	l_1	l_2	l_3	l_4	l_5	l_6	w_1	w_2	w_3	w_4	Weight kg
L1970.20T-1040	20	M 4	19.2	1040	80	40	7	4.5	2.5	10.2	2.0	7.0	3.0	0.47
L1970.20T-2080	20	M 4	19.2	2080	80	40	7	4.5	2.5	10.2	2.0	7.0	3.0	0.47
L1970.20T-3120	20	M 4	19.2	3120	80	40	7	4.5	2.5	10.2	2.0	7.0	3.0	0.47
L1970.26T-1040	26	M 5	26.1	1040	80	40	11	6.0	5.0	14.0	2.5	9.5	4.5	0.80
L1970.26T-2080	26	M 5	26.1	2080	80	40	11	6.0	5.0	14.0	2.5	9.5	4.5	0.80
L1970.26T-3120	26	M 5	26.1	3120	80	40	11	6.0	5.0	14.0	2.5	9.5	4.5	0.80
L1970.30T-1040	30	M 5	29.5	1040	80	40	11	6.0	5.0	14.1	2.5	10.0	4.5	0.90
L1970.30T-2080	30	M 5	29.5	2080	80	40	11	6.0	5.0	14.1	2.5	10.0	4.5	0.90
L1970.30T-3120	30	M 5	29.5	3120	80	40	11	6.0	5.0	14.1	2.5	10.0	4.5	0.90
L1970.40T-1040	40	M 8	39.5	1040	80	40	13	9.0	4.0	20.0	3.0	13.0	6.0	1.55
L1970.40T-2080	40	M 8	39.5	2080	80	40	13	9.0	4.0	20.0	3.0	13.0	6.0	1.55
L1970.40T-3120	40	M 8	39.5	3120	80	40	13	9.0	4.0	20.0	3.0	13.0	6.0	1.55
L1970.45T-1040	45	M 8	46.4	1040	80	40	11	9.0	2.0	24.0	4.0	15.5	6.5	2.29
L1970.45T-2080	45	M 8	46.4	2080	80	40	11	9.0	2.0	24.0	4.0	15.5	6.5	2.29
L1970.45T-3120	45	M 8	46.4	3120	80	40	11	9.0	2.0	24.0	4.0	15.5	6.5	2.29





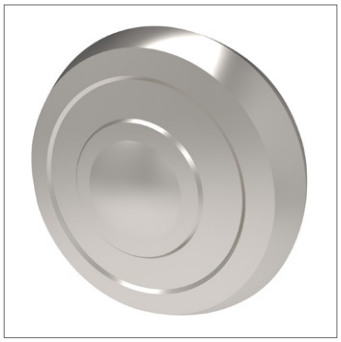
L1970.U

Material
Steel (BS1449-HR1), zinc plated.

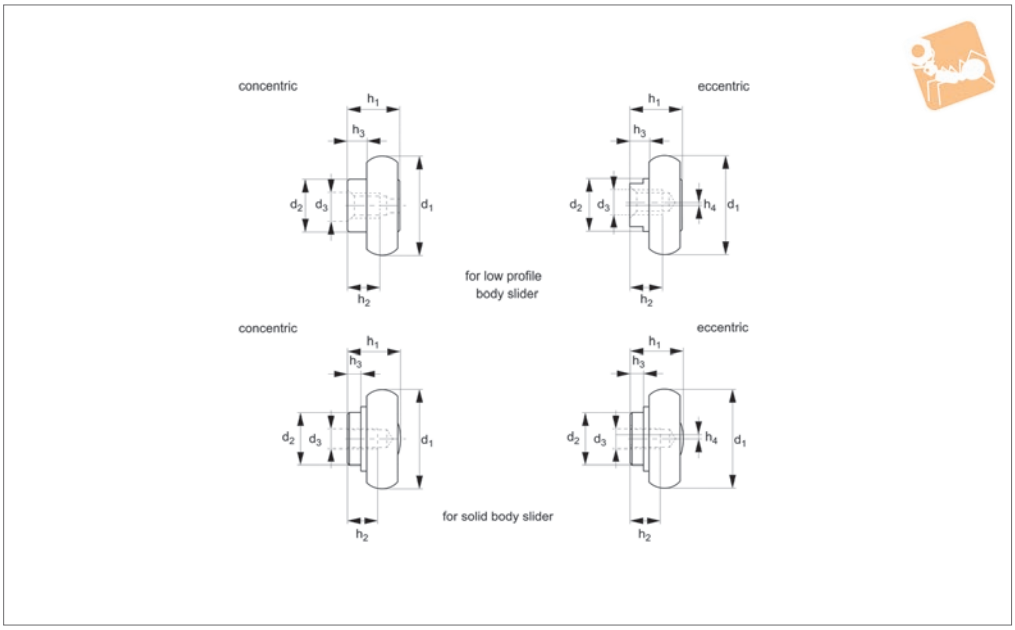
Technical Notes
Use hex. socket oval head screws (ISO 7380) or Torx screws (see part no. L1970.S).

Order No.	Rail size	For screw	h_1	l_1	l_2	l_3	l_4	l_5	l_6	w_1	w_2	w_3	Weight kg
L1970.30U-1040	30	M5	31.8	1040	80	40	8.4	6.4	2	16	4	7	1.4
L1970.30U-2080	30	M5	31.8	2080	80	40	8.4	6.4	2	16	4	7	2.8
L1970.30U-3120	30	M5	31.8	3120	80	40	8.4	6.4	2	16	4	7	4.2
L1970.40U-1040	40	M8	38.5	1040	80	40	13	9	4	21.0	3	6	1.7
L1970.40U-2080	40	M8	38.5	2080	80	40	13	9	4	21.0	3	6	3.4
L1970.40U-3120	40	M8	38.5	3120	80	40	13	9	4	21.0	3	6	5.1
L1970.45U-1040	45	M8	44.8	1040	80	40	11	9	2	24.5	4.5	9.5	2.9
L1970.45U-2080	45	M8	44.8	2080	80	40	11	9	2	24.5	4.5	9.5	5.8
L1970.45U-3120	45	M8	44.8	3120	80	40	11	9	2	24.5	4.5	9.5	8.7

Steel Replacement Rollers
for T version steel X rail



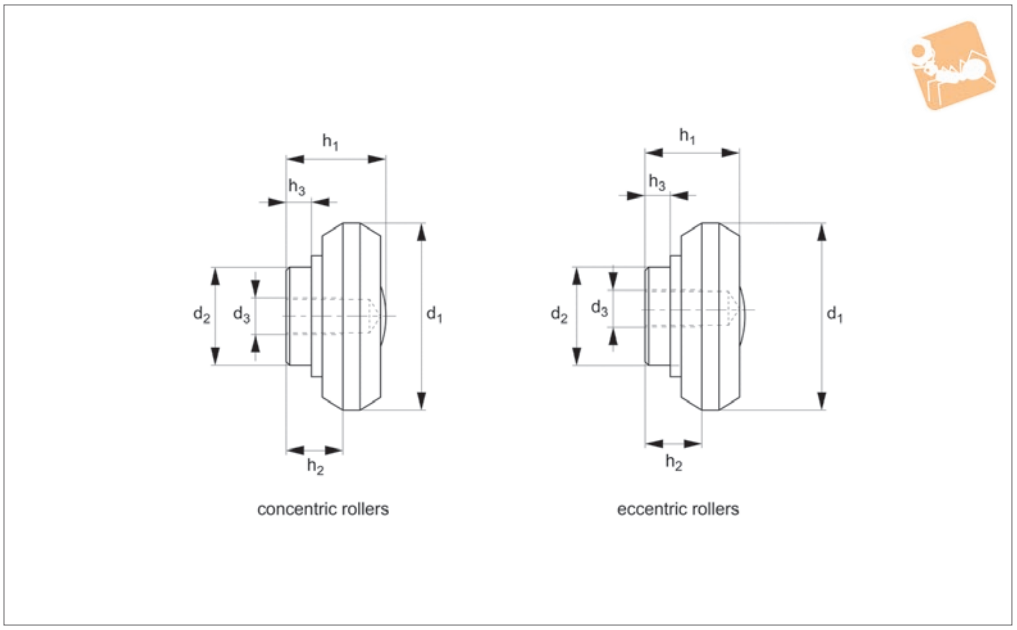
L1970.CRT

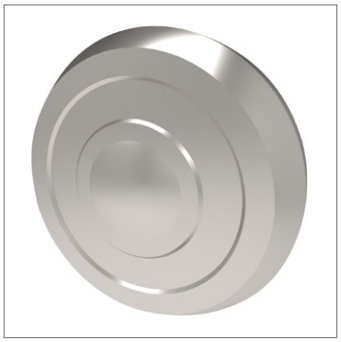


Material
Rollers with metal seals (2Z).

Technical Notes
For use with X rail steel sliders in T type rail.

Order No.	For slider type	Type	Body	h_1	h_2	h_3	h_4	d_1	d_2	d_3	w_1	w_2	w_3	Weight g
L1970.CRPN20	L1970.20T-080	Concentric	Low prof.	8.2	6.0	4.0	-	14.0	9	M 4	8.5	6.0	4.0	5
L1970.CRPA20	L1970.20T-080	Eccentric	Low prof.	8.2	6.0	4.0	0.5	14.0	9	M 4	8.5	6.0	4.0	5
L1970.CRPN30	L1970.30T-088	Concentric	Low prof.	12.0	8.0	4.5	-	22.8	12	M 5	12.0	7.0	4.5	20
L1970.CRPA30	L1970.30T-088	Eccentric	Low prof.	12.0	8.0	4.5	0.6	22.8	12	M 5	12.0	7.0	4.5	20
L1970.CRPN45	L1970.45T-150	Concentric	Low prof.	17.3	11.5	6.0	-	35.6	17	M 6	18.0	12.0	6.0	68
L1970.CRPA45	L1970.45T-150	Eccentric	Low prof.	17.3	11.5	6.0	0.8	35.6	17	M 6	18.0	12.0	6.0	68
L1970.CRN20	L1970.20T-060	Concentric	Solid	8.7	6.7	6.0	-	14.0	6	M 4	8.7	6.0	1.8	5
L1970.CRA20	L1970.20T-060	Eccentric	Solid	8.7	6.7	6.0	0.5	14.0	6	M 4	8.7	6.0	1.8	5
L1970.CRN30	L1970.30T-080	Concentric	Solid	13.8	10.3	9.0	-	22.8	10	M 5	14.0	9.0	3.8	20
L1970.CRA30	L1970.30T-080	Eccentric	Solid	13.8	10.3	9.0	0.6	22.8	10	M 5	14.0	9.0	3.8	20
L1970.CRN45	L1970.45T-120	Concentric	Solid	20.5	15.0	14.5	-	35.6	12	M 6	20.5	14.5	4.5	68
L1970.CRA45	L1970.45T-120	Eccentric	Solid	20.5	15.0	14.5	0.8	35.6	12	M 6	20.5	14.5	4.5	68





L1970.CRU

Material
Rollers with metal seals (2Z).

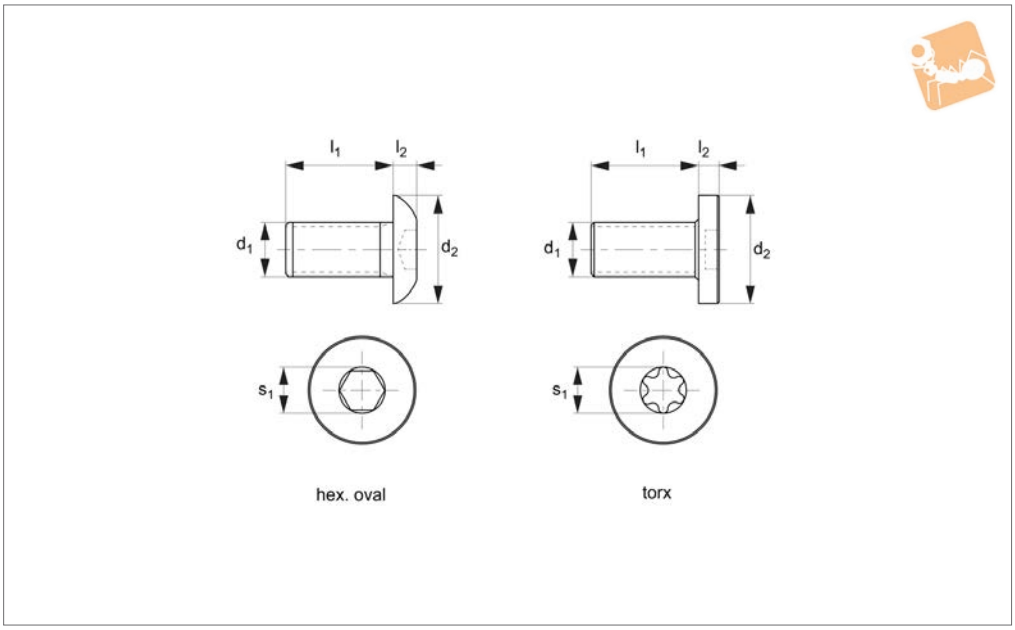
Technical Notes
For use with X rail steel sliders in U type rail.

Order No.	For slider type	Type	Body	h_1	h_2	h_3	d_1	d_2	d_3	Weight g
L1970.CPN20	L1970.20U-060	Concentric	Solid	7.35	5.5	1.8	14.0	6	M 4	4
L1970.CPA20	L1970.20U-060	Eccentric	Solid	7.35	5.5	1.8	14.0	6	M 4	4
L1970.CPN30	L1970.30U-080	Concentric	Solid	13.00	7.0	3.5	23.2	10	M 5	18
L1970.CPA30	L1970.30U-080	Eccentric	Solid	13.00	7.0	3.5	23.2	10	M 5	18
L1970.CPN45	L1970.45U-120	Concentric	Solid	18.00	12.0	4.5	35.0	12	M 6	60
L1970.CPA45	L1970.45U-120	Eccentric	Solid	18.00	12.0	4.5	35.0	12	M 6	60

Fixing screws
for steel X rail



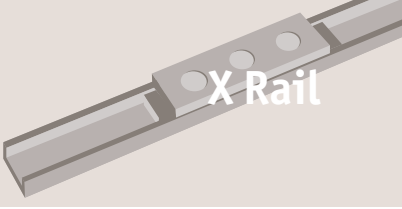
L1970.S



Material
ISO 7380 hex. socket oval head and Torx screws (both zinc plated).

Strength class 10,9.

Order No.	Type	l_1	l_2	s_1	Torque to Nm	d_1 x p	d_2
L1970.T20	Torx	8	2	T20	3	M4 x 0,7	8
L1970.T30	Torx	10	2	T25	9	M5 x 0,8	10
L1970.T45	Torx	16	3	T40	22	M8 x 1,25	16



Specifications

- Maximum speed 1,5 m/s.
- Maximum acceleration 2 m/s².
- Maximum rail length 3120 mm.
- Three rail sizes 20, 30 and 45.
- Temperature range steel -30°C to +120°C.
- Temperature range stainless -30°C to +100°C.
- Sliders have two fixed rollers and one eccentric roller for adjustment of preload.
- Two slider body types; solid slider version and low profile slider version (T rails only).
- Joining of rails together, if required please discuss with our Technical Department.
- Not suitable for large moment loads (in this case use two or more sliders/rails to reduce moment loads).
- For applications with high moment and/or higher precision loads please use our Compact Rail System.

Applications

Safety guarding
Extending protective systems
sliding gates
automatic pick & place

Sliding doors & windows
Internal sliding doors
gates • roof lights
display cases

Medical technology
X-ray equipment
dental chairs
bed extensions

Food, drink & pharmaceuticals
Food handling conveyors
pharmaceutical factories
stainless display equipment

Transport (naval)
Sliding hatches
pull-out storage

Transport (rail)
Seat adjustment
sliding doors
battery removal units

Transport (automotive)
Ambulance sliding systems
fire fighting vehicles
sliding panels

Transport (military)
Sliding seats
protective hatches
stretcher extensions

Water & waste
Sliding protective hatches
wash down applications
water tank doors

Technical Information

Rail types

L1970 Zinc-plated steel version

ZINC PLATED Zinc-Plated Steel

Solid body slider



L1970.CEST/U
(2Z dust proof seals)

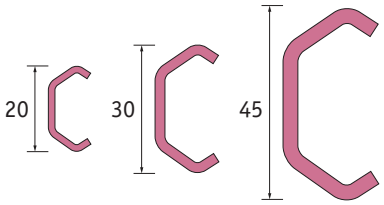
Low profile slider



L1970.CES
(2Z dust proof seals)

ZINC PLATED Zinc-Plated Steel

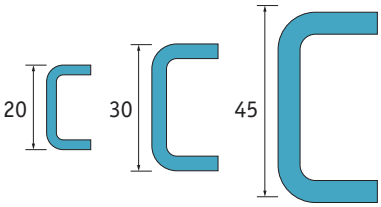
T Rail (master)



size 20 size 30 size 45

L1970.TES

U Rail (slave)



size 20 size 30 size 45

L1970.UES

L1971 Stainless Steel version

316L Stainless Steel

Solid body



L1971.CEXT/U
(2RS splash proof seals)

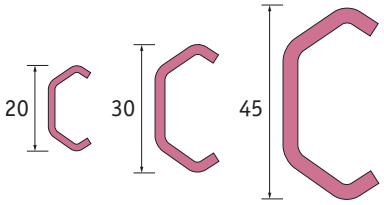
Low profile slider



L1971.CEX
(2RS splash proof seals)

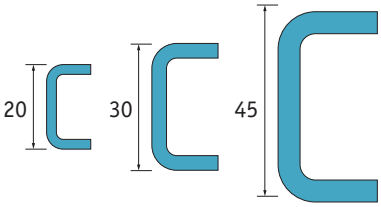
316L Stainless Steel

T Rail (master)



size 20 size 30 size 45

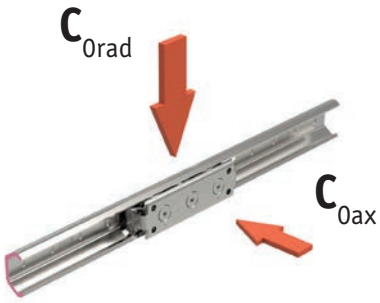
U Rail (slave)



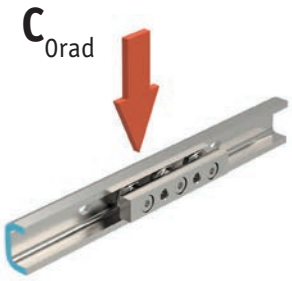
size 20 size 30 size 45

ov-x-rail-rail-types-lnh - Updated - 08-03-2023

Two rail types



T Rail (master)
Accepts radial and axial loads



U Rail (slave)
Radial loads only
Compensates for misalignment

Selecting the correct rail

Firstly

The decision needs to be made if zinc plated steel or stainless steel rails and sliders are required.

- The zinc plated steel version (L1970) of the product is considerably less expensive than the 316L stainless steel type (L1971).
- The rollers in the zinc plated (L1970) sliders are protected by 2Z metal bearing covers. These are not meant to be used in anything other than a dry environment.
- The L1971 stainless steel X rail system is resistant to water and many chemicals. The slider rollers have rubber 2RS roller seals – being water resistant (not to be used fully submersed).

Secondly

The size of system to be used is selected.

- There are three different rail and slider sizes: 20, 30 and 45.
- The load that is being carried and its shape needs to be considered. The X rail system is not really suited for moment loads. If moment loads exist then two or more rails/sliders should be used to off-set this. Typically 2, 4 or more sliders are used and the load carried should be divided over the number of sliders bearing in mind that if using a U rail slider along with a T rail, the U rail sliders do not have any axial load capacity.
- The rails are supplied in standard lengths of 1040mm, 2080mm and 3120mm – and can easily be cut to other required lengths by Automotion (on request).

Finally

Decide whether a low profile slider or a solid body slider is required (low profile sliders are only available for T rails). The low profile (L1970.CES and L1971.CEX) sliders are less expensive than the solid body sliders.

Please note

It is very important to ensure that the correct low profile fixing screws are used with this rail (see part no. L1970.S for zinc plated steel and L1971.S for stainless steel). Using other higher profile heads may lead to contact between the underside of the slider and the top of the screws.

Technical Information

Set-up

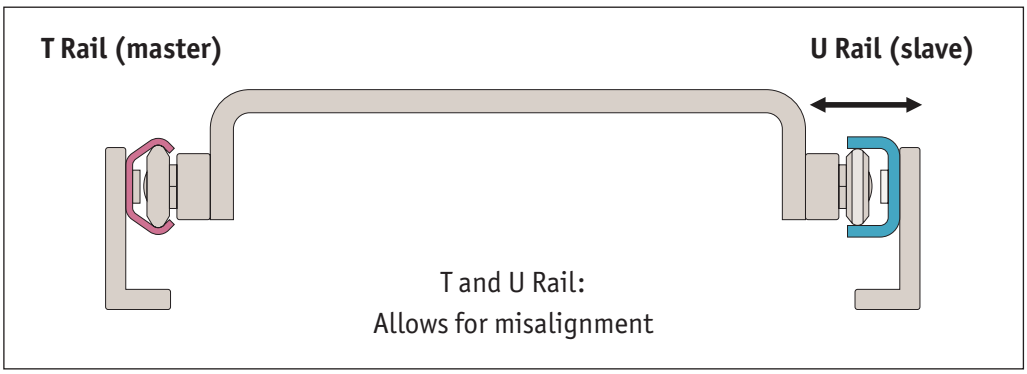
T rails (master) and U rails (slave)

It is often the case, with the X rail system, that two T rails are used in the system design. However, where there are substantial alignment issues it is better to use a T rail (master) and U rail (slave) as below.

This allows the slider in the T rail to remain fixed in the place, but allows some lateral movement of the sliders in the U rail to adapt to any misalignment and avoid any issues of stiction.

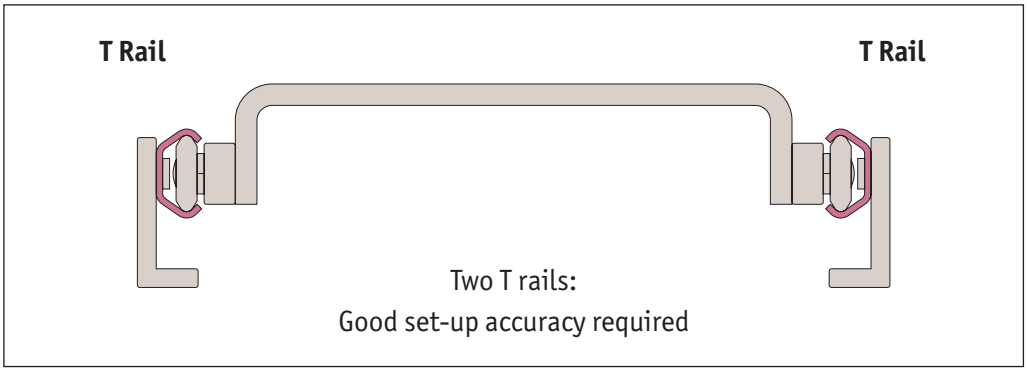
U rails have flat parallel raceways that allow free lateral movement of the sliders. The maximum lateral movement for each size rail is shown in the table that follows.

T and U rails



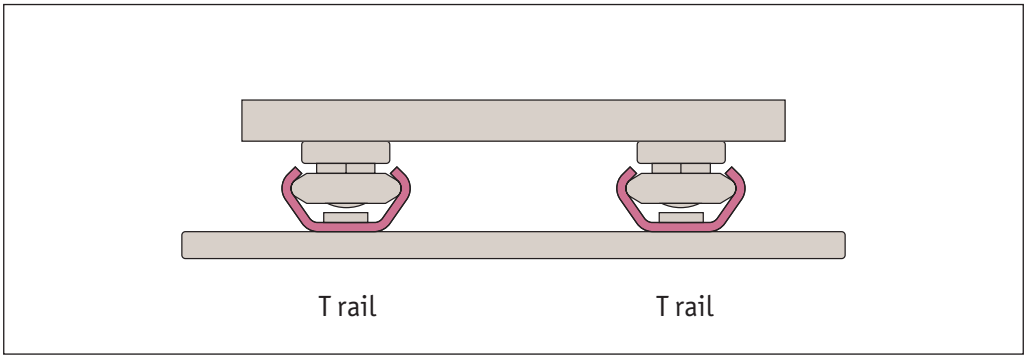
T and T rails

Some customers prefer to use two T rails as shown below. Whilst this is acceptable, a greater degree of accuracy is required in the structure on which the system is used.



It is however also acceptable (but not the preferred method), to use the rails as below but the alignment accuracy needed is slightly greater and in this set up only T type rails can be used. In this instance we recommend the use of solid body sliders L1970.CEST (steel) or L1971.CEXT (stainless) rather than the low profile sliders.

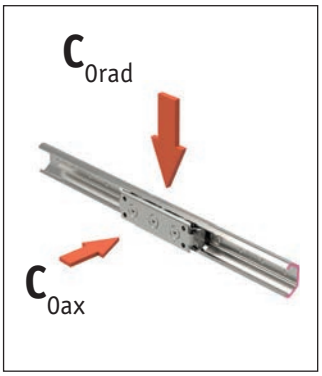
Ensure a significant margin of safety is applied to the load ratings or consider using our hardened steel Compact Rail System.



ov-x-rail-set-up-a-lnh - Updated - 08-03-2023

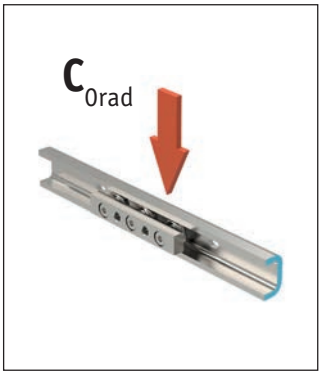
L1970 and L1971 slider load ratings for T rails

Part no.	Material	Body	C_{0rad} N	C_{0ax} N
L1970.20T-060	Steel	Solid	326	185
L1970.30T-080	Steel	Solid	870	435
L1970.45T-120	Steel	Solid	1740	935
L1970.20T-080	Steel	Low Profile	326	185
L1970.30T-088	Steel	Low Profile	870	435
L1970.45T-150	Steel	Low Profile	1740	935
L1971.20T-060	Stainless Steel	Solid	300	170
L1971.30T-080	Stainless Steel	Solid	800	400
L1971.45T-120	Stainless Steel	Solid	1600	860
L1971.20T-080	Stainless Steel	Low Profile	300	170
L1971.30T-088	Stainless Steel	Low Profile	800	400
L1971.45T-160	Stainless Steel	Low Profile	1600	860



L1970 and L1971 slider load ratings for U rails

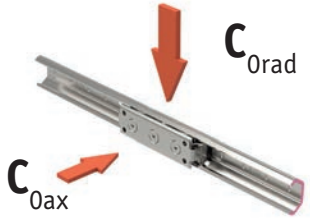
Part no.	Material	Body	C_{0rad} N	C_{0ax} N
L1970.20U-060	Steel	Solid	326	-
L1970.30U-080	Steel	Solid	870	-
L1970.45U-120	Steel	Solid	1740	-
L1971.20U-060	Stainless Steel	Solid	300	-
L1971.30U-080	Stainless Steel	Solid	800	-
L1971.45U-120	Stainless Steel	Solid	1600	-



Orientation of rails

The radial load that the sliders can take is significantly higher than the axial load, so where possible the rails should be set up with the sliders taking the loads in this plane.

Recommended



Non-preferred



Radial load rating is typically 2 x axial load rating

U rail sliders cannot accept axial loads



Technical Information

FAQs



Why should I consider using the X Rail system?

The X rail system is very cost-effective.

Using a master (T rail) and slave rail (U rail), the structure onto which the rail is installed does not have to be machined as accurately as when using other rail systems - this can result in major cost savings for many projects.

It is highly resistant to dirt. The L1971 stainless steel X rail is very corrosion resistant and can be used in wet environments (not submerged).

Are there any disadvantages?

The X rail system is made of a rolled formed section. It is not suited to high moment loads. If moment loads are present then typically more sliders and/or an extra rail is used to provide a system where less moment loads are applied to the sliders.

If you have applications with significant moment loads we would recommend the use of our Compact Rail System which is made from cold drawn steel section and has hardened raceways.

How do I change the smoothness of the running of the sliders in the rails?

Each slider is supplied with a small spanner. This can be used to push the eccentric roller towards the top of the rail (making it run more stiffly), or pulled away slightly to make the sliders run very smoothly. The eccentric rollers are clearly marked and the slider should be installed the correct way up in the rail. Generally this is with the fixed rollers towards the bottom of the rail (providing the loading points). The simple instructions are shown in the catalogue.

I want to use the rail outside or in a slightly wet environment?

The stainless steel version (L1971) is made of highly corrosion resistant 316L stainless steel. The rollers are also stainless steel but harder (440C stainless) and are fitted with 2RS rubber seals (splash proof). They can be used outside and in marine applications (e.g. sliding doors and hatches).

Do you hold these parts in stock?

Yes.

Can I get CAD files of these parts?

Most of the 3D models (in many formats) are available for download directly from our website www.automotioncomponents.co.uk

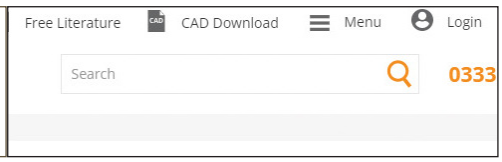
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CAD - Download in 3 easy steps

Most of our products are available to download directly from our website. Get the CAD you need for your application in minutes, no registration required.

Step 1: Find the part you need

Find the part or enter the Automotion part number into the search bar.



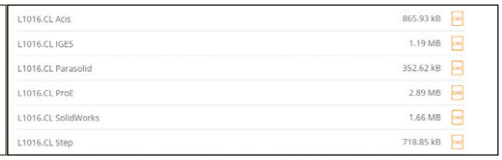
Step 2: Choose the CAD option

Click on the CAD button below the product window to the right of the drawing.



Step 3: Download your format

Choose the the format you require, and download it to your computer.

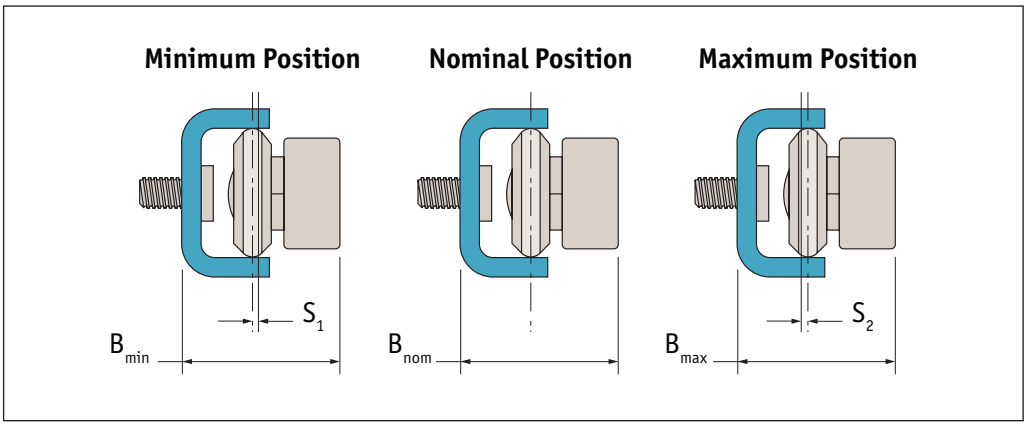


Slave rail compensation

In a T+U-System, the slider in the T rail carries axial and radial loads and guides the movement of the slider in the U rail. U rails have flat parallel raceways that allow free lateral movement for the sliders.

The maximum freedom a slider in the U rail can offer can be calculated using the values S_1 and S_2. With nominal value B_{nom} as the starting point, S_1 indicates the maximum allowed movement into the rail, while S_2 represents the maximum offset towards the outside of the rail.

If the length of the rail is known, the maximum allowable angle of deviation of the mounting surface is shown below. In this case the slide in the U rail has the freedom to travel from the innermost position S_1 to the outermost position S_2.

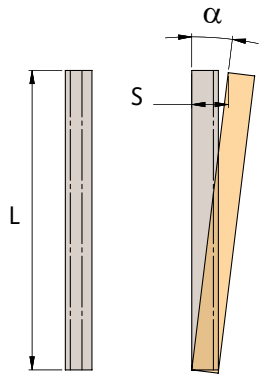


U rail size	S_1	S_2	B_{min}	B_{nom}	B_{max}
20	0,60	0,60	17,65	18,25	18,85
30	1,00	1,00	26,95	27,95	28,95
45	1,75	1,75	35,50	37,25	39,00

Guideline for maximum angle deviation α, achievable with the longest guide rail

$$\alpha = \arctan \frac{S^*}{L}$$

S* = sum of S_1 and S_2
L = length of the rail



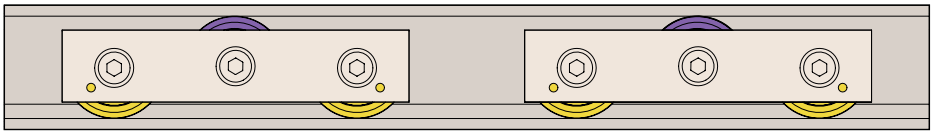
Size	Rail length	Offset S*	Angle α °
20	3120	1,2	0,022
30	3120	2,0	0,037
45	3120	3,5	0,064

Technical Information

Slider arrangements

The standard arrangement of the sliders (when used in a horizontal application) is as follows:

Arrangement 1



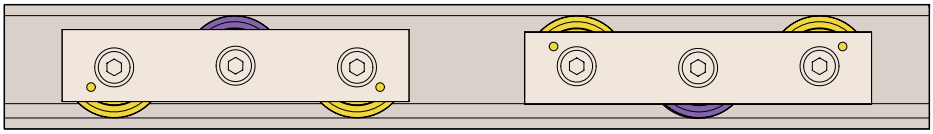
Note orientation of fixed rollers

 Fixed Roller

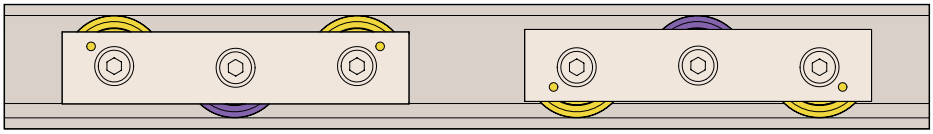
 Eccentric Roller

For other applications (e.g. horizontal or vertical) the alternative arrangements are as follows:

Arrangement 2



Arrangement 3



Note orientation of fixed rollers

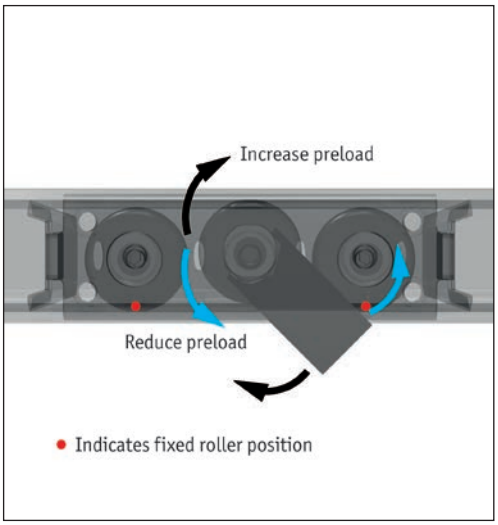
 Fixed Roller

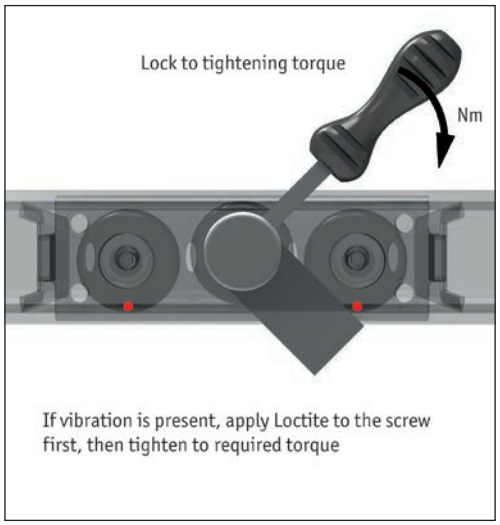
 Eccentric Roller

Adjusting the sliders

If delivered separately, or if the sliders need to be installed in another rail, the sliders must be re-adjusted. In this case, follow the instructions below.

The "•" or "V" marked on the slider indicates the direction of the fixed rollers.





The sliders have three large rollers. The two at either end are fixed and the direction of these fixed positions is marked on the sliders with a dot or an arrow.

Insert the sliders into the rails with the fixed rollers set to take the load in the best direction.

The middle roller is on an eccentric pivot that is easily adjusted (using the thin spanner that is supplied with them and a hexagon key). This allows the preload of the system to be set as required – stiff or free running.

Generally the sliders will not be inserted into the rails when leaving the factory. To set the sliders to the required preload is a simple procedure:

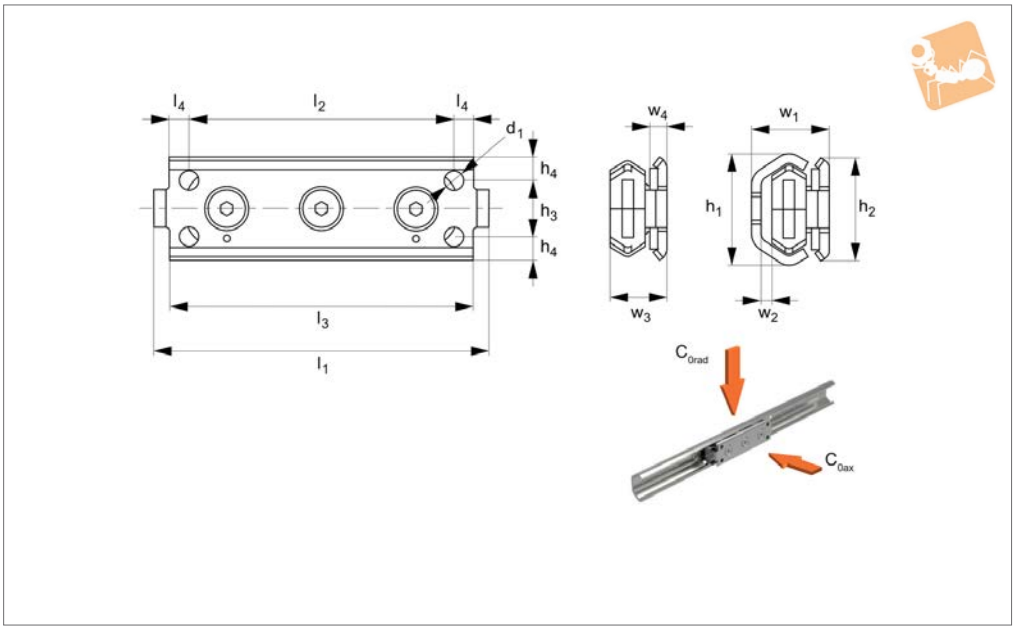
- Ensure raceways are clean.
- Remove the small plastic wipers (from the low profile sliders) and insert the slider into the rail.
- Slightly loosen the centre roller (using the spanner and a hexagon key).
- For U rails a packer should be used to set the slider in its middle lateral position.
- Use the flat spanner provided to move the middle roller on its eccentric to adjust the stiffness of its running. Not too loose so that there is excess play and not too tight that a lot of friction is generated.
- Lock the roller in the desired position with the spanner and a hexagon key.
- Move the slider the length of the rail to check required running – it should move easily with no play at any point on the rail.
- Tighten the fixing screw to the correct torque – whilst holding the spanner in place to ensure no further movement (see correct torque values in table below.
- Finally (if using a slider with a wiper), re-install the wipers if required.

Size	Tightening torque Nm
20	3
30	7
45	12

Low Profile Stainless Sliders
for T rail (master)



L1971.LP



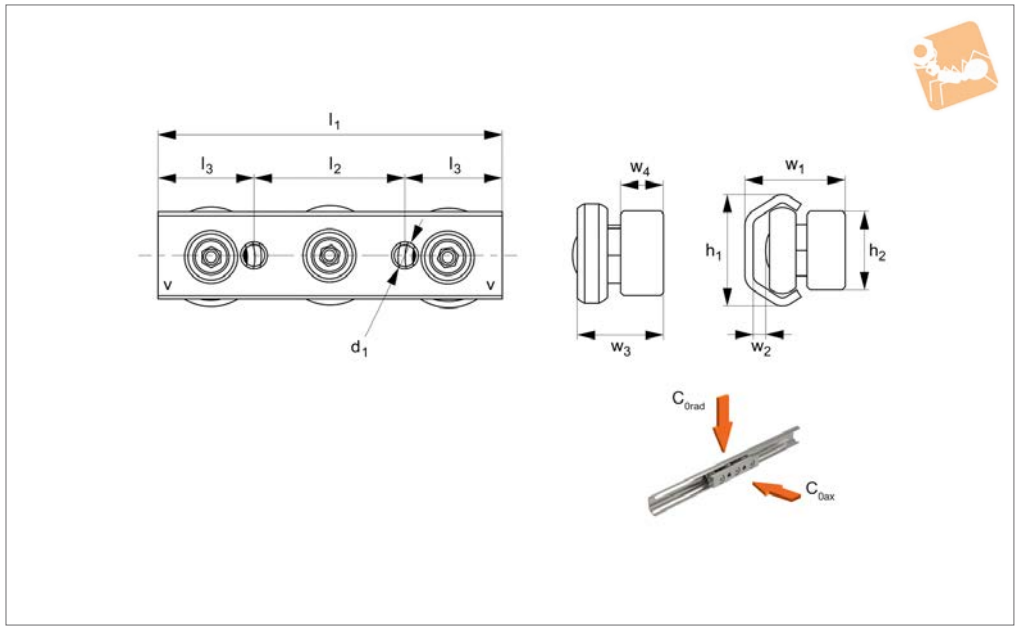
Material
Body stainless steel (316L), stainless steel (AISI 440) rollers with 2RS, water resistant rubber seals.

Technical Notes
The three sizes of sliders are suited to the relevant L1971.TEX rail size.
Select the size and quantity to suit the required load.

Tips
The punched dot marked on the slider body indicates the orientation for the loading of the fixed rollers.
The middle roller is eccentric, allowing the preload to be easily adjusted when mounted inside the rail.
Coefficient of friction (without seals) 0.01.

Order No.	Size	d_1	l_1	h_1	h_2	h_3	h_4	l_2	Weight kg
L1971.20T-080	20	M5	80	19.2	18	-	9.0	60	0.05
L1971.30T-088	30	M5	88	29.5	27	15	6.0	70	0.12
L1971.45T-150	45	M6	150	46.4	40	23	8.5	120	0.47

Order No.	l_3	l_4	w_1	w_2	w_3	w_4	Load $C_{0\ rad}$ N max.	Load $C_{0\ ax}$ N max.
L1971.20T-080	71	5.5	16.0	2.5	11.5	5.5	300	170
L1971.30T-088	80	5.0	20.5	3.5	15.0	4.5	800	400
L1971.45T-150	135	7.5	31.0	5.0	22.0	4.0	1600	860





L1971.SBT

Material
Body stainless steel (316L), stainless steel (AISI 440) rollers with 2RS, water resistant rubber seals.

Technical Notes
The three sizes of sliders are suited to the relevant L1971.TEX rail size.

For size 20 sliders there are two threaded holes on the centreline.
Select the size and quantity to suit the required load.

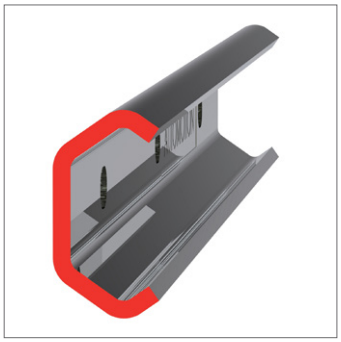
Tips
The „V“ marks on the slider body indicate the orientation for the loading of the fixed rollers.
The middle roller is eccentric, allowing the preload to be easily adjusted when mounted inside the rail.
Coefficient of friction (without seals) 0.01.

Order No.	Size	d_1	l_1	d_2	h_1	h_2	h_3	Weight kg
L1971.20T-060	20	M5	60	-	19.2	10	-	0.04
L1971.26T-080	26	M 5	80	-	26.1	25	-	0.10
L1971.30T-080	30	M6	80	-	29.5	20	-	0.17
L1971.40T-135	40	-	135	M 6	39.5	35	23	0.45
L1971.45T-120	45	M8	120	-	46.4	25	-	0.47

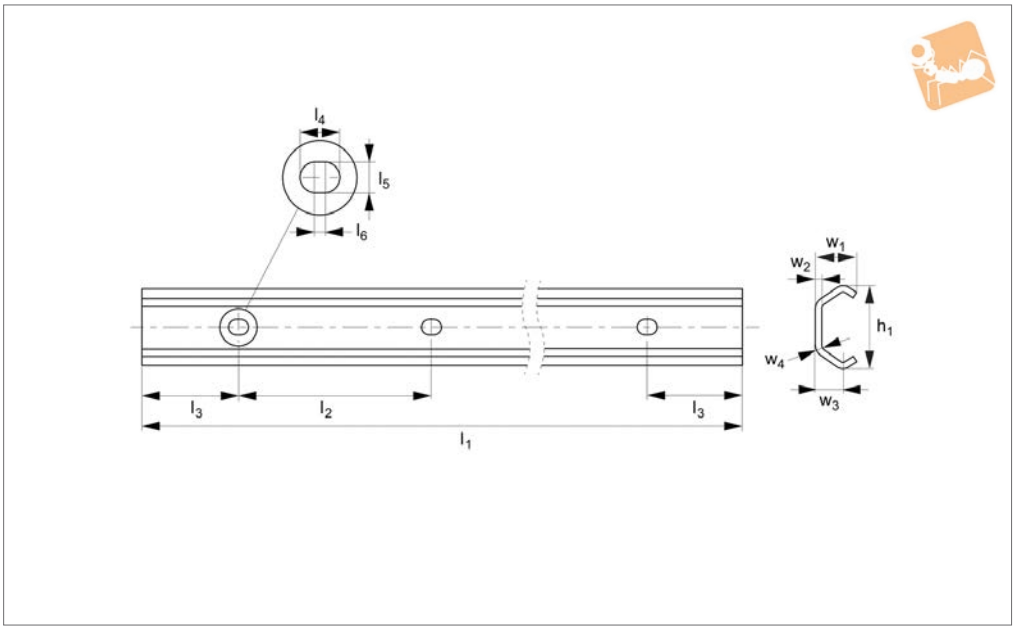
Order No.	h_4	l_2	l_3	l_4	w_1	w_2	w_3	w_4	Load $C_{0\ rad}$ N max.	Load $C_{0\ ax}$ N max.
L1971.20T-060	-	20	20	-	17.8	2.6	13.0	6	300	170
L1971.26T-080	12.5	30	25.0	-	22.00	3.7	15.80	4	740	370
L1971.30T-080	-	35	22.5	-	26.5	3.3	20.7	10	800	400
L1971.40T-135	6.0	-	7.5	120	28.65	5.0	20.65	6	1470	740
L1971.45T-120	-	55	32.5	-	38.0	5.1	28.9	12	1600	860

Stainless X Rail

T rail (master)



L1971.T



Material

Stainless steel (316L). Corrosion resistant FDA/USDA compliant materials.

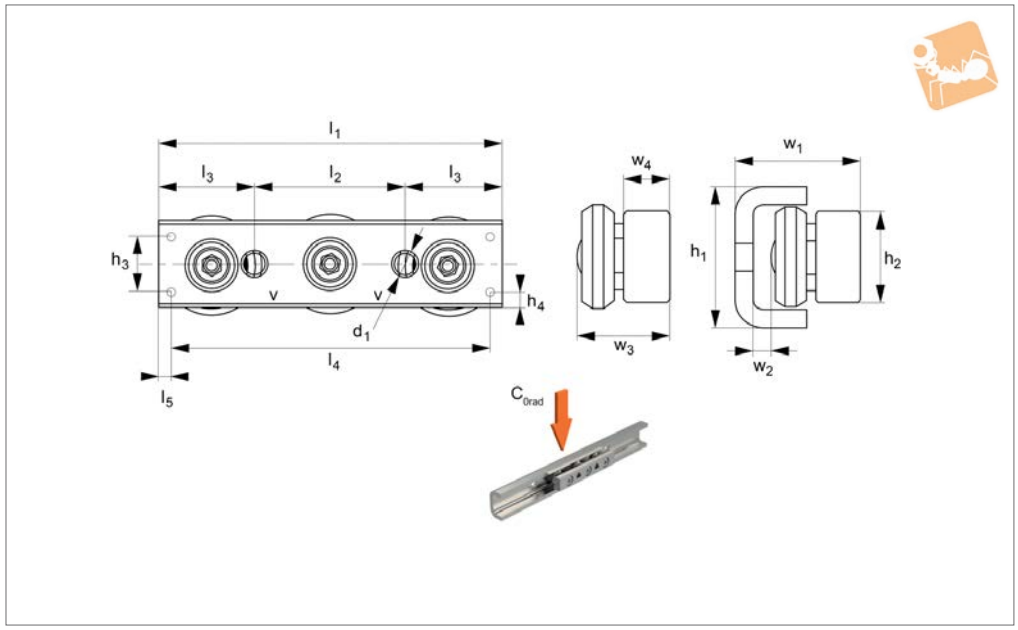
Technical Notes

X rail is for light duty loads, select number of carriages to suit.

Tips

Use hex. socket oval head screws (ISO 7380), see part no. L1971.S.

Order No.	Rail size	l_1	h_1	l_2	l_3	l_4	l_5	l_6	w_1	w_2	w_3	w_4	For screw	Weight kg
L1971.20T-1040	20	1040	19.2	80	40	7	4.5	2.5	10.2	2.0	6.9	3.0	M 4	0.47
L1971.20T-2080	20	2080	19.2	80	40	7	4.5	2.5	10.2	2.0	6.9	3.0	M 4	0.47
L1971.20T-3120	20	3120	19.2	80	40	7	4.5	2.5	10.2	2.0	6.9	3.0	M 4	0.47
L1971.26T-1040	26	1040	26.1	80	40	11	6.0	5.0	14.0	2.5	9.5	4.5	M 4	0.80
L1971.26T-2080	26	2080	26.1	80	40	11	6.0	5.0	14.0	2.5	9.5	4.5	M 5	0.80
L1971.26T-3120	26	3120	26.1	80	40	11	6.0	5.0	14.0	2.5	9.5	4.5	M 5	0.80
L1971.30T-1040	30	1040	29.5	80	40	11	6.0	5.0	15.0	2.5	10.0	4.5	M 5	0.90
L1971.30T-2080	30	2080	29.5	80	40	11	6.0	5.0	15.0	2.5	10.0	4.5	M 5	0.90
L1971.30T-3120	30	3120	29.5	80	40	11	6.0	5.0	15.0	2.5	10.0	4.5	M 5	0.90
L1971.40T-1040	40	1040	39.5	80	40	13	9.0	4.0	20.0	3.0	13.0	6.0	M 8	1.55
L1971.40T-2080	40	2080	39.5	80	40	13	9.0	4.0	20.0	3.0	13.0	6.0	M 8	1.55
L1971.40T-3120	40	3120	39.5	80	40	13	9.0	4.0	20.0	3.0	13.0	6.0	M 8	1.55
L1971.45T-1040	45	1040	46.4	80	40	11	9.0	2.0	24.0	4.0	15.5	6.5	M 8	2.29
L1971.45T-2080	45	2080	46.4	80	40	11	9.0	2.0	24.0	4.0	15.5	6.5	M 8	2.29
L1971.45T-3120	45	3120	46.4	80	40	11	9.0	2.0	24.0	4.0	15.5	6.5	M 8	2.29





L1971.SBU

Material
Body stainless steel (316L), stainless steel (AISI 440) rollers with 2RS, water resistant rubber seals.

Technical Notes
The three sizes of sliders are suited to the relevant L1971.UEX rail size.

Select the size and quantity to suit the required load.

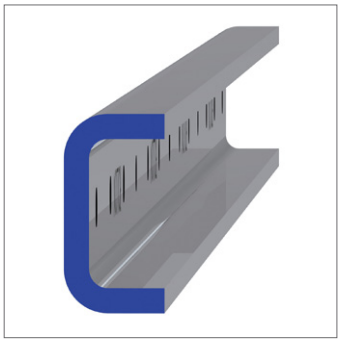
Tips
The „V" marks on the slider body indicate the orientation for the loading of the fixed rollers.
The middle roller is eccentric, allowing the preload to be easily adjusted when mounted inside the rail.
Coefficient of friction (without seals) 0.01.

Important Notes
Sliders in U rails cannot accept axial loads.

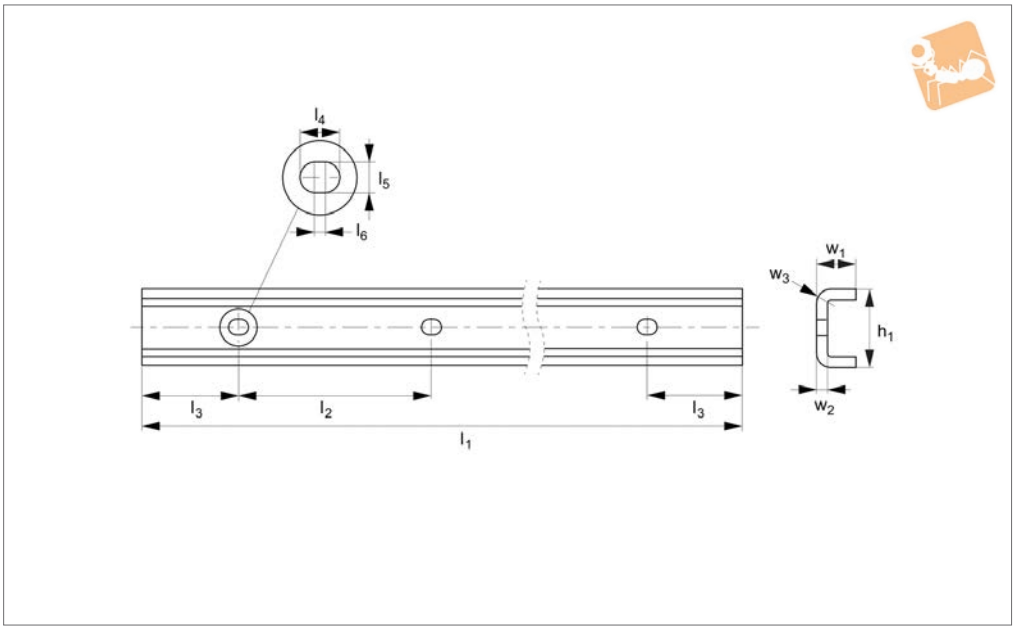
Order No.	Size	d_1	l_1	d_2	h_1	h_2	h_3	Weight kg
L1971.30U-080	30	M6	80	-	31.8	20	-	0.16
L1971.40U-135	40	-	135	M 6	38.5	35	23	0.45
L1971.45U-120	45	M8	120	-	44.8	25	-	0.45

Order No.	h_4	l_2	l_3	l_4	l_5	w_1	w_2	w_3	w_4	Load $C_{0\ rad}$ N max.
L1971.30U-080	-	35	22.5	-	-	27,95 ± 0,60	3.5	19.2	10	800
L1971.40U-135	8	-	-	120	7.5	29.95 ± 1.60	-	-	6	1470
L1971.45U-120	-	55	32.5	-	-	37,25 ± 0,60	5.0	25.5	12	1600

Stainless X Rail
U rail (slave)



L1971.U

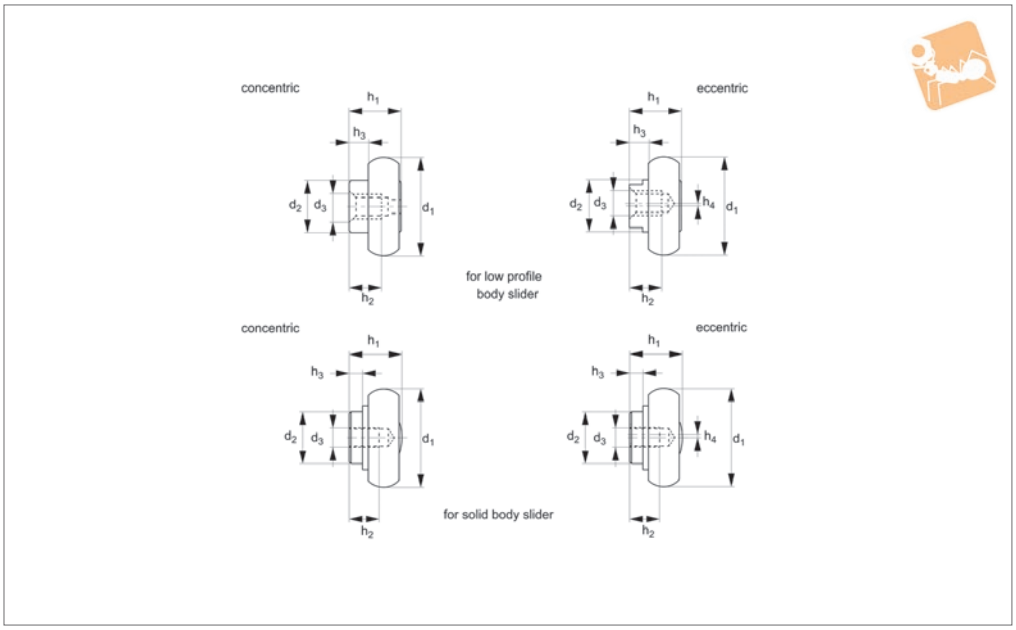


Material
Stainless steel (316L). Corrosion resistant FDA/USDA compliant materials.

Technical Notes
X rail is for light duty loads, select number of carriages to suit.

Tips
Use hex. socket oval head screws (ISO 7380), see part no. L1971.S.

Order No.	Rail size	l_1	h_1	l_2	l_3	l_4	l_5	l_6	w_1	w_2	w_3	For screw	Weight kg
L1971.30U-1040	30	1040	31.8	80	40	8.4	6.4	2	16	4	7	M5	1.4
L1971.30U-2080	30	2080	31.8	80	40	8.4	6.4	2	16	4	7	M5	2.8
L1971.30U-3120	30	3120	31.8	80	40	8.4	6.4	2	16	4	7	M5	4.2
L1971.40U-1040	40	1040	38.5	80	40	13	9	4	21.0	3	6	M8	1.7
L1971.40U-2080	40	2080	38.5	80	40	13	9	4	21.0	3	6	M8	3.4
L1971.40U-3120	40	3120	38.5	80	40	13	9	4	21.0	3	6	M8	5.1
L1971.45U-1040	45	1040	44.8	80	40	11	9	2	24.5	4.5	9.5	M8	2.9
L1971.45U-2080	45	2080	44.8	80	40	11	9	2	24.5	4.5	9.5	M8	5.8
L1971.45U-3120	45	3120	44.8	80	40	11	9	2	24.5	4.5	9.5	M8	8.7





L1971.CRT

Material
Rollers stainless steel (AISI 440C) with water resistant rubber seals (2RS).

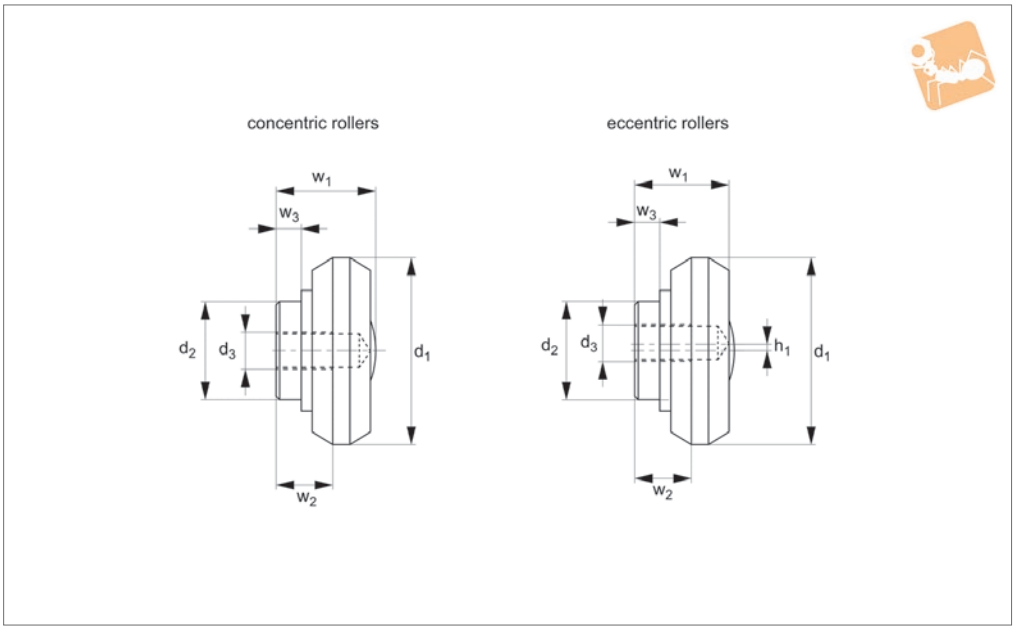
Technical Notes
For use with X rail stainless steel sliders in T type stainless steel rail.

Order No.	For slider type	Type	Body	d_1	d_2	d_3	h_1	h_2	h_3	h_4	Weight g
L1971.CRPNX20	L1971.20T-080	Concentric	Low prof.	14.0	8	M4	8.5	6	4.0	-	6
L1971.CRPAX20	L1971.20T-080	Eccentric	Low prof.	14.0	8	M4	8.5	6	4.0	0.5	6
L1971.CRPNX30	L1971.30T-088	Concentric	Low prof.	22.8	12	M5	12.0	7	4.5	-	20
L1971.CRPAX30	L1971.30T-088	Eccentric	Low prof.	22.8	12	M5	12.0	7	4.5	0.6	20
L1971.CRPNX45	L1971.45T-150	Concentric	Low prof.	35.6	16	M6	18.0	12	6.0	-	68
L1971.CRPAX45	L1971.45T-150	Eccentric	Low prof.	35.6	16	M6	18.0	12	6.0	0.8	68
L1971.CRNX20	L1971.20T-060	Concentric	Solid	14.0	6	M4	8.7	6	1.8	-	6
L1971.CRAX20	L1971.20T-060	Eccentric	Solid	14.0	6	M4	8.7	6	1.8	0.5	6
L1971.CRNX30	L1971.30T-080	Concentric	Solid	22.8	10	M5	14.0	9	3.8	-	22
L1971.CRAX30	L1971.30T-080	Eccentric	Solid	22.8	10	M5	14.0	9	3.8	0.6	22
L1971.CRNX45	L1971.45T-120	Concentric	Solid	35.6	12	M6	20.5	14.5	4.5	-	70
L1971.CRAX45	L1971.45T-120	Eccentric	Solid	35.6	12	M6	20.5	14.5	4.5	0.8	70

Stainless Replacement Rollers
for U version stainless X rail



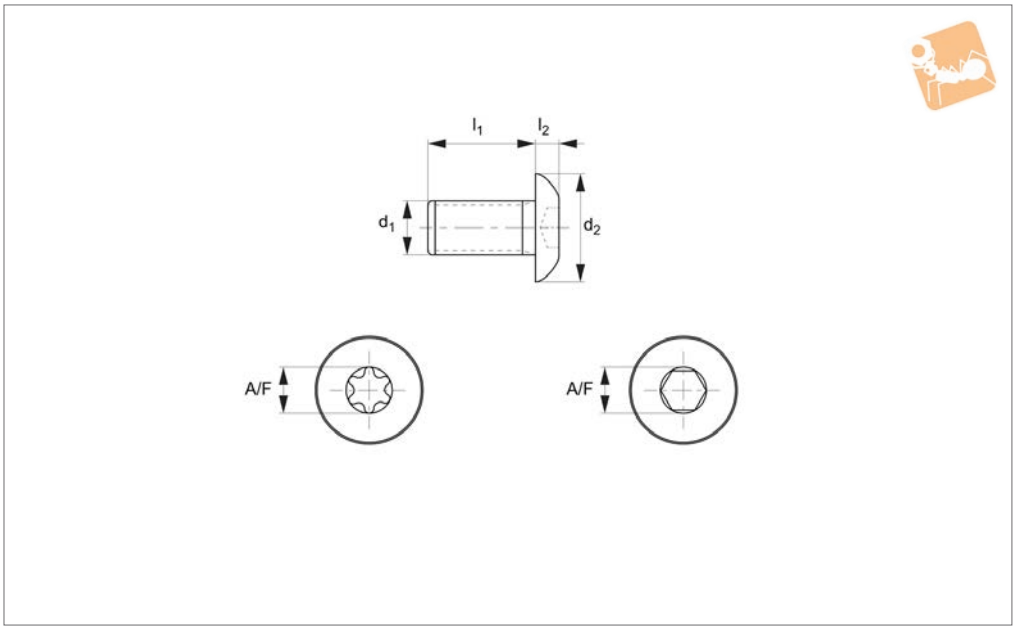
L1971.CRU



Material
Rollers stainless steel (AISI 440C) with water resistant rubber seals (2RS).

Technical Notes
For use with X rail stainless steel sliders in U type stainless steel rail.

Order No.	For slider type	Type	Body	d_1	d_2	d_3	h_1	w_1	w_2	w_3	Weight g
L1971.CPNX20	L1971.20U-060	Concentric	Solid	14	6	M4	-	7.35	5.5	1.8	4
L1971.CPAX20	L1971.20U-060	Eccentric	Solid	14	6	M4	0.4	7.35	5.5	1.8	4
L1971.CPNX30	L1971.30U-080	Concentric	Solid	23.2	10	M5	-	13	7	3.8	18
L1971.CPAX30	L1971.30U-080	Eccentric	Solid	23.2	10	M5	0.6	13	7	3.8	18
L1971.CPNX45	L1971.45U-120	Concentric	Solid	35	12	M6	-	18	12	4.5	60
L1971.CPAX45	L1971.45U-120	Eccentric	Solid	35	12	M6	0.8	18	12	4.5	60





L1971.S

Material
ISO 7380 hex. socket or Torx oval head screws A4 (316) stainless steel.

Order No.	Size	Type	d_1 x p	l_1	d_2	l_2 max.	Torque to Nm	A/F
L1971.T20	TX-1	Torx oval	M4 x 0,7	8	7.6	2.2	3	2.5
L1971.T30	TX-2	Torx oval	M5 x 0,8	10	9.5	2.8	9	3
L1971.T45	TX-6	Torx oval	M8 x 1,25	16	14	4.4	22	5

Compact Rails

Introduction

The compact rail systems are unique. They have many major advantages over other rail systems.

Easy and cost-effective to set up

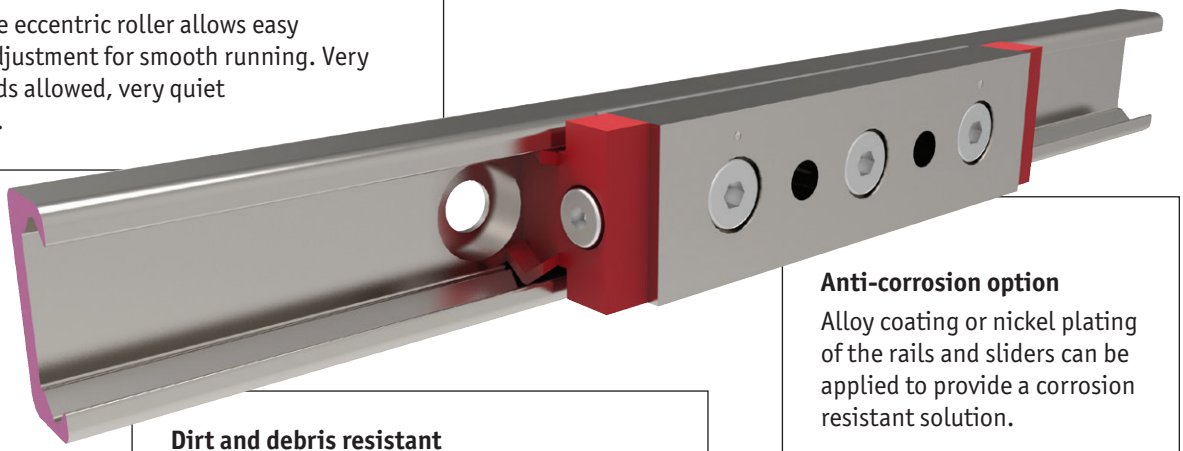
The rails are easy to set up and can adjust for some misalignment of the structure on which it is being used. The compact rail system achieves this by using a master (T type) rail, and a slave (U type) rail. This allows the sliders in the T rail to remain fixed in place but allows lateral movement of the sliders in the U rail to adapt to any misalignment and avoid any issues of stiction.

Slave (U) rails have flat, parallel raceways that allow free lateral movement of the sliders. This flexibility can mean a large saving in the machining of the structure surface making it a very cost-effective solution.



Fast, smooth and quiet

The unique eccentric roller allows easy preload adjustment for smooth running. Very high speeds allowed, very quiet operation.



Anti-corrosion option

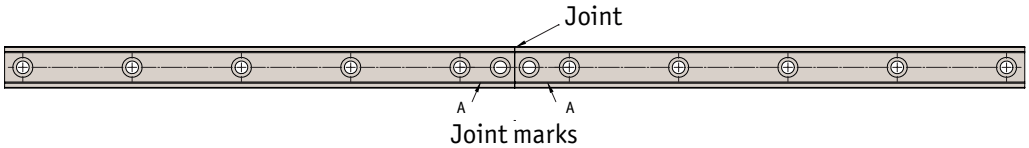
Alloy coating or nickel plating of the rails and sliders can be applied to provide a corrosion resistant solution.

Dirt and debris resistant

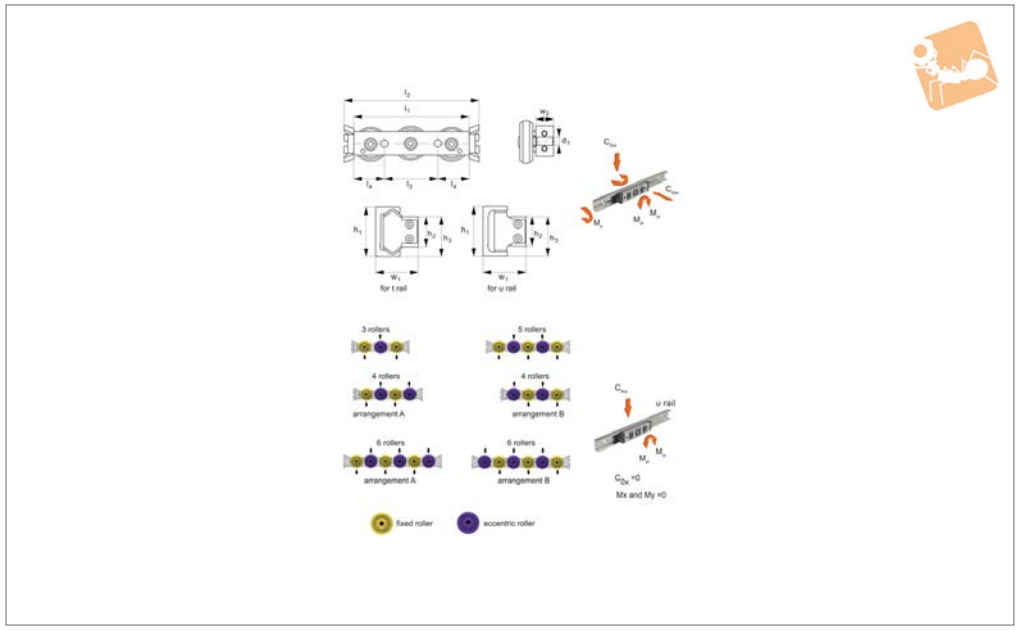
The internal raceways are resistant to dirt and debris, larger roller bearings with seals and wipers are used (compared to small ball bearings on other systems).

Unlimited rail lengths

Rails can be easily joined together for unlimited rail lengths, and extra hole needs to be machined at the joint area. The rails need to be selected so they are “matched” and a joining tool needs to be used to align the rails.



ov-compact-rails-introduction-lnh - Updated - 09-03-2023





L1918.CS

Material
Zinc plated steel body.
Steel rollers (100Cr6) with metal (2Z) or rubber (2RS) seals.

Technical Notes
To be used with compact rail size 18.
Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).
Unlike the N series sliders these CS sliders do not have protective side seals.

Tips
The U rail sliders cannot accept axial loads.
The 3 and 5 bearing sliders can be used either way up in the rail dependent on where the loads will be applied.
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Quiet and fast (up to 3 m/s).

Order No.	For rail type	No. of rollers	Seal type	d_1	h_1 +0.25|-0.10	h_2 +0|-0.05	h_3 +0.05|-0.25	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm	Weight kg
L1918.18CS-060-2RST	T	3	Rubber	M 5	18	9.5	14	60	76	20	20	1.5	4.7	0.04
L1918.18CS-060-2RSU	U	3	Rubber	M 5	18	9.5	14	60	76	20	20	0	0	0.04
L1918.18CS-080-2RSTA	T	4	Rubber	M 5	18	9.5	14	80	96	40	20	2.8	7	0.05
L1918.18CS-080-2RSUA	U	4	Rubber	M 5	18	9.5	14	80	96	40	20	0	0	0.05
L1918.18CS-080-2RSTB	T	4	Rubber	M 5	18	9.5	14	80	96	40	20	2.8	7	0.05
L1918.18CS-080-2RSUB	U	4	Rubber	M 5	18	9.5	14	80	96	40	20	0	0	0.05
L1918.18CS-100-2RST	T	5	Rubber	M 5	18	9.5	14	100	116	20	20	2.8	9.4	0.06
L1918.18CS-100-2RSU	U	5	Rubber	M 5	18	9.5	14	100	116	20	20	0	0	0.06
L1918.18CS-120-2RSTA	T	6	Rubber	M 5	18	9.5	14	100	116	20	20	3.3	11.8	0.07
L1918.18CS-120-2RSUA	U	6	Rubber	M 5	18	9.5	14	120	136	40	20	0	0	0.07
L1918.18CS-120-2RSTB	T	6	Rubber	M 5	18	9.5	14	120	136	40	20	3.3	11.8	0.07
L1918.18CS-120-2RSUB	U	6	Rubber	M 5	18	9.5	14	120	136	40	20	0	0	0.07

Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Dyn. load C N max.	Static load $C_{0\,ax.}$ N max.	Arrangement type	Static load $C_{0\,rad.}$ N max.
L1918.18CS-060-2RST	8.2	8.2	15	5.7	1530	260	-	820
L1918.18CS-060-2RSU	8.2	8.2	15	5.7	1530	0	-	820
L1918.18CS-080-2RSTA	8.2	24.7	15	5.7	1530	300	A	820
L1918.18CS-080-2RSUA	8.2	24.7	15	5.7	1530	0	A	820
L1918.18CS-080-2RSTB	24.7	8.2	15	5.7	1530	300	B	820
L1918.18CS-080-2RSUB	24.7	8.2	15	5.7	1530	0	B	820

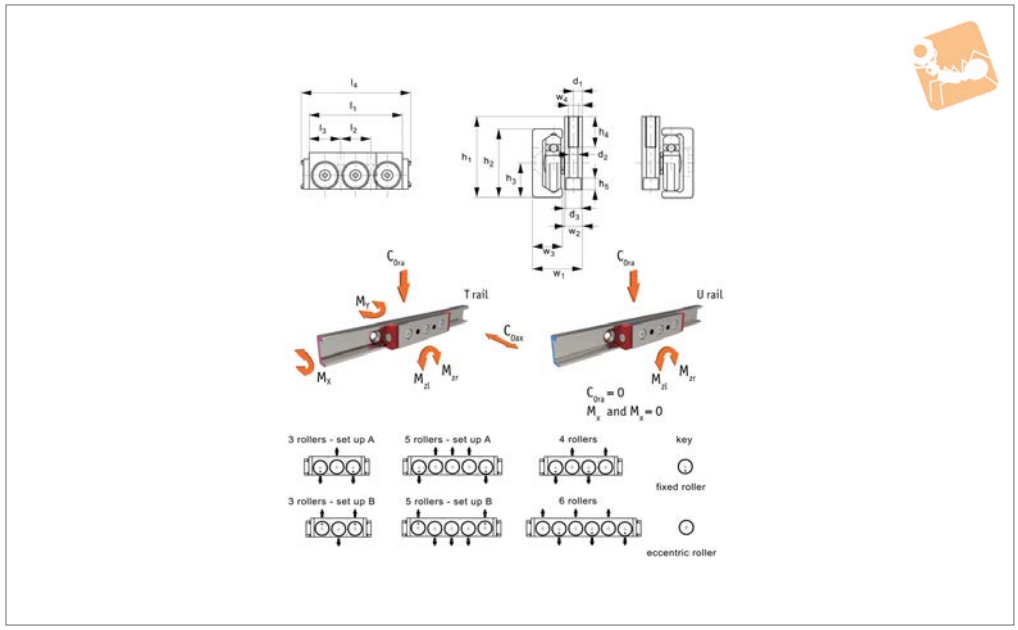


Light Duty Sliders - Size 18

no side seal - front fixing



Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Arrangement type	Static load $C_{0\ rad.}$ N max.
L1918.18CS-100-2RST	24.7	24.7	15	5.7	1830	360	-	975
L1918.18CS-100-2RSU	24.7	24.7	15	5.7	1830	0	-	975
L1918.18CS-120-2RSTA	24.7	41.1	15	5.7	1830	400	A	975
L1918.18CS-120-2RSUA	24.7	41.1	15	5.7	1830	0	A	975
L1918.18CS-120-2RSTB	41.1	24.7	15	5.7	1830	400	B	975
L1918.18CS-120-2RSUB	41.1	24.7	15	5.7	1830	0	B	975





L1918.CR

Material
Zinc plated steel body.
Steel rollers (100Cr6) with rubber seals.

Technical Notes
To be used with compact rail size 18.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	d_1 for screw	d_2	d_3	h_1	h_2	h_3	h_4	h_5	l_1	l_2	l_3	l_4	M_x Nm
L1918.18CR-060-TA	T	3	M5	4.2	7.5	18	9	22	8	3	60	20	20	74	1.6
L1918.18CR-060-UA	U	3	M5	4.2	7.5	18	9	22	8	3	60	20	20	74	0
L1918.18CR-060-TB	T	3	M5	4.2	7.5	18	9	22	8	3	60	20	20	74	1.6
L1918.18CR-060-UB	U	3	M5	4.2	7.5	18	9	22	8	3	60	20	20	74	0
L1918.18CR-080-TA	T	4	M5	4.2	7.5	18	9	22	8	3	80	40	20	94	2.9
L1918.18CR-080-UA	U	4	M5	4.2	7.5	18	9	22	8	3	80	40	20	94	0
L1918.18CR-080-TB	T	4	M5	4.2	7.5	18	9	22	8	3	80	40	20	94	2.9
L1918.18CR-080-UB	U	4	M5	4.2	7.5	18	9	22	8	3	80	40	20	94	0
L1918.18CR-100-TA	T	5	M5	4.2	7.5	18	9	22	8	3	100	20	20	114	2.9
L1918.18CR-100-UA	U	5	M5	4.2	7.5	18	9	22	8	3	100	20	20	114	0
L1918.18CR-100-TB	T	5	M5	4.2	7.5	18	9	22	8	3	100	20	20	114	2.9
L1918.18CR-100-UB	U	5	M5	4.2	7.5	18	9	22	8	3	100	20	20	114	0
L1918.18CR-120-TA	T	6	M5	4.2	7.5	18	9	22	8	3	120	40	20	134	3.4
L1918.18CR-120-UA	U	6	M5	4.2	7.5	18	9	22	8	3	120	40	20	134	0
L1918.18CR-120-TB	T	6	M5	4.2	7.5	18	9	22	8	3	120	40	20	134	3.4
L1918.18CR-120-UB	U	6	M5	4.2	7.5	18	9	22	8	3	120	40	20	134	0

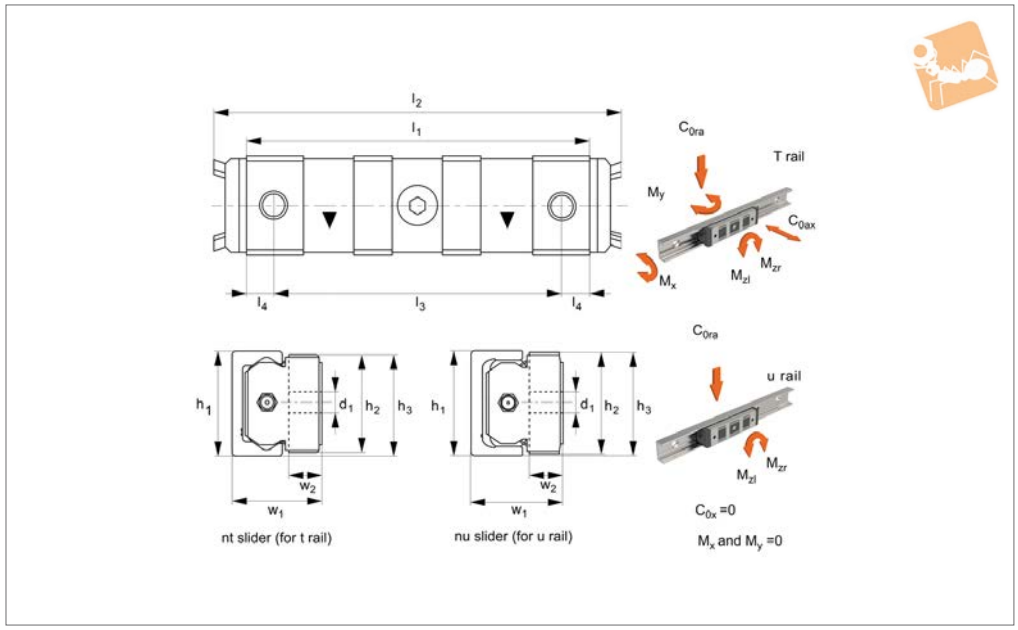
Order No.	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1	w_2	w_3	w_4	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1918.18CR-060-TA	4.8	8.3	8.3	17.4	8	8.3	4	1540	262	825
L1918.18CR-060-UA	0	8.3	8.3	17.4	8	8.3	4	1540	0	825
L1918.18CR-060-TB	4.8	8.3	8.3	17.4	8	8.3	4	1540	262	825
L1918.18CR-060-UB	0	8.3	8.3	17.4	8	8.3	4	1540	0	825
L1918.18CR-080-TA	7.1	8.3	24.9	17.4	8	8.3	4	1540	310	825

Light Duty Sliders, size 18

side seal, with wipers



Order No.	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1	w_2	w_3	w_4	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1918.18CR-080-UA	0	8.3	24.9	17.4	8	8.3	4	1540	0	825
L1918.18CR-080-TB	7.1	24.9	8.3	17.4	8	8.3	4	1540	310	825
L1918.18CR-080-UB	0	24.9	8.3	17.4	8	8.3	4	1540	0	825
L1918.18CR-100-TA	9.5	24.9	24.9	17.4	8	8.3	4	1832	365	978
L1918.18CR-100-UA	0	24.9	24.9	17.4	8	8.3	4	1832	0	978
L1918.18CR-100-TB	9.5	24.9	24.9	17.4	8	8.3	4	1832	365	978
L1918.18CR-100-UB	0	24.9	24.9	17.4	8	8.3	4	1832	0	978
L1918.18CR-120-TA	11.9	24.9	41.2	17.4	8	8.3	4	1832	442	978
L1918.18CR-120-UA	0	24.9	41.2	17.4	8	8.3	4	1832	0	978
L1918.18CR-120-TB	11.9	41.2	24.9	17.4	8	8.3	4	1832	442	978
L1918.18CR-120-UB	0	41.2	24.9	17.4	8	8.3	4	1832	0	978





L1918.N

Material

Die cast aluminium body, chemically nickel plated.
Steel rollers (100Cr6) with metal seals (2Z).
Polyester end pieces and nytrilic rubber side seals.

Technical Notes

To be used with compact rail size 18.
Select the relevant sliders to suit the rail size and the required load to be carried (taking into account any moment loads).
Maintenance free, self-lubricating wipers.

Tips

Easy to install (the middle roller is eccentric allowing for adjustable preload). Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 3 m/s).

Order No.	For rail type	No. of rollers	C N	C_{0ax} N	C_{0rad} N	d	h_1 +0.25|-0.10	h_2 +0|-0.2	h_3 ±0.25	l_1	l_2	l_3	Weight kg
L1918.NT18	T	3	1530	260	820	M5	18	17.6	18.3	62	74	52	0.03
L1918.NU18	U	3	1530	0	820	M5	18	17.6	18.3	62	74	52	0.03

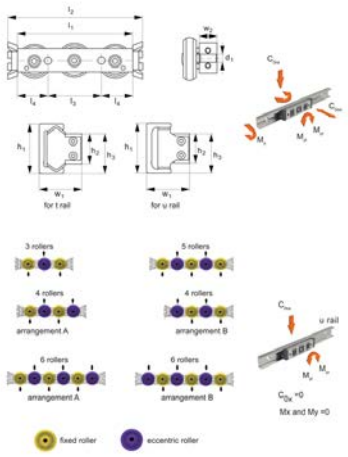
Order No.	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 -0.15	w_2
L1918.NT18	5	1.5	4.7	8.2	8.2	16.5	6.4
L1918.NU18	5	0	0	8.2	8.2	16.5	6.4

Light Duty Sliders - Size 18

no side seal - front fixing



L1918.CSW



Material

Zinc plated steel body.
Steel rollers (100Cr6) with metal (2Z) or rubber (2RS) seals.

Technical Notes

To be used with compact rail size 18.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).
Unlike the N series sliders these CSW sliders do not have protective side seals.

Tips

Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 3 m/s).

Order No.	For rail type	No. of rollers	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.25|-0.10	h_2 +0|-0.05	h_3 +0.05|-0.25	Weight g
L1918.CSW18-060-2ZT	T	3	Metal	1530	260	820	M 5	18	9.5	14	0.04
L1918.CSW18-060-2ZU	U	3	Metal	1530	0	820	M 5	18	9.5	14	0.04
L1918.CSW18-080-2ZTA	T	4	Metal	1530	300	820	M 5	18	9.5	14	0.05
L1918.CSW18-080-2ZUA	U	4	Metal	1530	0	820	M 5	18	9.5	14	0.05
L1918.CSW18-080-2ZTB	T	4	Metal	1530	300	820	M 5	18	9.5	14	0.05
L1918.CSW18-080-2ZUB	U	4	Metal	1530	0	820	M 5	18	9.5	14	0.05
L1918.CSW18-100-2ZT	T	5	Metal	1830	360	975	M 5	18	9.5	14	0.06
L1918.CSW18-100-2ZU	U	5	Metal	1830	0	975	M 5	18	9.5	14	0.06
L1918.CSW18-120-2ZTA	T	6	Metal	1830	400	975	M 5	18	9.5	14	0.07
L1918.CSW18-120-2ZUA	U	6	Metal	1830	0	975	M 5	18	9.5	14	0.07
L1918.CSW18-120-2ZTB	T	6	Metal	1830	400	975	M 5	18	9.5	14	0.07
L1918.CSW18-120-2ZUB	U	6	Metal	1830	0	975	M 5	18	9.5	14	0.07
L1918.CSW18-060-2RST	T	3	Rubber	1530	260	820	M 5	18	9.5	14	0.04
L1918.CSW18-060-2RSU	U	3	Rubber	1530	0	820	M 5	18	9.5	14	0.04
L1918.CSW18-080-2RSTA	T	4	Rubber	1530	300	820	M 5	18	9.5	14	0.05
L1918.CSW18-080-2RSUA	U	4	Rubber	1530	0	820	M 5	18	9.5	14	0.05
L1918.CSW18-080-2RSTB	T	4	Rubber	1530	300	820	M 5	18	9.5	14	0.05
L1918.CSW18-080-2RSUB	U	4	Rubber	1530	0	820	M 5	18	9.5	14	0.05
L1918.CSW18-100-2RST	T	5	Rubber	1830	360	975	M 5	18	9.5	14	0.06
L1918.CSW18-100-2RSU	U	5	Rubber	1830	0	975	M 5	18	9.5	14	0.06
L1918.CSW18-120-2RSTA	T	6	Rubber	1830	400	975	M 5	18	9.5	14	0.07
L1918.CSW18-120-2RSUA	U	6	Rubber	1830	0	975	M 5	18	9.5	14	0.07
L1918.CSW18-120-2RSTB	T	6	Rubber	1830	400	975	M 5	18	9.5	14	0.07

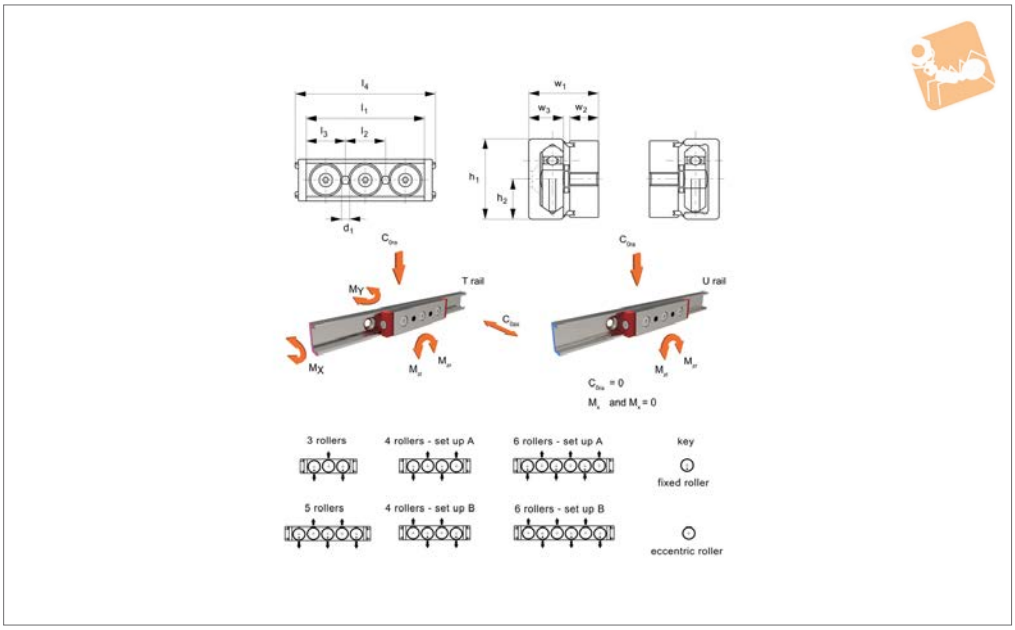
Order No.	For rail type	No. of rollers	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.25|-0.10	h_2 +0|-0.05	h_3 +0.05|-0.25	Weight g
L1918.CSW18-120-2RSUB	U	6	Rubber	1830	0	975	M 5	18	9.5	14	0.07

Order No.	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Arrangement type
L1918.CSW18-060-2ZT	60	76	20	20	1.5	4.7	8.2	8.2	15	5.7	-
L1918.CSW18-060-2ZU	60	76	20	20	0	0	8.2	8.2	15	5.7	-
L1918.CSW18-080-2ZTA	80	96	40	20	2.8	7	8.2	24.7	15	5.7	A
L1918.CSW18-080-2ZUA	80	96	40	20	0	0	8.2	24.7	15	5.7	A
L1918.CSW18-080-2ZTB	80	96	40	20	2.8	7	24.7	8.2	15	5.7	B
L1918.CSW18-080-2ZUB	80	96	40	20	0	0	24.7	8.2	15	5.7	B
L1918.CSW18-100-2ZT	100	116	20	20	2.8	9.4	24.7	24.7	15	5.7	-
L1918.CSW18-100-2ZU	100	116	20	20	0	0	24.7	24.7	15	5.7	-
L1918.CSW18-120-2ZTA	120	116	20	20	3.3	11.8	24.7	41.1	15	5.7	A
L1918.CSW18-120-2ZUA	120	136	40	20	0	0	24.7	41.1	15	5.7	A
L1918.CSW18-120-2ZTB	120	136	40	20	3.3	11.8	41.1	24.7	15	5.7	B
L1918.CSW18-120-2ZUB	120	136	40	20	0	0	41.1	24.7	15	5.7	B
L1918.CSW18-060-2RST	60	76	20	20	1.5	4.7	8.2	8.2	15	5.7	-
L1918.CSW18-060-2RSU	60	76	20	20	0	0	8.2	8.2	15	5.7	-
L1918.CSW18-080-2RSTA	80	96	40	20	2.8	7	8.2	24.7	15	5.7	A
L1918.CSW18-080-2RSUA	80	96	40	20	0	0	8.2	24.7	15	5.7	A
L1918.CSW18-080-2RSTB	80	96	40	20	2.8	7	24.7	8.2	15	5.7	B
L1918.CSW18-080-2RSUB	80	96	40	20	0	0	24.7	8.2	15	5.7	B
L1918.CSW18-100-2RST	100	116	20	20	2.8	9.4	24.7	24.7	15	5.7	-
L1918.CSW18-100-2RSU	100	116	20	20	0	0	24.7	24.7	15	5.7	-
L1918.CSW18-120-2RSTA	100	116	20	20	3.3	11.8	24.7	41.1	15	5.7	A
L1918.CSW18-120-2RSUA	120	136	40	20	0	0	24.7	41.1	15	5.7	A
L1918.CSW18-120-2RSTB	120	136	40	20	3.3	11.8	41.1	24.7	15	5.7	B
L1918.CSW18-120-2RSUB	120	136	40	20	0	0	41.1	24.7	15	5.7	B

Light Duty Sliders, size 18
side seal, with wipers



L1918.CL



Material
Zinc plated steel body.
Steel rollers (100Cr6) with rubber seals.

Technical Notes
To be used with compact rail size 18.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
The U rail sliders cannot accept axial loads.

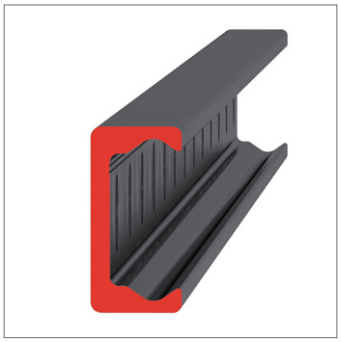
The 3 and 5 bearing sliders can be used either way up in the rail dependent on where the loads will be applied.
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Quiet and fast (up to 3 m/s).

Order No.	For rail type	No. of rollers	d_1	h_1	h_2	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm
L1918.18CL-060-T	T	3	M5	18	9.0	60	20	20	74	1.6	4.8
L1918.18CL-060-U	U	3	M5	18	9.0	60	20	20	74	0	0
L1918.18CL-080-TA	T	4	M5	18	9.0	80	20	40	94	2.9	7.1
L1918.18CL-080-UA	U	4	M5	18	9.0	80	20	40	94	0	0
L1918.18CL-080-TB	T	4	M5	18	9.0	80	20	40	94	2.9	7.1
L1918.18CL-080-UB	U	4	M5	18	9.0	80	20	40	94	0	0
L1918.18CL-100-T	T	5	M5	18	9.0	100	20	20	114	2.9	9.5
L1918.18CL-100-U	U	5	M5	18	9.0	100	20	20	114	0	0
L1918.18CL-120-TA	T	6	M5	18	9.0	120	20	40	134	3.4	11.9
L1918.18CL-120-UA	U	6	M5	18	9.0	120	20	40	134	0	0
L1918.18CL-120-TB	T	6	M5	18	9.0	120	20	40	134	3.4	11.9
L1918.18CL-120-UB	U	6	M5	18	9.0	120	20	40	134	0	0

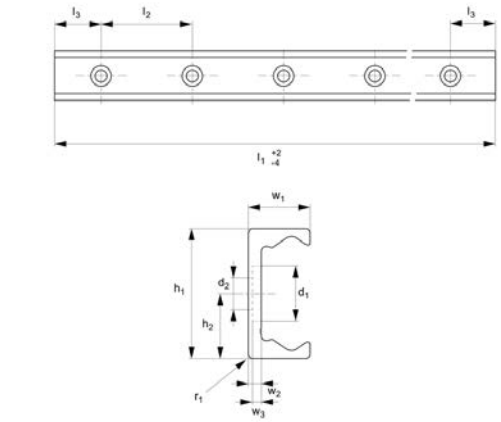
Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	w_3	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1918.18CL-060-T	8.3	8.3	15	5.7	8.3	1540	262	825
L1918.18CL-060-U	8.3	8.3	15	5.7	8.3	1540	0	825
L1918.18CL-080-TA	8.3	24.9	15	5.7	8.3	1540	310	825
L1918.18CL-080-UA	8.3	24.9	15	5.7	8.3	1540	0	825
L1918.18CL-080-TB	24.9	8.3	15	5.7	8.3	1540	310	825
L1918.18CL-080-UB	24.9	8.3	15	5.7	8.3	1540	0	825
L1918.18CL-100-T	24.9	24.9	15	5.7	8.3	1832	365	978
L1918.18CL-100-U	24.9	24.9	15	5.7	8.3	1832	0	978
L1918.18CL-120-TA	24.9	41.2	15	5.7	8.3	1832	442	978

Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	w_3	Dyn. load C N max.	Static load $C_{0\,ax.}$ N max.	Static load $C_{0\,rad.}$ N max.
L1918.18CL-120-UA	24.9	41.2	15	5.7	8.3	1832	0	978
L1918.18CL-120-TB	41.2	24.9	15	5.7	8.3	1832	442	978
L1918.18CL-120-UB	41.2	24.9	15	5.7	8.3	1832	0	978

Light Duty T Rail
counterbored holes



L1918.18T-C



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for system misalignment).
This is the counterbored rail type (most popular), which is usually used with a corresponding U-C rail.
Special low profile Torx head screws provided free of charge.

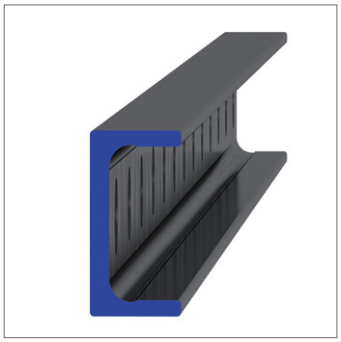
Weight: 0,55 Kg/m.

Tips
Standard carriages are the L1918.CL series.

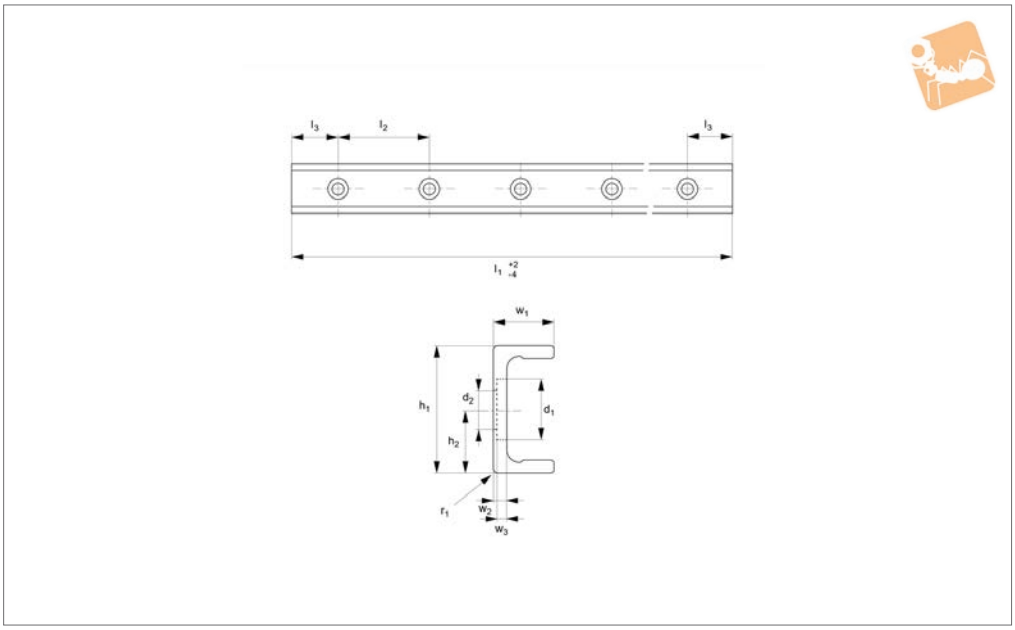
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1918.18T-0160-C	9.5	M4	18	9	160	80	40	1.5	8.25	2.8	2
L1918.18T-0240-C	9.5	M4	18	9	240	80	40	1.5	8.25	2.8	2
L1918.18T-0320-C	9.5	M4	18	9	320	80	40	1.5	8.25	2.8	2
L1918.18T-0400-C	9.5	M4	18	9	400	80	40	1.5	8.25	2.8	2
L1918.18T-0480-C	9.5	M4	18	9	480	80	40	1.5	8.25	2.8	2
L1918.18T-0560-C	9.5	M4	18	9	560	80	40	1.5	8.25	2.8	2
L1918.18T-0640-C	9.5	M4	18	9	640	80	40	1.5	8.25	2.8	2
L1918.18T-0720-C	9.5	M4	18	9	720	80	40	1.5	8.25	2.8	2
L1918.18T-0800-C	9.5	M4	18	9	800	80	40	1.5	8.25	2.8	2
L1918.18T-0880-C	9.5	M4	18	9	880	80	40	1.5	8.25	2.8	2
L1918.18T-0960-C	9.5	M4	18	9	960	80	40	1.5	8.25	2.8	2
L1918.18T-1040-C	9.5	M4	18	9	1040	80	40	1.5	8.25	2.8	2
L1918.18T-1120-C	9.5	M4	18	9	1120	80	40	1.5	8.25	2.8	2
L1918.18T-1200-C	9.5	M4	18	9	1200	80	40	1.5	8.25	2.8	2
L1918.18T-1280-C	9.5	M4	18	9	1280	80	40	1.5	8.25	2.8	2
L1918.18T-1360-C	9.5	M4	18	9	1360	80	40	1.5	8.25	2.8	2
L1918.18T-1440-C	9.5	M4	18	9	1440	80	40	1.5	8.25	2.8	2
L1918.18T-1520-C	9.5	M4	18	9	1520	80	40	1.5	8.25	2.8	2
L1918.18T-1600-C	9.5	M4	18	9	1600	80	40	1.5	8.25	2.8	2
L1918.18T-1680-C	9.5	M4	18	9	1680	80	40	1.5	8.25	2.8	2
L1918.18T-1760-C	9.5	M4	18	9	1760	80	40	1.5	8.25	2.8	2
L1918.18T-1840-C	9.5	M4	18	9	1840	80	40	1.5	8.25	2.8	2
L1918.18T-1920-C	9.5	M4	18	9	1920	80	40	1.5	8.25	2.8	2
L1918.18T-2000-C	9.5	M4	18	9	2000	80	40	1.5	8.25	2.8	2
L1918.18T-2080-C	9.5	M4	18	9	2080	80	40	1.5	8.25	2.8	2
L1918.18T-2160-C	9.5	M4	18	9	2160	80	40	1.5	8.25	2.8	2
L1918.18T-2240-C	9.5	M4	18	9	2240	80	40	1.5	8.25	2.8	2
L1918.18T-2320-C	9.5	M4	18	9	2320	80	40	1.5	8.25	2.8	2
L1918.18T-2400-C	9.5	M4	18	9	2400	80	40	1.5	8.25	2.8	2
L1918.18T-2480-C	9.5	M4	18	9	2480	80	40	1.5	8.25	2.8	2
L1918.18T-2560-C	9.5	M4	18	9	2560	80	40	1.5	8.25	2.8	2

Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1918.18T-2640-C	9.5	M4	18	9	2640	80	40	1.5	8.25	2.8	2
L1918.18T-2720-C	9.5	M4	18	9	2720	80	40	1.5	8.25	2.8	2
L1918.18T-2800-C	9.5	M4	18	9	2800	80	40	1.5	8.25	2.8	2
L1918.18T-2880-C	9.5	M4	18	9	2880	80	40	1.5	8.25	2.8	2
L1918.18T-2960-C	9.5	M4	18	9	2960	80	40	1.5	8.25	2.8	2
L1918.18T-3040-C	9.5	M4	18	9	3040	80	40	1.5	8.25	2.8	2

Light Duty U Rail
counterbored holes



L1918.18U-C



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

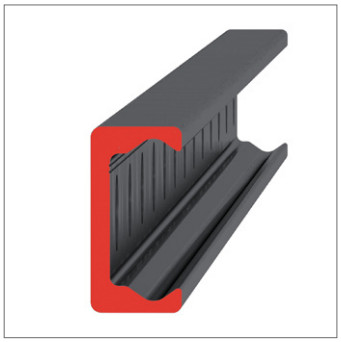
Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the U-C counterbored rail type (most popular), which is usually used with a corresponding T-C rail.
Special low profile Torx head screws provided free of charge.
Weight: 0,55 Kg/m.

Tips
Standard carriages are the L1918.CL series.

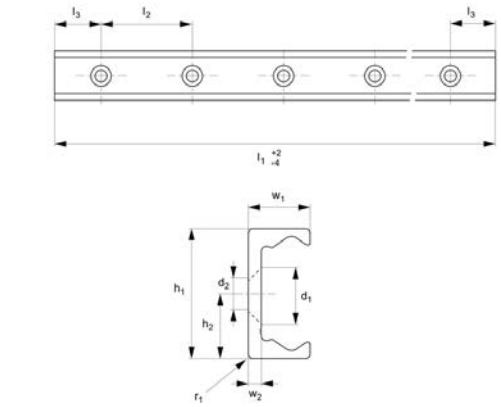
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1918.18U-0160-C	9.5	M4	18	9	160	80	40	1	8.25	2.6	1.9
L1918.18U-0240-C	9.5	M4	18	9	240	80	40	1	8.25	2.6	1.9
L1918.18U-0320-C	9.5	M4	18	9	320	80	40	1	8.25	2.6	1.9
L1918.18U-0400-C	9.5	M4	18	9	400	80	40	1	8.25	2.6	1.9
L1918.18U-0480-C	9.5	M4	18	9	480	80	40	1	8.25	2.6	1.9
L1918.18U-0560-C	9.5	M4	18	9	560	80	40	1	8.25	2.6	1.9
L1918.18U-0640-C	9.5	M4	18	9	640	80	40	1	8.25	2.6	1.9
L1918.18U-0720-C	9.5	M4	18	9	720	80	40	1	8.25	2.8	1.9
L1918.18U-0800-C	9.5	M4	18	9	800	80	40	1	8.25	2.6	1.9
L1918.18U-0880-C	9.5	M4	18	9	880	80	40	1	8.25	2.6	1.9
L1918.18U-0960-C	9.5	M4	18	9	960	80	40	1	8.25	2.6	1.9
L1918.18U-1040-C	9.5	M4	18	9	1040	80	40	1	8.25	2.6	1.9
L1918.18U-1120-C	9.5	M4	18	9	1120	80	40	1	8.25	2.6	1.9
L1918.18U-1200-C	9.5	M4	18	9	1200	80	40	1	8.25	2.6	1.9
L1918.18U-1280-C	9.5	M4	18	9	1280	80	40	1	8.25	2.6	1.9
L1918.18U-1360-C	9.5	M4	18	9	1360	80	40	1	8.25	2.6	1.9
L1918.18U-1440-C	9.5	M4	18	9	1440	80	40	1	8.25	2.6	1.9
L1918.18U-1520-C	9.5	M4	18	9	1520	80	40	1	8.25	2.6	1.9
L1918.18U-1600-C	9.5	M4	18	9	1600	80	40	1	8.25	2.6	1.9
L1918.18U-1680-C	9.5	M4	18	9	1680	80	40	1	8.25	2.6	1.9
L1918.18U-1760-C	9.5	M4	18	9	1760	80	40	1	8.25	2.6	1.9
L1918.18U-1840-C	9.5	M4	18	9	1840	80	40	1	8.25	2.6	1.9
L1918.18U-1920-C	9.5	M4	18	9	1920	80	40	1	8.25	2.6	1.9
L1918.18U-2000-C	9.5	M4	18	9	2000	80	40	1	8.25	2.6	1.9
L1918.18U-2080-C	9.5	M4	18	9	2080	80	40	1	8.25	2.6	1.9
L1918.18U-2160-C	9.5	M4	18	9	2160	80	40	1	8.25	2.6	1.9
L1918.18U-2240-C	9.5	M4	18	9	2240	80	40	1	8.25	2.6	1.9
L1918.18U-2320-C	9.5	M4	18	9	2320	80	40	1	8.25	2.6	1.9
L1918.18U-2400-C	9.5	M4	18	9	2400	80	40	1	8.25	2.6	1.9
L1918.18U-2480-C	9.5	M4	18	9	2480	80	40	1	8.25	2.6	1.9
L1918.18U-2560-C	9.5	M4	18	9	2560	80	40	1	8.25	2.6	1.9

Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1918.18U-2640-C	9.5	M4	18	9	2640	80	40	1	8.25	2.6	1.9
L1918.18U-2720-C	9.5	M4	18	9	2720	80	40	1	8.25	2.6	1.9
L1918.18U-2800-C	9.5	M4	18	9	2800	80	40	1	8.25	2.6	1.9
L1918.18U-2880-C	9.5	M4	18	9	2880	80	40	1	8.25	2.6	1.9
L1918.18U-2960-C	9.5	M4	18	9	2960	80	40	1	8.25	2.6	1.9
L1918.18U-3040-C	9.5	M4	18	9	3040	80	40	1	8.25	2.6	1.9

Light Duty T Rail
countersunk holes



L1918.18T-V



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rails (allows for misaligment).
This is the T-V countersunk rail which is usually used with a corresponding U-V rail.
For fixing use countersunk DIN 7991 screws.
Weight: 0,55 Kg/m.

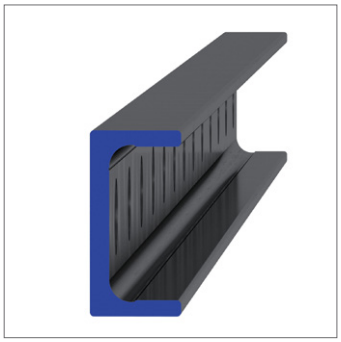
Tips
Standard carriages are the L1918.CL series.

Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1918.18T-0160-V	M4	18	9	160	80	40	1.5	8.25	2.8
L1918.18T-0240-V	M4	18	9	240	80	40	1.5	8.25	2.8
L1918.18T-0320-V	M4	18	9	320	80	40	1.5	8.25	2.8
L1918.18T-0400-V	M4	18	9	400	80	40	1.5	8.25	2.8
L1918.18T-0480-V	M4	18	9	480	80	40	1.5	8.25	2.8
L1918.18T-0560-V	M4	18	9	560	80	40	1.5	8.25	2.8
L1918.18T-0640-V	M4	18	9	640	80	40	1.5	8.25	2.8
L1918.18T-0720-V	M4	18	9	720	80	40	1.5	8.25	2.8
L1918.18T-0800-V	M4	18	9	800	80	40	1.5	8.25	2.8
L1918.18T-0880-V	M4	18	9	880	80	40	1.5	8.25	2.8
L1918.18T-0960-V	M4	18	9	960	80	40	1.5	8.25	2.8
L1918.18T-1040-V	M4	18	9	1040	80	40	1.5	8.25	2.8
L1918.18T-1120-V	M4	18	9	1120	80	40	1.5	8.25	2.8
L1918.18T-1200-V	M4	18	9	1200	80	40	1.5	8.25	2.8
L1918.18T-1280-V	M4	18	9	1280	80	40	1.5	8.25	2.8
L1918.18T-1360-V	M4	18	9	1360	80	40	1.5	8.25	2.8
L1918.18T-1440-V	M4	18	9	1440	80	40	1.5	8.25	2.8
L1918.18T-1520-V	M4	18	9	1520	80	40	1.5	8.25	2.8
L1918.18T-1600-V	M4	18	9	1600	80	40	1.5	8.25	2.8
L1918.18T-1680-V	M4	18	9	1680	80	40	1.5	8.25	2.8
L1918.18T-1760-V	M4	18	9	1760	80	40	1.5	8.25	2.8
L1918.18T-1840-V	M4	18	9	1840	80	40	1.5	8.25	2.8
L1918.18T-1920-V	M4	18	9	1920	80	40	1.5	8.25	2.8
L1918.18T-2000-V	M4	18	9	2000	80	40	1.5	8.25	2.8
L1918.18T-2080-V	M4	18	9	2080	80	40	1.5	8.25	2.8
L1918.18T-2160-V	M4	18	9	2160	80	40	1.5	8.25	2.8
L1918.18T-2240-V	M4	18	9	2240	80	40	1.5	8.25	2.8
L1918.18T-2320-V	M4	18	9	2320	80	40	1.5	8.25	2.8
L1918.18T-2400-V	M4	18	9	2400	80	40	1.5	8.25	2.8
L1918.18T-2480-V	M4	18	9	2480	80	40	1.5	8.25	2.8
L1918.18T-2560-V	M4	18	9	2560	80	40	1.5	8.25	2.8

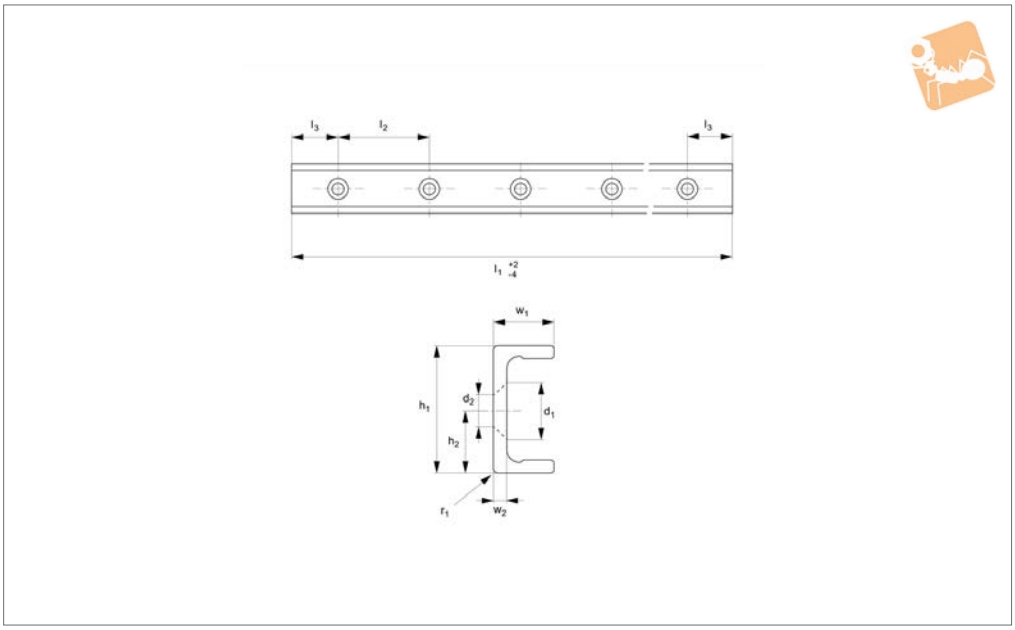


Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1918.18T-2640-V	M4	18	9	2640	80	40	1.5	8.25	2.8
L1918.18T-2720-V	M4	18	9	2720	80	40	1.5	8.25	2.8
L1918.18T-2800-V	M4	18	9	2800	80	40	1.5	8.25	2.8
L1918.18T-2880-V	M4	18	9	2880	80	40	1.5	8.25	2.8
L1918.18T-2960-V	M4	18	9	2960	80	40	1.5	8.25	2.8
L1918.18T-3040-V	M4	18	9	3040	80	40	1.5	8.25	2.8

Light Duty U Rail
countersunk holes



L1918.18U-V



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the U-V countersunk rail type which is usually used with a corresponding T-V rail.
For fixing use countersunk DIN 7991 screws.
Weight: 0,55 Kg/m.

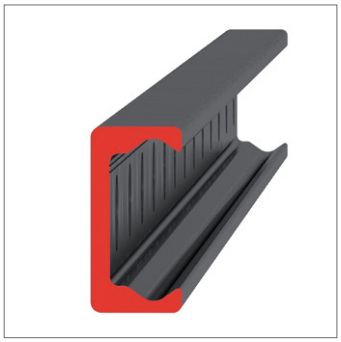
Tips
Standard carriages are the L1918.CL series.

Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1918.18U-0160-V	M4	18	9	160	80	40	1	8.25	2.6
L1918.18U-0240-V	M4	18	9	240	80	40	1	8.25	2.6
L1918.18U-0320-V	M4	18	9	320	80	40	1	8.25	2.6
L1918.18U-0400-V	M4	18	9	400	80	40	1	8.25	2.6
L1918.18U-0480-V	M4	18	9	480	80	40	1	8.25	2.6
L1918.18U-0560-V	M4	18	9	560	80	40	1	8.25	2.6
L1918.18U-0640-V	M4	18	9	640	80	40	1	8.25	2.6
L1918.18U-0720-V	M4	18	9	720	80	40	1	8.25	2.6
L1918.18U-0800-V	M4	18	9	800	80	40	1	8.25	2.6
L1918.18U-0880-V	M4	18	9	880	80	40	1	8.25	2.6
L1918.18U-0960-V	M4	18	9	960	80	40	1	8.25	2.6
L1918.18U-1040-V	M4	18	9	1040	80	40	1	8.25	2.6
L1918.18U-1120-V	M4	18	9	1120	80	40	1	8.25	2.6
L1918.18U-1200-V	M4	18	9	1200	80	40	1	8.25	2.6
L1918.18U-1280-V	M4	18	9	1280	80	40	1	8.25	2.6
L1918.18U-1360-V	M4	18	9	1360	80	40	1	8.25	2.6
L1918.18U-1440-V	M4	18	9	1440	80	40	1	8.25	2.6
L1918.18U-1520-V	M4	18	9	1520	80	40	1	8.25	2.6
L1918.18U-1600-V	M4	18	9	1600	80	40	1	8.25	2.6
L1918.18U-1680-V	M4	18	9	1680	80	40	1	8.25	2.6
L1918.18U-1760-V	M4	18	9	1760	80	40	1	8.25	2.6
L1918.18U-1840-V	M4	18	9	1840	80	40	1	8.25	2.6
L1918.18U-1920-V	M4	18	9	1920	80	40	1	8.25	2.6
L1918.18U-2000-V	M4	18	9	2000	80	40	1	8.25	2.6
L1918.18U-2080-V	M4	18	9	2080	80	40	1	8.25	2.6
L1918.18U-2160-V	M4	18	9	2160	80	40	1	8.25	2.6
L1918.18U-2240-V	M4	18	9	2240	80	40	1	8.25	2.6
L1918.18U-2320-V	M4	18	9	2320	80	40	1	8.25	2.6
L1918.18U-2400-V	M4	18	9	2400	80	40	1	8.25	2.6
L1918.18U-2480-V	M4	18	9	2480	80	40	1	8.25	2.6
L1918.18U-2560-V	M4	18	9	2560	80	40	1	8.25	2.6

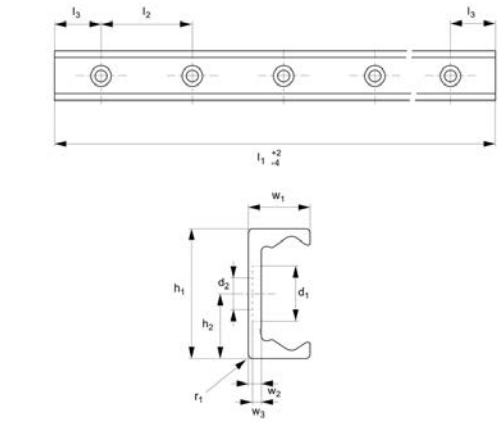


Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1918.18U-2640-V	M4	18	9	2640	80	40	1	8.25	2.6
L1918.18U-2720-V	M4	18	9	2720	80	40	1	8.25	2.6
L1918.18U-2800-V	M4	18	9	2800	80	40	1	8.25	2.6
L1918.18U-2880-V	M4	18	9	2880	80	40	1	8.25	2.6
L1918.18U-2960-V	M4	18	9	2960	80	40	1	8.25	2.6
L1918.18U-3040-V	M4	18	9	3040	80	40	1	8.25	2.6

Light Duty T Rail
counterbored holes



L1918.TLC18



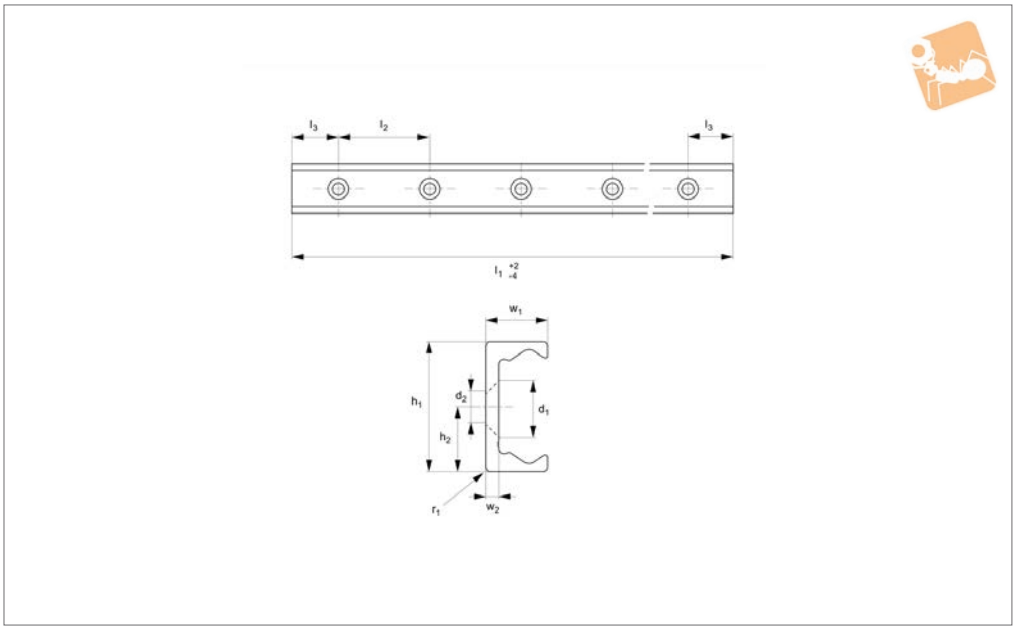
Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

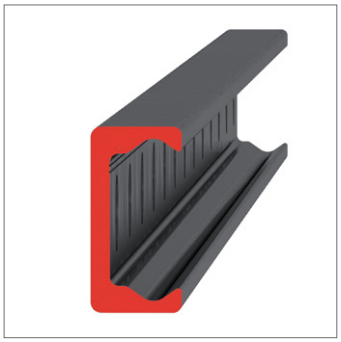
Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for system misalignment).
This is the counterbored rail type (most popular), which is usually used with a corresponding ULC rail.
Special low profile Torx head screws provided free of charge.

Weight: 0,55 Kg/m.

Tips
Standard carriages are the L1918.N versions (die cast aluminium alloy with wipers). Alternatively the L1918.C type is also available (without wipers).

Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2	w_3
L1918.TLC18-0160	9.5	M4	18	9	160	80	40	1.5	8.25	2.8	2
L1918.TLC18-0240	9.5	M4	18	9	240	80	40	1.5	8.25	2.8	2
L1918.TLC18-0320	9.5	M4	18	9	320	80	40	1.5	8.25	2.8	2
L1918.TLC18-0400	9.5	M4	18	9	400	80	40	1.5	8.25	2.8	2
L1918.TLC18-0480	9.5	M4	18	9	480	80	40	1.5	8.25	2.8	2
L1918.TLC18-0560	9.5	M4	18	9	560	80	40	1.5	8.25	2.8	2
L1918.TLC18-0640	9.5	M4	18	9	640	80	40	1.5	8.25	2.8	2
L1918.TLC18-0720	9.5	M4	18	9	720	80	40	1.5	8.25	2.8	2
L1918.TLC18-0800	9.5	M4	18	9	800	80	40	1.5	8.25	2.8	2
L1918.TLC18-0880	9.5	M4	18	9	880	80	40	1.5	8.25	2.8	2
L1918.TLC18-0960	9.5	M4	18	9	960	80	40	1.5	8.25	2.8	2
L1918.TLC18-1040	9.5	M4	18	9	1040	80	40	1.5	8.25	2.8	2
L1918.TLC18-1120	9.5	M4	18	9	1120	80	40	1.5	8.25	2.8	2
L1918.TLC18-1200	9.5	M4	18	9	1200	80	40	1.5	8.25	2.8	2
L1918.TLC18-1280	9.5	M4	18	9	1280	80	40	1.5	8.25	2.8	2
L1918.TLC18-1360	9.5	M4	18	9	1360	80	40	1.5	8.25	2.8	2
L1918.TLC18-1440	9.5	M4	18	9	1440	80	40	1.5	8.25	2.8	2
L1918.TLC18-1520	9.5	M4	18	9	1520	80	40	1.5	8.25	2.8	2
L1918.TLC18-1600	9.5	M4	18	9	1600	80	40	1.5	8.25	2.8	2
L1918.TLC18-1680	9.5	M4	18	9	1680	80	40	1.5	8.25	2.8	2
L1918.TLC18-1760	9.5	M4	18	9	1760	80	40	1.5	8.25	2.8	2
L1918.TLC18-1840	9.5	M4	18	9	1840	80	40	1.5	8.25	2.8	2
L1918.TLC18-1920	9.5	M4	18	9	1920	80	40	1.5	8.25	2.8	2
L1918.TLC18-2000	9.5	M4	18	9	2000	80	40	1.5	8.25	2.8	2





L1918.TLV18

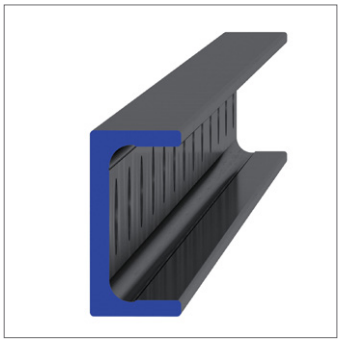
Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rails (allows for misalignment).
This is the TLV countersunk rail which is usually used with a corresponding ULV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 0,55 Kg/m.

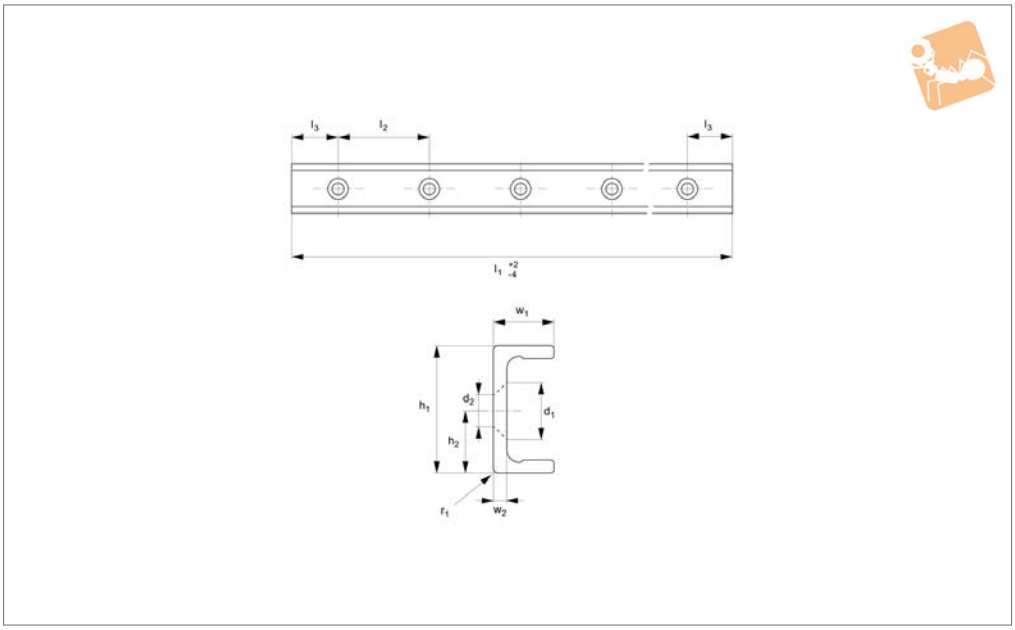
Tips
Standard carriages are the L1918.N versions (die cast aluminium alloy with wipers). Alternatively the L1918.C type is also available (without wipers).

Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1918.TLV18-0160	M4	18	9	160	80	40	1.5	8.25	2.8
L1918.TLV18-0240	M4	18	9	240	80	40	1.5	8.25	2.8
L1918.TLV18-0320	M4	18	9	320	80	40	1.5	8.25	2.8
L1918.TLV18-0400	M4	18	9	400	80	40	1.5	8.25	2.8
L1918.TLV18-0480	M4	18	9	480	80	40	1.5	8.25	2.8
L1918.TLV18-0560	M4	18	9	560	80	40	1.5	8.25	2.8
L1918.TLV18-0640	M4	18	9	640	80	40	1.5	8.25	2.8
L1918.TLV18-0720	M4	18	9	720	80	40	1.5	8.25	2.8
L1918.TLV18-0800	M4	18	9	800	80	40	1.5	8.25	2.8
L1918.TLV18-0880	M4	18	9	880	80	40	1.5	8.25	2.8
L1918.TLV18-0960	M4	18	9	960	80	40	1.5	8.25	2.8
L1918.TLV18-1040	M4	18	9	1040	80	40	1.5	8.25	2.8
L1918.TLV18-1120	M4	18	9	1120	80	40	1.5	8.25	2.8
L1918.TLV18-1200	M4	18	9	1200	80	40	1.5	8.25	2.8
L1918.TLV18-1280	M4	18	9	1280	80	40	1.5	8.25	2.8
L1918.TLV18-1360	M4	18	9	1360	80	40	1.5	8.25	2.8
L1918.TLV18-1440	M4	18	9	1440	80	40	1.5	8.25	2.8
L1918.TLV18-1520	M4	18	9	1520	80	40	1.5	8.25	2.8
L1918.TLV18-1600	M4	18	9	1600	80	40	1.5	8.25	2.8
L1918.TLV18-1680	M4	18	9	1680	80	40	1.5	8.25	2.8
L1918.TLV18-1760	M4	18	9	1760	80	40	1.5	8.25	2.8
L1918.TLV18-1840	M4	18	9	1840	80	40	1.5	8.25	2.8
L1918.TLV18-1920	M4	18	9	1920	80	40	1.5	8.25	2.8
L1918.TLV18-2000	M4	18	9	2000	80	40	1.5	8.25	2.8

Light Duty U Rail
countersunk holes



L1918.ULV18

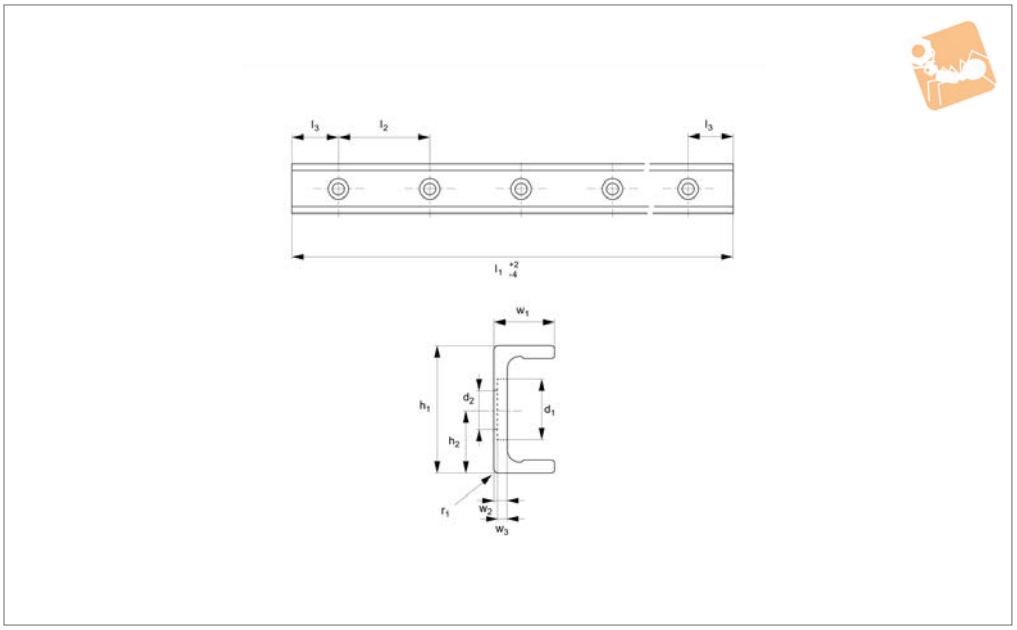


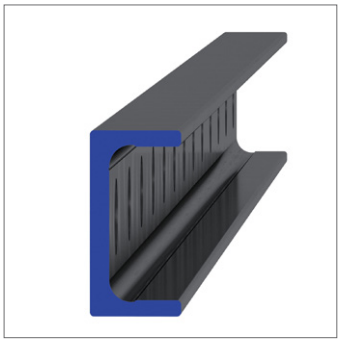
Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULV countersunk rail type which is usually used with a corresponding TLV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 0,55 Kg/m.

Tips
Standard carriages are the L1918.N versions (die cast aluminium alloy with wipers). Alternatively the L1918.C type is also available (without wipers).

Order No.	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1918.ULV18-0160	M4	18	9	160	80	40	1	8.25	2.6
L1918.ULV18-0240	M4	18	9	240	80	40	1	8.25	2.6
L1918.ULV18-0320	M4	18	9	320	80	40	1	8.25	2.6
L1918.ULV18-0400	M4	18	9	400	80	40	1	8.25	2.6
L1918.ULV18-0480	M4	18	9	480	80	40	1	8.25	2.6
L1918.ULV18-0560	M4	18	9	560	80	40	1	8.25	2.6
L1918.ULV18-0640	M4	18	9	640	80	40	1	8.25	2.6
L1918.ULV18-0720	M4	18	9	720	80	40	1	8.25	2.6
L1918.ULV18-0800	M4	18	9	800	80	40	1	8.25	2.6
L1918.ULV18-0880	M4	18	9	880	80	40	1	8.25	2.6
L1918.ULV18-0960	M4	18	9	960	80	40	1	8.25	2.6
L1918.ULV18-1040	M4	18	9	1040	80	40	1	8.25	2.6
L1918.ULV18-1120	M4	18	9	1120	80	40	1	8.25	2.6
L1918.ULV18-1200	M4	18	9	1200	80	40	1	8.25	2.6
L1918.ULV18-1280	M4	18	9	1280	80	40	1	8.25	2.6
L1918.ULV18-1360	M4	18	9	1360	80	40	1	8.25	2.6
L1918.ULV18-1440	M4	18	9	1440	80	40	1	8.25	2.6
L1918.ULV18-1520	M4	18	9	1520	80	40	1	8.25	2.6
L1918.ULV18-1600	M4	18	9	1600	80	40	1	8.25	2.6
L1918.ULV18-1680	M4	18	9	1680	80	40	1	8.25	2.6
L1918.ULV18-1760	M4	18	9	1760	80	40	1	8.25	2.6
L1918.ULV18-1840	M4	18	9	1840	80	40	1	8.25	2.6
L1918.ULV18-1920	M4	18	9	1920	80	40	1	8.25	2.6
L1918.ULV18-2000	M4	18	9	2000	80	40	1	8.25	2.6





L1918.ULC18

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULC counterbored rail type (most popular), which is usually used with a corresponding TLC rail.
Special low profile Torx head screws provided free of charge.
Weight: 0,55 Kg/m.

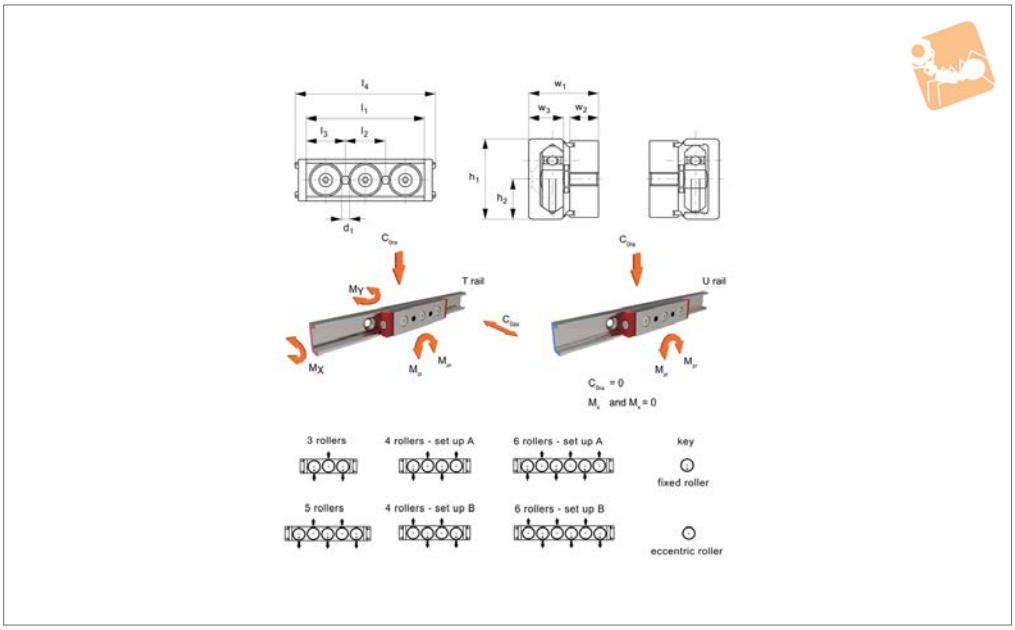
Tips
Standard carriages are the L1918.N versions (die cast aluminium alloy with wipers). Alternatively the L1918.C type is also available (without wipers).

Order No.	d_1	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1918.ULC18-0160	9.5	M4	18	9	160	80	40	1	8.25	2.6	1.9
L1918.ULC18-0240	9.5	M4	18	9	240	80	40	1	8.25	2.6	1.9
L1918.ULC18-0320	9.5	M4	18	9	320	80	40	1	8.25	2.6	1.9
L1918.ULC18-0400	9.5	M4	18	9	400	80	40	1	8.25	2.6	1.9
L1918.ULC18-0480	9.5	M4	18	9	480	80	40	1	8.25	2.6	1.9
L1918.ULC18-0560	9.5	M4	18	9	560	80	40	1	8.25	2.6	1.9
L1918.ULC18-0640	9.5	M4	18	9	640	80	40	1	8.25	2.6	1.9
L1918.ULC18-0720	9.5	M4	18	9	720	80	40	1	8.25	2.8	1.9
L1918.ULC18-0800	9.5	M4	18	9	800	80	40	1	8.25	2.6	1.9
L1918.ULC18-0880	9.5	M4	18	9	880	80	40	1	8.25	2.6	1.9
L1918.ULC18-0960	9.5	M4	18	9	960	80	40	1	8.25	2.6	1.9
L1918.ULC18-1040	9.5	M4	18	9	1040	80	40	1	8.25	2.6	1.9
L1918.ULC18-1120	9.5	M4	18	9	1120	80	40	1	8.25	2.6	1.9
L1918.ULC18-1200	9.5	M4	18	9	1200	80	40	1	8.25	2.6	1.9
L1918.ULC18-1280	9.5	M4	18	9	1280	80	40	1	8.25	2.6	1.9
L1918.ULC18-1360	9.5	M4	18	9	1360	80	40	1	8.25	2.6	1.9
L1918.ULC18-1440	9.5	M4	18	9	1440	80	40	1	8.25	2.6	1.9
L1918.ULC18-1520	9.5	M4	18	9	1520	80	40	1	8.25	2.6	1.9
L1918.ULC18-1600	9.5	M4	18	9	1600	80	40	1	8.25	2.6	1.9
L1918.ULC18-1680	9.5	M4	18	9	1680	80	40	1	8.25	2.6	1.9
L1918.ULC18-1760	9.5	M4	18	9	1760	80	40	1	8.25	2.6	1.9
L1918.ULC18-1840	9.5	M4	18	9	1840	80	40	1	8.25	2.6	1.9
L1918.ULC18-1920	9.5	M4	18	9	1920	80	40	1	8.25	2.6	1.9
L1918.ULC18-2000	9.5	M4	18	9	2000	80	40	1	8.25	2.6	1.9

Medium Duty Sliders, size 28
side seal, front fixing, with wiper



L1928.CL



Material
Zinc plated steel body.
Steel rollers (100Cr6) with rubber seals.

Technical Notes
To be used with compact rail size 28H.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
The U rail sliders cannot accept axial loads.
The 3 and 5 bearing sliders can be used either way up in the rail dependent on where the loads will be applied.
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	d_1	h_1	h_2	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm
L1928.28CL-080-T	T	3	M5	28	14	80	35	22.5	94	6.4	16.4
L1928.28CL-080-U	U	3	M5	28	14	80	35	22.5	94	0	0
L1928.28CL-100-TA	T	4	M5	28	14	100	50	25.0	114	11.8	22.3
L1928.28CL-100-UA	U	4	M5	28	14	100	50	25.0	114	0	0
L1928.28CL-100-TB	T	4	M5	28	14	100	50	25.0	114	11.8	22.3
L1928.28CL-100-UB	U	4	M5	28	14	100	50	25.0	114	0	0
L1928.28CL-125-T	T	5	M5	28	14	125	25	25.0	139	11.8	30.0
L1928.28CL-125-U	U	5	M5	28	14	125	25	25.0	139	0	0
L1928.28CL-150-TA	T	6	M5	28	14	150	50	25.0	164	14.1	37.3
L1928.28CL-150-UA	U	6	M5	28	14	150	50	25.0	164	0	0
L1928.28CL-150-TB	T	6	M5	28	14	150	50	25.0	164	14.1	37.3
L1928.28CL-150-UB	U	6	M5	28	14	150	50	25.0	164	0	0

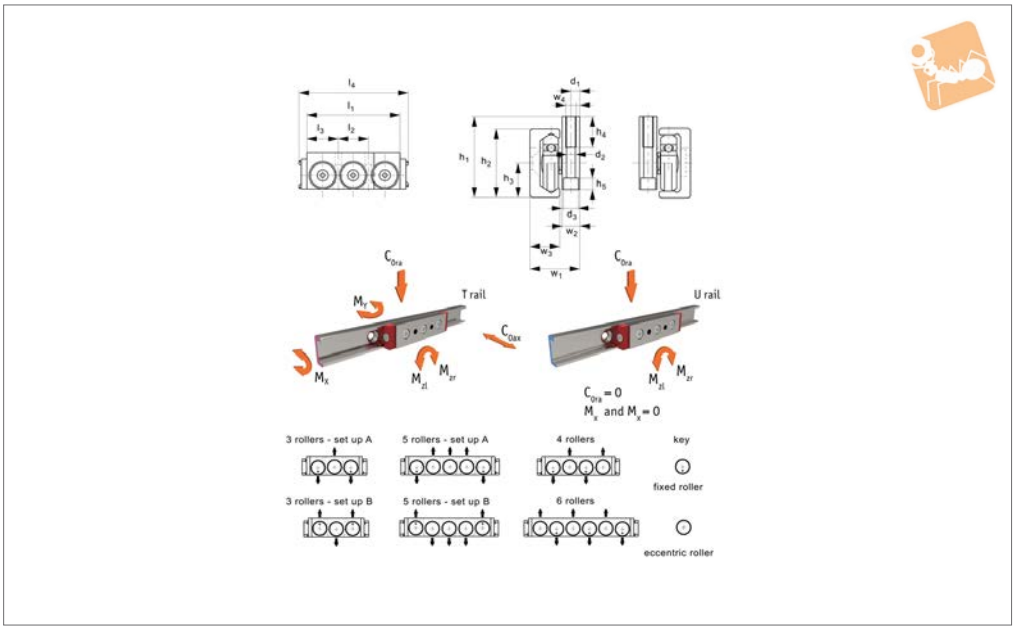
Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	w_3	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1928.28CL-080-T	28.0	28.0	24.1	10	12.3	4345	652	2213
L1928.28CL-080-U	28.0	28.0	24.1	10	12.3	4345	0	2213
L1928.28CL-100-TA	28.0	84.1	24.1	10	12.3	4345	765	2213
L1928.28CL-100-UA	28.0	84.1	24.1	10	12.3	4345	0	2213
L1928.28CL-100-TB	84.1	27.2	24.1	10	12.3	4345	765	2213
L1928.28CL-100-UB	84.1	27.2	24.1	10	12.3	4345	0	2213
L1928.28CL-125-T	84.1	84.1	24.1	10	12.3	5160	919	2630
L1928.28CL-125-U	84.1	84.1	24.1	10	12.3	5160	0	2630
L1928.28CL-150-TA	84.1	140.0	24.1	10	12.3	5160	1102	2630

Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	w_3	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1928.28CL-150-UA	84.1	140.0	24.1	10	12.3	5160	0	2630
L1928.28CL-150-TB	140.0	84.1	24.1	10	12.3	5160	1102	2630
L1928.28CL-150-UB	140.0	84.1	24.1	10	12.3	5160	0	2630

Medium Duty Sliders, size 28
no side seal, side fixing, with wiper



L1928.CR



Material
Zinc plated steel body.
Steel rollers (100Cr6) with rubber seals.

Technical Notes
To be used with compact rail size 28H.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	d_1 for screw	d_2	d_3	h_1	h_2	h_3	h_4	h_5	l_1	l_2	l_3	l_4	M_x Nm
L1928.28CR-080-TA	T	3	M6	5.2	9	28	14	32	10	5.5	80	36	22	94	6.4
L1928.28CR-080-UA	U	3	M6	5.2	9	28	14	32	10	5.5	80	36	22	94	0
L1928.28CR-080-TB	T	3	M6	5.2	9	28	14	32	10	5.5	80	36	22	94	6.4
L1928.28CR-080-UB	U	3	M6	5.2	9	28	14	32	10	5.5	80	36	22	94	0
L1928.28CR-100-TA	T	4	M6	5.2	9	28	14	32	10	5.5	100	28	22	114	11.8
L1928.28CR-100-UA	U	4	M6	5.2	9	28	14	32	10	5.5	100	28	22	114	0
L1928.28CR-100-TB	T	4	M6	5.2	9	28	14	32	10	5.5	100	28	22	114	11.8
L1928.28CR-100-UB	U	4	M6	5.2	9	28	14	32	10	5.5	100	28	22	114	0
L1928.28CR-125-TA	T	5	M6	5.2	9	28	14	32	10	5.5	125	27	22	139	11.8
L1928.28CR-125-UA	U	5	M6	5.2	9	28	14	32	10	5.5	125	27	22	139	0
L1928.28CR-125-TB	T	5	M6	5.2	9	28	14	32	10	5.5	125	27	22	139	11.8
L1928.28CR-125-UB	U	5	M6	5.2	9	28	14	32	10	5.5	125	27	22	139	0
L1928.28CR-150-TA	T	6	M6	5.2	9	28	14	32	10	5.5	150	27	22	164	14.1
L1928.28CR-150-UA	U	6	M6	5.2	9	28	14	32	10	5.5	150	27	22	164	0
L1928.28CR-150-TB	T	6	M6	5.2	9	28	14	32	10	5.5	150	27	22	164	14.1
L1928.28CR-150-UB	U	6	M6	5.2	9	28	14	32	10	5.5	150	27	22	164	0

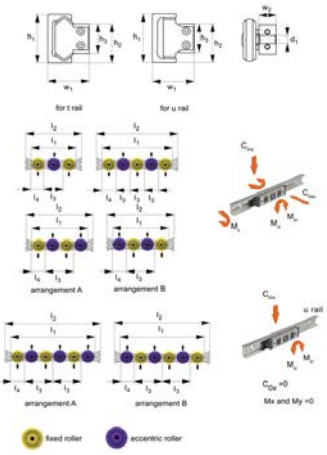
Order No.	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1	w_2	w_3	w_4	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1928.28CR-080-TA	16.4	28.0	28.0	24.1	10	12.3	5	4345	652	2213
L1928.28CR-080-UA	0	28.0	28.0	24.1	10	12.3	5	4345	0	2213
L1928.28CR-080-TB	16.4	28.0	28.0	24.1	10	12.3	5	4345	652	2213
L1928.28CR-080-UB	0	28.0	28.0	24.1	10	12.3	5	4345	0	2213
L1928.28CR-100-TA	22.3	28.0	84.1	24.1	10	12.3	5	4345	765	2213

Order No.	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1	w_2	w_3	w_4	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1928.28CR-100-UA	0	28.0	84.1	24.1	10	12.3	5	4345	0	2213
L1928.28CR-100-TB	22.3	84.1	28.0	24.1	10	12.3	5	4345	765	2213
L1928.28CR-100-UB	0	84.1	28.0	24.1	10	12.3	5	4345	0	2213
L1928.28CR-125-TA	30.0	84.1	84.1	24.1	10	12.3	5	5160	919	2630
L1928.28CR-125-UA	0	84.1	84.1	24.1	10	12.3	5	5160	0	2630
L1928.28CR-125-TB	30.0	84.1	84.1	24.1	10	12.3	5	5160	919	2630
L1928.28CR-125-UB	0	84.1	84.1	24.1	10	12.3	5	5160	0	2630
L1928.28CR-150-TA	37.3	84.1	140.0	24.1	10	12.3	5	5160	1102	2630
L1928.28CR-150-UA	0	84.1	140.0	24.1	10	12.3	5	5160	0	2630
L1928.28CR-150-TB	37.3	140.0	84.1	24.1	10	12.3	5	5160	1102	2630
L1928.28CR-150-UB	0	140.0	84.1	24.1	10	12.3	5	5160	0	2630

Medium Duty Sliders, size 28
no side seal, front fixing



L1928.CSW



Material
Zinc plated steel body.
Steel rollers (100Cr6) with metal (2Z) or rubber (2RS) seals.

Technical Notes
To be used with compact rail size 28.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).
Unlike the N series sliders these CSW sliders do not have protective side seals.

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.25|-0.10	h_2 +0|-0.10	h_3 +0.05|-0.35	Weight kg
L1928.CSW28-080-2ZT	T	3	Metal	4260	640	2170	M5	28	14.9	21.7	0.115
L1928.CSW28-080-2ZU	U	3	Metal	4260	0	2170	M5	28	14.9	21.7	0.115
L1928.CSW28-100-2ZTA	T	4	Metal	4260	750	2170	M5	28	14.9	21.7	0.195
L1928.CSW28-100-2ZUA	U	4	Metal	4260	0	2170	M5	28	14.9	21.7	0.195
L1928.CSW28-100-2ZTB	T	4	Metal	4260	750	2170	M5	28	14.9	21.7	0.195
L1928.CSW28-100-2ZUB	U	4	Metal	4260	0	2170	M5	28	14.9	21.7	0.195
L1928.CSW28-125-2ZT	T	5	Metal	5065	900	2580	M5	28	14.9	21.7	0.24
L1928.CSW28-125-2ZU	U	5	Metal	5065	0	2580	M5	28	14.9	21.7	0.24
L1928.CSW28-150-2ZTA	T	6	Metal	5065	1070	2580	M5	28	14.9	21.7	0.29
L1928.CSW28-150-2ZUA	U	6	Metal	5065	0	2580	M5	28	14.9	21.7	0.29
L1928.CSW28-150-2ZTB	T	6	Metal	5065	1070	2580	M5	28	14.9	21.7	0.29
L1928.CSW28-150-2ZUB	U	6	Metal	5065	0	2580	M5	28	14.9	21.7	0.29
L1928.CSW28-080-2RST	T	3	Rubber	4260	640	2170	M5	28	14.9	21.7	0.155
L1928.CSW28-080-2RSU	U	3	Rubber	4260	0	2170	M5	28	14.9	21.7	0.155
L1928.CSW28-100-2RSTA	T	4	Rubber	4260	750	2170	M5	28	14.9	21.7	0.195
L1928.CSW28-100-2RSUA	U	4	Rubber	4260	0	2170	M5	28	14.9	21.7	0.195
L1928.CSW28-100-2RSTB	T	4	Rubber	4260	750	2170	M5	28	14.9	21.7	0.195
L1928.CSW28-100-2RSUB	U	4	Rubber	4260	0	2170	M5	28	14.9	21.7	0.195
L1928.CSW28-125-2RST	T	5	Rubber	5065	900	2580	M5	28	14.9	21.7	0.24
L1928.CSW28-125-2RSU	U	5	Rubber	5065	0	2580	M5	28	14.9	21.7	0.24
L1928.CSW28-150-2RSTA	T	6	Rubber	5065	1070	2580	M5	28	14.9	21.7	0.29
L1928.CSW28-150-2RSUA	U	6	Rubber	5065	0	2580	M5	28	14.9	21.7	0.29

Order No.	For rail type	No. of rollers	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.25|-0.10	h_2 +0|-0.10	h_3 +0.05|-0.35	Weight kg
L1928.CSW28-150-2RSTB	T	6	Rubber	5065	1070	2580	M5	28	14.9	21.7	0.29
L1928.CSW28-150-2RSUB	U	6	Rubber	5065	0	2580	M5	28	14.9	21.7	0.29

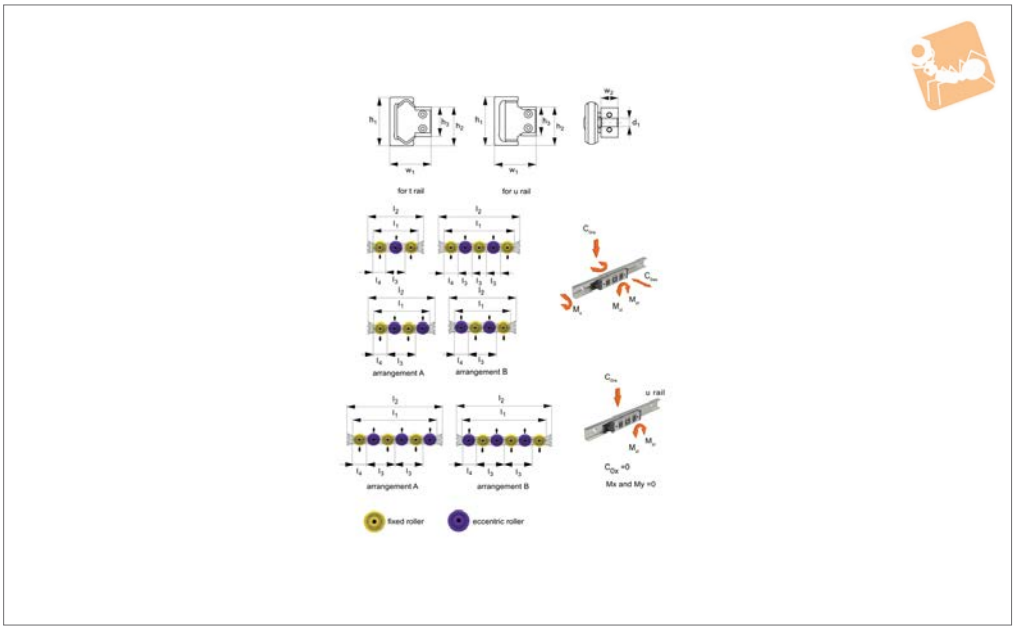
Order No.	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2
L1928.CSW28-080-2ZT	80	100	35	22.5	6.2	16	27.2	27.2	23.9	9.7
L1928.CSW28-080-2ZU	80	100	35	22.5	0	0	27.2	27.2	23.9	9.7
L1928.CSW28-100-2ZTA	100	120	50	25	11.5	21.7	27.2	81.7	23.9	9.7
L1928.CSW28-100-2ZUA	100	120	50	25	0	0	27.2	81.7	23.9	9.7
L1928.CSW28-100-2ZTB	100	120	50	25	11.5	21.7	81.7	27.2	23.9	9.7
L1928.CSW28-100-2ZUB	100	120	50	25	0	0	81.7	27.2	23.9	9.7
L1928.CSW28-125-2ZT	125	145	25	25	11.5	29	81.7	81.7	23.9	9.7
L1928.CSW28-125-2ZU	125	145	25	25	0	0	81.7	81.7	23.9	9.7
L1928.CSW28-150-2ZTA	150	170	50	25	13.7	36.2	81.7	136.1	23.9	9.7
L1928.CSW28-150-2ZUA	150	170	50	25	0	0	81.7	136.1	23.9	9.7
L1928.CSW28-150-2ZTB	150	170	50	25	13.7	36.2	136.1	81.7	23.9	9.7
L1928.CSW28-150-2ZUB	150	170	50	25	0	0	136.1	81.7	23.9	9.7
L1928.CSW28-080-2RST	80	100	35	22.5	6.2	16	27.2	27.2	23.9	9.7
L1928.CSW28-080-2RSU	80	100	35	22.5	0	0	27.2	27.2	23.9	9.7
L1928.CSW28-100-2RSTA	100	120	50	25	11.5	21.7	27.2	81.7	23.9	9.7
L1928.CSW28-100-2RSUA	100	120	50	25	0	0	27.2	81.7	23.9	9.7
L1928.CSW28-100-2RSTB	100	120	50	25	11.5	21.7	81.7	27.2	23.9	9.7
L1928.CSW28-100-2RSUB	100	120	50	25	0	0	81.7	27.2	23.9	9.7
L1928.CSW28-125-2RST	125	145	25	25	11.5	29	81.7	81.7	23.9	9.7
L1928.CSW28-125-2RSU	125	145	25	25	0	0	81.7	81.7	23.9	9.7
L1928.CSW28-150-2RSTA	150	170	50	25	13.7	36.2	81.7	136.1	23.9	9.7
L1928.CSW28-150-2RSUA	150	170	50	25	0	0	81.7	136.1	23.9	9.7
L1928.CSW28-150-2RSTB	150	170	50	25	13.7	36.2	136.1	81.7	23.9	9.7
L1928.CSW28-150-2RSUB	150	170	50	25	0	0	136.1	87.1	23.9	9.7

Medium Duty Sliders - Size 28

no side seal - front fixing - with wiper



L1928.CS



Material

Zinc plated steel body.
Steel rollers (100Cr6) with metal (2Z) or rubber (2RS) seals.

Technical Notes

To be used with compact rail size 28.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).
Unlike the N series sliders these CS sliders do not have protective side seals.

Tips

The U rail sliders cannot accept axial loads.

The 3 and 5 bearing sliders can be used either way up in the rail dependent on where the loads will be applied.
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	Seal type	d_1	h_1 +0.25|-0.10	h_2 +0.0|-0.10	h_3 +0.05|-0.35	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm	Weight g
L1928.28CS-080-2RST	T	3	Rubber	M5	28	14.9	21.7	80	100	35	22.5	6.2	16	0.15
L1928.28CS-080-2RSU	U	3	Rubber	M5	28	14.9	21.7	80	100	35	22.5	0	0	0.15
L1928.28CS-100-2RSTA	T	4	Rubber	M5	28	14.9	21.7	100	120	50	25	11.5	21.7	0.19
L1928.28CS-100-2RSUA	U	4	Rubber	M5	28	14.9	21.7	100	120	50	25	0	0	0.19
L1928.28CS-100-2RSTB	T	4	Rubber	M5	28	14.9	21.7	100	120	50	25	11.5	21.7	0.19
L1928.28CS-100-2RSUB	U	4	Rubber	M5	28	14.9	21.7	100	120	50	25	0	0	0.19
L1928.28CS-125-2RST	T	5	Rubber	M5	28	14.9	21.7	125	145	25	25	11.5	29	0.24
L1928.28CS-125-2RSU	U	5	Rubber	M5	28	14.9	21.7	125	145	25	25	0	0	0.24
L1928.28CS-150-2RSTA	T	6	Rubber	M5	28	14.9	21.7	150	170	50	25	13.7	36.2	0.29
L1928.28CS-150-2RSUA	U	6	Rubber	M5	28	14.9	21.7	150	170	50	25	0	0	0.29
L1928.28CS-150-2RSTB	T	6	Rubber	M5	28	14.9	21.7	150	170	50	25	13.7	36.2	0.29
L1928.28CS-150-2RSUB	U	6	Rubber	M5	28	14.9	21.7	150	170	50	25	0	0	0.29

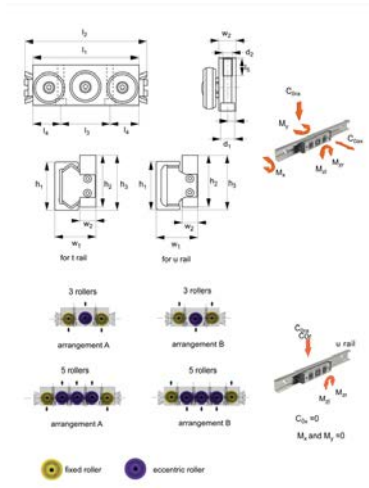
Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Arrangement type	Static load $C_{0\ rad.}$ N max.
L1928.28CS-080-2RST	27.2	27.2	23.9	9.7	4260	640	-	2170
L1928.28CS-080-2RSU	27.2	27.2	23.9	9.7	4260	0	-	2170
L1928.28CS-100-2RSTA	27.2	81.7	23.9	9.7	4260	750	A	2170
L1928.28CS-100-2RSUA	27.2	81.7	23.9	9.7	4260	0	A	2170
L1928.28CS-100-2RSTB	81.7	27.2	23.9	9.7	4260	750	B	2170
L1928.28CS-100-2RSUB	81.7	27.2	23.9	9.7	4260	0	B	2170
L1928.28CS-125-2RST	81.7	81.7	23.9	9.7	5065	900	-	2580
L1928.28CS-125-2RSU	81.7	81.7	23.9	9.7	5065	0	-	2580
L1928.28CS-150-2RSTA	81.7	136.1	23.9	9.7	5065	1070	A	2580
L1928.28CS-150-2RSUA	81.7	136.1	23.9	9.7	5065	0	A	2580
L1928.28CS-150-2RSTB	136.1	81.7	23.9	9.7	5065	1070	B	2580
L1928.28CS-150-2RSUB	136.1	87.1	23.9	9.7	5065	0	B	2580

Medium Duty Sliders - size 28

no side seal - top fixing



L1928.CDW



Material

Zinc plated steel body.
Steel rollers (100Cr6) with metal (2Z) or rubber (2RS) seals.

Technical Notes

To be used with compact rail size 18.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).
Unlike the N series sliders these CDW sliders do not have protective side seals.

Tips

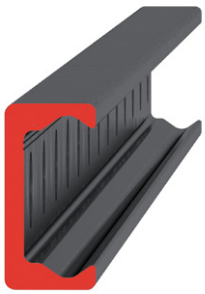
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1 for screw	d_2 thread	h_1 +0.25|-0.10	h_2 +0|-0.50	h_3 +0.05|-0.35	l_1	Weight g
L1928.CDW28-080-2RSTA	T	3	Rubber	4260	640	2170	M5	M6	28	29.9	32	80	0.22
L1928.CDW28-080-2RSUA	U	3	Rubber	4260	0	2170	M5	M6	28	29.9	32	80	0.22
L1928.CDW28-080-2ZTA	T	3	Metal	4260	640	2170	M5	M6	28	29.9	32	80	0.22
L1928.CDW28-080-2ZUA	U	3	Metal	4260	0	2170	M5	M6	28	29.9	32	80	0.22
L1928.CDW28-125-2RSTA	T	5	Rubber	5065	900	2580	M5	M6	28	29.9	32	125	0.30
L1928.CDW28-125-2RSUA	U	5	Rubber	5065	0	2580	M5	M6	28	29.9	32	125	0.30
L1928.CDW28-125-2ZTA	T	5	Metal	5065	900	2580	M5	M6	28	29.9	32	125	0.30
L1928.CDW28-125-2ZUA	U	5	Metal	5065	0	2580	M5	M6	28	29.9	32	125	0.30
L1928.CDW28-080-2RSTB	T	3	Rubber	4260	640	2170	M5	M6	28	29.9	32	80	0.22
L1928.CDW28-080-2RSUB	U	3	Rubber	4260	0	2170	M5	M6	28	29.9	32	80	0.22
L1928.CDW28-080-2ZTB	T	3	Metal	4260	640	2170	M5	M6	28	29.9	32	80	0.22
L1928.CDW28-080-2ZUB	U	3	Metal	4260	0	2170	M5	M6	28	29.9	32	80	0.22
L1928.CDW28-125-2RSTB	T	5	Rubber	5065	900	2580	M5	M6	28	29.9	32	125	0.30
L1928.CDW28-125-2RSUB	U	5	Rubber	5065	0	2580	M5	M6	28	29.9	32	125	0.30

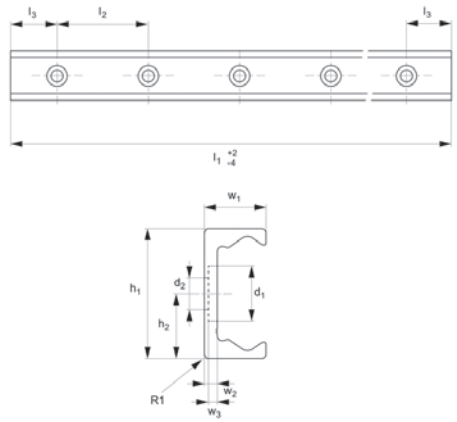
Order No.	For rail type	No. of rollers	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1 for screw	d_2 thread	h_1 +0.25|-0.10	h_2 +0|-0.50	h_3 +0.05|-0.35	l_1	Weight g
L1928.CDW28-125-2ZTB	T	5	Metal	5065	900	2580	M5	M6	28	29.9	32	125	0.30
L1928.CDW28-125-2ZUB	U	5	Metal	5065	0	2580	M5	M6	28	29.9	32	125	0.30

Order No.	l_2	l_3	l_4	l_5	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.20	w_2	w_3	No. of holes	Arrangement type
L1928.CDW28-080-2RSTA	100	36	22	15	6.2	16	27.2	27.2	24.1	9.9	4.9	2	A
L1928.CDW28-080-2RSUA	100	36	22	15	0	0	27.2	27.2	24.1	9.9	4.9	2	A
L1928.CDW28-080-2ZTA	100	36	22	15	6.2	16	27.2	27.2	24.1	9.9	4.9	2	A
L1928.CDW28-080-2ZUA	100	36	22	15	0	0	27.2	27.2	24.1	9.9	4.9	2	A
L1928.CDW28-125-2RSTA	145	27	22	15	11.5	29	81.7	81.7	24.1	9.9	4.9	4	A
L1928.CDW28-125-2RSUA	145	27	22	15	0	0	81.7	81.7	24.1	9.9	4.9	4	A
L1928.CDW28-125-2ZTA	145	27	22	15	11.5	29	81.7	81.7	24.1	9.9	4.9	4	A
L1928.CDW28-125-2ZUA	145	27	22	15	0	0	81.7	81.7	24.1	9.9	4.9	4	A
L1928.CDW28-080-2RSTB	100	36	22	15	6.2	16	27.2	27.2	24.1	9.9	4.9	2	B
L1928.CDW28-080-2RSUB	100	36	22	15	0	0	27.2	27.2	24.1	9.9	4.9	2	B
L1928.CDW28-080-2ZTB	100	36	22	15	6.2	16	27.2	27.2	24.1	9.9	4.9	2	B
L1928.CDW28-080-2ZUB	100	36	22	15	0	0	27.2	27.2	24.1	9.9	4.9	2	B
L1928.CDW28-125-2RSTB	145	27	22	15	11.5	29	81.7	81.7	24.1	9.9	4.9	4	B
L1928.CDW28-125-2RSUB	145	27	22	15	0	0	81.7	81.7	24.1	9.9	4.9	4	B
L1928.CDW28-125-2ZTB	145	27	22	15	11.5	29	81.7	81.7	24.1	9.9	4.9	4	B
L1928.CDW28-125-2ZUB	145	27	22	15	0	0	81.7	81.7	24.1	9.9	4.9	4	B

Medium Duty T Rail
counterbored holes



L1928.TLC28



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for system misalignment).
This is the counterbored rail type (most popular), which is usually used with a corresponding ULC rail.
Special low profile Torx head screws provided free of charge.

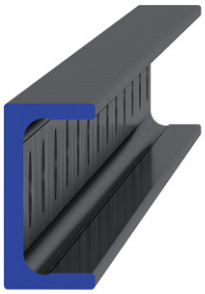
Weight: 1,0 Kg/m.

Tips
Standard carriages are the L1928.N versions (die cast aluminium alloy with wipers). Alternatively the L1928.C type is also available (without wipers).

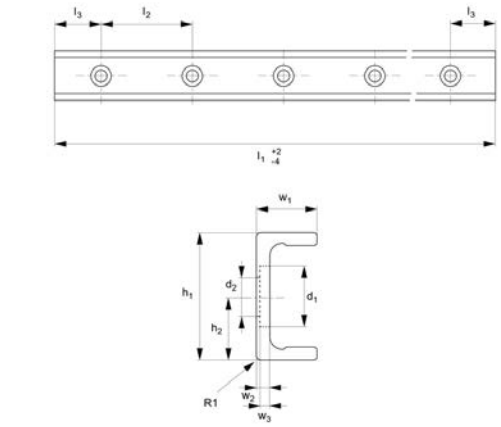
Order No.	d_1	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1928.TLC28-0240	11	M5	28	14	240	80	40	1	12.3	3	2
L1928.TLC28-0320	11	M5	28	14	320	80	40	1	12.3	3	2
L1928.TLC28-0400	11	M5	28	14	400	80	40	1	12.3	3	2
L1928.TLC28-0480	11	M5	28	14	480	80	40	1	12.3	3	2
L1928.TLC28-0560	11	M5	28	14	560	80	40	1	12.3	3	2
L1928.TLC28-0640	11	M5	28	14	640	80	40	1	12.3	3	2
L1928.TLC28-0720	11	M5	28	14	720	80	40	1	12.3	3	2
L1928.TLC28-0800	11	M5	28	14	800	80	40	1	12.3	3	2
L1928.TLC28-0880	11	M5	28	14	880	80	40	1	12.3	3	2
L1928.TLC28-0960	11	M5	28	14	960	80	40	1	12.3	3	2
L1928.TLC28-1040	11	M5	28	14	1040	80	40	1	12.3	3	2
L1928.TLC28-1120	11	M5	28	14	1120	80	40	1	12.3	3	2
L1928.TLC28-1200	11	M5	28	14	1200	80	40	1	12.3	3	2
L1928.TLC28-1280	11	M5	28	14	1280	80	40	1	12.3	3	2
L1928.TLC28-1360	11	M5	28	14	1360	80	40	1	12.3	3	2
L1928.TLC28-1440	11	M5	28	14	1440	80	40	1	12.3	3	2
L1928.TLC28-1520	11	M5	28	14	1520	80	40	1	12.3	3	2
L1928.TLC28-1600	11	M5	28	14	1600	80	40	1	12.3	3	2
L1928.TLC28-1680	11	M5	28	14	1680	80	40	1	12.3	3	2
L1928.TLC28-1760	11	M5	28	14	1760	80	40	1	12.3	3	2
L1928.TLC28-1840	11	M5	28	14	1840	80	40	1	12.3	3	2
L1928.TLC28-1920	11	M5	28	14	1920	80	40	1	12.3	3	2
L1928.TLC28-2000	11	M5	28	14	2000	80	40	1	12.3	3	2
L1928.TLC28-2080	11	M5	28	14	2080	80	40	1	12.3	3	2
L1928.TLC28-2160	11	M5	28	14	2160	80	40	1	12.3	3	2
L1928.TLC28-2240	11	M5	28	14	2240	80	40	1	12.3	3	2
L1928.TLC28-2320	11	M5	28	14	2320	80	40	1	12.3	3	2
L1928.TLC28-2400	11	M5	28	14	2400	80	40	1	12.3	3	2
L1928.TLC28-2480	11	M5	28	14	2480	80	40	1	12.3	3	2
L1928.TLC28-2560	11	M5	28	14	2560	80	40	1	12.3	3	2
L1928.TLC28-2640	11	M5	28	14	2640	80	40	1	12.3	3	2

Order No.	d_1	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1928.TLC28-2720	11	M5	28	14	2720	80	40	1	12.3	3	2
L1928.TLC28-2800	11	M5	28	14	2800	80	40	1	12.3	3	2
L1928.TLC28-2880	11	M5	28	14	2880	80	40	1	12.3	3	2
L1928.TLC28-2960	11	M5	28	14	2960	80	40	1	12.3	3	2
L1928.TLC28-3040	11	M5	28	14	3040	80	40	1	12.3	3	2
L1928.TLC28-3120	11	M5	28	14	3120	80	40	1	12.3	3	2
L1928.TLC28-3200	11	M5	28	14	3200	80	40	1	12.3	3	2

Medium Duty U Rail
counterbored holes



L1928.ULC28



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

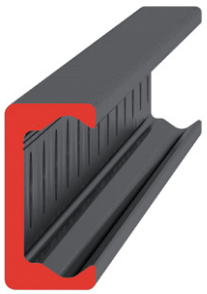
Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULC counterbored rail type (most popular), which is usually used with a corresponding TLC rail.
Special low profile Torx head screws provided free of charge.
Weight: 1,0 Kg/m.

Tips
Standard carriages are the L1928.N versions (die cast aluminium alloy with wipers). Alternatively the L1928.C type is also available (without wipers).

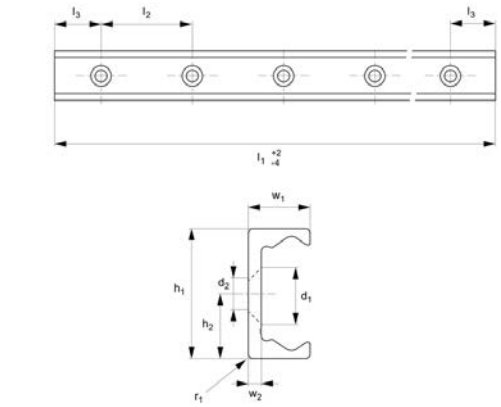
Order No.	d_1	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1928.ULC28-0240	11	M5	28	14	240	80	40	1	12	3	2
L1928.ULC28-0320	11	M5	28	14	320	80	40	1	12	3	2
L1928.ULC28-0400	11	M5	28	14	400	80	40	1	12	3	2
L1928.ULC28-0480	11	M5	28	14	480	80	40	1	12	3	2
L1928.ULC28-0560	11	M5	28	14	560	80	40	1	12	3	2
L1928.ULC28-0640	11	M5	28	14	640	80	40	1	12	3	2
L1928.ULC28-0720	11	M5	28	14	720	80	40	1	12	3	2
L1928.ULC28-0800	11	M5	28	14	800	80	40	1	12	3	2
L1928.ULC28-0880	11	M5	28	14	880	80	40	1	12	3	2
L1928.ULC28-0960	11	M5	28	14	960	80	40	1	12	3	2
L1928.ULC28-1040	11	M5	28	14	1040	80	40	1	12	3	2
L1928.ULC28-1120	11	M5	28	14	1120	80	40	1	12	3	2
L1928.ULC28-1200	11	M5	28	14	1200	80	40	1	12	3	2
L1928.ULC28-1280	11	M5	28	14	1280	80	40	1	12	3	2
L1928.ULC28-1360	11	M5	28	14	1360	80	40	1	12	3	2
L1928.ULC28-1440	11	M5	28	14	1440	80	40	1	12	3	2
L1928.ULC28-1520	11	M5	28	14	1520	80	40	1	12	3	2
L1928.ULC28-1600	11	M5	28	14	1600	80	40	1	12	3	2
L1928.ULC28-1680	11	M5	28	14	1680	80	40	1	12	3	2
L1928.ULC28-1760	11	M5	28	14	1760	80	40	1	12	3	2
L1928.ULC28-1840	11	M5	28	14	1840	80	40	1	12	3	2
L1928.ULC28-1920	11	M5	28	14	1920	80	40	1	12	3	2
L1928.ULC28-2000	11	M5	28	14	2000	80	40	1	12	3	2
L1928.ULC28-2080	11	M5	28	14	2080	80	40	1	12	3	2
L1928.ULC28-2160	11	M5	28	14	2160	80	40	1	12	3	2
L1928.ULC28-2240	11	M5	28	14	2240	80	40	1	12	3	2
L1928.ULC28-2320	11	M5	28	14	2320	80	40	1	12	3	2
L1928.ULC28-2400	11	M5	28	14	2400	80	40	1	12	3	2
L1928.ULC28-2480	11	M5	28	14	2480	80	40	1	12	3	2
L1928.ULC28-2560	11	M5	28	14	2560	80	40	1	12	3	2
L1928.ULC28-2640	11	M5	28	14	2640	80	40	1	12	3	2

Order No.	d_1	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1928.ULC28-2720	11	M5	28	14	2720	80	40	1	12	3	2
L1928.ULC28-2800	11	M5	28	14	2800	80	40	1	12	3	2
L1928.ULC28-2880	11	M5	28	14	2880	80	40	1	12	3	2
L1928.ULC28-2960	11	M5	28	14	2960	80	40	1	12	3	2
L1928.ULC28-3040	11	M5	28	14	3040	80	40	1	12	3	2
L1928.ULC28-3120	11	M5	28	14	3120	80	40	1	12	3	2
L1928.ULC28-3200	11	M5	28	14	3200	80	40	1	12	3	2

Medium Duty T Rail
countersunk holes



L1928.TLV28



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

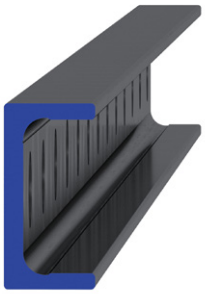
Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for misaligment).
This is the TLV countersunk rail which is usually used with a corresponding ULV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 1,0 Kg/m.

Tips
Standard carriages are the L1928.N versions (die cast aluminium alloy with wipers). Alternatively the L1928.C type is also available (without wipers).

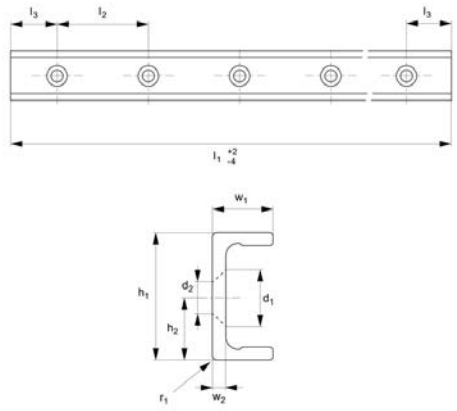
Order No.	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1928.TLV28-0240	M5	28	14	240	80	40	1	12.3	3
L1928.TLV28-0320	M5	28	14	320	80	40	1	12.3	3
L1928.TLV28-0400	M5	28	14	400	80	40	1	12.3	3
L1928.TLV28-0480	M5	28	14	480	80	40	1	12.3	3
L1928.TLV28-0560	M5	28	14	560	80	40	1	12.3	3
L1928.TLV28-0640	M5	28	14	640	80	40	1	12.3	3
L1928.TLV28-0720	M5	28	14	720	80	40	1	12.3	3
L1928.TLV28-0800	M5	28	14	800	80	40	1	12.3	3
L1928.TLV28-0880	M5	28	14	880	80	40	1	12.3	3
L1928.TLV28-0960	M5	28	14	960	80	40	1	12.3	3
L1928.TLV28-1040	M5	28	14	1040	80	40	1	12.3	3
L1928.TLV28-1120	M5	28	14	1120	80	40	1	12.3	3
L1928.TLV28-1200	M5	28	14	1200	80	40	1	12.3	3
L1928.TLV28-1280	M5	28	14	1280	80	40	1	12.3	3
L1928.TLV28-1360	M5	28	14	1360	80	40	1	12.3	3
L1928.TLV28-1440	M5	28	14	1440	80	40	1	12.3	3
L1928.TLV28-1520	M5	28	14	1520	80	40	1	12.3	3
L1928.TLV28-1600	M5	28	14	1600	80	40	1	12.3	3
L1928.TLV28-1680	M5	28	14	1680	80	40	1	12.3	3
L1928.TLV28-1760	M5	28	14	1760	80	40	1	12.3	3
L1928.TLV28-1840	M5	28	14	1840	80	40	1	12.3	3
L1928.TLV28-1920	M5	28	14	1920	80	40	1	12.3	3
L1928.TLV28-2000	M5	28	14	2000	80	40	1	12.3	3
L1928.TLV28-2080	M5	28	14	2080	80	40	1	12.3	3
L1928.TLV28-2160	M5	28	14	2160	80	40	1	12.3	3
L1928.TLV28-2240	M5	28	14	2240	80	40	1	12.3	3
L1928.TLV28-2320	M5	28	14	2320	80	40	1	12.3	3
L1928.TLV28-2400	M5	28	14	2400	80	40	1	12.3	3
L1928.TLV28-2480	M5	28	14	2480	80	40	1	12.3	3
L1928.TLV28-2560	M5	28	14	2560	80	40	1	12.3	3
L1928.TLV28-2640	M5	28	14	2640	80	40	1	12.3	3

Order No.	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1928.TLV28-2720	M5	28	14	2720	80	40	1	12.3	3
L1928.TLV28-2800	M5	28	14	2800	80	40	1	12.3	3
L1928.TLV28-2880	M5	28	14	2880	80	40	1	12.3	3
L1928.TLV28-2960	M5	28	14	2960	80	40	1	12.3	3
L1928.TLV28-3040	M5	28	14	3040	80	40	1	12.3	3
L1928.TLV28-3120	M5	28	14	3120	80	40	1	12.3	3
L1928.TLV28-3200	M5	28	14	3200	80	40	1	12.3	3

Medium Duty U Rail
countersunk holes



L1928.ULV28



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

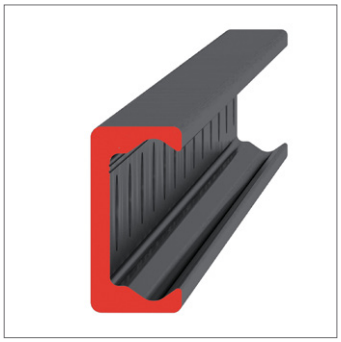
Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULV countersunk rail type which is usually used with a corresponding TLV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 1,0 Kg/m.

Tips
Standard carriages are the L1928.N versions (die cast aluminium alloy with wipers). Alternatively the L1928.C type is also available (without wipers).

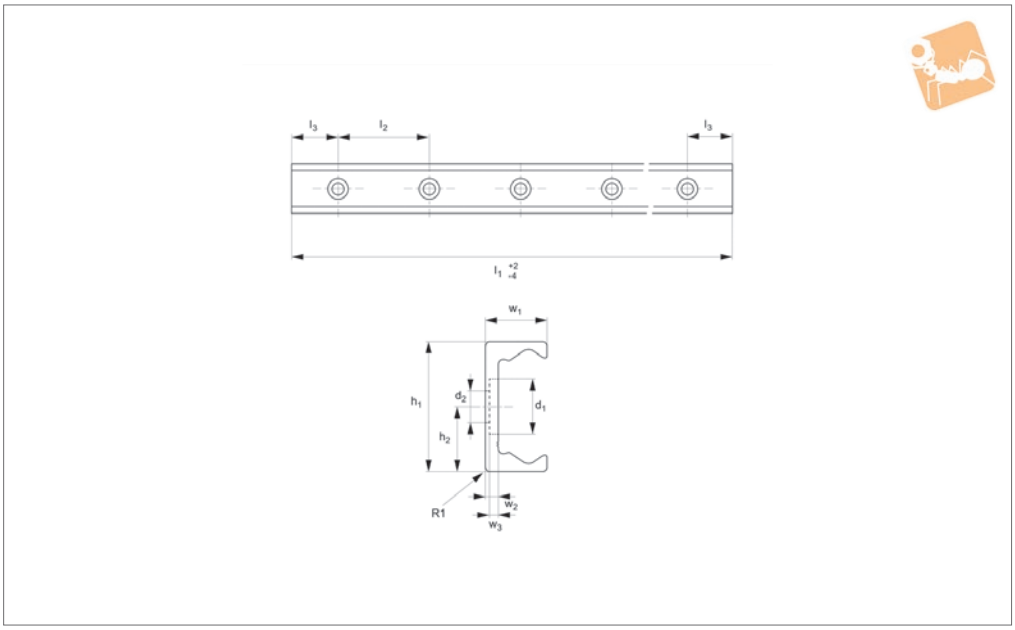
Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1928.ULV28-0240	M5	28	14	240	80	40	1	12	3
L1928.ULV28-0320	M5	28	14	320	80	40	1	12	3
L1928.ULV28-0400	M5	28	14	400	80	40	1	12	3
L1928.ULV28-0480	M5	28	14	480	80	40	1	12	3
L1928.ULV28-0560	M5	28	14	560	80	40	1	12	3
L1928.ULV28-0640	M5	28	14	640	80	40	1	12	3
L1928.ULV28-0720	M5	28	14	720	80	40	1	12	3
L1928.ULV28-0800	M5	28	14	800	80	40	1	12	3
L1928.ULV28-0880	M5	28	14	880	80	40	1	12	3
L1928.ULV28-0960	M5	28	14	960	80	40	1	12	3
L1928.ULV28-1040	M5	28	14	1040	80	40	1	12	3
L1928.ULV28-1120	M5	28	14	1120	80	40	1	12	3
L1928.ULV28-1200	M5	28	14	1200	80	40	1	12	3
L1928.ULV28-1280	M5	28	14	1280	80	40	1	12	3
L1928.ULV28-1360	M5	28	14	1360	80	40	1	12	3
L1928.ULV28-1440	M5	28	14	1440	80	40	1	12	3
L1928.ULV28-1520	M5	28	14	1520	80	40	1	12	3
L1928.ULV28-1600	M5	28	14	1600	80	40	1	12	3
L1928.ULV28-1680	M5	28	14	1680	80	40	1	12	3
L1928.ULV28-1760	M5	28	14	1760	80	40	1	12	3
L1928.ULV28-1840	M5	28	14	1840	80	40	1	12	3
L1928.ULV28-1920	M5	28	14	1920	80	40	1	12	3
L1928.ULV28-2000	M5	28	14	2000	80	40	1	12	3
L1928.ULV28-2080	M5	28	14	2080	80	40	1	12	3
L1928.ULV28-2160	M5	28	14	2160	80	40	1	12	3
L1928.ULV28-2240	M5	28	14	2240	80	40	1	12	3
L1928.ULV28-2320	M5	28	14	2320	80	40	1	12	3
L1928.ULV28-2400	M5	28	14	2400	80	40	1	12	3
L1928.ULV28-2480	M5	28	14	2480	80	40	1	12	3
L1928.ULV28-2560	M5	28	14	2560	80	40	1	12	3
L1928.ULV28-2640	M5	28	14	2640	80	40	1	12	3

Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1928.ULV28-2720	M5	28	14	2720	80	40	1	12	3
L1928.ULV28-2800	M5	28	14	2800	80	40	1	12	3
L1928.ULV28-2880	M5	28	14	2880	80	40	1	12	3
L1928.ULV28-2960	M5	28	14	2960	80	40	1	12	3
L1928.ULV28-3040	M5	28	14	3040	80	40	1	12	3
L1928.ULV28-3120	M5	28	14	3120	80	40	1	12	3
L1928.ULV28-3200	M5	28	14	3200	80	40	1	12	3

Medium Duty T Rail
counterbored holes



L1928.28T-C



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for system misalignment).
This is the counterbored rail type (most popular), which is usually used with a corresponding U-C rail.
Special low profile Torx head screws provided free of charge.

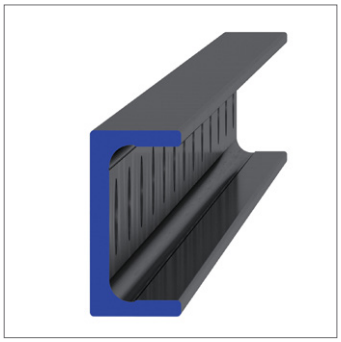
Weight: 1,0 Kg/m.

Tips
Standard carriages are the L1928.N versions (die cast aluminium alloy with wipers). Alternatively the L1928.C type is also available (without wipers).

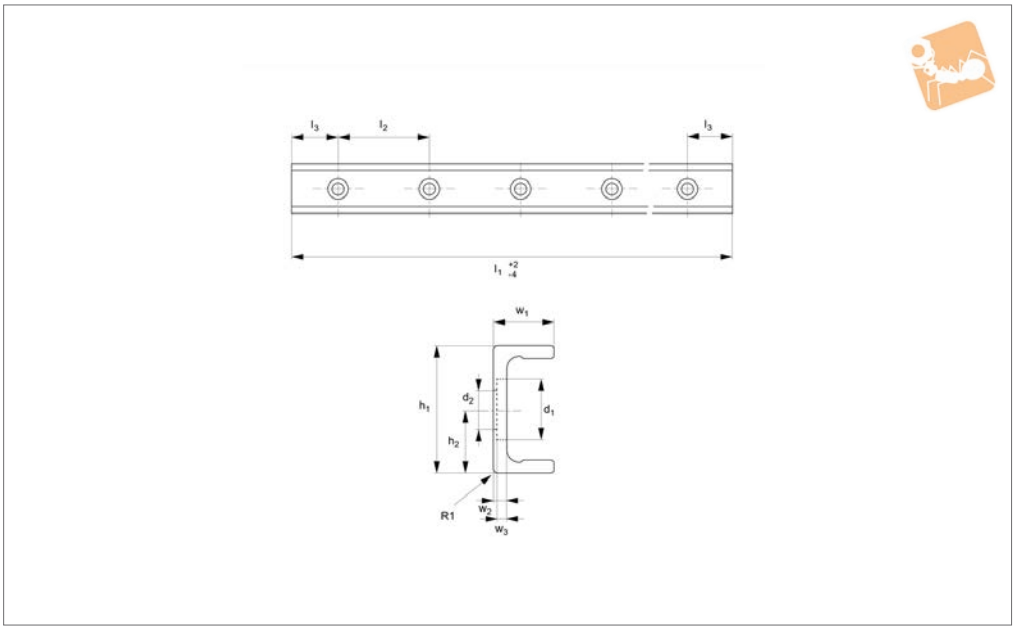
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	w_1	w_2	w_3
L1928.28T-0240-C	11	M5	28	14	240	80	40	12.3	3	2
L1928.28T-0320-C	11	M5	28	14	320	80	40	12.3	3	2
L1928.28T-0400-C	11	M5	28	14	400	80	40	12.3	3	2
L1928.28T-0480-C	11	M5	28	14	480	80	40	12.3	3	2
L1928.28T-0560-C	11	M5	28	14	560	80	40	12.3	3	2
L1928.28T-0640-C	11	M5	28	14	640	80	40	12.3	3	2
L1928.28T-0720-C	11	M5	28	14	720	80	40	12.3	3	2
L1928.28T-0800-C	11	M5	28	14	800	80	40	12.3	3	2
L1928.28T-0880-C	11	M5	28	14	880	80	40	12.3	3	2
L1928.28T-0960-C	11	M5	28	14	960	80	40	12.3	3	2
L1928.28T-1040-C	11	M5	28	14	1040	80	40	12.3	3	2
L1928.28T-1120-C	11	M5	28	14	1120	80	40	12.3	3	2
L1928.28T-1200-C	11	M5	28	14	1200	80	40	12.3	3	2
L1928.28T-1280-C	11	M5	28	14	1280	80	40	12.3	3	2
L1928.28T-1360-C	11	M5	28	14	1360	80	40	12.3	3	2
L1928.28T-1440-C	11	M5	28	14	1440	80	40	12.3	3	2
L1928.28T-1520-C	11	M5	28	14	1520	80	40	12.3	3	2
L1928.28T-1600-C	11	M5	28	14	1600	80	40	12.3	3	2
L1928.28T-1680-C	11	M5	28	14	1680	80	40	12.3	3	2
L1928.28T-1760-C	11	M5	28	14	1760	80	40	12.3	3	2
L1928.28T-1840-C	11	M5	28	14	1840	80	40	12.3	3	2
L1928.28T-1920-C	11	M5	28	14	1920	80	40	12.3	3	2
L1928.28T-2000-C	11	M5	28	14	2000	80	40	12.3	3	2
L1928.28T-2080-C	11	M5	28	14	2080	80	40	12.3	3	2
L1928.28T-2160-C	11	M5	28	14	2160	80	40	12.3	3	2
L1928.28T-2240-C	11	M5	28	14	2240	80	40	12.3	3	2
L1928.28T-2320-C	11	M5	28	14	2320	80	40	12.3	3	2
L1928.28T-2400-C	11	M5	28	14	2400	80	40	12.3	3	2
L1928.28T-2480-C	11	M5	28	14	2480	80	40	12.3	3	2
L1928.28T-2560-C	11	M5	28	14	2560	80	40	12.3	3	2
L1928.28T-2640-C	11	M5	28	14	2640	80	40	12.3	3	2

Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	w_1	w_2	w_3
L1928.28T-2720-C	11	M5	28	14	2720	80	40	12.3	3	2
L1928.28T-2800-C	11	M5	28	14	2800	80	40	12.3	3	2
L1928.28T-2880-C	11	M5	28	14	2880	80	40	12.3	3	2
L1928.28T-2960-C	11	M5	28	14	2960	80	40	12.3	3	2
L1928.28T-3040-C	11	M5	28	14	3040	80	40	12.3	3	2
L1928.28T-3120-C	11	M5	28	14	3120	80	40	12.3	3	2
L1928.28T-3200-C	11	M5	28	14	3200	80	40	12.3	3	2
L1928.28T-3280-C	11	M5	28	14	3280	80	40	12.3	3	2
L1928.28T-3360-C	11	M5	28	14	3360	80	40	12.3	3	2
L1928.28T-3440-C	11	M5	28	14	3440	80	40	12.3	3	2
L1928.28T-3520-C	11	M5	28	14	3520	80	40	12.3	3	2
L1928.28T-3600-C	11	M5	28	14	3600	80	40	12.3	3	2
L1928.28T-3680-C	11	M5	28	14	3680	80	40	12.3	3	2
L1928.28T-3760-C	11	M5	28	14	3760	80	40	12.3	3	2
L1928.28T-3840-C	11	M5	28	14	3840	80	40	12.3	3	2
L1928.28T-3920-C	11	M5	28	14	3920	80	40	12.3	3	2
L1928.28T-4000-C	11	M5	28	14	4000	80	40	12.3	3	2
L1928.28T-4080-C	11	M5	28	14	4080	80	40	12.3	3	2

Medium Duty U Rail
counterbored holes



L1928.28U-C



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

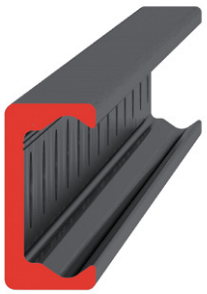
Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the U-C counterbored rail type (most popular), which is usually used with a corresponding T-C rail.
Special low profile Torx head screws provided free of charge.
Weight: 1,0 Kg/m.

Tips
Standard carriages are the L1928.N versions (die cast aluminium alloy with wipers). Alternatively the L1928.C type is also available (without wipers).

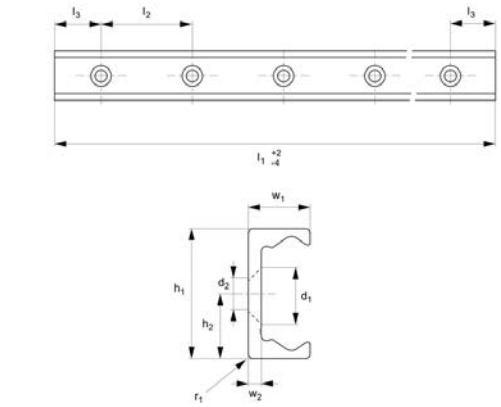
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	w_1	w_2	w_3
L1928.28U-0240-C	11	M5	28	14	240	80	40	12	3	2
L1928.28U-0320-C	11	M5	28	14	320	80	40	12	3	2
L1928.28U-0400-C	11	M5	28	14	400	80	40	12	3	2
L1928.28U-0480-C	11	M5	28	14	480	80	40	12	3	2
L1928.28U-0560-C	11	M5	28	14	560	80	40	12	3	2
L1928.28U-0640-C	11	M5	28	14	640	80	40	12	3	2
L1928.28U-0720-C	11	M5	28	14	720	80	40	12	3	2
L1928.28U-0800-C	11	M5	28	14	800	80	40	12	3	2
L1928.28U-0880-C	11	M5	28	14	880	80	40	12	3	2
L1928.28U-0960-C	11	M5	28	14	960	80	40	12	3	2
L1928.28U-1040-C	11	M5	28	14	1040	80	40	12	3	2
L1928.28U-1120-C	11	M5	28	14	1120	80	40	12	3	2
L1928.28U-1200-C	11	M5	28	14	1200	80	40	12	3	2
L1928.28U-1280-C	11	M5	28	14	1280	80	40	12	3	2
L1928.28U-1360-C	11	M5	28	14	1360	80	40	12	3	2
L1928.28U-1440-C	11	M5	28	14	1440	80	40	12	3	2
L1928.28U-1520-C	11	M5	28	14	1520	80	40	12	3	2
L1928.28U-1600-C	11	M5	28	14	1600	80	40	12	3	2
L1928.28U-1680-C	11	M5	28	14	1680	80	40	12	3	2
L1928.28U-1760-C	11	M5	28	14	1760	80	40	12	3	2
L1928.28U-1840-C	11	M5	28	14	1840	80	40	12	3	2
L1928.28U-1920-C	11	M5	28	14	1920	80	40	12	3	2
L1928.28U-2000-C	11	M5	28	14	2000	80	40	12	3	2
L1928.28U-2080-C	11	M5	28	14	2080	80	40	12	3	2
L1928.28U-2160-C	11	M5	28	14	2160	80	40	12	3	2
L1928.28U-2240-C	11	M5	28	14	2240	80	40	12	3	2
L1928.28U-2320-C	11	M5	28	14	2320	80	40	12	3	2
L1928.28U-2400-C	11	M5	28	14	2400	80	40	12	3	2
L1928.28U-2480-C	11	M5	28	14	2480	80	40	12	3	2
L1928.28U-2560-C	11	M5	28	14	2560	80	40	12	3	2
L1928.28U-2640-C	11	M5	28	14	2640	80	40	12	3	2

Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	w_1	w_2	w_3
L1928.28U-2720-C	11	M5	28	14	2720	80	40	12	3	2
L1928.28U-2800-C	11	M5	28	14	2800	80	40	12	3	2
L1928.28U-2880-C	11	M5	28	14	2880	80	40	12	3	2
L1928.28U-2960-C	11	M5	28	14	2960	80	40	12	3	2
L1928.28U-3040-C	11	M5	28	14	3040	80	40	12	3	2
L1928.28U-3120-C	11	M5	28	14	3120	80	40	12	3	2
L1928.28U-3200-C	11	M5	28	14	3200	80	40	12	3	2
L1928.28U-3280-C	11	M5	28	14	3280	80	40	12	3	2
L1928.28U-3360-C	11	M5	28	14	3360	80	40	12	3	2
L1928.28U-3440-C	11	M5	28	14	3440	80	40	12	3	2
L1928.28U-3520-C	11	M5	28	14	3520	80	40	12	3	2
L1928.28U-3600-C	11	M5	28	14	3600	80	40	12	3	2
L1928.28U-3680-C	11	M5	28	14	3680	80	40	12	3	2
L1928.28U-3760-C	11	M5	28	14	3760	80	40	12	3	2
L1928.28U-3840-C	11	M5	28	14	3840	80	40	12	3	2
L1928.28U-3920-C	11	M5	28	14	3920	80	40	12	3	2
L1928.28U-4000-C	11	M5	28	14	4000	80	40	12	3	2
L1928.28U-4080-C	11	M5	28	14	4080	80	40	12	3	2

Medium Duty T Rail
countersunk holes



L1928.28T-V



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

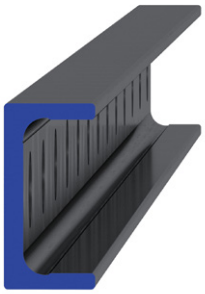
Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for misaligment).
This is the T-V countersunk rail which is usually used with a corresponding U-V rail.
For fixing use countersunk DIN 7991 screws.
Weight: 1,0 Kg/m.

Tips
Standard carriages are the L1928.N versions (die cast aluminium alloy with wipers). Alternatively the L1928.C type is also available (without wipers).

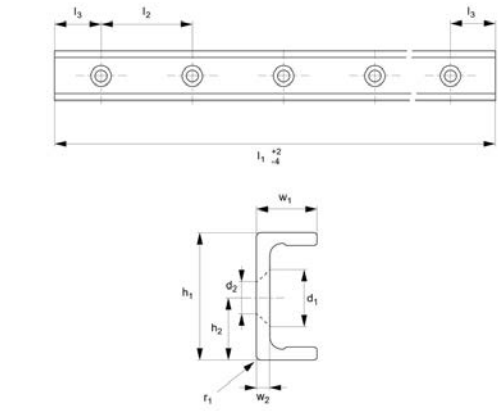
Order No.	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	d for screws
L1928.28T-0240-V	28	14	240	80	40	1	12.3	3	M5
L1928.28T-0320-V	28	14	320	80	40	1	12.3	3	M5
L1928.28T-0400-V	28	14	400	80	40	1	12.3	3	M5
L1928.28T-0480-V	28	14	480	80	40	1	12.3	3	M5
L1928.28T-0560-V	28	14	560	80	40	1	12.3	3	M5
L1928.28T-0640-V	28	14	640	80	40	1	12.3	3	M5
L1928.28T-0720-V	28	14	720	80	40	1	12.3	3	M5
L1928.28T-0800-V	28	14	800	80	40	1	12.3	3	M5
L1928.28T-0880-V	28	14	880	80	40	1	12.3	3	M5
L1928.28T-0960-V	28	14	960	80	40	1	12.3	3	M5
L1928.28T-1040-V	28	14	1040	80	40	1	12.3	3	M5
L1928.28T-1120-V	28	14	1120	80	40	1	12.3	3	M5
L1928.28T-1200-V	28	14	1200	80	40	1	12.3	3	M5
L1928.28T-1280-V	28	14	1280	80	40	1	12.3	3	M5
L1928.28T-1360-V	28	14	1360	80	40	1	12.3	3	M5
L1928.28T-1440-V	28	14	1440	80	40	1	12.3	3	M5
L1928.28T-1520-V	28	14	1520	80	40	1	12.3	3	M5
L1928.28T-1600-V	28	14	1600	80	40	1	12.3	3	M5
L1928.28T-1680-V	28	14	1680	80	40	1	12.3	3	M5
L1928.28T-1760-V	28	14	1760	80	40	1	12.3	3	M5
L1928.28T-1840-V	28	14	1840	80	40	1	12.3	3	M5
L1928.28T-1920-V	28	14	1920	80	40	1	12.3	3	M5
L1928.28T-2000-V	28	14	2000	80	40	1	12.3	3	M5
L1928.28T-2080-V	28	14	2080	80	40	1	12.3	3	M5
L1928.28T-2160-V	28	14	2160	80	40	1	12.3	3	M5
L1928.28T-2240-V	28	14	2240	80	40	1	12.3	3	M5
L1928.28T-2320-V	28	14	2320	80	40	1	12.3	3	M5
L1928.28T-2400-V	28	14	2400	80	40	1	12.3	3	M5
L1928.28T-2480-V	28	14	2480	80	40	1	12.3	3	M5
L1928.28T-2560-V	28	14	2560	80	40	1	12.3	3	M5
L1928.28T-2640-V	28	14	2640	80	40	1	12.3	3	M5

Order No.	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	d for screws
L1928.28T-2720-V	28	14	2720	80	40	1	12.3	3	M5
L1928.28T-2800-V	28	14	2800	80	40	1	12.3	3	M5
L1928.28T-2880-V	28	14	2880	80	40	1	12.3	3	M5
L1928.28T-2960-V	28	14	2960	80	40	1	12.3	3	M5
L1928.28T-3040-V	28	14	3040	80	40	1	12.3	3	M5
L1928.28T-3120-V	28	14	3120	80	40	1	12.3	3	M5
L1928.28T-3200-V	28	14	3200	80	40	1	12.3	3	M5
L1928.28T-3280-V	28	14	3280	80	40	1	12.3	3	M5
L1928.28T-3360-V	28	14	3360	80	40	1	12.3	3	M5
L1928.28T-3440-V	28	14	3440	80	40	1	12.3	3	M5
L1928.28T-3520-V	28	14	3520	80	40	1	12.3	3	M5
L1928.28T-3600-V	28	14	3600	80	40	1	12.3	3	M5
L1928.28T-3680-V	28	14	3680	80	40	1	12.3	3	M5
L1928.28T-3760-V	28	14	3760	80	40	1	12.3	3	M5
L1928.28T-3840-V	28	14	3840	80	40	1	12.3	3	M5
L1928.28T-3920-V	28	14	3920	80	40	1	12.3	3	M5
L1928.28T-4000-V	28	14	4000	80	40	1	12.3	3	M5
L1928.28T-4080-V	28	14	4080	80	40	1	12.3	3	M5

Medium Duty U Rail
countersunk holes



L1928.28U-V



Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the U-V countersunk rail type which is usually used with a corresponding T-V rail.
For fixing use countersunk DIN 7991 screws.
Weight: 1,0 Kg/m.

Tips
Standard carriages are the L1928.N versions (die cast aluminium alloy with wipers). Alternatively the L1928.C type is also available (without wipers).

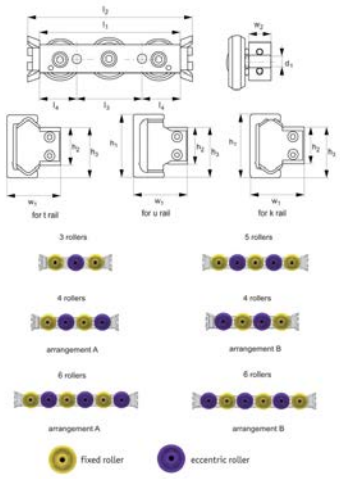
Order No.	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	d for screws
L1928.28U-0240-V	28	14	240	80	40	1	12	3	M5
L1928.28U-0320-V	28	14	320	80	40	1	12	3	M5
L1928.28U-0400-V	28	14	400	80	40	1	12	3	M5
L1928.28U-0480-V	28	14	480	80	40	1	12	3	M5
L1928.28U-0560-V	28	14	560	80	40	1	12	3	M5
L1928.28U-0640-V	28	14	640	80	40	1	12	3	M5
L1928.28U-0720-V	28	14	720	80	40	1	12	3	M5
L1928.28U-0800-V	28	14	800	80	40	1	12	3	M5
L1928.28U-0880-V	28	14	880	80	40	1	12	3	M5
L1928.28U-0960-V	28	14	960	80	40	1	12	3	M5
L1928.28U-1040-V	28	14	1040	80	40	1	12	3	M5
L1928.28U-1120-V	28	14	1120	80	40	1	12	3	M5
L1928.28U-1200-V	28	14	1200	80	40	1	12	3	M5
L1928.28U-1280-V	28	14	1280	80	40	1	12	3	M5
L1928.28U-1360-V	28	14	1360	80	40	1	12	3	M5
L1928.28U-1440-V	28	14	1440	80	40	1	12	3	M5
L1928.28U-1520-V	28	14	1520	80	40	1	12	3	M5
L1928.28U-1600-V	28	14	1600	80	40	1	12	3	M5
L1928.28U-1680-V	28	14	1680	80	40	1	12	3	M5
L1928.28U-1760-V	28	14	1760	80	40	1	12	3	M5
L1928.28U-1840-V	28	14	1840	80	40	1	12	3	M5
L1928.28U-1920-V	28	14	1920	80	40	1	12	3	M5
L1928.28U-2000-V	28	14	2000	80	40	1	12	3	M5
L1928.28U-2080-V	28	14	2080	80	40	1	12	3	M5
L1928.28U-2160-V	28	14	2160	80	40	1	12	3	M5
L1928.28U-2240-V	28	14	2240	80	40	1	12	3	M5
L1928.28U-2320-V	28	14	2320	80	40	1	12	3	M5
L1928.28U-2400-V	28	14	2400	80	40	1	12	3	M5
L1928.28U-2480-V	28	14	2480	80	40	1	12	3	M5
L1928.28U-2560-V	28	14	2560	80	40	1	12	3	M5
L1928.28U-2640-V	28	14	2640	80	40	1	12	3	M5

Order No.	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	d for screws
L1928.28U-2720-V	28	14	2720	80	40	1	12	3	M5
L1928.28U-2800-V	28	14	2800	80	40	1	12	3	M5
L1928.28U-2880-V	28	14	2880	80	40	1	12	3	M5
L1928.28U-2960-V	28	14	2960	80	40	1	12	3	M5
L1928.28U-3040-V	28	14	3040	80	40	1	12	3	M5
L1928.28U-3120-V	28	14	3120	80	40	1	12	3	M5
L1928.28U-3200-V	28	14	3200	80	40	1	12	3	M5
L1928.28U-3280-V	28	14	3280	80	40	1	12	3	M5
L1928.28U-3360-V	28	14	3360	80	40	1	12	3	M5
L1928.28U-3440-V	28	14	3440	80	40	1	12	3	M5
L1928.28U-3520-V	28	14	3520	80	40	1	12	3	M5
L1928.28U-3600-V	28	14	3600	80	40	1	12	3	M5
L1928.28U-3680-V	28	14	3680	80	40	1	12	3	M5
L1928.28U-3760-V	28	14	3760	80	40	1	12	3	M5
L1928.28U-3840-V	28	14	3840	80	40	1	12	3	M5
L1928.28U-3920-V	28	14	3920	80	40	1	12	3	M5
L1928.28U-4000-V	28	14	4000	80	40	1	12	3	M5
L1928.28U-4080-V	28	14	4080	80	40	1	12	3	M5

Medium Duty Sliders, size 35
no side seal, front fixing



L1935.CSW



Material
Zinc plated steel body.
Steel rollers (100Cr6) with metal (2Z) or rubber (2RS) seals.

Technical Notes
To be used with compact rail size 35.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).

Coefficient of friction (without seals) 0.005.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.35|-0.10	h_2 +0.05|-0.15	h_3 +0.10|-0.30	l_1	l_2	l_3	Weight kg
L1935.CSW35-100-2ZT	T	3	Metal	8040	1060	3510	M6	35	19.9	27.85	100	120	45	0.27
L1935.CSW35-100-2ZU	U	3	Metal	8040	0	3510	M6	35	19.9	27.85	100	120	45	0.27
L1935.CSW35-120-2ZTA	T	4	Metal	8040	1220	3510	M6	35	19.9	27.85	120	140	60	0.33
L1935.CSW35-120-2ZUA	U	4	Metal	8040	0	3510	M6	35	19.9	27.85	120	140	60	0.33
L1935.CSW35-120-2ZTB	T	4	Metal	8040	1220	3510	M6	35	19.9	27.85	120	140	60	0.33
L1935.CSW35-120-2ZUB	U	4	Metal	8040	0	3510	M6	35	19.9	27.85	120	140	60	0.33
L1935.CSW35-150-2ZT	T	5	Metal	9565	1460	4180	M6	35	19.9	27.85	150	170	30	0.41
L1935.CSW35-150-2ZU	U	5	Metal	9565	0	4180	M6	35	19.9	27.85	150	170	30	0.41
L1935.CSW35-180-2ZTA	T	6	Metal	9565	1780	4180	M6	35	19.9	27.85	180	200	60	0.49
L1935.CSW35-180-2ZUA	U	6	Metal	9565	0	4180	M6	35	19.9	27.85	180	200	60	0.49
L1935.CSW35-180-2ZTB	T	6	Metal	9565	1780	4180	M6	35	19.9	27.85	180	200	60	0.49
L1935.CSW35-180-2ZUB	U	6	Metal	9565	0	4180	M6	35	19.9	27.85	180	200	60	0.49
L1935.CSW35-100-2RST	T	3	Rubber	8040	1060	3510	M6	35	19.9	27.85	100	120	45	0.27
L1935.CSW35-100-2RSU	U	3	Rubber	8040	0	3510	M6	35	19.9	27.85	100	120	45	0.27

Order No.	For rail type	No. of rollers	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.35|-0.10	h_2 +0.05|-0.15	h_3 +0.10|-0.30	l_1	l_2	l_3	Weight kg
L1935.CSW35-120-2RSTA	T	4	Rubber	8040	1220	3510	M6	35	19.9	27.85	120	140	60	0.33
L1935.CSW35-120-2RSUA	U	4	Rubber	8040	0	3510	M6	35	19.9	27.85	120	140	60	0.33
L1935.CSW35-120-2RSTB	T	4	Rubber	8040	1220	3510	M6	35	19.9	27.85	120	140	60	0.33
L1935.CSW35-120-2RSUB	U	4	Rubber	8040	0	3510	M6	35	19.9	27.85	120	140	60	0.33
L1935.CSW35-150-2RST	T	5	Rubber	9565	1460	4180	M6	35	19.9	27.85	150	170	30	0.41
L1935.CSW35-150-2RSU	U	5	Rubber	9565	0	4180	M6	35	19.9	27.85	150	170	30	0.41
L1935.CSW35-180-2RSTA	T	6	Rubber	9565	1780	4180	M6	35	19.9	27.85	180	200	60	0.49
L1935.CSW35-180-2RSUA	U	6	Rubber	9565	0	4180	M6	35	19.9	27.85	180	200	60	0.49
L1935.CSW35-180-2RST	T	6	Rubber	9565	1780	4180	M6	35	19.9	27.85	180	200	60	0.49
L1935.CSW35-180-2RSUB	U	6	Rubber	9565	0	4180	M6	35	19.9	27.85	180	200	60	0.49

Order No.	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 +0.1|-0.3	w_2
L1935.CSW35-100-2ZT	27.5	12.9	33.7	61.5	61.5	30.2	11.9
L1935.CSW35-100-2ZU	27.5	0	0	61.5	61.5	30.2	11.9
L1935.CSW35-120-2ZTA	30.0	23.9	43.3	52.7	158.1	30.2	11.9
L1935.CSW35-120-2ZUA	30.0	0	0	52.7	158.1	30.2	11.9
L1935.CSW35-120-2ZTB	30.0	23.9	43.3	158.1	52.7	30.2	11.9
L1935.CSW35-120-2ZUB	30.0	0	0	158.1	52.7	30.2	11.9
L1935.CSW35-150-2ZT	30.0	23.9	57.7	158.1	158.1	30.2	11.9
L1935.CSW35-150-2ZU	30.0	0	0	158.1	158.1	30.2	11.9
L1935.CSW35-180-2ZTA	30.0	28.5	72.2	158.1	263.4	30.2	11.9
L1935.CSW35-180-2ZUA	30.0	0	0	158.1	263.4	30.2	11.9
L1935.CSW35-180-2ZTB	30.0	28.5	72.2	263.4	158.1	30.2	11.9
L1935.CSW35-180-2ZUB	30.0	0	0	263.4	158.1	30.2	11.9
L1935.CSW35-100-2RST	27.5	12.9	33.7	61.5	61.5	30.2	11.9
L1935.CSW35-100-2RSU	27.5	0	0	61.5	61.5	30.2	11.9
L1935.CSW35-120-2RSTA	30.0	23.9	43.3	52.7	158.1	30.2	11.9
L1935.CSW35-120-2RSUA	30.0	0	0	52.7	158.1	30.2	11.9
L1935.CSW35-120-2RSTB	30.0	23.9	43.3	158.1	52.7	30.2	11.9
L1935.CSW35-120-2RSUB	30.0	0	0	158.1	52.7	30.2	11.9
L1935.CSW35-150-2RST	30.0	23.9	57.7	158.1	158.1	30.2	11.9
L1935.CSW35-150-2RSU	30.0	0	0	158.1	158.1	30.2	11.9
L1935.CSW35-180-2RSTA	30.0	28.5	72.2	158.1	263.4	30.2	11.9
L1935.CSW35-180-2RSUA	30.0	0	0	158.1	263.4	30.2	11.9

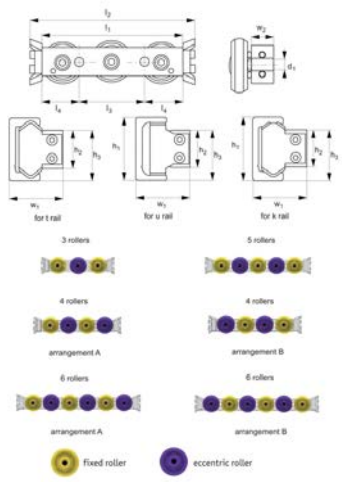


Medium Duty Sliders, size 35

no side seal, front fixing



Order No.	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 +0.1|-0.3	w_2
L1935.CSW35-180-2RST	30.0	28.5	72.2	263.4	158.1	30.2	11.9
L1935.CSW35-180-2RSUB	30.0	0	0	263.4	158.1	30.2	11.9





L1935.CS

Material
Zinc plated steel body.
Steel rollers (100Cr6) with metal (2Z) or rubber (2RS) seals.

Technical Notes
To be used with compact rail size 35.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
The U rail sliders cannot accept axial loads.
The 3 and 5 bearing sliders can be used either way up in the rail dependent on where the loads will be applied.
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.005.
Quiet and fast (up to 5 m/s).

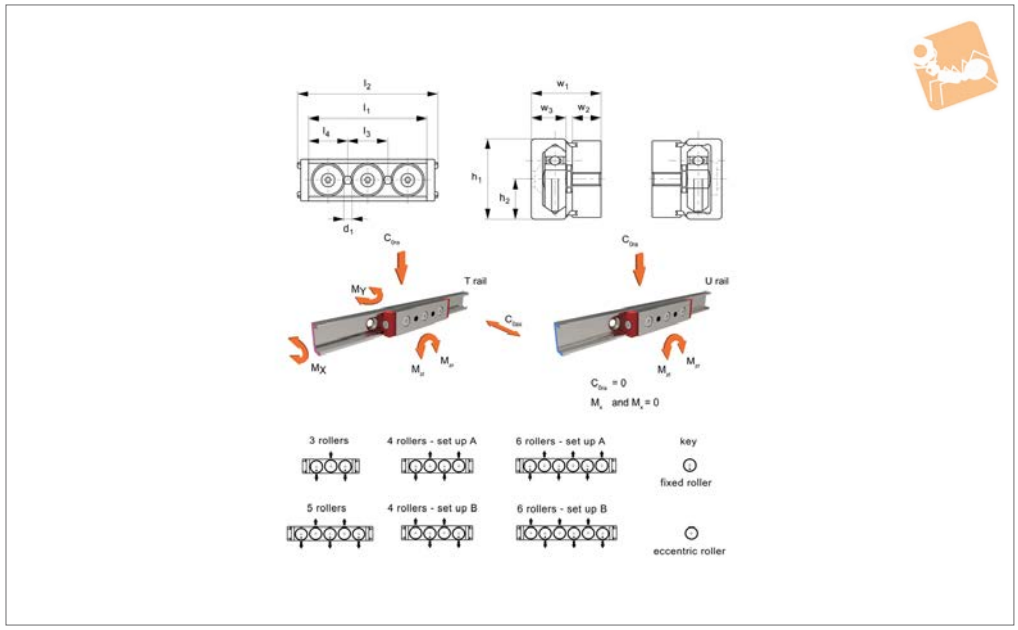
Order No.	For rail type	No. of rollers	Seal type	d_1	h_1 +0.35|-0.10	h_2 +0.05|-0.15	h_3 +0.10|-0.30	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm	Weight kg
L1935.35CS-100-2RST	T	3	Rubber	M6	35	19.9	27.85	100	120	45	27.5	12.9	33.7	0.27
L1935.35CS-100-2RSU	U	3	Rubber	M6	35	19.9	27.85	100	120	45	27.5	0	0	0.27
L1935.35CS-120-2RSTA	T	4	Rubber	M6	35	19.9	27.85	120	140	60	30.0	23.9	43.3	0.33
L1935.35CS-120-2RSUA	U	4	Rubber	M6	35	19.9	27.85	120	140	60	30.0	0	0	0.33
L1935.35CS-120-2RSTB	T	4	Rubber	M6	35	19.9	27.85	120	140	60	30.0	23.9	43.3	0.33
L1935.35CS-120-2RSUB	U	4	Rubber	M6	35	19.9	27.85	120	140	60	30.0	0	0	0.33
L1935.35CS-150-2RST	T	5	Rubber	M6	35	19.9	27.85	150	170	30	30.0	23.9	57.7	0.41
L1935.35CS-150-2RSU	U	5	Rubber	M6	35	19.9	27.85	150	170	30	30.0	0	0	0.41
L1935.35CS-180-2RSTA	T	6	Rubber	M6	35	19.9	27.85	180	200	60	30.0	28.5	72.2	0.49
L1935.35CS-180-2RSUA	U	6	Rubber	M6	35	19.9	27.85	180	200	60	30.0	0	0	0.49
L1935.35CS-180-2RST	T	6	Rubber	M6	35	19.9	27.85	180	200	60	30.0	28.5	72.2	0.49
L1935.35CS-180-2RSUB	U	6	Rubber	M6	35	19.9	27.85	180	200	60	30.0	0	0	0.49

Medium Duty Sliders, size 35

no side seal, front fixing, with wiper



Order No.	M_{zr} Nm	M_{zl} Nm	w_1 +0.1 | -0.3	w_2	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1935.35CS-100-2RST	61.5	61.5	30.2	11.9	8040	1060	3510
L1935.35CS-100-2RSU	61.5	61.5	30.2	11.9	8040	0	3510
L1935.35CS-120-2RSTA	52.7	158.1	30.2	11.9	8040	1220	3510
L1935.35CS-120-2RSUA	52.7	158.1	30.2	11.9	8040	0	3510
L1935.35CS-120-2RSTB	158.1	52.7	30.2	11.9	8040	1220	3510
L1935.35CS-120-2RSUB	158.1	52.7	30.2	11.9	8040	0	3510
L1935.35CS-150-2RST	158.1	158.1	30.2	11.9	9565	1460	4180
L1935.35CS-150-2RSU	158.1	158.1	30.2	11.9	9565	0	4180
L1935.35CS-180-2RSTA	158.1	263.4	30.2	11.9	9565	1780	4180
L1935.35CS-180-2RSUA	158.1	263.4	30.2	11.9	9565	0	4180
L1935.35CS-180-2RST	263.4	158.1	30.2	11.9	9565	1780	4180
L1935.35CS-180-2RSUB	263.4	158.1	30.2	11.9	9565	0	4180





L1935.CL

Material
Zinc plated steel body.
Steel rollers (100Cr6) with rubber seals.

Technical Notes
To be used with compact rail size 35.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
The U rail sliders cannot accept axial loads.
The 3 and 5 bearing sliders can be used either way up in the rail dependent on where the loads will be applied.
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	d_1	h_1	h_2	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm
L1935.35CL-100-T	T	3	M6	35	17.5	100	114	45	27.5	13.1	34.3
L1935.35CL-100-U	U	3	M6	35	17.5	100	114	45	27.5	0	0
L1935.35CL-120-TA	T	4	M6	35	17.5	120	134	60	30.0	24.3	44.1
L1935.35CL-120-UA	U	4	M6	35	17.5	120	134	60	30.0	0	0
L1935.35CL-120-TB	T	4	M6	35	17.5	120	134	60	30.0	24.3	44.1
L1935.35CL-120-UB	U	4	M6	35	17.5	120	134	60	30.0	0	0
L1935.35CL-150-T	T	5	M6	35	17.5	150	164	30	30.0	24.3	58.8
L1935.35CL-150-U	U	5	M6	35	17.5	150	164	30	30.0	0	0
L1935.35CL-180-TA	T	6	M6	35	17.5	180	194	60	30.0	29.0	75.6
L1935.35CL-180-UA	U	6	M6	35	17.5	180	194	60	30.0	0	0
L1935.35CL-180-TB	T	6	M6	35	17.5	180	194	60	30.0	29.0	75.6
L1935.35CL-180-UB	U	6	M6	35	17.5	180	194	60	30.0	0	0

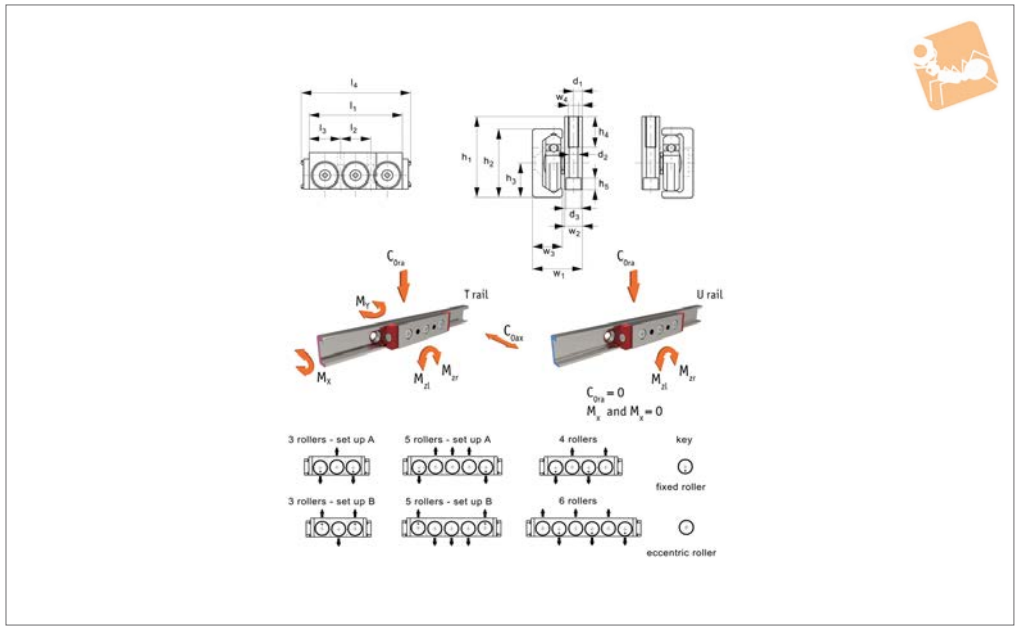
Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	w_3	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1935.35CL-100-T	62.7	62.75	30	16.5	12	8200	1080	3580
L1935.35CL-100-U	62.7	62.7	30	16.5	12	8200	0	3580
L1935.35CL-120-TA	53.7	161.2	30	16.5	12	8200	1240	3580
L1935.35CL-120-UA	53.7	161.2	30	16.5	12	8200	0	3580
L1935.35CL-120-TB	161.2	53.7	30	16.5	12	8200	1240	3580
L1935.35CL-120-UB	161.2	53.7	30	16.5	12	8200	0	3580
L1935.35CL-150-T	161.2	161.2	30	16.5	12	9756	1490	4260
L1935.35CL-150-U	161.2	161.2	30	16.5	12	9756	0	4260
L1935.35CL-180-TA	161.2	268.6	30	16.5	12	9756	1810	4260

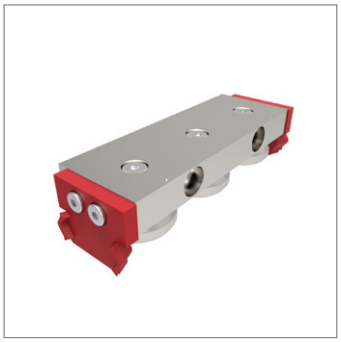
Medium Duty Sliders, size 35

side seal, front fixing, with wiper



Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	w_3	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1935.35CL-180-UA	161.2	268.6	30	16.5	12	9756	0	4260
L1935.35CL-180-TB	268.6	161.2	30	16.5	12	9756	1810	4260
L1935.35CL-180-UB	268.6	161.2	30	16.5	12	9756	0	4260





L1935.CR

Material
Zinc plated steel body.
Steel rollers (100Cr6) with rubber seals.

Technical Notes
To be used with compact rail size 35.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	d_1 for screw	d_2	d_3	h_1	h_2	h_3	h_4	h_5	l_1	l_2	l_3	l_4	M_x Nm
L1935.35CR-100-TA	T	3	M8	6.7	11	35	17.5	37	15	5.5	100	114	45	27.5	13.1
L1935.35CR-100-UA	U	3	M8	6.8	12	35	17.5	37	15	5.5	100	114	45	27.5	0
L1935.35CR-120-TA	T	4	M8	6.9	13	35	17.5	37	15	5.5	120	134	60	30.0	24.3
L1935.35CR-120-UA	U	4	M8	6.10	14	35	17.5	37	15	5.5	120	134	60	30.0	0
L1935.35CR-120-TB	T	4	M8	6.11	15	35	17.5	37	15	5.5	120	134	60	30.0	24.3
L1935.35CR-120-UB	U	4	M8	6.12	16	35	17.5	37	15	5.5	120	134	60	30.0	0
L1935.35CR-150-TA	T	5	M8	6.13	17	35	17.5	37	15	5.5	150	164	30	30.0	24.3
L1935.35CR-150-UA	U	5	M8	6.14	18	35	17.5	37	15	5.5	150	164	30	30.0	0
L1935.35CR-180-TA	T	6	M8	6.15	19	35	17.5	37	15	5.5	180	194	60	30.0	29.0
L1935.35CR-180-UA	U	6	M8	6.16	20	35	17.5	37	15	5.5	180	194	60	30.0	0
L1935.35CR-180-TB	T	6	M8	6.17	21	35	17.5	37	15	5.5	180	194	60	30.0	29.0
L1935.35CR-180-UB	U	6	M8	6.18	22	35	17.5	37	15	5.5	180	194	60	30.0	0

Order No.	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1	w_2	w_3	w_4	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1935.35CR-100-TA	34.3	62.7	62.7	29.9	16.5	12	6	8200	1080	3580
L1935.35CR-100-UA	0	62.7	62.7	29.9	16.5	12	6	8200	0	3580
L1935.35CR-120-TA	44.1	53.7	161.2	29.9	16.5	12	6	8200	1240	3580
L1935.35CR-120-UA	0	53.7	161.2	29.9	16.5	12	6	8200	0	3580
L1935.35CR-120-TB	44.1	161.2	53.7	29.9	16.5	12	6	8200	1240	3580
L1935.35CR-120-UB	0	161.2	53.7	29.9	16.5	12	6	8200	0	3580
L1935.35CR-150-TA	58.8	161.2	161.2	29.9	16.5	12	6	9576	1490	4280

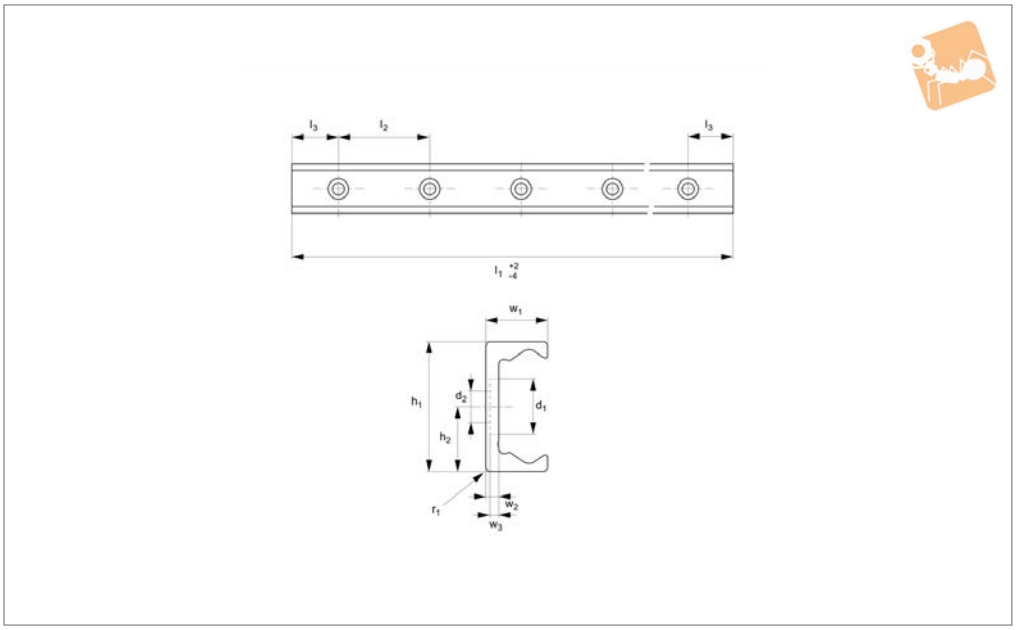


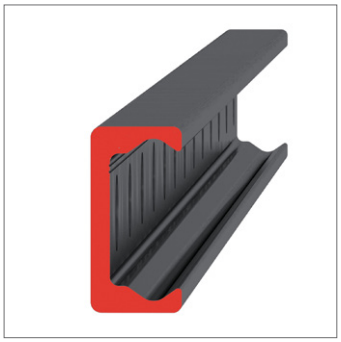
Medium Duty Sliders, size 35

no side seal, side fixing, with wiper



Order No.	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1	w_2	w_3	w_4	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1935.35CR-150-UA	0	161.2	161.2	29.9	16.5	12	6	9576	0	4280
L1935.35CR-180-TA	73.6	161.2	268.6	29.9	16.5	12	6	9576	1810	4280
L1935.35CR-180-UA	0	161.2	268.6	29.9	16.5	12	6	9576	0	4280
L1935.35CR-180-TB	73.6	268.6	161.2	29.9	16.5	12	6	9576	1810	4280
L1935.35CR-180-UB	0	268.6	161.2	29.9	16.5	12	6	9576	0	4280





L1935.TLC35

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for system misalignment).
This is the counterbored rail type (most popular), which is usually used with a corresponding ULC rail.
Special low profile Torx head screws provided free of charge.

Weight: 1,7 Kg/m.

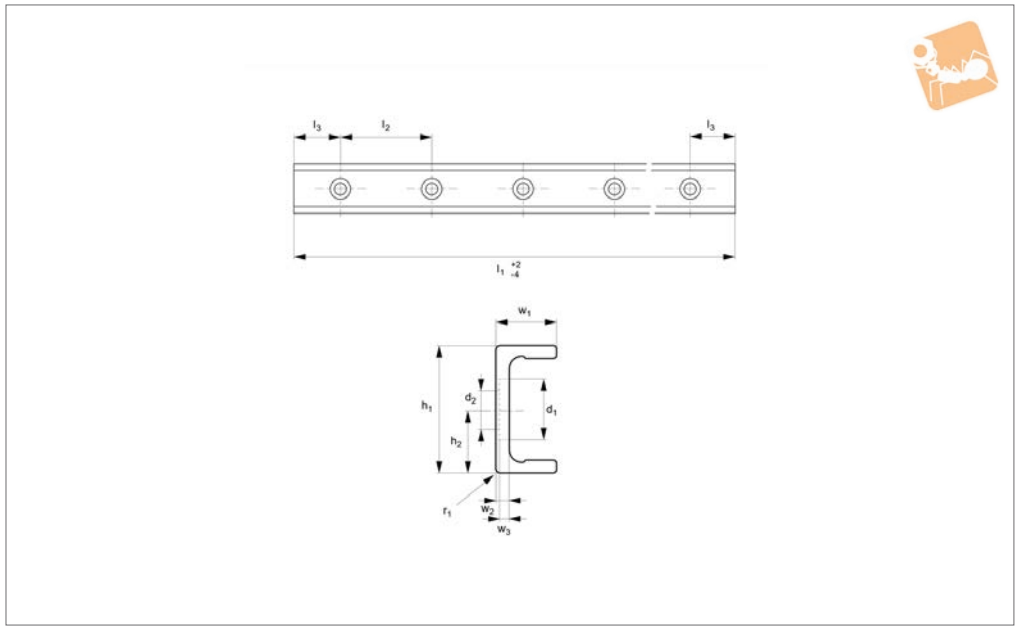
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1935.TLC35-0320	14.5	M6	35	17.5	320	80	40	2	16	3.5	2.7
L1935.TLC35-0400	14.5	M6	35	17.5	400	80	40	2	16	3.5	2.7
L1935.TLC35-0480	14.5	M6	35	17.5	480	80	40	2	16	3.5	2.7
L1935.TLC35-0560	14.5	M6	35	17.5	560	80	40	2	16	3.5	2.7
L1935.TLC35-0640	14.5	M6	35	17.5	640	80	40	2	16	3.5	2.7
L1935.TLC35-0720	14.5	M6	35	17.5	720	80	40	2	16	3.5	2.7
L1935.TLC35-0800	14.5	M6	35	17.5	800	80	40	2	16	3.5	2.7
L1935.TLC35-0880	14.5	M6	35	17.5	880	80	40	2	16	3.5	2.7
L1935.TLC35-0960	14.5	M6	35	17.5	960	80	40	2	16	3.5	2.7
L1935.TLC35-1040	14.5	M6	35	17.5	1040	80	40	2	16	3.5	2.7
L1935.TLC35-1120	14.5	M6	35	17.5	1120	80	40	2	16	3.5	2.7
L1935.TLC35-1200	14.5	M6	35	17.5	1200	80	40	2	16	3.5	2.7
L1935.TLC35-1280	14.5	M6	35	17.5	1280	80	40	2	16	3.5	2.7
L1935.TLC35-1360	14.5	M6	35	17.5	1360	80	40	2	16	3.5	2.7
L1935.TLC35-1440	14.5	M6	35	17.5	1440	80	40	2	16	3.5	2.7
L1935.TLC35-1520	14.5	M6	35	17.5	1520	80	40	2	16	3.5	2.7
L1935.TLC35-1600	14.5	M6	35	17.5	1600	80	40	2	16	3.5	2.7
L1935.TLC35-1680	14.5	M6	35	17.5	1680	80	40	2	16	3.5	2.7
L1935.TLC35-1760	14.5	M6	35	17.5	1760	80	40	2	16	3.5	2.7
L1935.TLC35-1840	14.5	M6	35	17.5	1840	80	40	2	16	3.5	2.7
L1935.TLC35-1920	14.5	M6	35	17.5	1920	80	40	2	16	3.5	2.7
L1935.TLC35-2000	14.5	M6	35	17.5	2000	80	40	2	16	3.5	2.7
L1935.TLC35-2080	14.5	M6	35	17.5	2080	80	40	2	16	3.5	2.7
L1935.TLC35-2160	14.5	M6	35	17.5	2160	80	40	2	16	3.5	2.7
L1935.TLC35-2240	14.5	M6	35	17.5	2240	80	40	2	16	3.5	2.7
L1935.TLC35-2320	14.5	M6	35	17.5	2320	80	40	2	16	3.5	2.7
L1935.TLC35-2400	14.5	M6	35	17.5	2400	80	40	2	16	3.5	2.7
L1935.TLC35-2480	14.5	M6	35	17.5	2480	80	40	2	16	3.5	2.7
L1935.TLC35-2560	14.5	M6	35	17.5	2560	80	40	2	16	3.5	2.7
L1935.TLC35-2640	14.5	M6	35	17.5	2640	80	40	2	16	3.5	2.7
L1935.TLC35-2720	14.5	M6	35	17.5	2720	80	40	2	16	3.5	2.7

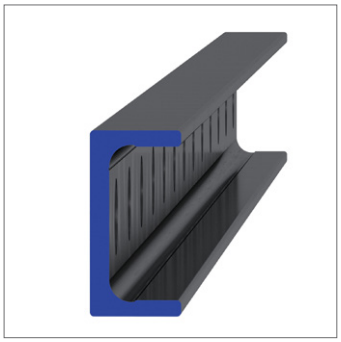


Medium Duty T Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1935.TLC35-2800	14.5	M6	35	17.5	2800	80	40	2	16	3.5	2.7
L1935.TLC35-2880	14.5	M6	35	17.5	2880	80	40	2	16	3.5	2.7
L1935.TLC35-2960	14.5	M6	35	17.5	2960	80	40	2	16	3.5	2.7
L1935.TLC35-3040	14.5	M6	35	17.5	3040	80	40	2	16	3.5	2.7
L1935.TLC35-3120	14.5	M6	35	17.5	3120	80	40	2	16	3.5	2.7
L1935.TLC35-3200	14.5	M6	35	17.5	3200	80	40	2	16	3.5	2.7
L1935.TLC35-3280	14.5	M6	35	17.5	3280	80	40	2	16	3.5	2.7
L1935.TLC35-3360	14.5	M6	35	17.5	3360	80	40	2	16	3.5	2.7
L1935.TLC35-3440	14.5	M6	35	17.5	3440	80	40	2	16	3.5	2.7
L1935.TLC35-3520	14.5	M6	35	17.5	3520	80	40	2	16	3.5	2.7
L1935.TLC35-3600	14.5	M6	35	17.5	3600	80	40	2	16	3.5	2.7





L1935.ULC35

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULC counterbored rail type (most popular), which is usually used with a corresponding TLC rail.
Special low profile Torx head screws provided free of charge.
Weight: 1,7 Kg/m.

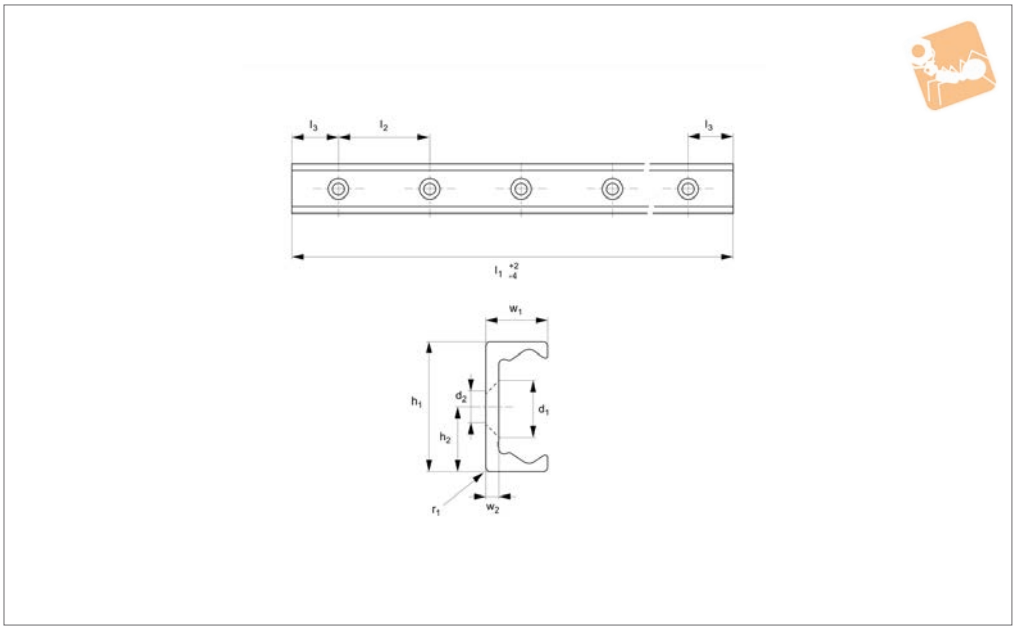
Order No.	d_1	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1935.ULC35-0320	14.5	M6	35	17.5	320	80	40	2	16	3.5	2.7
L1935.ULC35-0400	14.5	M6	35	17.5	400	80	40	2	16	3.5	2.7
L1935.ULC35-0480	14.5	M6	35	17.5	480	80	40	2	16	3.5	2.7
L1935.ULC35-0560	14.5	M6	35	17.5	560	80	40	2	16	3.5	2.7
L1935.ULC35-0640	14.5	M6	35	17.5	640	80	40	2	16	3.5	2.7
L1935.ULC35-0720	14.5	M6	35	17.5	720	80	40	2	16	3.5	2.7
L1935.ULC35-0800	14.5	M6	35	17.5	800	80	40	2	16	3.5	2.7
L1935.ULC35-0880	14.5	M6	35	17.5	880	80	40	2	16	3.5	2.7
L1935.ULC35-0960	14.5	M6	35	17.5	960	80	40	2	16	3.5	2.7
L1935.ULC35-1040	14.5	M6	35	17.5	1040	80	40	2	16	3.5	2.7
L1935.ULC35-1120	14.5	M6	35	17.5	1120	80	40	2	16	3.5	2.7
L1935.ULC35-1200	14.5	M6	35	17.5	1200	80	40	2	16	3.5	2.7
L1935.ULC35-1280	14.5	M6	35	17.5	1280	80	40	2	16	3.5	2.7
L1935.ULC35-1360	14.5	M6	35	17.5	1360	80	40	2	16	3.5	2.7
L1935.ULC35-1440	14.5	M6	35	17.5	1440	80	40	2	16	3.5	2.7
L1935.ULC35-1520	14.5	M6	35	17.5	1520	80	40	2	16	3.5	2.7
L1935.ULC35-1600	14.5	M6	35	17.5	1600	80	40	2	16	3.5	2.7
L1935.ULC35-1680	14.5	M6	35	17.5	1680	80	40	2	16	3.5	2.7
L1935.ULC35-1760	14.5	M6	35	17.5	1760	80	40	2	16	3.5	2.7
L1935.ULC35-1840	14.5	M6	35	17.5	1840	80	40	2	16	3.5	2.7
L1935.ULC35-1920	14.5	M6	35	17.5	1920	80	40	2	16	3.5	2.7
L1935.ULC35-2000	14.5	M6	35	17.5	2000	80	40	2	16	3.5	2.7
L1935.ULC35-2080	14.5	M6	35	17.5	2080	80	40	2	16	3.5	2.7
L1935.ULC35-2160	14.5	M6	35	17.5	2160	80	40	2	16	3.5	2.7
L1935.ULC35-2240	14.5	M6	35	17.5	2240	80	40	2	16	3.5	2.7
L1935.ULC35-2320	14.5	M6	35	17.5	2320	80	40	2	16	3.5	2.7
L1935.ULC35-2400	14.5	M6	35	17.5	2400	80	40	2	16	3.5	2.7
L1935.ULC35-2480	14.5	M6	35	17.5	2480	80	40	2	16	3.5	2.7
L1935.ULC35-2560	14.5	M6	35	17.5	2560	80	40	2	16	3.5	2.7
L1935.ULC35-2640	14.5	M6	35	17.5	2640	80	40	2	16	3.5	2.7
L1935.ULC35-2720	14.5	M6	35	17.5	2720	80	40	2	16	3.5	2.7
L1935.ULC35-2800	14.5	M6	35	17.5	2800	80	40	2	16	3.5	2.7
L1935.ULC35-2880	14.5	M6	35	17.5	2880	80	40	2	16	3.5	2.7

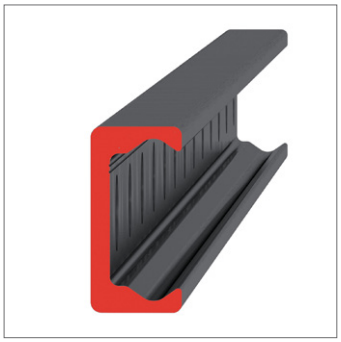


Medium Duty U Rail
counterbored holes



Order No.	d_1	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1935.ULC35-2960	14.5	M6	35	17.5	2960	80	40	2	16	3.5	2.7
L1935.ULC35-3040	14.5	M6	35	17.5	3040	80	40	2	16	3.5	2.7
L1935.ULC35-3120	14.5	M6	35	17.5	3120	80	40	2	16	3.5	2.7
L1935.ULC35-3200	14.5	M6	35	17.5	3200	80	40	2	16	3.5	2.7
L1935.ULC35-3280	14.5	M6	35	17.5	3280	80	40	2	16	3.5	2.7
L1935.ULC35-3360	14.5	M6	35	17.5	3360	80	40	2	16	3.5	2.7
L1935.ULC35-3440	14.5	M6	35	17.5	3440	80	40	2	16	3.5	2.7
L1935.ULC35-3520	14.5	M6	35	17.5	3520	80	40	2	16	3.5	2.7
L1935.ULC35-3600	14.5	M6	35	17.5	3600	80	40	2	16	3.5	2.7





L1935.TLV35

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rails (allows for misalignment).
This is the TLV countersunk rail which is usually used with a corresponding ULV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 1,7 Kg/m.

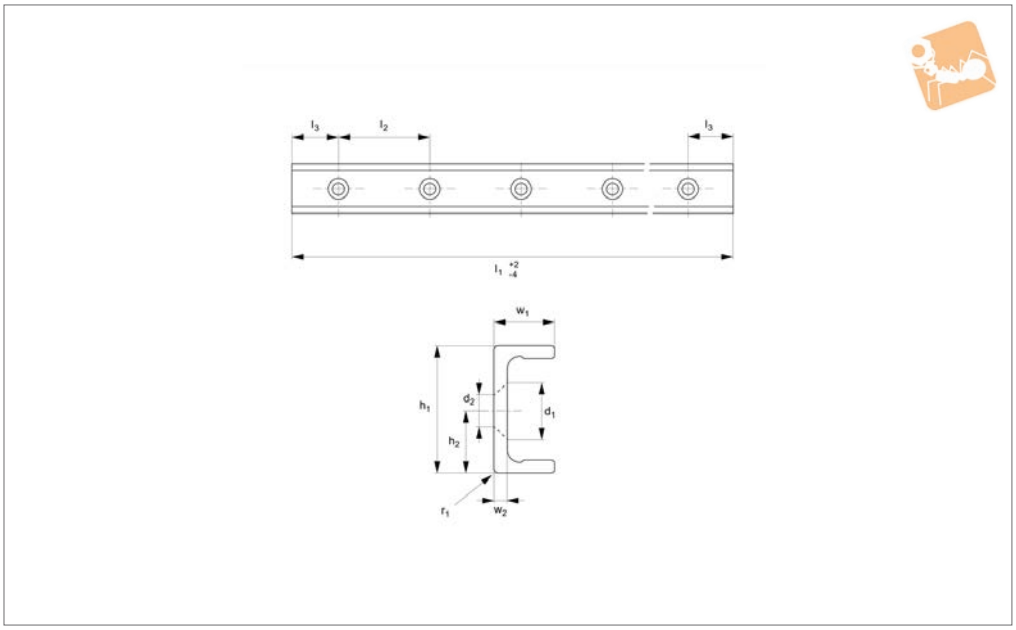
Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1935.TLV35-0320	M6	35	17.5	320	80	40	1	16	3.5
L1935.TLV35-0400	M6	35	17.5	400	80	40	1	16	3.5
L1935.TLV35-0480	M6	35	17.5	480	80	40	1	16	3.5
L1935.TLV35-0560	M6	35	17.5	560	80	40	1	16	3.5
L1935.TLV35-0640	M6	35	17.5	640	80	40	1	16	3.5
L1935.TLV35-0720	M6	35	17.5	720	80	40	1	16	3.5
L1935.TLV35-0800	M6	35	17.5	800	80	40	1	16	3.5
L1935.TLV35-0880	M6	35	17.5	880	80	40	1	16	3.5
L1935.TLV35-0960	M6	35	17.5	960	80	40	1	16	3.5
L1935.TLV35-1040	M6	35	17.5	1040	80	40	1	16	3.5
L1935.TLV35-1120	M6	35	17.5	1120	80	40	1	16	3.5
L1935.TLV35-1200	M6	35	17.5	1200	80	40	1	16	3.5
L1935.TLV35-1280	M6	35	17.5	1280	80	40	1	16	3.5
L1935.TLV35-1360	M6	35	17.5	1360	80	40	1	16	3.5
L1935.TLV35-1440	M6	35	17.5	1440	80	40	1	16	3.5
L1935.TLV35-1520	M6	35	17.5	1520	80	40	1	16	3.5
L1935.TLV35-1600	M6	35	17.5	1600	80	40	1	16	3.5
L1935.TLV35-1680	M6	35	17.5	1680	80	40	1	16	3.5
L1935.TLV35-1760	M6	35	17.5	1760	80	40	1	16	3.5
L1935.TLV35-1840	M6	35	17.5	1840	80	40	1	16	3.5
L1935.TLV35-1920	M6	35	17.5	1920	80	40	1	16	3.5
L1935.TLV35-2000	M6	35	17.5	2000	80	40	1	16	3.5
L1935.TLV35-2080	M6	35	17.5	2080	80	40	1	16	3.5
L1935.TLV35-2160	M6	35	17.5	2160	80	40	1	16	3.5
L1935.TLV35-2240	M6	35	17.5	2240	80	40	1	16	3.5
L1935.TLV35-2320	M6	35	17.5	2320	80	40	1	16	3.5
L1935.TLV35-2400	M6	35	17.5	2400	80	40	1	16	3.5
L1935.TLV35-2480	M6	35	17.5	2480	80	40	1	16	3.5
L1935.TLV35-2560	M6	35	17.5	2560	80	40	1	16	3.5
L1935.TLV35-2640	M6	35	17.5	2640	80	40	1	16	3.5
L1935.TLV35-2720	M6	35	17.5	2720	80	40	1	16	3.5
L1935.TLV35-2800	M6	35	17.5	2800	80	40	1	16	3.5
L1935.TLV35-2880	M6	35	17.5	2880	80	40	1	16	3.5

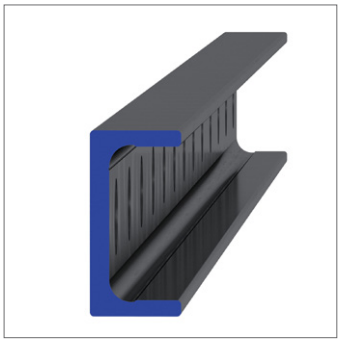


Medium Duty T Rail
countersunk holes



Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1935.TLV35-2960	M6	35	17.5	2960	80	40	1	16	3.5
L1935.TLV35-3040	M6	35	17.5	3040	80	40	1	16	3.5
L1935.TLV35-3120	M6	35	17.5	3120	80	40	1	16	3.5
L1935.TLV35-3200	M6	35	17.5	3200	80	40	1	16	3.5
L1935.TLV35-3280	M6	35	17.5	3280	80	40	1	16	3.5
L1935.TLV35-3360	M6	35	17.5	3360	80	40	1	16	3.5
L1935.TLV35-3440	M6	35	17.5	3440	80	40	1	16	3.5
L1935.TLV35-3520	M6	35	17.5	3520	80	40	1	16	3.5
L1935.TLV35-3600	M6	35	17.5	3600	80	40	1	16	3.5





L1935.ULV35

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULV countersunk rail type which is usually used with a corresponding TLV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 1,7 Kg/m.

Order No.	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1935.ULV35-0320	M6	35	17.5	320	80	40	1	16	3.5
L1935.ULV35-0400	M6	35	17.5	400	80	40	1	16	3.5
L1935.ULV35-0480	M6	35	17.5	480	80	40	1	16	3.5
L1935.ULV35-0560	M6	35	17.5	560	80	40	1	16	3.5
L1935.ULV35-0640	M6	35	17.5	640	80	40	1	16	3.5
L1935.ULV35-0720	M6	35	17.5	720	80	40	1	16	3.5
L1935.ULV35-0800	M6	35	17.5	800	80	40	1	16	3.5
L1935.ULV35-0880	M6	35	17.5	880	80	40	1	16	3.5
L1935.ULV35-0960	M6	35	17.5	960	80	40	1	16	3.5
L1935.ULV35-1040	M6	35	17.5	1040	80	40	1	16	3.5
L1935.ULV35-1120	M6	35	17.5	1120	80	40	1	16	3.5
L1935.ULV35-1200	M6	35	17.5	1200	80	40	1	16	3.5
L1935.ULV35-1280	M6	35	17.5	1280	80	40	1	16	3.5
L1935.ULV35-1360	M6	35	17.5	1360	80	40	1	16	3.5
L1935.ULV35-1440	M6	35	17.5	1440	80	40	1	16	3.5
L1935.ULV35-1520	M6	35	17.5	1520	80	40	1	16	3.5
L1935.ULV35-1600	M6	35	17.5	1600	80	40	1	16	3.5
L1935.ULV35-1680	M6	35	17.5	1680	80	40	1	16	3.5
L1935.ULV35-1760	M6	35	17.5	1760	80	40	1	16	3.5
L1935.ULV35-1840	M6	35	17.5	1840	80	40	1	16	3.5
L1935.ULV35-1920	M6	35	17.5	1920	80	40	1	16	3.5
L1935.ULV35-2000	M6	35	17.5	2000	80	40	1	16	3.5
L1935.ULV35-2080	M6	35	17.5	2080	80	40	1	16	3.5
L1935.ULV35-2160	M6	35	17.5	2160	80	40	1	16	3.5
L1935.ULV35-2240	M6	35	17.5	2240	80	40	1	16	3.5
L1935.ULV35-2320	M6	35	17.5	2320	80	40	1	16	3.5
L1935.ULV35-2400	M6	35	17.5	2400	80	40	1	16	3.5
L1935.ULV35-2480	M6	35	17.5	2480	80	40	1	16	3.5
L1935.ULV35-2560	M6	35	17.5	2560	80	40	1	16	3.5
L1935.ULV35-2640	M6	35	17.5	2640	80	40	1	16	3.5
L1935.ULV35-2720	M6	35	17.5	2720	80	40	1	16	3.5
L1935.ULV35-2800	M6	35	17.5	2800	80	40	1	16	3.5
L1935.ULV35-2880	M6	35	17.5	2880	80	40	1	16	3.5

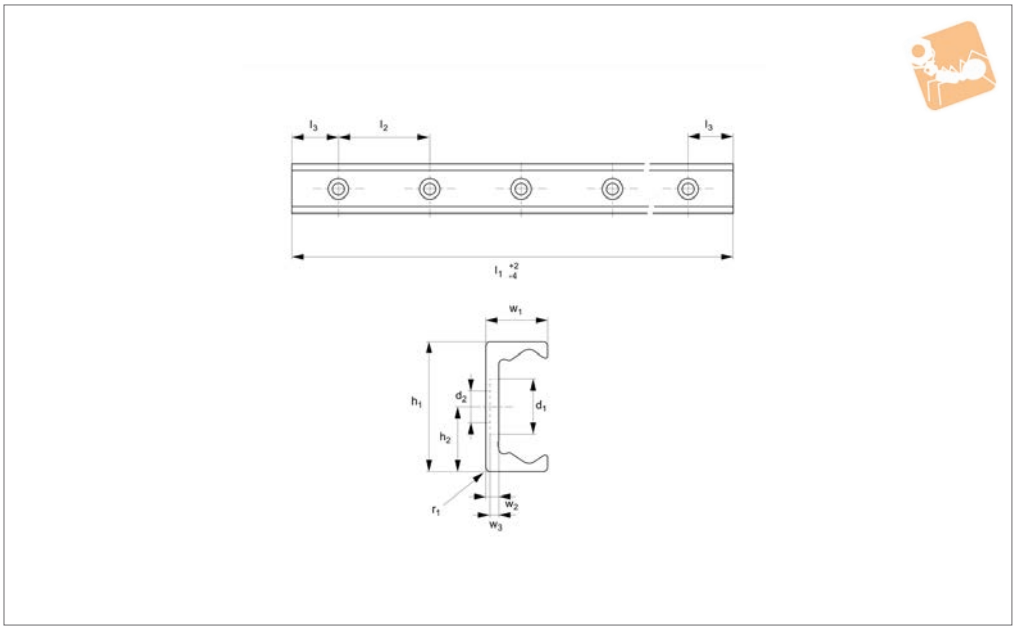


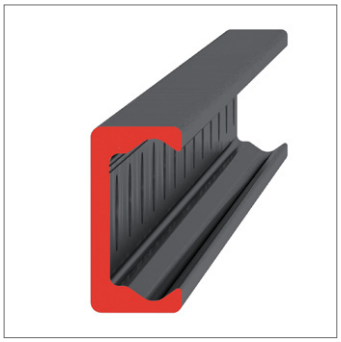
Medium Duty U Rail

countersunk holes



Order No.	d_2	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1935.ULV35-2960	M6	35	17.5	2960	80	40	1	16	3.5
L1935.ULV35-3040	M6	35	17.5	3040	80	40	1	16	3.5
L1935.ULV35-3120	M6	35	17.5	3120	80	40	1	16	3.5
L1935.ULV35-3200	M6	35	17.5	3200	80	40	1	16	3.5
L1935.ULV35-3280	M6	35	17.5	3280	80	40	1	16	3.5
L1935.ULV35-3360	M6	35	17.5	3360	80	40	1	16	3.5
L1935.ULV35-3440	M6	35	17.5	3440	80	40	1	16	3.5
L1935.ULV35-3520	M6	35	17.5	3520	80	40	1	16	3.5
L1935.ULV35-3600	M6	35	17.5	3600	80	40	1	16	3.5





L1935.35T-C

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for system misalignment).
This is the counterbored rail type (most popular), which is usually used with a corresponding U-C rail.
Special low profile Torx head screws provided free of charge.

Weight: 1,7 Kg/m.

Tips
Standard carriages are the L1935.CL series.

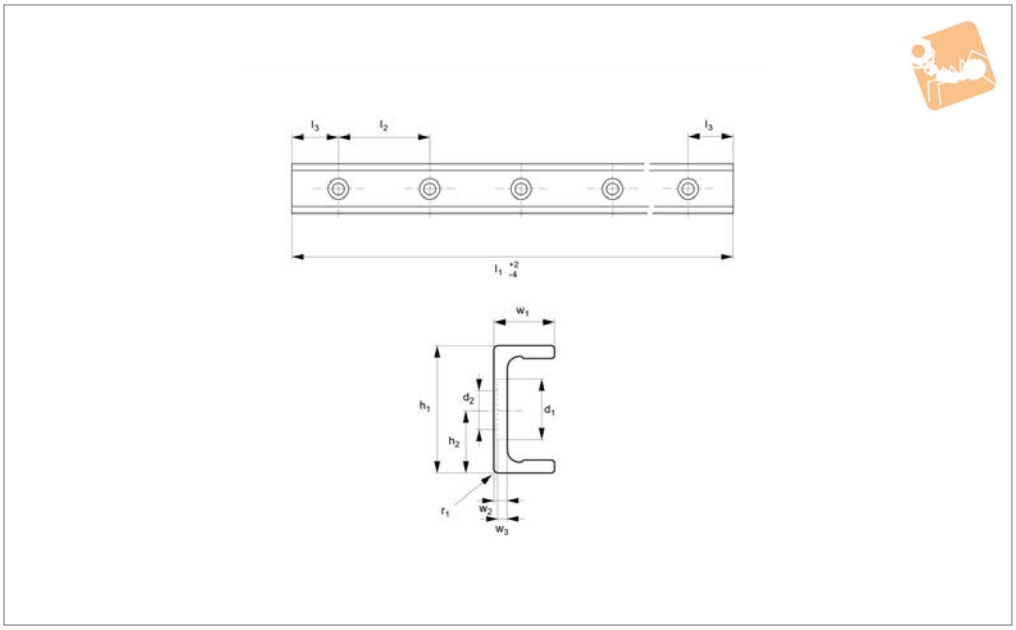
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1935.35T-0240-C	14.5	M6	35	17.5	240	80	40	2	16	3.5	2.7
L1935.35T-0320-C	14.5	M6	35	17.5	320	80	40	2	16	3.5	2.7
L1935.35T-0400-C	14.5	M6	35	17.5	400	80	40	2	16	3.5	2.7
L1935.35T-0480-C	14.5	M6	35	17.5	480	80	40	2	16	3.5	2.7
L1935.35T-0560-C	14.5	M6	35	17.5	560	80	40	2	16	3.5	2.7
L1935.35T-0640-C	14.5	M6	35	17.5	640	80	40	2	16	3.5	2.7
L1935.35T-0720-C	14.5	M6	35	17.5	720	80	40	2	16	3.5	2.7
L1935.35T-0800-C	14.5	M6	35	17.5	800	80	40	2	16	3.5	2.7
L1935.35T-0880-C	14.5	M6	35	17.5	880	80	40	2	16	3.5	2.7
L1935.35T-0960-C	14.5	M6	35	17.5	960	80	40	2	16	3.5	2.7
L1935.35T-1040-C	14.5	M6	35	17.5	1040	80	40	2	16	3.5	2.7
L1935.35T-1120-C	14.5	M6	35	17.5	1120	80	40	2	16	3.5	2.7
L1935.35T-1200-C	14.5	M6	35	17.5	1200	80	40	2	16	3.5	2.7
L1935.35T-1280-C	14.5	M6	35	17.5	1280	80	40	2	16	3.5	2.7
L1935.35T-1360-C	14.5	M6	35	17.5	1360	80	40	2	16	3.5	2.7
L1935.35T-1440-C	14.5	M6	35	17.5	1440	80	40	2	16	3.5	2.7
L1935.35T-1520-C	14.5	M6	35	17.5	1520	80	40	2	16	3.5	2.7
L1935.35T-1600-C	14.5	M6	35	17.5	1600	80	40	2	16	3.5	2.7
L1935.35T-1680-C	14.5	M6	35	17.5	1680	80	40	2	16	3.5	2.7
L1935.35T-1760-C	14.5	M6	35	17.5	1760	80	40	2	16	3.5	2.7
L1935.35T-1840-C	14.5	M6	35	17.5	1840	80	40	2	16	3.5	2.7
L1935.35T-1920-C	14.5	M6	35	17.5	1920	80	40	2	16	3.5	2.7
L1935.35T-2000-C	14.5	M6	35	17.5	2000	80	40	2	16	3.5	2.7
L1935.35T-2080-C	14.5	M6	35	17.5	2080	80	40	2	16	3.5	2.7
L1935.35T-2160-C	14.5	M6	35	17.5	2160	80	40	2	16	3.5	2.7
L1935.35T-2240-C	14.5	M6	35	17.5	2240	80	40	2	16	3.5	2.7
L1935.35T-2320-C	14.5	M6	35	17.5	2320	80	40	2	16	3.5	2.7
L1935.35T-2400-C	14.5	M6	35	17.5	2400	80	40	2	16	3.5	2.7
L1935.35T-2480-C	14.5	M6	35	17.5	2480	80	40	2	16	3.5	2.7
L1935.35T-2560-C	14.5	M6	35	17.5	2560	80	40	2	16	3.5	2.7
L1935.35T-2640-C	14.5	M6	35	17.5	2640	80	40	2	16	3.5	2.7

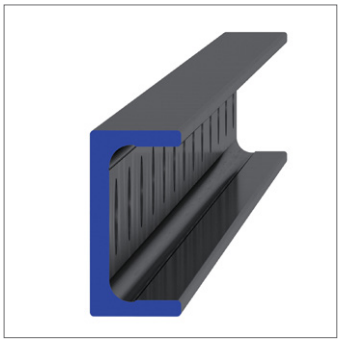


Medium Duty T Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1935.35T-2720-C	14.5	M6	35	17.5	2720	80	40	2	16	3.5	2.7
L1935.35T-2800-C	14.5	M6	35	17.5	2800	80	40	2	16	3.5	2.7
L1935.35T-2880-C	14.5	M6	35	17.5	2880	80	40	2	16	3.5	2.7
L1935.35T-2960-C	14.5	M6	35	17.5	2960	80	40	2	16	3.5	2.7
L1935.35T-3040-C	14.5	M6	35	17.5	3040	80	40	2	16	3.5	2.7
L1935.35T-3120-C	14.5	M6	35	17.5	3120	80	40	2	16	3.5	2.7
L1935.35T-3200-C	14.5	M6	35	17.5	3200	80	40	2	16	3.5	2.7
L1935.35T-3280-C	14.5	M6	35	17.5	3280	80	40	2	16	3.5	2.7
L1935.35T-3360-C	14.5	M6	35	17.5	3360	80	40	2	16	3.5	2.7
L1935.35T-3440-C	14.5	M6	35	17.5	3440	80	40	2	16	3.5	2.7
L1935.35T-3520-C	14.5	M6	35	17.5	3520	80	40	2	16	3.5	2.7
L1935.35T-3600-C	14.5	M6	35	17.5	3600	80	40	2	16	3.5	2.7
L1935.35T-3680-C	14.5	M6	35	17.5	3680	80	40	2	16	3.5	2.7
L1935.35T-3760-C	14.5	M6	35	17.5	3760	80	40	2	16	3.5	2.7
L1935.35T-3840-C	14.5	M6	35	17.5	3840	80	40	2	16	3.5	2.7
L1935.35T-3920-C	14.5	M6	35	17.5	3920	80	40	2	16	3.5	2.7
L1935.35T-4000-C	14.5	M6	35	17.5	4000	80	40	2	16	3.5	2.7
L1935.35T-4080-C	14.5	M6	35	17.5	4080	80	40	2	16	3.5	2.7





L1935.35U-C

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the U-C counterbored rail type (most popular), which is usually used with a corresponding T-C rail.
Special low profile Torx head screws provided free of charge.
Weight: 1,7 Kg/m.

Tips
Standard carriages are the L1935.CL series.

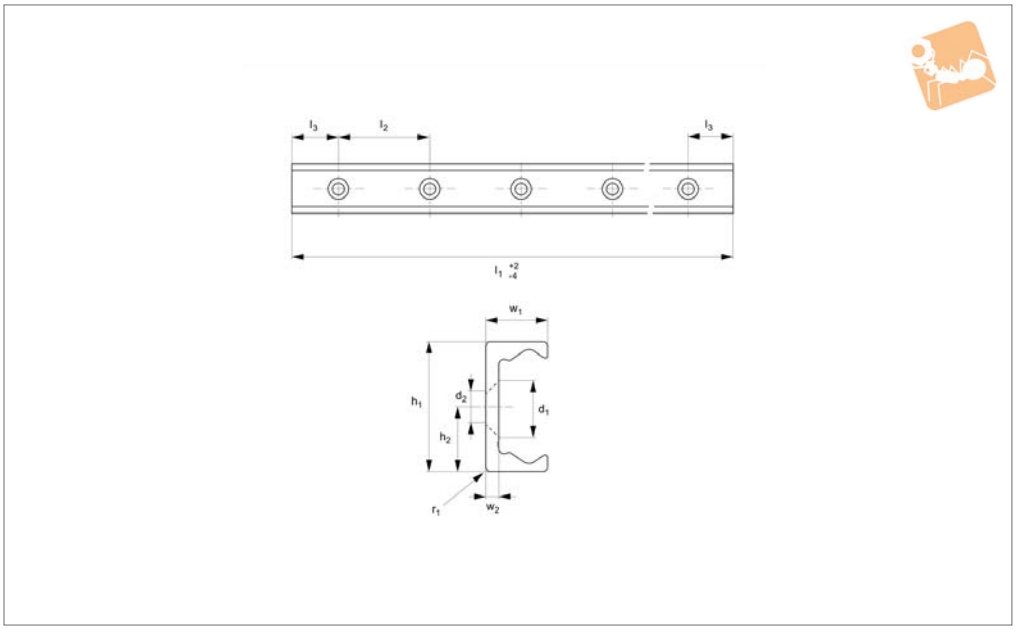
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1935.35U-0240-C	14.5	M6	35	17.5	240	80	40	2	16	3.5	2.7
L1935.35U-0320-C	14.5	M6	35	17.5	320	80	40	2	16	3.5	2.7
L1935.35U-0400-C	14.5	M6	35	17.5	400	80	40	2	16	3.5	2.7
L1935.35U-0480-C	14.5	M6	35	17.5	480	80	40	2	16	3.5	2.7
L1935.35U-0560-C	14.5	M6	35	17.5	560	80	40	2	16	3.5	2.7
L1935.35U-0640-C	14.5	M6	35	17.5	640	80	40	2	16	3.5	2.7
L1935.35U-0720-C	14.5	M6	35	17.5	720	80	40	2	16	3.5	2.7
L1935.35U-0800-C	14.5	M6	35	17.5	800	80	40	2	16	3.5	2.7
L1935.35U-0880-C	14.5	M6	35	17.5	880	80	40	2	16	3.5	2.7
L1935.35U-0960-C	14.5	M6	35	17.5	960	80	40	2	16	3.5	2.7
L1935.35U-1040-C	14.5	M6	35	17.5	1040	80	40	2	16	3.5	2.7
L1935.35U-1120-C	14.5	M6	35	17.5	1120	80	40	2	16	3.5	2.7
L1935.35U-1200-C	14.5	M6	35	17.5	1200	80	40	2	16	3.5	2.7
L1935.35U-1280-C	14.5	M6	35	17.5	1280	80	40	2	16	3.5	2.7
L1935.35U-1360-C	14.5	M6	35	17.5	1360	80	40	2	16	3.5	2.7
L1935.35U-1440-C	14.5	M6	35	17.5	1440	80	40	2	16	3.5	2.7
L1935.35U-1520-C	14.5	M6	35	17.5	1520	80	40	2	16	3.5	2.7
L1935.35U-1600-C	14.5	M6	35	17.5	1600	80	40	2	16	3.5	2.7
L1935.35U-1680-C	14.5	M6	35	17.5	1680	80	40	2	16	3.5	2.7
L1935.35U-1760-C	14.5	M6	35	17.5	1760	80	40	2	16	3.5	2.7
L1935.35U-1840-C	14.5	M6	35	17.5	1840	80	40	2	16	3.5	2.7
L1935.35U-1920-C	14.5	M6	35	17.5	1920	80	40	2	16	3.5	2.7
L1935.35U-2000-C	14.5	M6	35	17.5	2000	80	40	2	16	3.5	2.7
L1935.35U-2080-C	14.5	M6	35	17.5	2080	80	40	2	16	3.5	2.7
L1935.35U-2160-C	14.5	M6	35	17.5	2160	80	40	2	16	3.5	2.7
L1935.35U-2240-C	14.5	M6	35	17.5	2240	80	40	2	16	3.5	2.7
L1935.35U-2320-C	14.5	M6	35	17.5	2320	80	40	2	16	3.5	2.7
L1935.35U-2400-C	14.5	M6	35	17.5	2400	80	40	2	16	3.5	2.7
L1935.35U-2480-C	14.5	M6	35	17.5	2480	80	40	2	16	3.5	2.7
L1935.35U-2560-C	14.5	M6	35	17.5	2560	80	40	2	16	3.5	2.7
L1935.35U-2640-C	14.5	M6	35	17.5	2640	80	40	2	16	3.5	2.7

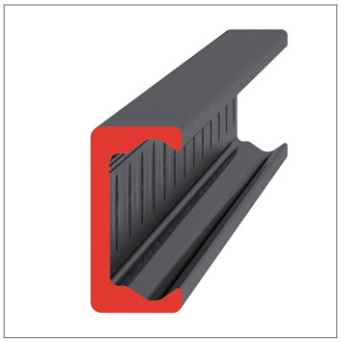


Medium Duty U Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1935.35U-2720-C	14.5	M6	35	17.5	2720	80	40	2	16	3.5	2.7
L1935.35U-2800-C	14.5	M6	35	17.5	2800	80	40	2	16	3.5	2.7
L1935.35U-2880-C	14.5	M6	35	17.5	2880	80	40	2	16	3.5	2.7
L1935.35U-2960-C	14.5	M6	35	17.5	2960	80	40	2	16	3.5	2.7
L1935.35U-3040-C	14.5	M6	35	17.5	3040	80	40	2	16	3.5	2.7
L1935.35U-3120-C	14.5	M6	35	17.5	3120	80	40	2	16	3.5	2.7
L1935.35U-3200-C	14.5	M6	35	17.5	3200	80	40	2	16	3.5	2.7
L1935.35U-3280-C	14.5	M6	35	17.5	3280	80	40	2	16	3.5	2.7
L1935.35U-3360-C	14.5	M6	35	17.5	3360	80	40	2	16	3.5	2.7
L1935.35U-3440-C	14.5	M6	35	17.5	3440	80	40	2	16	3.5	2.7
L1935.35U-3520-C	14.5	M6	35	17.5	3520	80	40	2	16	3.5	2.7
L1935.35U-3600-C	14.5	M6	35	17.5	3600	80	40	2	16	3.5	2.7
L1935.35U-3680-C	14.5	M6	35	17.5	3680	80	40	2	16	3.5	2.7
L1935.35U-3760-C	14.5	M6	35	17.5	3760	80	40	2	16	3.5	2.7
L1935.35U-3840-C	14.5	M6	35	17.5	3840	80	40	2	16	3.5	2.7
L1935.35U-3920-C	14.5	M6	35	17.5	3920	80	40	2	16	3.5	2.7
L1935.35U-4000-C	14.5	M6	35	17.5	4000	80	40	2	16	3.5	2.7
L1935.35U-4080-C	14.5	M6	35	17.5	4080	80	40	2	16	3.5	2.7





L1935.35T-V

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rails (allows for misalignment).
This is the T-V countersunk rail which is usually used with a corresponding U-V rail.
For fixing use countersunk DIN 7991 screws.
Weight: 1,7 Kg/m.

Tips
Standard carriages are the L1935.CL series.

Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1935.35T-0240-V	M6	35	17.5	240	80	40	1	16	3.5
L1935.35T-0320-V	M6	35	17.5	320	80	40	1	16	3.5
L1935.35T-0400-V	M6	35	17.5	400	80	40	1	16	3.5
L1935.35T-0480-V	M6	35	17.5	480	80	40	1	16	3.5
L1935.35T-0560-V	M6	35	17.5	560	80	40	1	16	3.5
L1935.35T-0640-V	M6	35	17.5	640	80	40	1	16	3.5
L1935.35T-0720-V	M6	35	17.5	720	80	40	1	16	3.5
L1935.35T-0800-V	M6	35	17.5	800	80	40	1	16	3.5
L1935.35T-0880-V	M6	35	17.5	880	80	40	1	16	3.5
L1935.35T-0960-V	M6	35	17.5	960	80	40	1	16	3.5
L1935.35T-1040-V	M6	35	17.5	1040	80	40	1	16	3.5
L1935.35T-1120-V	M6	35	17.5	1120	80	40	1	16	3.5
L1935.35T-1200-V	M6	35	17.5	1200	80	40	1	16	3.5
L1935.35T-1280-V	M6	35	17.5	1280	80	40	1	16	3.5
L1935.35T-1360-V	M6	35	17.5	1360	80	40	1	16	3.5
L1935.35T-1440-V	M6	35	17.5	1440	80	40	1	16	3.5
L1935.35T-1520-V	M6	35	17.5	1520	80	40	1	16	3.5
L1935.35T-1600-V	M6	35	17.5	1600	80	40	1	16	3.5
L1935.35T-1680-V	M6	35	17.5	1680	80	40	1	16	3.5
L1935.35T-1760-V	M6	35	17.5	1760	80	40	1	16	3.5
L1935.35T-1840-V	M6	35	17.5	1840	80	40	1	16	3.5
L1935.35T-1920-V	M6	35	17.5	1920	80	40	1	16	3.5
L1935.35T-2000-V	M6	35	17.5	2000	80	40	1	16	3.5
L1935.35T-2080-V	M6	35	17.5	2080	80	40	1	16	3.5
L1935.35T-2160-V	M6	35	17.5	2160	80	40	1	16	3.5
L1935.35T-2240-V	M6	35	17.5	2240	80	40	1	16	3.5
L1935.35T-2320-V	M6	35	17.5	2320	80	40	1	16	3.5
L1935.35T-2400-V	M6	35	17.5	2400	80	40	1	16	3.5
L1935.35T-2480-V	M6	35	17.5	2480	80	40	1	16	3.5
L1935.35T-2560-V	M6	35	17.5	2560	80	40	1	16	3.5
L1935.35T-2640-V	M6	35	17.5	2640	80	40	1	16	3.5

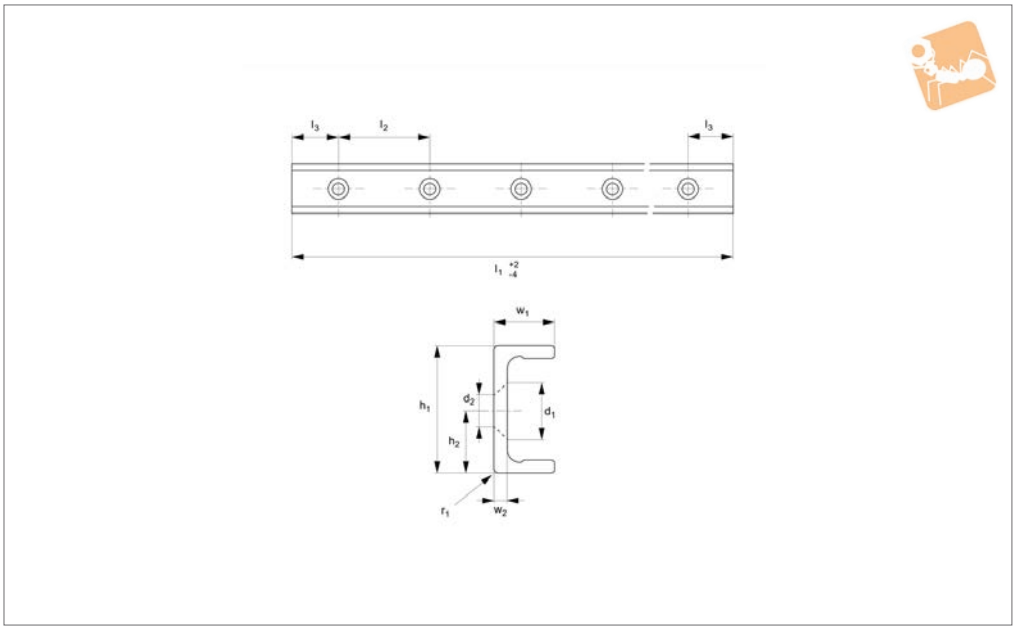


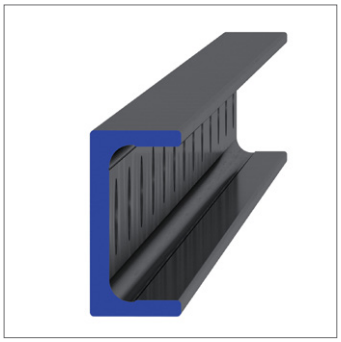
Medium Duty T Rail

countersunk holes



Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1935.35T-2720-V	M6	35	17.5	2720	80	40	1	16	3.5
L1935.35T-2800-V	M6	35	17.5	2800	80	40	1	16	3.5
L1935.35T-2880-V	M6	35	17.5	2880	80	40	1	16	3.5
L1935.35T-2960-V	M6	35	17.5	2960	80	40	1	16	3.5
L1935.35T-3040-V	M6	35	17.5	3040	80	40	1	16	3.5
L1935.35T-3120-V	M6	35	17.5	3120	80	40	1	16	3.5
L1935.35T-3200-V	M6	35	17.5	3200	80	40	1	16	3.5
L1935.35T-3280-V	M6	35	17.5	3280	80	40	1	16	3.5
L1935.35T-3360-V	M6	35	17.5	3360	80	40	1	16	3.5
L1935.35T-3440-V	M6	35	17.5	3440	80	40	1	16	3.5
L1935.35T-3520-V	M6	35	17.5	3520	80	40	1	16	3.5
L1935.35T-3600-V	M6	35	17.5	3600	80	40	1	16	3.5
L1935.35T-3680-V	M6	35	17.5	3680	80	40	1	16	3.5
L1935.35T-3760-V	M6	35	17.5	3760	80	40	1	16	3.5
L1935.35T-3840-V	M6	35	17.5	3840	80	40	1	16	3.5
L1935.35T-3920-V	M6	35	17.5	3920	80	40	1	16	3.5
L1935.35T-4000-V	M6	35	17.5	4000	80	40	1	16	3.5
L1935.35T-4080-V	M6	35	17.5	4080	80	40	1	16	3.5





L1935.35U-V

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the U-V countersunk rail type which is usually used with a corresponding T-V rail.
For fixing use countersunk DIN 7991 screws.
Weight: 1,7 Kg/m.

Tips
Standard carriages are the L1935.CL series.

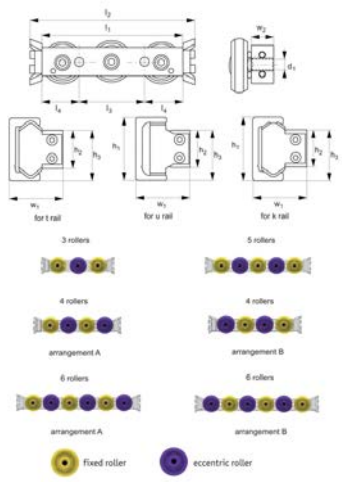
Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1935.35U-0240-V	M6	35	17.5	240	80	40	1	16	3.5
L1935.35U-0320-V	M6	35	17.5	320	80	40	1	16	3.5
L1935.35U-0400-V	M6	35	17.5	400	80	40	1	16	3.5
L1935.35U-0480-V	M6	35	17.5	480	80	40	1	16	3.5
L1935.35U-0560-V	M6	35	17.5	560	80	40	1	16	3.5
L1935.35U-0640-V	M6	35	17.5	640	80	40	1	16	3.5
L1935.35U-0720-V	M6	35	17.5	720	80	40	1	16	3.5
L1935.35U-0800-V	M6	35	17.5	800	80	40	1	16	3.5
L1935.35U-0880-V	M6	35	17.5	880	80	40	1	16	3.5
L1935.35U-0960-V	M6	35	17.5	960	80	40	1	16	3.5
L1935.35U-1040-V	M6	35	17.5	1040	80	40	1	16	3.5
L1935.35U-1120-V	M6	35	17.5	1120	80	40	1	16	3.5
L1935.35U-1200-V	M6	35	17.5	1200	80	40	1	16	3.5
L1935.35U-1280-V	M6	35	17.5	1280	80	40	1	16	3.5
L1935.35U-1360-V	M6	35	17.5	1360	80	40	1	16	3.5
L1935.35U-1440-V	M6	35	17.5	1440	80	40	1	16	3.5
L1935.35U-1520-V	M6	35	17.5	1520	80	40	1	16	3.5
L1935.35U-1600-V	M6	35	17.5	1600	80	40	1	16	3.5
L1935.35U-1680-V	M6	35	17.5	1680	80	40	1	16	3.5
L1935.35U-1760-V	M6	35	17.5	1760	80	40	1	16	3.5
L1935.35U-1840-V	M6	35	17.5	1840	80	40	1	16	3.5
L1935.35U-1920-V	M6	35	17.5	1920	80	40	1	16	3.5
L1935.35U-2000-V	M6	35	17.5	2000	80	40	1	16	3.5
L1935.35U-2080-V	M6	35	17.5	2080	80	40	1	16	3.5
L1935.35U-2160-V	M6	35	17.5	2160	80	40	1	16	3.5
L1935.35U-2240-V	M6	35	17.5	2240	80	40	1	16	3.5
L1935.35U-2320-V	M6	35	17.5	2320	80	40	1	16	3.5
L1935.35U-2400-V	M6	35	17.5	2400	80	40	1	16	3.5
L1935.35U-2480-V	M6	35	17.5	2480	80	40	1	16	3.5
L1935.35U-2560-V	M6	35	17.5	2560	80	40	1	16	3.5
L1935.35U-2640-V	M6	35	17.5	2640	80	40	1	16	3.5



Medium Duty U Rail
countersunk holes



Order No.	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1935.35U-2720-V	M6	35	17.5	2720	80	40	1	16	3.5
L1935.35U-2800-V	M6	35	17.5	2800	80	40	1	16	3.5
L1935.35U-2880-V	M6	35	17.5	2880	80	40	1	16	3.5
L1935.35U-2960-V	M6	35	17.5	2960	80	40	1	16	3.5
L1935.35U-3040-V	M6	35	17.5	3040	80	40	1	16	3.5
L1935.35U-3120-V	M6	35	17.5	3120	80	40	1	16	3.5
L1935.35U-3200-V	M6	35	17.5	3200	80	40	1	16	3.5
L1935.35U-3280-V	M6	35	17.5	3280	80	40	1	16	3.5
L1935.35U-3360-V	M6	35	17.5	3360	80	40	1	16	3.5
L1935.35U-3440-V	M6	35	17.5	3440	80	40	1	16	3.5
L1935.35U-3520-V	M6	35	17.5	3520	80	40	1	16	3.5
L1935.35U-3600-V	M6	35	17.5	3600	80	40	1	16	3.5
L1935.35U-3680-V	M6	35	17.5	3680	80	40	1	16	3.5
L1935.35U-3760-V	M6	35	17.5	3760	80	40	1	16	3.5
L1935.35U-3840-V	M6	35	17.5	3840	80	40	1	16	3.5
L1935.35U-3920-V	M6	35	17.5	3920	80	40	1	16	3.5
L1935.35U-4000-V	M6	35	17.5	4000	80	40	1	16	3.5
L1935.35U-4080-V	M6	35	17.5	4080	80	40	1	16	3.5





L1943.CS

Material
Zinc plated steel body.
Steel rollers (100Cr6) with metal (2Z) or rubber (2RS) seals.

Technical Notes
To be used with compact rail size 43.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).
Unlike the N series sliders these CS sliders do not have protective side seals.

Tips
The U rail sliders cannot accept axial loads.

The 3 and 5 bearing sliders can be used either way up in the rail dependent on where the loads will be applied.
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.005.
Quiet and fast (up to 7 m/s).

Order No.	For rail type	No. of rollers	Seal type	d_1	h_1 +0.35|-0.10	h_2 +0|-0.15	h_3 +0.10|-0.30	l_1	l_2	l_3	Weight g
L1943.43CS-120-2RST	T	3	Rubber	M 8	43	24.9	34.3	120	140	55	0.53
L1943.43CS-120-2RSU	U	3	Rubber	M 8	43	24.9	34.3	120	140	55	0.53
L1943.43CS-150-2RSTA	T	4	Rubber	M 8	43	24.9	34.3	150	170	80	0.68
L1943.43CS-150-2RSUA	U	4	Rubber	M 8	43	24.9	34.3	150	170	80	0.68
L1943.43CS-150-2RSTB	T	4	Rubber	M 8	43	24.9	34.3	150	170	80	0.68
L1943.43CS-150-2RSUB	U	4	Rubber	M 8	43	24.9	34.3	150	170	80	0.68
L1943.43CS-190-2RST	T	5	Rubber	M 8	43	24.9	34.3	190	210	40	0.84
L1943.43CS-190-2RSU	U	5	Rubber	M 8	43	24.9	34.3	190	210	40	0.84
L1943.43CS-230-2RSTA	T	6	Rubber	M 8	43	24.9	34.3	230	250	80	1.01
L1943.43CS-230-2RSUA	U	6	Rubber	M 8	43	24.9	34.3	230	250	80	1.01
L1943.43CS-230-2RSTB	T	6	Rubber	M 8	43	24.9	34.3	230	250	80	1.01
L1943.43CS-230-2RSUB	U	6	Rubber	M 8	43	24.9	34.3	230	250	80	1.01

Order No.	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Set up type	Static load $C_{0\ rad.}$ N max.
L1943.43CS-120-2RST	32.5	23.6	60	104.5	104.5	37	14.5	12280	1570	-	5500
L1943.43CS-120-2RSU	32.5	0	0	104.5	104.5	37	14.5	12280	0	-	5500
L1943.43CS-150-2RSTA	35	43.6	81.5	104.5	313.5	37	14.5	12280	1855	A	5500
L1943.43CS-150-2RSUA	35	0	0	104.5	313.5	37	14.5	12280	0	A	5500
L1943.43CS-150-2RSTB	35	43.6	81.5	313.5	104.5	37	14.5	12280	1855	B	5500
L1943.43CS-150-2RSUB	35	0	0	313.5	104.5	37	14.5	12280	0	B	5500

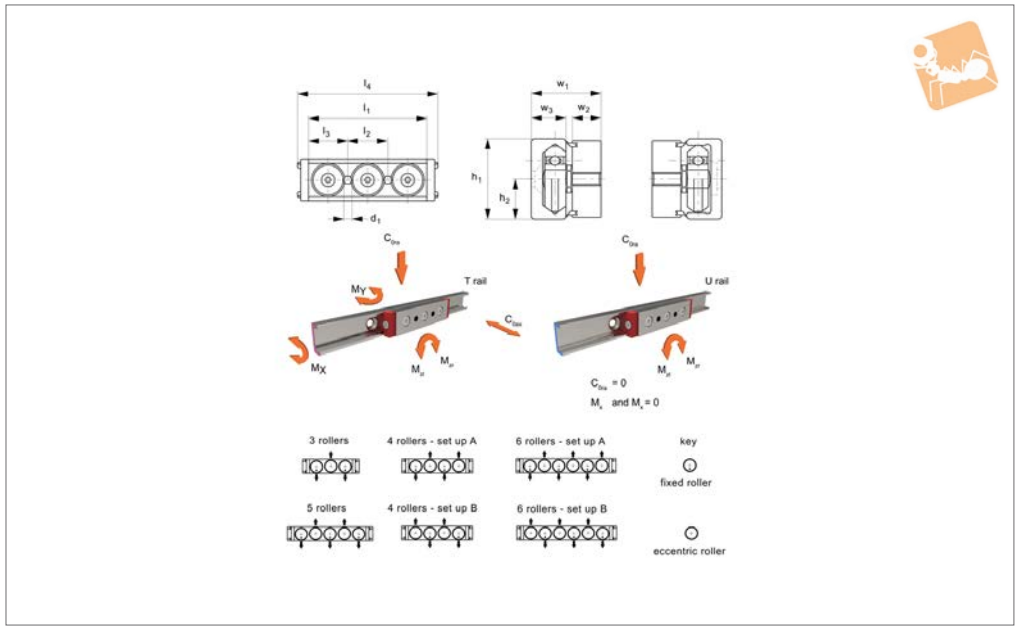


Heavy Duty Sliders - Size 43

no side seal - front fixing - with wiper



Order No.	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Set up type	Static load $C_{0\ rad.}$ N max.
L1943.43CS-190-2RST	35	43.6	108.6	313.5	313.5	37	14.5	14675	2215	-	6540
L1943.43CS-190-2RSU	35	0	0	313.5	313.5	37	14.5	14675	0	-	6540
L1943.43CS-230-2RSTA	35	52	135.8	313.5	522.5	37	14.5	14675	2645	A	6540
L1943.43CS-230-2RSUA	35	0	0	313.5	522.5	37	14.5	14675	0	A	6540
L1943.43CS-230-2RSTB	35	52	135.8	522.5	313.5	37	14.5	14675	2645	B	6540
L1943.43CS-230-2RSUB	35	0	0	522.5	313.5	37	14.5	14675	0	B	6540





L1943.CL

Material
Zinc plated steel body.
Steel rollers (100Cr6) with rubber seals.

Technical Notes
To be used with compact rail size 43.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
The U rail sliders cannot accept axial loads.
The 3 and 5 bearing sliders can be used either way up in the rail dependent on where the loads will be applied.
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	d_1	h_1	h_2	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm
L1943.43CL-120-T	T	3	M 8	43	21.5	120	55	32.5	134	23.7	60.1
L1943.43CL-120-U	U	3	M 8	43	21.5	120	55	32.5	134	-	-
L1943.43CL-150-TA	T	4	M 8	43	21.5	150	80	35.0	164	43.7	81.6
L1943.43CL-150-UA	U	4	M 8	43	21.5	150	80	35.0	164	-	-
L1943.43CL-150-TB	T	4	M 8	43	21.5	150	80	35.0	164	43.7	81.6
L1943.43CL-150-UB	U	4	M 8	43	21.5	150	80	35.0	164	-	-
L1943.43CL-190-T	T	5	M 8	43	21.5	190	40	35.0	204	43.7	108.7
L1943.43CL-190-U	U	5	M 8	43	21.5	190	40	35.0	204	-	-
L1943.43CL-230-TA	T	6	M 8	43	21.5	230	80	35.0	244	52.5	136.0
L1943.43CL-230-UA	U	6	M 8	43	21.5	230	80	35.0	244	-	-
L1943.43CL-230-TB	T	6	M 8	43	21.5	230	80	35.0	244	52.5	136.0
L1943.43CL-230-UB	U	6	M 8	43	21.5	230	80	35.0	244	-	-

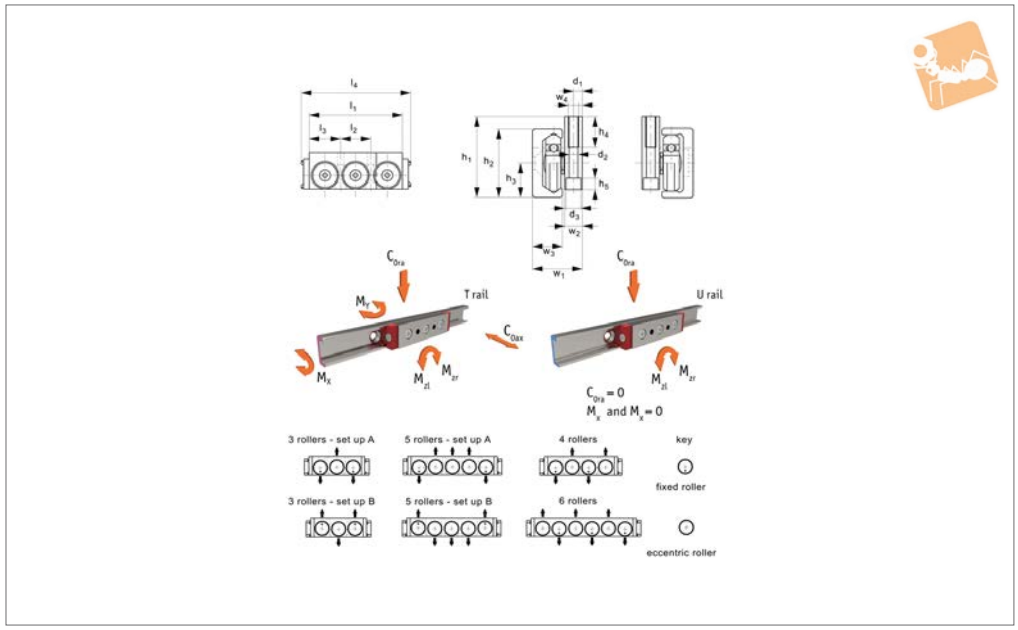
Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	w_3	Dyn. load C N max.	Static load $C_{0\,ax.}$ N max.	Set up type	Static load $C_{0\,rad.}$ N max.
L1943.43CL-120-T	104.7	104.7	37.5	15	21	12300	1580	-	5520
L1943.43CL-120-U	104.7	104.7	37.5	15	21	12300	-	-	5520
L1943.43CL-150-TA	104.7	313.8	37.5	15	21	12300	1890	A	5520
L1943.43CL-150-UA	104.7	313.8	37.5	15	21	12300	-	A	5520
L1943.43CL-150-TB	313.8	104.5	37.5	15	21	12300	1890	B	5520
L1943.43CL-150-UB	313.8	104.5	37.5	15	21	12300	-	B	5520
L1943.43CL-190-T	313.8	313.8	37.5	15	21	14680	2220	-	6560
L1943.43CL-190-U	313.8	313.8	37.5	15	21	14680	-	-	6560
L1943.43CL-230-TA	313.8	523.0	37.5	15	21	14680	2650	A	6560

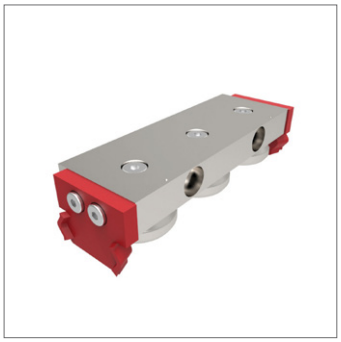
Heavy Duty Sliders - Size 43

side seal - front fixing - with wiper



Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	w_3	Dyn. load C N max.	Static load $C_{0\,ax.}$ N max.	Set up type	Static load $C_{0\,rad.}$ N max.
L1943.43CL-230-UA	313.8	523.0	37.5	15	21	14680	-	A	6560
L1943.43CL-230-TB	523.0	313.8	37.5	15	21	14680	2650	B	6560
L1943.43CL-230-UB	523.0	313.8	37.5	15	21	14680	-	B	6560





L1943.CR

Material
Zinc plated steel body.
Steel rollers (100Cr6) with rubber seals.

Technical Notes
To be used with compact rail size 43.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	d_1 for screw	d_2	d_3	h_1	h_2	h_3	h_4	h_5	l_1	l_2	l_3	l_4	M_x Nm
L1943.43CR-120-TA	T	3	M8	6.7	11	43	21.5	47	16	6.5	120	56	32	134	23.7
L1943.43CR-120-UA	U	3	M8	6.7	11	43	21.5	47	16	6.5	120	56	32	134	0
L1943.43CR-120-TB	T	3	M8	6.7	11	43	21.5	47	16	6.5	120	56	32	134	23.7
L1943.43CR-120-UB	U	3	M8	6.7	11	43	21.5	47	16	6.5	120	56	32	134	0
L1943.43CR-150-TA	T	4	M8	6.7	11	43	21.5	47	16	6.5	150	86	32	164	43.7
L1943.43CR-150-UA	U	4	M8	6.7	11	43	21.5	47	16	6.5	150	86	32	164	0
L1943.43CR-150-TB	T	4	M8	6.7	11	43	21.5	47	16	6.5	150	86	32	164	43.7
L1943.43CR-150-UB	U	4	M8	6.7	11	43	21.5	47	16	6.5	150	86	32	164	0
L1943.43CR-190-TA	T	5	M8	6.7	11	43	21.5	47	16	6.5	190	42	32	204	43.7
L1943.43CR-190-UA	U	5	M8	6.7	11	43	21.5	47	16	6.5	190	42	32	204	0
L1943.43CR-190-TB	T	5	M8	6.7	11	43	21.5	47	16	6.5	190	42	32	204	43.7
L1943.43CR-190-UB	U	5	M8	6.7	11	43	21.5	47	16	6.5	190	42	32	204	0
L1943.43CR-230-TA	T	6	M8	6.7	11	43	21.5	47	16	6.5	230	83	32	244	52.5
L1943.43CR-230-UA	U	6	M8	6.7	11	43	21.5	47	16	6.5	230	83	32	244	0
L1943.43CR-230-TB	T	6	M8	6.7	11	43	21.5	47	16	6.5	230	83	32	244	52.5
L1943.43CR-230-UB	U	6	M8	6.7	11	43	21.5	47	16	6.5	230	83	32	244	0

Order No.	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1	w_2	w_3	w_4	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1943.43CR-120-TA	60.1	104.7	104.7	37.5	15	21	7.5	12300	1580	5520
L1943.43CR-120-UA	0	104.7	104.7	37.5	15	21	7.5	12300	0	5520
L1943.43CR-120-TB	60.1	104.7	104.7	37.5	15	21	7.5	12300	1580	5520
L1943.43CR-120-UB	0	104.7	104.7	37.5	15	21	7.5	12300	0	5520
L1943.43CR-150-TA	81.6	104.7	313.8	37.5	15	21	7.5	12300	1890	5520

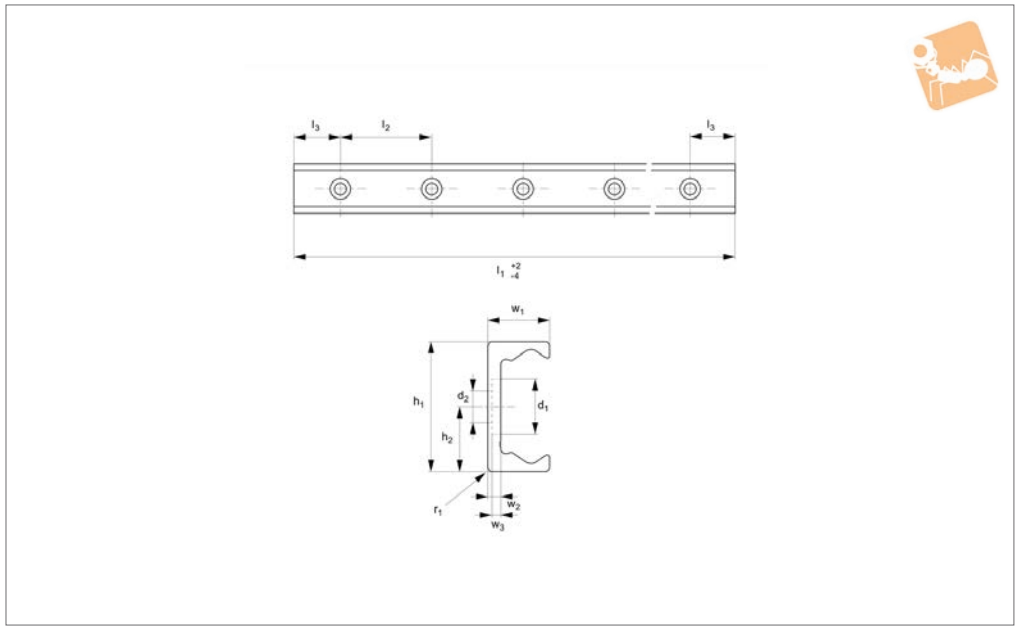


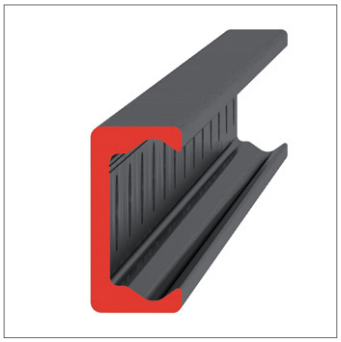
Heavy Duty Sliders, size 43

no side seal, side fixing, with wiper



Order No.	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1	w_2	w_3	w_4	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1943.43CR-150-UA	0	104.7	313.8	37.5	15	21	7.5	12300	0	5520
L1943.43CR-150-TB	81.6	313.8	104.5	37.5	15	21	7.5	12300	1890	5520
L1943.43CR-150-UB	0	313.8	104.5	37.5	15	21	7.5	12300	0	5520
L1943.43CR-190-TA	108.7	313.8	313.8	37.5	15	21	7.5	14680	2220	6560
L1943.43CR-190-UA	0	313.8	313.8	37.5	15	21	7.5	14680	0	6560
L1943.43CR-190-TB	108.7	313.8	313.8	37.5	15	21	7.5	14680	2220	6560
L1943.43CR-190-UB	0	313.8	313.8	37.5	15	21	7.5	14680	0	6560
L1943.43CR-230-TA	136.0	313.8	523.0	37.5	15	21	7.5	14680	2650	6560
L1943.43CR-230-UA	0	313.8	523.0	37.5	15	21	7.5	14680	0	6560
L1943.43CR-230-TB	136.0	523.0	313.8	37.5	15	21	7.5	14680	2650	6560
L1943.43CR-230-UB	0	523.0	313.8	37.5	15	21	7.5	14680	0	6560





L1943.43T-C

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for system misalignment).
This is the counterbored rail type (most popular), which is usually used with a corresponding U-C rail.
Special low profile Torx head screws provided free of charge.

Weight: 2,6 Kg/m.

Tips
Standard carriages are the L1943.CL series.

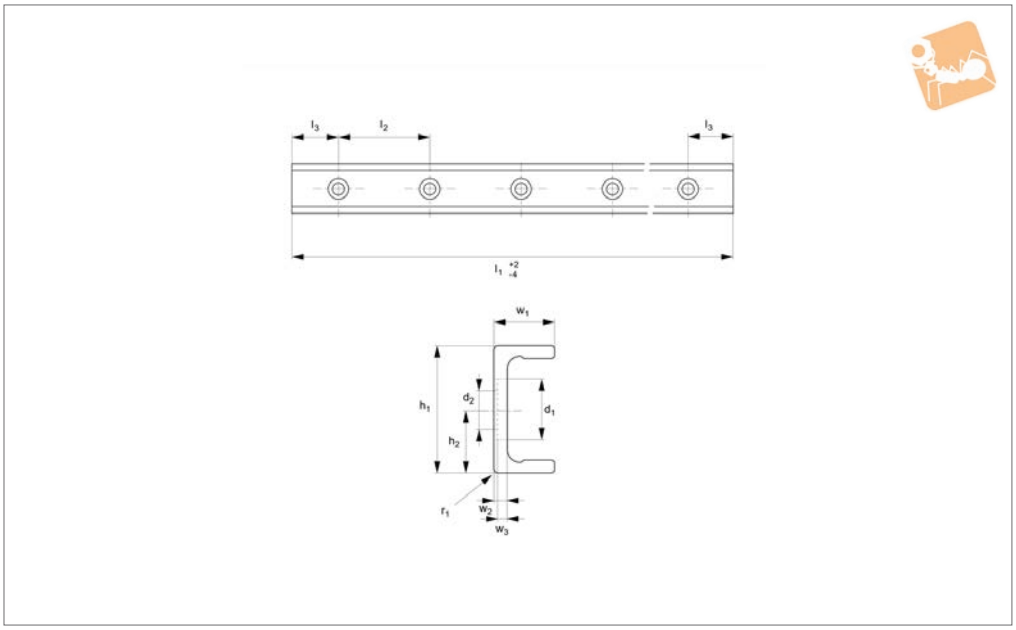
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1943.43T-0400-C	18	M8	43	21.5	400	80	40	2.5	21	4.5	3.1
L1943.43T-0480-C	18	M8	43	21.5	480	80	40	2.5	21	4.5	3.1
L1943.43T-0560-C	18	M8	43	21.5	560	80	40	2.5	21	4.5	3.1
L1943.43T-0640-C	18	M8	43	21.5	640	80	40	2.5	21	4.5	3.1
L1943.43T-0720-C	18	M8	43	21.5	720	80	40	2.5	21	4.5	3.1
L1943.43T-0800-C	18	M8	43	21.5	800	80	40	2.5	21	4.5	3.1
L1943.43T-0880-C	18	M8	43	21.5	880	80	40	2.5	21	4.5	3.1
L1943.43T-0960-C	18	M8	43	21.5	960	80	40	2.5	21	4.5	3.1
L1943.43T-1040-C	18	M8	43	21.5	1040	80	40	2.5	21	4.5	3.1
L1943.43T-1120-C	18	M8	43	21.5	1120	80	40	2.5	21	4.5	3.1
L1943.43T-1200-C	18	M8	43	21.5	1200	80	40	2.5	21	4.5	3.1
L1943.43T-1280-C	18	M8	43	21.5	1280	80	40	2.5	21	4.5	3.1
L1943.43T-1360-C	18	M8	43	21.5	1360	80	40	2.5	21	4.5	3.1
L1943.43T-1440-C	18	M8	43	21.5	1440	80	40	2.5	21	4.5	3.1
L1943.43T-1520-C	18	M8	43	21.5	1520	80	40	2.5	21	4.5	3.1
L1943.43T-1600-C	18	M8	43	21.5	1600	80	40	2.5	21	4.5	3.1
L1943.43T-1680-C	18	M8	43	21.5	1680	80	40	2.5	21	4.5	3.1
L1943.43T-1760-C	18	M8	43	21.5	1760	80	40	2.5	21	4.5	3.1
L1943.43T-1840-C	18	M8	43	21.5	1840	80	40	2.5	21	4.5	3.1
L1943.43T-1920-C	18	M8	43	21.5	1920	80	40	2.5	21	4.5	3.1
L1943.43T-2000-C	18	M8	43	21.5	2000	80	40	2.5	21	4.5	3.1
L1943.43T-2080-C	18	M8	43	21.5	2080	80	40	2.5	21	4.5	3.1
L1943.43T-2160-C	18	M8	43	21.5	2160	80	40	2.5	21	4.5	3.1
L1943.43T-2240-C	18	M8	43	21.5	2240	80	40	2.5	21	4.5	3.1
L1943.43T-2320-C	18	M8	43	21.5	2320	80	40	2.5	21	4.5	3.1
L1943.43T-2400-C	18	M8	43	21.5	2400	80	40	2.5	21	4.5	3.1
L1943.43T-2480-C	18	M8	43	21.5	2480	80	40	2.5	21	4.5	3.1
L1943.43T-2560-C	18	M8	43	21.5	2560	80	40	2.5	21	4.5	3.1
L1943.43T-2640-C	18	M8	43	21.5	2640	80	40	2.5	21	4.5	3.1
L1943.43T-2720-C	18	M8	43	21.5	2720	80	40	2.5	21	4.5	3.1
L1943.43T-2800-C	18	M8	43	21.5	2800	80	40	2.5	21	4.5	3.1

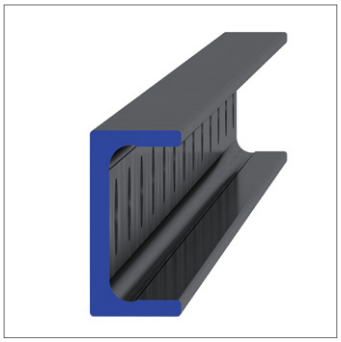


Heavy Duty T Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1943.43T-2880-C	18	M8	43	21.5	2880	80	40	2.5	21	4.5	3.1
L1943.43T-2960-C	18	M8	43	21.5	2960	80	40	2.5	21	4.5	3.1
L1943.43T-3040-C	18	M8	43	21.5	3040	80	40	2.5	21	4.5	3.1
L1943.43T-3120-C	18	M8	43	21.5	3120	80	40	2.5	21	4.5	3.1
L1943.43T-3200-C	18	M8	43	21.5	3200	80	40	2.5	21	4.5	3.1
L1943.43T-3280-C	18	M8	43	21.5	3280	80	40	2.5	21	4.5	3.1
L1943.43T-3360-C	18	M8	43	21.5	3360	80	40	2.5	21	4.5	3.1
L1943.43T-3440-C	18	M8	43	21.5	3440	80	40	2.5	21	4.5	3.1
L1943.43T-3520-C	18	M8	43	21.5	3520	80	40	2.5	21	4.5	3.1
L1943.43T-3600-C	18	M8	43	21.5	3600	80	40	2.5	21	4.5	3.1
L1943.43T-3680-C	18	M8	43	21.5	3680	80	40	2.5	21	4.5	3.1
L1943.43T-3760-C	18	M8	43	21.5	3760	80	40	2.5	21	4.5	3.1
L1943.43T-3840-C	18	M8	43	21.5	3840	80	40	2.5	21	4.5	3.1
L1943.43T-3920-C	18	M8	43	21.5	3920	80	40	2.5	21	4.5	3.1
L1943.43T-4000-C	18	M8	43	21.5	4000	80	40	2.5	21	4.5	3.1
L1943.43T-4080-C	18	M8	43	21.5	4080	80	40	2.5	21	4.5	3.1





L1943.43U-C

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the U-C counterbored rail type (most popular), which is usually used with a corresponding T-C rail.
Special low profile Torx head screws provided free of charge.
Weight: 2,6 Kg/m.

Tips
Standard carriages are the L1943.CL series.

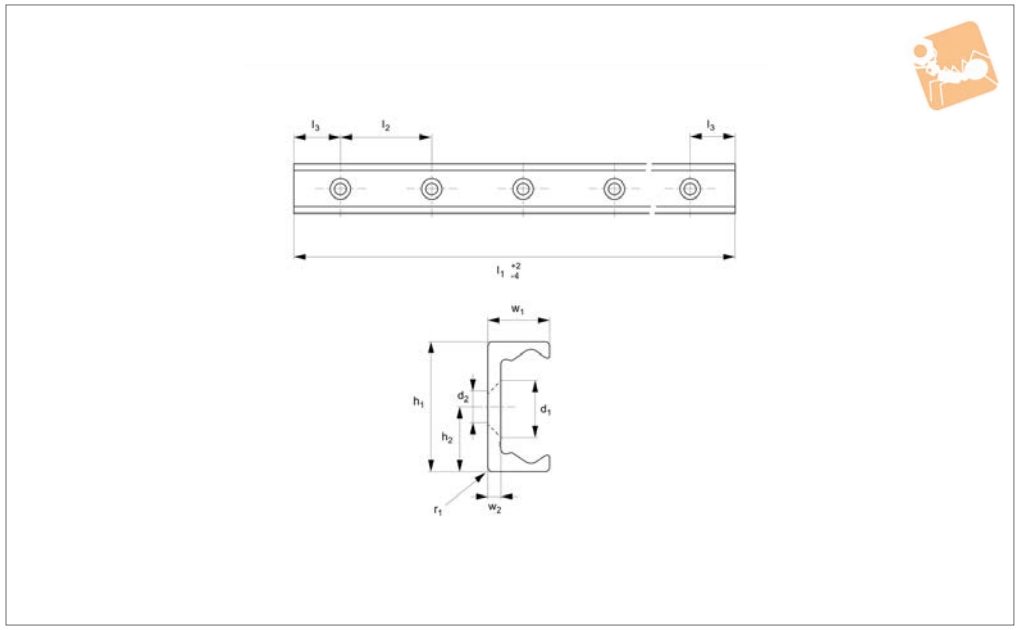
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1943.43U-0400-C	18	M8	43	21.5	400	80	40	2.5	21	4.5	3.1
L1943.43U-0480-C	18	M8	43	21.5	480	80	40	2.5	21	4.5	3.1
L1943.43U-0560-C	18	M8	43	21.5	560	80	40	2.5	21	4.5	3.1
L1943.43U-0640-C	18	M8	43	21.5	640	80	40	2.5	21	4.5	3.1
L1943.43U-0720-C	18	M8	43	21.5	720	80	40	2.5	21	4.5	3.1
L1943.43U-0800-C	18	M8	43	21.5	800	80	40	2.5	21	4.5	3.1
L1943.43U-0880-C	18	M8	43	21.5	880	80	40	2.5	21	4.5	3.1
L1943.43U-0960-C	18	M8	43	21.5	960	80	40	2.5	21	4.5	3.1
L1943.43U-1040-C	18	M8	43	21.5	1040	80	40	2.5	21	4.5	3.1
L1943.43U-1120-C	18	M8	43	21.5	1120	80	40	2.5	21	4.5	3.1
L1943.43U-1200-C	18	M8	43	21.5	1200	80	40	2.5	21	4.5	3.1
L1943.43U-1280-C	18	M8	43	21.5	1280	80	40	2.5	21	4.5	3.1
L1943.43U-1360-C	18	M8	43	21.5	1360	80	40	2.5	21	4.5	3.1
L1943.43U-1440-C	18	M8	43	21.5	1440	80	40	2.5	21	4.5	3.1
L1943.43U-1520-C	18	M8	43	21.5	1520	80	40	2.5	21	4.5	3.1
L1943.43U-1600-C	18	M8	43	21.5	1600	80	40	2.5	21	4.5	3.1
L1943.43U-1680-C	18	M8	43	21.5	1680	80	40	2.5	21	4.5	3.1
L1943.43U-1760-C	18	M8	43	21.5	1760	80	40	2.5	21	4.5	3.1
L1943.43U-1840-C	18	M8	43	21.5	1840	80	40	2.5	21	4.5	3.1
L1943.43U-1920-C	18	M8	43	21.5	1920	80	40	2.5	21	4.5	3.1
L1943.43U-2000-C	18	M8	43	21.5	2000	80	40	2.5	21	4.5	3.1
L1943.43U-2080-C	18	M8	43	21.5	2080	80	40	2.5	21	4.5	3.1
L1943.43U-2160-C	18	M8	43	21.5	2160	80	40	2.5	21	4.5	3.1
L1943.43U-2240-C	18	M8	43	21.5	2240	80	40	2.5	21	4.5	3.1
L1943.43U-2320-C	18	M8	43	21.5	2320	80	40	2.5	21	4.5	3.1
L1943.43U-2400-C	18	M8	43	21.5	2400	80	40	2.5	21	4.5	3.1
L1943.43U-2480-C	18	M8	43	21.5	2480	80	40	2.5	21	4.5	3.1
L1943.43U-2560-C	18	M8	43	21.5	2560	80	40	2.5	21	4.5	3.1
L1943.43U-2640-C	18	M8	43	21.5	2640	80	40	2.5	21	4.5	3.1
L1943.43U-2720-C	18	M8	43	21.5	2720	80	40	2.5	21	4.5	3.1
L1943.43U-2800-C	18	M8	43	21.5	2800	80	40	2.5	21	4.5	3.1

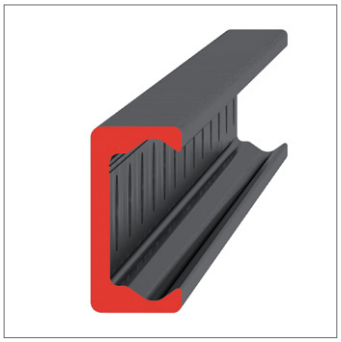


Heavy Duty U Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1943.43U-2880-C	18	M8	43	21.5	2880	80	40	2.5	21	4.5	3.1
L1943.43U-2960-C	18	M8	43	21.5	2960	80	40	2.5	21	4.5	3.1
L1943.43U-3040-C	18	M8	43	21.5	3040	80	40	2.5	21	4.5	3.1
L1943.43U-3120-C	18	M8	43	21.5	3120	80	40	2.5	21	4.5	3.1
L1943.43U-3200-C	18	M8	43	21.5	3200	80	40	2.5	21	4.5	3.1
L1943.43U-3280-C	18	M8	43	21.5	3280	80	40	2.5	21	4.5	3.1
L1943.43U-3360-C	18	M8	43	21.5	3360	80	40	2.5	21	4.5	3.1
L1943.43U-3440-C	18	M8	43	21.5	3440	80	40	2.5	21	4.5	3.1
L1943.43U-3520-C	18	M8	43	21.5	3520	80	40	2.5	21	4.5	3.1
L1943.43U-3600-C	18	M8	43	21.5	3600	80	40	2.5	21	4.5	3.1
L1943.43U-3680-C	18	M8	43	21.5	3680	80	40	2.5	21	4.5	3.1
L1943.43U-3760-C	18	M8	43	21.5	3760	80	40	2.5	21	4.5	3.1
L1943.43U-3840-C	18	M8	43	21.5	3840	80	40	2.5	21	4.5	3.1
L1943.43U-3920-C	18	M8	43	21.5	3920	80	40	2.5	21	4.5	3.1
L1943.43U-4000-C	18	M8	43	21.5	4000	80	40	2.5	21	4.5	3.1
L1943.43U-4080-C	18	M8	43	21.5	4080	80	40	2.5	21	4.5	3.1





L1943.43T-V

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rails (allows for misalignment).
This is the T-V countersunk rail which is usually used with a corresponding U-V rail.
For fixing use countersunk DIN 7991 screws.
Weight: 2,6 Kg/m.

Tips
Standard carriages are the L1943.CL series.

Order No.	d_1 for screw	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1943.43T-0400-V	M8	43	21.5	400	80	40	1	21	4.5
L1943.43T-0480-V	M8	43	21.5	480	80	40	1	21	4.5
L1943.43T-0560-V	M8	43	21.5	560	80	40	1	21	4.5
L1943.43T-0640-V	M8	43	21.5	640	80	40	1	21	4.5
L1943.43T-0720-V	M8	43	21.5	720	80	40	1	21	4.5
L1943.43T-0800-V	M8	43	21.5	800	80	40	1	21	4.5
L1943.43T-0880-V	M8	43	21.5	880	80	40	1	21	4.5
L1943.43T-0960-V	M8	43	21.5	960	80	40	1	21	4.5
L1943.43T-1040-V	M8	43	21.5	1040	80	40	1	21	4.5
L1943.43T-1120-V	M8	43	21.5	1120	80	40	1	21	4.5
L1943.43T-1200-V	M8	43	21.5	1200	80	40	1	21	4.5
L1943.43T-1280-V	M8	43	21.5	1280	80	40	1	21	4.5
L1943.43T-1360-V	M8	43	21.5	1360	80	40	1	21	4.5
L1943.43T-1440-V	M8	43	21.5	1440	80	40	1	21	4.5
L1943.43T-1520-V	M8	43	21.5	1520	80	40	1	21	4.5
L1943.43T-1600-V	M8	43	21.5	1600	80	40	1	21	4.5
L1943.43T-1680-V	M8	43	21.5	1680	80	40	1	21	4.5
L1943.43T-1760-V	M8	43	21.5	1760	80	40	1	21	4.5
L1943.43T-1840-V	M8	43	21.5	1840	80	40	1	21	4.5
L1943.43T-1920-V	M8	43	21.5	1920	80	40	1	21	4.5
L1943.43T-2000-V	M8	43	21.5	2000	80	40	1	21	4.5
L1943.43T-2080-V	M8	43	21.5	2080	80	40	1	21	4.5
L1943.43T-2160-V	M8	43	21.5	2160	80	40	1	21	4.5
L1943.43T-2240-V	M8	43	21.5	2240	80	40	1	21	4.5
L1943.43T-2320-V	M8	43	21.5	2320	80	40	1	21	4.5
L1943.43T-2400-V	M8	43	21.5	2400	80	40	1	21	4.5
L1943.43T-2480-V	M8	43	21.5	2480	80	40	1	21	4.5
L1943.43T-2560-V	M8	43	21.5	2560	80	40	1	21	4.5
L1943.43T-2640-V	M8	43	21.5	2640	80	40	1	21	4.5
L1943.43T-2720-V	M8	43	21.5	2720	80	40	1	21	4.5
L1943.43T-2800-V	M8	43	21.5	2800	80	40	1	21	4.5

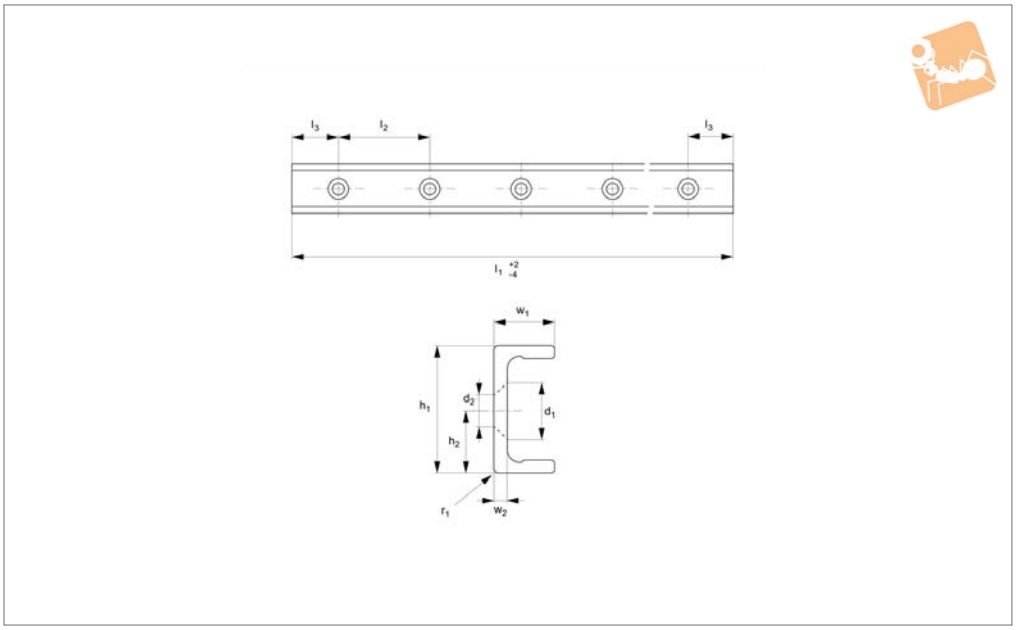


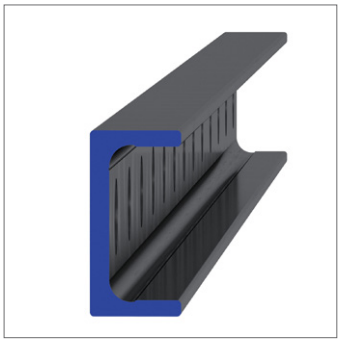
Heavy Duty T Rail

countersunk holes



Order No.	d_1 for screw	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2
L1943.43T-2880-V	M8	43	21.5	2880	80	40	1	21	4.5
L1943.43T-2960-V	M8	43	21.5	2960	80	40	1	21	4.5
L1943.43T-3040-V	M8	43	21.5	3040	80	40	1	21	4.5
L1943.43T-3120-V	M8	43	21.5	3120	80	40	1	21	4.5
L1943.43T-3200-V	M8	43	21.5	3200	80	40	1	21	4.5
L1943.43T-3280-V	M8	43	21.5	3280	80	40	1	21	4.5
L1943.43T-3360-V	M8	43	21.5	3360	80	40	1	21	4.5
L1943.43T-3440-V	M8	43	21.5	3440	80	40	1	21	4.5
L1943.43T-3520-V	M8	43	21.5	3520	80	40	1	21	4.5
L1943.43T-3600-V	M8	43	21.5	3600	80	40	1	21	4.5
L1943.43T-3680-V	M8	43	21.5	3680	80	40	1	21	4.5
L1943.43T-3760-V	M8	43	21.5	3760	80	40	1	21	4.5
L1943.43T-3840-V	M8	43	21.5	3840	80	40	1	21	4.5
L1943.43T-3920-V	M8	43	21.5	3920	80	40	1	21	4.5
L1943.43T-4000-V	M8	43	21.5	4000	80	40	1	21	4.5
L1943.43T-4080-V	M8	43	21.5	4080	80	40	1	21	4.5





L1943.43U-V

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the U-V countersunk rail type which is usually used with a corresponding T-V rail.
For fixing use countersunk DIN 7991 screws.
Weight: 2,6 Kg/m.

Tips
Standard carriages are the L1943.CL series.

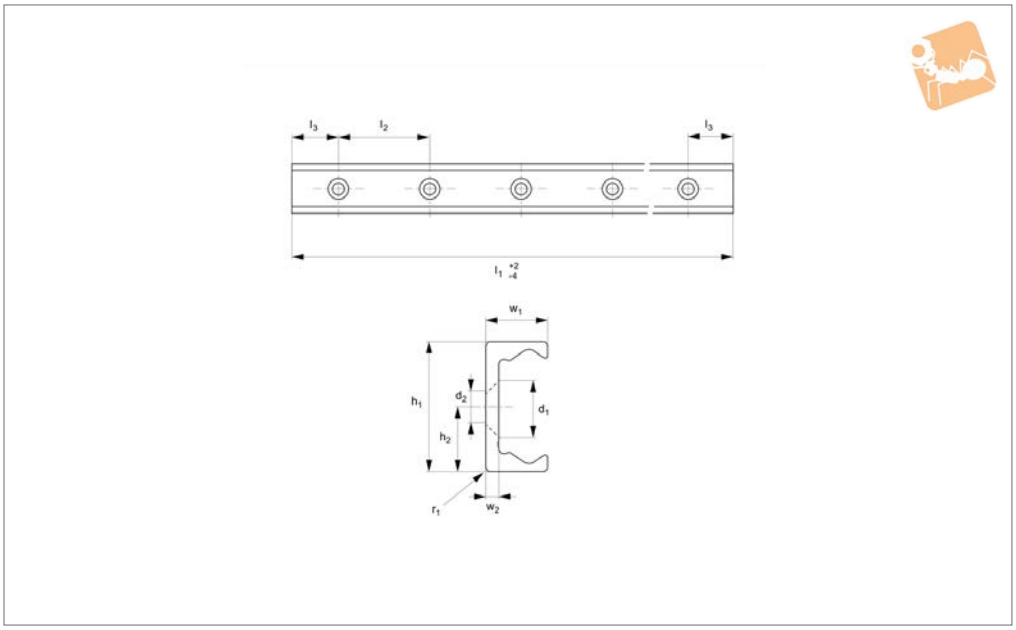
Order No.	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	d for screws
L1943.43U-0400-V	43	21.5	400	80	40	1	21	4.5	M8
L1943.43U-0480-V	43	21.5	480	80	40	1	21	4.5	M8
L1943.43U-0560-V	43	21.5	560	80	40	1	21	4.5	M8
L1943.43U-0640-V	43	21.5	640	80	40	1	21	4.5	M8
L1943.43U-0720-V	43	21.5	720	80	40	1	21	4.5	M8
L1943.43U-0800-V	43	21.5	800	80	40	1	21	4.5	M8
L1943.43U-0880-V	43	21.5	880	80	40	1	21	4.5	M8
L1943.43U-0960-V	43	21.5	960	80	40	1	21	4.5	M8
L1943.43U-1040-V	43	21.5	1040	80	40	1	21	4.5	M8
L1943.43U-1120-V	43	21.5	1120	80	40	1	21	4.5	M8
L1943.43U-1200-V	43	21.5	1200	80	40	1	21	4.5	M8
L1943.43U-1280-V	43	21.5	1280	80	40	1	21	4.5	M8
L1943.43U-1360-V	43	21.5	1360	80	40	1	21	4.5	M8
L1943.43U-1440-V	43	21.5	1440	80	40	1	21	4.5	M8
L1943.43U-1520-V	43	21.5	1520	80	40	1	21	4.5	M8
L1943.43U-1600-V	43	21.5	1600	80	40	1	21	4.5	M8
L1943.43U-1680-V	43	21.5	1680	80	40	1	21	4.5	M8
L1943.43U-1760-V	43	21.5	1760	80	40	1	21	4.5	M8
L1943.43U-1840-V	43	21.5	1840	80	40	1	21	4.5	M8
L1943.43U-1920-V	43	21.5	1920	80	40	1	21	4.5	M8
L1943.43U-2000-V	43	21.5	2000	80	40	1	21	4.5	M8
L1943.43U-2080-V	43	21.5	2080	80	40	1	21	4.5	M8
L1943.43U-2160-V	43	21.5	2160	80	40	1	21	4.5	M8
L1943.43U-2240-V	43	21.5	2240	80	40	1	21	4.5	M8
L1943.43U-2320-V	43	21.5	2320	80	40	1	21	4.5	M8
L1943.43U-2400-V	43	21.5	2400	80	40	1	21	4.5	M8
L1943.43U-2480-V	43	21.5	2480	80	40	1	21	4.5	M8
L1943.43U-2560-V	43	21.5	2560	80	40	1	21	4.5	M8
L1943.43U-2640-V	43	21.5	2640	80	40	1	21	4.5	M8
L1943.43U-2720-V	43	21.5	2720	80	40	1	21	4.5	M8
L1943.43U-2800-V	43	21.5	2800	80	40	1	21	4.5	M8

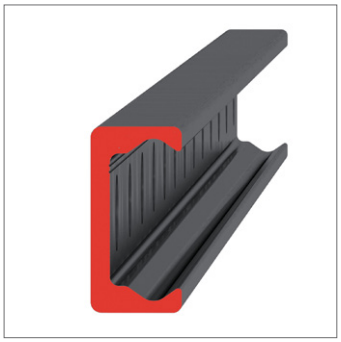


Heavy Duty U Rail
countersunk holes



Order No.	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	d for screws
L1943.43U-2880-V	43	21.5	2880	80	40	1	21	4.5	M8
L1943.43U-2960-V	43	21.5	2960	80	40	1	21	4.5	M8
L1943.43U-3040-V	43	21.5	3040	80	40	1	21	4.5	M8
L1943.43U-3120-V	43	21.5	3120	80	40	1	21	4.5	M8
L1943.43U-3200-V	43	21.5	3200	80	40	1	21	4.5	M8
L1943.43U-3280-V	43	21.5	3280	80	40	1	21	4.5	M8
L1943.43U-3360-V	43	21.5	3360	80	40	1	21	4.5	M8
L1943.43U-3440-V	43	21.5	3440	80	40	1	21	4.5	M8
L1943.43U-3520-V	43	21.5	3520	80	40	1	21	4.5	M8
L1943.43U-3600-V	43	21.5	3600	80	40	1	21	4.5	M8
L1943.43U-3680-V	43	21.5	3680	80	40	1	21	4.5	M8
L1943.43U-3760-V	43	21.5	3760	80	40	1	21	4.5	M8
L1943.43U-3840-V	43	21.5	3840	80	40	1	21	4.5	M8
L1943.43U-3920-V	43	21.5	3920	80	40	1	21	4.5	M8
L1943.43U-4000-V	43	21.5	4000	80	40	1	21	4.5	M8
L1943.43U-4080-V	43	21.5	4080	80	40	1	21	4.5	M8





L1943.TLV43

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rails (allows for misalignment).
This is the TLV countersunk rail which is usually used with a corresponding ULV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 2,6 Kg/m.

Tips
Standard carriages are the L1943.N versions (die cast aluminium alloy with wipers). Alternatively the L1943.C type is also available (without wipers).

Order No.	d_1 for screw	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2
L1943.TLV43-0400	M8	43	21.5	400	80	40	1	21	4.5
L1943.TLV43-0480	M8	43	21.5	480	80	40	1	21	4.5
L1943.TLV43-0560	M8	43	21.5	560	80	40	1	21	4.5
L1943.TLV43-0640	M8	43	21.5	640	80	40	1	21	4.5
L1943.TLV43-0720	M8	43	21.5	720	80	40	1	21	4.5
L1943.TLV43-0800	M8	43	21.5	800	80	40	1	21	4.5
L1943.TLV43-0880	M8	43	21.5	880	80	40	1	21	4.5
L1943.TLV43-0960	M8	43	21.5	960	80	40	1	21	4.5
L1943.TLV43-1040	M8	43	21.5	1040	80	40	1	21	4.5
L1943.TLV43-1120	M8	43	21.5	1120	80	40	1	21	4.5
L1943.TLV43-1200	M8	43	21.5	1200	80	40	1	21	4.5
L1943.TLV43-1280	M8	43	21.5	1280	80	40	1	21	4.5
L1943.TLV43-1360	M8	43	21.5	1360	80	40	1	21	4.5
L1943.TLV43-1440	M8	43	21.5	1440	80	40	1	21	4.5
L1943.TLV43-1520	M8	43	21.5	1520	80	40	1	21	4.5
L1943.TLV43-1600	M8	43	21.5	1600	80	40	1	21	4.5
L1943.TLV43-1680	M8	43	21.5	1680	80	40	1	21	4.5
L1943.TLV43-1760	M8	43	21.5	1760	80	40	1	21	4.5
L1943.TLV43-1840	M8	43	21.5	1840	80	40	1	21	4.5
L1943.TLV43-1920	M8	43	21.5	1920	80	40	1	21	4.5
L1943.TLV43-2000	M8	43	21.5	2000	80	40	1	21	4.5
L1943.TLV43-2080	M8	43	21.5	2080	80	40	1	21	4.5
L1943.TLV43-2160	M8	43	21.5	2160	80	40	1	21	4.5
L1943.TLV43-2240	M8	43	21.5	2240	80	40	1	21	4.5
L1943.TLV43-2320	M8	43	21.5	2320	80	40	1	21	4.5
L1943.TLV43-2400	M8	43	21.5	2400	80	40	1	21	4.5
L1943.TLV43-2480	M8	43	21.5	2480	80	40	1	21	4.5
L1943.TLV43-2560	M8	43	21.5	2560	80	40	1	21	4.5
L1943.TLV43-2640	M8	43	21.5	2640	80	40	1	21	4.5
L1943.TLV43-2720	M8	43	21.5	2720	80	40	1	21	4.5
L1943.TLV43-2800	M8	43	21.5	2800	80	40	1	21	4.5

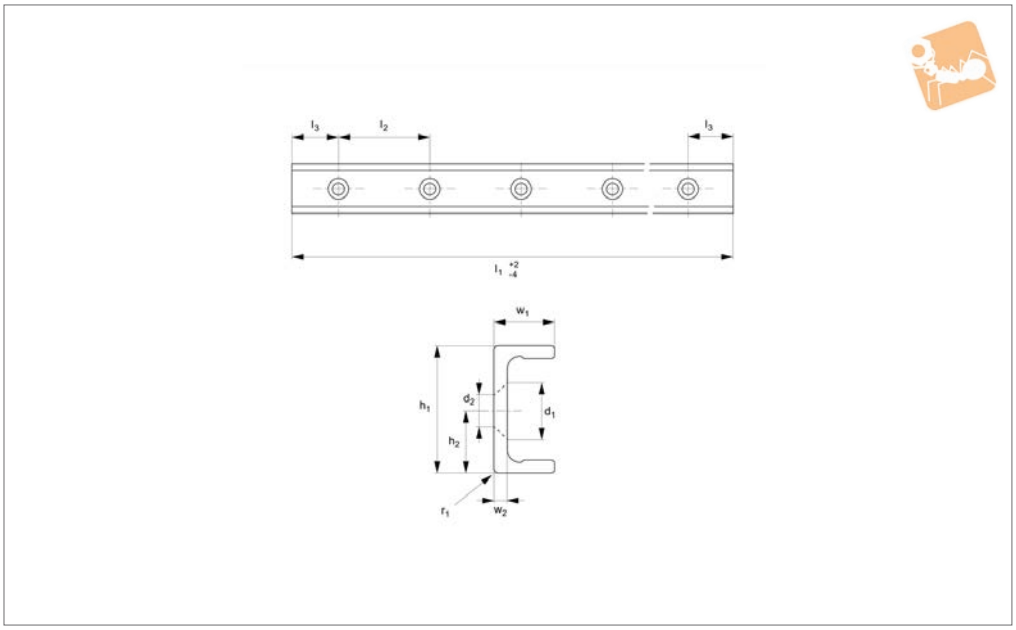


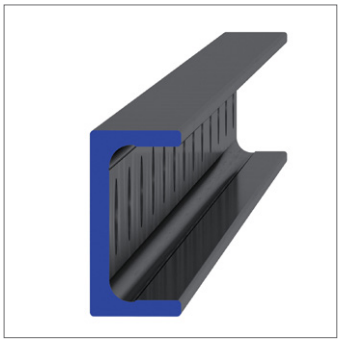
Heavy Duty T Rail

countersunk holes



Order No.	d_1 for screw	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2
L1943.TLV43-2880	M8	43	21.5	2880	80	40	1	21	4.5
L1943.TLV43-2960	M8	43	21.5	2960	80	40	1	21	4.5
L1943.TLV43-3040	M8	43	21.5	3040	80	40	1	21	4.5
L1943.TLV43-3120	M8	43	21.5	3120	80	40	1	21	4.5
L1943.TLV43-3200	M8	43	21.5	3200	80	40	1	21	4.5
L1943.TLV43-3280	M8	43	21.5	3280	80	40	1	21	4.5
L1943.TLV43-3360	M8	43	21.5	3360	80	40	1	21	4.5
L1943.TLV43-3440	M8	43	21.5	3440	80	40	1	21	4.5
L1943.TLV43-3520	M8	43	21.5	3520	80	40	1	21	4.5
L1943.TLV43-3600	M8	43	21.5	3600	80	40	1	21	4.5
L1943.TLV43-3680	M8	43	21.5	3680	80	40	1	21	4.5
L1943.TLV43-3760	M8	43	21.5	3760	80	40	1	21	4.5
L1943.TLV43-3840	M8	43	21.5	3840	80	40	1	21	4.5
L1943.TLV43-3920	M8	43	21.5	3920	80	40	1	21	4.5
L1943.TLV43-4000	M8	43	21.5	4000	80	40	1	21	4.5
L1943.TLV43-4080	M8	43	21.5	4080	80	40	1	21	4.5





L1943.ULV43

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULV countersunk rail type which is usually used with a corresponding TLV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 2,6 Kg/m.

Tips
Standard carriages are the L1943.N versions (die cast aluminium alloy with wipers). Alternatively the L1943.C type is also available (without wipers).

Order No.	d_1 for screw	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2
L1943.ULV43-0400	M8	43	21.5	400	80	40	1	21	4.5
L1943.ULV43-0480	M8	43	21.5	480	80	40	1	21	4.5
L1943.ULV43-0560	M8	43	21.5	560	80	40	1	21	4.5
L1943.ULV43-0640	M8	43	21.5	640	80	40	1	21	4.5
L1943.ULV43-0720	M8	43	21.5	720	80	40	1	21	4.5
L1943.ULV43-0800	M8	43	21.5	800	80	40	1	21	4.5
L1943.ULV43-0880	M8	43	21.5	880	80	40	1	21	4.5
L1943.ULV43-0960	M8	43	21.5	960	80	40	1	21	4.5
L1943.ULV43-1040	M8	43	21.5	1040	80	40	1	21	4.5
L1943.ULV43-1120	M8	43	21.5	1120	80	40	1	21	4.5
L1943.ULV43-1200	M8	43	21.5	1200	80	40	1	21	4.5
L1943.ULV43-1280	M8	43	21.5	1280	80	40	1	21	4.5
L1943.ULV43-1360	M8	43	21.5	1360	80	40	1	21	4.5
L1943.ULV43-1440	M8	43	21.5	1440	80	40	1	21	4.5
L1943.ULV43-1520	M8	43	21.5	1520	80	40	1	21	4.5
L1943.ULV43-1600	M8	43	21.5	1600	80	40	1	21	4.5
L1943.ULV43-1680	M8	43	21.5	1680	80	40	1	21	4.5
L1943.ULV43-1760	M8	43	21.5	1760	80	40	1	21	4.5
L1943.ULV43-1840	M8	43	21.5	1840	80	40	1	21	4.5
L1943.ULV43-1920	M8	43	21.5	1920	80	40	1	21	4.5
L1943.ULV43-2000	M8	43	21.5	2000	80	40	1	21	4.5
L1943.ULV43-2080	M8	43	21.5	2080	80	40	1	21	4.5
L1943.ULV43-2160	M8	43	21.5	2160	80	40	1	21	4.5
L1943.ULV43-2240	M8	43	21.5	2240	80	40	1	21	4.5
L1943.ULV43-2320	M8	43	21.5	2320	80	40	1	21	4.5
L1943.ULV43-2400	M8	43	21.5	2400	80	40	1	21	4.5
L1943.ULV43-2480	M8	43	21.5	2480	80	40	1	21	4.5
L1943.ULV43-2560	M8	43	21.5	2560	80	40	1	21	4.5
L1943.ULV43-2640	M8	43	21.5	2640	80	40	1	21	4.5
L1943.ULV43-2720	M8	43	21.5	2720	80	40	1	21	4.5
L1943.ULV43-2800	M8	43	21.5	2800	80	40	1	21	4.5

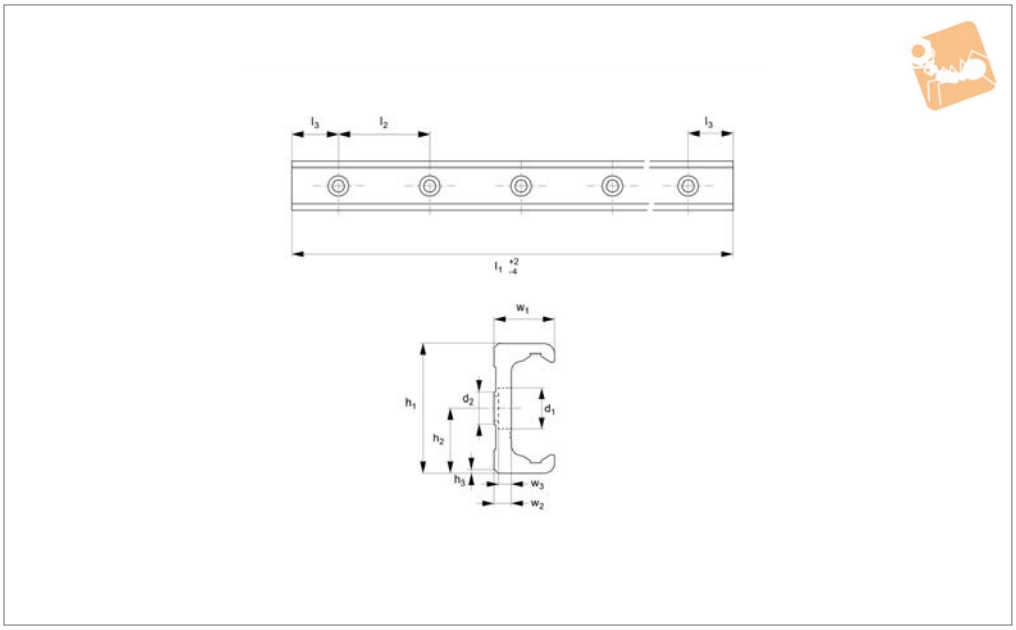


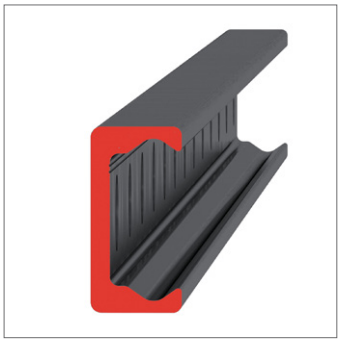
Heavy Duty U Rail

countersunk holes



Order No.	d_1 for screw	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2
L1943.ULV43-2880	M8	43	21.5	2880	80	40	1	21	4.5
L1943.ULV43-2960	M8	43	21.5	2960	80	40	1	21	4.5
L1943.ULV43-3040	M8	43	21.5	3040	80	40	1	21	4.5
L1943.ULV43-3120	M8	43	21.5	3120	80	40	1	21	4.5
L1943.ULV43-3200	M8	43	21.5	3200	80	40	1	21	4.5
L1943.ULV43-3280	M8	43	21.5	3280	80	40	1	21	4.5
L1943.ULV43-3360	M8	43	21.5	3360	80	40	1	21	4.5
L1943.ULV43-3440	M8	43	21.5	3440	80	40	1	21	4.5
L1943.ULV43-3520	M8	43	21.5	3520	80	40	1	21	4.5
L1943.ULV43-3600	M8	43	21.5	3600	80	40	1	21	4.5
L1943.ULV43-3680	M8	43	21.5	3680	80	40	1	21	4.5
L1943.ULV43-3760	M8	43	21.5	3760	80	40	1	21	4.5
L1943.ULV43-3840	M8	43	21.5	3840	80	40	1	21	4.5
L1943.ULV43-3920	M8	43	21.5	3920	80	40	1	21	4.5
L1943.ULV43-4000	M8	43	21.5	4000	80	40	1	21	4.5
L1943.ULV43-4080	M8	43	21.5	4080	80	40	1	21	4.5





L1963.TLC63

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for system misalignment).
This is the counterbored rail type (most popular), which is usually used with a corresponding ULC rail.
Special low profile Torx head screws provided free of charge.

Weight: 6,0 Kg/m.

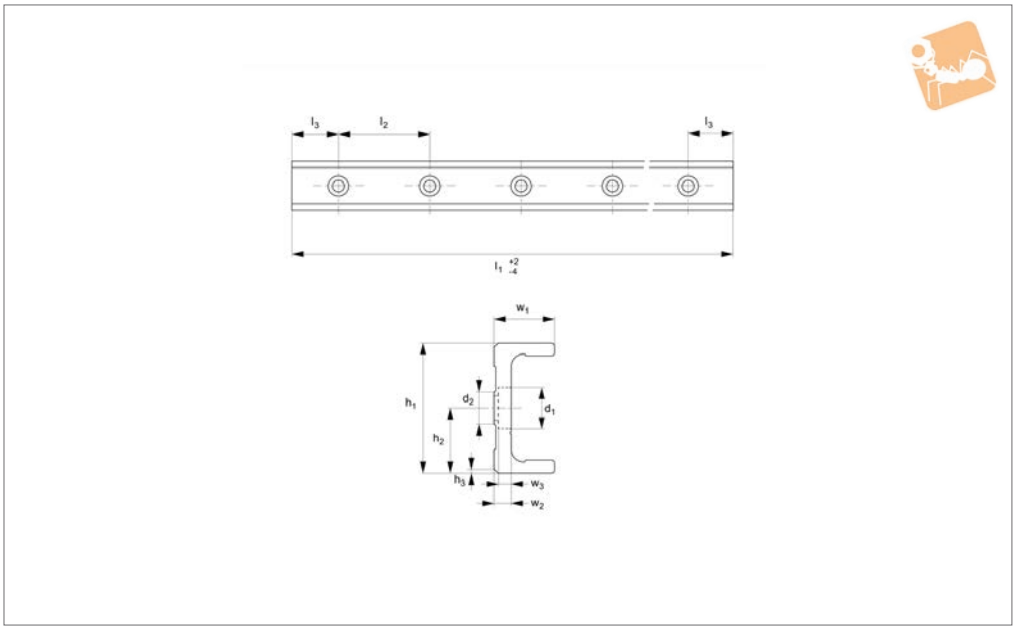
Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

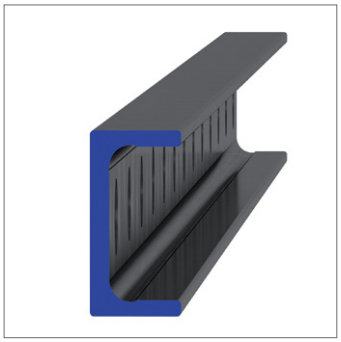
Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.TLC63-0560	15	M8	63	31.5	2x45°	560	80	40	28	8	5.2
L1963.TLC63-0640	15	M8	63	31.5	2x45°	640	80	40	28	8	5.2
L1963.TLC63-0720	15	M8	63	31.5	2x45°	720	80	40	28	8	5.2
L1963.TLC63-0800	15	M8	63	31.5	2x45°	800	80	40	28	8	5.2
L1963.TLC63-0880	15	M8	63	31.5	2x45°	880	80	40	28	8	5.2
L1963.TLC63-0960	15	M8	63	31.5	2x45°	960	80	40	28	8	5.2
L1963.TLC63-1040	15	M8	63	31.5	2x45°	1040	80	40	28	8	5.2
L1963.TLC63-1120	15	M8	63	31.5	2x45°	1120	80	40	28	8	5.2
L1963.TLC63-1200	15	M8	63	31.5	2x45°	1200	80	40	28	8	5.2
L1963.TLC63-1280	15	M8	63	31.5	2x45°	1280	80	40	28	8	5.2
L1963.TLC63-1360	15	M8	63	31.5	2x45°	1360	80	40	28	8	5.2
L1963.TLC63-1440	15	M8	63	31.5	2x45°	1440	80	40	28	8	5.2
L1963.TLC63-1520	15	M8	63	31.5	2x45°	1520	80	40	28	8	5.2
L1963.TLC63-1600	15	M8	63	31.5	2x45°	1600	80	40	28	8	5.2
L1963.TLC63-1680	15	M8	63	31.5	2x45°	1680	80	40	28	8	5.2
L1963.TLC63-1760	15	M8	63	31.5	2x45°	1760	80	40	28	8	5.2
L1963.TLC63-1840	15	M8	63	31.5	2x45°	1840	80	40	28	8	5.2
L1963.TLC63-1920	15	M8	63	31.5	2x45°	1920	80	40	28	8	5.2
L1963.TLC63-2000	15	M8	63	31.5	2x45°	2000	80	40	28	8	5.2
L1963.TLC63-2080	15	M8	63	31.5	2x45°	2080	80	40	28	8	5.2
L1963.TLC63-2160	15	M8	63	31.5	2x45°	2160	80	40	28	8	5.2
L1963.TLC63-2240	15	M8	63	31.5	2x45°	2240	80	40	28	8	5.2
L1963.TLC63-2320	15	M8	63	31.5	2x45°	2320	80	40	28	8	5.2
L1963.TLC63-2400	15	M8	63	31.5	2x45°	2400	80	40	28	8	5.2
L1963.TLC63-2480	15	M8	63	31.5	2x45°	2480	80	40	28	8	5.2
L1963.TLC63-2560	15	M8	63	31.5	2x45°	2560	80	40	28	8	5.2
L1963.TLC63-2640	15	M8	63	31.5	2x45°	2640	80	40	28	8	5.2
L1963.TLC63-2720	15	M8	63	31.5	2x45°	2720	80	40	28	8	5.2
L1963.TLC63-2800	15	M8	63	31.5	2x45°	2800	80	40	28	8	5.2
L1963.TLC63-2880	15	M8	63	31.5	2x45°	2880	80	40	28	8	5.2
L1963.TLC63-2960	15	M8	63	31.5	2x45°	2960	80	40	28	8	5.2

Very Heavy Duty T Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.TLC63-3040	15	M8	63	31.5	2x45°	3040	80	40	28	8	5.2
L1963.TLC63-3120	15	M8	63	31.5	2x45°	3120	80	40	28	8	5.2
L1963.TLC63-3200	15	M8	63	31.5	2x45°	3200	80	40	28	8	5.2
L1963.TLC63-3280	15	M8	63	31.5	2x45°	3280	80	40	28	8	5.2
L1963.TLC63-3360	15	M8	63	31.5	2x45°	3360	80	40	28	8	5.2
L1963.TLC63-3440	15	M8	63	31.5	2x45°	3440	80	40	28	8	5.2
L1963.TLC63-3520	15	M8	63	31.5	2x45°	3520	80	40	28	8	5.2
L1963.TLC63-3600	15	M8	63	31.5	2x45°	3600	80	40	28	8	5.2
L1963.TLC63-3680	15	M8	63	31.5	2x45°	3680	80	40	28	8	5.2
L1963.TLC63-3760	15	M8	63	31.5	2x45°	3760	80	40	28	8	5.2
L1963.TLC63-3840	15	M8	63	31.5	2x45°	3840	80	40	28	8	5.2
L1963.TLC63-3920	15	M8	63	31.5	2x45°	3920	80	40	28	8	5.2
L1963.TLC63-4000	15	M8	63	31.5	2x45°	4000	80	40	28	8	5.2
L1963.TLC63-4080	15	M8	63	31.5	2x45°	4080	80	40	28	8	5.2





L1963.ULC63

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULC counterbored rail type (most popular), which is usually used with a corresponding TLC rail.
Special low profile Torx head screws provided free of charge.
Weight: 6,0 Kg/m.

Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

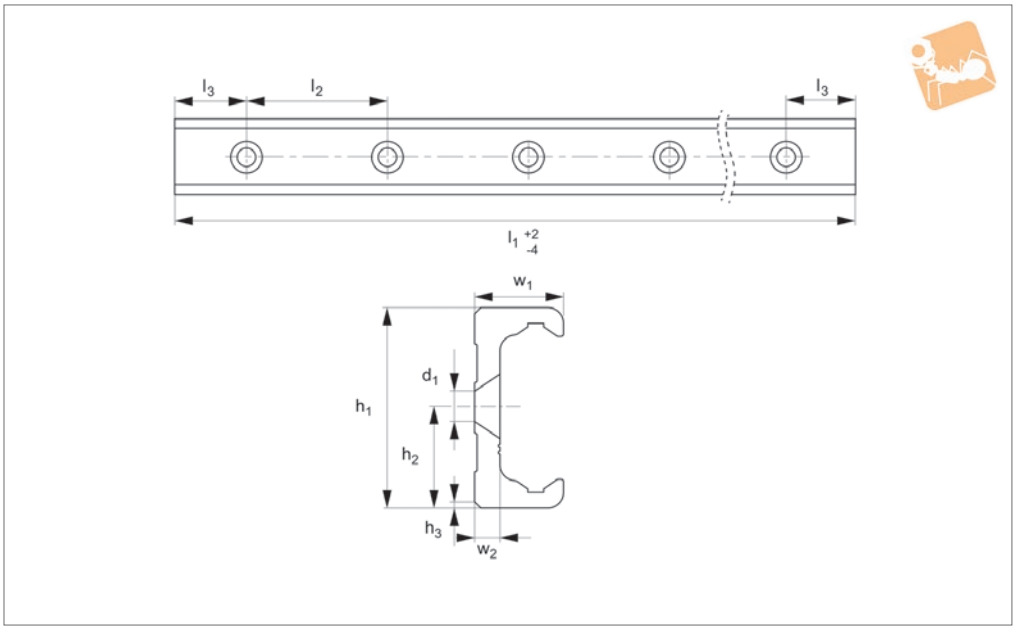
Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.ULC63-0400	15	M8	63	31.5	2x45°	400	80	40	28	8	5.2
L1963.ULC63-0480	15	M8	63	31.5	2x45°	480	80	40	28	8	5.2
L1963.ULC63-0560	15	M8	63	31.5	2x45°	560	80	40	28	8	5.2
L1963.ULC63-0640	15	M8	63	31.5	2x45°	640	80	40	28	8	5.2
L1963.ULC63-0720	15	M8	63	31.5	2x45°	720	80	40	28	8	5.2
L1963.ULC63-0800	15	M8	63	31.5	2x45°	800	80	40	28	8	5.2
L1963.ULC63-0880	15	M8	63	31.5	2x45°	880	80	40	28	8	5.2
L1963.ULC63-0960	15	M8	63	31.5	2x45°	960	80	40	28	8	5.2
L1963.ULC63-1040	15	M8	63	31.5	2x45°	1040	80	40	28	8	5.2
L1963.ULC63-1120	15	M8	63	31.5	2x45°	1120	80	40	28	8	5.2
L1963.ULC63-1200	15	M8	63	31.5	2x45°	1200	80	40	28	8	5.2
L1963.ULC63-1280	15	M8	63	31.5	2x45°	1280	80	40	28	8	5.2
L1963.ULC63-1360	15	M8	63	31.5	2x45°	1360	80	40	28	8	5.2
L1963.ULC63-1440	15	M8	63	31.5	2x45°	1440	80	40	28	8	5.2
L1963.ULC63-1520	15	M8	63	31.5	2x45°	1520	80	40	28	8	5.2
L1963.ULC63-1600	15	M8	63	31.5	2x45°	1600	80	40	28	8	5.2
L1963.ULC63-1680	15	M8	63	31.5	2x45°	1680	80	40	28	8	5.2
L1963.ULC63-1760	15	M8	63	31.5	2x45°	1760	80	40	28	8	5.2
L1963.ULC63-1840	15	M8	63	31.5	2x45°	1840	80	40	28	8	5.2
L1963.ULC63-1920	15	M8	63	31.5	2x45°	1920	80	40	28	8	5.2
L1963.ULC63-2000	15	M8	63	31.5	2x45°	2000	80	40	28	8	5.2
L1963.ULC63-2080	15	M8	63	31.5	2x45°	2080	80	40	28	8	5.2
L1963.ULC63-2160	15	M8	63	31.5	2x45°	2160	80	40	28	8	5.2
L1963.ULC63-2240	15	M8	63	31.5	2x45°	2240	80	40	28	8	5.2
L1963.ULC63-2320	15	M8	63	31.5	2x45°	2320	80	40	28	8	5.2
L1963.ULC63-2400	15	M8	63	31.5	2x45°	2400	80	40	28	8	5.2
L1963.ULC63-2480	15	M8	63	31.5	2x45°	2480	80	40	28	8	5.2
L1963.ULC63-2560	15	M8	63	31.5	2x45°	2560	80	40	28	8	5.2
L1963.ULC63-2640	15	M8	63	31.5	2x45°	2640	80	40	28	8	5.2
L1963.ULC63-2720	15	M8	63	31.5	2x45°	2720	80	40	28	8	5.2
L1963.ULC63-2800	15	M8	63	31.5	2x45°	2800	80	40	28	8	5.2

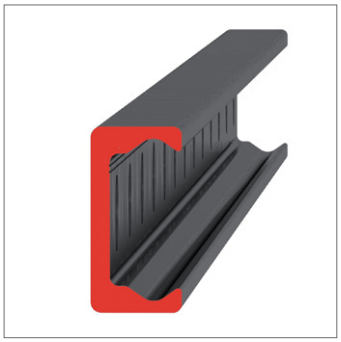


Very Heavy Duty U Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.ULC63-2880	15	M8	63	31.5	2x45°	2880	80	40	28	8	5.2
L1963.ULC63-2960	15	M8	63	31.5	2x45°	2960	80	40	28	8	5.2
L1963.ULC63-3040	15	M8	63	31.5	2x45°	3040	80	40	28	8	5.2
L1963.ULC63-3120	15	M8	63	31.5	2x45°	3120	80	40	28	8	5.2
L1963.ULC63-3200	15	M8	63	31.5	2x45°	3200	80	40	28	8	5.2
L1963.ULC63-3280	15	M8	63	31.5	2x45°	3280	80	40	28	8	5.2
L1963.ULC63-3360	15	M8	63	31.5	2x45°	3360	80	40	28	8	5.2
L1963.ULC63-3440	15	M8	63	31.5	2x45°	3440	80	40	28	8	5.2
L1963.ULC63-3520	15	M8	63	31.5	2x45°	3520	80	40	28	8	5.2
L1963.ULC63-3600	15	M8	63	31.5	2x45°	3600	80	40	28	8	5.2
L1963.ULC63-3680	15	M8	63	31.5	2x45°	3680	80	40	28	8	5.2
L1963.ULC63-3760	15	M8	63	31.5	2x45°	3760	80	40	28	8	5.2
L1963.ULC63-3840	15	M8	63	31.5	2x45°	3840	80	40	28	8	5.2
L1963.ULC63-3920	15	M8	63	31.5	2x45°	3920	80	40	28	8	5.2
L1963.ULC63-4000	15	M8	63	31.5	2x45°	4000	80	40	28	8	5.2
L1963.ULC63-4080	15	M8	63	31.5	2x45°	4080	80	40	28	8	5.2





L1963.TLV63

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rails (allows for misalignment).
This is the TLV countersunk rail which is usually used with a corresponding ULV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 6,0 Kg/m.

Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

Order No.	d_1 for screw	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.TLV63-0400	M10	63	31.5	2x45°	400	80	40	28	8
L1963.TLV63-0480	M10	63	31.5	2x45°	480	80	40	28	8
L1963.TLV63-0560	M10	63	31.5	2x45°	560	80	40	28	8
L1963.TLV63-0640	M10	63	31.5	2x45°	640	80	40	28	8
L1963.TLV63-0720	M10	63	31.5	2x45°	720	80	40	28	8
L1963.TLV63-0800	M10	63	31.5	2x45°	800	80	40	28	8
L1963.TLV63-0880	M10	63	31.5	2x45°	880	80	40	28	8
L1963.TLV63-0960	M10	63	31.5	2x45°	960	80	40	28	8
L1963.TLV63-1040	M10	63	31.5	2x45°	1040	80	40	28	8
L1963.TLV63-1120	M10	63	31.5	2x45°	1120	80	40	28	8
L1963.TLV63-1200	M10	63	31.5	2x45°	1200	80	40	28	8
L1963.TLV63-1280	M10	63	31.5	2x45°	1280	80	40	28	8
L1963.TLV63-1360	M10	63	31.5	2x45°	1360	80	40	28	8
L1963.TLV63-1440	M10	63	31.5	2x45°	1440	80	40	28	8
L1963.TLV63-1520	M10	63	31.5	2x45°	1520	80	40	28	8
L1963.TLV63-1600	M10	63	31.5	2x45°	1600	80	40	28	8
L1963.TLV63-1680	M10	63	31.5	2x45°	1680	80	40	28	8
L1963.TLV63-1760	M10	63	31.5	2x45°	1760	80	40	28	8
L1963.TLV63-1840	M10	63	31.5	2x45°	1840	80	40	28	8
L1963.TLV63-1920	M10	63	31.5	2x45°	1920	80	40	28	8
L1963.TLV63-2000	M10	63	31.5	2x45°	2000	80	40	28	8
L1963.TLV63-2080	M10	63	31.5	2x45°	2080	80	40	28	8
L1963.TLV63-2160	M10	63	31.5	2x45°	2160	80	40	28	8
L1963.TLV63-2240	M10	63	31.5	2x45°	2240	80	40	28	8
L1963.TLV63-2320	M10	63	31.5	2x45°	2320	80	40	28	8
L1963.TLV63-2400	M10	63	31.5	2x45°	2400	80	40	28	8
L1963.TLV63-2480	M10	63	31.5	2x45°	2480	80	40	28	8
L1963.TLV63-2560	M10	63	31.5	2x45°	2560	80	40	28	8
L1963.TLV63-2640	M10	63	31.5	2x45°	2640	80	40	28	8
L1963.TLV63-2720	M10	63	31.5	2x45°	2720	80	40	28	8
L1963.TLV63-2800	M10	63	31.5	2x45°	2800	80	40	28	8

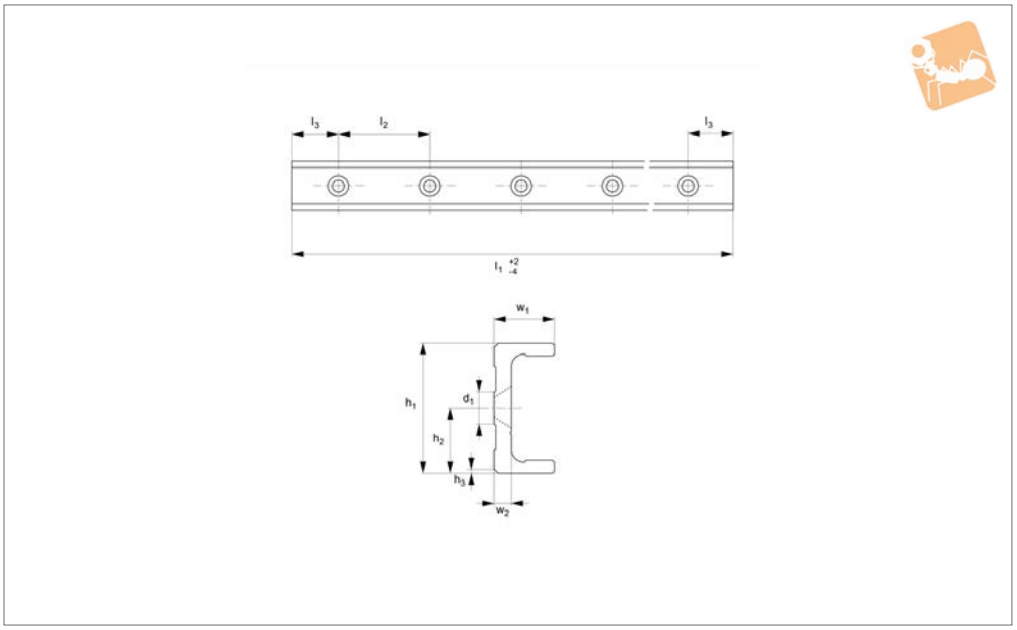


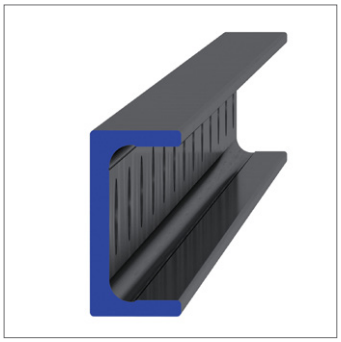
Very Heavy Duty T Rail

countersunk holes



Order No.	d_1 for screw	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.TLV63-2880	M10	63	31.5	2x45°	2880	80	40	28	8
L1963.TLV63-2960	M10	63	31.5	2x45°	2960	80	40	28	8
L1963.TLV63-3040	M10	63	31.5	2x45°	3040	80	40	28	8
L1963.TLV63-3120	M10	63	31.5	2x45°	3120	80	40	28	8
L1963.TLV63-3200	M10	63	31.5	2x45°	3200	80	40	28	8
L1963.TLV63-3280	M10	63	31.5	2x45°	3280	80	40	28	8
L1963.TLV63-3360	M10	63	31.5	2x45°	3360	80	40	28	8
L1963.TLV63-3440	M10	63	31.5	2x45°	3440	80	40	28	8
L1963.TLV63-3520	M10	63	31.5	2x45°	3520	80	40	28	8
L1963.TLV63-3600	M10	63	31.5	2x45°	3600	80	40	28	8
L1963.TLV63-3680	M10	63	31.5	2x45°	3680	80	40	28	8
L1963.TLV63-3760	M10	63	31.5	2x45°	3760	80	40	28	8
L1963.TLV63-3840	M10	63	31.5	2x45°	3840	80	40	28	8
L1963.TLV63-3920	M10	63	31.5	2x45°	3920	80	40	28	8
L1963.TLV63-4000	M10	63	31.5	2x45°	4000	80	40	28	8
L1963.TLV63-4080	M10	63	31.5	2x45°	4080	80	40	28	8





L1963.ULV63

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULV countersunk rail type which is usually used with a corresponding TLV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 6,0 Kg/m.

Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

Order No.	d_1 for screw	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.ULV63-0400	M10	63	31.5	2x45°	400	80	40	28	8
L1963.ULV63-0480	M10	63	31.5	2x45°	480	80	40	28	8
L1963.ULV63-0560	M10	63	31.5	2x45°	560	80	40	28	8
L1963.ULV63-0640	M10	63	31.5	2x45°	640	80	40	28	8
L1963.ULV63-0720	M10	63	31.5	2x45°	720	80	40	28	8
L1963.ULV63-0800	M10	63	31.5	2x45°	800	80	40	28	8
L1963.ULV63-0880	M10	63	31.5	2x45°	880	80	40	28	8
L1963.ULV63-0960	M10	63	31.5	2x45°	960	80	40	28	8
L1963.ULV63-1040	M10	63	31.5	2x45°	1040	80	40	28	8
L1963.ULV63-1120	M10	63	31.5	2x45°	1120	80	40	28	8
L1963.ULV63-1200	M10	63	31.5	2x45°	1200	80	40	28	8
L1963.ULV63-1280	M10	63	31.5	2x45°	1280	80	40	28	8
L1963.ULV63-1360	M10	63	31.5	2x45°	1360	80	40	28	8
L1963.ULV63-1440	M10	63	31.5	2x45°	1440	80	40	28	8
L1963.ULV63-1520	M10	63	31.5	2x45°	1520	80	40	28	8
L1963.ULV63-1600	M10	63	31.5	2x45°	1600	80	40	28	8
L1963.ULV63-1680	M10	63	31.5	2x45°	1680	80	40	28	8
L1963.ULV63-1760	M10	63	31.5	2x45°	1760	80	40	28	8
L1963.ULV63-1840	M10	63	31.5	2x45°	1840	80	40	28	8
L1963.ULV63-1920	M10	63	31.5	2x45°	1920	80	40	28	8
L1963.ULV63-2000	M10	63	31.5	2x45°	2000	80	40	28	8
L1963.ULV63-2080	M10	63	31.5	2x45°	2080	80	40	28	8
L1963.ULV63-2160	M10	63	31.5	2x45°	2160	80	40	28	8
L1963.ULV63-2240	M10	63	31.5	2x45°	2240	80	40	28	8
L1963.ULV63-2320	M10	63	31.5	2x45°	2320	80	40	28	8
L1963.ULV63-2400	M10	63	31.5	2x45°	2400	80	40	28	8
L1963.ULV63-2480	M10	63	31.5	2x45°	2480	80	40	28	8
L1963.ULV63-2560	M10	63	31.5	2x45°	2560	80	40	28	8
L1963.ULV63-2640	M10	63	31.5	2x45°	2640	80	40	28	8
L1963.ULV63-2720	M10	63	31.5	2x45°	2720	80	40	28	8
L1963.ULV63-2800	M10	63	31.5	2x45°	2800	80	40	28	8

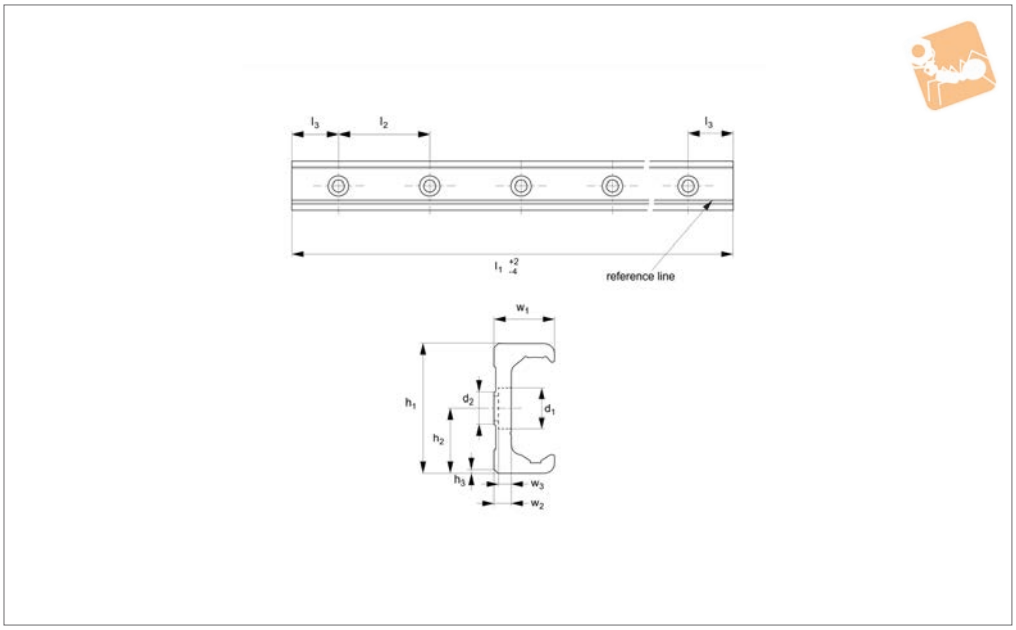


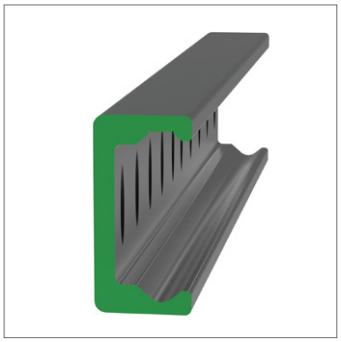
Very Heavy Duty U Rail

countersunk holes



Order No.	d_1 for screw	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.ULV63-2880	M10	63	31.5	2x45°	2880	80	40	28	8
L1963.ULV63-2960	M10	63	31.5	2x45°	2960	80	40	28	8
L1963.ULV63-3040	M10	63	31.5	2x45°	3040	80	40	28	8
L1963.ULV63-3120	M10	63	31.5	2x45°	3120	80	40	28	8
L1963.ULV63-3200	M10	63	31.5	2x45°	3200	80	40	28	8
L1963.ULV63-3280	M10	63	31.5	2x45°	3280	80	40	28	8
L1963.ULV63-3360	M10	63	31.5	2x45°	3360	80	40	28	8
L1963.ULV63-3440	M10	63	31.5	2x45°	3440	80	40	28	8
L1963.ULV63-3520	M10	63	31.5	2x45°	3520	80	40	28	8
L1963.ULV63-3600	M10	63	31.5	2x45°	3600	80	40	28	8
L1963.ULV63-3680	M10	63	31.5	2x45°	3680	80	40	28	8
L1963.ULV63-3760	M10	63	31.5	2x45°	3760	80	40	28	8
L1963.ULV63-3840	M10	63	31.5	2x45°	3840	80	40	28	8
L1963.ULV63-3920	M10	63	31.5	2x45°	3920	80	40	28	8
L1963.ULV63-4000	M10	63	31.5	2x45°	4000	80	40	28	8
L1963.ULV63-4080	M10	63	31.5	2x45°	4080	80	40	28	8





L1963.KLC63

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

Technical Notes
The K rail is a master rail and is usually used with a U slave rail (allows for system misalignment in two planes).

This is the counterbored rail type (most popular), which is usually used with a corresponding ULC rail.
Special low profile Torx head screws provided free of charge.
Weight: 6,0 Kg/m.

Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

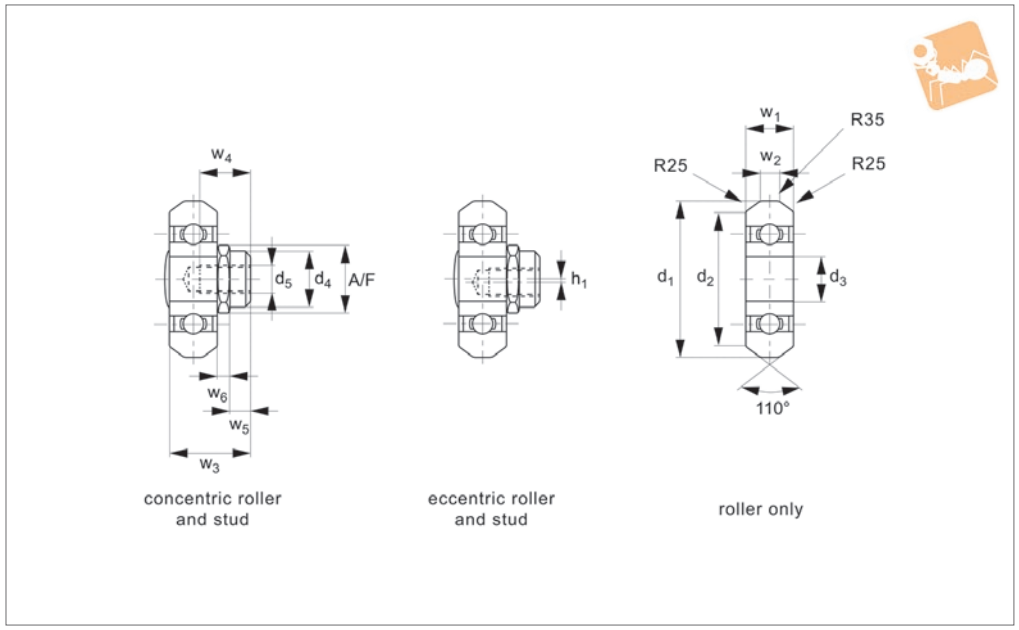
Important Notes
K Rails are not suited for vertical applications.

Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.KLC63-0400	15	M8	63	31.5	2x45°	400	80	40	28	8	5.2
L1963.KLC63-0480	15	M8	63	31.5	2x45°	480	80	40	28	8	5.2
L1963.KLC63-0560	15	M8	63	31.5	2x45°	560	80	40	28	8	5.2
L1963.KLC63-0640	15	M8	63	31.5	2x45°	640	80	40	28	8	5.2
L1963.KLC63-0720	15	M8	63	31.5	2x45°	720	80	40	28	8	5.2
L1963.KLC63-0800	15	M8	63	31.5	2x45°	800	80	40	28	8	5.2
L1963.KLC63-0880	15	M8	63	31.5	2x45°	880	80	40	28	8	5.2
L1963.KLC63-0960	15	M8	63	31.5	2x45°	960	80	40	28	8	5.2
L1963.KLC63-1040	15	M8	63	31.5	2x45°	1040	80	40	28	8	5.2
L1963.KLC63-1120	15	M8	63	31.5	2x45°	1120	80	40	28	8	5.2
L1963.KLC63-1200	15	M8	63	31.5	2x45°	1200	80	40	28	8	5.2
L1963.KLC63-1280	15	M8	63	31.5	2x45°	1280	80	40	28	8	5.2
L1963.KLC63-1360	15	M8	63	31.5	2x45°	1360	80	40	28	8	5.2
L1963.KLC63-1440	15	M8	63	31.5	2x45°	1440	80	40	28	8	5.2
L1963.KLC63-1520	15	M8	63	31.5	2x45°	1520	80	40	28	8	5.2
L1963.KLC63-1600	15	M8	63	31.5	2x45°	1600	80	40	28	8	5.2
L1963.KLC63-1680	15	M8	63	31.5	2x45°	1680	80	40	28	8	5.2
L1963.KLC63-1760	15	M8	63	31.5	2x45°	1760	80	40	28	8	5.2
L1963.KLC63-1840	15	M8	63	31.5	2x45°	1840	80	40	28	8	5.2
L1963.KLC63-1920	15	M8	63	31.5	2x45°	1920	80	40	28	8	5.2
L1963.KLC63-2000	15	M8	63	31.5	2x45°	2000	80	40	28	8	5.2
L1963.KLC63-2080	15	M8	63	31.5	2x45°	2080	80	40	28	8	5.2
L1963.KLC63-2160	15	M8	63	31.5	2x45°	2160	80	40	28	8	5.2
L1963.KLC63-2240	15	M8	63	31.5	2x45°	2240	80	40	28	8	5.2
L1963.KLC63-2320	15	M8	63	31.5	2x45°	2320	80	40	28	8	5.2
L1963.KLC63-2400	15	M8	63	31.5	2x45°	2400	80	40	28	8	5.2
L1963.KLC63-2480	15	M8	63	31.5	2x45°	2480	80	40	28	8	5.2
L1963.KLC63-2560	15	M8	63	31.5	2x45°	2560	80	40	28	8	5.2

Very Heavy Duty K Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.KLC63-2640	15	M8	63	31.5	2x45°	2640	80	40	28	8	5.2
L1963.KLC63-2720	15	M8	63	31.5	2x45°	2720	80	40	28	8	5.2
L1963.KLC63-2800	15	M8	63	31.5	2x45°	2800	80	40	28	8	5.2
L1963.KLC63-2880	15	M8	63	31.5	2x45°	2880	80	40	28	8	5.2
L1963.KLC63-2960	15	M8	63	31.5	2x45°	2960	80	40	28	8	5.2
L1963.KLC63-3040	15	M8	63	31.5	2x45°	3040	80	40	28	8	5.2
L1963.KLC63-3120	15	M8	63	31.5	2x45°	3120	80	40	28	8	5.2
L1963.KLC63-3200	15	M8	63	31.5	2x45°	3200	80	40	28	8	5.2
L1963.KLC63-3280	15	M8	63	31.5	2x45°	3280	80	40	28	8	5.2
L1963.KLC63-3360	15	M8	63	31.5	2x45°	3360	80	40	28	8	5.2
L1963.KLC63-3440	15	M8	63	31.5	2x45°	3440	80	40	28	8	5.2
L1963.KLC63-3520	15	M8	63	31.5	2x45°	3520	80	40	28	8	5.2
L1963.KLC63-3600	15	M8	63	31.5	2x45°	3600	80	40	28	8	5.2
L1963.KLC63-3680	15	M8	63	31.5	2x45°	3680	80	40	28	8	5.2
L1963.KLC63-3760	15	M8	63	31.5	2x45°	3760	80	40	28	8	5.2
L1963.KLC63-3840	15	M8	63	31.5	2x45°	3840	80	40	28	8	5.2
L1963.KLC63-3920	15	M8	63	31.5	2x45°	3920	80	40	28	8	5.2
L1963.KLC63-4000	15	M8	63	31.5	2x45°	4000	80	40	28	8	5.2
L1963.KLC63-4080	15	M8	63	31.5	2x45°	4080	80	40	28	8	5.2





L1900.CB

Material
Steel (100Cr6) rollers with 2RS seals (splashproof). 2Z seals (for dust protection) available on request.

Lubricated for life.

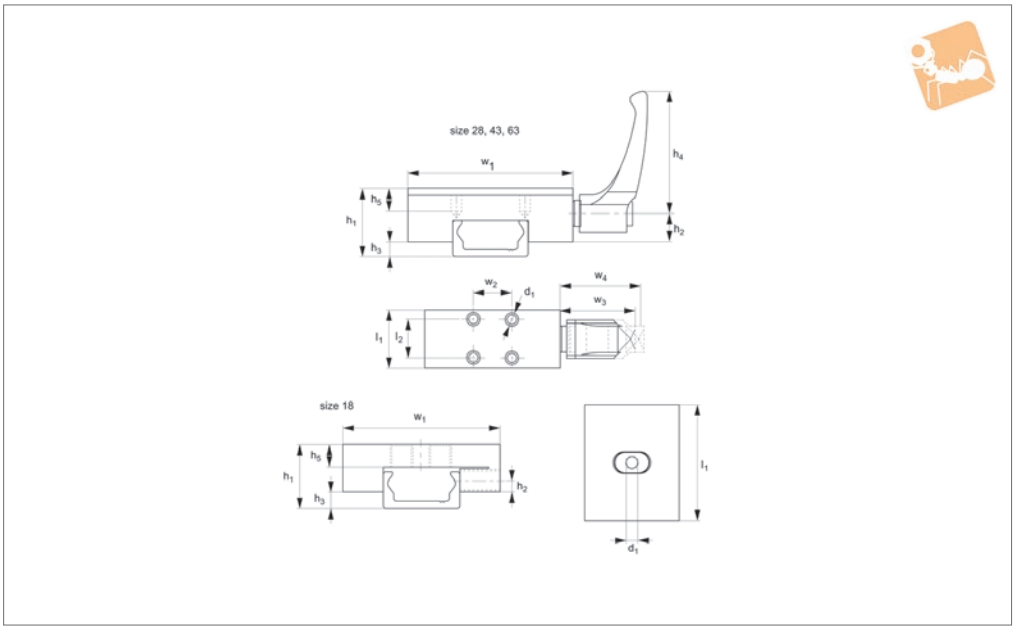
Technical Notes
To choose the correct replacement roller select either the plain, concentric or eccentric roller with the correct seal type.

Order No.	For rail type	For rail size	Roller type	d_1	d_2	d_3	d_4	d_5	h_1	w_1	w_2
L1918.CBC18-2RS	T and U	18	Concentric	14.0	12.4	-	6	M 4	-	4	1.6
L1918.CBE18-2RS	T and U	18	Eccentric	14.0	12.4	-	6	M 4	0.4	4	1.6
L1918.CBR18-2RS	T and U	18	Roller only	14.0	12.4	5	-	-	-	4	1.6
L1928.CBC28-2RS	T and U	28	Concentric	22.4	19.2	-	10	M 5	-	7	2.4
L1928.CBE28-2RS	T and U	28	Eccentric	22.4	19.2	-	10	M 5	0.5	7	2.4
L1928.CBR28-2RS	T and U	28	Roller only	22.4	19.2	7	-	-	-	7	2.4
L1943.CBC43-2RS	T and U	43	Concentric	35.0	30.8	-	12	M 6	-	11	5.0
L1943.CBE43-2RS	T and U	43	Eccentric	35.0	30.8	-	12	M 6	0.8	11	5.0
L1943.CBR43-2RS	T and U	43	Roller only	35.0	30.8	10	-	-	-	11	5.0

Order No.	w_3	w_4	w_5	w_6	A/F	Dyn. load C_0 kN	Static load C kN
L1918.CBC18-2RS	7.3	5	1.8	1.5	8	0.4	0.8
L1918.CBE18-2RS	7.3	5	1.8	1.5	8	0.4	0.8
L1918.CBR18-2RS	-	-	-	-	-	0.4	0.8
L1928.CBC28-2RS	13.0	8	3.8	2.2	13	1.1	2.5
L1928.CBE28-2RS	13.0	8	3.8	2.2	13	1.1	2.5
L1928.CBR28-2RS	-	-	-	-	-	1.1	2.5
L1943.CBC43-2RS	18.0	11	4.3	2.5	15	2.7	6.0
L1943.CBE43-2RS	18.0	11	4.3	2.5	15	2.7	6.0
L1943.CBR43-2RS	-	-	-	-	-	2.7	6.0

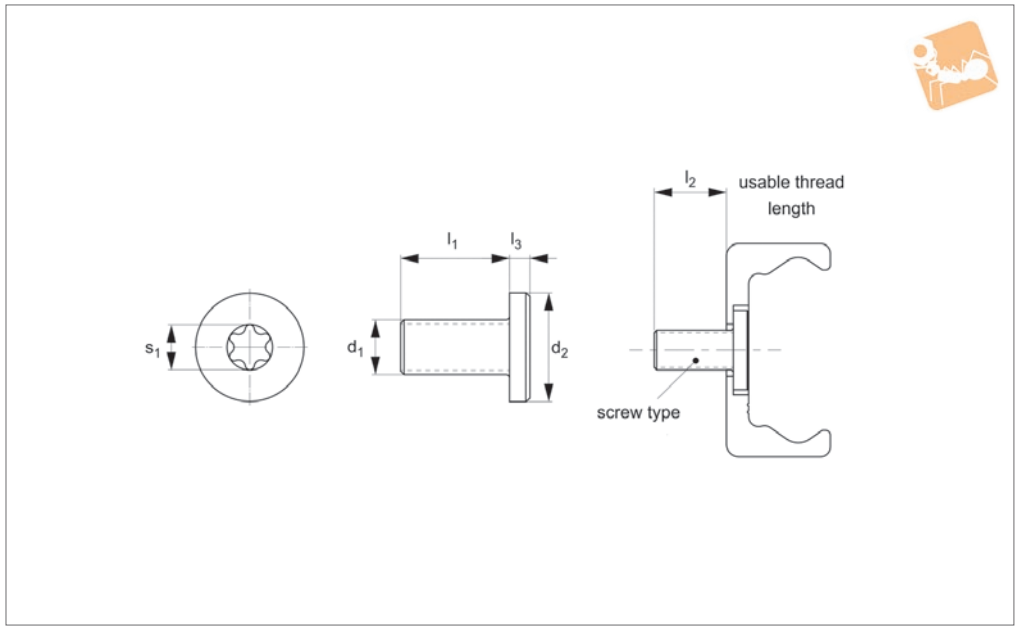


L1900.CL



Important Notes
Aluminium clamp body with steel clamping face.

Order No.	For rail size	d_1	h_1	h_2	h_3	h_4	h_5	l_1	l_2	w_1	w_2	w_3	w_4	Holding force N	Torque to Nm
L1918.CL18	18	M5	15	3.2	3	-	6	43	-	35	-	-	-	150	0.5
L1928.CL28	28	M5	24	17	5	64	6	24	15	68	33.5	38.5	41.5	1200	7
L1943.CL43	43	M8	37	28.5	8	78	12	39	22	105	41.5	46.5	50.5	2000	15
L1963.CL63	63	M8	50.5	35	9.5	80	12	44	26	138	41.5	54.5	59.5	2000	15





L1900.S

Material
Special low head Torx screws (zinc or nickel plated).
Strength class 10,9.

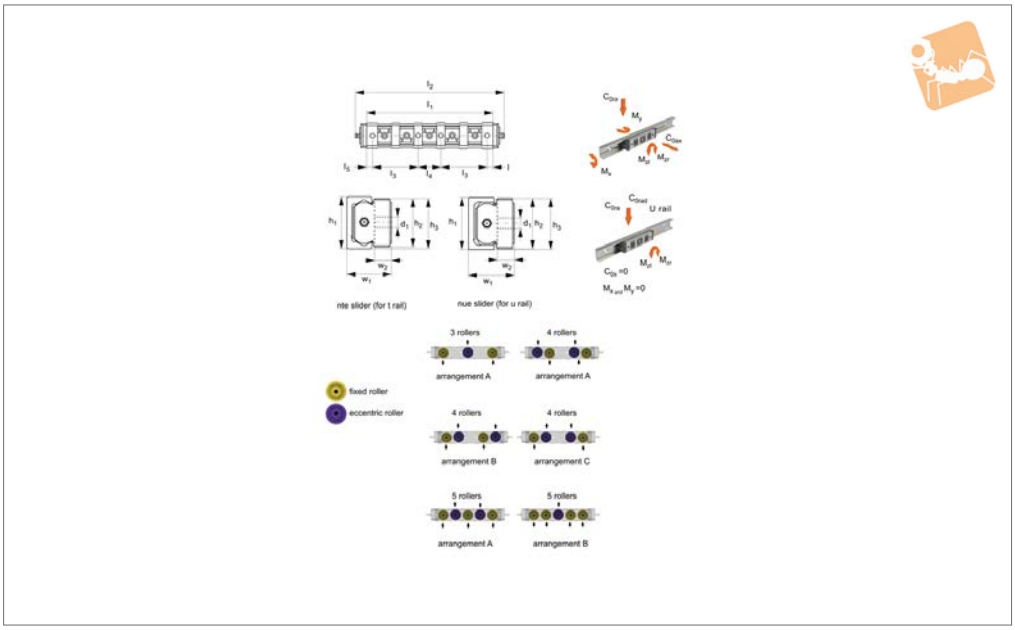
Technical Notes
Standard screws are zinc plated.
Nickel plated versions are used with anti-corrosion treated (nickel plated on alloy coated) rails.

Order No.	For rail	Finish	d_1	d_2	l_1	l_2	l_3	s_1	Torque to Nm
L1943.M08-16	Size 43	Zinc plated	M8 x1,25	16	16	14.6	3	T40	22
L1963.M08-20	Size 63	Zinc plated	M8 x1,25	20	20	18.6	5	T40	35
L1935.M06-13	Size 35	Zinc plated	M6 x 1,0	13	13	12.8	2.7	T30	12
L1928.M05-10	Size 28	Zinc plated	M5 x 0,8	10	10	9	2	T25	9
L1918.M04-08	Size 18	Zinc plated	M4 x 0,7	8	8	7	2	T20	3
L1943.M08-16-NP	Size 43	Nickel plated	M8 x1,25	16	16	14.6	3	T40	22
L1963.M08-20-NP	Size 63	Nickel plated	M8 x1,25	20	20	18.6	5	T40	35
L1935.M06-13-NP	Size 35	Nickel plated	M6 x 1,0	13	13	12.8	2.7	T30	12
L1928.M05-10-NP	Size 28	Nickel plated	M5 x 0,8	10	10	9	2	T25	9
L1918.M04-08-NP	Size 18	Nickel plated	M4 x 0,7	8	8	7	2	T20	3

Medium Duty Sliders, size 28
cast body, long



L1928.NL



Material
Die cast aluminium body, chemically nickel plated.
Steel rollers (100Cr6) with metal seals (2Z).
Polyester end pieces and nytrilic rubber side seals.

Technical Notes
To be used with compact rail size 28.
Select the relevant sliders to suit the rail size and the required load to be carried (taking into account any moment loads).
Maintenance free, self-lubricating wipers.

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.25|-0.10	h_2 +0.10|-0.20	h_3 +0.15|-0.35	l_1	l_2	l_3	l_4	Weight kg
L1928.NTE28L-3A	T	3	4260	640	2170	M5	28	26.5	28	140	176	52	26	0.2
L1928.NTE28L-4A	T	4	4260	750	2170	M5	28	26.5	28	140	176	52	26	0.2
L1928.NTE28L-4B	T	4	4260	750	2170	M5	28	26.5	28	140	176	52	26	0.2
L1928.NTE28L-4C	T	4	4260	750	2170	M5	28	26.5	28	140	176	52	26	0.2
L1928.NTE28L-5A	T	5	5065	900	2570	M5	28	26.5	28	140	176	52	26	0.2
L1928.NTE28L-5B	T	5	6816	640	3472	M5	28	26.5	28	140	176	52	26	0.2
L1928.NUE28L-3A	U	3	4260	0	2170	M5	28	26.5	28	140	176	52	26	0.2
L1928.NUE28L-4A	U	4	4260	0	2170	M5	28	26.5	28	140	176	52	26	0.2
L1928.NUE28L-4B	U	4	4260	0	2170	M5	28	26.5	28	140	176	52	26	0.2
L1928.NUE28L-4C	U	4	4260	0	2170	M5	28	26.5	28	140	176	52	26	0.2
L1928.NUE28L-5A	U	5	5065	0	2570	M5	28	26.5	28	140	176	52	26	0.2
L1928.NUE28L-5B	U	5	6816	0	3472	M5	28	26.5	28	140	176	52	26	0.2

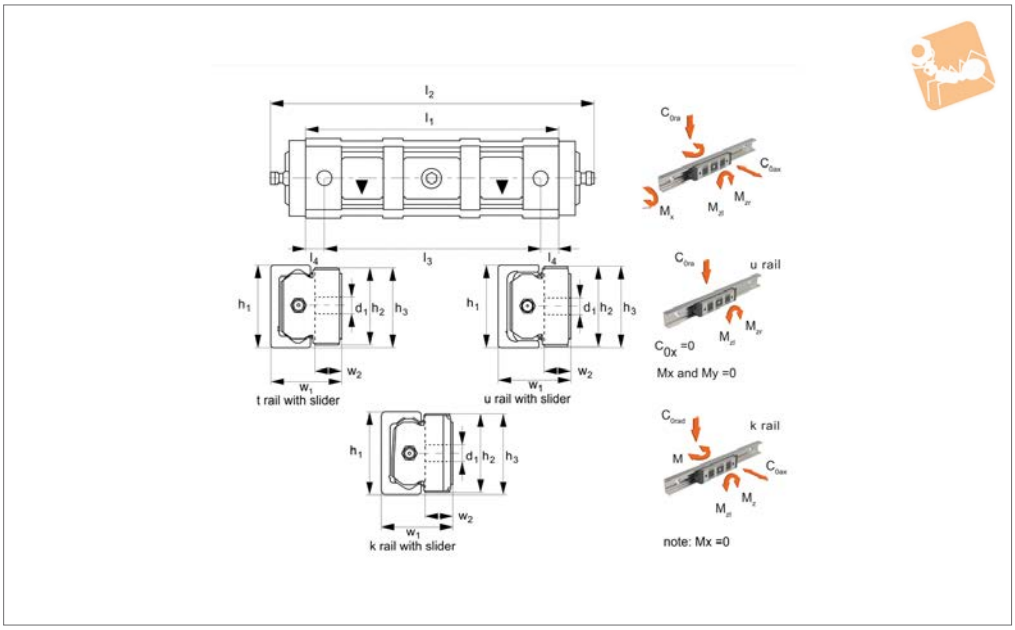
Order No.	l_5	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 +0.25|-0.10	w_2
L1928.NTE28L-3A	5	6.2	29	54.4	54.4	24	9
L1928.NTE28L-4A	5	11.5	29	54.4	108.5	24	9

Order No.	l_5	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 +0.25|-0.10	w_2
L1928.NTE28L-4B	5	11.5	29	108.5	54.4	24	9
L1928.NTE28L-4C	5	11.5	29	81.7	81.7	24	9
L1928.NTE28L-5A	5	11.5	29	54.4	54.4	24	9
L1928.NTE28L-5B	5	6.2	29	54.4	54.4	24	9
L1928.NUE28L-3A	5	0	0	54.4	54.4	24	9
L1928.NUE28L-4A	5	0	0	54.4	108.5	24	9
L1928.NUE28L-4B	5	0	0	108.5	54.4	24	9
L1928.NUE28L-4C	5	0	0	81.7	81.7	24	9
L1928.NUE28L-5A	5	0	0	54.4	54.4	24	9
L1928.NUE28L-5B	5	0	0	54.4	54.4	24	9

Heavy Duty Sliders, size 43
standard



L1943.N



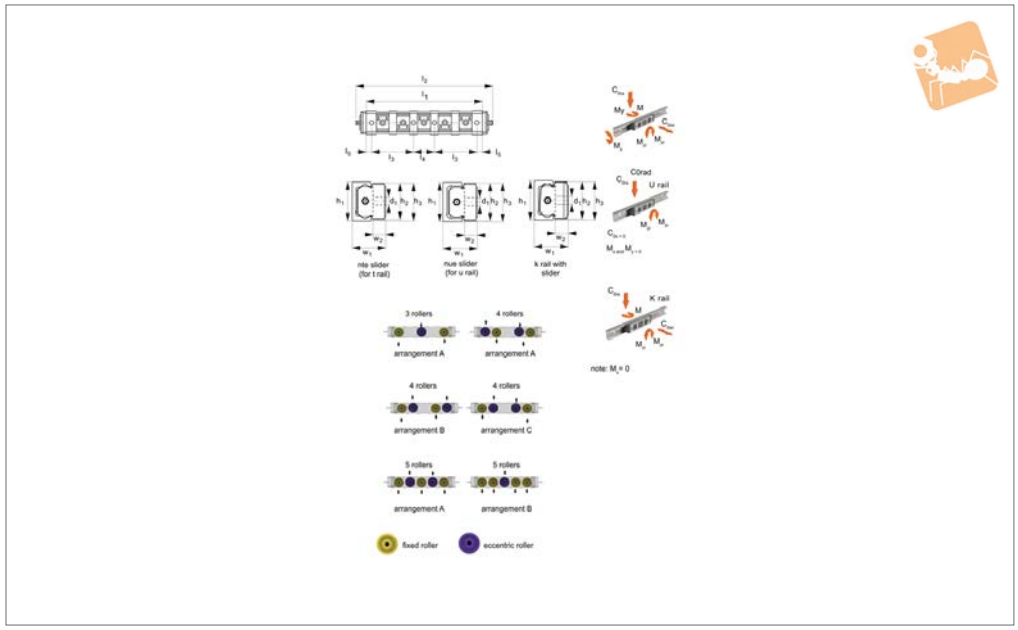
Material
Die cast aluminium body, chemically nickel plated.
Steel rollers (100Cr6) with metal seals (2Z).
Polyester end pieces and nytrilic rubber side seals.

Technical Notes
To be used with compact rail size 43.
Select the relevant sliders to suit the rail size and the required load to be carried (taking into account any moment loads).
Maintenance free, self-lubricating wipers.

Tips
Easy to install (the middle bearing is eccentric allowing for adjustable preload).
Quiet and fast (up to 7 m/s).

Order No.	For rail type	No. of rollers	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.35|-0.10	h_2 +0|-0.3	h_3 +0.20|-0.30	l_1	l_2	l_3	Weight kg
L1943.NTE43	T	3	12280	1570	5500	M8	43	40	41.9	134	170	114	0.385
L1943.NUE43	U	3	12280	0	5500	M8	43	40	41.9	134	170	114	0.385
L1943.NKE43	K	3	12280	1320	5100	M8	43	40	41.9	134	170	114	0.385

Order No.	l_4	M_x Nm	M_y Nm	M_z Nm	w_1 +0.25|-0.10	w_2
L1943.NTE43	10	23.6	60	104.5	37	13.7
L1943.NUE43	10	0	0	104.5	37	13.7
L1943.NKE43	10	0	50.4	96.9	37	13.7





L1943.NL

Material
Die cast aluminium body, chemically nickel plated.
Steel rollers (100Cr6) with metal seals (2Z).
Polyester end pieces and nytrilic rubber side seals.

Technical Notes
To be used with compact rail size 43.
Select the relevant sliders to suit the rail size and the required load to be carried (taking into account any moment loads).
Maintenance free, self-lubricating wipers.

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.00.
Quiet and fast (up to 7 m/s).

Order No.	For rail type	No. of rollers	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.35|-0.10	h_2 +0|-0.30	h_3 +0.20|-0.30	l_1	l_2	l_3	l_4	Weight kg
L1943.NTE43L-3A	T	3	12280	1570	5500	M 8	43	41	42.7	208	245	75.5	37	0.45
L1943.NTE43L-4A	T	4	12280	1855	5500	M 8	43	41	42.7	208	245	75.5	37	0.52
L1943.NTE43L-4B	T	4	12280	1855	5500	M 8	43	41	42.7	208	245	75.5	37	0.52
L1943.NTE43L-4C	T	4	12280	1855	5500	M 8	43	41	42.7	208	245	75.5	37	0.52
L1943.NTE43L-5A	T	5	14675	2215	6540	M 8	43	41	42.7	208	245	75.5	37	0.59
L1943.NTE43L-5B	T	5	19650	1570	8800	M 8	43	41	42.7	208	245	75.5	37	0.59
L1943.NUE43L-3A	U	3	12280	0	5500	M 8	43	41	42.7	208	245	75.5	37	0.45
L1943.NUE43L-4A	U	4	12280	0	5500	M 8	43	41	42.7	208	245	75.5	37	0.52
L1943.NUE43L-4B	U	4	12280	0	5500	M 8	43	41	42.7	208	245	75.5	37	0.52
L1943.NUE43L-4C	U	4	12280	0	5500	M 8	43	41	42.7	208	245	75.5	37	0.52
L1943.NUE43L-5A	U	5	14675	0	6540	M 8	43	41	42.7	208	245	75.5	37	0.59
L1943.NUE43L-5B	U	5	19650	0	8800	M 8	43	41	42.7	208	245	75.5	37	0.59
L1943.NKE43L-3A	K	3	12280	1320	5100	M 8	43	41	42.7	208	245	75.5	37	0.45
L1943.NKE43L-4A	K	4	12280	1320	5100	M 8	43	41	42.7	208	245	75.5	37	0.52
L1943.NKE43L-4B	K	4	12280	1320	5100	M 8	43	41	42.7	208	245	75.5	37	0.52



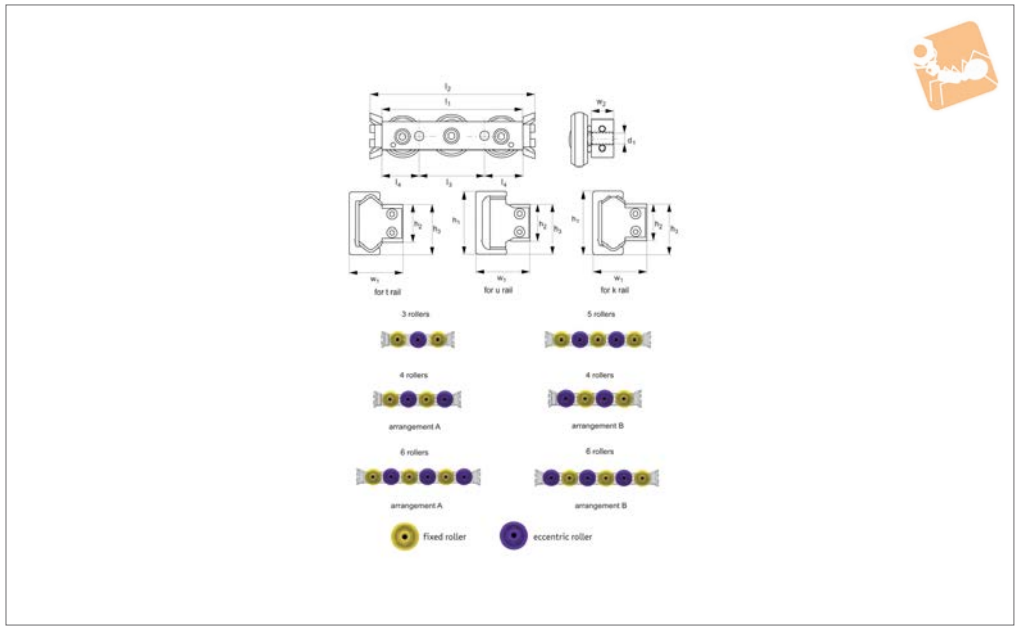
Heavy Duty Sliders - Size 43

standard - long



Order No.	For rail type	No. of rollers	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.35|-0.10	h_2 +0|-0.30	h_3 +0.20|-0.30	l_1	l_2	l_3	l_4	Weight kg
L1943.NKE43L-4C	K	4	12280	1320	5100	M 8	43	41	42.7	208	245	75.5	37	0.52
L1943.NKE43L-5A	K	5	14675	1980	6062	M 8	43	41	42.7	208	245	75.5	37	0.59
L1943.NKE43L-5B	K	5	19650	1980	8800	M 8	43	41	42.7	208	245	75.5	37	0.59

Order No.	l_5	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 +0.25|-0.10	w_2	Arrangement type
L1943.NTE43L-3A	10	23.6	108	209	209	37	13.7	A
L1943.NTE43L-4A	10	43.6	108	209	418	37	13.7	A
L1943.NTE43L-4B	10	43.6	108	418	418	37	13.7	B
L1943.NTE43L-4C	10	43.6	108	313	313	37	13.7	C
L1943.NTE43L-5A	10	43.6	108	313	313	37	13.7	A
L1943.NTE43L-5B	10	23.6	108	209	209	37	13.7	B
L1943.NUE43L-3A	10	0	0	209	209	37	13.7	A
L1943.NUE43L-4A	10	0	0	209	418	37	13.7	A
L1943.NUE43L-4B	10	0	0	418	209	37	13.7	B
L1943.NUE43L-4C	10	0	0	313	313	37	13.7	C
L1943.NUE43L-5A	10	0	0	313	313	37	13.7	A
L1943.NUE43L-5B	10	0	0	209	209	37	13.7	B
L1943.NKE43L-3A	10	0	97.7	188	188	37	13.7	A
L1943.NKE43L-4A	10	0	97.7	188	377	37	13.7	A
L1943.NKE43L-4B	10	0	97.7	377	188	37	13.7	B
L1943.NKE43L-4C	10	0	097.7	283	283	37	13.7	C
L1943.NKE43L-5A	10	0	97.7	283	283	37	13.7	A
L1943.NKE43L-5B	10	0	97.7	188	188	37	13.7	B





L1943.CSW

Material
Zinc plated steel body.
Steel rollers (100Cr6) with metal (2Z) or rubber (2RS) seals.

Technical Notes
To be used with compact rail size 43.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).
Unlike the N series sliders these CSW sliders do not have protective side seals.

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.005.
Quiet and fast (up to 7 m/s).

Order No.	For rail type	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.35|-0.10	h_2 +0|-0.15	h_3 +0.10|-0.30	l_1	Weight kg
L1943.CSW43-120-2ZT	T	Metal	12280	1570	5500	M 8	43	24.9	34.3	120	0.53
L1943.CSW43-120-2ZU	U	Metal	12280	0	5500	M 8	43	24.9	34.3	120	0.53
L1943.CSW43-150-2ZTA	T	Metal	12280	1855	5500	M 8	43	24.9	34.3	150	0.68
L1943.CSW43-150-2ZUA	U	Metal	12280	0	5500	M 8	43	24.9	34.3	150	0.68
L1943.CSW43-150-2ZTB	T	Metal	12280	1855	5500	M 8	43	24.9	34.3	150	0.68
L1943.CSW43-150-2ZUB	U	Metal	12280	0	5500	M 8	43	24.9	34.3	150	0.68
L1943.CSW43-190-2ZT	T	Metal	14675	2215	6540	M 8	43	24.9	34.3	190	0.84
L1943.CSW43-190-2ZU	U	Metal	14675	0	6540	M 8	43	24.9	34.3	190	0.84
L1943.CSW43-230-2ZTA	T	Metal	14675	2645	6540	M 8	43	24.9	34.3	230	1.01
L1943.CSW43-230-2ZUA	U	Metal	14675	0	6540	M 8	43	24.9	34.3	230	1.01
L1943.CSW43-230-2ZTB	T	Metal	14675	2645	6540	M 8	43	24.9	34.3	230	1.01
L1943.CSW43-230-2ZUB	U	Metal	14675	0	6540	M 8	43	24.9	34.3	230	1.01
L1943.CSW43-120-2RST	T	Rubber	12280	1570	5500	M 8	43	24.9	34.3	120	0.53
L1943.CSW43-120-2RSU	U	Rubber	12280	0	5500	M 8	43	24.9	34.3	120	0.53
L1943.CSW43-150-2RSTA	T	Rubber	12280	1855	5500	M 8	43	24.9	34.3	150	0.68
L1943.CSW43-150-2RSUA	U	Rubber	12280	0	5500	M 8	43	24.9	34.3	150	0.68
L1943.CSW43-150-2RSTB	T	Rubber	12280	1855	5500	M 8	43	24.9	34.3	150	0.68
L1943.CSW43-150-2RSUB	U	Rubber	12280	0	5500	M 8	43	24.9	34.3	150	0.68
L1943.CSW43-190-2RST	T	Rubber	14675	2215	6540	M 8	43	24.9	34.3	190	0.84
L1943.CSW43-190-2RSU	U	Rubber	14675	0	6540	M 8	43	24.9	34.3	190	0.84
L1943.CSW43-230-2RSTA	T	Rubber	14675	2645	6540	M 8	43	24.9	34.3	230	1.01
L1943.CSW43-230-2RSUA	U	Rubber	14675	0	6540	M 8	43	24.9	34.3	230	1.01

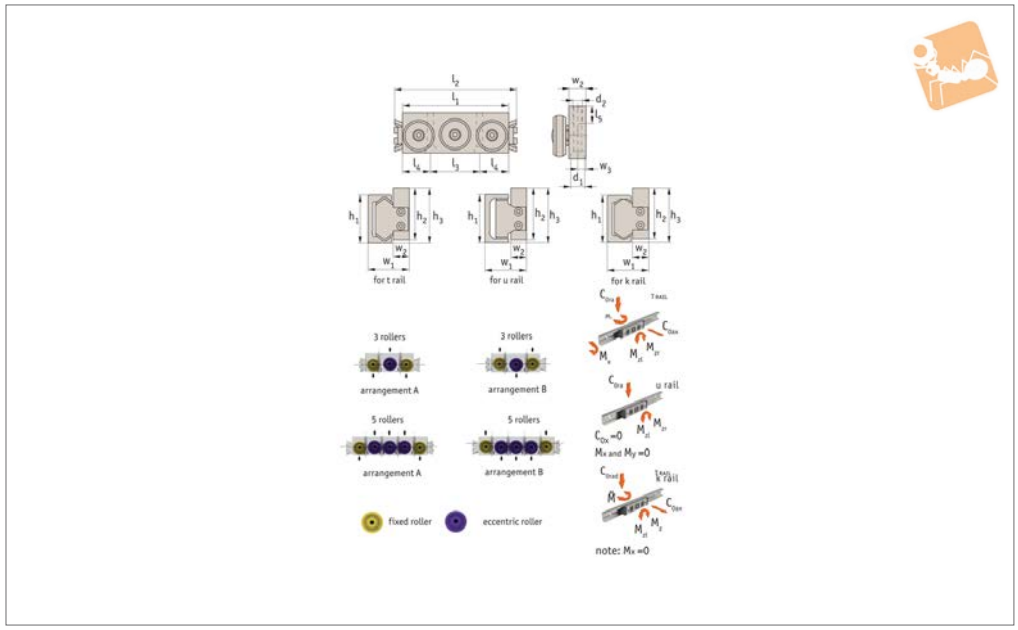
Heavy Duty Sliders - Size 43

no side seal - front fixing



Order No.	For rail type	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.35|-0.10	h_2 +0|-0.15	h_3 +0.10|-0.30	l_1	Weight kg
L1943.CSW43-230-2RSTB	T	Rubber	14675	2645	6540	M 8	43	24.9	34.3	230	1.01
L1943.CSW43-230-2RSUB	U	Rubber	14675	0	6540	M 8	43	24.9	34.3	230	1.01

Order No.	l_2	l_3	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Set up type
L1943.CSW43-120-2ZT	140	55	32.5	23.6	60	104.5	104.5	37	14.5	-
L1943.CSW43-120-2ZU	140	55	32.5	0	0	104.5	104.5	37	14.5	-
L1943.CSW43-150-2ZTA	170	80	35	43.6	81.5	104.5	313.5	37	14.5	A
L1943.CSW43-150-2ZUA	170	80	35	0	0	104.5	313.5	37	14.5	A
L1943.CSW43-150-2ZTB	170	80	35	43.6	81.5	313.5	104.5	37	14.5	B
L1943.CSW43-150-2ZUB	170	80	35	0	0	313.5	104.5	37	14.5	B
L1943.CSW43-190-2ZT	210	40	35	43.6	108.6	313.5	313.5	37	14.5	-
L1943.CSW43-190-2ZU	210	40	35	0	0	313.5	313.5	37	14.5	-
L1943.CSW43-230-2ZTA	250	80	35	52	135.8	313.5	522.5	37	14.5	A
L1943.CSW43-230-2ZUA	250	80	35	0	0	313.5	522.5	37	14.5	A
L1943.CSW43-230-2ZTB	250	80	35	52	135.8	522.5	313.5	37	14.5	B
L1943.CSW43-230-2ZUB	250	80	35	0	0	522.5	313.5	37	14.5	B
L1943.CSW43-120-2RST	140	55	32.5	23.6	60	104.5	104.5	37	14.5	-
L1943.CSW43-120-2RSU	140	55	32.5	0	0	104.5	104.5	37	14.5	-
L1943.CSW43-150-2RSTA	170	80	35	43.6	81.5	104.5	313.5	37	14.5	A
L1943.CSW43-150-2RSUA	170	80	35	0	0	104.5	313.5	37	14.5	A
L1943.CSW43-150-2RSTB	170	80	35	43.6	81.5	313.5	104.5	37	14.5	B
L1943.CSW43-150-2RSUB	170	80	35	0	0	313.5	104.5	37	14.5	B
L1943.CSW43-190-2RST	210	40	35	43.6	108.6	313.5	313.5	37	14.5	-
L1943.CSW43-190-2RSU	210	40	35	0	0	313.5	313.5	37	14.5	-
L1943.CSW43-230-2RSTA	250	80	35	52	135.8	313.5	522.5	37	14.5	A
L1943.CSW43-230-2RSUA	250	80	35	0	0	313.5	522.5	37	14.5	A
L1943.CSW43-230-2RSTB	250	80	35	52	135.8	522.5	313.5	37	14.5	B
L1943.CSW43-230-2RSUB	250	80	35	0	0	522.5	313.5	37	14.5	B





L1943.CDW

Material
Zinc plated steel body.
Steel rollers (100Cr6) with metal (2Z) or rubber (2RS) seals.

Technical Notes
To be used with compact rail size 43.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).
Unlike the N series sliders these CDW sliders do not have protective side seals.

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.005.
Quiet and fast (up to 7 m/s).

Order No.	For rail type	No. of rollers	Seal type	C N	C_{0ax} N	C_{0rad} N	d_1 screw	d_2 thread	h_1 +0.35|-0.10	h_2 +0|-0.50	Weight kg
L1943.CDW43-120-2ZTA	T	3	Metal	12280	1570	5500	M 6	M 8	43	44.9	0.64
L1943.CDW43-120-2ZUA	U	3	Metal	12280	0	5500	M 6	M 8	43	44.9	0.64
L1943.CDW43-120-2ZTB	T	3	Metal	12280	1570	5500	M 6	M 8	43	44.9	0.64
L1943.CDW43-120-2ZUB	U	3	Metal	12280	0	5500	M 6	M 8	43	44.9	0.64
L1943.CDW43-190-2ZTA	T	5	Metal	14675	2215	6540	M 6	M 8	43	44.9	0.95
L1943.CDW43-190-2ZUA	U	5	Metal	14675	0	6540	M 6	M 8	43	44.9	0.95
L1943.CDW43-190-2ZTB	T	5	Metal	14675	2215	6540	M 6	M 8	43	44.9	0.95
L1943.CDW43-190-2ZUB	U	5	Metal	14675	0	6540	M 6	M 6	43	44.9	0.95
L1943.CDW43-120-2RSTA	T	3	Rubber	12280	1570	5500	M 6	M 8	43	44.9	0.64
L1943.CDW43-120-2RSUA	U	3	Rubber	12280	0	5500	M 6	M 8	43	44.9	0.64
L1943.CDW43-120-2RSTB	T	3	Rubber	12280	1570	5500	M 6	M 8	43	44.9	0.64
L1943.CDW43-120-2RSUB	U	3	Rubber	12280	0	5500	M 6	M 8	43	44.9	0.64
L1943.CDW43-190-2RSTA	T	5	Rubber	14675	2215	6540	M 6	M 8	43	44.9	0.95
L1943.CDW43-190-2RSUA	U	5	Rubber	14675	0	6540	M 6	M 8	43	44.9	0.95
L1943.CDW43-190-2RSTB	T	5	Rubber	14675	2215	6540	M 6	M 8	43	44.9	0.95
L1943.CDW43-190-2RSUB	U	5	Rubber	14675	0	6540	M 5	M 8	43	44.9	0.95

Order No.	h_3	l_1	l_2	l_3	l_4	l_5	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.20	w_2	w_3	No. of holes	Arrangement type
L1943.CDW43-120-2ZTA	47	120	140	56	32	15	23.6	60.0	104.5	104.5	37.3	14.8	7.3	2	A

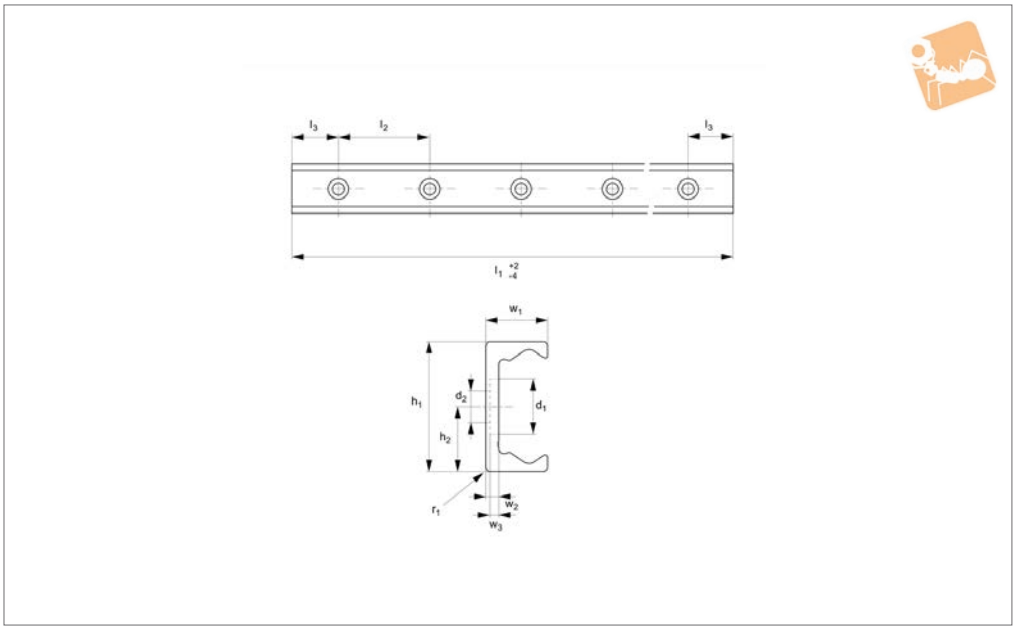


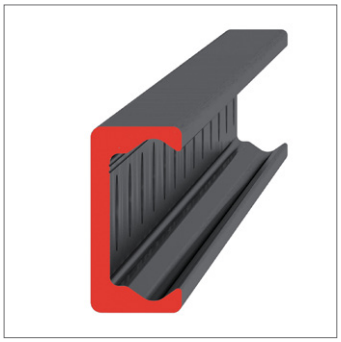
Heavy Duty Sliders - Size 43

no side seal - top fixing



Order No.	h_3	l_1	l_2	l_3	l_4	l_5	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.20	w_2	w_3	No. of holes	Arrangement type
L1943.CDW43-120-2ZUA	47	120	140	56	32	15	0	0	104.5	104.5	37.3	14.8	7.3	2	A
L1943.CDW43-120-2ZTB	47	120	140	56	32	15	23.6	60.0	104.5	104.5	37.3	14.8	7.3	2	B
L1943.CDW43-120-2ZUB	47	120	140	56	32	15	0	0	104.5	104.5	37.3	14.8	7.3	2	B
L1943.CDW43-190-2ZTA	47	190	210	42	32	15	43.6	108.6	313.5	313.5	37.3	14.8	7.3	4	A
L1943.CDW43-190-2ZUA	47	190	210	42	32	15	0	0	313.5	313.5	37.3	14.8	7.3	4	A
L1943.CDW43-190-2ZTB	47	190	210	42	32	15	43.6	108.6	313.5	313.5	37.3	14.8	7.3	4	B
L1943.CDW43-190-2ZUB	47	190	210	42	32	15	0	0	313.5	313.5	37.3	14.8	7.3	4	B
L1943.CDW43-120-2RSTA	47	120	140	56	32	15	23.6	60.0	104.5	104.5	37.3	14.8	7.3	2	A
L1943.CDW43-120-2RSUA	47	120	140	56	32	15	0	0	104.5	104.5	37.3	14.8	7.3	2	A
L1943.CDW43-120-2RSTB	47	120	140	56	32	15	23.6	60.0	104.5	104.5	37.3	14.8	7.3	2	B
L1943.CDW43-120-2RSUB	47	120	140	56	32	15	0	0	104.5	104.5	37.3	14.8	7.3	2	B
L1943.CDW43-190-2RSTA	47	190	210	42	32	15	43.6	108.6	313.5	313.5	37.3	14.8	7.3	4	A
L1943.CDW43-190-2RSUA	47	190	210	42	32	15	0	0	313.5	313.5	37.3	14.8	7.3	4	A
L1943.CDW43-190-2RSTB	47	190	210	42	32	15	43.6	108.6	313.5	313.5	37.3	14.8	7.3	4	B
L1943.CDW43-190-2RSUB	47	190	210	42	32	15	0	0	313.5	313.5	37.3	14.8	7.3	4	B





L1943.TLC43

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for system misalignment).
This is the counterbored rail type (most popular), which is usually used with a corresponding ULC rail.
Special low profile Torx head screws provided free of charge.

Weight: 2,6 Kg/m.

Tips
Standard carriages are the L1943.N versions (die cast aluminium alloy with wipers). Alternatively the L1943.C type is also available (without wipers).

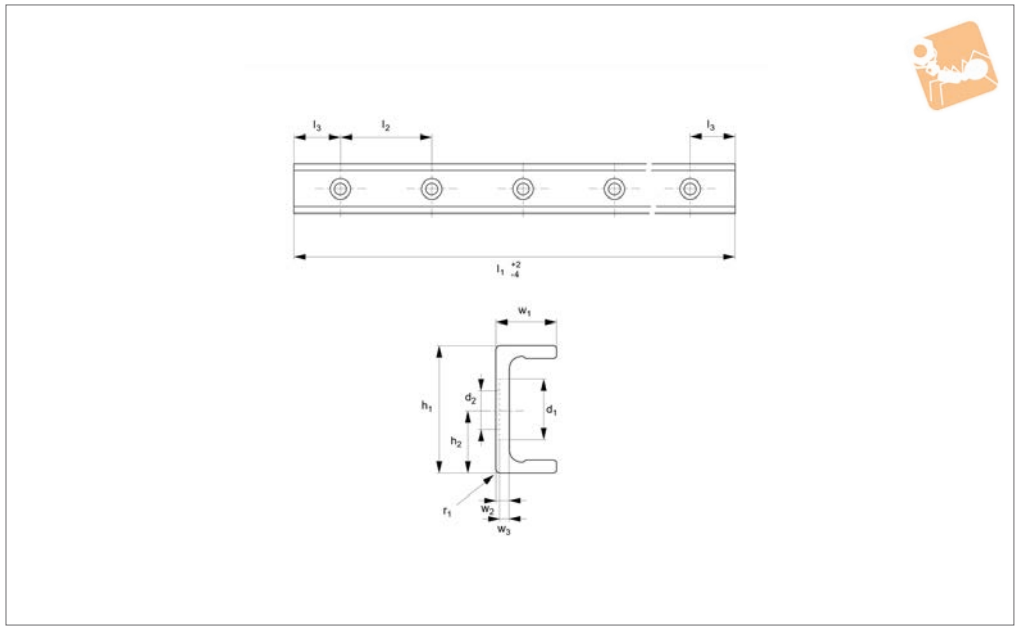
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1943.TLC43-0400	18	M8	43	21.5	400	80	40	2.5	21	4.5	3.1
L1943.TLC43-0480	18	M8	43	21.5	480	80	40	2.5	21	4.5	3.1
L1943.TLC43-0560	18	M8	43	21.5	560	80	40	2.5	21	4.5	3.1
L1943.TLC43-0640	18	M8	43	21.5	640	80	40	2.5	21	4.5	3.1
L1943.TLC43-0720	18	M8	43	21.5	720	80	40	2.5	21	4.5	3.1
L1943.TLC43-0800	18	M8	43	21.5	800	80	40	2.5	21	4.5	3.1
L1943.TLC43-0880	18	M8	43	21.5	880	80	40	2.5	21	4.5	3.1
L1943.TLC43-0960	18	M8	43	21.5	960	80	40	2.5	21	4.5	3.1
L1943.TLC43-1040	18	M8	43	21.5	1040	80	40	2.5	21	4.5	3.1
L1943.TLC43-1120	18	M8	43	21.5	1120	80	40	2.5	21	4.5	3.1
L1943.TLC43-1200	18	M8	43	21.5	1200	80	40	2.5	21	4.5	3.1
L1943.TLC43-1280	18	M8	43	21.5	1280	80	40	2.5	21	4.5	3.1
L1943.TLC43-1360	18	M8	43	21.5	1360	80	40	2.5	21	4.5	3.1
L1943.TLC43-1440	18	M8	43	21.5	1440	80	40	2.5	21	4.5	3.1
L1943.TLC43-1520	18	M8	43	21.5	1520	80	40	2.5	21	4.5	3.1
L1943.TLC43-1600	18	M8	43	21.5	1600	80	40	2.5	21	4.5	3.1
L1943.TLC43-1680	18	M8	43	21.5	1680	80	40	2.5	21	4.5	3.1
L1943.TLC43-1760	18	M8	43	21.5	1760	80	40	2.5	21	4.5	3.1
L1943.TLC43-1840	18	M8	43	21.5	1840	80	40	2.5	21	4.5	3.1
L1943.TLC43-1920	18	M8	43	21.5	1920	80	40	2.5	21	4.5	3.1
L1943.TLC43-2000	18	M8	43	21.5	2000	80	40	2.5	21	4.5	3.1
L1943.TLC43-2080	18	M8	43	21.5	2080	80	40	2.5	21	4.5	3.1
L1943.TLC43-2160	18	M8	43	21.5	2160	80	40	2.5	21	4.5	3.1
L1943.TLC43-2240	18	M8	43	21.5	2240	80	40	2.5	21	4.5	3.1
L1943.TLC43-2320	18	M8	43	21.5	2320	80	40	2.5	21	4.5	3.1
L1943.TLC43-2400	18	M8	43	21.5	2400	80	40	2.5	21	4.5	3.1
L1943.TLC43-2480	18	M8	43	21.5	2480	80	40	2.5	21	4.5	3.1
L1943.TLC43-2560	18	M8	43	21.5	2560	80	40	2.5	21	4.5	3.1
L1943.TLC43-2640	18	M8	43	21.5	2640	80	40	2.5	21	4.5	3.1
L1943.TLC43-2720	18	M8	43	21.5	2720	80	40	2.5	21	4.5	3.1
L1943.TLC43-2800	18	M8	43	21.5	2800	80	40	2.5	21	4.5	3.1

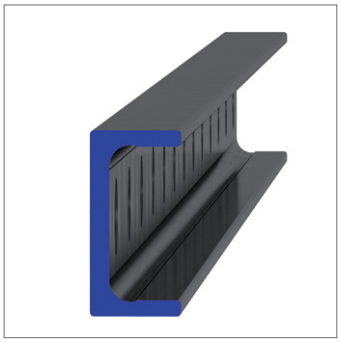


Heavy Duty T Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1943.TLC43-2880	18	M8	43	21.5	2880	80	40	2.5	21	4.5	3.1
L1943.TLC43-2960	18	M8	43	21.5	2960	80	40	2.5	21	4.5	3.1
L1943.TLC43-3040	18	M8	43	21.5	3040	80	40	2.5	21	4.5	3.1
L1943.TLC43-3120	18	M8	43	21.5	3120	80	40	2.5	21	4.5	3.1
L1943.TLC43-3200	18	M8	43	21.5	3200	80	40	2.5	21	4.5	3.1
L1943.TLC43-3280	18	M8	43	21.5	3280	80	40	2.5	21	4.5	3.1
L1943.TLC43-3360	18	M8	43	21.5	3360	80	40	2.5	21	4.5	3.1
L1943.TLC43-3440	18	M8	43	21.5	3440	80	40	2.5	21	4.5	3.1
L1943.TLC43-3520	18	M8	43	21.5	3520	80	40	2.5	21	4.5	3.1
L1943.TLC43-3600	18	M8	43	21.5	3600	80	40	2.5	21	4.5	3.1
L1943.TLC43-3680	18	M8	43	21.5	3680	80	40	2.5	21	4.5	3.1
L1943.TLC43-3760	18	M8	43	21.5	3760	80	40	2.5	21	4.5	3.1
L1943.TLC43-3840	18	M8	43	21.5	3840	80	40	2.5	21	4.5	3.1
L1943.TLC43-3920	18	M8	43	21.5	3920	80	40	2.5	21	4.5	3.1
L1943.TLC43-4000	18	M8	43	21.5	4000	80	40	2.5	21	4.5	3.1
L1943.TLC43-4080	18	M8	43	21.5	4080	80	40	2.5	21	4.5	3.1





L1943.ULC43

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULC counterbored rail type (most popular), which is usually used with a corresponding TLC rail.
Special low profile Torx head screws provided free of charge.
Weight: 2,6 Kg/m.

Tips
Standard carriages are the L1943.N versions (die cast aluminium alloy with wipers). Alternatively the L1943.C type is also available (without wipers).

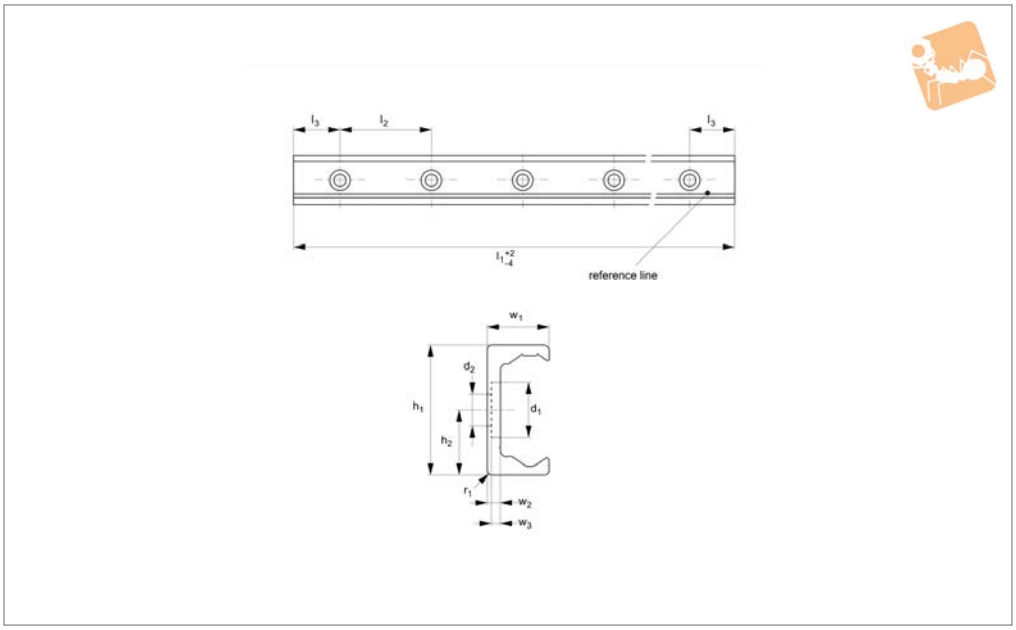
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2	w_3
L1943.ULC43-0400	18	M8	43	21.5	400	80	40	2.5	21	4.5	3.1
L1943.ULC43-0480	18	M8	43	21.5	480	80	40	2.5	21	4.5	3.1
L1943.ULC43-0560	18	M8	43	21.5	560	80	40	2.5	21	4.5	3.1
L1943.ULC43-0640	18	M8	43	21.5	640	80	40	2.5	21	4.5	3.1
L1943.ULC43-0720	18	M8	43	21.5	720	80	40	2.5	21	4.5	3.1
L1943.ULC43-0800	18	M8	43	21.5	800	80	40	2.5	21	4.5	3.1
L1943.ULC43-0880	18	M8	43	21.5	880	80	40	2.5	21	4.5	3.1
L1943.ULC43-0960	18	M8	43	21.5	960	80	40	2.5	21	4.5	3.1
L1943.ULC43-1040	18	M8	43	21.5	1040	80	40	2.5	21	4.5	3.1
L1943.ULC43-1120	18	M8	43	21.5	1120	80	40	2.5	21	4.5	3.1
L1943.ULC43-1200	18	M8	43	21.5	1200	80	40	2.5	21	4.5	3.1
L1943.ULC43-1280	18	M8	43	21.5	1280	80	40	2.5	21	4.5	3.1
L1943.ULC43-1360	18	M8	43	21.5	1360	80	40	2.5	21	4.5	3.1
L1943.ULC43-1440	18	M8	43	21.5	1440	80	40	2.5	21	4.5	3.1
L1943.ULC43-1520	18	M8	43	21.5	1520	80	40	2.5	21	4.5	3.1
L1943.ULC43-1600	18	M8	43	21.5	1600	80	40	2.5	21	4.5	3.1
L1943.ULC43-1680	18	M8	43	21.5	1680	80	40	2.5	21	4.5	3.1
L1943.ULC43-1760	18	M8	43	21.5	1760	80	40	2.5	21	4.5	3.1
L1943.ULC43-1840	18	M8	43	21.5	1840	80	40	2.5	21	4.5	3.1
L1943.ULC43-1920	18	M8	43	21.5	1920	80	40	2.5	21	4.5	3.1
L1943.ULC43-2000	18	M8	43	21.5	2000	80	40	2.5	21	4.5	3.1
L1943.ULC43-2080	18	M8	43	21.5	2080	80	40	2.5	21	4.5	3.1
L1943.ULC43-2160	18	M8	43	21.5	2160	80	40	2.5	21	4.5	3.1
L1943.ULC43-2240	18	M8	43	21.5	2240	80	40	2.5	21	4.5	3.1
L1943.ULC43-2320	18	M8	43	21.5	2320	80	40	2.5	21	4.5	3.1
L1943.ULC43-2400	18	M8	43	21.5	2400	80	40	2.5	21	4.5	3.1
L1943.ULC43-2480	18	M8	43	21.5	2480	80	40	2.5	21	4.5	3.1
L1943.ULC43-2560	18	M8	43	21.5	2560	80	40	2.5	21	4.5	3.1
L1943.ULC43-2640	18	M8	43	21.5	2640	80	40	2.5	21	4.5	3.1
L1943.ULC43-2720	18	M8	43	21.5	2720	80	40	2.5	21	4.5	3.1
L1943.ULC43-2800	18	M8	43	21.5	2800	80	40	2.5	21	4.5	3.1

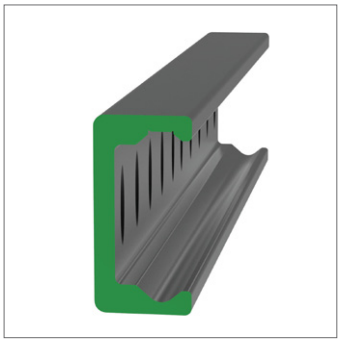


Heavy Duty U Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2	w_3
L1943.ULC43-2880	18	M8	43	21.5	2880	80	40	2.5	21	4.5	3.1
L1943.ULC43-2960	18	M8	43	21.5	2960	80	40	2.5	21	4.5	3.1
L1943.ULC43-3040	18	M8	43	21.5	3040	80	40	2.5	21	4.5	3.1
L1943.ULC43-3120	18	M8	43	21.5	3120	80	40	2.5	21	4.5	3.1
L1943.ULC43-3200	18	M8	43	21.5	3200	80	40	2.5	21	4.5	3.1
L1943.ULC43-3280	18	M8	43	21.5	3280	80	40	2.5	21	4.5	3.1
L1943.ULC43-3360	18	M8	43	21.5	3360	80	40	2.5	21	4.5	3.1
L1943.ULC43-3440	18	M8	43	21.5	3440	80	40	2.5	21	4.5	3.1
L1943.ULC43-3520	18	M8	43	21.5	3520	80	40	2.5	21	4.5	3.1
L1943.ULC43-3600	18	M8	43	21.5	3600	80	40	2.5	21	4.5	3.1
L1943.ULC43-3680	18	M8	43	21.5	3680	80	40	2.5	21	4.5	3.1
L1943.ULC43-3760	18	M8	43	21.5	3760	80	40	2.5	21	4.5	3.1
L1943.ULC43-3840	18	M8	43	21.5	3840	80	40	2.5	21	4.5	3.1
L1943.ULC43-3920	18	M8	43	21.5	3920	80	40	2.5	21	4.5	3.1
L1943.ULC43-4000	18	M8	43	21.5	4000	80	40	2.5	21	4.5	3.1
L1943.ULC43-4080	18	M8	43	21.5	4080	80	40	2.5	21	4.5	3.1





L1943.KLC43

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The K rail is a master rail and is usually used with a U slave rail (allows for system misalignment in two planes).

This is the counterbored rail type (most popular), which is usually used with a corresponding ULC rail.
Special low profile Torx head screws provided free of charge.
Weight: 2,6 Kg/m.

Tips
Standard carriages are the L1943.N versions (die cast aluminium alloy with wipers). Alternatively the L1943.C type is also available (without wipers).

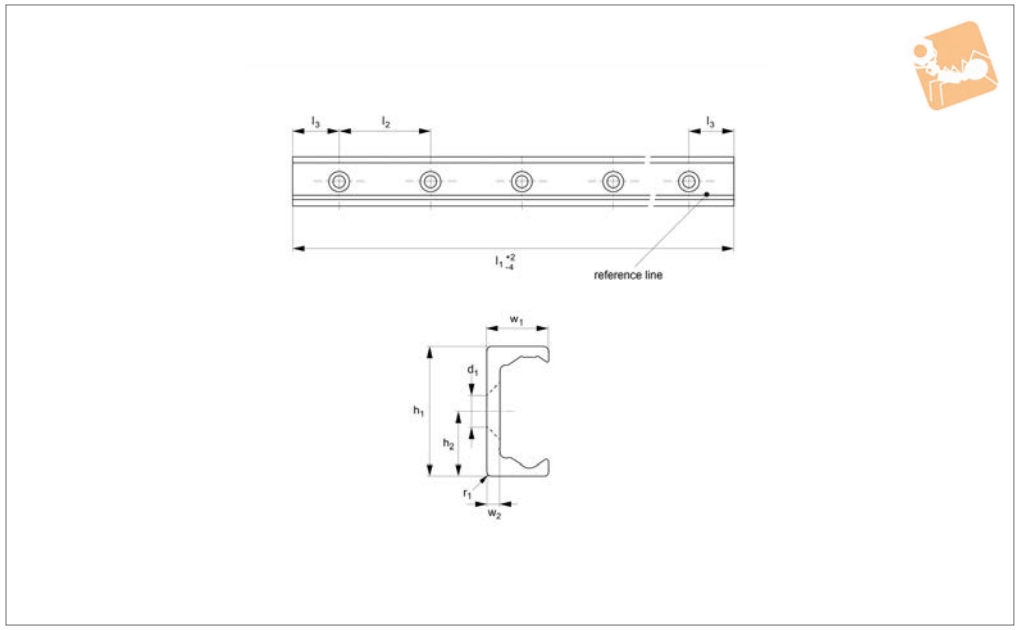
Important Notes
K Rails are not suited for vertical applications.

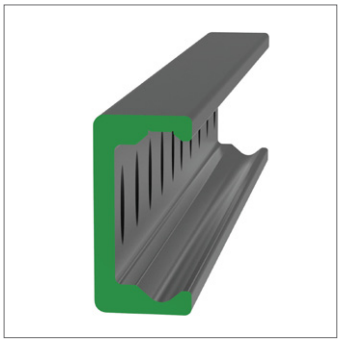
Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2	w_3
L1943.KLC43-0400	18	M8	43	21.5	400	80	40	2.5	21	4.5	3.1
L1943.KLC43-0480	18	M8	43	21.5	480	80	40	2.5	21	4.5	3.1
L1943.KLC43-0560	18	M8	43	21.5	560	80	40	2.5	21	4.5	3.1
L1943.KLC43-0640	18	M8	43	21.5	640	80	40	2.5	21	4.5	3.1
L1943.KLC43-0720	18	M8	43	21.5	720	80	40	2.5	21	4.5	3.1
L1943.KLC43-0800	18	M8	43	21.5	800	80	40	2.5	21	4.5	3.1
L1943.KLC43-0880	18	M8	43	21.5	880	80	40	2.5	21	4.5	3.1
L1943.KLC43-0960	18	M8	43	21.5	960	80	40	2.5	21	4.5	3.1
L1943.KLC43-1040	18	M8	43	21.5	1040	80	40	2.5	21	4.5	3.1
L1943.KLC43-1120	18	M8	43	21.5	1120	80	40	2.5	21	4.5	3.1
L1943.KLC43-1200	18	M8	43	21.5	1200	80	40	2.5	21	4.5	3.1
L1943.KLC43-1280	18	M8	43	21.5	1280	80	40	2.5	21	4.5	3.1
L1943.KLC43-1360	18	M8	43	21.5	1360	80	40	2.5	21	4.5	3.1
L1943.KLC43-1440	18	M8	43	21.5	1440	80	40	2.5	21	4.5	3.1
L1943.KLC43-1520	18	M8	43	21.5	1520	80	40	2.5	21	4.5	3.1
L1943.KLC43-1600	18	M8	43	21.5	1600	80	40	2.5	21	4.5	3.1
L1943.KLC43-1680	18	M8	43	21.5	1680	80	40	2.5	21	4.5	3.1
L1943.KLC43-1760	18	M8	43	21.5	1760	80	40	2.5	21	4.5	3.1
L1943.KLC43-1840	18	M8	43	21.5	1840	80	40	2.5	21	4.5	3.1
L1943.KLC43-1920	18	M8	43	21.5	1920	80	40	2.5	21	4.5	3.1
L1943.KLC43-2000	18	M8	43	21.5	2000	80	40	2.5	21	4.5	3.1
L1943.KLC43-2080	18	M8	43	21.5	2080	80	40	2.5	21	4.5	3.1
L1943.KLC43-2160	18	M8	43	21.5	2160	80	40	2.5	21	4.5	3.1
L1943.KLC43-2240	18	M8	43	21.5	2240	80	40	2.5	21	4.5	3.1
L1943.KLC43-2320	18	M8	43	21.5	2320	80	40	2.5	21	4.5	3.1
L1943.KLC43-2400	18	M8	43	21.5	2400	80	40	2.5	21	4.5	3.1
L1943.KLC43-2480	18	M8	43	21.5	2480	80	40	2.5	21	4.5	3.1
L1943.KLC43-2560	18	M8	43	21.5	2560	80	40	2.5	21	4.5	3.1

Heavy Duty K Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2	w_3
L1943.KLC43-2640	18	M8	43	21.5	2640	80	40	2.5	21	4.5	3.1
L1943.KLC43-2720	18	M8	43	21.5	2720	80	40	2.5	21	4.5	3.1
L1943.KLC43-2800	18	M8	43	21.5	2800	80	40	2.5	21	4.5	3.1
L1943.KLC43-2960	18	M8	43	21.5	2960	80	40	2.5	21	4.5	3.1
L1943.KLC43-3040	18	M8	43	21.5	3040	80	40	2.5	21	4.5	3.1
L1943.KLC43-3120	18	M8	43	21.5	3120	80	40	2.5	21	4.5	3.1
L1943.KLC43-3200	18	M8	43	21.5	3200	80	40	2.5	21	4.5	3.1
L1943.KLC43-3280	18	M8	43	21.5	3280	80	40	2.5	21	4.5	3.1
L1943.KLC43-3360	18	M8	43	21.5	3360	80	40	2.5	21	4.5	3.1
L1943.KLC43-3440	18	M8	43	21.5	3440	80	40	2.5	21	4.5	3.1
L1943.KLC43-3520	18	M8	43	21.5	3520	80	40	2.5	21	4.5	3.1
L1943.KLC43-3600	18	M8	43	21.5	3600	80	40	2.5	21	4.5	3.1





L1943.KLV43

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The K rail is a master rail and is usually used with a U slave rail (allows for system misalignment in two planes).
This is the countersunk rail type which is usually used with a corresponding ULV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 2,6 Kg/m.

Tips
Standard carriages are the L1943.N versions (die cast aluminium alloy with wipers). Alternatively the L1943.C type is also available (without wipers).

Important Notes
K Rails are not suited for vertical applications.

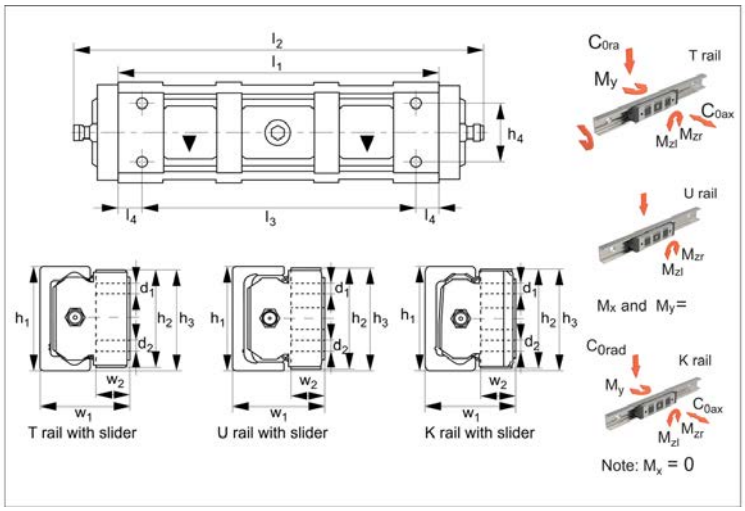
Order No.	d_1 for screw	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2
L1943.KLV43-0400	M8	43	21.5	400	80	40	1	21	4.5
L1943.KLV43-0480	M8	43	21.5	480	80	40	1	21	4.5
L1943.KLV43-0560	M8	43	21.5	560	80	40	1	21	4.5
L1943.KLV43-0640	M8	43	21.5	640	80	40	1	21	4.5
L1943.KLV43-0720	M8	43	21.5	720	80	40	1	21	4.5
L1943.KLV43-0800	M8	43	21.5	800	80	40	1	21	4.5
L1943.KLV43-0880	M8	43	21.5	880	80	40	1	21	4.5
L1943.KLV43-0960	M8	43	21.5	960	80	40	1	21	4.5
L1943.KLV43-1040	M8	43	21.5	1040	80	40	1	21	4.5
L1943.KLV43-1120	M8	43	21.5	1120	80	40	1	21	4.5
L1943.KLV43-1200	M8	43	21.5	1200	80	40	1	21	4.5
L1943.KLV43-1280	M8	43	21.5	1280	80	40	1	21	4.5
L1943.KLV43-1360	M8	43	21.5	1360	80	40	1	21	4.5
L1943.KLV43-1440	M8	43	21.5	1440	80	40	1	21	4.5
L1943.KLV43-1520	M8	43	21.5	1520	80	40	1	21	4.5
L1943.KLV43-1600	M8	43	21.5	1600	80	40	1	21	4.5
L1943.KLV43-1680	M8	43	21.5	1680	80	40	1	21	4.5
L1943.KLV43-1760	M8	43	21.5	1760	80	40	1	21	4.5
L1943.KLV43-1840	M8	43	21.5	1840	80	40	1	21	4.5
L1943.KLV43-1920	M8	43	21.5	1920	80	40	1	21	4.5
L1943.KLV43-2000	M8	43	21.5	2000	80	40	1	21	4.5
L1943.KLV43-2080	M8	43	21.5	2080	80	40	1	21	4.5
L1943.KLV43-2160	M8	43	21.5	2160	80	40	1	21	4.5
L1943.KLV43-2240	M8	43	21.5	2240	80	40	1	21	4.5
L1943.KLV43-2320	M8	43	21.5	2320	80	40	1	21	4.5
L1943.KLV43-2400	M8	43	21.5	2400	80	40	1	21	4.5
L1943.KLV43-2480	M8	43	21.5	2480	80	40	1	21	4.5
L1943.KLV43-2560	M8	43	21.5	2560	80	40	1	21	4.5
L1943.KLV43-2640	M8	43	21.5	2640	80	40	1	21	4.5



Heavy Duty K Rail
countersunk holes



Order No.	d_1 for screw	h_1	h_2	l_1	l_2	l_3	r	w_1	w_2
L1943.KLV43-2720	M8	43	21.5	2720	80	40	1	21	4.5
L1943.KLV43-2800	M8	43	21.5	2800	80	40	1	21	4.5
L1943.KLV43-2880	M8	43	21.5	2880	80	40	1	21	4.5
L1943.KLV43-2960	M8	43	21.5	2960	80	40	1	21	4.5
L1943.KLV43-3040	M8	43	21.5	3040	80	40	1	21	4.5
L1943.KLV43-3120	M8	43	21.5	3120	80	40	1	21	4.5
L1943.KLV43-3200	M8	43	21.5	3200	80	40	1	21	4.5
L1943.KLV43-3280	M8	43	21.5	3280	80	40	1	21	4.5
L1943.KLV43-3360	M8	43	21.5	3360	80	40	1	21	4.5
L1943.KLV43-3440	M8	43	21.5	3440	80	40	1	21	4.5
L1943.KLV43-3520	M8	43	21.5	3520	80	40	1	21	4.5
L1943.KLV43-3600	M8	43	21.5	3600	80	40	1	21	4.5
L1943.43K-0400-V	M8	43	21.5	400	80	40	1	21	4.5
L1943.43K-0480-V	M8	43	21.5	480	80	40	1	21	4.5
L1943.43K-0560-V	M8	43	21.5	560	80	40	1	21	4.5
L1943.43K-0640-V	M8	43	21.5	640	80	40	1	21	4.5
L1943.43K-0720-V	M8	43	21.5	720	80	40	1	21	4.5
L1943.43K-0800-V	M8	43	21.5	800	80	40	1	21	4.5
L1943.43K-0880-V	M8	43	21.5	880	80	40	1	21	4.5
L1943.43K-0960-V	M8	43	21.5	960	80	40	1	21	4.5
L1943.43K-1040-V	M8	43	21.5	1040	80	40	1	21	4.5
L1943.43K-1120-V	M8	43	21.5	1120	80	40	1	21	4.5
L1943.43K-1200-V	M8	43	21.5	1200	80	40	1	21	4.5
L1943.43K-1280-V	M8	43	21.5	1280	80	40	1	21	4.5
L1943.43K-1360-V	M8	43	21.5	1360	80	40	1	21	4.5
L1943.43K-1440-V	M8	43	21.5	1440	80	40	1	21	4.5
L1943.43K-1520-V	M8	43	21.5	1520	80	40	1	21	4.5
L1943.43K-1600-V	M8	43	21.5	1600	80	40	1	21	4.5
L1943.43K-1680-V	M8	43	21.5	1680	80	40	1	21	4.5
L1943.43K-1760-V	M8	43	21.5	1760	80	40	1	21	4.5
L1943.43K-1840-V	M8	43	21.5	1840	80	40	1	21	4.5
L1943.43K-1920-V	M8	43	21.5	1920	80	40	1	21	4.5
L1943.43K-2000-V	M8	43	21.5	2000	80	40	1	21	4.5
L1943.43K-2080-V	M8	43	21.5	2080	80	40	1	21	4.5
L1943.43K-2160-V	M8	43	21.5	2160	80	40	1	21	4.5
L1943.43K-2240-V	M8	43	21.5	2240	80	40	1	21	4.5
L1943.43K-2320-V	M8	43	21.5	2320	80	40	1	21	4.5
L1943.43K-2400-V	M8	43	21.5	2400	80	40	1	21	4.5
L1943.43K-2480-V	M8	43	21.5	2480	80	40	1	21	4.5
L1943.43K-2560-V	M8	43	21.5	2560	80	40	1	21	4.5
L1943.43K-2640-V	M8	43	21.5	2640	80	40	1	21	4.5
L1943.43K-2720-V	M8	43	21.5	2720	80	40	1	21	4.5
L1943.43K-2800-V	M8	43	21.5	2800	80	40	1	21	4.5
L1943.43K-2880-V	M8	43	21.5	2880	80	40	1	21	4.5
L1943.43K-2960-V	M8	43	21.5	2960	80	40	1	21	4.5
L1943.43K-3040-V	M8	43	21.5	3040	80	40	1	21	4.5
L1943.43K-3120-V	M8	43	21.5	3120	80	40	1	21	4.5
L1943.43K-3200-V	M8	43	21.5	3200	80	40	1	21	4.5
L1943.43K-3280-V	M8	43	21.5	3280	80	40	1	21	4.5
L1943.43K-3360-V	M8	43	21.5	3360	80	40	1	21	4.5
L1943.43K-3440-V	M8	43	21.5	3440	80	40	1	21	4.5
L1943.43K-3520-V	M8	43	21.5	3520	80	40	1	21	4.5
L1943.43K-3600-V	M8	43	21.5	3600	80	40	1	21	4.5
L1943.43K-3680-V	M8	43	21.5	3680	80	40	1	21	4.5
L1943.43K-3760-V	M8	43	21.5	3760	80	40	1	21	4.5
L1943.43K-3840-V	M8	43	21.5	3840	80	40	1	21	4.5
L1943.43K-3920-V	M8	43	21.5	3920	80	40	1	21	4.5
L1943.43K-4000-V	M8	43	21.5	4000	80	40	1	21	4.5
L1943.43K-4080-V	M8	43	21.5	4080	80	40	1	21	4.5





L1963.N

Material
Die cast aluminium body, chemically nickel plated.
Steel rollers (100Cr6) with combined metal/rubber seals (2ZR).
Polyester end pieces and nytrilic rubber side seals.

Technical Notes
To be used with compact rail size 63.
Select the relevant sliders to suit the rail size and the required load to be carried (taking into account any moment loads).
Maintenance free, self-lubricating wipers.

Tips
Easy to install (the middle bearing is eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.006.
Quiet and fast (up to 9 m/s).

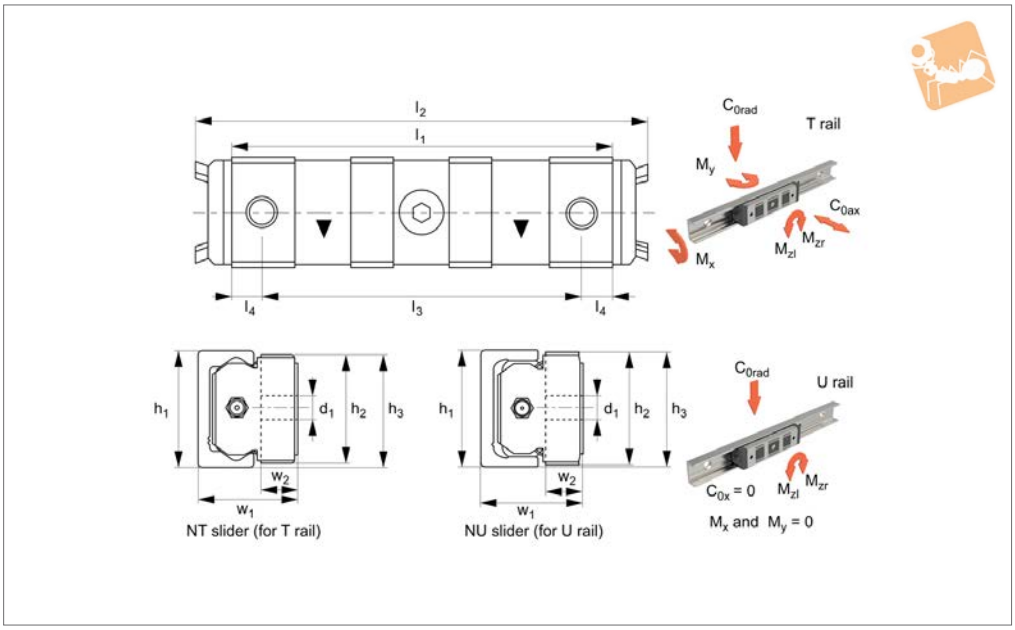
Order No.	For rail type	No. of rollers	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.35|-0.10	h_2 +0.10|-0.20	h_3 +0|-0.50	h_4	Weight kg
L1963.NTE63	T	3	30750	6000	12500	M8	63	60	62	34	1.070
L1963.NUE63	U	3	30750	0	12500	M8	63	60	62	34	1.070
L1963.NKE63	K	3	30750	5045	11550	M8	63	60	62	34	1.070

Order No.	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm	M_z Nm	w_1 +0.25|-0.10	w_2
L1963.NTE63	188	225	168	10	125	271	367	50.5	20.2
L1963.NUE63	188	225	168	10	0	0	367	50.5	20.2
L1963.NKE63	188	225	168	10	0	235	335	50.5	20.2

Medium Duty Sliders, size 28
cast body



L1928.N



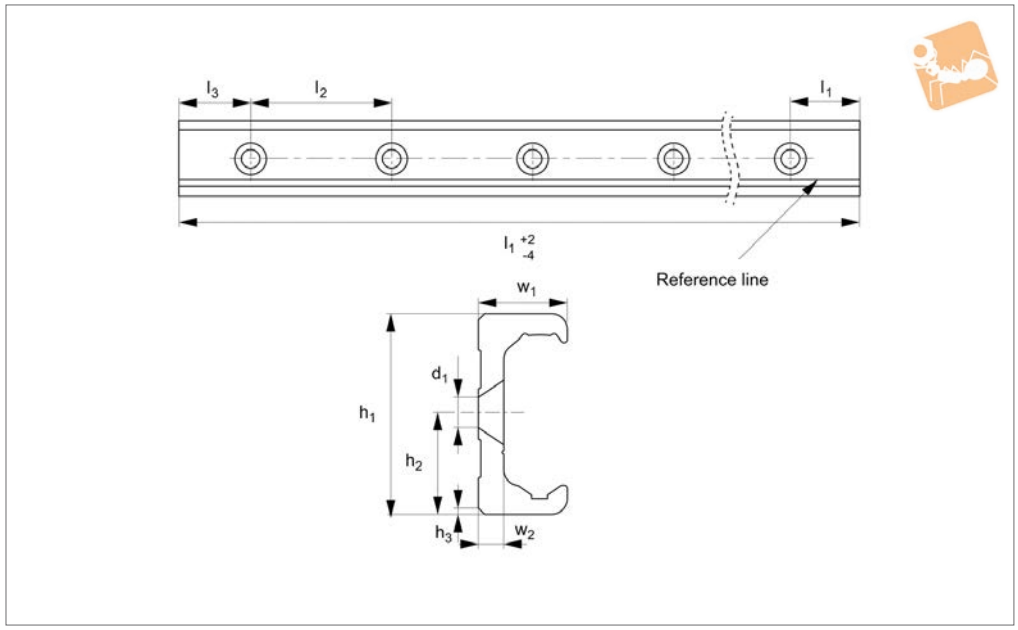
Material
Die cast aluminium body, chemically nickel plated.
Steel rollers (100Cr6) with metal seals (2Z).
Polyester end pieces and nytrilic rubber side seals.

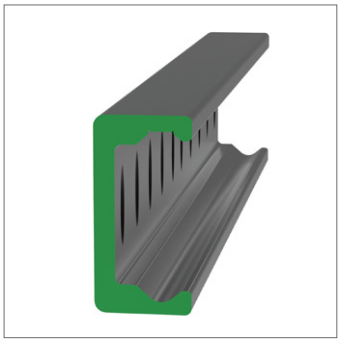
Technical Notes
To be used with compact rail size 28.
Select the relevant sliders to suit the rail size and the required load to be carried (taking into account any moment loads).
Maintenance free, self-lubricating wipers.

Tips
Easy to install (the middle roller is eccentric allowing for adjustable preload).
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	C N	C_{0ax} N	C_{0rad} N	d_1	h_1 +0.25|-0.10	h_2 +0|-0.20	h_3 +0.15|-0.35	l_1	l_2	l_3	Weight kg
L1928.NTE28	T	3	4260	640	2170	M5	28	26.5	28	88	124	78	0.115
L1928.NUE28	U	3	4260	0	2170	M5	28	26.5	28	88	124	78	0.115

Order No.	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2
L1928.NTE28	5	6.2	16	27.2	27.2	24	9.3
L1928.NUE28	5	0	0	27.2	27.2	24	9.3





L1963.KLV63

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The K rail is a master rail and is usually used with a U slave rail (allows for system misalignment in two planes).
This is the countersunk rail type which is usually used with a corresponding ULV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 6,0 Kg/m.

Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

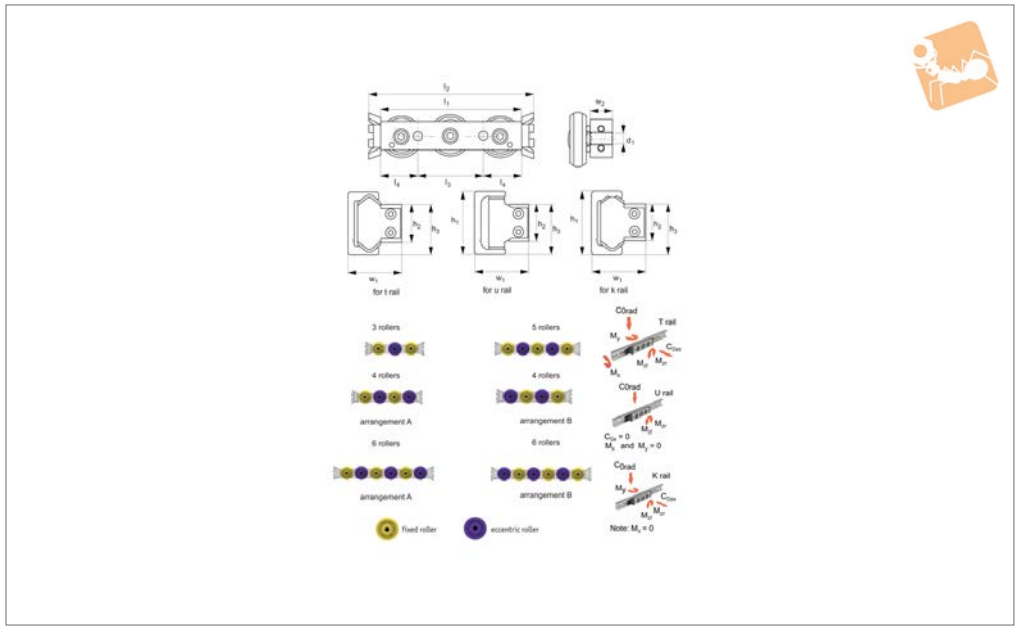
Important Notes
K Rails are not suited for vertical applications.

Order No.	d_1 for screw	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.KLV63-0400	M10	63	31.5	2x45°	400	80	40	28	8
L1963.KLV63-0480	M10	63	31.5	2x45°	480	80	40	28	8
L1963.KLV63-0560	M10	63	31.5	2x45°	560	80	40	28	8
L1963.KLV63-0640	M10	63	31.5	2x45°	640	80	40	28	8
L1963.KLV63-0720	M10	63	31.5	2x45°	720	80	40	28	8
L1963.KLV63-0800	M10	63	31.5	2x45°	800	80	40	28	8
L1963.KLV63-0880	M10	63	31.5	2x45°	880	80	40	28	8
L1963.KLV63-0960	M10	63	31.5	2x45°	960	80	40	28	8
L1963.KLV63-1040	M10	63	31.5	2x45°	1040	80	40	28	8
L1963.KLV63-1120	M10	63	31.5	2x45°	1120	80	40	28	8
L1963.KLV63-1200	M10	63	31.5	2x45°	1200	80	40	28	8
L1963.KLV63-1280	M10	63	31.5	2x45°	1280	80	40	28	8
L1963.KLV63-1360	M10	63	31.5	2x45°	1360	80	40	28	8
L1963.KLV63-1440	M10	63	31.5	2x45°	1440	80	40	28	8
L1963.KLV63-1520	M10	63	31.5	2x45°	1520	80	40	28	8
L1943.KLV63-1600	M10	63	31.5	2x45°	1600	80	40	28	8
L1963.KLV63-1680	M10	63	31.5	2x45°	1680	80	40	28	8
L1963.KLV63-1760	M10	63	31.5	2x45°	1760	80	40	28	8
L1963.KLV63-1840	M10	63	31.5	2x45°	1840	80	40	28	8
L1963.KLV63-1920	M10	63	31.5	2x45°	1920	80	40	28	8
L1963.KLV63-2000	M10	63	31.5	2x45°	2000	80	40	28	8
L1963.KLV63-2080	M10	63	31.5	2x45°	2080	80	40	28	8
L1963.KLV63-2160	M10	63	31.5	2x45°	2160	80	40	28	8
L1963.KLV63-2240	M10	63	31.5	2x45°	2240	80	40	28	8
L1963.KLV63-2320	M10	63	31.5	2x45°	2320	80	40	28	8
L1963.KLV63-2400	M10	63	31.5	2x45°	2400	80	40	28	8
L1963.KLV63-2480	M10	63	31.5	2x45°	2480	80	40	28	8
L1963.KLV63-2560	M10	63	31.5	2x45°	2560	80	40	28	8
L1963.KLV63-2640	M10	63	31.5	2x45°	2640	80	40	28	8

Very Heavy Duty K Rail
countersunk holes



Order No.	d_1 for screw	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.KLV63-2720	M10	63	31.5	2x45°	2720	80	40	28	8
L1963.KLV63-2800	M10	63	31.5	2x45°	2800	80	40	28	8
L1963.KLV63-2880	M10	63	31.5	2x45°	2880	80	40	28	8
L1963.KLV63-2960	M10	63	31.5	2x45°	2960	80	40	28	8
L1963.KLV63-3040	M10	63	31.5	2x45°	3040	80	40	28	8
L1963.KLV63-3120	M10	63	31.5	2x45°	3120	80	40	28	8
L1963.KLV63-3200	M10	63	31.5	2x45°	3200	80	40	28	8
L1963.KLV63-3280	M10	63	31.5	2x45°	3280	80	40	28	8
L1963.KLV63-3360	M10	63	31.5	2x45°	3360	80	40	28	8
L1963.KLV63-3440	M10	63	31.5	2x45°	3440	80	40	28	8
L1963.KLV63-3520	M10	63	31.5	2x45°	3520	80	40	28	8
L1963.KLV63-3600	M10	63	31.5	2x45°	3600	80	40	28	8
L1963.KLV63-3680	M10	63	31.5	2x45°	3680	80	40	28	8
L1963.KLV63-3760	M10	63	31.5	2x45°	3760	80	40	28	8
L1963.KLV63-3840	M10	63	31.5	2x45°	3840	80	40	28	8
L1963.KLV63-3920	M10	63	31.5	2x45°	3920	80	40	28	8
L1963.KLV63-4000	M10	63	31.5	2x45°	4000	80	40	28	8
L1963.KLV63-4080	M10	63	31.5	2x45°	4080	80	40	28	8





L1963.CS

Material
Zinc plated steel body.
Steel rollers (100Cr6) with a special combined metal and rubber seal (2ZR).

Technical Notes
To be used with compact rail size 63.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).
Unlike the N series sliders these CSW sliders do not have protective side seals.

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.006.
Quiet and fast (up to 9 m/s).

Order No.	For rail type	No. of rollers	Seal type	d	h_1 +0.35 | -0.10	h_2 +0.5 | -0	h_3 +0.15 | -0.30	l_1	l_2	l_3	l_4	M_x Nm	M_y Nm	Weight kg
L1963.63CS-180-2ZT	T	3	Metal	M8	63	39.5	51.6	180	200	54	9	125	271	1.66
L1963.63CS-180-2ZU	U	3	Metal	M8	63	39.5	51.6	180	200	54	9	0	0	1.66
L1963.63CS-180-2ZK	K	3	Metal	M8	63	39.5	51.6	180	200	54	9	0	235	1.66
L1963.63CS-235-2ZTA	T	4	Metal	M8	63	39.5	51.6	235	255	54	9.5	250	413	2.17
L1963.63CS-235-2ZUA	U	4	Metal	M8	63	39.5	51.6	235	255	54	9.5	0	0	2.17
L1963.63CS-235-2ZKA	K	4	Metal	M8	63	39.5	51.6	235	255	54	9.5	0	294	2.17
L1963.63CS-235-2ZTB	T	4	Metal	M8	63	39.5	51.6	235	255	54	9.5	250	413	2.17
L1963.63CS-235-2ZUBA	U	4	Metal	M8	63	39.5	51.6	235	255	54	9.5	0	0	2.17
L1963.63CS-235-2ZKB	K	4	Metal	M8	63	39.5	51.6	235	255	54	9.5	0	294	2.17
L1963.63CS-290-2ZT	T	5	Metal	M8	63	39.5	51.6	290	310	54	10	250	511	2.67
L1963.63CS-290-2ZU	U	5	Metal	M8	63	39.5	51.6	290	310	54	10	0	0	2.67
L1963.63CS-290-2ZK	K	5	Metal	M8	63	39.5	51.6	290	310	54	10	0	589	2.67
L1963.63CS-345-2ZTA	T	6	Metal	M8	63	39.5	51.6	345	365	54	10.5	350	689	3.17
L1963.63CS-345-2ZUA	U	6	Metal	M8	63	39.5	51.6	345	365	54	10.5	0	0	3.17
L1963.63CS-345-2ZKA	K	6	Metal	M8	63	39.5	51.6	345	365	54	10.5	0	589	3.17
L1963.63CS-345-2ZTB	T	6	Metal	M8	63	39.5	51.6	345	365	54	10.5	350	689	3.17
L1963.63CS-345-2ZUB	U	6	Metal	M8	63	39.5	51.6	345	365	54	10.5	0	0	3.17
L1963.63CS-345-2ZKB	K	6	Metal	M8	63	39.5	51.6	345	365	54	10.5	0	589	3.17

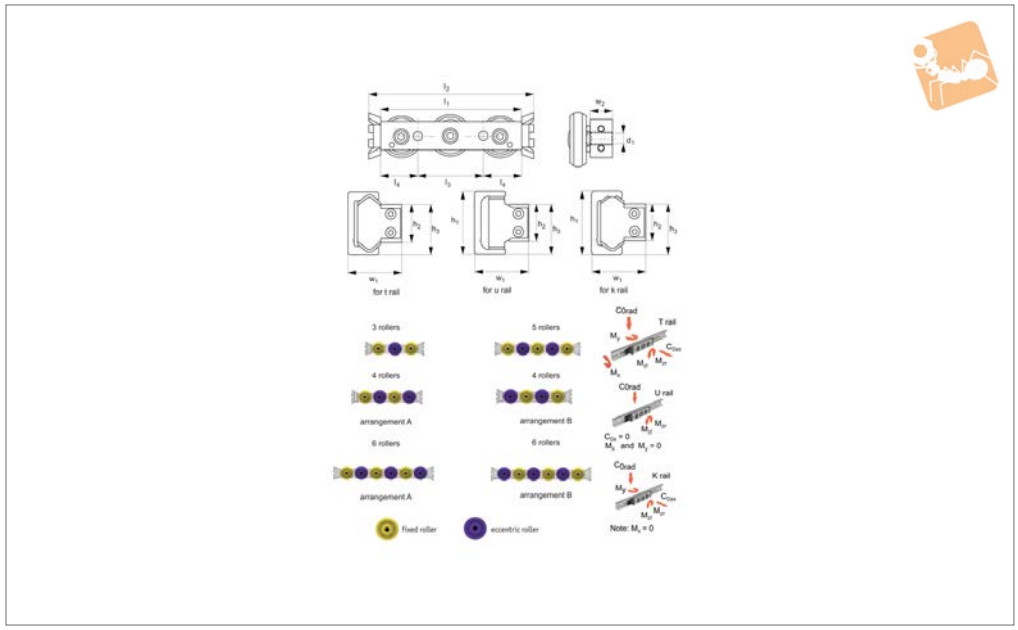
Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1963.63CS-180-2ZT	367	367	49.8	19.5	30750	6000	12500
L1963.63CS-180-2ZU	367	367	49.8	19.5	30750	0	12500
L1963.63CS-180-2ZK	335	335	49.8	19.5	30750	5045	11550
L1963.63CS-235-2ZTA	367	1100	49.8	19.5	30750	7200	12500

Very Heavy Sliders, size 63

no side seal, front fixing, with wiper



Order No.	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1963.63CS-235-2ZUA	367	1100	49.8	19.5	30750	0	12500
L1963.63CS-235-2ZKA	335	935	49.8	19.5	30750	5045	11550
L1963.63CS-235-2ZTB	1100	367	49.8	19.5	30750	7200	12500
L1963.63CS-235-2ZUBA	1100	367	49.8	19.5	30750	0	12500
L1963.63CS-235-2ZKB	935	335	49.8	19.5	30750	5045	11550
L1963.63CS-290-2ZT	1100	1100	49.8	19.5	36600	8500	15000
L1963.63CS-290-2ZU	1100	1100	49.8	19.5	36600	0	15000
L1963.63CS-290-2ZK	935	935	49.8	19.5	36600	6000	13745
L1963.63CS-345-2ZTA	1100	1830	49.8	19.5	36600	10000	15000
L1963.63CS-345-2ZUA	1100	1830	49.8	19.5	36600	0	15000
L1963.63CS-345-2ZKA	935	1560	49.8	19.5	36600	6000	13745
L1963.63CS-345-2ZTB	1830	1100	49.8	19.5	36600	10000	15000
L1963.63CS-345-2ZUB	1830	1100	49.8	19.5	36600	0	15000
L1963.63CS-345-2ZKB	1560	935	49.8	19.5	36600	6000	13745





L1963.CSW

Material
Zinc plated steel body.
Steel rollers (100Cr6) with a special combined metal and rubber seal (2ZR).

Technical Notes
To be used with compact rail size 63.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).
Unlike the N series sliders these CSW sliders do not have protective side seals.

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.006.
Quiet and fast (up to 9 m/s).

Order No.	For rail type	No. of rollers	Seal type	d_1	h_1 +0.35|-0.10	h_2 +0.5|-0	h_3 +0.10|-0.30	l_1	l_2	l_3	Weight kg
L1963.CSW63-180-2ZT	T	3	Metal	M 8	63	39.5	51.6	180	200	54	1.66
L1963.CSW63-180-2ZU	U	3	Metal	M 8	63	39.5	51.6	180	200	54	1.66
L1963.CSW63-180-2ZK	K	3	Metal	M 8	63	39.5	51.6	180	200	54	1.66
L1963.CSW63-235-2ZTA	T	4	Metal	M 8	63	39.5	51.6	235	255	54	2.17
L1963.CSW63-235-2ZUA	U	4	Metal	M 8	63	39.5	51.6	235	255	54	2.17
L1963.CSW63-235-2ZKA	K	4	Metal	M 8	63	39.5	51.6	235	255	54	2.17
L1963.CSW63-235-2ZTB	T	4	Metal	M 8	63	39.5	51.6	235	255	54	2.17
L1963.CSW63-235-2ZUBA	U	4	Metal	M 8	63	39.5	51.6	235	255	54	2.17
L1963.CSW63-235-2ZKB	K	4	Metal	M 8	63	39.5	51.6	235	255	54	2.17
L1963.CSW63-290-2ZT	T	5	Metal	M 8	63	39.5	51.6	290	310	54	2.67
L1963.CSW63-290-2ZU	U	5	Metal	M 8	63	39.5	51.6	290	310	54	2.67
L1963.CSW63-290-2ZK	K	5	Metal	M 8	63	39.5	51.6	290	310	54	2.67
L1963.CSW63-345-2ZTA	T	6	Metal	M 8	63	39.5	51.6	345	365	54	3.17
L1963.CSW63-345-2ZUA	U	6	Metal	M 8	63	39.5	51.6	345	365	54	3.17
L1963.CSW63-345-2ZKA	K	6	Metal	M 8	63	39.5	51.6	345	365	54	3.17
L1963.CSW63-345-2ZTB	T	6	Metal	M 8	63	39.5	51.6	345	365	54	3.17
L1963.CSW63-345-2ZUB	U	6	Metal	M 8	63	39.5	51.6	345	365	54	3.17
L1963.CSW63-345-2ZKB	K	6	Metal	M 8	63	39.5	51.6	345	365	54	3.17

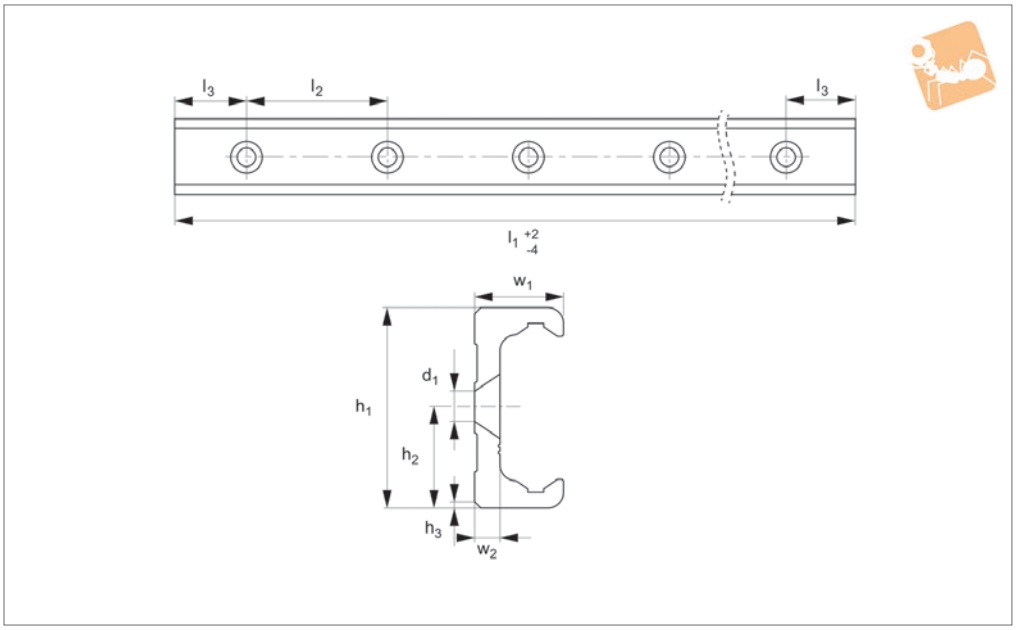
Order No.	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Dyn. load C N max.	Static load $C_{0\,ax.}$ N max.	Arrangement type	Static load $C_{0\,rad.}$ N max.
L1963.CSW63-180-2ZT	9	125	271	367	367	49.8	19.5	30750	6000	-	12500
L1963.CSW63-180-2ZU	9	0	0	367	367	49.8	19.5	30750	0	-	12500
L1963.CSW63-180-2ZK	9	0	235	335	335	49.8	19.5	30750	5045	-	11550
L1963.CSW63-235-2ZTA	9.5	250	413	367	1100	49.8	19.5	30750	7200	A	12500

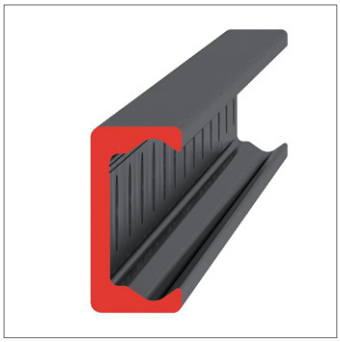
Very Heavy Sliders - Size 63

no side seal - front fixing - with wiper



Order No.	l_4	M_x Nm	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1 ±0.15	w_2	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Arrangement type	Static load $C_{0\ rad.}$ N max.
L1963.CSW63-235-2ZUA	9.5	0	0	367	1100	49.8	19.5	30750	0	A	12500
L1963.CSW63-235-2ZKA	9.5	0	294	335	935	49.8	19.5	30750	5045	A	11550
L1963.CSW63-235-2ZTB	9.5	250	413	1100	367	49.8	19.5	30750	7200	B	12500
L1963.CSW63-235-2ZUBA	9.5	0	0	1100	367	49.8	19.5	30750	0	A	12500
L1963.CSW63-235-2ZKB	9.5	0	294	935	335	49.8	19.5	30750	5045	B	11550
L1963.CSW63-290-2ZT	10	250	511	1100	1100	49.8	19.5	36600	8500	-	15000
L1963.CSW63-290-2ZU	10	0	0	1100	1100	49.8	19.5	36600	0	-	15000
L1963.CSW63-290-2ZK	10	0	589	935	935	49.8	19.5	36600	6000	-	13745
L1963.CSW63-345-2ZTA	10.5	350	689	1100	1830	49.8	19.5	36600	10000	A	15000
L1963.CSW63-345-2ZUA	10.5	0	0	1100	1830	49.8	19.5	36600	0	A	15000
L1963.CSW63-345-2ZKA	10.5	0	589	935	1560	49.8	19.5	36600	6000	A	13745
L1963.CSW63-345-2ZTB	10.5	350	689	1830	1100	49.8	19.5	36600	10000	B	15000
L1963.CSW63-345-2ZUB	10.5	0	0	1830	1100	49.8	19.5	36600	0	B	15000
L1963.CSW63-345-2ZKB	10.5	0	589	1560	935	49.8	19.5	36600	6000	B	13745





L1963.63T-V

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding raceways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rails (allows for misalignment).
This is the TLV countersunk rail which is usually used with a corresponding ULV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 6,0 Kg/m.

Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

Order No.	d_1 for screw	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.63T-0400-V	M8	63	31.5	2x45°	400	80	40	28	8
L1963.63T-0480-V	M8	63	31.5	2x45°	480	80	40	28	8
L1963.63T-0560-V	M8	63	31.5	2x45°	560	80	40	28	8
L1963.63T-0640-V	M8	63	31.5	2x45°	640	80	40	28	8
L1963.63T-0720-V	M8	63	31.5	2x45°	720	80	40	28	8
L1963.63T-0800-V	M8	63	31.5	2x45°	800	80	40	28	8
L1963.63T-0880-V	M8	63	31.5	2x45°	880	80	40	28	8
L1963.63T-0960-V	M8	63	31.5	2x45°	960	80	40	28	8
L1963.63T-1040-V	M8	63	31.5	2x45°	1040	80	40	28	8
L1963.63T-1120-V	M8	63	31.5	2x45°	1120	80	40	28	8
L1963.63T-1200-V	M8	63	31.5	2x45°	1200	80	40	28	8
L1963.63T-1280-V	M8	63	31.5	2x45°	1280	80	40	28	8
L1963.63T-1360-V	M8	63	31.5	2x45°	1360	80	40	28	8
L1963.63T-1440-V	M8	63	31.5	2x45°	1440	80	40	28	8
L1963.63T-1520-V	M8	63	31.5	2x45°	1520	80	40	28	8
L1963.63T-1600-V	M8	63	31.5	2x45°	1600	80	40	28	8
L1963.63T-1680-V	M8	63	31.5	2x45°	1680	80	40	28	8
L1963.63T-1760-V	M8	63	31.5	2x45°	1760	80	40	28	8
L1963.63T-1840-V	M8	63	31.5	2x45°	1840	80	40	28	8
L1963.63T-1920-V	M8	63	31.5	2x45°	1920	80	40	28	8
L1963.63T-2000-V	M8	63	31.5	2x45°	2000	80	40	28	8
L1963.63T-2080-V	M8	63	31.5	2x45°	2080	80	40	28	8
L1963.63T-2160-V	M8	63	31.5	2x45°	2160	80	40	28	8
L1963.63T-2240-V	M8	63	31.5	2x45°	2240	80	40	28	8
L1963.63T-2320-V	M8	63	31.5	2x45°	2320	80	40	28	8
L1963.63T-2400-V	M8	63	31.5	2x45°	2400	80	40	28	8
L1963.63T-2480-V	M8	63	31.5	2x45°	2480	80	40	28	8
L1963.63T-2560-V	M8	63	31.5	2x45°	2560	80	40	28	8
L1963.63T-2640-V	M8	63	31.5	2x45°	2640	80	40	28	8
L1963.63T-2720-V	M8	63	31.5	2x45°	2720	80	40	28	8
L1963.63T-2800-V	M8	63	31.5	2x45°	2800	80	40	28	8

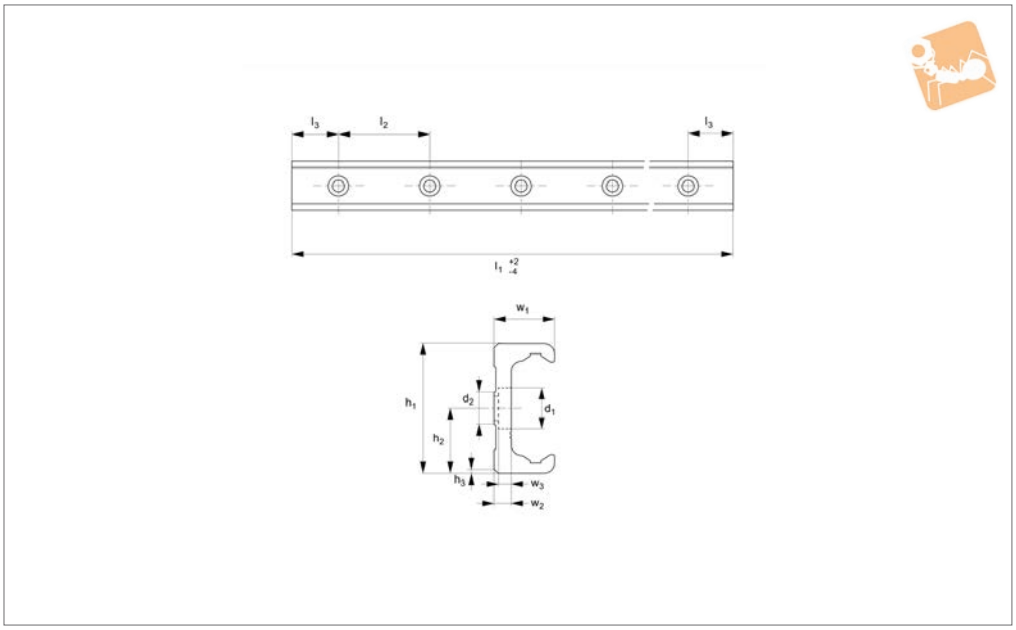


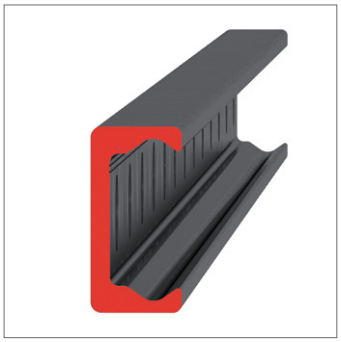
Very Heavy Duty T Rail

countersunk holes



Order No.	d_1 for screw	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.63T-2880-V	M8	63	31.5	2x45°	2880	80	40	28	8
L1963.63T-2960-V	M8	63	31.5	2x45°	2960	80	40	28	8
L1963.63T-3040-V	M8	63	31.5	2x45°	3040	80	40	28	8
L1963.63T-3120-V	M8	63	31.5	2x45°	3120	80	40	28	8
L1963.63T-3200-V	M8	63	31.5	2x45°	3200	80	40	28	8
L1963.63T-3280-V	M8	63	31.5	2x45°	3280	80	40	28	8
L1963.63T-3360-V	M8	63	31.5	2x45°	3360	80	40	28	8
L1963.63T-3440-V	M8	63	31.5	2x45°	3440	80	40	28	8
L1963.63T-3520-V	M8	63	31.5	2x45°	3520	80	40	28	8
L1963.63T-3600-V	M8	63	31.5	2x45°	3600	80	40	28	8
L1963.63T3680-V	M8	63	31.5	2x45°	3680	80	40	28	8
L1963.63T-3760-V	M8	63	31.5	2x45°	3760	80	40	28	8
L1963.63T-3840-V	M8	63	31.5	2x45°	3840	80	40	28	8
L1963.63T-3920-V	M8	63	31.5	2x45°	3920	80	40	28	8
L1963.63T-4000-V	M8	63	31.5	2x45°	4000	80	40	28	8
L1963.63T-4080-V	M8	63	31.5	2x45°	4080	80	40	28	8





L1963.63T-C

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The T rail is a master rail and is usually used with a U slave rail (allows for system misalignment).
This is the counterbored rail type (most popular), which is usually used with a corresponding ULC rail.
Special low profile Torx head screws provided free of charge.

Weight: 6,0 Kg/m.

Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

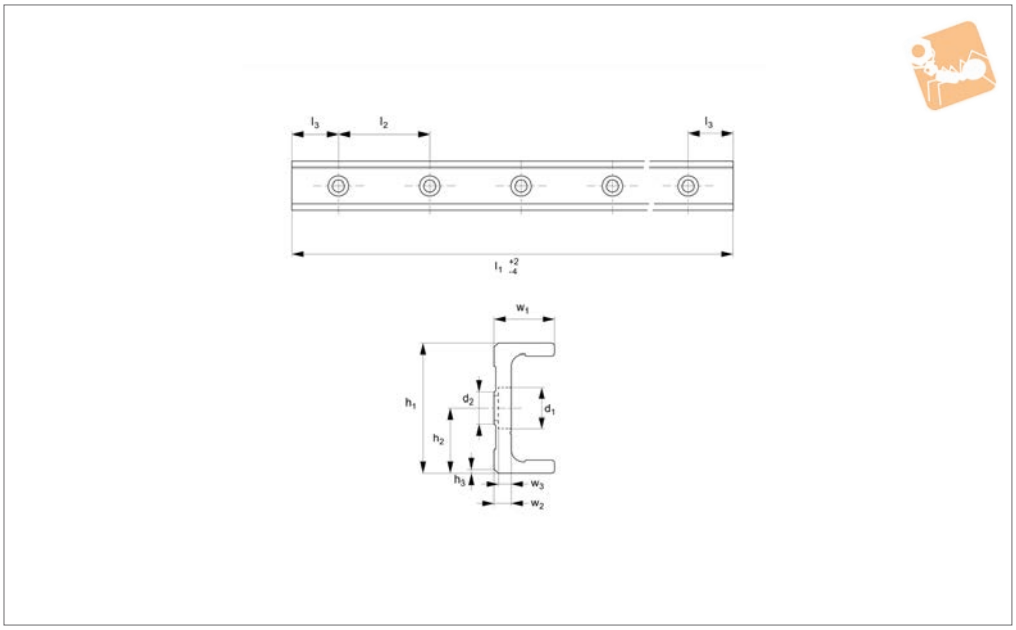
Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.63T-0560-C	15	M8	63	31.5	2x45°	560	80	40	28	8	5.2
L1963.63T-0640-C	15	M8	63	31.5	2x45°	640	80	40	28	8	5.2
L1963.63T-0720-C	15	M8	63	31.5	2x45°	720	80	40	28	8	5.2
L1963.63T-0800-C	15	M8	63	31.5	2x45°	800	80	40	28	8	5.2
L1963.63T-0880-C	15	M8	63	31.5	2x45°	880	80	40	28	8	5.2
L1963.63T-0960-C	15	M8	63	31.5	2x45°	960	80	40	28	8	5.2
L1963.63T-1040-C	15	M8	63	31.5	2x45°	1040	80	40	28	8	5.2
L1963.63T-1120-C	15	M8	63	31.5	2x45°	1120	80	40	28	8	5.2
L1963.63T-1200-C	15	M8	63	31.5	2x45°	1200	80	40	28	8	5.2
L1963.63T-1280-C	15	M8	63	31.5	2x45°	1280	80	40	28	8	5.2
L1963.63T-1360-C	15	M8	63	31.5	2x45°	1360	80	40	28	8	5.2
L1963.63T-1440-C	15	M8	63	31.5	2x45°	1440	80	40	28	8	5.2
L1963.63T-1520-C	15	M8	63	31.5	2x45°	1520	80	40	28	8	5.2
L1963.63T-1600-C	15	M8	63	31.5	2x45°	1600	80	40	28	8	5.2
L1963.63T-1680-C	15	M8	63	31.5	2x45°	1680	80	40	28	8	5.2
L1963.63T-1760-C	15	M8	63	31.5	2x45°	1760	80	40	28	8	5.2
L1963.63T-1840-C	15	M8	63	31.5	2x45°	1840	80	40	28	8	5.2
L1963.63T-1920-C	15	M8	63	31.5	2x45°	1920	80	40	28	8	5.2
L1963.63T-2000-C	15	M8	63	31.5	2x45°	2000	80	40	28	8	5.2
L1963.63T-2080-C	15	M8	63	31.5	2x45°	2080	80	40	28	8	5.2
L1963.63T-2160-C	15	M8	63	31.5	2x45°	2160	80	40	28	8	5.2
L1963.63T-2240-C	15	M8	63	31.5	2x45°	2240	80	40	28	8	5.2
L1963.63T-2320-C	15	M8	63	31.5	2x45°	2320	80	40	28	8	5.2
L1963.63T-2400-C	15	M8	63	31.5	2x45°	2400	80	40	28	8	5.2
L1963.63T-2480-C	15	M8	63	31.5	2x45°	2480	80	40	28	8	5.2
L1963.63T-2560-C	15	M8	63	31.5	2x45°	2560	80	40	28	8	5.2
L1963.63T-2640-C	15	M8	63	31.5	2x45°	2640	80	40	28	8	5.2
L1963.63T-2720-C	15	M8	63	31.5	2x45°	2720	80	40	28	8	5.2
L1963.63T-2800-C	15	M8	63	31.5	2x45°	2800	80	40	28	8	5.2
L1963.63T-2880-C	15	M8	63	31.5	2x45°	2880	80	40	28	8	5.2
L1963.63T-2960-C	15	M8	63	31.5	2x45°	2960	80	40	28	8	5.2

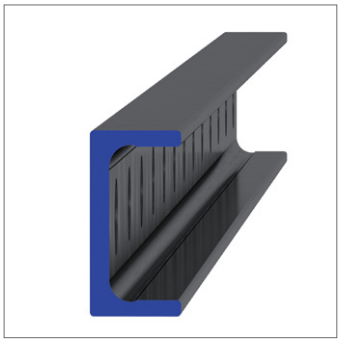


Very Heavy Duty T Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.63T-3040-C	15	M8	63	31.5	2x45°	3040	80	40	28	8	5.2
L1963.63T-3120-C	15	M8	63	31.5	2x45°	3120	80	40	28	8	5.2
L1963.63T-3200-C	15	M8	63	31.5	2x45°	3200	80	40	28	8	5.2
L1963.63T-3280-C	15	M8	63	31.5	2x45°	3280	80	40	28	8	5.2
L1963.63T-3360-C	15	M8	63	31.5	2x45°	3360	80	40	28	8	5.2
L1963.63T-3440-C	15	M8	63	31.5	2x45°	3440	80	40	28	8	5.2
L1963.63T-3520-C	15	M8	63	31.5	2x45°	3520	80	40	28	8	5.2
L1963.63T-3600-C	15	M8	63	31.5	2x45°	3600	80	40	28	8	5.2
L1963.63T-3680-C	15	M8	63	31.5	2x45°	3680	80	40	28	8	5.2
L1963.63T-3760-C	15	M8	63	31.5	2x45°	3760	80	40	28	8	5.2
L1963.63T-3840-C	15	M8	63	31.5	2x45°	3840	80	40	28	8	5.2
L1963.63T-3920-C	15	M8	63	31.5	2x45°	3920	80	40	28	8	5.2
L1963.63T-4000-C	15	M8	63	31.5	2x45°	4000	80	40	28	8	5.2
L1963.63T-4080-C	15	M8	63	31.5	2x45°	4080	80	40	28	8	5.2





L1963.63U-C

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULC counterbored rail type (most popular), which is usually used with a corresponding TLC rail.
Special low profile Torx head screws provided free of charge.
Weight: 6,0 Kg/m.

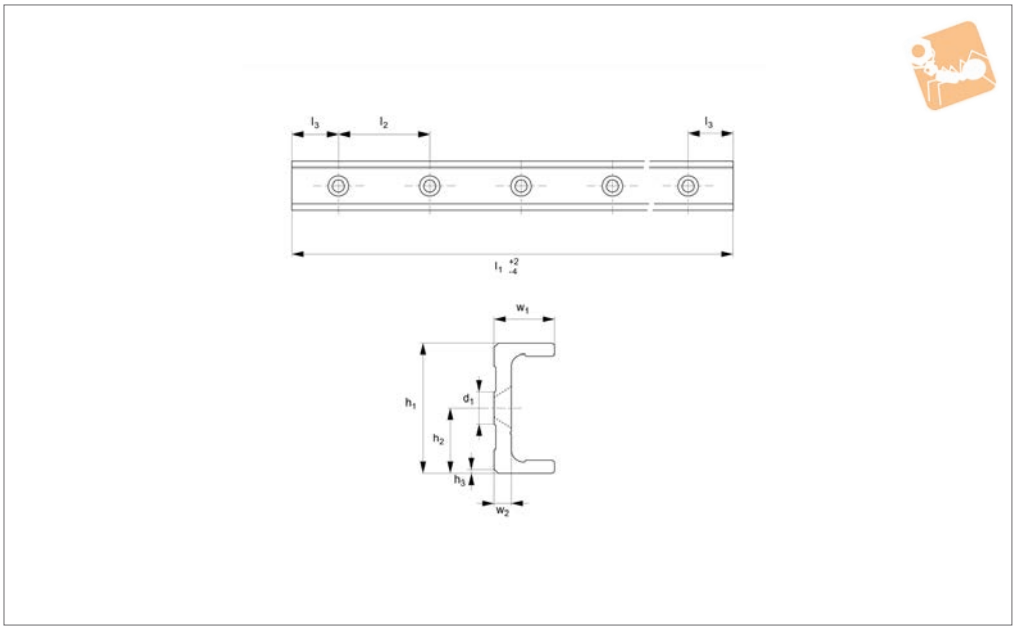
Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

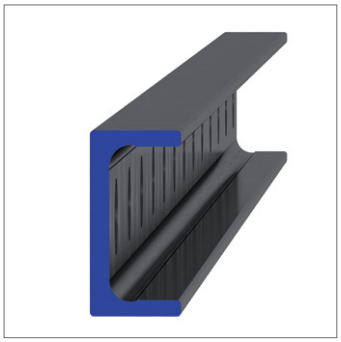
Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.63U-0400-C	15	M8	63	31.5	2x45°	400	80	40	28	8	5.2
L1963.63U-0480-C	15	M8	63	31.5	2x45°	480	80	40	28	8	5.2
L1963.63U-0560-C	15	M8	63	31.5	2x45°	560	80	40	28	8	5.2
L1963.63U-0640-C	15	M8	63	31.5	2x45°	640	80	40	28	8	5.2
L1963.63U-0720-C	15	M8	63	31.5	2x45°	720	80	40	28	8	5.2
L1963.63U-0800-C	15	M8	63	31.5	2x45°	800	80	40	28	8	5.2
L1963.63U-0880-C	15	M8	63	31.5	2x45°	880	80	40	28	8	5.2
L1963.63U-0960-C	15	M8	63	31.5	2x45°	960	80	40	28	8	5.2
L1963.63U-1040-C	15	M8	63	31.5	2x45°	1040	80	40	28	8	5.2
L1963.63U-1120-C	15	M8	63	31.5	2x45°	1120	80	40	28	8	5.2
L1963.63U-1200-C	15	M8	63	31.5	2x45°	1200	80	40	28	8	5.2
L1963.63U-1280-C	15	M8	63	31.5	2x45°	1280	80	40	28	8	5.2
L1963.63U-1360-C	15	M8	63	31.5	2x45°	1360	80	40	28	8	5.2
L1963.63U-1440-C	15	M8	63	31.5	2x45°	1440	80	40	28	8	5.2
L1963.63U-1520-C	15	M8	63	31.5	2x45°	1520	80	40	28	8	5.2
L1963.63U-1600-C	15	M8	63	31.5	2x45°	1600	80	40	28	8	5.2
L1963.63U-1680-C	15	M8	63	31.5	2x45°	1680	80	40	28	8	5.2
L1963.63U-1760-C	15	M8	63	31.5	2x45°	1760	80	40	28	8	5.2
L1963.63U-1840-C	15	M8	63	31.5	2x45°	1840	80	40	28	8	5.2
L1963.63U-1920-C	15	M8	63	31.5	2x45°	1920	80	40	28	8	5.2
L1963.63U-2000-C	15	M8	63	31.5	2x45°	2000	80	40	28	8	5.2
L1963.63U-2080-C	15	M8	63	31.5	2x45°	2080	80	40	28	8	5.2
L1963.63U-2160-C	15	M8	63	31.5	2x45°	2160	80	40	28	8	5.2
L1963.63U-2240-C	15	M8	63	31.5	2x45°	2240	80	40	28	8	5.2
L1963.63U-2320-C	15	M8	63	31.5	2x45°	2320	80	40	28	8	5.2
L1963.63U-2400-C	15	M8	63	31.5	2x45°	2400	80	40	28	8	5.2
L1963.63U-2480-C	15	M8	63	31.5	2x45°	2480	80	40	28	8	5.2
L1963.63U-2560-C	15	M8	63	31.5	2x45°	2560	80	40	28	8	5.2
L1963.63U-2640-C	15	M8	63	31.5	2x45°	2640	80	40	28	8	5.2
L1963.63U-2720-C	15	M8	63	31.5	2x45°	2720	80	40	28	8	5.2
L1963.63U-2800-C	15	M8	63	31.5	2x45°	2800	80	40	28	8	5.2

Very Heavy Duty U Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.63U-2880-C	15	M8	63	31.5	2x45°	2880	80	40	28	8	5.2
L1963.63U-2960-C	15	M8	63	31.5	2x45°	2960	80	40	28	8	5.2
L1963.63U-3040-C	15	M8	63	31.5	2x45°	3040	80	40	28	8	5.2
L1963.63U-3120-C	15	M8	63	31.5	2x45°	3120	80	40	28	8	5.2
L1963.63U-3200-C	15	M8	63	31.5	2x45°	3200	80	40	28	8	5.2
L1963.63U-3280-C	15	M8	63	31.5	2x45°	3280	80	40	28	8	5.2
L1963.63U-3360-C	15	M8	63	31.5	2x45°	3360	80	40	28	8	5.2
L1963.63U-3440-C	15	M8	63	31.5	2x45°	3440	80	40	28	8	5.2
L1963.63U-3520-C	15	M8	63	31.5	2x45°	3520	80	40	28	8	5.2
L1963.63U-3600-C	15	M8	63	31.5	2x45°	3600	80	40	28	8	5.2
L1963.63U-3680-C	15	M8	63	31.5	2x45°	3680	80	40	28	8	5.2
L1963.63U-3760-C	15	M8	63	31.5	2x45°	3760	80	40	28	8	5.2
L1963.63U-3840-C	15	M8	63	31.5	2x45°	3840	80	40	28	8	5.2
L1963.63U-3920-C	15	M8	63	31.5	2x45°	3920	80	40	28	8	5.2
L1963.63U-4000-C	15	M8	63	31.5	2x45°	4000	80	40	28	8	5.2
L1963.63U-4080-C	15	M8	63	31.5	2x45°	4080	80	40	28	8	5.2





L1963.63U-V

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the ULV countersunk rail type which is usually used with a corresponding TLV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 6,0 Kg/m.

Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

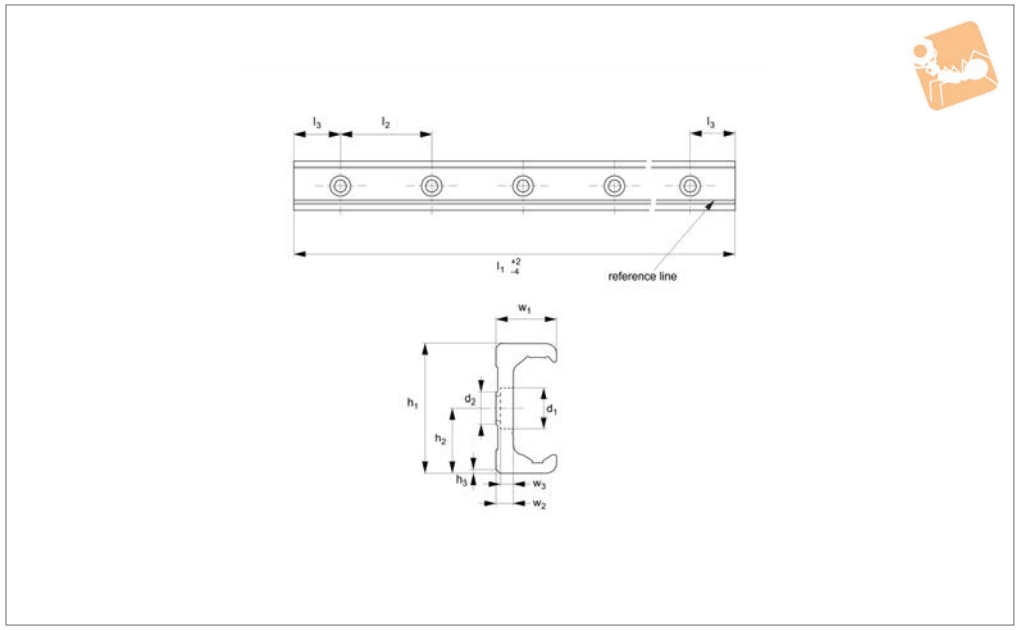
Order No.	d_1	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.63U-0400-V	M8	63	31.5	2x45°	400	80	40	28	8
L1963.63U-0480-V	M8	63	31.5	2x45°	480	80	40	28	8
L1963.63U-0560-V	M8	63	31.5	2x45°	560	80	40	28	8
L1963.63U-0640-V	M8	63	31.5	2x45°	640	80	40	28	8
L1963.63U-0720-V	M8	63	31.5	2x45°	720	80	40	28	8
L1963.63U-0800-V	M8	63	31.5	2x45°	800	80	40	28	8
L1963.63U-0880-V	M8	63	31.5	2x45°	880	80	40	28	8
L1963.63U-0960-V	M8	63	31.5	2x45°	960	80	40	28	8
L1963.63U-1040-V	M8	63	31.5	2x45°	1040	80	40	28	8
L1963.63U-1120-V	M8	63	31.5	2x45°	1120	80	40	28	8
L1963.63U-1200-V	M8	63	31.5	2x45°	1200	80	40	28	8
L1963.63U-1280-V	M8	63	31.5	2x45°	1280	80	40	28	8
L1963.63U-1360-V	M8	63	31.5	2x45°	1360	80	40	28	8
L1963.63U-1440-V	M8	63	31.5	2x45°	1440	80	40	28	8
L1963.63U-1520-V	M8	63	31.5	2x45°	1520	80	40	28	8
L1963.63U-1600-V	M8	63	31.5	2x45°	1600	80	40	28	8
L1963.63U-1680-V	M8	63	31.5	2x45°	1680	80	40	28	8
L1963.63U-1760-V	M8	63	31.5	2x45°	1760	80	40	28	8
L1963.63U-1840-V	M8	63	31.5	2x45°	1840	80	40	28	8
L1963.63U-1920-V	M8	63	31.5	2x45°	1920	80	40	28	8
L1963.63U-2000-V	M8	63	31.5	2x45°	2000	80	40	28	8
L1963.63U-2080-V	M8	63	31.5	2x45°	2080	80	40	28	8
L1963.63U-2160-V	M8	63	31.5	2x45°	2160	80	40	28	8
L1963.63U-2240-V	M8	63	31.5	2x45°	2240	80	40	28	8
L1963.63U-2320-V	M8	63	31.5	2x45°	2320	80	40	28	8
L1963.63U-2400-V	M8	63	31.5	2x45°	2400	80	40	28	8
L1963.63U-2480-V	M8	63	31.5	2x45°	2480	80	40	28	8
L1963.63U-2560-V	M8	63	31.5	2x45°	2560	80	40	28	8
L1963.63U-2640-V	M8	63	31.5	2x45°	2640	80	40	28	8
L1963.63U-2720-V	M8	63	31.5	2x45°	2720	80	40	28	8
L1963.63U-2800-V	M8	63	31.5	2x45°	2800	80	40	28	8

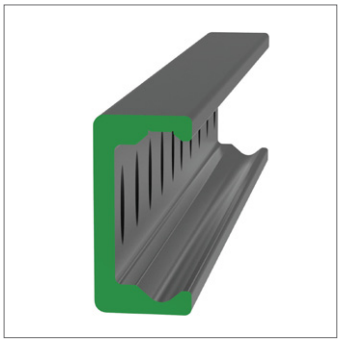


Very Heavy Duty U Rail
countersunk holes



Order No.	d_1	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.63U-2880-V	M8	63	31.5	2x45°	2880	80	40	28	8
L1963.63U-2960-V	M8	63	31.5	2x45°	2960	80	40	28	8
L1963.63U-3040-V	M8	63	31.5	2x45°	3040	80	40	28	8
L1963.63U-3120-V	M8	63	31.5	2x45°	3120	80	40	28	8
L1963.63U-3200-V	M8	63	31.5	2x45°	3200	80	40	28	8
L1963.63U-3280-V	M8	63	31.5	2x45°	3280	80	40	28	8
L1963.63U-3360-V	M8	63	31.5	2x45°	3360	80	40	28	8
L1963.63U-3440-V	M8	63	31.5	2x45°	3440	80	40	28	8
L1963.63U-3520-V	M8	63	31.5	2x45°	3520	80	40	28	8
L1963.63U-3600-V	M8	63	31.5	2x45°	3600	80	40	28	8
L1963.63U-3680-V	M8	63	31.5	2x45°	3680	80	40	28	8
L1963.63U-3760-V	M8	63	31.5	2x45°	3760	80	40	28	8
L1963.63U-3840-V	M8	63	31.5	2x45°	3840	80	40	28	8
L1963.63U-3920-V	M8	63	31.5	2x45°	3920	80	40	28	8
L1963.63U-4000-V	M8	63	31.5	2x45°	4000	80	40	28	8
L1963.63U-4080-V	M8	63	31.5	2x45°	4080	80	40	28	8





L1963.63K-C

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The K rail is a master rail and is usually used with a U slave rail (allows for system misalignment in two planes).

This is the counterbored rail type (most popular), which is usually used with a corresponding ULC rail.
Special low profile Torx head screws provided free of charge.
Weight: 6,0 Kg/m.

Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

Important Notes
K Rails are not suited for vertical applications.

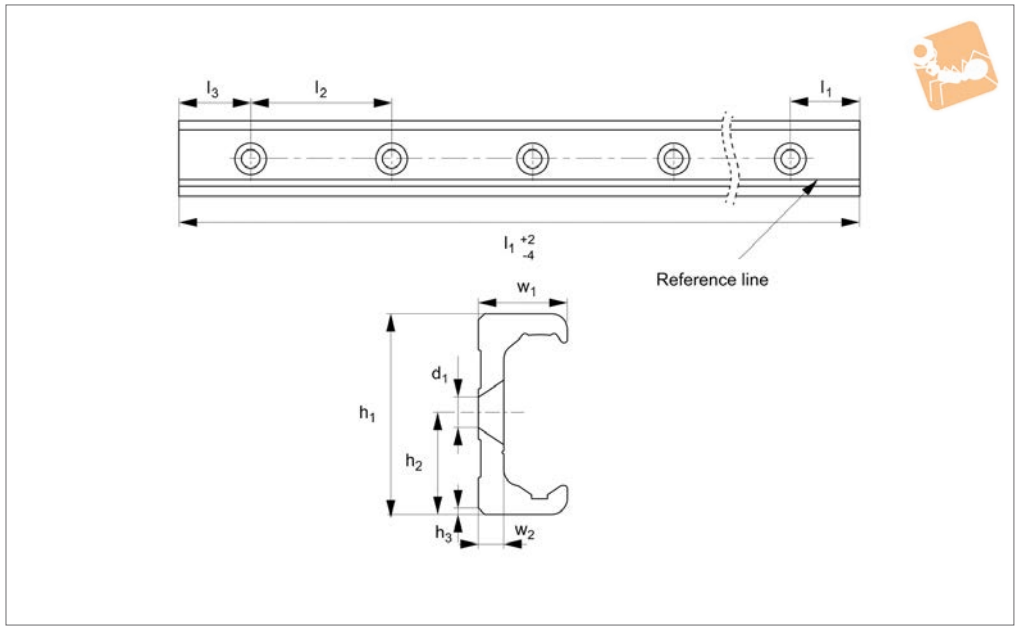
Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.63K-0400-C	15	M8	63	31.5	2x45°	400	80	40	28	8	5.2
L1963.63K-0480-C	15	M8	63	31.5	2x45°	480	80	40	28	8	5.2
L1963.63K-0560-C	15	M8	63	31.5	2x45°	560	80	40	28	8	5.2
L1963.63K-0640-C	15	M8	63	31.5	2x45°	640	80	40	28	8	5.2
L1963.63K-0720-C	15	M8	63	31.5	2x45°	720	80	40	28	8	5.2
L1963.63K-0800-C	15	M8	63	31.5	2x45°	800	80	40	28	8	5.2
L1963.63K-0880-C	15	M8	63	31.5	2x45°	880	80	40	28	8	5.2
L1963.63K-0960-C	15	M8	63	31.5	2x45°	960	80	40	28	8	5.2
L1963.63K-1040-C	15	M8	63	31.5	2x45°	1040	80	40	28	8	5.2
L1963.63K-1120-C	15	M8	63	31.5	2x45°	1120	80	40	28	8	5.2
L1963.63K-1200-C	15	M8	63	31.5	2x45°	1200	80	40	28	8	5.2
L1963.63K-1280-C	15	M8	63	31.5	2x45°	1280	80	40	28	8	5.2
L1963.63K-1360-C	15	M8	63	31.5	2x45°	1360	80	40	28	8	5.2
L1963.63K-1440-C	15	M8	63	31.5	2x45°	1440	80	40	28	8	5.2
L1963.63K-1520-C	15	M8	63	31.5	2x45°	1520	80	40	28	8	5.2
L1963.63K-1600-C	15	M8	63	31.5	2x45°	1600	80	40	28	8	5.2
L1963.63K-1680-C	15	M8	63	31.5	2x45°	1680	80	40	28	8	5.2
L1963.63K-1760-C	15	M8	63	31.5	2x45°	1760	80	40	28	8	5.2
L1963.63K-1840-C	15	M8	63	31.5	2x45°	1840	80	40	28	8	5.2
L1963.63K-1920-C	15	M8	63	31.5	2x45°	1920	80	40	28	8	5.2
L1963.63K-2000-C	15	M8	63	31.5	2x45°	2000	80	40	28	8	5.2
L1963.63K-2080-C	15	M8	63	31.5	2x45°	2080	80	40	28	8	5.2
L1963.63K-2160-C	15	M8	63	31.5	2x45°	2160	80	40	28	8	5.2
L1963.63K-2240-C	15	M8	63	31.5	2x45°	2240	80	40	28	8	5.2
L1963.63K-2320-C	15	M8	63	31.5	2x45°	2320	80	40	28	8	5.2
L1963.63K-2400-C	15	M8	63	31.5	2x45°	2400	80	40	28	8	5.2
L1963.63K-2480-C	15	M8	63	31.5	2x45°	2480	80	40	28	8	5.2
L1963.63K-2560-C	15	M8	63	31.5	2x45°	2560	80	40	28	8	5.2

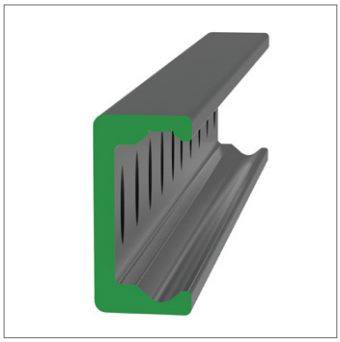


Very Heavy Duty K Rail
counterbored holes



Order No.	d_1	d_2 for screws	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3
L1963.63K-2640-C	15	M8	63	31.5	2x45°	2640	80	40	28	8	5.2
L1963.63K-2720-C	15	M8	63	31.5	2x45°	2720	80	40	28	8	5.2
L1963.63K-2800-C	15	M8	63	31.5	2x45°	2800	80	40	28	8	5.2
L1963.63K-2880-C	15	M8	63	31.5	2x45°	2880	80	40	28	8	5.2
L1963.63K-2960-C	15	M8	63	31.5	2x45°	2960	80	40	28	8	5.2
L1963.63K-3040-C	15	M8	63	31.5	2x45°	3040	80	40	28	8	5.2
L1963.63K-3120-C	15	M8	63	31.5	2x45°	3120	80	40	28	8	5.2
L1963.63K-3200-C	15	M8	63	31.5	2x45°	3200	80	40	28	8	5.2
L1963.63K-3280-C	15	M8	63	31.5	2x45°	3280	80	40	28	8	5.2
L1963.63K-3360-C	15	M8	63	31.5	2x45°	3360	80	40	28	8	5.2
L1963.63K-3440-C	15	M8	63	31.5	2x45°	3440	80	40	28	8	5.2
L1963.63K-3520-C	15	M8	63	31.5	2x45°	3520	80	40	28	8	5.2
L1963.63K-3600-C	15	M8	63	31.5	2x45°	3600	80	40	28	8	5.2
L1963.63K-3680-C	15	M8	63	31.5	2x45°	3680	80	40	28	8	5.2
L1963.63K-3760-C	15	M8	63	31.5	2x45°	3760	80	40	28	8	5.2
L1963.63K-3840-C	15	M8	63	31.5	2x45°	3840	80	40	28	8	5.2
L1963.63K-3920-C	15	M8	63	31.5	2x45°	3920	80	40	28	8	5.2
L1963.63K-4000-C	15	M8	63	31.5	2x45°	4000	80	40	28	8	5.2
L1963.63K-4080-C	15	M8	63	31.5	2x45°	4080	80	40	28	8	5.2





L1963.63K-V

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The K rail is a master rail and is usually used with a U slave rail (allows for system misalignment in two planes).
This is the countersunk rail type which is usually used with a corresponding ULV rail.
For fixing use countersunk DIN 7991 screws.
Weight: 6,0 Kg/m.

Tips
Standard carriages are the L1963.N versions (die cast aluminium alloy with wipers). Alternatively the L1963.C type is also available (without wipers).

Important Notes
K Rails are not suited for vertical applications.

Order No.	d_1	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.63K-0400-V	M8	63	31.5	2x45°	400	80	40	28	8
L1963.63K-0480-V	M8	63	31.5	2x45°	480	80	40	28	8
L1963.63K-0560-V	M8	63	31.5	2x45°	560	80	40	28	8
L1963.63K-0640-V	M8	63	31.5	2x45°	640	80	40	28	8
L1963.63K-0720-V	M8	63	31.5	2x45°	720	80	40	28	8
L1963.63K-0800-V	M8	63	31.5	2x45°	800	80	40	28	8
L1963.63K-0880-V	M8	63	31.5	2x45°	880	80	40	28	8
L1963.63K-0960-V	M8	63	31.5	2x45°	960	80	40	28	8
L1963.63K-1040-V	M8	63	31.5	2x45°	1040	80	40	28	8
L1963.63K-1120-V	M8	63	31.5	2x45°	1120	80	40	28	8
L1963.63K-1200-V	M8	63	31.5	2x45°	1200	80	40	28	8
L1963.63K-1280-V	M8	63	31.5	2x45°	1280	80	40	28	8
L1963.63K-1360-V	M8	63	31.5	2x45°	1360	80	40	28	8
L1963.63K-1440-V	M8	63	31.5	2x45°	1440	80	40	28	8
L1963.63K-1520-V	M8	63	31.5	2x45°	1520	80	40	28	8
L1943.63K-1600-V	M8	63	31.5	2x45°	1600	80	40	28	8
L1963.63K-1680-V	M8	63	31.5	2x45°	1680	80	40	28	8
L1963.63K-1760-V	M8	63	31.5	2x45°	1760	80	40	28	8
L1963.63K-1840-V	M8	63	31.5	2x45°	1840	80	40	28	8
L1963.63K-1920-V	M8	63	31.5	2x45°	1920	80	40	28	8
L1963.63K-2000-V	M8	63	31.5	2x45°	2000	80	40	28	8
L1963.63K-2080-V	M8	63	31.5	2x45°	2080	80	40	28	8
L1963.63K-2160-V	M8	63	31.5	2x45°	2160	80	40	28	8
L1963.63K-2240-V	M8	63	31.5	2x45°	2240	80	40	28	8
L1963.63K-2320-V	M8	63	31.5	2x45°	2320	80	40	28	8
L1963.63K-2400-V	M8	63	31.5	2x45°	2400	80	40	28	8
L1963.63K-2480-V	M8	63	31.5	2x45°	2480	80	40	28	8
L1963.63K-2560-V	M8	63	31.5	2x45°	2560	80	40	28	8
L1963.63K-2640-V	M8	63	31.5	2x45°	2640	80	40	28	8

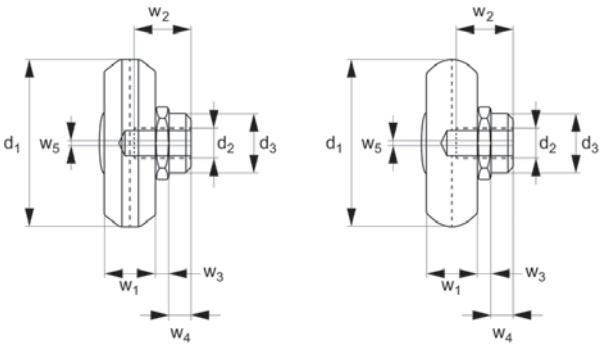


Very Heavy Duty K Rail

countersunk holes



Order No.	d_1	h_1	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1963.63K-2720-V	M8	63	31.5	2x45°	2720	80	40	28	8
L1963.63K-2800-V	M8	63	31.5	2x45°	2800	80	40	28	8
L1963.63K-2880-V	M8	63	31.5	2x45°	2880	80	40	28	8
L1963.63K-2960-V	M8	63	31.5	2x45°	2960	80	40	28	8
L1963.63K-3040-V	M8	63	31.5	2x45°	3040	80	40	28	8
L1963.63K-3120-V	M8	63	31.5	2x45°	3120	80	40	28	8
L1963.63K-3200-V	M8	63	31.5	2x45°	3200	80	40	28	8
L1963.63K-3280-V	M8	63	31.5	2x45°	3280	80	40	28	8
L1963.63K-3360-V	M8	63	31.5	2x45°	3360	80	40	28	8
L1963.63K-3440-V	M8	63	31.5	2x45°	3440	80	40	28	8
L1963.63K-3520-V	M8	63	31.5	2x45°	3520	80	40	28	8
L1963.63K-3600-V	M8	63	31.5	2x45°	3600	80	40	28	8
L1963.63K-3680-V	M8	63	31.5	2x45°	3680	80	40	28	8
L1963.63K-3760-V	M8	63	31.5	2x45°	3760	80	40	28	8
L1963.63K-3840-V	M8	63	31.5	2x45°	3840	80	40	28	8
L1963.63K-3920-V	M8	63	31.5	2x45°	3920	80	40	28	8
L1963.63K-4000-V	M8	63	31.5	2x45°	4000	80	40	28	8
L1963.63K-4080-V	M8	63	31.5	2x45°	4080	80	40	28	8





L1900.CPN

Material
Steel (100Cr6) rollers with either 2Z seals (for dust protection) or 2RS seals (splash-proof).
Lubricated for life.
The size 63 rollers are a combination of metal seals with a limited degree of splash-hproof protection.

Technical Notes
To choose the correct replacement roller select either the concentric or eccentric roller with the correct seal type.

Important Notes
Aluminium clamp body with steel clamping face.

Order No.	For rail type	For rail size	Seal type	Roller type	C N	C_{0rad} N	d_1	d_2	d_3	w_1	w_2	w_3	w_4	w_5
L1918.CPN18-2Z	T and U	18	Metal	Concentric	765	410	14	M4	6	4	5.5	1.55	1.8	-
L1918.CPA18-2Z	T and U	18	Metal	Eccentric	765	410	14	M4	6	4	5.5	1.55	1.8	0.4
L1928.CPN28-2Z	T and U	28	Metal	Concentric	2130	1085	23.2	M5	10	7	7	2.2	3.8	-
L1928.CPA28-2Z	T and U	28	Metal	Eccentric	2130	1085	23.2	M5	10	7	7	2.2	3.8	0.6
L1935.CPN35-2Z	T and U	35	Metal	Concentric	4020	1755	28.2	M5	12	7.5	9	2.55	4.2	-
L1935.CPA35-2Z	T and U	35	Metal	Eccentric	4020	1755	28.2	M5	12	7.5	9	2.55	4.2	0.7
L1943.CPN43-2Z	T and U	43	Metal	Concentric	6140	2750	35	M6	12	11	12	2.5	4.5	-
L1943.CPA43-2Z	T and U	43	Metal	Eccentric	6140	2750	35	M6	12	11	12	2.5	4.5	0.8
L1943.CPN63-2ZR	T and U	63	Metal	Concentric	15375	6250	50	M8	18	17.5	16	2.3	6.0	-
L1943.CPA63-2ZR	T and U	63	Metal	Eccentric	15375	6250	50	M10	18	17.5	16	2.3	6.0	1.2
L1918.CPN18-2RS	T and U	18	Rubber	Concentric	765	410	14	M4	6	4	5.5	1.55	1.8	-
L1918.CPA18-2RS	T and U	18	Rubber	Eccentric	765	410	14	M4	6	4	5.5	1.55	1.8	0.4
L1928.CPN28-2RS	T and U	28	Rubber	Concentric	2130	1085	23.2	M5	10	7	7	2.2	3.8	-
L1928.CPA28-2RS	T and U	28	Rubber	Eccentric	2130	1085	23.2	M5	10	7	7	2.2	3.8	0.6
L1935.CPN35-2RS	T and U	35	Rubber	Concentric	4020	1755	28.2	M5	12	7.5	9	2.55	4.2	-
L1935.CPA35-2RS	T and U	35	Rubber	Eccentric	4020	1755	28.2	M5	12	7.5	9	2.55	4.2	0.7
L1943.CPN43-2RS	T and U	43	Rubber	Concentric	6140	2750	35	M6	12	11	12	2.5	4.5	-
L1943.CPA43-2RS	T and U	43	Rubber	Eccentric	6140	2750	35	M6	12	11	12	2.5	4.5	0.8
L1943.CRN43-2Z	K	43	Metal	Concentric	6140	2550	35.6	M6	12	11	12	2.5	4.5	-
L1943.CRA43-2Z	K	43	Metal	Eccentric	6140	2550	35.6	M6	12	11	12	2.5	4.5	0.8
L1943.CRN63-2ZR	K	63	Metal	Concentric	15375	5775	49.7	M8	18	17.5	16	2.3	6.0	-
L1943.CRA63-2ZR	K	63	Metal	Eccentric	15375	5775	49.7	M8	18	17.5	16	2.3	6.0	1.2

Compact Rails

Specifications and applications



Specifications

- Maximum speed 9 m/s.
- Maximum acceleration 20 m/s².
- Maximum unjoined rail length 3600 mm.
- 4 rail sizes – 18, 28, 35 and 43.
- Three rail types - T rail, U rail and K rail.
- Rail lengths from 160mm upwards.
- Rail raceways hardened and ground.
- Accuracy 0,15mm over 3,5 metres.
- Maximum radial load per slider is 15,000 N.
- Temperature range -30°C to +120°C.
- Roller bearings seals either 2Z (dust proof) or 2RS (splash proof), lubricated for life.
- Roller bearings from 100Cr6.
- Easy adjustment of preload.
- Three slider body types.
- Rails can be joined together, please contact our Technical Department for details.
- Special anti-corrosion coatings and finishes on request.

Applications



Special purpose & packaging machines
Precision positioning systems
handling units
robotic systems • cutting machines



Seating
Sliding seats
disability ramps
seat extensions



Safety guarding
Extending protective systems
sliding gates
automatic pick & place



Sliding doors & windows
Internal sliding doors
gates • roof lights
display cases



Photography & lighting
Sliding tracks
positioning of lights
shielding systems



Medical technology
X-ray equipment
dental chairs
bed extensions



Food, drink & pharmaceuticals
Food handling conveyors
pharmaceutical factories
stainless display equipment



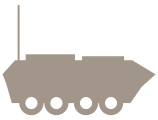
Transport (naval)
Sliding hatches
pull-out storage



Transport (rail)
Seat adjustment
sliding doors
battery removal units

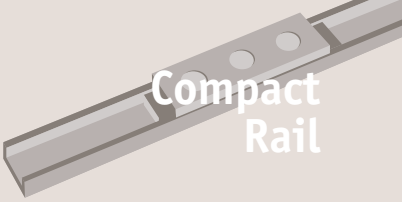


Transport (automotive)
Ambulance sliding systems
fire fighting vehicles
sliding panels

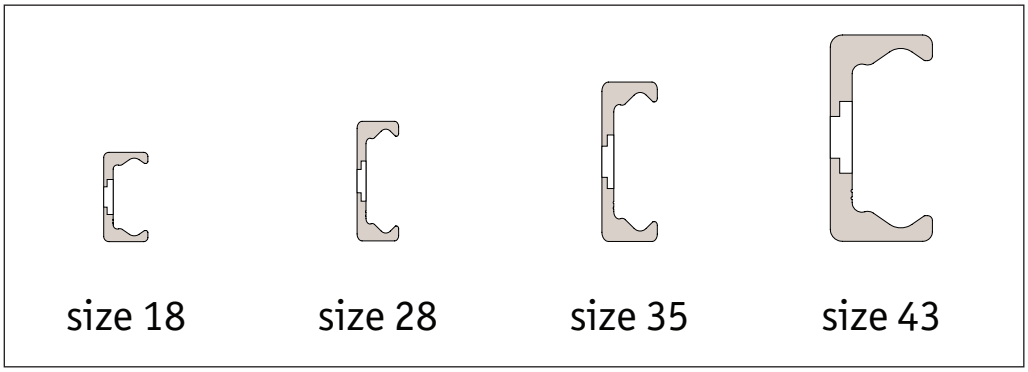


Transport (military)
Sliding seats
protective hatches
stretcher extensions

ov-compact-rails-specification-applications-lnh - Updated - 09-03-2023

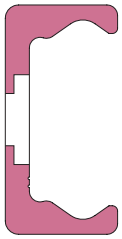


Rail sizes



Rail types

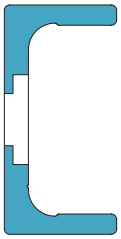
T Rail (master)



Master rail

Accepts radial and axial loads

U Rail (slave)



Slave rail

Compensates for misalignment in one plane

Sliders

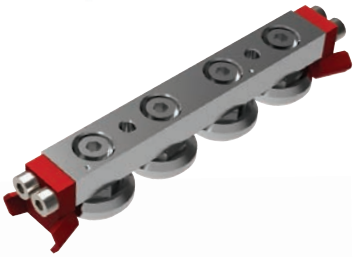
Solid body, front mount - Type CL

Solid steel, zinc plated body
with removable end wipers
side seals, fixing in top face



Solid body, front mount - Type CS

Narrow body, solid steel
zinc plated
with removable end wipers
no side seals, fixing on top face



Solid body, side mount - Type CR

Solid steel, zinc plated body
with removable end wipers
side seals, fixing in side of body



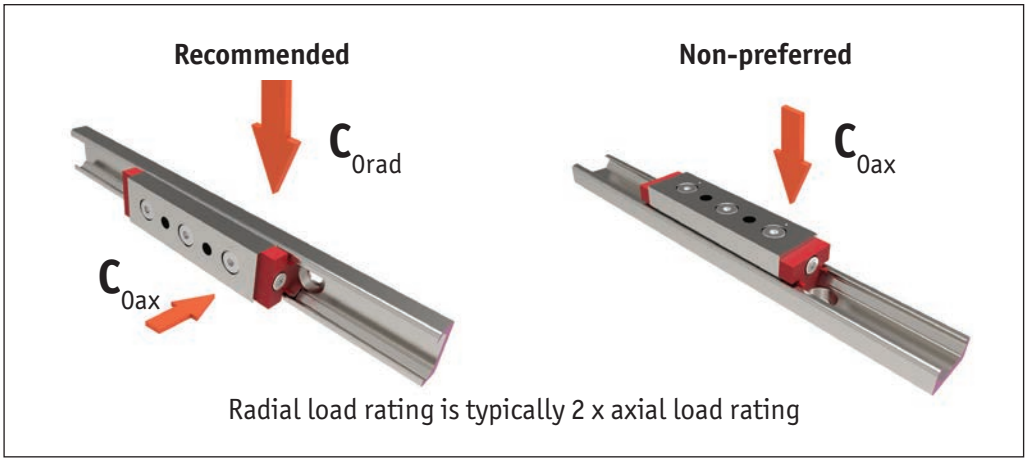
Compact Rail from Automotion Components

Compact Rail

Set-up

Orientation of rails

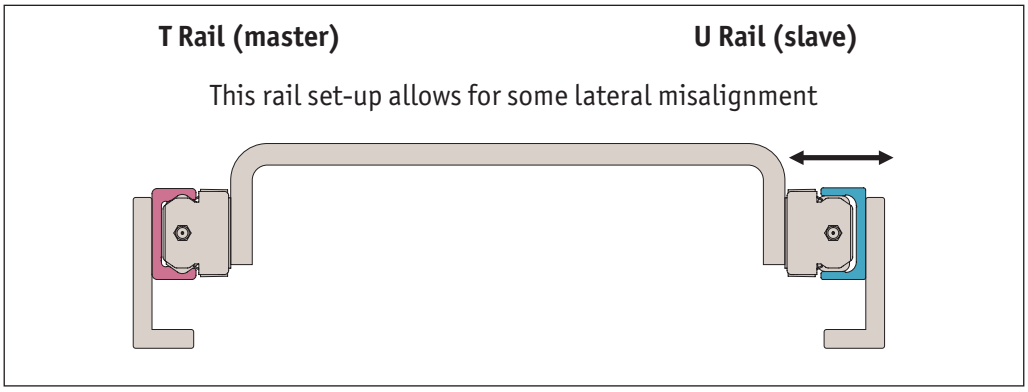
The radial load that the sliders can take is significantly higher than the axial load, so where possible the rails should be set up with the sliders taking the loads in this plane.



One of the key benefits of the compact rail system is that it compensates for misalignment in the structure. This often results in a major cost saving when compared to the use of other guideways which have to be very accurately installed.

The compact rail system achieves this by using a master (T type) rail, and a slave (U type) rail. This allows the slides in the T rail to remain fixed in place but allows lateral movement of the sliders in the U rail to adapt to any misalignment and avoid any issues of stiction.

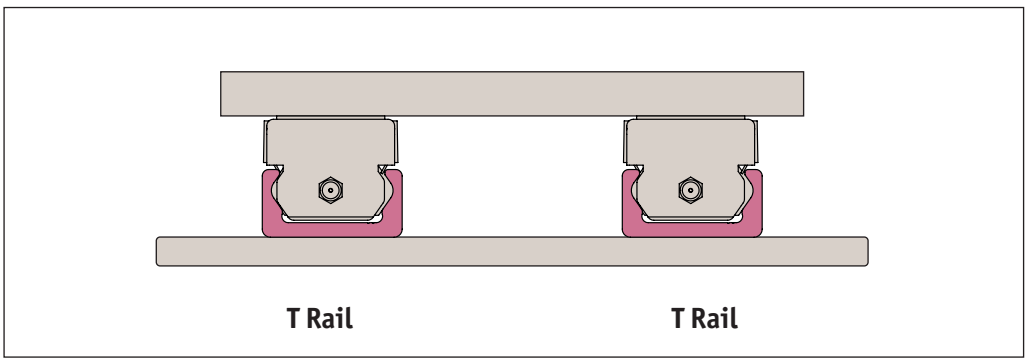
U rails have flat, parallel raceways that allow free lateral movement of the sliders.
The maximum lateral movement for each size is shown in later tables.



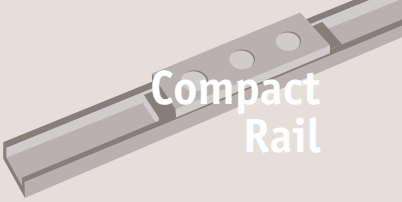
Using flat rails

It is acceptable (but not the preferred method), to use rails as below but the alignment accuracy needed is slightly greater and in this set-up only T type rails can be used.

In this case the axial load figure C_{0ax} should be used in any calculations (which is considerably less than the radial load figure C_{0rad}).



ov-compact-rails-set-up-a-lnh - Updated - 09-03-2023



Why should I consider using compact rails?

- Compact rails have a number of major advantages over the traditional use of recirculating ball linear guideways. Using a master (T) rail and slave rail (U) rail, the structure onto which the rails are installed does not have to be machined so accurately – this can result in major cost savings for many projects.
- The raceways of the compact rail system are on the inside of the rail profile, and this, highly effective side and end sealing, and the use of large diameter roller bearings(as opposed to miniature ball bearings), means that the system is highly resistant to dirt and debris.
- Unlike linear guideways, the preload of the sliders can be adjusted as required. This can result in a very smooth running system.
- Rails can be easily joined together to make unlimited rail lengths.
- The rails and sliders can be provided with alloy coating and stainless steel roller bearings for applications that may become wet.

Are there any disadvantages?

- The compact rail system's accuracy is around 0,15mm over a 3 metre length – this is not as accurate as recirculating ball linear guideways.
- Recirculating ball linear guideways have higher load capacities for both axial and radial loads.

How do I change the smoothness of the running of the sliders in the rails?

- Each slider is supplied with a small spanner. This can be used to push the eccentric roller towards the top of the rail (making it run stiffly), or pulled away slightly to make the sliders run very smoothly. The eccentric rollers are clearly marked and the slider should be installed the correct way up in the rail. Generally this is with the fixed rollers towards the bottom of the rail (providing the loading points). The simple instructions are shown in the catalogue.

I want to use the rail outside or in a slightly wet environment?

- A nickel or alloy plating can be applied to the compact rail, this is our preferred anti-corrosion solution. Please see our anti-corrosion section for details.
- The sliders can also be nickel plated and provided with stainless 440C roller bearings with 2RS (splash-proof) seals.

What about if I want to motorise my application?

- We have a full range of motorised linear stages based on the compact rail systems – these are our uniline stages.
- Maximum stroke for these (in a single piece) is around 6 metres.

Do you hold these parts in stock?

- In general we hold all the rail in stock as well as most the most popular C series sliders.

Can I get CAD files of these parts?

- Most of the 3D models (in many formats) are available for download directly from our website **www.automotioncomponents.co.uk**

I am not sure which is the best rail/slider combination for my application?

- Please send us a sketch listing the main points of the application and our Technical Department will deal with this promptly. If required we can also arrange a visit to discuss the application and to show you the different systems available.

Compact Rail from Automotion Components

Anti-corrosion treatments

The compact rail systems have the following protective coatings as standard:

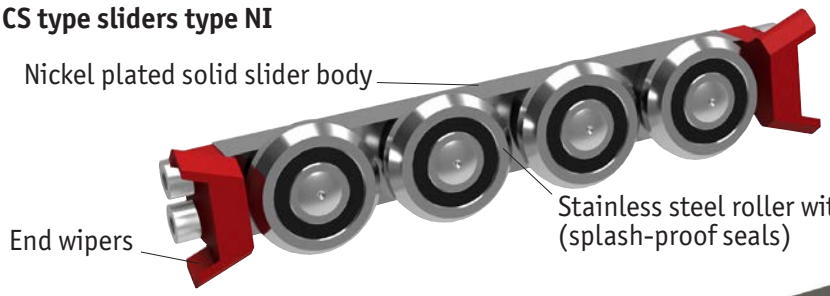
- Rails: zinc plated (with the exception of the area of the raceways themselves), these are ground after the plating process.
- Sliders have a zinc plated solid steel body.

We can upgrade the anti-corrosion protection of the system by offering the following:

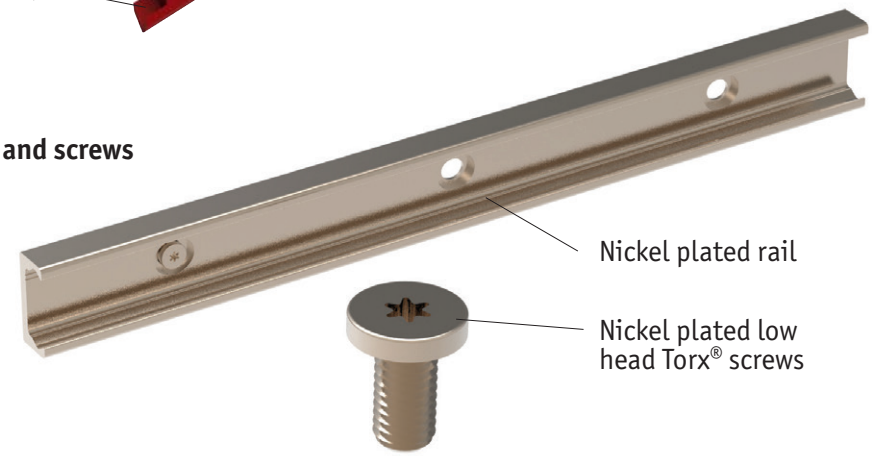
- Nickel plating the rails. In this case the nickel plating is applied after the grinding of the raceways. In this way the whole of the rail is anti-corrosion protected.
- Sliders can also be fully nickel plated. Stainless steel (440C) rollers can be used with 2RS (splash proof) seals and stainless steel screws for the sliders.
- The special low head Torx screws can be supplied nickel plated.

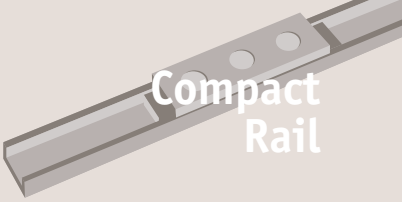
Anti-corrosion protection option

CS type sliders type NI



Rail and screws





1 Consider the size and overall weight of the load

- There are four different rail sizes (18, 28, 35 and 43).
- A large percentage of applications use size 28 or size 43 rails and sliders. Whilst rails can be used singly, for the majority of applications they are used in pairs (typically a T and a U rail).
- Normally at least two sliders are used per rail. So as a starting point, divide the total load (in Kg.) by the number of sliders and multiply by 10 to give the expected load per slider in Newtons. Compare this to the dynamic load C_{0rad} load ratings in the load capacity summary tables. More sliders can be added to increase the system load capacity, or select a slider with more roller bearings (the standard sliders have three roller bearings), up to six roller bearings per sliders are available.
- Where possible the rails should be installed on their side as this gives the maximum load rating per slider. Typically the radial load of a slider is twice its axial load rating.

2 Type of slider

- Our standard sliders are solid body, front mount with side seal type CL. These have a wide body and are available front mount and side mount.
- Some customers however prefer to use narrow solid steel body sliders type CS. These types do not have side seals.

3 System travel

- Thinking about the physical dimension of the load will give an indication of how far apart the sliders should be positioned in the rails. This, and the distance apart that the rails and the sliders are positioned, affect the moment loads that the sliders experience.
- The above factors will give a good indication of the rail size to be used. In many cases the rails size that could be used might be smaller than would be expected (due to the impressive load ratings of the sliders). In many cases customers quite often “up-size” the rail so that it “looks” more appropriate to the size of the load being carried.
- Considering the distance apart of the sliders and the movement (stroke) required in the system will determine the overall rail length required.
- Rails can be joined together to make unlimited rail lengths. For this we have to select suitable rails, machine the ends and add an extra fixing hole. The rails can then be aligned with a simple tool.

4 Rail types

- Typically a T rail is used on one side and a U rail on the other. The U rail allows for lateral movement of the U slider in the U rail - this reduces the need for accuracy in the structure that the rails are used on, as the T rail becomes a master rail and the U rail a slave rail (unlike linear guideways where to prevent irregular movement the rails have to be aligned highly accurately).
- In some instances there can also be significant height inaccuracies and in this case the T rail can be replaced by a K rail (K rails cannot be used in vertical applications).
- There are two versions of each rails type. These end in either a C or a V and indicate the type of fixing screw required to fix the rail to the structure. The C (counterbored) type is most widely used compared to the V (countersunk) type. The counterbored fixing in the rails allows for more flexibility in the fixing hole position of the structure. Special low profile counterbore screws are provided with the type C rails.

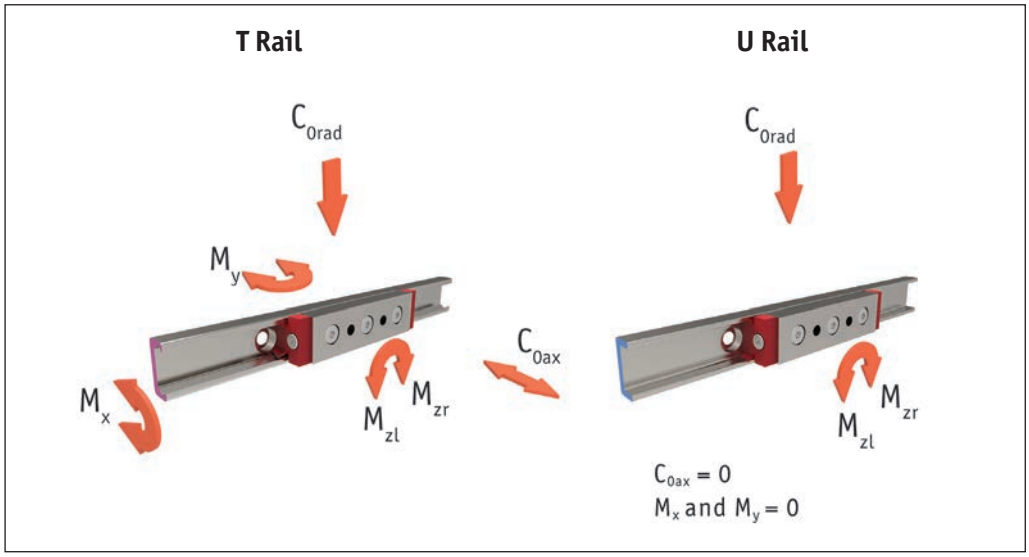
5 Environment

- In normal, dry applications, the zinc plated finish of the rails combined with the standard 2Z (dust proof) seals of the roller bearings in the sliders is sufficient.
- In some cases the rails may become wet. In this case we have the option to apply a special coating to the rails, please discuss with our Technical Department. This has good corrosion resistance (see notes on Salt Spray tests), and should be combined with either nickel or alloy plated sliders with stainless steel rollers (440C), and 2RS roller bearing seals (splash proof) these are generally of the CL or CS type and are shown in the catalogue. The 2RS seals are “splash proof” - they cannot operate fully immersed.

This is a basic overview for rail system selection. For full technical details and advice please refer to the technical pages in our catalogue, or alternatively send details on a sketch to our Technical Department who will be happy to advise on the application.





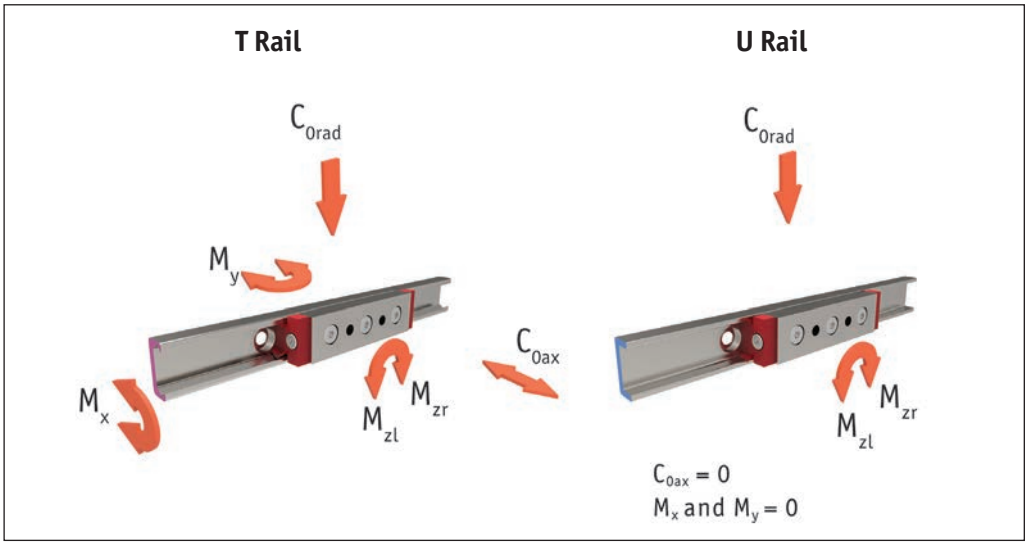


Important note

The load rating of the sliders tables apply to the use of the sliders in the T (master) rail.

For sliders in U rails:
$C_{0ax} = 0$
$M_x = 0$
$M_y = 0$

Part no.	No. of rollers	Load capacities and moments						
		Max. dyn. C N	Max. static C_{0rad} N	Max. static C_{0ax} N	M_x Nm	M_y Nm	M_z Nm	
							M_{zr}	M_{zl}
Side seal, front fixing								
L1918.18CL-060	3	1540	825	262	1,6	4,8	8,3	8,3
L1918.18CL-080-A	4	1540	825	310	2,9	7,1	8,3	24,9
L1918.18CL-080-B	4	1540	825	310	2,9	7,1	24,9	8,3
L1918.18CL-100	5	1832	978	365	2,9	9,5	24,9	24,9
L1918.18CL-120-A	6	1832	978	442	3,4	11,9	24,9	41,2
L1918.18CL-120-B	6	1832	978	422	3,4	11,9	41,2	24,9
Side seal, top fixing								
L1918.18CR-060-A	3	1540	825	262	1,6	4,8	8,3	8,3
L1918.18CR-060-B	3	1540	825	262	1,6	4,8	8,3	8,3
L1918.18CR-080-A	4	1540	825	310	2,9	7,1	8,3	24,9
L1918.18CR-080-B	4	1540	825	310	2,9	7,1	24,9	8,3
L1918.18CR-100-A	5	1832	978	365	2,9	9,5	24,9	24,9
L1918.18CR-100-B	5	1832	978	365	2,9	9,5	24,9	24,9
L1918.18CR-120-A	6	1832	978	442	3,4	11,9	24,9	41,2
L1918.18CR-120-B	6	1832	978	442	3,4	11,9	41,2	24,9
No side seal, front fixing								
L1918.18CS-060	3	1530	820	260	1,5	4,7	8,32	8,2
L1918.18CS-080-A	4	1530	820	300	2,8	7,0	8,2	24,7
L1918.18CS-080-B	4	1530	820	300	2,8	7,0	24,7	8,2
L1918.18CS-100	5	1830	975	360	2,8	9,4	24,7	24,7
L1918.18CS-120-A	6	1830	975	440	3,3	11,8	24,7	41,1
L1918.18CS-120-B	6	1830	975	440	3,3	11,8	41,1	24,7



Part no.	No. of rollers	Load capacities and moments						
		Max. dyn. C N	Max. static C_{0rad} N	Max. static C_{0ax} N	M_x Nm	M_y Nm	M_z Nm	
							M_{zr}	M_{zl}
Side seal, front fixing								
L1928.28CL-080	3	4345	2213	652	6,4	16,4	28,0	28,0
L1928.28CL-100-A	4	4345	2213	765	11,8	22,3	28,0	84,1
L1928.28CL-100-B	4	4345	2213	765	11,8	22,3	84,1	27,2
L1928.28CL-125	5	5160	2630	919	11,8	30,0	84,1	84,1
L1928.28CL-150-A	6	5160	2630	1102	14,1	37,3	84,1	140,0
L1928.28CL-150-B	6	5160	2630	1102	14,1	37,3	140,0	84,1
Side seal, top fixing								
L1928.28CR-080-A	3	4345	2213	652	6,4	16,4	28,0	28,0
L1928.28CR-080-B	3	4345	2213	652	6,4	16,4	28,0	28,0
L1928.28CR-100-A	4	4345	2213	765	11,8	22,3	28,0	84,1
L1928.28CR-100-B	4	4345	2213	765	11,8	22,3	84,1	27,2
L1928.28CR-125-A	5	5160	2630	919	11,8	30,0	84,1	84,1
L1928.28CR-125-B	5	5160	2630	919	11,8	30,0	84,1	84,1
L1928.28CR-150-A	6	5160	2630	1102	14,1	37,3	84,1	140,0
L1928.28CR-150-B	6	5160	2630	1102	14,1	37,3	140,0	84,1
No side seal, front fixing								
L1928.28CS-080	3	4260	2170	640	6,2	16,0	27,2	27,2
L1928.28CS-100-A	4	4260	2170	750	11,5	21,7	27,2	81,7
L1928.28CS-100-B	4	4260	2170	750	11,5	21,7	81,7	27,2
L1928.28CS-125	5	5065	2580	900	11,5	29,0	81,7	81,7
L1928.28CS-150-A	6	5065	2580	1070	13,7	36,2	81,7	136,1
L1928.28CS-150-B	6	5065	2580	1070	13,7	36,2	136,1	81,7

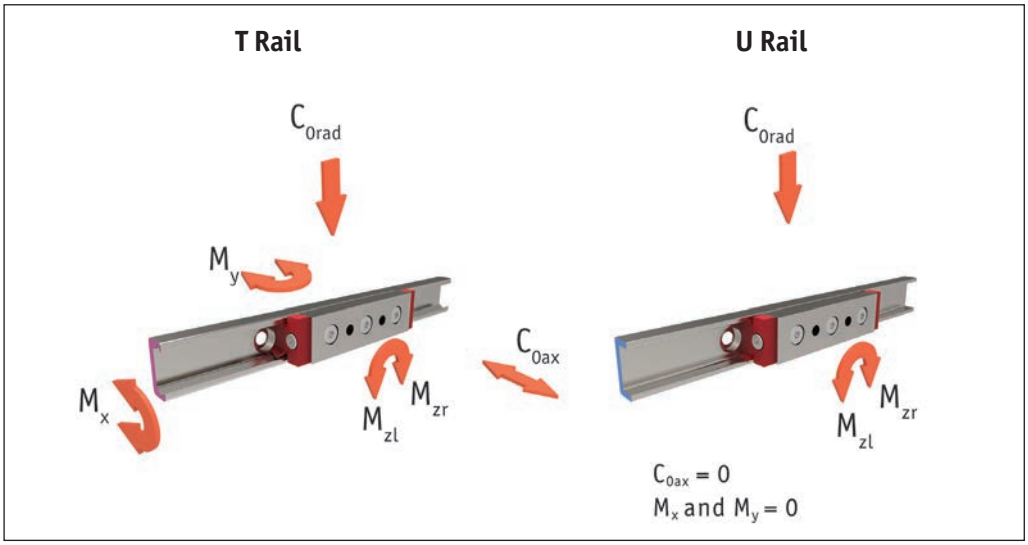
Important note

The value of the C sliders in the tables apply to the use of the sliders in the T (master) rail.

For C sliders in U rails:
$C_{0ax} = 0$
$M_x = 0$
$M_y = 0$

Technical Information

Load capacities - Size 43



Important note

The value of the C sliders in the tables apply to the use of the sliders in the T (master) rail.

For C sliders in U rails:
$C_{0ax} = 0$
$M_x = 0$
$M_y = 0$

Part no.	No. of rollers	Load capacities and moments						
		Max. dyn. C N	Max. static C_{0rad} N	Max. static C_{0ax} N	M_x Nm	M_y Nm	M_z Nm	
							M_{zr}	M_{zl}
Side seal, front fixing								
L1943.43CL-120	3	12300	5520	1580	23,7	60,1	104,7	104,7
L1943.43CL-150-A	4	12300	5520	1890	43,7	81,6	104,7	313,8
L1943.43CL-150-B	4	12300	5520	1890	43,7	81,6	313,8	104,5
L1943.43CL-190	5	14680	6560	2220	43,7	108,7	313,8	313,8
L1943.43CL-230-A	6	14680	6560	2650	52,5	136,0	313,8	523,0
L1943.43CL-230-B	6	14680	6560	2650	52,5	136,0	523,0	313,8
Side seal, top fixing								
L1943.43CR-120-A	3	12300	5520	1580	23,7	60,1	104,7	104,7
L1943.43CR-120-B	3	12300	5520	1580	23,7	60,1	104,7	104,7
L1943.43CR-150-A	4	12300	5520	1890	43,7	81,6	104,7	313,8
L1943.43CR-150-B	4	12300	5520	1890	43,7	81,6	313,8	104,5
L1943.43CR-190-A	5	14680	6560	2220	43,7	108,7	313,8	313,8
L1943.43CR-190-B	5	14680	6560	2650	52,5	136,0	313,8	523,0
L1943.43CR-230-A	6	14680	6560	2650	52,5	136,0	313,8	523,0
L1943.43CR-230-B	6	14680	6560	2650	52,5	136,0	523,0	313,8
No side seal, front fixing								
L1943.43CL-120	3	12280	5500	1570	26,6	60,0	104,5	104,5
L1943.43CL-150-A	4	12280	5500	1855	43,6	81,5	104,5	313,5
L1943.43CL-150-B	4	12280	5500	1855	43,6	81,5	313,5	104,5
L1943.43CL-190	5	14675	6540	2215	43,6	108,6	313,5	313,5
L1943.43CL-230-A	6	14675	6540	2645	52,0	135,8	313,5	522,5
L1943.43CL-230-B	6	14675	6540	2645	52,0	135,8	522,5	313,5

Representation of slider arrangement for various load cases

Arrangement 1

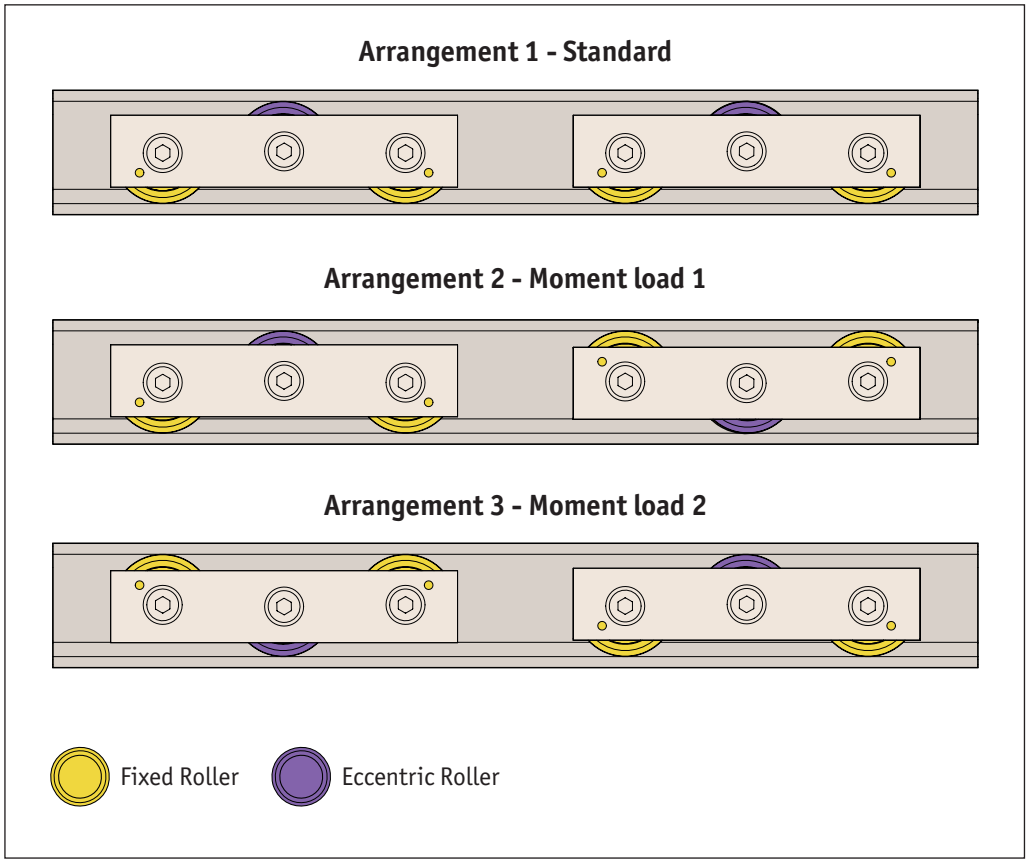
- Standard arrangement if no other information is given. This arrangement is recommended if the load point is located within the two outside points of the sliders.

Arrangement 2

- This is the recommended arrangement for use of two sliders under an M_z moment load when using one rail. Also see previous page: Two sliders under load moment M_z.

Arrangement 3

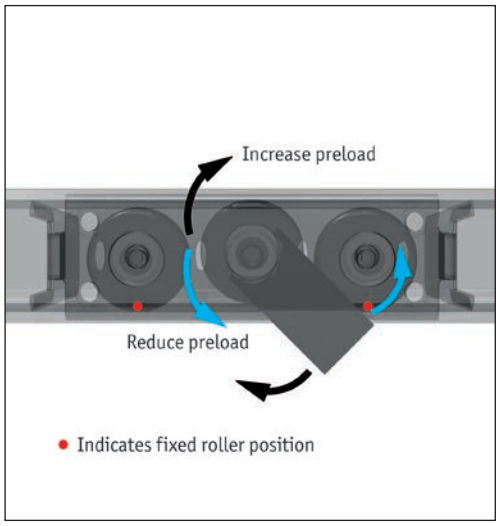
- For using a pair of guide rails with two sliders each under an M_z moment load, the second system should be designed in arrangement 3. This results in the following combination: Guide rail 1 with two sliders in arrangement 2 and guide rail 2 with two sliders in arrangement 3. This allows even load and moment load distribution between the two parallel rails.

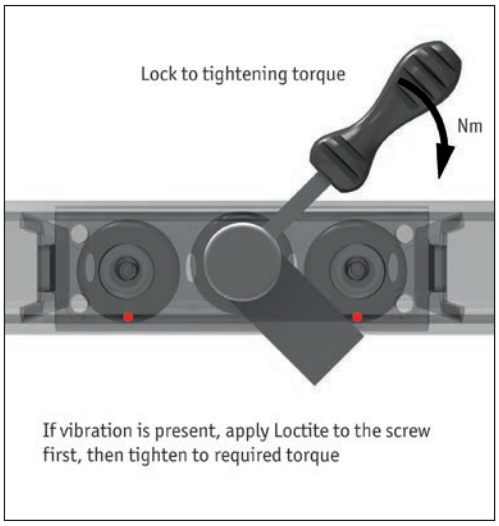


Adjusting the sliders

If delivered separately, or if the sliders need to be installed in another rail, the sliders must be re-adjusted. In this case, follow the instructions below.

The "•" or "V" marked on the slider indicates the direction of the fixed rollers.





The sliders have three (or more) large roller bearings. In general, the two at either end are fixed and the direction of these fixed rollers is marked on the sliders with a dot or an arrow.

Insert the sliders into the rails with the fixed rollers set to take the load in the best direction.

The middle roller is on an eccentric pivot that is easily adjusted (using the thin spanner that is supplied with them and a hexagon key). This allows the preload of the system to be set as required – stiff or free running.

Generally the sliders will not be inserted into the rails when leaving the factory. To set the sliders to the required preload is a simple procedure:

- Ensure raceways are clean.
- Remove the small plastic end wipers and insert the slider into the rail.
- Slightly loosen the eccentric roller (using the spanner and a hexagon key).
- For U rails a packer should be used to set the slider in its middle lateral position.
- Use the flat spanner provided to move the middle roller on its eccentric to adjust the stiffness of its running. Not too loose so that there is excess play and not too tight that a lot of friction is generated.
- Lock the eccentric roller in the desired position with the spanner and a hexagon key.
- Move the slider the length of the rail to check required running – it should move easily with no play at any point on the rail.
- Tighten the fixing screw to the correct torque – whilst holding the spanner in place to ensure no further movement (see correct torque values in table below).
- Finally (if using a slider with a wiper), re-install the wipers if required.

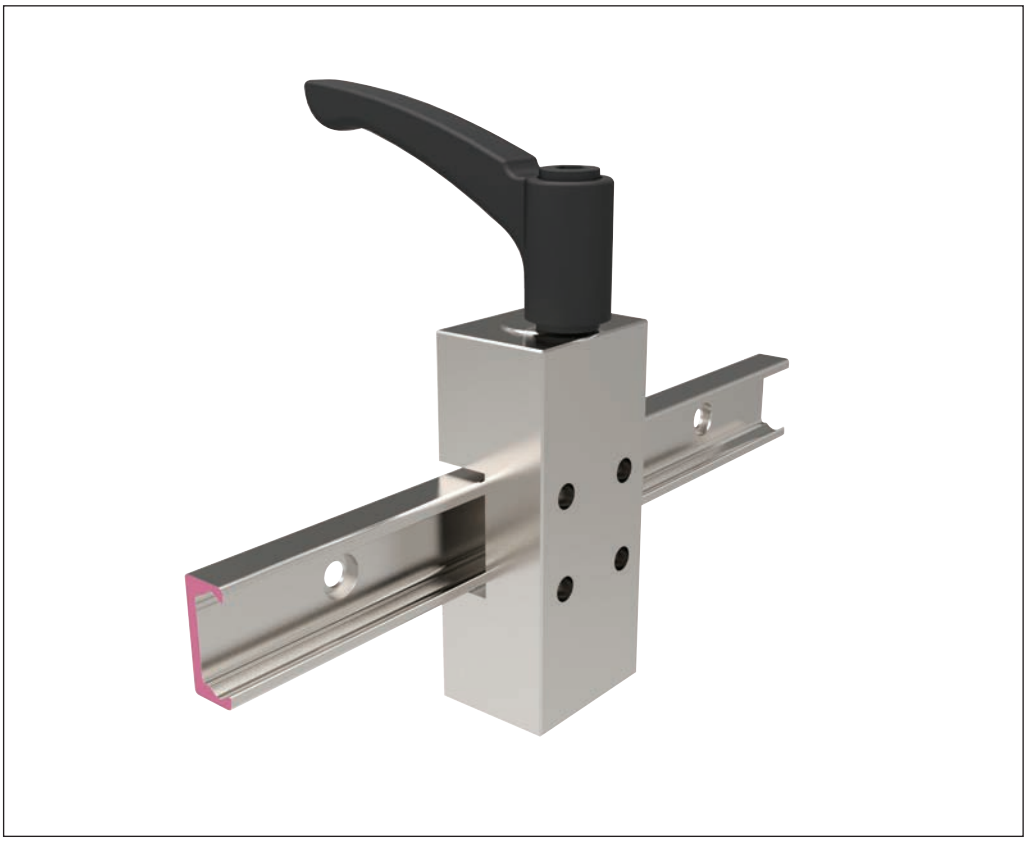
Size	Tightening torque Nm
18	3
28	7
35	12
43	12

Manual rail clamps

- Many of our customers wish to lock their moving element in position on the rails. Whilst this can be relatively simply achieved with the use of an adjustable clamping handle and thrust pad, we also offer a clamping element which can be integrated into your rail/system design.
- This is available in the standard manual version as well as (on request) a pneumatic version for linear guideways only (not compact rail systems).
- These manual clamps have a holding force of up to 2,000N.
- They are relatively compact in shape. Please bear in mind the extra force required for the clamping element when calculating the total movement you require.

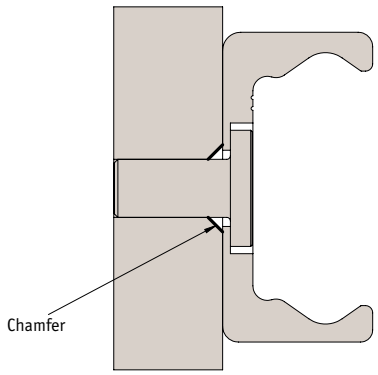
Applications

- Table cross beams.
- Sliding beds.
- Width adjustment stops.
- Positioning of optical equipment.



Compact Rail from Automotion Components

Example for fixing with Torx® screws (custom design)

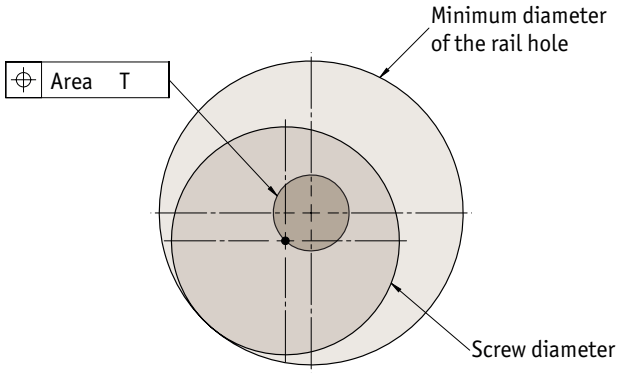


Size	Chamfer
18	0,5 x 45°
28	0,6 x 45°
35	0,5 x 45°
43	1,0 x 45°

Using counterbored hole rails

The low profile screws for counterbored holes are used with rails identified by T-C, U-C or K-C. The cylindrical screw allows some play in the countersunk fixing hole, so that an optimum alignment of the rail can be achieved during installation.

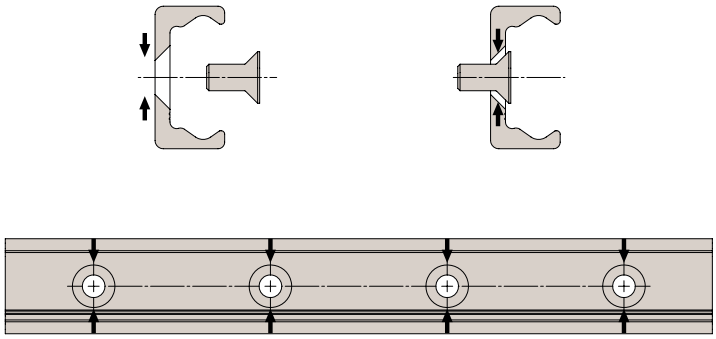
The area T is the diameter of the possible offset, in which the screw centre point can move during the alignment. The minimum chamfers on the fixing threads are listed in the table above.



Rail size	Area T
18	Ø 0,4
28	Ø 0,8
35	Ø 1,0
43	Ø 1,2

Using countersunk hole rails

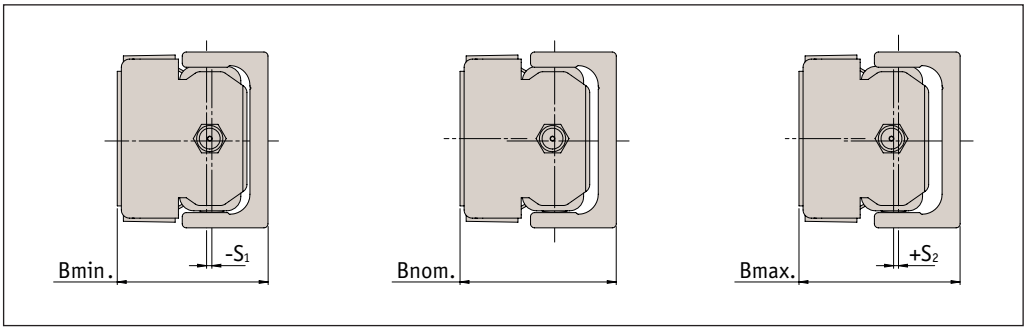
These rails are identified by T-V, U-V or K-V. The selection of rails with 90° countersunk holes requires the precise alignment of the threaded holes for installation. Here the complex alignment of the rail to an external reference is omitted, since the rail aligns during installation by the self-centering of the countersunk screws on the machined hole pattern.



T and U system maximum offset

U rails have flat parallel raceways that allow free lateral movement of the sliders.
The maximum axial offset that can be compensated for in each slider of the U rail is made up of the combined values S_1 and S_2 listed in the following table.

Considered from a nominal value B_{nom} as the starting point, S_1 indicates the maximum offset into the rail, while S_2 represents the maximum offset towards the outside of the rail.

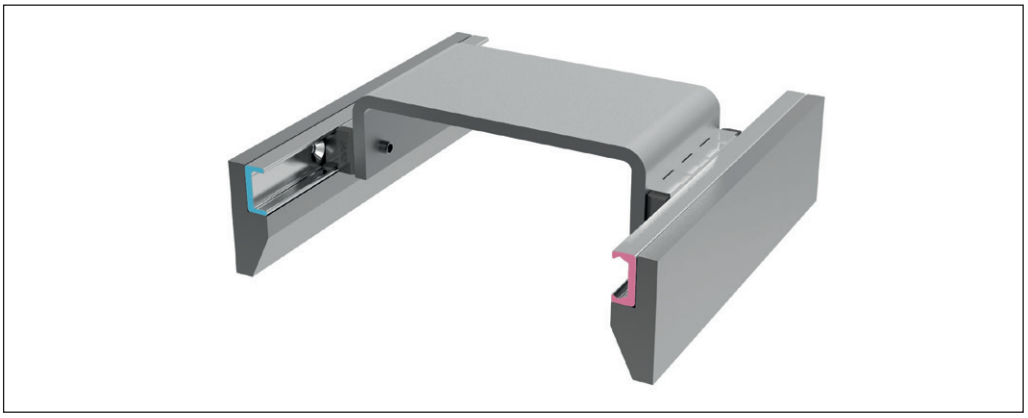


Slider type	S_1	S_2	B_{min}	B_{nom}	B_{max}
L1918.18CL/CS	0,3	1,1	14,7	15,0	16,1
L1918.18CR	0,3	1,1	14,7	15,0	16,1
L1928.28CL/CS	0,6	1,3	23,3	23,9	25,2
L1928.28CR	0,6	1,3	23,3	23,9	25,2
L1935.35CL/CS	1,3	2,7	28,8	30,1	32,8
L1935.35CR	1,3	2,7	28,8	30,1	32,8
L1943.43CL/CS	1,4	2,5	35,6	37,0	39,5
L1943.43CR	1,4	2,5	35,9	37,3	39,8

All values in mm.

T (master) rails and U (slave) rails

It is often the case that two T rails are used in the system design but where there are substantial alignment issues it is better to use a T (master) rail and a U (slave) rail as below.



This allows the slider in the T rail to remain fixed in the place, but allows some lateral movement of the sliders in the U rail to adapt to any misalignment and avoid any issues of stiction.

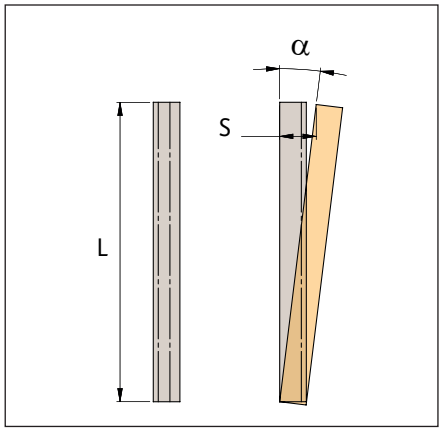
The application example in the following drawing shows that the T and U system implements a problem-free function of the slider even with an angled offset in the mounting surfaces.

If the length of the guide rails is known, the maximum allowable angle deviation of the surfaces can be determined using this formula (the slider in the U rail moves here from the innermost position S_1 to outermost position S_2):

$$\alpha = \arctan \frac{S^*}{L}$$

S^* = sum of S_1 and S_2

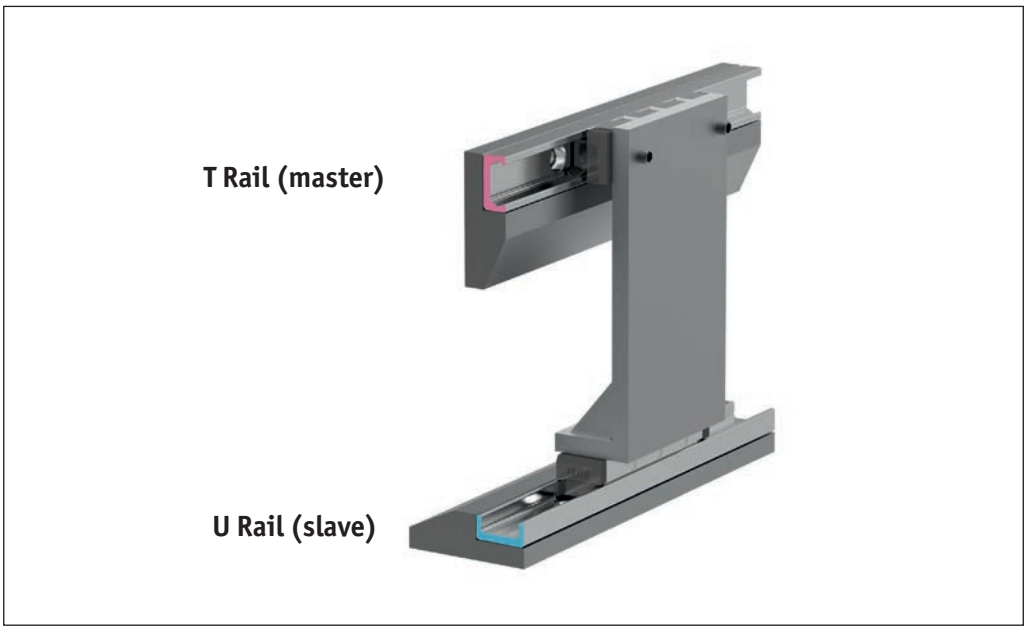
L = length of the rail



The following table contains guidelines for this maximum angle deviation α, achievable with the longest guide rail from one piece.

Rail size	Rail length	Offset S	Angle α °
18	2000	1,4	0,040
28	3200	1,9	0,034
35	3600	4	0,063
43	3600	3,9	0,062

The T and U system can be set up in different arrangements. In the example below, a T rail accepts the vertical components of a load. A U rail attached underneath the component to be guided prevents the vertical panel from swinging and is used as moment support.
In this way both a vertical offset in the structure, as well as possible existing unevenness of the support surface, are compensated for.



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K and U System Tolerance Compensation

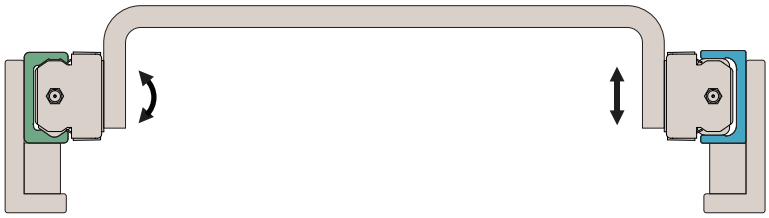
Deviations in Parallelism in Two Planes

The K and U system, like the T and U system, can compensate for axial deviations in parallelism. Additionally, the K and U system has the option of rotating the slider in the rail, which will compensate for other deviations in parallelism, e.g. height offset.

The unique raceway contour of the K rail allows the slider a certain rotation around its longitudinal axis with the same linear precision as with a T rail. With the use of a K and U system, the K rail accounts for the main loads and is the master rail. The U rail is used as a support bearing and takes only radial forces and M_z moments. The K rail must always be installed so that the radial load of the slider is always supported by at least two load bearing roller sliders, which lie on the V-shaped raceway (reference line) of the rail.

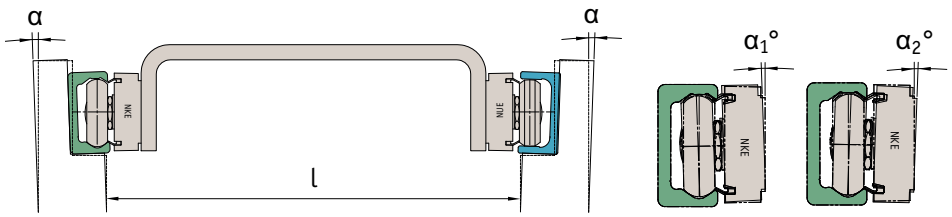
K Rail (master) **U Rail (slave)**

Less used set-up but does allow for height and load misalignment.



K rails and sliders are available in both sizes 43 and 63. The NKE slider may only be used in K rails. The maximum allowable rotation angle of the NKE and NUE sliders are shown in the table. α_1 is the maximum rotation angle counterclockwise, α_2 is clockwise.

Slider Type	α_1°	α_2°
L1943.NKE43 L1943.NUE43	2	2
L1943.NKE63 L1943.NUE63	1	1

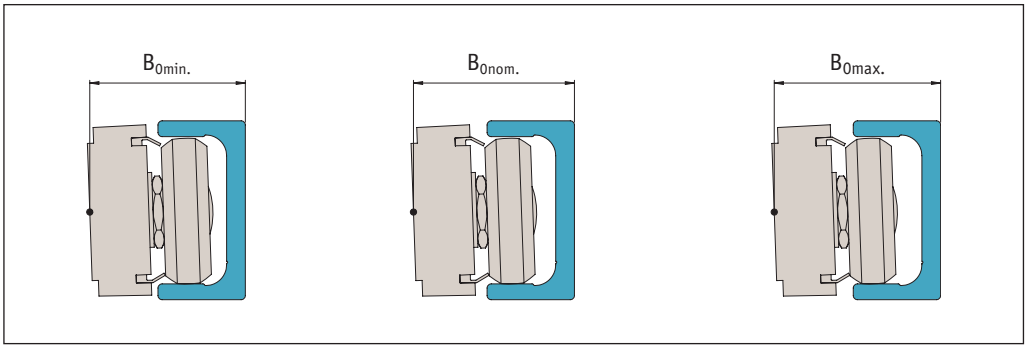


K rails are particularly useful where the distance between the rails is significant. It compensates for height misalignment and the particular errors of a structure.

K and U System Maximum Offset

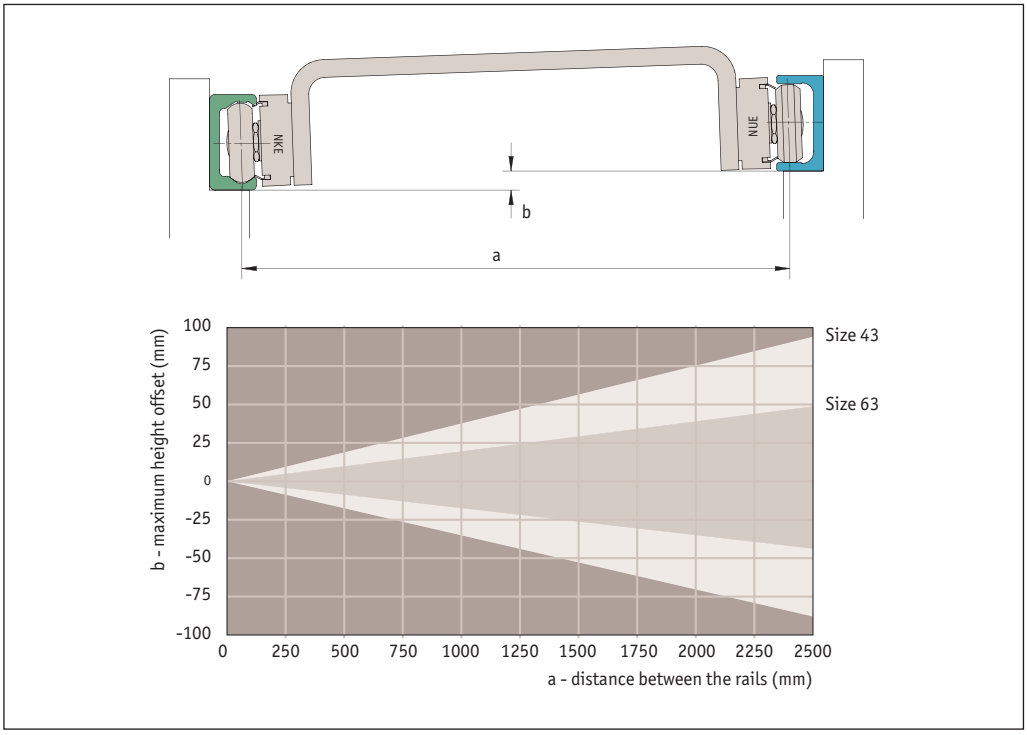
It must be noted that the slider in the U rail will turn during the movement and rotation of the slider in the K rail to allow an axial offset. During the combined effect of these movements, you must not exceed the maximum values (see table below). If a maximum rotated NUE slider is observed (2° for size 43 and 1° for size 63), the maximum and minimum position of the slider in the U rail results from the values B_{0max} and B_{0min}, which are already considered by the additional rotation caused axial offset.

B_{0nom} is a recommended nominal starting value for the position of a NUE slider in the U rail of a K and U system.



Slider Type	B_{0min}	B_{0nom}	B_{0max}
L1943.NUE43 L1943.NUE43L	37,60	38,85	40,10
L1943.CSW43	37,60	38,85	40,10
L1943.CDW43	37,90	39,15	40,40
L1963.CSW63	49,85	51,80	53,75
L1963.NUE63	50,95	52,70	53,45

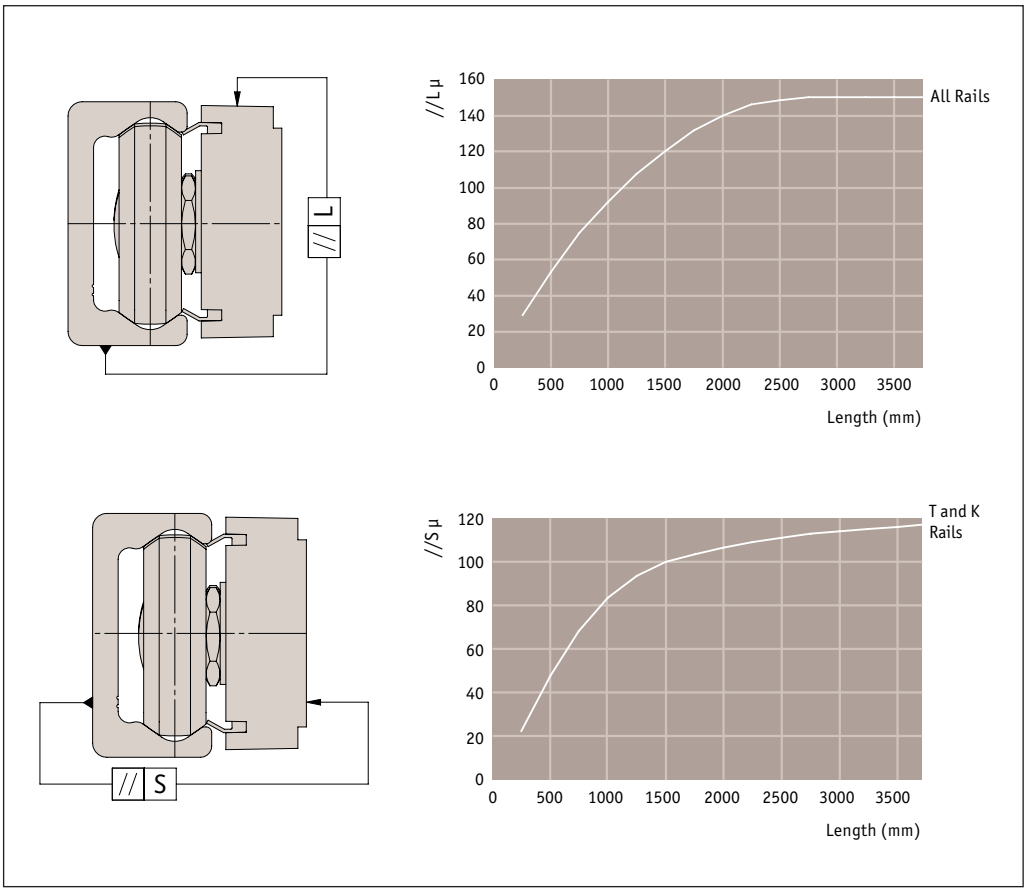
If a K rail is used in combination with a U rail, a pronounced height difference between the two rails can also be compensated for. The following illustration shows the maximum height offset “b” of the mounting surfaces in relation to the distance “a” of the rails.



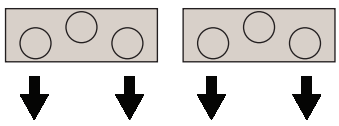
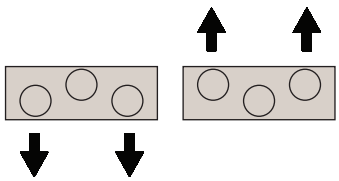
ov-compact-rails-k-and-u-rails-b-lnh-Updated-28-03-2023

Linear accuracy

Linear accuracy is defined as the maximum deviation of the slider in the rail based on the side and support surface during straight line movement. The linear accuracy, depicted in the graphs below, applies to rails that are carefully installed using all screw holes onto a level and rigid structure.



Deviation of accuracy with two 3 roller sliders in one rail

Type	All rails
Slider with equal arrangement 	δL = 0,2
Slider with opposite arrangement 	δL = 1,0
All	δS = 0,05

Compact Rail from Automotion Components

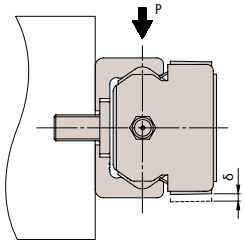
Compact Rail from Automotion Components

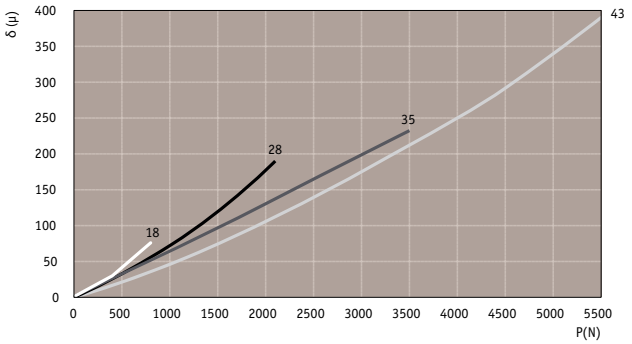
Total deformation

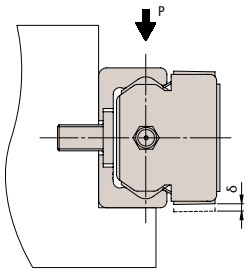
In the following deformation diagrams the total deviation of the linear guide is indicated under the effect of external loads P or moment loads M. As seen from the graphs, the rigidity can be increased by supporting the sides of the rails. The graph values indicate only the deformation of the linear guide, the supporting structure is assumed to be infinitely rigid.
All graphs refer to sliders with 3 rollers and K_1 preload (standard setting). An increased preload, K_2, reduces the deformation values by 25%.

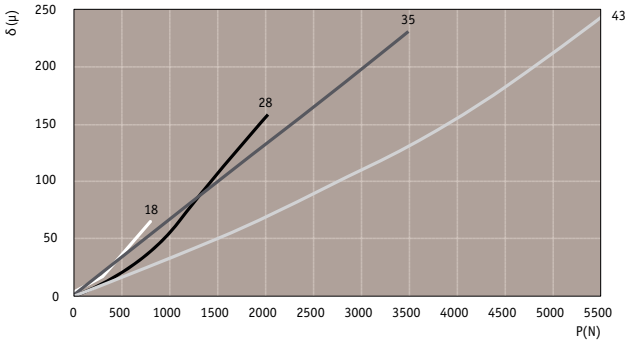
Size 18-43

Radial Load

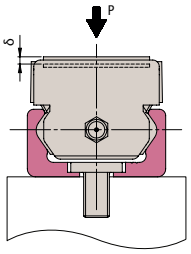


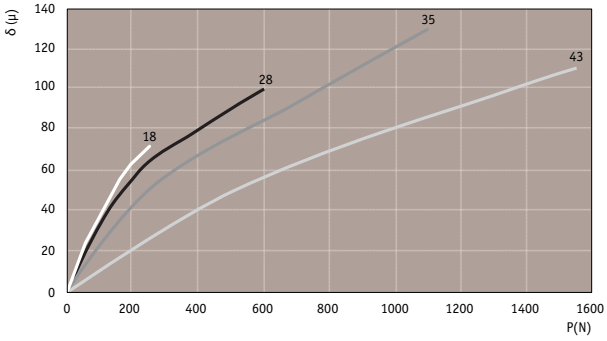




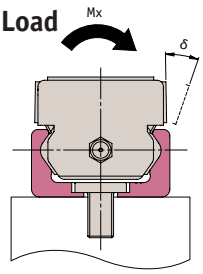


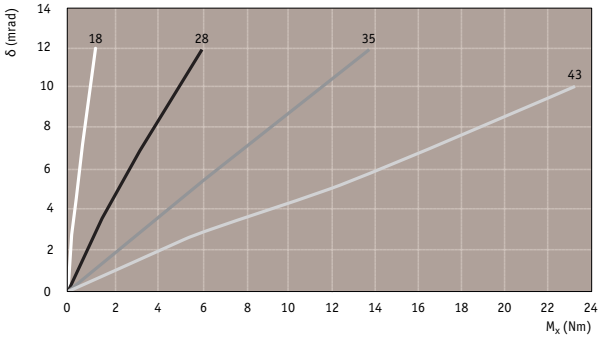
Axial Load





Moment Load

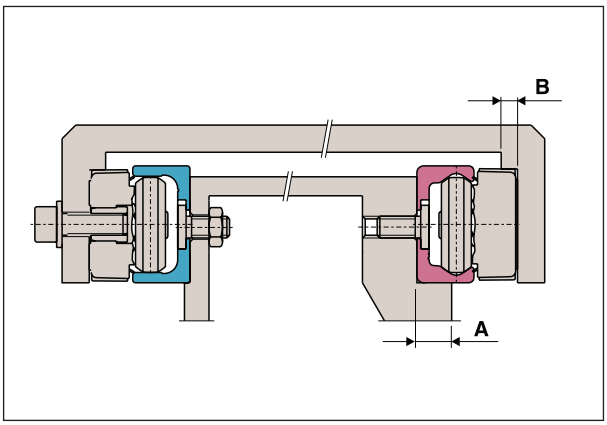




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Supported sides

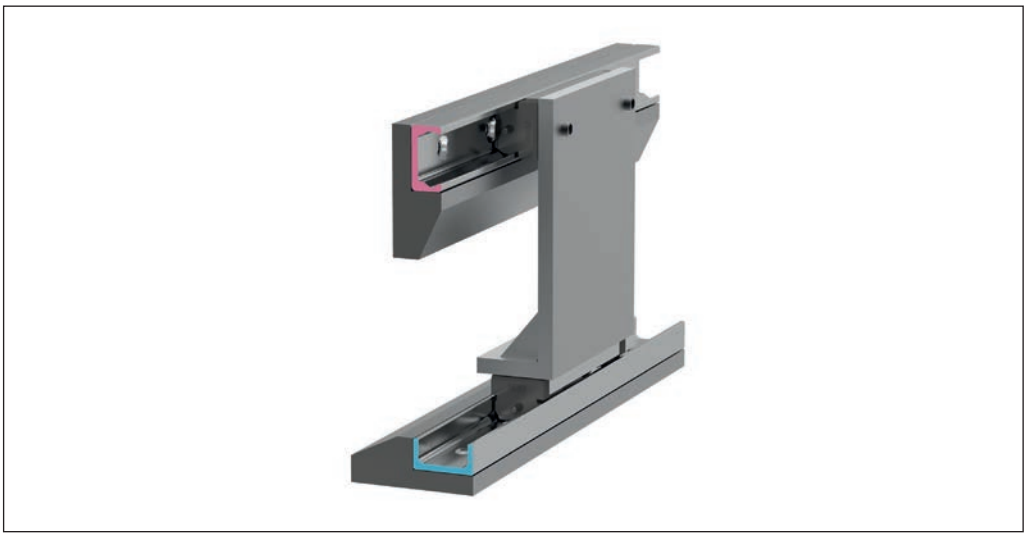
If a higher system rigidity is required, support of the rail sides is recommended, which can also be used as the reference surface. The minimum required support depth can be taken from the table.



Rail size	A	B
18	5	4
28	8	4
35	11	5
43	14	5

U rail offset

Even the K and U system can be used in different arrangements. If the same example as with the T and U system is observed, this solution, in addition to the prevention of vibrations and moments, also enables the compensation of larger deviations in parallelism in the vertical direction, without negative consequences to the guide. This is particularly important for longer strokes as it is more difficult to obtain a correct vertical parallelism.

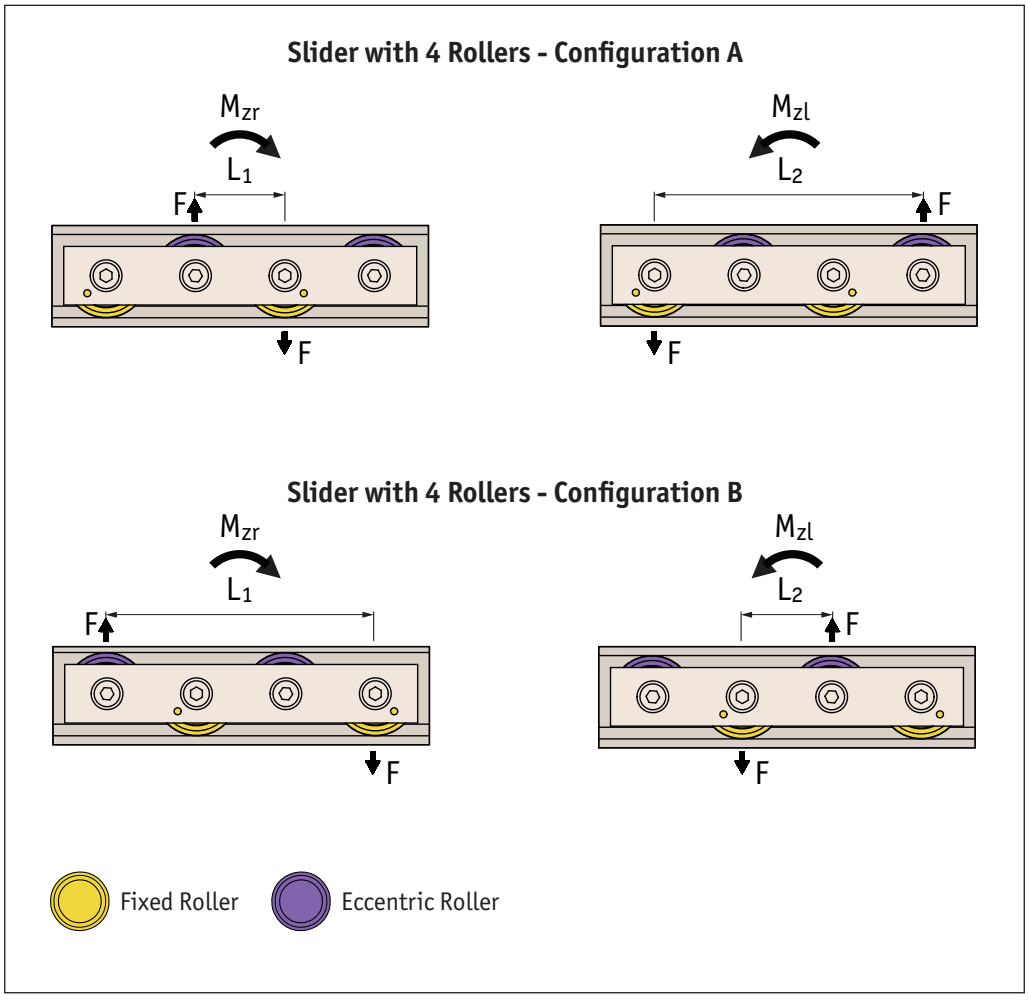


Configurations and behaviour of the sliders under yawing moments M_z

Individual slider under load moment M_z

When an overhanging load in an application with a single slider per rail causes an M_z moment in one direction, a 4 to 6 roller Compact Rail slider is available. These sliders are available in both configurations A and B in regards to the roller arrangement (to counter the acting M_z moment). The moment capacity of these sliders in the M_z direction varies significantly through spacing L_1 and L_2 in accordance with the direction of rotation of M_z. Especially when using two parallel rails, for example with a T+U system, it is extremely important to pay attention to the correct combination of the slider configuration A and B, in order to use the maximum load capacities of the slider.

The diagrams below illustrate this concept of the A and B configuration for sliders with 4 and 6 rollers. The maximum allowable M_z moment is identical in both directions for all 3 and 5 roller sliders.



Two sliders under M_z moment loads

If an overhanging load acts in an application with two sliders per rail and thus causes an M_z moment in one direction, there are differing support reactions with the two sliders.

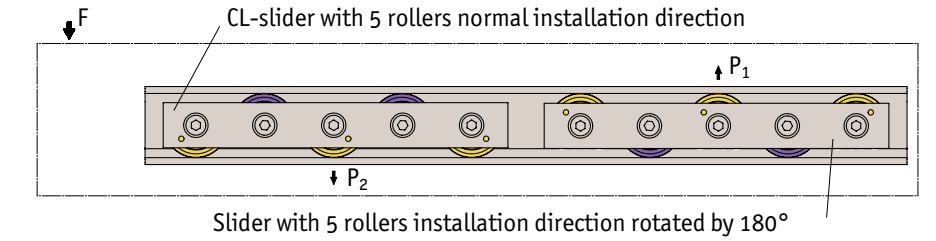
For this reason, an optimal arrangement of different slider configurations to reach the maximum load capacity must be applied.

In practice this means, sliders with 3 or 5 rollers, both sliders are installed rotated by 180° so that the slider is always loaded on the side with the most rollers.

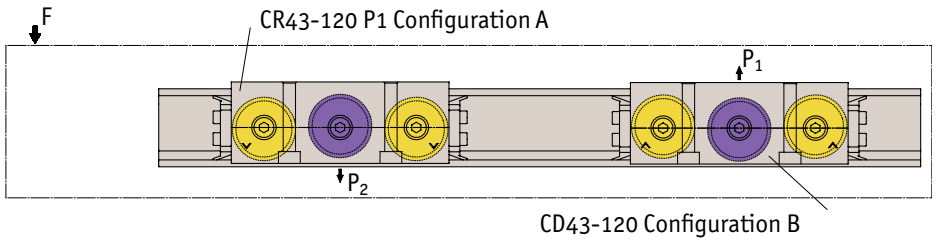
For an even number of rollers this has no effect.

The side mount slider with installation option from above or below cannot be installed due to the position of the rollers in reference to the installation side (therefore they are available in the configurations of both A and B).

Slider under M_z moment load



Slider under M_z moment load







Lubrication of the raceways

Proper lubrication during normal conditions:

- Reduces friction and wear.
- Reduces the load of the contact surfaces through elastic deformations.
- Reduces running noise

To reach the calculated service life, a film of lubricant should always be present between the raceway and roller; this also protects against corrosion of the ground raceways.

Roller bearing lubrication

The bearings inside the rollers are lubricated for life. Custom lubrication of the roller sliders for use in high temperature environments or in the food industry is available upon request. For more information, please contact our Technical Department.

Lubrication when using sliders

The series sliders are provided with end wipers made of polyamide, to remove the contaminants on the raceways. Since the sliders do not have a self-lubrication kit, manual lubrication of the raceways is required. A guideline is to lubricate the raceways every 100 Km or every 6 months. We recommend a roller bearing lubricant with a lithium base of average consistency as a lubricant.

Lubricant	Thickening agent	Temperature range °C	Dynamic viscosity mPas
Roller bearing lubricant	Lithium soap	-30° to + 170°	4500

Replacement of N slider wiper head

Sliders CL and CR are equipped with a safety system made of longitudinal sealing gaskets and rigid, spring preloaded wipers on both sides of the head for automatic cleaning of the raceways. The slider heads can be removed for replacement. To do this it is necessary to loosen the fittings, which should be re-fastened after installing the new heads with the following tightening torque:

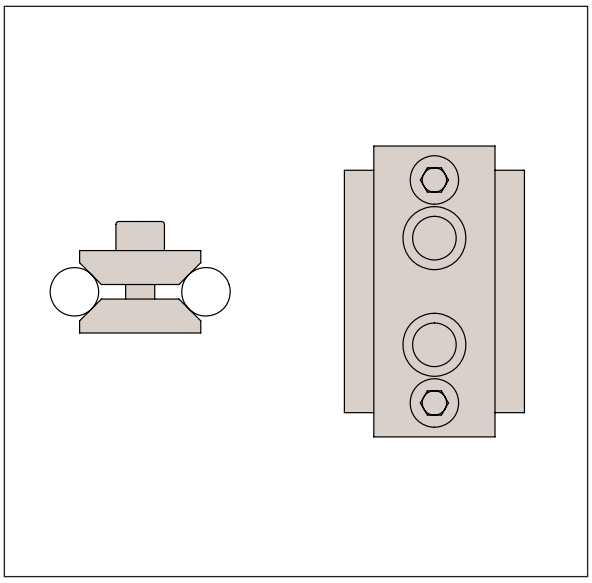
Slider type	Tightening torque Nm
Size 28	0,4 - 0,5
Size 43	0,6 - 0,7

Lubrication when using C sliders

The C series sliders are provided with end wipers made of polyamide, to remove the contaminants on the raceways. Since the sliders do not have a self-lubrication kit, manual lubrication of the raceways is required. A guideline is to lubricate the raceways every 100 Km or every 6 months. We recommend a roller bearing lubricant with a lithium base of average consistency as a lubricant.

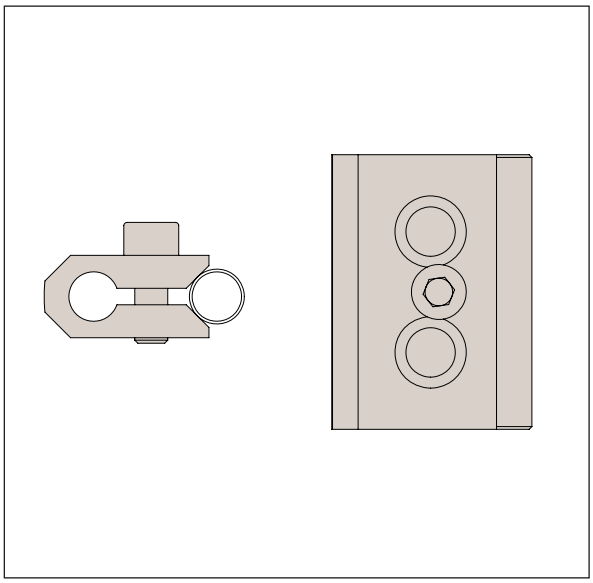
Lubricant	Thickening agent	Temperature range °C	Dynamic viscosity mPas
Roller bearing lubricant	Lithium soap	-30° to + 170°	4500

Alignment fixture AT (for T and U rail)



Rail size	Alignment fixture
L1918.AT18	AT 18
L1928.AT28	AT 28
L1935.AT35	AT 35
L1943.AT43	AT 43

Alignment fixture AK (for K rail)



Rail size	Alignment fixture
L1943.AK43	AK 43

Compact Rail from Automotion Components



Compact Rail from Automotion Components

The Choice Between X Rail and Compact Rail

The X rail system is considerably less expensive than compact rail system. However the compact rail is able to take significant moment loads (unlike the X rail) as the rails themselves are made from cold-drawn steel and have hardened raceways.

Occasionally we have applications where the cost of the standard compact rail sliders makes the combined cost of the compact rail system outweigh some of its benefits.

In these rare cases (and where there is a significant volume of product required) we can offer X rail sliders which fit directly into the compact rail.

Here is a comparison of the slider capacities:

	C N	C_{0rad} N	C_{0ax} N	M_x Nm	M_y Nm	M_{zs} Nm
L1918.NT18	1530	820	260	1,5	4,7	8,2
L1970.20T	1068	543	185	1,1	3,2	5,2
	C N	**C_{0rad} N**	**C_{0ax} N**	**M_x Nm**	**M_y Nm**	**M_{zs} Nm**
L1928.NTE28	4260	2170	640	6,2	16,0	27,2
L1970.30T	2882	1346	454	4,4	10,3	16,8
	C N	**C_{0rad} N**	**C_{0ax} N**	**M_x Nm**	**M_y Nm**	**M_{zs} Nm**
L1943.NTE43	12280	5500	1570	23,6	60,0	104,5
L1970.45T	8181	3307	1120	16,8	42,8	69,5

Preload classes

The factory installed systems, consisting of rails and sliders, are available in two preload classes:

- Standard preload K_1 means a rail slider combination with minimum preload which means the rollers are adjusted free of clearance for optimal running properties
- Usually preload K_2 is used for rail slider systems for increasing the rigidity. When using a system with K_2 preload a reduction of the loading capacities and service life must be taken into consideration.

The excess is the distance between the contact lines of the roller pins minus y. This coefficient Y is used in the calculation formula for checking the static load.

Preload class	Excess*	Rail size	Reduction Y
K_1	0,01	all	-
K_2	0,03	18	0,1
	0,04	28	0,1
	0,05	35	0,1
	0,06	43 63	0,1

* Measured on the largest interior dimension between the raceways.

External preload

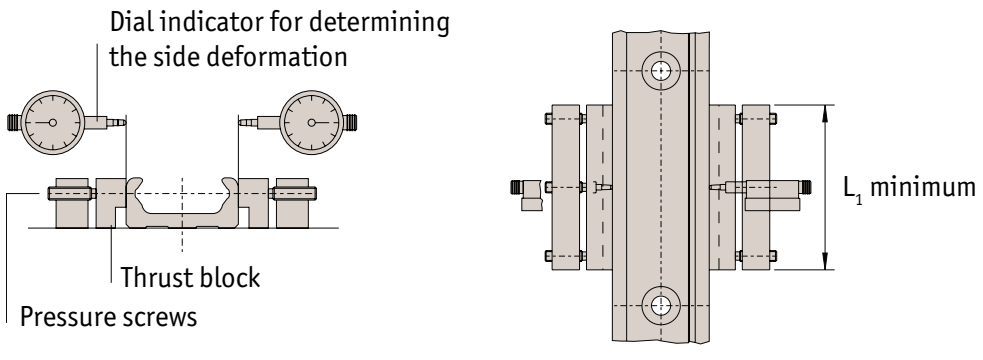
The unique design of the Compact Rail product family enables the application of a partial external preload on selected locations along the entire rail.

An external preload can be applied by pressure along the side surfaces of the guide rail according to the drawing below. This local preload results in higher rigidity only at the locations where it is necessary (e.g. on reversing points with high dynamic forces).

This partial preload increases the service life of the linear guide by avoiding a continually increased preload over the entire length of the rail. Also the required drive force of the linear slider in the non-preloaded areas is reduced.

The amount of the externally applied preload is determined using two dial indicators to measure the deformation of the rail sides. These are deformed by thrust blocks with pressure screws. The external preload must be initially applied when the slider is not directly located in the pressure zone.

Rail size	L_1
18	40
28	55
35	75
43	80



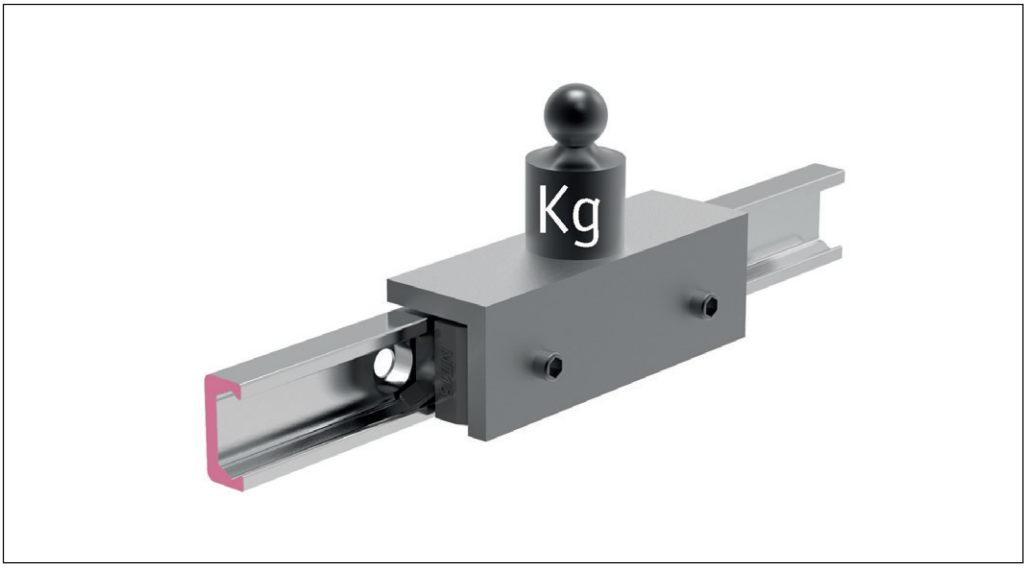
Drive force

Frictional resistance

The drive force required for moving the slider is determined by the combined resistance of the rollers, wipers and seals.

The surface machining of the raceways and rollers have a minimal coefficient of friction, which remains almost the same in both the static and dynamic state. The wiper and longitudinal seals are designed for an optimum protection of the system, without a significant negative effect on the quality of motion.

The overall friction of the compact rail also depends on external factors such as lubrication, preload and additional forces. The following table contains the coefficients of friction for each slider type (for CS and CD sliders no friction occurs to μ_s).



Size	Roller friction μ	Wiper friction μ_w	Friction of longitudinal seals μ_s
18	0,003	$\frac{\ln (m \cdot 1000)}{0,98 \cdot m \cdot 1000}$	0,0015
28	0,003	$\frac{\ln (m \cdot 1000)}{0,06 \cdot m \cdot 1000}$	$\frac{\ln (m \cdot 1000)}{0,15 \cdot m \cdot 1000}$
35	0,005		
43	0,005		

Where m is load in kilograms.

The values given in the above table apply to external loads, which, with sliders with three rollers, are at least 10% of the maximum load rating. For calculating the driving force for lower loads, please contact our Technical Department.

Calculation of drive force

The minimum required drive force for the slider is determined with the coefficients of friction and the following formula:

$$F = (\mu + \mu_w + \mu_s) \cdot m \cdot g$$

m = mass (Kg)
g = 9,81 m/s²
μ = Roller friction
μ_w = Wiper friction
μ_s = Friction of longitudinal

Example calculation:

If an NTE43 slider is used with a radial load of 100 Kg, the result is μ = 0,005 (from table); and from the formula the following is calculated:

$$\mu_s = \frac{\ln(100000)}{0{,}15 \cdot 100000} = 0{,}00076$$

$$\mu_w = \frac{\ln(100000)}{0{,}06 \cdot 100000} = 0{,}0019$$

Therefore the minimum driving force for this example:

$$F = (0{,}005 + 0{,}0019 + 0{,}00076) \cdot 100 \cdot 9{,}81 = 7{,}51 \text{ N}$$



The radial load capacity rating, C_{0rad},the axial load capacity rating C_{0ax}, and moments loads M_x, M_y, M_z indicate the maximum permissible values of the load.

Higher loads will have a detrimental effect on the running quality.

A safety factor, S_0, is used to check the static load, which takes into account the basic parameters of the application:

Conditions	Safety factor S_0
No shock or vibration, smooth and low-frequency reverse, high assembly accuracy, no elastic deformations	1 - 1,5
Normal installation conditions	1,5 - 2
Shock and vibration, high frequency reverse, significant elastic deformation	2 - 3,5

The ratio of the actual load to maximum permissible load may be as large as the reciprocal of the accepted safety factor, S_0, at the most.

$$\frac{P_{0rad}}{C_{0rad}} \le \frac{1}{S_0} \qquad \frac{P_{0ax}}{C_{0ax}} \le \frac{1}{S_0} \qquad \frac{M_1}{M_x} \le \frac{1}{S_0} \qquad \frac{M_2}{M_y} \le \frac{1}{S_0} \qquad \frac{M_3}{M_z} \le \frac{1}{S_0}$$

The above formulae are valid for a single load case.

If two or more forces are acting simultaneously, please check the following formula:

$$\frac{P_{0rad}}{C_{0rad}} + \frac{P_{0ax}}{C_{0ax}} + \frac{M_1}{M_x} + \frac{M_2}{M_y} + \frac{M_3}{M_z} + y \le \frac{1}{S_0}$$

P_{0rad} = effective radial load
C_{0rad} = permissible radial load
P_{0ax} = effective axial load
C_{0ax} = permissible axial load
M_1 = effective moment in the X-direction
M_x = permissible moment in the X-direction
M_2 = effective moment in the Y-direction
M_y = permissible moment in the Y-direction
M_3 = effective moment in the Z-direction
M_z = permissible moment in the Z-direction
y = reduction due to preload

The safety factor S_0 can lie on the lower given limit if the occurring forces can be determined with sufficient precision.

If shock and vibration are present, the higher value should be selected. For dynamic applications a higher safety level is required.

ov-compact-rails-static-load-lnh- Updated - 13-03-2023

Calculation formulae

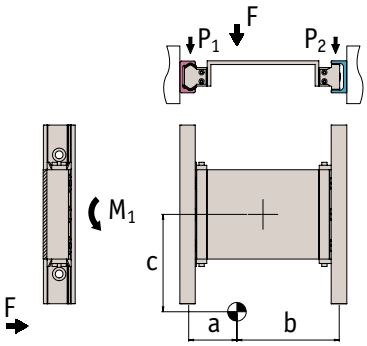
Example formulae for determining the forces on the most heavily loaded slider

The parameters in the formulae are shown below.

F	=	effective force (N)	M_1, M_2	=	effective moment (Nm)
F_g	=	weight-force (N)	m	=	mass (Kg)
P_1, P_2, P_3, P_4	=	effective load on the slider (N)	a	=	acceleration (m/s^2)

Horizontal movement

Static test

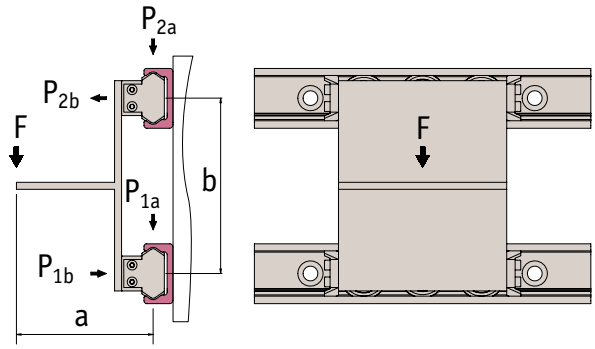


Slider load

$$P_1 = F \cdot \frac{b}{a+b}$$

in addition each slider is loaded by a moment:

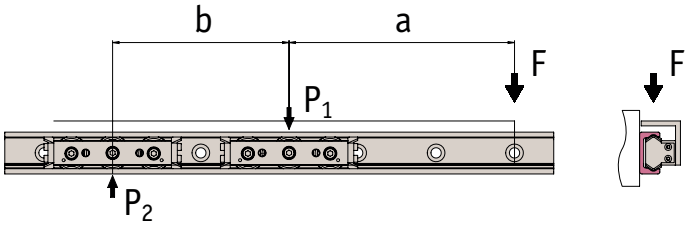
$$M_1 = \frac{F}{2} \cdot c$$



Slider load

$$P_{1a} \simeq P_{2a} = \frac{F}{2}$$

$$P_{2b} \simeq P_{1b} = F \cdot \frac{a}{b}$$



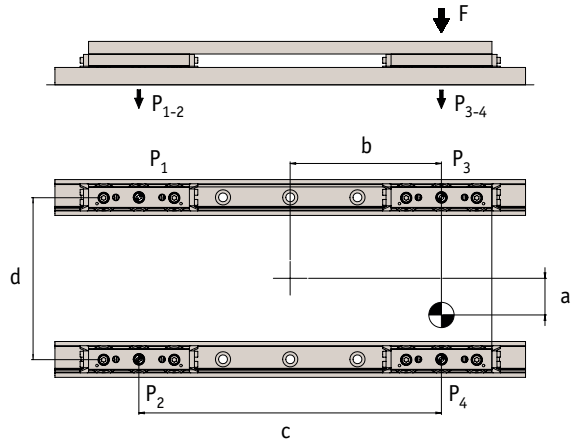
Slider load

$$P_2 = F \cdot \frac{a}{b}$$

$$P_1 = P_2 + F$$

Horizontal movement

Static test



Slider load

$$P_1 = \frac{F}{4} - \left(\frac{F}{2} \cdot \frac{b}{c}\right) - \left(\frac{F}{2} \cdot \frac{a}{d}\right)$$

$$P_2 = \frac{F}{4} - \left(\frac{F}{2} \cdot \frac{b}{c}\right) - \left(\frac{F}{2} \cdot \frac{a}{d}\right)$$

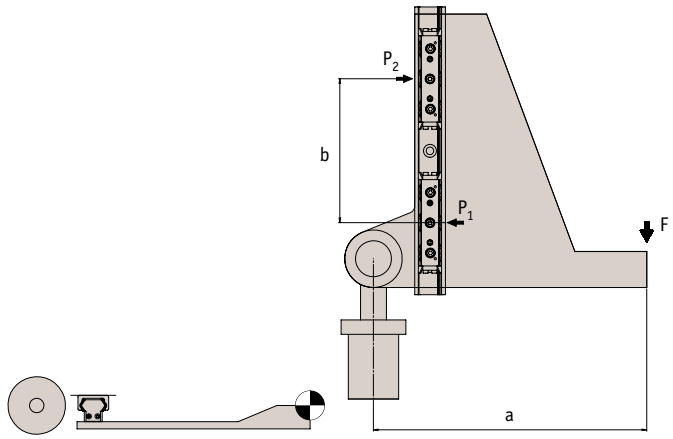
$$P_3 = \frac{F}{4} - \left(\frac{F}{2} \cdot \frac{b}{c}\right) - \left(\frac{F}{2} \cdot \frac{a}{d}\right)$$

$$P_4 = \frac{F}{4} - \left(\frac{F}{2} \cdot \frac{b}{c}\right) - \left(\frac{F}{2} \cdot \frac{a}{d}\right)$$

Note: Its defined that slider number 4 is always located closest to the point where the force is applied.

Vertical movement

Static test

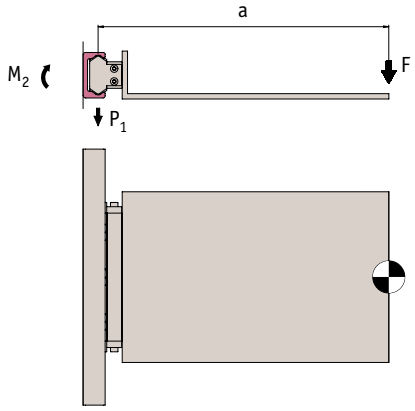


Slider load

$$P_{2a} \simeq P_{1b} = F \cdot \frac{a}{b}$$

Horizontal movement

Static test

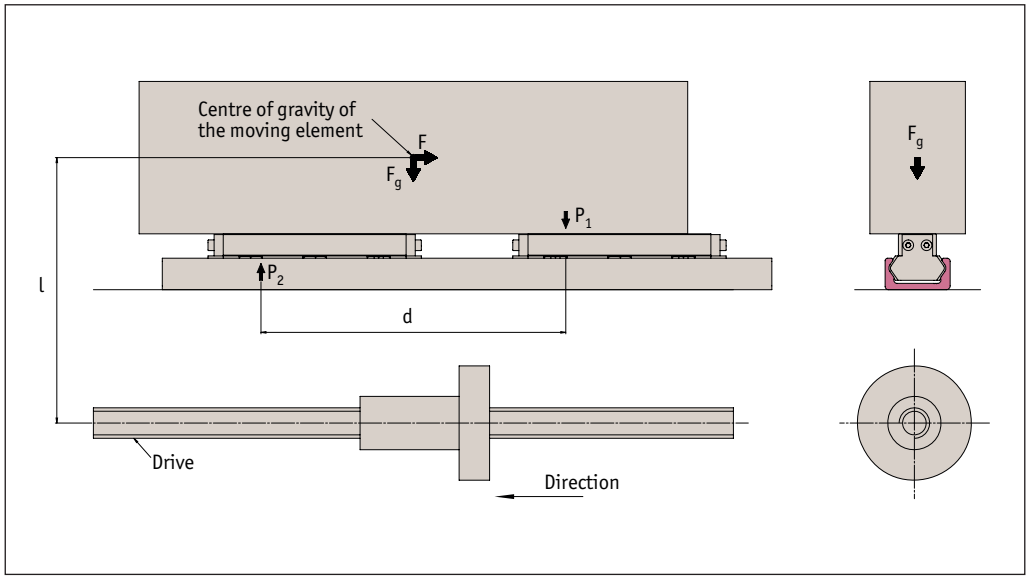


Slider load

$$P_1 = F$$

$$M_2 = F \cdot a$$

ov-compact-rails-loading-calculations-b-lnh - Updated - 13-03-2023



Horizontal movement

Test with a moving element of the weight-force F_g at the instant the direction of movement changes:

Inertial force	Slider load at time of reverse	
$F = m \cdot a$	$P_1 = \frac{F \cdot l}{d} + \frac{F_g}{2}$	$P_2 = \frac{F_g}{2} - \frac{F \cdot l}{d}$

F	=	effective force (N)
F_g	=	weight-force (N)
P_1, P_2, P_3, P_4	=	effective load on the slider (N)
M_1, M_2	=	effective moment (Nm)
m	=	mass (Kg)
a	=	acceleration (m/s^2)



The dynamic load capacity C is a conventional variable used for calculating the service life. This load corresponds to a nominal service life of 100 Km. For values of the individual slider see Load Capacities. The following formulae link the calculated theoretical service life to the dynamic load capacity and the equivalent load:

$$L_{km} = 100 \cdot \left(\frac{C}{P} \cdot \frac{f_c}{f_i} \cdot f_h \right)^3$$

L_{km} = theoretical service life in Km
C = dynamic load capacity in N
P = effective equivalent load in N
f_c = contact factor
f_i = application coefficient
f_h = stroke factor

The equivalent load P corresponds in its effects to the sum of the forces and moments working simultaneously on a slider. If these different load components are known, P results as follows:

$$P_1 = P_r + \left(\frac{P_a}{C_{0ax}} + \frac{M_1}{M_x} + \frac{M_2}{M_y} + \frac{M_3}{M_z} \right) \cdot C_{0rad}$$

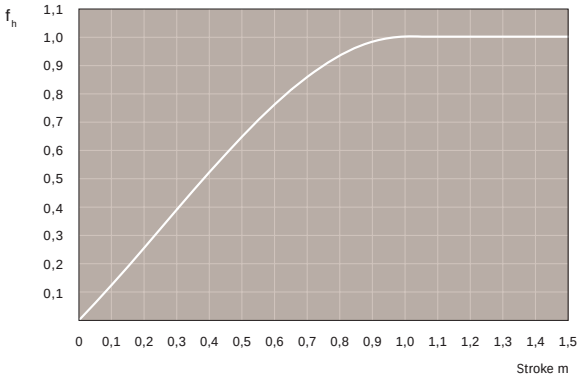
Here the external loads are assumed as constant in time. Brief loads, which do not exceed the maximum load capacities, do not have any relevant effect on the service life and can therefore be discounted. The contact factor f_c refers to applications in which several sliders pass the same rail section. If two or more sliders move over the same point of a rail, the contact factor according to the table would be taken into account in the formula for calculation of the service life.

Number of sliders	1	2	3	4
f_c	1,00	0,80	0,70	0,63

The application coefficient f_i takes into account the operational conditions in the service life calculation. It has similar significance to the safety factor S_0 in the static load test. It is calculated as described in the following table:

Conditions	Application coefficient f_i
Neither shocks or vibrations, smooth and low-frequency direction change; clean operating conditions; low speeds (<1 m/s)	1,0 - 1,5
Slight vibrations, average speeds (1 - 2.5 m/s) and average frequency of direction change	1,5 - 2,0
Shock and vibration, high speeds (>2.5 m/s) and high-frequency direction change; extreme dirt contamination	2,0 - 3,5

The stroke factor f_h takes into account the higher load of the raceways and rollers during short strokes on the same total length of the run. The corresponding values are taken from the following graph (for strokes longer than 1m, $f_h = 1$):



Setting the preload

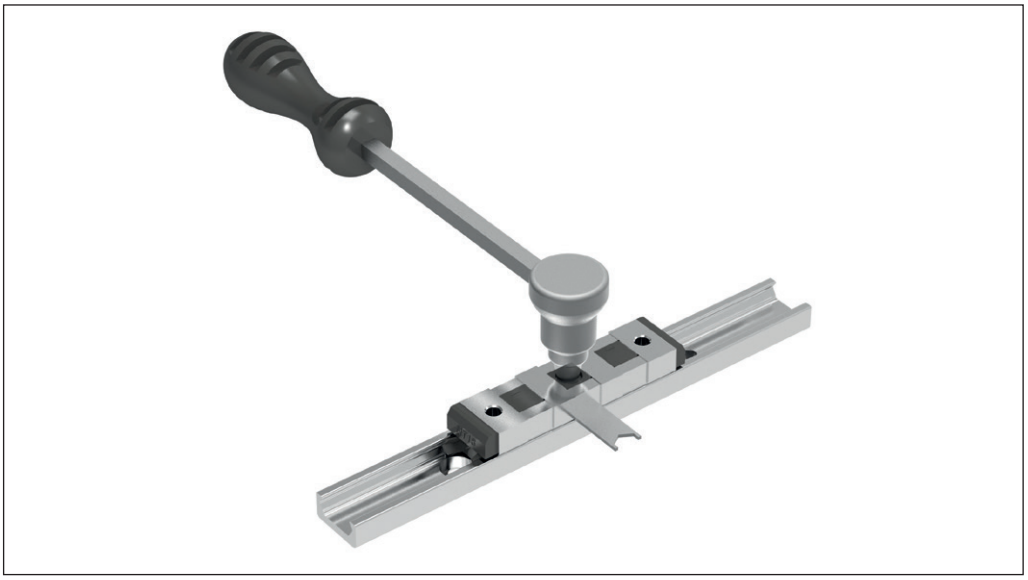
The slides have three or more large roller bearings. In the case of a standard three roller bearing slider, the two at either end are fixed and the direction of these fixed positions is marked on the sliders with a dot or an arrow. Insert the sliders in the rails with the fixed rollers set to take the load in the best direction.

The middle roller is on an eccentric that is easily adjusted using the thin spanner that is supplied with the sliders. This allows the preload of the system to be set as required - either stiff or free running.

Generally the slider will not be installed into the rails when leaving the factory. To set them to the required preload is a simple procedure:

- Ensure the raceways are clean.
- Insert the sliders in the rail (remove the small plastic wipers).
- Slightly loosen the eccentric roller (using the spanner and a hexagon key).
- For U rails, a packer should be used to set the slider in its middle lateral position.
- Use the flat spanner provided to move the eccentric roller (marked with a red dot on the screw) to adjust the stiffness of its running; not too loose so that there is excess play and not too tight that a lot of friction is generated.
- Lock the roller in the desired position with the spanner and a hexagon key.
- For sliders with more than one eccentric roller repeat this process with all the eccentric roller bearings; make sure that all the rollers have uniform contact with the rails.
- Move the slider along the length of the rail to check required running - it should move easily; with no play at any point on the rail.
- Tighten the fixing screw to the correct torque - whilst holding the spanner in place to ensure no further movement.
- Finally, if using a slider with a wiper that you have removed prior to installation - re-install the wipers if required.

Slider size	Tightening torque Nm
18	3
28	7
35	12
43	12



Compact Rail from Automotion Components

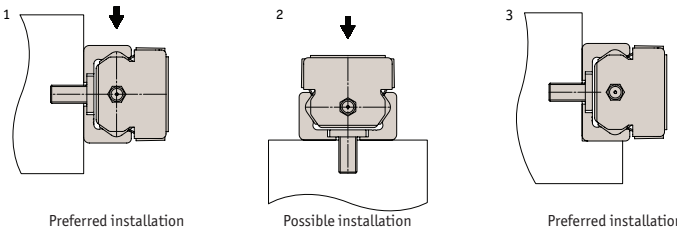
Technical Information

Installing a Single Rail

Both the T and K type rails can be installed in two positions relative to the external force. For axial loading of the slider, the load capacity is reduced because of the decline in contact area caused by the change in position. Therefore, the rails should be installed where possible in such a way that the load of the rollers acts in the radial direction.

For critical applications with vibrations or a higher demand for rigidity, a support of the rail is beneficial.

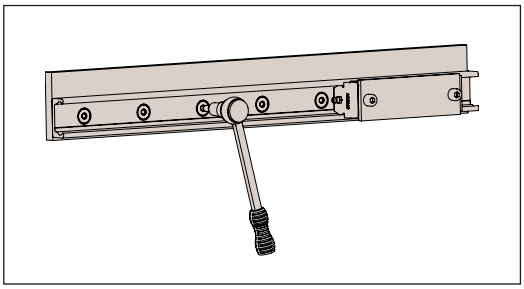
This reduces the deformation of the rail sides and the load on the screws. The installation of a rail with countersunk holes requires an external reference for alignment. This reference can also be used as a rail support if required. All information in this section on alignment of the rails, refers to rails with cylindrical countersunk holes. Rails with countersunk holes self-align using the specified fixing hole pattern.



Rail Installation Without Support

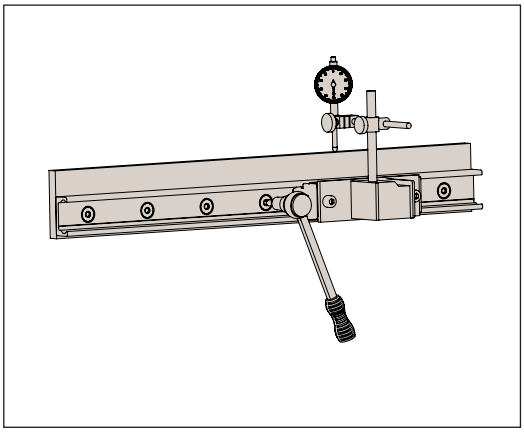
Rail Installation 1

- Carefully lay the guide rail with the installed slider on the mounting surface and slightly tighten the fixing screws so that the guide rail lightly touches the mounting surface.



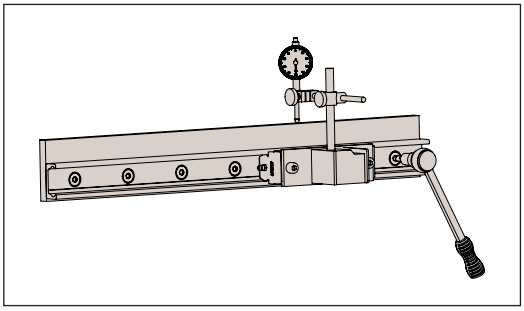
Rail Installation 2

- Install a dial indicator so that the offset of the rail to a reference line can be measured. Now position the slider in the centre of the rail and set the dial indicator to zero. Move the slider back and forth between each two hole spacings and carefully align the rail.
- Fasten the three centre screws of this area with the specified tightening torque.
- Now position the slider on one end of the rail and carefully align the rail to zero on the dial indicator.



Rail Installation 3

- Begin to tighten the screws as specified while moving the slider together with the dial indicator.
  Make sure that it does not show any significant deflection. Repeat this procedure from the other end of the rail.

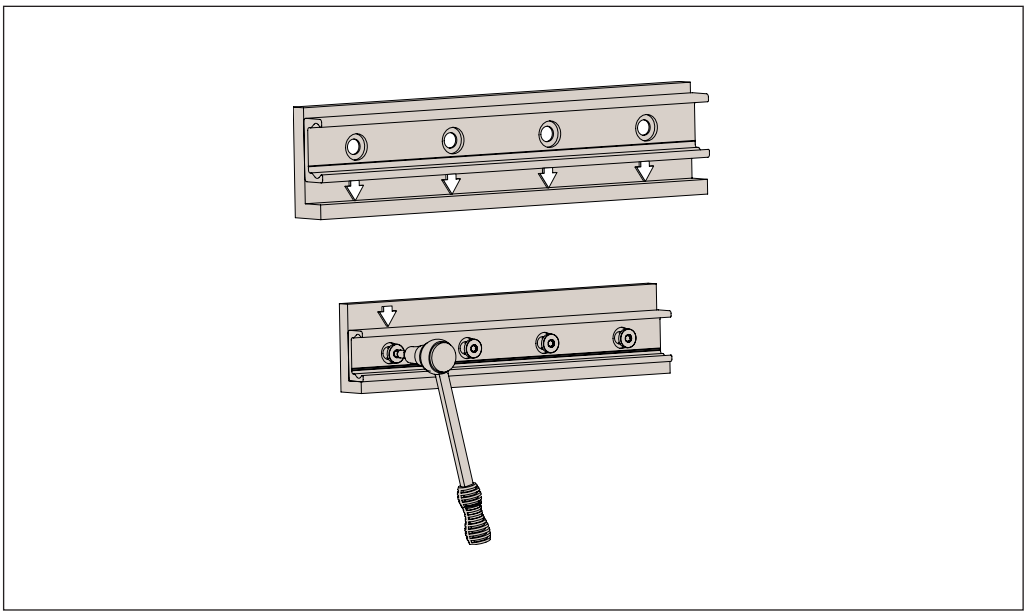


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Rail installation with reference surface as support

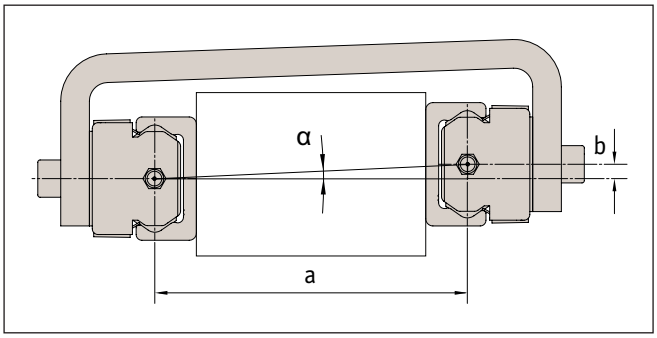
- Remove unevenness, burrs and dirt from the support surface.
- Press the rail against the support surface and insert all screws without tightening them.
- Start tightening the fixing screws to the specified torque on one end of the rail while continuing to hold pressure on the rail against the support surface.

Screw type	Rail size	Tightening torque Nm
M4	18	3
M5	28	9
M6	35	12
M8	43	22



Parallel installation of two rails

If two T rails or a T and U system are installed, the height difference of the two rails must not exceed a certain value, in order to ensure proper guiding. These maximum values result from the maximum allowable twisting angle of the rollers in the raceways. These values account for a load capacity reduction of 30% on the T rail and must be carefully observed.



Size	α
18	1,0 mrad (0,057°)
28	2,5 mrad (0,143°)
35	2,6 mrad (0,149°)
43	3,0 mrad (0,171°)

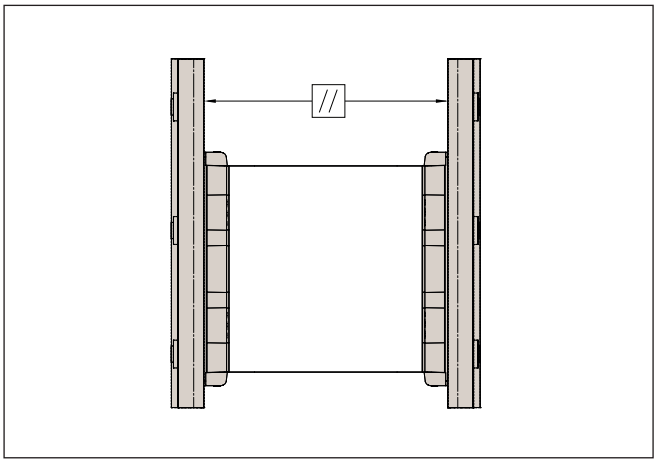
Example:

NTE43: if a = 500 mm

$b = a * \tan\alpha = 1{,}5\text{mm}$

Using two T rails

When using two T rails, the maximum parallelism deviation must not be exceeded. Otherwise stresses can occur, which can result in a reduction in load capacity and service life.



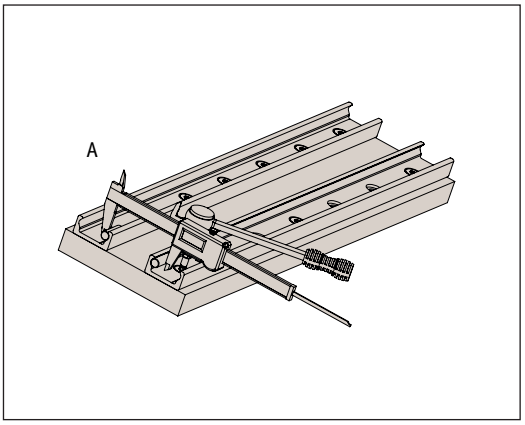
Size	//
18	0,03
28	0,04
35	0,04
43	0,05

For parallelism problems, it is recommended to use a T and U or K and U system, since these combinations compensate for inaccuracies. K_1 is the standard slider preload, K_2 is the increased preload setting where extra rigidity is required.

Flat, parallel installation of two T rails

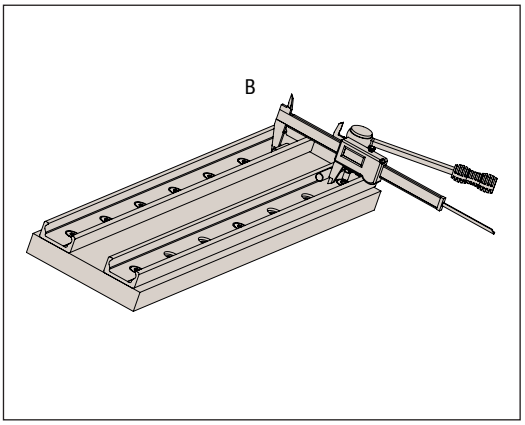
Parallel installation 1

- Clean chips and dirt from the prepared mounting surfaces and fasten the first rail as described in the section on installation of a single rail.
- Fasten the second rail at the ends and the centre.
- Tighten the screws in Position A and measure the distance between the raceways of the two rails, this can be aided by using a dowel positioned in the two raceway grooves.



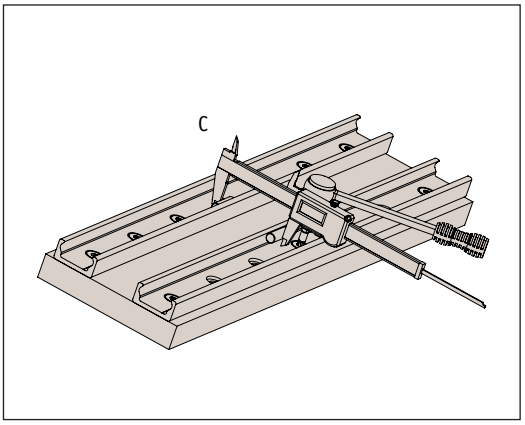
Parallel installation 2

- Fasten the rail in Position B so that the distance between the raceways does not exceed the measured values in Position A while maintaining the tolerances for parallel installation.



Parallel installation 3

- Fasten the screw in Position C so that the distance of the raceways is as close to an average between the two values from A and B as possible.
- Fasten all other screws and check the specified tightening torque of all fixing screws.

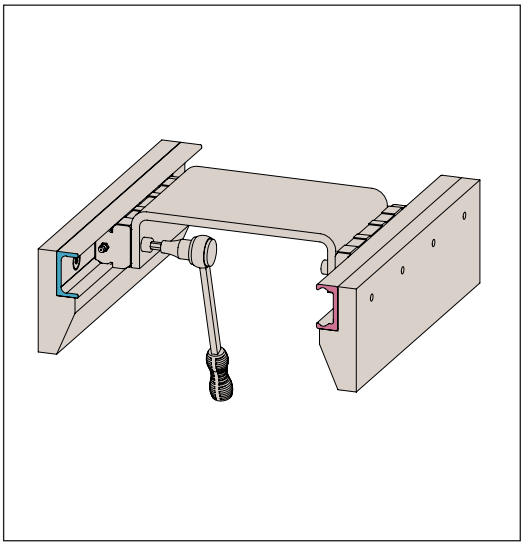


Installation of the T and U systems

When using a two-track parallel linear guide system we recommend the use of a master/slave rail system. The combination of T and U rails for compensating of deviations in parallelism or the K and U system to compensate for deviations in parallelism in two planes.

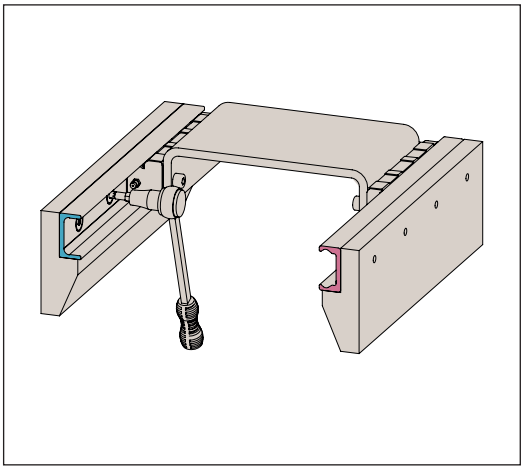
Installation step 1

- For a master/slave rail system the master (T) rail is always installed first. This is then used as a reference for the slave (U type) rail.
- Then proceed as described in the section on installation of a single rail.
- Install the master rail and only tighten the fixing screws slightly.
- Insert the sliders into the rails and install the element to be moved, without tightening the screws.
- Insert the element in the centre of the rails and tighten it to the correct tightening torque.



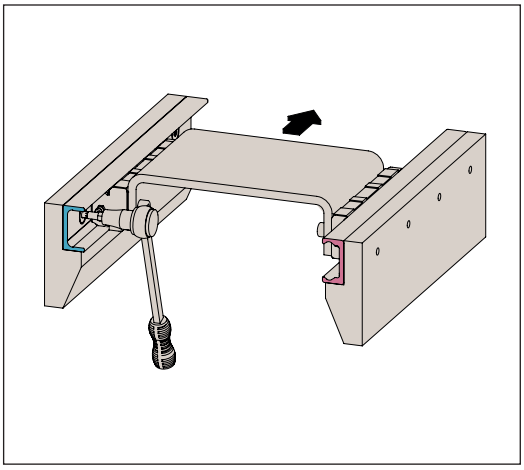
Installation step 2

- Tighten the centre rail fixing screws to the specified torque.

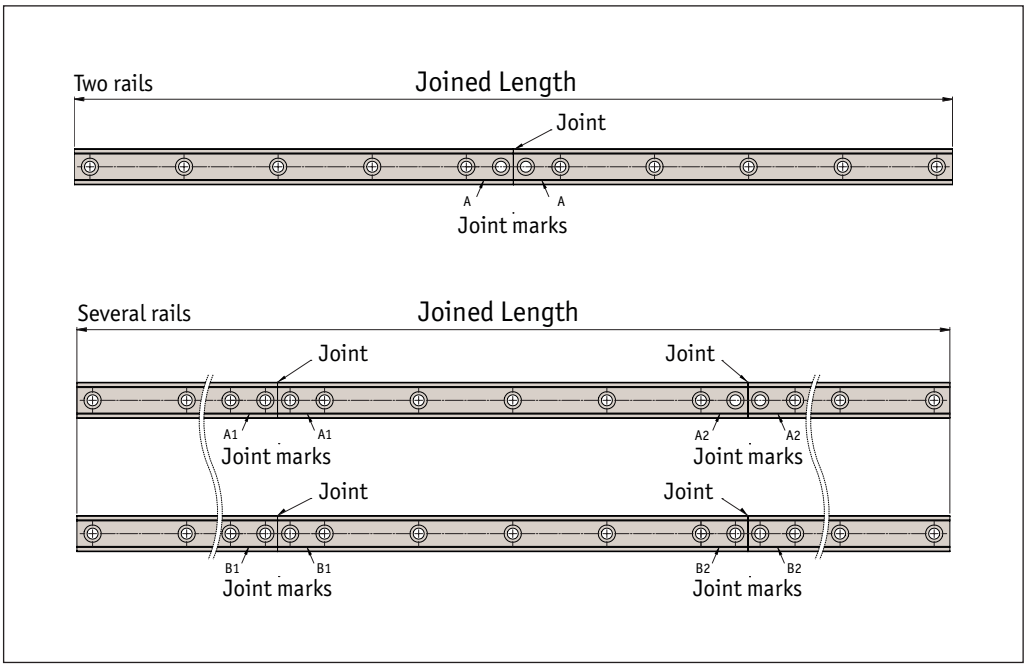


Installation step 3

- Move the element to one end of the rail and start tightening the rest of the screws in the direction away from the slider.



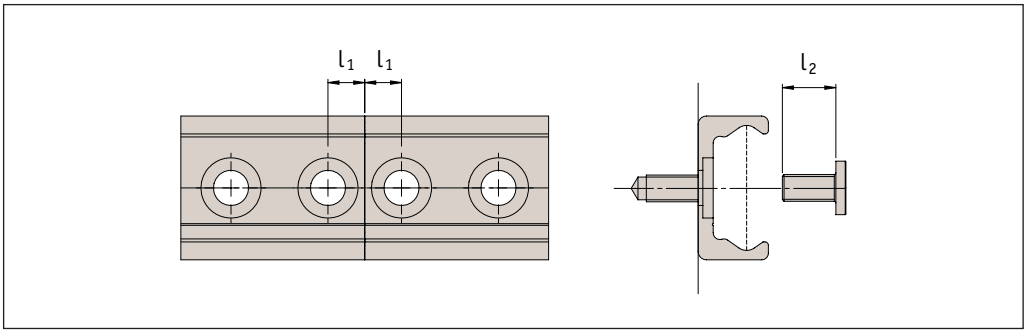
If long guide rails are required, two or more rails can be joined to the desired length. When putting guide rails together, be sure that the register marks shown below are positioned correctly.



General information

Each rail has a one piece maximum length. Longer lengths are achieved by joining two or more rails together (joined rails).

We then machine the rail ends at a right angle to the end face and mark them.
Additional fixing screws are included with the delivery, which ensure a problem-free transition of the slider over the joints, if the following installation procedures are followed. Two additional threaded holes are required in the load-bearing structure. The alignment tool for aligning the rail joint should be ordered (see below).



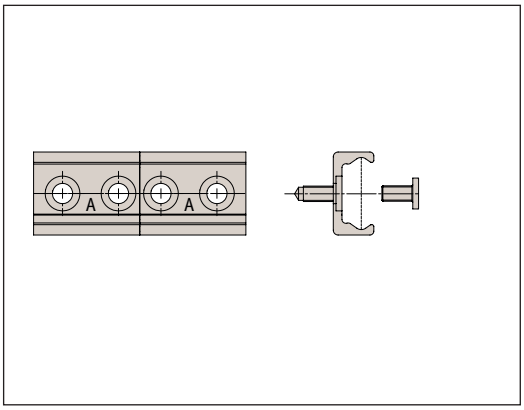
Rail size	l_1	Threaded hole (load bearing structure)	l_2	Alignment tool
18	7	M4	8	L1918.AT18
28	8	M5	10	L1928. AT28
35	10	M6	13	L1935. AT35
43	11	M8	16	L1943. AT43
K43	11	M8	16	L1943. AK43

Installation of joined rails

After the fixing holes for the rails are made in the load-bearing structure, the joined rails can be installed according to the following procedure:

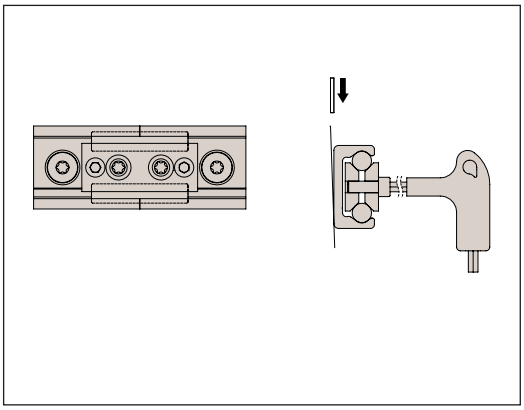
Installation of joined rails step 1

- Fix the individual rails on the mounting surface by tightening all screws except for each last one on the rail joint.
- Install the end fixing screws without tightening them.



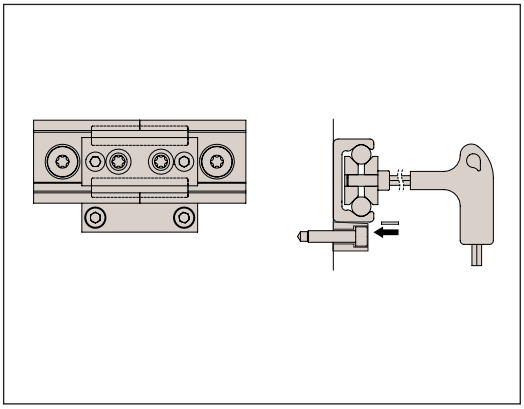
Installation of joined rails step 2

- Place the alignment fixture on the rail joint and tighten both set screws uniformly, until the raceways are aligned.
- After doing this, check if both rail backs lie evenly on the mounting surface. If a gap has formed there, it must be shimmed.



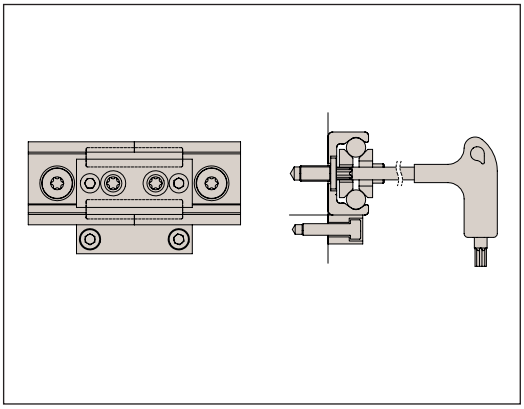
Installation of joined rails step 3

- The bottom of the rails should be supported in the area of the transition. Here a possible existing gap should be looked for, which if exists, should be eliminated by shimming.



Installation of joined rails step 4

- Insert the key through the holes in the alignment tool and tighten the screws on the rail ends.
- For rails with 90° countersunk holes, tighten the remaining screws starting from the rail joint in the direction of the rail centre. For rails with cylindrical countersunk holes, first adjust the rail to an external reference, then proceed as described above.
- Remove the alignment tool from the rail.



ov-compact-rails-joining-rails-b-lnh - Updated - 13-03-2023



The Easy Slide family of linear rails have a compact cross-section and low-friction movement.

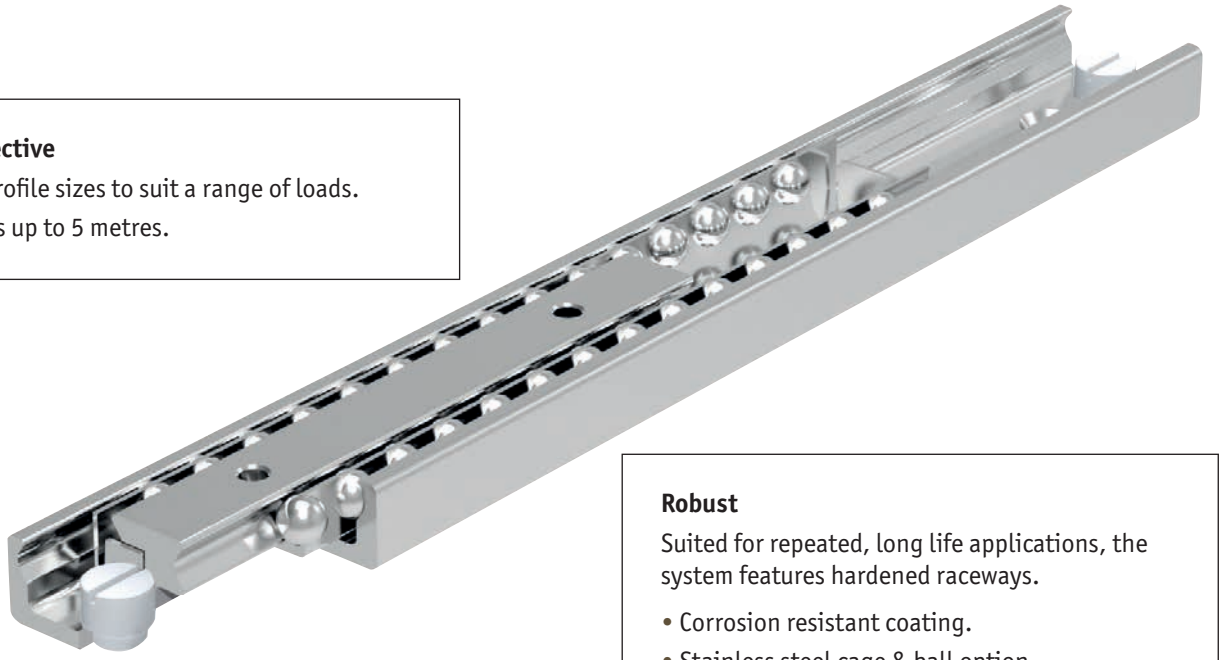
Robust and long service life

Easy Slide's range of cross-sectional rail sizes allow for applications in which high load capacities can be applied, combined with a very long service life.

This is achieved through producing the guide rails and sliders from cold-drawn bearing steel, the ball cage from steel and the balls from hardened bearing steel. The raceways of the guide rails and sliders are induction hardened. The system can be provided with anti-corrosion coating and stainless steel cages and balls.

Cost-effective

- 4 rail profile sizes to suit a range of loads.
- Lengths up to 5 metres.



Robust

Suited for repeated, long life applications, the system features hardened raceways.

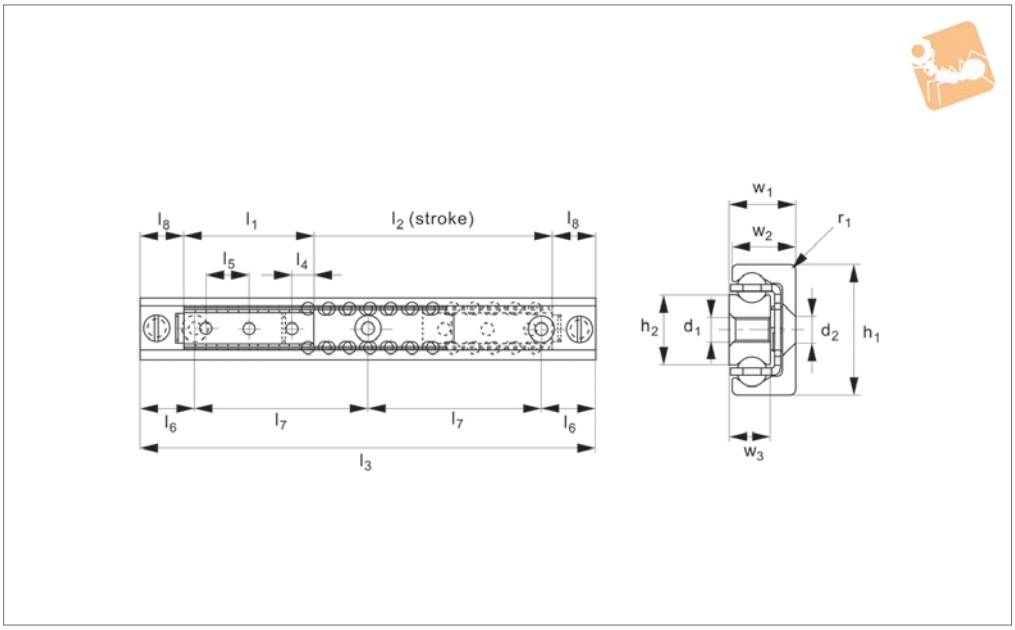
- Corrosion resistant coating.
- Stainless steel cage & ball option.

Horizontal applications only

Please note: For high acceleration/deceleration movement, cage creep may occur especially with long ball cage versions. Please see technical notes to minimise this.



L1972.28



Material

Cold drawn steel, zinc plated (excluding raceways). Induction hardened raceways. High precision, bearing steel balls with steel cages.

Technical Notes

Smooth movement, with very little friction (less than 0,01). Speeds up to 0,8 m/s.
To ensure all fixing holes in the rail are accessible l_1 must be < $(l_3 / 2) - (2 \times l_8)$. To ensure proper smooth movement the stroke, l_2 must be < 7 x l_1.
Rail weight: 1,0 Kg/m.

Tips

Must be mounted to a rigid structure.
Stroke end stops must be fitted.
Only to be used for horizontal movements.

Order No.	l_1	l_3	l_2 stroke	h_1	w_1	d_1	d_2 for	Load $C_{0\,ax}$ N max.	Load $C_{0\,rad}$ N	M_x Nm	M_y Nm	M_z Nm
L1972.S28-060-0030-0130	60	130	30	28	13	M5	M5	2436	3480	18	25	37
L1972.S28-060-0110-0210	60	210	110	28	13	M5	M5	2436	3480	18	25	37
L1972.S28-060-0190-0290	60	290	190	28	13	M5	M5	2436	3480	18	25	37
L1972.S28-060-0270-0370	60	370	270	28	13	M5	M5	2436	3480	18	25	37
L1972.S28-060-0350-0450	60	450	350	28	13	M5	M5	2436	3480	18	25	37
L1972.S28-080-0090-0210	80	210	90	28	13	M5	M5	3248	4640	23	45	65
L1972.S28-080-0170-0290	80	290	170	28	13	M5	M5	3248	4640	23	45	65
L1972.S28-080-0250-0370	80	370	250	28	13	M5	M5	3248	4640	23	45	65
L1972.S28-080-0330-0450	80	450	330	28	13	M5	M5	3248	4640	23	45	65
L1972.S28-080-0410-0530	80	530	410	28	13	M5	M5	3248	4640	23	45	65
L1972.S28-080-0490-0610	80	610	490	28	13	M5	M5	3248	4640	23	45	65
L1972.S28-130-0120-0290	130	290	120	28	13	M5	M5	5278	7540	38	117	166
L1972.S28-130-0200-0370	130	370	200	28	13	M5	M5	5278	7540	38	117	166
L1972.S28-130-0280-0450	130	450	280	28	13	M5	M5	5278	7540	38	117	166
L1972.S28-130-0360-0530	130	530	360	28	13	M5	M5	5278	7540	38	117	166
L1972.S28-130-0440-0610	130	610	440	28	13	M5	M5	5278	7540	38	117	166
L1972.S28-130-0520-0690	130	690	520	28	13	M5	M5	5278	7540	38	117	166
L1972.S28-130-0600-0770	130	770	600	28	13	M5	M5	5278	7540	38	117	166
L1972.S28-130-0680-0850	130	850	680	28	13	M5	M5	5278	7540	38	117	166
L1972.S28-130-0760-0930	130	930	760	28	13	M5	M5	5278	7540	38	117	166
L1972.S28-130-0840-1010	130	1010	840	28	13	M5	M5	5278	7540	38	117	166
L1972.S28-210-0200-0450	210	450	200	28	13	M5	M5	8526	12180	62	300	430
L1972.S28-210-0280-0530	210	530	280	28	13	M5	M5	8526	12180	62	300	430
L1972.S28-210-0360-0610	210	610	360	28	13	M5	M5	8526	12180	62	300	430
L1972.S28-210-0440-0690	210	690	440	28	13	M5	M5	8526	12180	62	300	430
L1972.S28-210-0520-0770	210	770	520	28	13	M5	M5	8526	12180	62	300	430
L1972.S28-210-0600-0850	210	850	600	28	13	M5	M5	8526	12180	62	300	430
L1972.S28-210-0680-0930	210	930	680	28	13	M5	M5	8526	12180	62	300	430
L1972.S28-210-0760-1010	210	1010	760	28	13	M5	M5	8526	12180	62	300	430



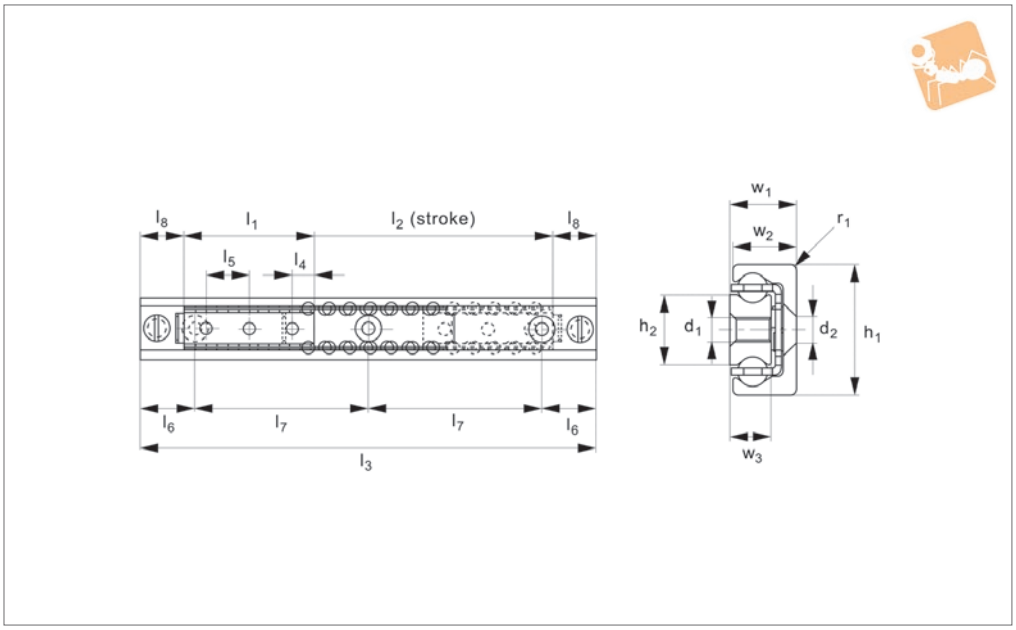
Order No.	l_1	l_3	l_2 stroke	h_1	w_1	d_1	d_2 for	Load $C_{0\,ax}$ N max.	Load $C_{0\,rad}$ N	M_x Nm	M_y Nm	M_z Nm
L1972.S28-210-0920-1170	210	1170	920	28	13	M5	M5	8526	12180	62	300	430
L1972.S28-210-1080-1330	210	1330	1080	28	13	M5	M5	8526	12180	62	300	430
L1972.S28-290-0280-0610	290	610	280	28	13	M5	M5	11774	16820	83	570	815
L1972.S28-290-0360-0690	290	690	360	28	13	M5	M5	11774	16820	83	570	815
L1972.S28-290-0440-0770	290	770	440	28	13	M5	M5	11774	16820	83	570	815
L1972.S28-290-0520-0850	290	850	520	28	13	M5	M5	11774	16820	83	570	815
L1972.S28-290-0600-0930	290	930	600	28	13	M5	M5	11774	16820	83	570	815
L1972.S28-290-0680-1010	290	1010	680	28	13	M5	M5	11774	16820	83	570	815
L1972.S28-290-0840-1170	290	1170	840	28	13	M5	M5	11774	16820	83	570	815
L1972.S28-290-1000-1330	290	1330	1000	28	13	M5	M5	11774	16820	83	570	815
L1972.S28-290-1160-1490	290	1490	1160	28	13	M5	M5	11774	16820	83	570	815
L1972.S28-370-0360-0770	370	770	360	28	13	M5	M5	15022	21460	106	930	1327
L1972.S28-370-0450-0850	370	850	440	28	13	M5	M5	15022	21460	106	930	1327
L1972.S28-370-0520-0930	370	930	520	28	13	M5	M5	15022	21460	106	930	1327
L1972.S28-370-0600-1010	370	1010	600	28	13	M5	M5	15022	21460	106	930	1327
L1972.S28-370-0760-1170	370	1170	760	28	13	M5	M5	15022	21460	106	930	1327
L1972.S28-370-0920-1330	370	1330	920	28	13	M5	M5	15022	21460	106	930	1327
L1972.S28-370-1080-1490	370	1490	1080	28	13	M5	M5	15022	21460	106	930	1327
L1972.S28-450-0440-0930	450	930	440	28	13	M5	M5	18270	26100	130	1374	1960
L1972.S28-450-0520-1010	450	1010	520	28	13	M5	M5	18270	26100	130	1374	1960
L1972.S28-450-0680-1170	450	1170	680	28	13	M5	M5	18270	26100	130	1374	1960
L1972.S28-450-0840-1330	450	1330	840	28	13	M5	M5	18270	26100	130	1374	1960
L1972.S28-450-1000-1490	450	1490	1000	28	13	M5	M5	18270	26100	130	1374	1960
L1972.S28-450-1160-1650	450	1650	1160	28	13	M5	M5	18270	26100	130	1374	1960

Order No.	l_4	l_5	Holes/ slider	l_6	l_7	l_8	h_2	w_2	w_3	R
L1972.S28-060-0030-0130	10	20	3	25	80	20	15	12.25	7.5	1
L1972.S28-060-0110-0210	10	20	3	25	80	20	15	12.25	7.5	1
L1972.S28-060-0190-0290	10	20	3	25	80	20	15	12.25	7.5	1
L1972.S28-060-0270-0370	10	20	3	25	80	20	15	12.25	7.5	1
L1972.S28-060-0350-0450	10	20	3	25	80	20	15	12.25	7.5	1
L1972.S28-080-0090-0210	10	20	4	25	80	20	15	12.25	7.5	1
L1972.S28-080-0170-0290	10	20	4	25	80	20	15	12.25	7.5	1
L1972.S28-080-0250-0370	10	20	4	25	80	20	15	12.25	7.5	1
L1972.S28-080-0330-0450	10	20	4	25	80	20	15	12.25	7.5	1
L1972.S28-080-0410-0530	10	20	4	25	80	20	15	12.25	7.5	1
L1972.S28-080-0490-0610	10	20	4	25	80	20	15	12.25	7.5	1
L1972.S28-130-0120-0290	25	80	2	25	80	20	15	12.25	7.5	1
L1972.S28-130-0200-0370	25	80	2	25	80	20	15	12.25	7.5	1
L1972.S28-130-0280-0450	25	80	2	25	80	20	15	12.25	7.5	1
L1972.S28-130-0360-0530	25	80	2	25	80	20	15	12.25	7.5	1
L1972.S28-130-0440-0610	25	80	2	25	80	20	15	12.25	7.5	1
L1972.S28-130-0520-0690	25	80	2	25	80	20	15	12.25	7.5	1
L1972.S28-130-0600-0770	25	80	2	25	80	20	15	12.25	7.5	1
L1972.S28-130-0680-0850	25	80	2	25	80	20	15	12.25	7.5	1
L1972.S28-130-0760-0930	25	80	2	25	80	20	15	12.25	7.5	1

Easy Slide - Size 28



Order No.	l_4	l_5	Holes/ slider	l_6	l_7	l_8	h_2	w_2	w_3	R
L1972.S28-130-0840-1010	25	80	2	25	80	20	15	12.25	7.5	1
L1972.S28-210-0200-0450	25	80	3	25	80	20	15	12.25	7.5	1
L1972.S28-210-0280-0530	25	80	3	25	80	20	15	12.25	7.5	1
L1972.S28-210-0360-0610	25	80	3	25	80	20	15	12.25	7.5	1
L1972.S28-210-0440-0690	25	80	3	25	80	20	15	12.25	7.5	1
L1972.S28-210-0520-0770	25	80	3	25	80	20	15	12.25	7.5	1
L1972.S28-210-0600-0850	25	80	3	25	80	20	15	12.25	7.5	1
L1972.S28-210-0680-0930	25	80	3	25	80	20	15	12.25	7.5	1
L1972.S28-210-0760-1010	25	80	3	25	80	20	15	12.25	7.5	1
L1972.S28-210-0920-1170	25	80	3	25	80	20	15	12.25	7.5	1
L1972.S28-210-1080-1330	25	80	3	25	80	20	15	12.25	7.5	1
L1972.S28-290-0280-0610	25	80	4	25	80	20	15	12.25	7.5	1
L1972.S28-290-0360-0690	25	80	4	25	80	20	15	12.25	7.5	1
L1972.S28-290-0440-0770	25	80	4	25	80	20	15	12.25	7.5	1
L1972.S28-290-0520-0850	25	80	4	25	80	20	15	12.25	7.5	1
L1972.S28-290-0600-0930	25	80	4	25	80	20	15	12.25	7.5	1
L1972.S28-290-0680-1010	25	80	4	25	80	20	15	12.25	7.5	1
L1972.S28-290-0840-1170	25	80	4	25	80	20	15	12.25	7.5	1
L1972.S28-290-1000-1330	25	80	4	25	80	20	15	12.25	7.5	1
L1972.S28-290-1160-1490	25	80	4	25	80	20	15	12.25	7.5	1
L1972.S28-370-0360-0770	25	80	5	25	80	20	15	12.25	7.5	1
L1972.S28-370-0450-0850	25	80	5	25	80	20	15	12.25	7.5	1
L1972.S28-370-0520-0930	25	80	5	25	80	20	15	12.25	7.5	1
L1972.S28-370-0600-1010	25	80	5	25	80	20	15	12.25	7.5	1
L1972.S28-370-0760-1170	25	80	5	25	80	20	15	12.25	7.5	1
L1972.S28-370-0920-1330	25	80	5	25	80	20	15	12.25	7.5	1
L1972.S28-370-1080-1490	25	80	5	25	80	20	15	12.25	7.5	1
L1972.S28-450-0440-0930	25	80	6	25	80	20	15	12.25	7.5	1
L1972.S28-450-0520-1010	25	80	6	25	80	20	15	12.25	7.5	1
L1972.S28-450-0680-1170	25	80	6	25	80	20	15	12.25	7.5	1
L1972.S28-450-0840-1330	25	80	6	25	80	20	15	12.25	7.5	1
L1972.S28-450-1000-1490	25	80	6	25	80	20	15	12.25	7.5	1
L1972.S28-450-1160-1650	25	80	6	25	80	20	15	12.25	7.5	1





L1972.35

Material
Cold drawn steel, zinc plated (excluding raceways). Induction hardened raceways. High precision, bearing steel balls with steel cages.

Technical Notes
Smooth movement, with very little friction (less than 0,01). Speeds up to 0,8 m/s. To ensure all fixing holes in the rail are accessible l_1 must be < $(l_3 / 2) - (2 \times l_8)$. To ensure proper smooth movement the stroke, l_2 must be < x l_1.
Rail weight: 1,8 Kg/m.

Tips
Must be mounted to a rigid structure.
Stroke end stops must be fitted.
Only to be used for horizontal movements.

Order No.	l_1	l_2	l_3	h_1	w_1	d_1	d_2 for	Load $C_{0\,ax}$ N max.	Load $C_{0\,rad}$ N max.	M_x Nm	M_y Nm	M_z Nm
L1972.S35-130-0110-0290	130	110	290	35	17	M6	M6	6825	9750	50	156	219
L1972.S35-130-0190-0370	130	190	370	35	17	M6	M6	6825	9750	50	156	219
L1972.S35-130-0270-0450	130	270	450	35	17	M6	M6	6825	9750	50	156	219
L1972.S35-130-0350-0530	130	350	530	35	17	M6	M6	6825	9750	50	156	219
L1972.S35-130-0430-0610	130	430	610	35	17	M6	M6	6825	9750	50	156	219
L1972.S35-130-0510-0690	130	510	690	35	17	M6	M6	6825	9750	50	156	219
L1972.S35-130-0590-0770	130	590	770	35	17	M6	M6	6825	9750	50	156	219
L1972.S35-130-0670-0850	130	670	850	35	17	M6	M6	6825	9750	50	156	219
L1972.S35-130-0750-0930	130	750	930	35	17	M6	M6	6825	9750	50	156	219
L1972.S35-130-0830-1010	130	830	1010	35	17	M6	M6	6825	9750	50	156	219
L1972.S35-210-0190-0450	210	190	450	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-210-0270-0530	210	270	530	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-210-0350-0610	210	350	610	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-210-0430-0690	210	430	690	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-210-0510-0770	210	510	770	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-210-0590-0850	210	590	850	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-210-0670-0930	210	670	930	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-210-0750-1010	210	750	1010	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-210-0910-1170	210	910	1170	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-210-1070-1330	210	1070	1330	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-210-1230-1490	210	1230	1490	35	17	M6	M6	11025	15750	87	397	560
L1972.S35-290-0270-0610	290	270	610	35	17	M6	M6	15225	21750	109	745	1086
L1972.S35-290-0350-0690	290	350	690	35	17	M6	M6	15225	21750	109	745	1086
L1972.S35-290-0430-0770	290	430	770	35	17	M6	25	15225	21750	109	745	1086
L1972.S35-290-0510-0850	290	510	850	35	17	M6	M6	15225	21750	109	745	1086
L1972.S35-290-0590-0930	290	590	930	35	17	M6	M6	15225	21750	109	745	1086
L1972.S35-290-0670-1010	290	670	1010	35	17	M6	M6	15225	21750	109	745	1086
L1972.S35-290-0830-1170	290	830	1170	35	17	M6	M6	15225	21750	109	745	1086
L1972.S35-290-0990-1330	290	990	1330	35	17	M6	M6	15225	21750	109	745	1086



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Order No.	l_1	l_2	l_3	h_1	w_1	d_1	d_2 for	Load $C_{0\ ax}$ N max.	Load $C_{0\ rad}$ N max.	M_x Nm	M_y Nm	M_z Nm
L1972.S35-290-1150-1490	290	1150	1490	35	17	M6	M6	15225	21750	109	745	1086
L1972.S35-290-1310-1650	290	1310	1650	35	17	M6	M6	15225	21750	109	745	1086
L1972.S35-370-0350-0770	370	350	770	35	17	M6	M6	19425	27750	140	1206	1720
L1972.S35-370-0430-0850	370	430	850	35	17	M6	M6	19425	27750	140	1206	1720
L1972.S35-370-0510-0930	370	510	930	35	17	M6	M6	19425	27750	140	1206	1720
L1972.S35-370-0590-1010	370	590	1010	35	17	M6	M6	19425	27750	140	1206	1720
L1972.S35-370-0750-1170	370	750	1170	35	17	M6	M6	19425	27750	140	1206	1720
L1972.S35-370-0910-1330	370	910	1330	35	17	M6	M6	19425	27750	140	1206	1720
L1972.S35-370-1070-1490	370	1070	1490	35	17	M6	M6	19425	27750	140	1206	1720
L1972.S35-370-1230-1650	370	1230	1650	35	17	M6	M6	19425	27750	140	1206	1720
L1972.S35-450-0430-930	450	430	930	35	17	M6	M6	23625	33750	169	1783	2541
L1972.S35-450-0510-1010	450	510	1010	35	17	M6	M6	23625	33750	169	1783	2541
L1972.S35-450-0670-1170	450	670	1170	35	17	M6	M6	23625	33750	169	1783	2541
L1972.S35-450-0830-1330	450	830	1330	35	17	M6	M6	23625	33750	169	1783	2541
L1972.S35-450-0990-1490	450	990	1490	35	17	M6	M6	23625	33750	169	1783	2541
L1972.S35-450-1150-1650	450	1150	1650	35	17	M6	M6	23625	33750	169	1783	2541
L1972.S35-450-1310-1810	450	1310	1810	35	17	M6	M6	23625	33750	169	1783	2541
L1972.S35-530-0590-1170	530	590	1170	35	17	M6	M6	27825	39750	198.5	2469	3521
L1972.S35-530-0750-1330	530	750	1330	35	17	M6	M6	27825	39750	198.5	2469	3521
L1972.S35-530-0910-1490	530	910	1490	35	17	M6	M6	27825	39750	198.5	2469	3521
L1972.S35-530-1070-1650	530	1070	1650	35	17	M6	M6	27825	39750	198.5	2469	3521
L1972.S35-530-1230-1810	530	1230	1810	35	17	M6	M6	27825	39750	198.5	2469	3521
L1972.S35-610-0670-1330	610	670	1330	35	17	M6	M6	32025	45750	229	3268	4663
L1972.S35-610-0830-1490	610	830	1490	35	17	M6	M6	32025	45750	229	3268	4663
L1972.S35-610-0990-1650	610	990	1650	35	17	M6	M6	32025	45750	229	3268	4663
L1972.S35-610-1150-1810	610	1150	1810	35	17	M6	M6	32025	45750	229	3268	4663

Order No.	l_4	l_5	Holes/ slider	l_6	l_7	l_8	h_2	w_2	w_3	R
L1972.S35-130-0110-0290	25	80	2	25	80	25	15.8	16	10	2
L1972.S35-130-0190-0370	25	80	2	25	80	25	15.8	16	10	2
L1972.S35-130-0270-0450	25	80	2	25	80	25	15.8	16	10	2
L1972.S35-130-0350-0530	25	80	2	25	80	25	15.8	16	10	2
L1972.S35-130-0430-0610	25	80	2	25	80	25	15.8	16	10	2
L1972.S35-130-0510-0690	25	80	2	25	80	25	15.8	16	10	2
L1972.S35-130-0590-0770	25	80	2	25	80	25	15.8	16	10	2
L1972.S35-130-0670-0850	25	80	2	25	80	25	15.8	16	10	2
L1972.S35-130-0750-0930	25	80	2	25	80	25	15.8	16	10	2
L1972.S35-130-0830-1010	25	80	2	25	80	25	15.8	16	10	2
L1972.S35-210-0190-0450	25	80	3	25	80	25	15.8	16	10	2
L1972.S35-210-0270-0530	25	80	3	25	80	25	15.8	16	10	2
L1972.S35-210-0350-0610	25	80	3	25	80	25	15.8	16	10	2
L1972.S35-210-0430-0690	25	80	3	25	80	25	15.8	16	10	2
L1972.S35-210-0510-0770	25	80	3	25	80	25	15.8	16	10	2
L1972.S35-210-0590-0850	25	80	3	25	80	25	15.8	16	10	2
L1972.S35-210-0670-0930	25	80	3	25	80	25	15.8	16	10	2
L1972.S35-210-0750-1010	25	80	3	25	80	25	15.8	16	10	2
L1972.S35-210-0910-1170	25	80	3	25	80	25	15.8	16	10	2



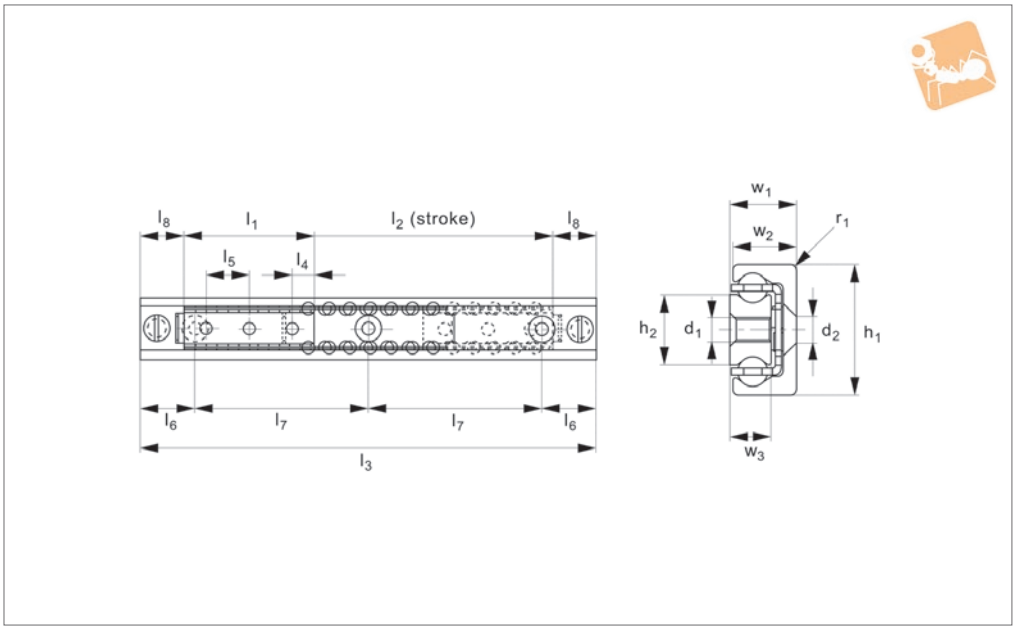
Order No.	l_4	l_5	Holes/ slider	l_6	l_7	l_8	h_2	w_2	w_3	R
L1972.S35-210-1070-1330	25	80	3	25	80	25	15.8	16	10	2
L1972.S35-210-1230-1490	25	80	3	25	80	25	15.8	16	10	2
L1972.S35-290-0270-0610	25	80	4	25	80	25	15.8	16	10	2
L1972.S35-290-0350-0690	25	80	4	25	80	25	15.8	16	10	2
L1972.S35-290-0430-0770	25	80	4	25	80	25	15.8	16	10	2
L1972.S35-290-0510-0850	25	80	4	25	80	25	15.8	16	10	2
L1972.S35-290-0590-0930	25	80	4	25	80	25	15.8	16	10	2
L1972.S35-290-0670-1010	25	80	4	25	80	25	15.8	16	10	2
L1972.S35-290-0830-1170	25	80	4	25	80	25	15.8	16	10	2
L1972.S35-290-0990-1330	25	80	4	25	80	25	15.8	16	10	2
L1972.S35-290-1150-1490	25	80	4	25	80	25	15.8	16	10	2
L1972.S35-290-1310-1650	25	80	4	25	80	25	15.8	16	10	2
L1972.S35-370-0350-0770	25	80	5	25	80	25	15.8	16	10	2
L1972.S35-370-0430-0850	25	80	5	25	80	25	15.8	16	10	2
L1972.S35-370-0510-0930	25	80	5	25	80	25	15.8	16	10	2
L1972.S35-370-0590-1010	25	80	5	25	80	25	15.8	16	10	2
L1972.S35-370-0750-1170	25	80	5	25	80	25	15.8	16	10	2
L1972.S35-370-0910-1330	25	80	5	25	80	25	15.8	16	10	2
L1972.S35-370-1070-1490	25	80	5	25	80	25	15.8	16	10	2
L1972.S35-370-1230-1650	25	80	5	25	80	25	15.8	16	10	2
L1972.S35-450-0430-930	25	80	6	25	80	25	15.8	16	10	2
L1972.S35-450-0510-1010	25	80	6	25	80	25	15.8	16	10	2
L1972.S35-450-0670-1170	25	80	6	25	80	25	15.8	16	10	2
L1972.S35-450-0830-1330	25	80	6	25	80	25	15.8	16	10	2
L1972.S35-450-0990-1490	25	80	6	25	80	25	15.8	16	10	2
L1972.S35-450-1150-1650	25	80	6	25	80	25	15.8	16	10	2
L1972.S35-450-1310-1810	25	80	6	25	80	25	15.8	16	10	2
L1972.S35-530-0590-1170	25	80	7	25	80	25	15.8	16	10	2
L1972.S35-530-0750-1330	25	80	7	25	80	25	15.8	16	10	2
L1972.S35-530-0910-1490	25	80	7	25	80	25	15.8	16	10	2
L1972.S35-530-1070-1650	25	80	7	25	80	25	15.8	16	10	2
L1972.S35-530-1230-1810	25	80	7	25	80	25	15.8	16	10	2
L1972.S35-610-0670-1330	25	80	8	25	80	25	15.8	16	10	2
L1972.S35-610-0830-1490	25	80	8	25	80	25	15.8	16	10	2



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Order No.	l_4	l_5	Holes/ slider	l_6	l_7	l_8	h_2	w_2	w_3	R
L1972.S35-610-0990-1650	25	80	8	25	80	25	15.8	16	10	2
L1972.S35-610-1150-1810	25	80	8	25	80	25	15.8	16	10	2





L1972.43

Material
Cold drawn steel, zinc plated (excluding raceways). Induction hardened raceways. High precision, bearing steel balls with steel cages.

Technical Notes
Smooth movement, with very little friction (less than 0,01). Speeds up to 0,8 m/s. To ensure all fixing holes in the rail are accessible l_1 must be < (l_3 / 2) - (2 x l_8). To ensure proper smooth movement the stroke, l_2 must be < 7 x l_1.
Rail weight: 2,6 Kg/m.

Tips
Must be mounted to a rigid structure.
Stroke end stops must be fitted.
Only to be used for horizontal movements.

Order No.	l_1	l_2	l_3	h_1	w_1	d_1	d_2 for	Load $C_{0\,ax}$ N max.	Load $C_{0\,rad}$ N max.	M_x Nm	M_y Nm	M_z Nm
L1972.S43-130-0110-0290	130	110	290	43	22	M8	M8	9737	13910	99.5	215	301
L1972.S43-130-0190-0370	130	190	370	43	22	M8	M8	9737	13910	99.5	215	301
L1972.S43-130-0270-0450	130	270	450	43	22	M8	M8	9737	13910	99.5	215	301
L1972.S43-130-0350-0530	130	350	530	43	22	M8	M8	9737	13910	99.5	215	301
L1972.S43-130-0430-0610	130	430	610	43	22	M8	M8	9737	13910	99.5	215	301
L1972.S43-130-0510-0690	130	510	690	43	22	M8	M8	9737	13910	99.5	215	301
L1972.S43-130-0590-0770	130	590	770	43	22	M8	M8	9737	13910	99.5	215	301
L1972.S43-130-0670-0850	130	670	850	43	22	M8	M8	9737	13910	99.5	215	301
L1972.S43-130-0750-0930	130	750	930	43	22	M8	M8	9737	13910	99.5	215	301
L1972.S43-130-0830-1010	130	830	1010	43	22	M8	M8	9737	13910	99.5	215	301
L1972.S43-210-0190-0450	210	190	450	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-0270-0530	210	270	530	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-0350-0610	210	350	610	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-0430-0690	210	430	690	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-0510-0770	210	510	770	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-0590-0850	210	590	850	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-0670-0930	210	670	930	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-0750-1010	210	750	1010	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-0910-1170	210	910	1170	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-1070-1330	210	1070	1330	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-1230-1490	210	1230	1490	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-210-1390-1650	210	1390	1650	43	22	M8	M8	15729	22470	157	552	786
L1972.S43-290-0270-0610	290	270	610	43	22	M8	M8	21721	31030	217	1053	1500
L1972.S43-290-0350-0690	290	350	690	43	22	M8	M8	21721	31030	217	1053	1500
L1972.S43-290-0430-0770	290	430	770	43	22	M8	M8	21721	31030	217	1053	1500
L1972.S43-290-0510-0850	290	510	850	43	22	M8	M8	21721	31030	217	1053	1500
L1972.S43-290-0590-0930	290	590	930	43	22	M8	M8	21721	31030	217	1053	1500
L1972.S43-290-0670-1010	290	670	1010	43	22	M8	M8	21721	31030	217	1053	1500
L1972.S43-290-0830-1170	290	830	1170	43	22	M8	M8	21721	31030	217	1053	1500

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Order No.	l_1	l_2	l_3	h_1	w_1	d_1	d_2 for	Load $C_{0\ ax}$ N max.	Load $C_{0\ rad}$ N max.	M_x Nm	M_y Nm	M_z Nm
L1972.S43-290-0990-1330	290	990	1330	43	22	M8	M8	21721	31030	217	1053	1500
L1972.S43-290-1150-1490	290	1150	1490	43	22	M8	M8	21721	31030	217	1053	1500
L1972.S43-290-1310-1650	290	1310	1650	43	22	M8	M8	21721	31030	217	1053	1500
L1972.S43-290-1470-1810	290	1470	1810	25	22	M8	M8	21721	31030	217	1053	1500
L1972.S43-370-0350-0770	370	350	770	43	22	M8	M8	27713	39590	275	1712	2441
L1972.S43-370-0430-0850	370	430	850	43	22	M8	M8	27713	39590	275	1712	2441
L1972.S43-370-0510-0930	370	510	930	43	22	M8	M8	27713	39590	275	1712	2441
L1972.S43-370-0590-1010	370	590	1010	43	22	M8	M8	27713	39590	275	1712	2441
L1972.S43-370-0750-1170	370	750	1170	43	22	M8	M8	27713	39590	275	1712	2441
L1972.S43-370-0910-1330	370	910	1330	43	22	M8	M8	27713	39590	275	1712	2441
L1972.S43-370-1070-1490	370	1070	1490	43	22	M8	M8	27713	39590	275	1712	2441
L1972.S43-370-1230-1650	370	1230	1650	43	22	M8	M8	27713	39590	275	1712	2441
L1972.S43-370-1390-1810	370	1390	1810	43	22	M8	M8	27713	39590	275	1712	2441
L1972.S43-450-0430-0930	450	430	930	43	22	M8	M8	33705	48150	334.5	2531	3611
L1972.S43-450-0510-1010	450	510	1010	43	22	M8	M8	33705	48150	334.5	2531	3611
L1972.S43-450-0670-1170	450	670	1170	43	22	M8	M8	33705	48150	334.5	2531	3611
L1972.S43-450-0830-1330	450	830	1330	43	22	M8	M8	33705	48150	334.5	2531	3611
L1972.S43-450-0990-1490	450	990	1490	43	22	M8	M8	33705	48150	334.5	2531	3611
L1972.S43-450-1150-1650	450	1150	1650	43	22	M8	M8	33705	48150	334.5	2531	3611
L1972.S43-450-1310-1810	450	1310	1810	43	22	M8	M8	33705	48150	334.5	2531	3611
L1972.S43-450-1470-1970	450	1470	1970	43	22	M8	M8	33705	48150	334.5	2531	3611
L1972.S43-530-0590-1170	530	590	1170	43	22	M8	M8	39697	56710	392	3511	5009
L1972.S43-530-0750-1330	530	750	1330	43	22	M8	M8	39697	56710	392	3511	5009
L1972.S43-530-0910-1490	530	910	1490	43	22	M8	M8	39697	56710	392	3511	5009
L1972.S43-530-1070-1650	530	1070	1650	43	22	M8	M8	39697	56710	392	3511	5009
L1972.S43-530-1230-1810	530	1230	1810	43	22	M8	M8	39697	56710	392	3511	5009
L1972.S43-530-1390-1970	530	1390	1970	43	22	M8	M8	39697	56710	392	3511	5009
L1972.S43-610-0670-1330	610	670	1330	43	22	M8	M8	45689	65270	452	4650	6636
L1972.S43-610-0830-1490	610	830	1490	43	22	M8	M8	45689	65270	452	4650	6636
L1972.S43-610-0990-1650	610	990	1650	43	22	M8	M8	45689	65270	452	4650	6636
L1972.S43-610-1150-1810	610	1150	1810	43	22	M8	M8	45689	65270	452	4650	6636
L1972.S43-610-1310-1970	610	1310	1970	43	22	M8	M8	45689	65270	452	4650	6636

Order No.	l_4	l_5	Holes/ slider	l_6	l_7	l_8	h_2	w_2	w_3	R
L1972.S43-130-0110-0290	25	80	2	25	80	25	23	21	13.5	2.5
L1972.S43-130-0190-0370	25	80	2	25	80	25	23	21	13.5	2.5
L1972.S43-130-0270-0450	25	80	2	25	80	25	23	21	13.5	2.5
L1972.S43-130-0350-0530	25	80	2	25	80	25	23	21	13.5	2.5
L1972.S43-130-0430-0610	25	80	2	25	80	25	23	21	13.5	2.5
L1972.S43-130-0510-0690	25	80	2	25	80	25	23	21	13.5	2.5
L1972.S43-130-0590-0770	25	80	2	25	80	25	23	21	13.5	2.5
L1972.S43-130-0670-0850	25	80	2	25	80	25	23	21	13.5	2.5
L1972.S43-130-0750-0930	25	80	2	25	80	25	23	21	13.5	2.5
L1972.S43-130-0830-1010	25	80	2	25	80	25	23	21	13.5	2.5
L1972.S43-210-0190-0450	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-210-0270-0530	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-210-0350-0610	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-210-0430-0690	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-210-0510-0770	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-210-0590-0850	25	80	3	25	80	25	23	21	13.5	2.5

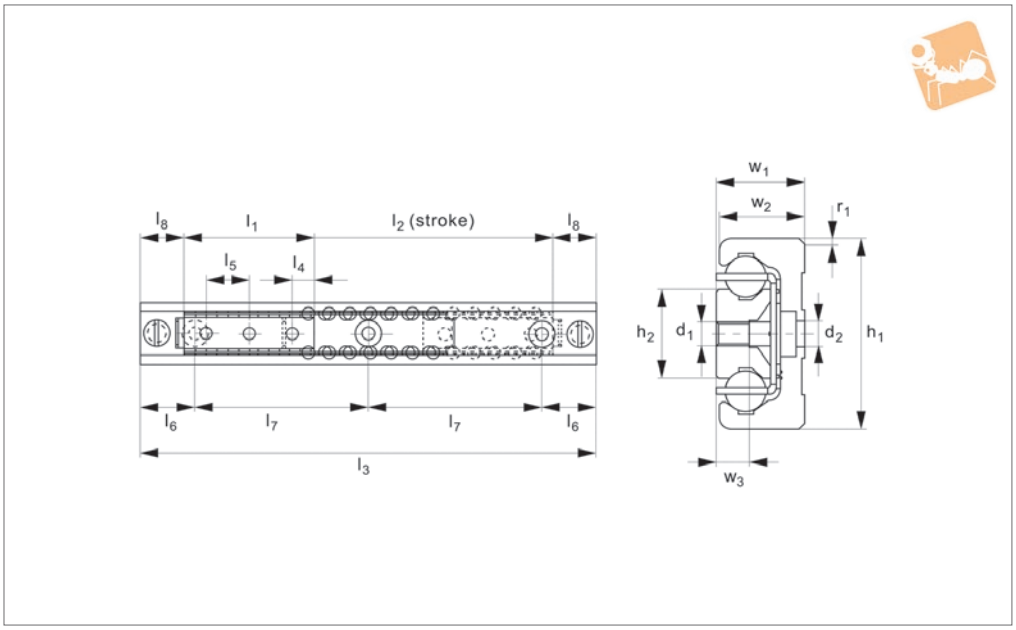


Order No.	l_4	l_5	Holes/ slider	l_6	l_7	l_8	h_2	w_2	w_3	R
L1972.S43-210-0670-0930	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-210-0750-1010	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-210-0910-1170	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-210-1070-1330	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-210-1230-1490	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-210-1390-1650	25	80	3	25	80	25	23	21	13.5	2.5
L1972.S43-290-0270-0610	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-290-0350-0690	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-290-0430-0770	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-290-0510-0850	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-290-0590-0930	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-290-0670-1010	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-290-0830-1170	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-290-0990-1330	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-290-1150-1490	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-290-1310-1650	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-290-1470-1810	25	80	4	25	80	25	23	21	13.5	2.5
L1972.S43-370-0350-0770	25	80	5	25	80	25	23	21	13.5	2.5
L1972.S43-370-0430-0850	25	80	5	25	80	25	23	21	13.5	2.5
L1972.S43-370-0510-0930	25	80	5	25	80	25	23	21	13.5	2.5
L1972.S43-370-0590-1010	25	80	5	25	80	25	23	21	13.5	2.5
L1972.S43-370-0750-1170	25	80	5	25	80	25	23	21	13.5	2.5
L1972.S43-370-0910-1330	25	80	5	25	80	25	23	21	13.5	2.5
L1972.S43-370-1070-1490	25	80	5	25	80	25	23	21	13.5	2.5
L1972.S43-370-1230-1650	25	80	5	25	80	25	23	21	13.5	2.5
L1972.S43-370-1390-1810	25	80	5	25	80	25	23	21	13.5	2.5
L1972.S43-450-0430-0930	25	80	6	25	80	25	23	21	13.5	2.5
L1972.S43-450-0510-1010	25	80	6	25	80	25	23	21	13.5	2.5
L1972.S43-450-0670-1170	25	80	6	25	80	25	23	21	13.5	2.5
L1972.S43-450-0830-1330	25	80	6	25	80	25	23	21	13.5	2.5
L1972.S43-450-0990-1490	25	80	6	25	80	25	23	21	13.5	2.5
L1972.S43-450-1150-1650	25	80	6	25	80	25	23	21	13.5	2.5
L1972.S43-450-1310-1810	25	80	6	25	80	25	23	21	13.5	2.5
L1972.S43-450-1470-1970	25	80	6	25	80	25	23	21	13.5	2.5

Easy Slide - Size 43



Order No.	l_4	l_5	Holes/ slider	l_6	l_7	l_8	h_2	w_2	w_3	R
L1972.S43-530-0590-1170	25	80	7	25	80	25	23	21	13.5	2.5
L1972.S43-530-0750-1330	25	80	7	25	80	25	23	21	13.5	2.5
L1972.S43-530-0910-1490	25	80	7	25	80	25	23	21	13.5	2.5
L1972.S43-530-1070-1650	25	80	7	25	80	25	23	21	13.5	2.5
L1972.S43-530-1230-1810	25	80	7	25	80	25	23	21	13.5	2.5
L1972.S43-530-1390-1970	25	80	7	25	80	25	23	21	13.5	2.5
L1972.S43-610-0670-1330	25	80	8	25	80	25	23	21	13.5	2.5
L1972.S43-610-0830-1490	25	80	8	25	80	25	23	21	13.5	2.5
L1972.S43-610-0990-1650	25	80	8	25	80	25	23	21	13.5	2.5
L1972.S43-610-1150-1810	25	80	8	25	80	25	23	21	13.5	2.5
L1972.S43-610-1310-1970	25	80	8	25	80	25	23	21	13.5	2.5





L1972.63

Material
Cold drawn steel, zinc plated (excluding raceways). Induction hardened raceways. High precision, bearing steel balls with steel cages.

Technical Notes
To ensure all fixing holes in the rail are accessible l_1 must be < (l_3 / 2) - (2 x l_8). To ensure proper smooth movement the stroke, l_2 must be < x l_1.

Tips
Must be mounted to a rigid structure.
Stroke end stops must be fitted.
Only to be used for horizontal movements.

Order No.	l_1	l_2	l_3	h_1	w_1	d_1	Load $C_{0\ ax}$ N max.	Load $C_{0\ rad}$ N max.	M_x Nm	M_y Nm	M_z Nm	l_4
L1972.SN63-130-0400-0610	130	400	610	63	29	M8	18200	26000	238,8	394	563	25
L1972.SN63-130-0480-0690	130	480	690	63	29	M8	18200	26000	238,8	394	563	25
L1972.SN63-130-0560-0770	130	560	770	63	29	M8	18200	26000	238,8	394	563	25
L1972.SN63-130-0640-0850	130	640	850	63	29	M8	18200	26000	238,8	394	563	25
L1972.SN63-130-0720-0930	130	720	930	63	29	M8	18200	26000	238,8	394	563	25
L1972.SN63-130-0800-1010	130	800	1010	63	29	M8	18200	26000	238,8	394	563	25
L1972.SN63-210-0320-0610	210	320	610	63	29	M8	29400	42000	385,8	1029	1470	25
L1972.SN63-210-0400-0690	210	400	690	63	29	M8	29400	42000	385,8	1029	1470	25
L1972.SN63-210-0480-0770	210	480	770	63	29	M8	29400	42000	385,8	1029	1470	25
L1972.SN63-210-0560-0850	210	560	850	63	29	M8	29400	42000	385,8	1029	1470	25
L1972.SN63-210-0640-0930	210	640	930	63	29	M8	29400	42000	385,8	1029	1470	25
L1972.SN63-210-0720-1010	210	720	1010	63	29	M8	29400	42000	385,8	1029	1470	25
L1972.SN63-210-0880-1170	210	880	1170	63	29	M8	29400	42000	385,8	1029	1470	25
L1972.SN63-210-1040-1330	210	1040	1330	63	29	M8	29400	42000	385,8	1029	1470	25
L1972.SN63-210-1200-1490	210	1200	1490	63	29	M8	29400	42000	385,8	1029	1470	25
L1972.SN63-210-1360-1650	210	1360	1650	63	29	M8	29400	42000	385,8	1029	1470	25
L1972.SN63-290-0240-0610	290	240	610	63	29	M8	40600	58000	532,8	1962	2803	25
L1972.SN63-290-0320-0690	290	320	690	63	29	M8	40600	58000	532,8	1962	2803	25
L1972.SN63-290-0400-0770	290	400	770	63	29	M8	40600	58000	532,8	1962	2803	25
L1972.SN63-290-0480-0850	290	480	850	63	29	M8	40600	58000	532,8	1962	2803	25
L1972.SN63-290-0560-0930	290	560	930	63	29	M8	40600	58000	532,8	1962	2803	25
L1972.SN63-290-0640-1010	290	640	1010	63	29	M8	40600	58000	532,8	1962	2803	25
L1972.SN63-290-0800-1170	290	800	1170	63	29	M8	40600	58000	532,8	1962	2803	25
L1972.SN63-290-0960-1330	290	960	1330	63	29	M8	40600	58000	532,8	1962	2803	25
L1972.SN63-290-1120-1490	290	1120	1490	63	29	M8	40600	58000	532,8	1962	2803	25
L1972.SN63-290-1280-1650	290	1280	1650	63	29	M8	40600	58000	532,8	1962	2803	25
L1972.SN63-370-0320-0770	370	320	770	63	29	M8	51800	74000	679,8	3194	4563	25
L1972.SN63-370-0400-0850	370	400	850	63	29	M8	51800	74000	679,8	3194	4563	25
L1972.SN63-370-0480-0930	370	480	930	63	29	M8	51800	74000	679,8	3194	4563	25



Easy Slide - Size 63



Order No.	l_1	l_2	l_3	h_1	w_1	d_1	Load $C_{0\,ax}$ N max.	Load $C_{0\,rad}$ N max.	M_x Nm	M_y Nm	M_z Nm	l_4
L1972.SN63-370-0560-1010	370	560	1010	63	29	M8	74000	74000	679,8	3194	4563	25
L1972.SN63-370-0720-1170	370	720	1170	63	29	M8	51800	74000	679,8	3194	4563	25
L1972.SN63-370-0880-1330	370	880	1330	63	29	M8	51800	74000	679,8	3194	4563	25
L1972.SN63-370-1040-1490	370	1040	1490	63	29	M8	51800	74000	679,8	3194	4563	25
L1972.SN63-370-1200-1650	370	1200	1650	63	29	M8	51800	74000	679,8	3194	4563	25
L1972.SN63-370-1360-1810	370	1360	1810	63	29	M8	51800	74000	679,8	3194	4563	25
L1972.SN63-450-0400-0930	450	400	930	63	29	M8	63000	90000	826,7	4725	6750	25
L1972.SN63-450-0480-1010	450	480	1010	63	29	M8	63000	90000	826,7	4725	6750	25
L1972.SN63-450-0640-1170	450	640	1170	63	29	M8	63000	90000	826,7	4725	6750	25
L1972.SN63-450-0800-1330	450	800	1330	63	29	M8	63000	90000	826,7	4725	6750	25
L1972.SN63-450-0960-1490	450	960	1490	63	29	M8	63000	90000	826,7	4725	6750	25
L1972.SN63-450-1120-1650	450	1120	1650	63	29	M8	63000	90000	826,7	4725	6750	25
L1972.SN63-450-1280-1810	450	1280	1810	63	29	M8	63000	90000	826,7	4725	6750	25
L1972.SN63-530-0560-1170	530	560	1170	63	29	M8	74200	106000	937,7	6554	9363	25
L1972.SN63-530-0720-1330	530	720	1330	63	29	M8	74200	106000	937,7	6554	9363	25
L1972.SN63-530-0880-1490	530	880	1490	63	29	M8	74200	106000	937,7	6554	9363	25
L1972.SN63-530-1040-1650	530	1040	1650	63	29	M8	74200	106000	937,7	6554	9363	25
L1972.SN63-530-1200-1810	530	1200	1810	63	29	M8	74200	106000	937,7	6554	9363	25
L1972.SN63-530-1360-1970	530	1360	1970	63	29	M8	74200	106000	937,7	6554	74200	25
L1972.SN63-610-0640-1330	610	640	1330	63	29	M8	85400	122000	1120,7	8682	12403	25
L1972.SN63-610-0800-1490	610	800	1490	63	29	M8	85400	122000	1120,7	8682	12403	25
L1972.SN63-610-0960-1650	610	960	1650	63	29	M8	85400	122000	1120,7	8682	12403	25
L1972.SN63-610-1120-1810	610	1120	1810	63	29	M8	85400	122000	1120,7	8682	12403	25
L1972.SN63-610-1280-1970	610	1280	1970	63	29	M8	85400	122000	1120,7	8682	12403	25

Order No.	l_5	Holes/ slider	l_6	l_7	l_8	h_2	w_2	w_3	R
L1972.SN63-130-0400-0610	80	2	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-130-0480-0690	80	2	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-130-0560-0770	80	2	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-130-0640-0850	80	2	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-130-0720-0930	80	2	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-130-0800-1010	80	2	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-210-0320-0610	80	3	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-210-0400-0690	80	3	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-210-0480-0770	80	3	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-210-0560-0850	80	3	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-210-0640-0930	80	3	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-210-0720-1010	80	3	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-210-0880-1170	80	3	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-210-1040-1330	80	3	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-210-1200-1490	80	3	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-210-1360-1650	80	3	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-290-0240-0610	80	4	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-290-0320-0690	80	4	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-290-0400-0770	80	4	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-290-0480-0850	80	4	25	80	40	29.3	28	10.5	2 x 45



Order No.	l_5	Holes/ slider	l_6	l_7	l_8	h_2	w_2	w_3	R
L1972.SN63-290-0560-0930	80	4	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-290-0640-1010	80	4	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-290-0800-1170	80	4	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-290-0960-1330	80	4	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-290-1120-1490	80	4	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-290-1280-1650	80	4	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-370-0320-0770	80	5	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-370-0400-0850	80	5	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-370-0480-0930	80	5	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-370-0560-1010	80	5	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-370-0720-1170	80	5	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-370-0880-1330	80	5	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-370-1040-1490	80	5	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-370-1200-1650	80	5	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-370-1360-1810	80	5	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-450-0400-0930	80	6	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-450-0480-1010	80	6	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-450-0640-1170	80	6	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-450-0800-1330	80	6	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-450-0960-1490	80	6	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-450-1120-1650	80	6	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-450-1280-1810	80	6	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-530-0560-1170	80	7	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-530-0720-1330	80	7	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-530-0880-1490	80	7	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-530-1040-1650	80	7	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-530-1200-1810	80	7	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-530-1360-1970	80	7	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-610-0640-1330	80	8	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-610-0800-1490	80	8	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-610-0960-1650	80	8	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-610-1120-1810	80	8	25	80	40	29.3	28	10.5	2 x 45
L1972.SN63-610-1280-1970	80	8	25	80	40	29.3	28	10.5	2 x 45

Easy Slide Rails

Specifications & applications



Specifications

- Available rail widths: 22, 28, 35, 43mm.
- Induction hardened raceways.
- Maximum rail length 1970mm.
- Rails and sliders made of cold-drawn steel.
- Balls made of hardened steel.
- Maximum operating speed 0,8 m/s.
- Temperature range -30°C to +140°C.
- Coefficient of friction ~ 0.01
- Electrolytic zinc-plating to ISO 2081; increased anti-corrosion protection and stainless steel balls on request.
- Linear accuracy 0,1mm/m stroke.
- For horizontal installation only.
- External end stops must be used.
- Fixing screws of class 10,9 must be used for all linear bearings.

Applications

Food, drink & pharmaceuticals
Food handling conveyors
pharmaceutical factories
stainless display equipment

Special purpose & packaging machines
Precision positioning systems
handling units • robotic systems
cutting machines

Logistics solutions
Container extensions
heavy duty extending systems
sliding doors

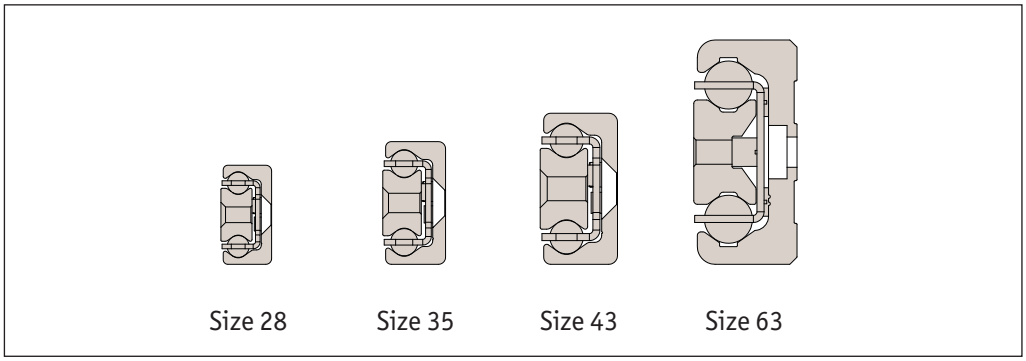
Construction
Seating
sliding panels

Transport (automotive)
Ambulance sliding systems
fire fighting vehicles
sliding panels

Transport (rail)
Seat adjustment
sliding doors
battery removal units

Medical technology
X-ray equipment
dental chairs
bed extensions

Rail Sizes



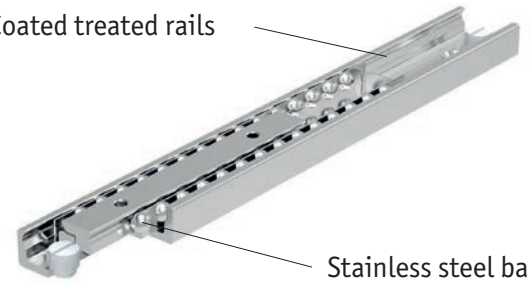
ov-easy-slide-specifications-&-applications-lnh-Updated-15-03-2023

Anti-corrosion treatments

The telescopic slides have a standard electrolytic zinc plated coating (to ISO 2081).
We offer a number of alternatives to increase the anti-corrosion protection including nickel plating.

However, our preferred and most effective solution to inhibit corrosion is to apply a special corrosion resistant (ATCoat) plating to the rails and sliders and to combine this with stainless steel ball bearings.

This coating is applied after the zinc plating process and is a special trivalent chromium passivation that is approximately 4 microns thick (and is free of Chromium VI).
This applies a nano-particle coating and has extremely good results of 200 hours in salt spray tests before any signs of white rust.



Use with stainless steel fixing screws, strength class 10,9

Salt Spray Test (to DIN EN ISO 9227 NSS)



ATCoated after 720 hours salt spray



Chemical nickel plating after 360 hours

Testing conducted by independent institute

The corrosion resistant alloy coating on the telescopic slides is a soft coating and will (over time) wear off the raceways (which are subject to loads from the ball bearings) – this can be seen sometimes by a thin line on the raceways.
However, lubricating the raceways with grease (as recommended) ensures, as far as possible, the good corrosion properties of the overall coating.

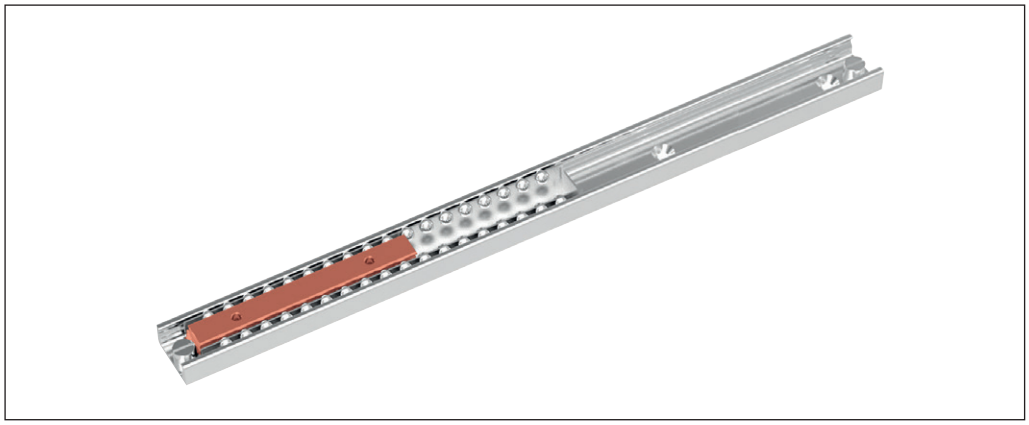
This coating is often re-applied to linear guides and telescopic pullouts in the food and chemical industries; where they can be exposed to corrosive or aggressive environments.

The ATCoat has received USDA approved and also EU approved No.1935/2004 for use in the food industry.

Easy Slide Rails from Automotion Components

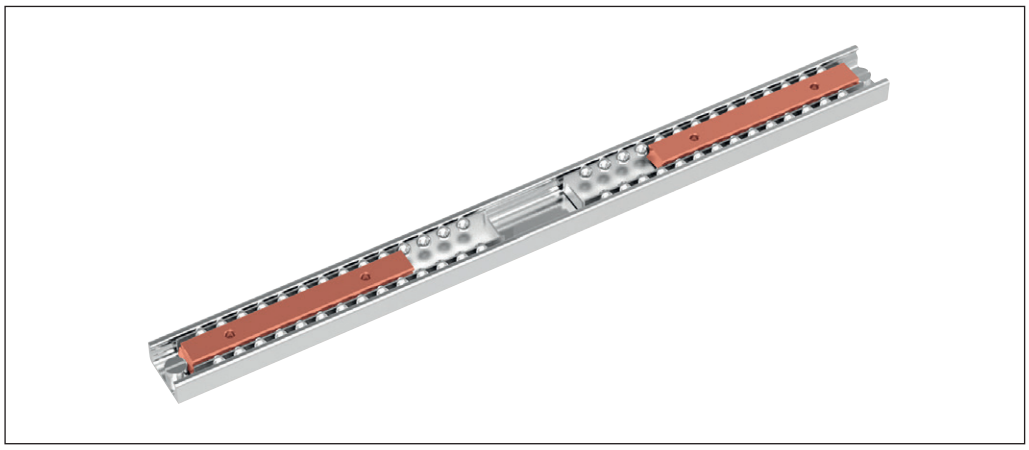
Single sliders

L1972 - This linear bearing consists of a guide rail and a slider that runs within the ball cage in the guide rail. High load capacities, compact cross-sections and simple and easy mounting characterise the series. Slider lengths can vary here as well and then form a total unit, which implements the required stroke.



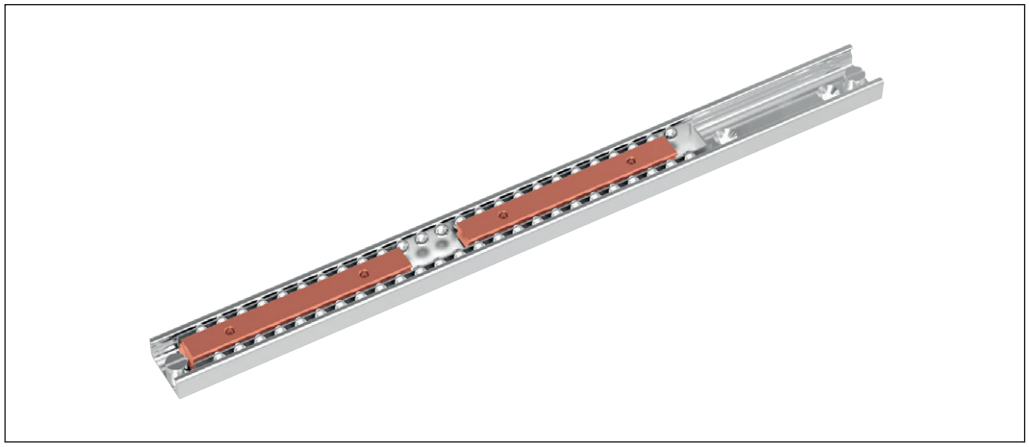
Multiple independent sliders

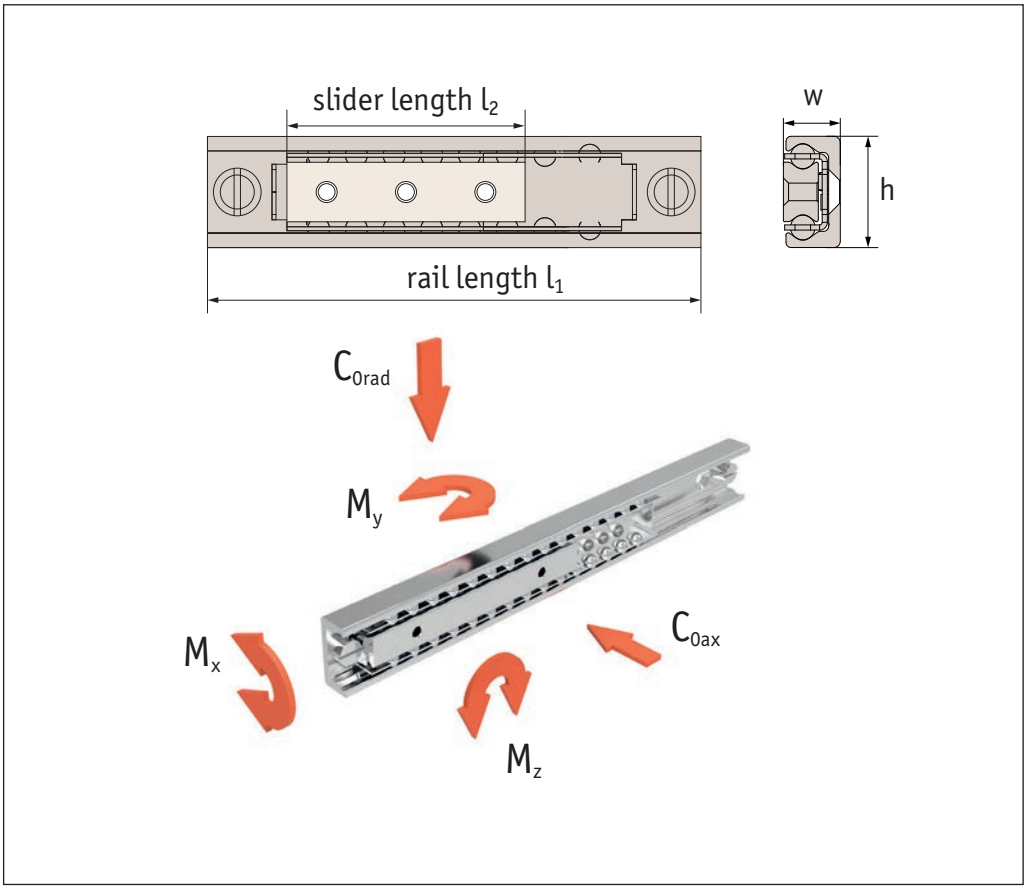
L1972.MI - Variant with several sliders, which each runs in its own ball cage, independently of each other, in the guide rail. Slider length and stroke for each slider can be different within one rail.



Multiple synchronised sliders

L1972.MS - Several sliders run in a common ball cage within the guide rails.
The slider lengths can vary here as well and then form a total unit, which implements the required stroke.





			Maximum loads:				
Rail Sizes h	Slider Length l_2	Width w	C_{0rad} N	C_{0ax} N	M_x Nm	M_y Nm	M_z Nm
28	60	13	3480	2436	17,1	24	35
	80		4640	3248	22,7	43	62
	130		7540	5278	36,9	114	163
	210		12180	8526	59,7	298	426
	290		16820	11774	82,4	569	813
	370		21460	15022	105,1	926	1323
	450		26100	18270	127,9	1370	1958

Easy Slide Rails from Automotion Components

Technical Information

Load capacities - summary

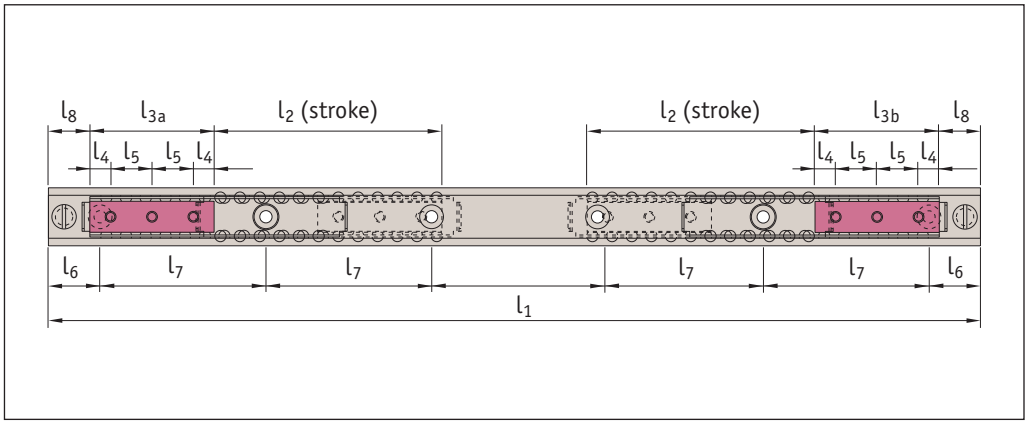


			Maximum loads:				
Rail Sizes h	Slider Length l_z	Width w	C_{0rad} N	C_{0ax} N	M_x Nm	M_y Nm	M_z Nm
35	130	17	9750	6825	47,2	148	211
	210		15750	11025	76,3	386	551
	290		21750	15225	105,3	736	1051
	370		27750	19425	134,4	1198	1711
	450		33750	23625	163,4	1772	2531
	530		39750	27825	192,5	2458	3511
	610		45750	32025	221,6	3256	4651
43	130	22	13910	9737	96,0	211	301
	210		22470	15729	155,1	551	786
	290		31030	21721	214,1	1050	1500
	370		39590	27713	273,2	1709	2441
	450		48150	33705	332,3	2528	3611
	530		56710	39697	391,4	3507	5009
	610		65270	45689	450,4	4645	6636

Easy Slide Rails from Automotion Components

ov-easy-slide-load-capacities-b-lnh-Updated-15-03-2023





Technical Notes
Easy Slide with several independent slides. The total load capacity is based on the number of slides in the rail and their length.

The length and stroke of the individual slides can be different.

Tips
To ensure proper smooth movement, the stroke must be ≤ 7 x slider length.

For full rail sizing see individual product pages L1972.SN22, SN28, SN38, SN43, SN63.

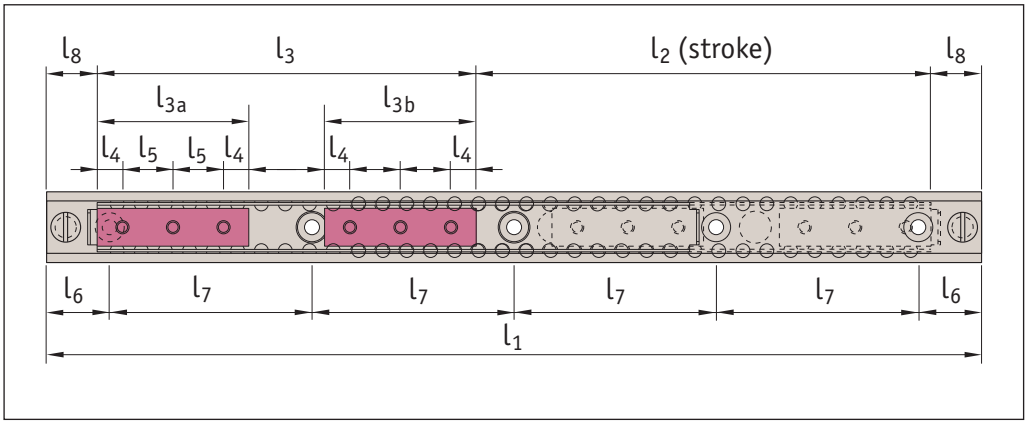
Rail Length $l_1 = [\ 2 \times (\ l_3 + l_2\ ) + \ (\ 2 \times l_8\ )]$

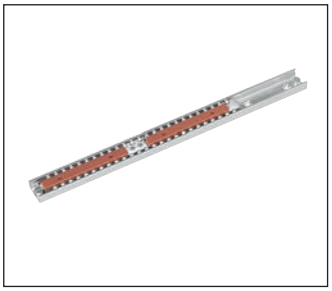
Ordering Example

		l_3	l_2	l_1		
L1972.43	02	0290	0350	1330	G1	ATC
Rail size	Number of sliders (e.g. 2)	Slider length (e.g. 290mm)	Standard Stroke (e.g. 350mm)	Total rail length (e.g. 1330mm)	Preload if different from standard	Extra Anti-corrosion protection: ATC - ATCoat

Technical Information

Multiple synchronised sliders





Technical Notes

Easy Slide with several independent slides. The total load capacity is based on the number of slides in the rail and their length.

The length and stroke of the individual slides can be different.

Tips

To ensure proper smooth movement, the stroke must be ≤ 7 x slider length.

For full rail sizing see individual product pages L1972.SN22, SN28, SN38, SN43, SN63.

Ordering Example

		l_3	$l_{3a} + l_{3b}$	l_2	l_1		
L1972.43	–	0850	(370 + 290)	0400	1330	G1	ATC
Rail size		Apparent length of slider (e.g. 850mm)	Individual length of slider (e.g. 370 + 290mm)	Stroke (e.g. 400mm)	Total rail length (e.g. 1330mm)	Preload if different from standard	Extra Anti-corrosion protection: ATC - ATCoat

ov-easy-slide-multiple-synchronised-lnh-Updated-16-03-2023

Static load

The maximum static loads of the L1972 series are defined by the slider lengths. These load capacities are valid for a loading point of forces and moments in the centre of the slider. The load capacities are independent of the position of the sliders inside the rails.

The radial load capacity, C_{0rad}, axial load capacity, C_{0ax}, and moments loads M_x, M_y and M_z indicate the maximum permissible values of the loads.

Higher loads adversely affect the running properties and the mechanical strength.

A safety factor, S_0, is used to check the static load, which takes into account the basic parameters of the application.

Conditions	Safety factor S_0
Neither shocks nor vibrations, smooth and low-frequency reverse; high assembly accuracy; no elastic deformations	1,0 - 1,5
Normal installation conditions	1,5 - 2,0
Shock and vibration, high-frequency reverse; significant elastic deformation	2,0 - 3,5

The ratio of the actual load to maximum permissible load may be as large as the reciprocal of the accepted safety factor, S_0, at most.

$$\frac{P_{0rad}}{C_{0rad}} \le \frac{1}{S_0} \quad \left| \quad \frac{P_{0ax}}{C_{0ax}} \le \frac{1}{S_0} \right| \quad \frac{M_1}{M_x} \le \frac{1}{S_0} \quad \left| \quad \frac{M_2}{M_y} \le \frac{1}{S_0} \right| \quad \frac{M_3}{M_z} \le \frac{1}{S_0}$$

The formulae above apply for a single load case. If there are two or more of the described forces simultaneously, the following check must be made:

$$\frac{P_{0rad}}{C_{0rad}} + \frac{P_{0ax}}{C_{0ax}} + \frac{M_1}{M_x} + \frac{M_2}{M_y} + \frac{M_3}{M_z} \le \frac{1}{S_0}$$

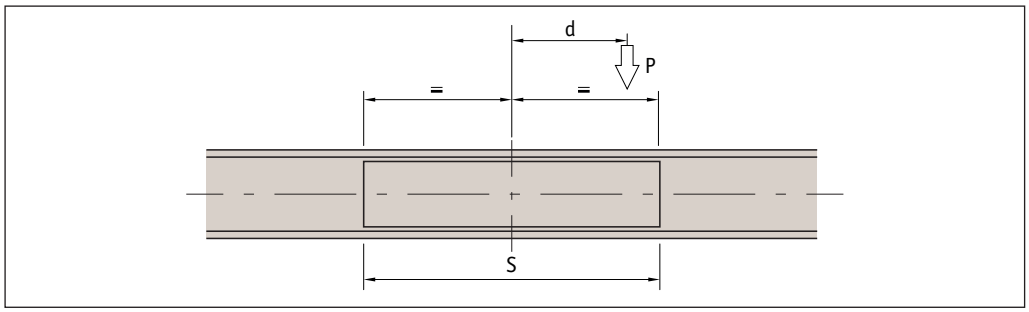
P_{0rad} = effective radial load
C_{0rad} = permissible radial load
P_{0ax} = effective axial load
C_{0ax} = permissible axial load
M_1 = effective moment in the X-direction
M_x = permissible moment in the X-direction
M_2 = effective moment in the Y-direction
M_y = permissible moment in the Y-direction
M_3 = effective moment in the Z-direction
M_z = permissible moment in the Z-direction



Easy Slide Rails from Automotion Components

Off-centre load P of the slider

For an off-centre load of the slider, the different load distribution on the balls must be accounted for with a reduction of the load capacity C. As shown, this reduction of the distance, d, from the loading point is dependent on the slider centre.



The value, q, is the position factor, the distance, d, is expressed in fractions of slider length S. The permissible load, P decreases as follows:

For a radial load

$$P = q \cdot C_{0rad}$$

For an axial load

$$P = q \cdot C_{0ax}$$

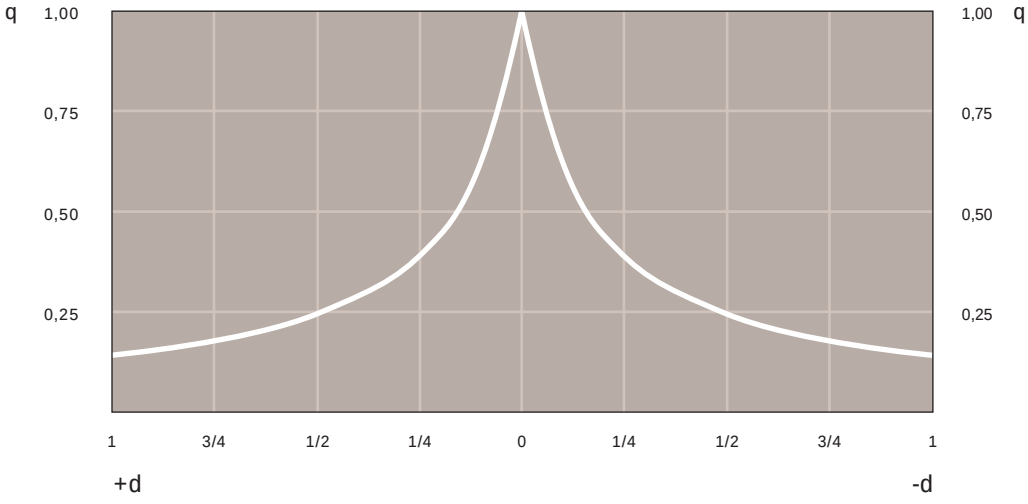
For the static load and the service life calculation, P_{0rad} and P_{0ax} must be replaced by the equivalent values calculated as follows, depending on whether the external load, P, acts:

Radially

$$P_{0rad} = \frac{P}{q}$$

Axially

$$P_{0ax} = \frac{P}{q}$$





Service life

The service life of a linear bearing depends on several factors, such as effective load, operating speed, installation precision, impacts and vibrations, operating temperature, ambient conditions and lubrication. The service life is defined as the time span between initial operation and the first fatigue or wear indications on the raceways.

In practice, the end of the service life must be defined as the time of bearing decommissioning due to its destruction or extreme wear of a component.

This is taken into account by an application coefficient, f_i so the service life consists of:

$$L_{km} = 100 \cdot \left(\frac{C_{0rad}}{W} \cdot \frac{1}{f_i} \right)^3$$

L_{km} = calculated service life (Km)
C_{0rad} = load capacity (N)
W = equivalent load (N)
f_i = application coefficient (see below)

Application coefficient f_i

Conditions	Application coefficient f_i
No impacts or vibrations, smooth and low-frequency direction change; clean operating conditions; low speeds (<0,5 m/s)	1,0 - 1,5
Slight vibrations, average speeds (0,5 - 0,7 m/s) and average frequency of direction change	1,5 - 2,0
Impacts and vibrations, high speeds (>0,7 m/s) and high-frequency direction change; very dirty environment	2,0 - 3,5

If the external load, P, is the same as the dynamic load capacity, C_{0rad}, (which of course must never be exceeded), the service life at ideal operating conditions ($f_i = 1$) amounts to 100Km.

For a single load P, the following applies:

$$W = P$$

If several external loads occur simultaneously, the equivalent load is calculated as follows:

$$W = P_{rad} + \left(\frac{P_{ax}}{C_{0ax}} + \frac{M_1}{M_x} + \frac{M_2}{M_y} + \frac{M_3}{M_z} \right) \cdot C_{0rad}$$

Clearance and Preload

The SN series linear bearings are installed with no clearance as standard. For more information, please contact our Technical Department.

Preload classes		
Increased clearance	No clearance	Increased preload
G_1	Standard	K_1



Easy Slide Rails from Automotion Components

Coefficient of friction

With correct lubrication and installation on level and rigid surfaces and sufficient parallelism for rail pairs, the friction value is less than or equal to 0,01. This value can vary depending on the installation situation.

Linear accuracy

With installation of the rails using all bolts on a perfectly plane support surface with the fixing holes in a straight line, the linear accuracy of the sliders to an external reference is as follows:

$$// = \frac{\sqrt{H}}{300}\ mm$$

H = stroke

Speed

The linear bearings of the L1972 series can be used up to an operating speed of 0,8 m/s.

With high-frequency direction changes and the resulting high accelerations, as well as with long ball cages, there is a risk of cage creep (see instructions for use).

Temperature

The series can be used in ambient temperatures from -30°C to +170°C. A lithium lubricant for high operating temperatures is recommended for temperatures above +130°C.

Anti-corrosion protection

The L1972 series has a standard anti-corrosion protection (electrolytic zinc-plating to ISO 2081).

If increased anti-corrosion protection is required, the rails are available either with special coatings.

Numerous application-specific surface treatments are available upon request, e.g. as a nickel-plated design with FDA approval for use in the food industry. For more information, please contact our Technical Department.

Lubrication

Recommended lubrication intervals are heavily dependent upon the ambient conditions. Under normal conditions, lubrication is recommended after 100Km operational performance or after an operating period of 6 months.

In critical applications, the interval should be shorter. Please clean the raceways carefully before lubrication. Raceways and spaces of the ball cage are lubricated with a lithium lubricant of average consistency (roller bearing lubricant).

Different lubricants for special applications are available upon request, e.g. lubricant with FDA approval for use in the food industry.

For more information, please contact our Technical Department.

Cage creep

Under normal operating conditions, the cage moves in synchronisation with the carriage slider, but at half its speed; or to put it another way, the ball cage follows the relevant stroke, but travelling half the distance. In unfavourable operating conditions, e.g. fast-changing acceleration or heavy fluctuating strokes, it is not always possible to avoid cage slip from occurring. In this case, you should schedule a no-load stroke, if possible, in order to re-position the cage. If strokes fluctuate, you should also ensure adequate dimensioning of the drive that is used. You can use a friction coefficient of 0.1 for the relevant calculations.

Important note

Only to be used for horizontal movement.

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Fixing screws

The rails of the SN series in sizes 22 to 43mm are fixed with countersunk head screws to DIN 7991.

Tightening torques of the standard fixing screws to be used

Rail sizes	Thread size	Property class	Tightening torque Nm
22	M4	10,9	4,3
28	M5		8,5
35	M6		14,6
43	M8		34,7

Installation instructions

Internal stops are used to stop the unloaded slider and the ball cage, these are not designed to stop a moving, loaded slider. Please use external stops for a loaded system.

To achieve optimum running properties, high service life and rigidity, it is necessary to fix the linear bearings with all accessible holes onto a rigid and level surface.

Instructions for use

For linear bearings of the L1972 series, the sliders are guided through a ball cage inside the rails. When the sliders run their course relative to the rails, the ball cage moves along for half the slider stroke. The stroke ends as soon as the slider reaches the end of the cage.

Normally the cage moves synchronously to the balls at half the speed of the slider. Any cage slip negatively affects the synchronous movement of the ball cage, causing it to reach the internal stops prematurely, this reduces the stroke. The stroke value can be normalised at any time by moving the slider to the stop in the stopped cage. This moving of the slider relative to the cage will have increased resistance, which is dependent on the working load.

The causes of “cage slip” can be installation accuracy, dynamics, and load changes.
The effects can be minimised by observing the following advice:

- The stroke should always remain constant and come as close as possible to the nominal stroke of the linear bearing.
- For applications with various strokes, make sure that the drive is sufficiently large enough to guarantee a movement of the slider relative to the cage; a coefficient of friction of 0,1 should be calculated for this.
- Another possibility is to include a maximum stroke without load into the working cycle in order to re-synchronise the slider and ball cage.

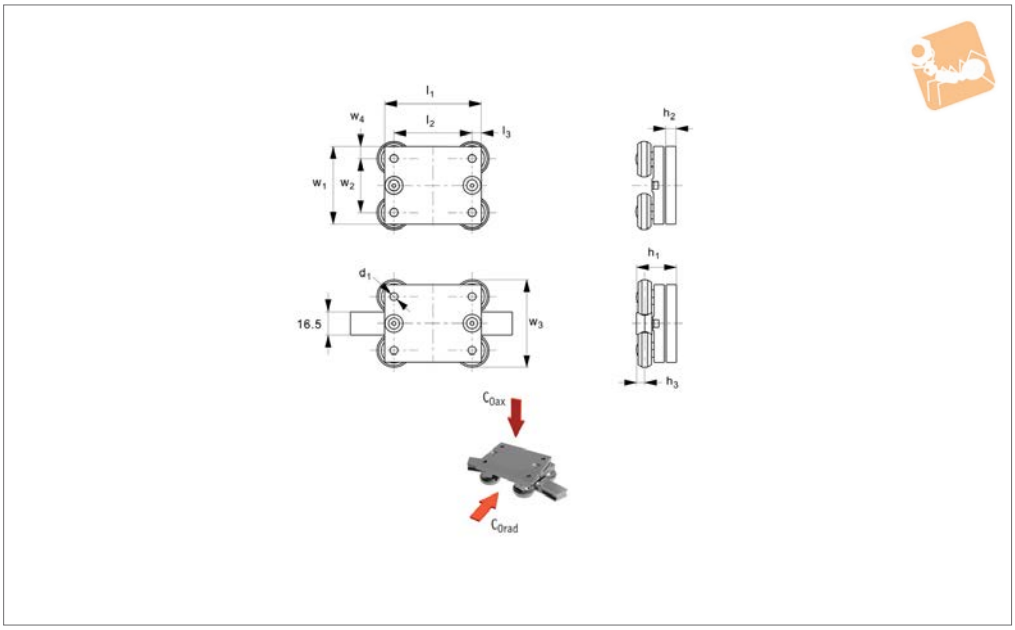
Parallelism errors or inaccuracies in the installation or in the mounting surfaces of mounted pairs can influence cage creep.

Series L1972 linear bearings should only be used for horizontal movement.

Curviline Sliders
size 16



L1978.CR16

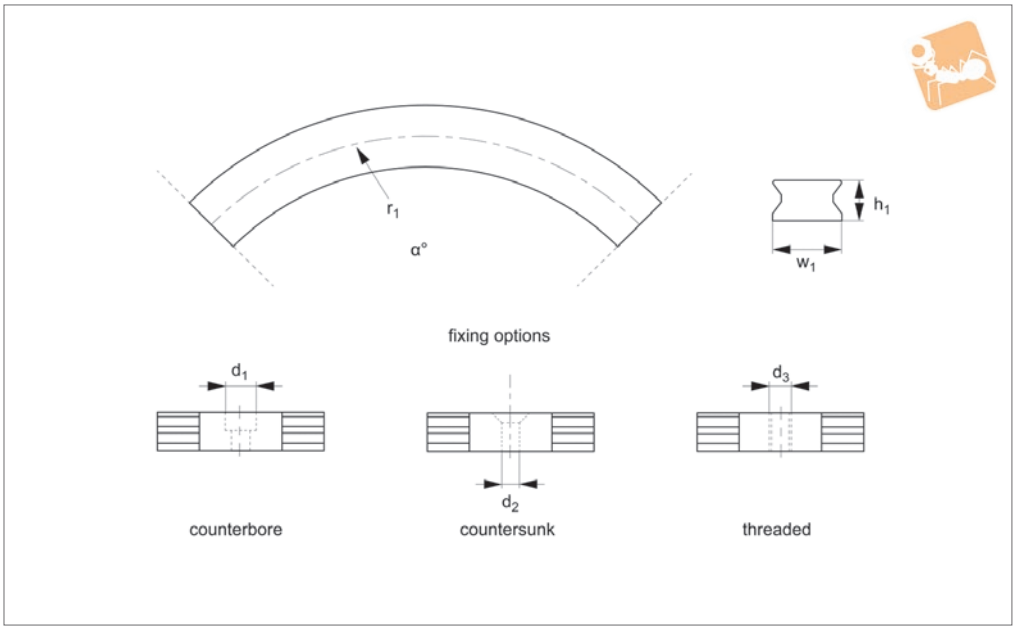


Material
Slider body: Fe360. Roller 100Cr6. Roller pins: Lubricated for life.
Finish: electrolytic zinc plated.

Technical Notes
Where moment loads are present use two or more sliders. Constant (L1978.CRX16) and variable (L1978.VRX16) radii rails can be produced.
Temperature range -30°C to +100°C.

Tips
All stainless steel available. Other coatings and finishes are also available.

Order No.	w_1	h_1	d_1	h_2	h_3	l_1	l_2	l_3	w_2	w_3	w_4	Load $C_{0\,rad}$ N max.	Load $C_{0\,ax}$ N max.	Weight kg
L1978.CR16-070	50	32.3	M5	10	5.7	70	50	10	30	60	10	570	400	0.45





L1978.CRX16

Material
Steel rail (C43), electrolytic zinc plated.
All stainless steel on request.

Technical Notes
Standard radii are shown below but any radius (from r_1 >120 mm) can be produced.
Advise angle required and fixing option type.
Temperature range -30°C to +80°C.
Rail weight 1,2 Kg/m.

Tips
Combine with curviline sliders L1978.CX16-070.
Recommended hole pitch on rail is 80mm.
Rail tolerance ± 0,5mm, angle tolerance ± 1°.
Recommended rail hole is counterbored (easy to install).

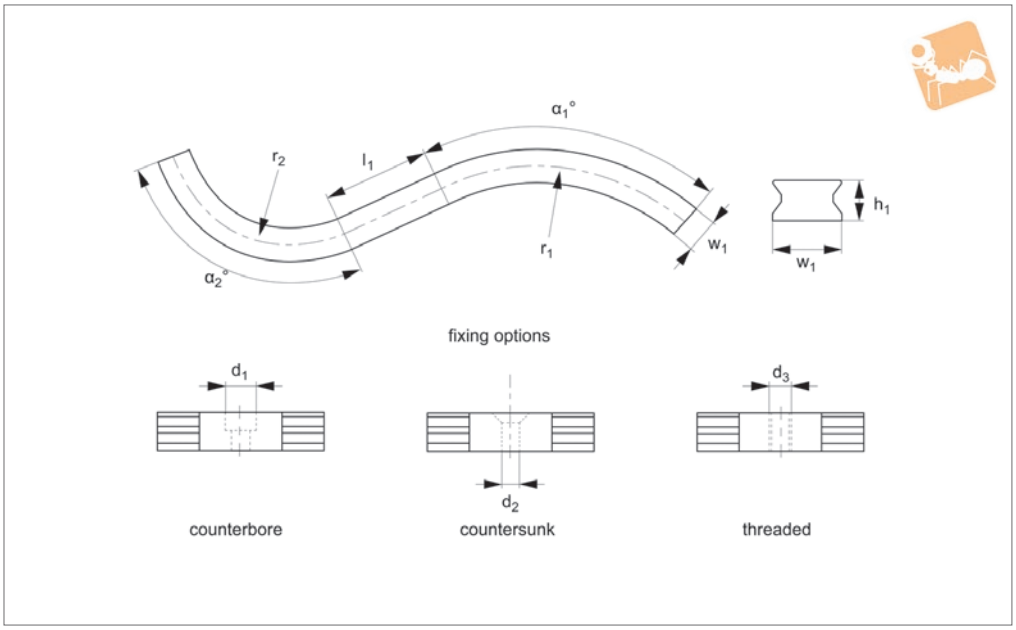
Important Notes
Not to be used in high-cycle applications.

Order No.	w_1	h_1	r_1	α	d_1 for	d_2 for	d_3 for
L1978.CRX16-0150-xx	16.5	10	150	tba	M5	M5	M6
L1978.CRX16-0200-xx	16.5	10	200	tba	M5	M5	M6
L1978.CRX16-0250-xx	16.5	10	250	tba	M5	M5	M6
L1978.CRX16-0300-xx	16.5	10	300	tba	M5	M5	M6
L1978.CRX16-0400-xx	16.5	10	400	tba	M5	M5	M6
L1978.CRX16-0500-xx	16.5	10	500	tba	M5	M5	M6
L1978.CRX16-0600-xx	16.5	10	600	tba	M5	M5	M6
L1978.CRX16-0700-xx	16.5	10	700	tba	M5	M5	M6
L1978.CRX16-0800-xx	16.5	10	800	tba	M5	M5	M6
L1978.CRX16-0900-xx	16.5	10	900	tba	M5	M5	M6
L1978.CRX16-1000-xx	16.5	10	1000	tba	M5	M5	M6

Constant Radius Rails
size 16

Ordering Example

L1978	.	CRX16	-	0200	-	060	-	X
Product Number		Rail width		Radius: r (mm) >120		Angle: α°		Fixing hole type: CB - Counterbored CS - Countersunk TR - Threaded





L1978.VRX16

Material
Steel rail (C43), electrolytic zinc plated.
All stainless steel on request.

Technical Notes
Advise angle required and fixing option type.
Temperature range -30°C to +80°C.

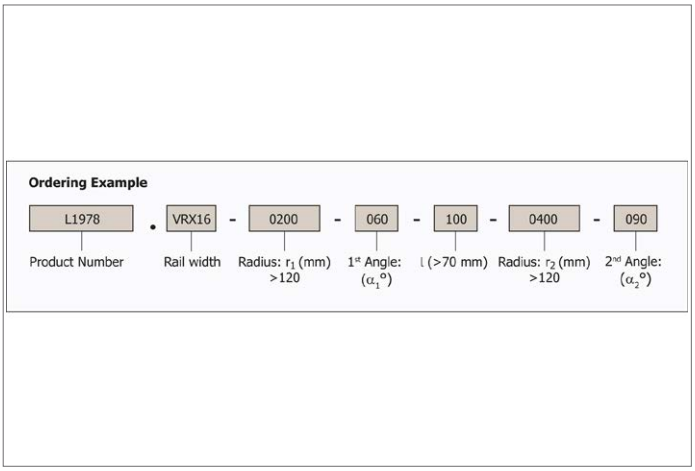
Rail weight 1,2 Kg/m.

Tips
Combine with curviline sliders L1978.CX16-070.
Recommended hole pitch on rail is 80mm.
Rail tolerance ± 0,5mm, angle tolerance ± 1°.

Recommended rail hole is counterbored (easy to install).

Important Notes
Not to be used in high-cycle applications.

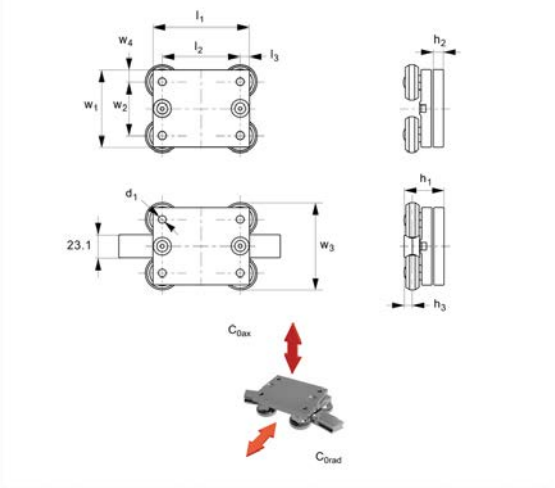
Order No.	w_1	h_1	r_1 & r_2	α_1 & α_2 °	d_1 for	d_2 for	d_3 for	l_1
L1978.VRX16-xxx-xx	16.5	10	tba	tba	M5	M5	M6	tba



Curviline Sliders
size 23



L1978.CR23

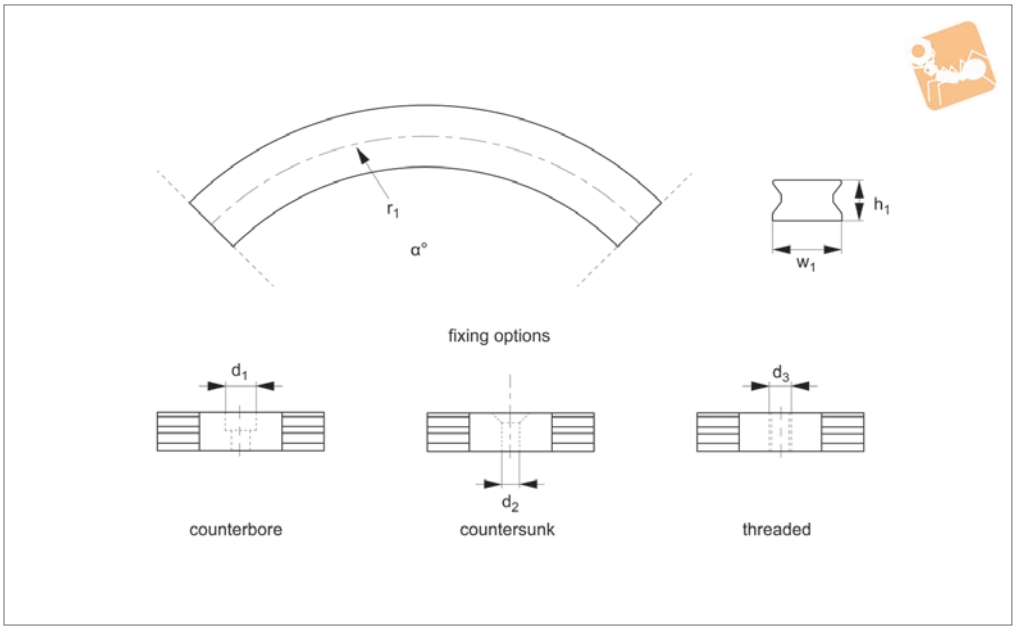


Material
Slider body: Fe360. Roller 100Cr6. Roller pins: Lubricated for life.
Finish: electrolytic zinc plated.

Technical Notes
Where moment loads are present use two or more sliders.
Constant (L1978.CRX23) and variable (L1978.VRX23) radii rails can be produced.
Temperature range -30°C to +100°C.

Tips
All stainless steel available. Other coatings and finishes are also available.

Order No.	w_1	h_1	h_2	h_3	d	l_1	l_2	l_3	w_2	w_3	w_4	Load $C_{0\ rad}$ N max.	Load $C_{0\ ax}$ N max.	Weight kg
L1978.CR23-100	80	36.4	10	7.5	M8	100	80	10	55	89.5	12.5	1615	1130	1.10





L1978.CRX23

Material
Steel rail (C43), electrolytic zinc plated.
All stainless steel on request.

Technical Notes
Standard radii are shown below but any radius (from r_1 >120 mm) can be produced.
Advise angle required and fixing option type.
Temperature range -30°C to +80°C.
Rail weight 2,2 Kg/m.

Tips
Combine with curviline sliders L1978.CX23-100.
Recommended hole pitch on rail is 80mm.
Rail tolerance ± 0,5mm, angle tolerance ± 1°.
Recommended rail hole is counterbored (easy to install).

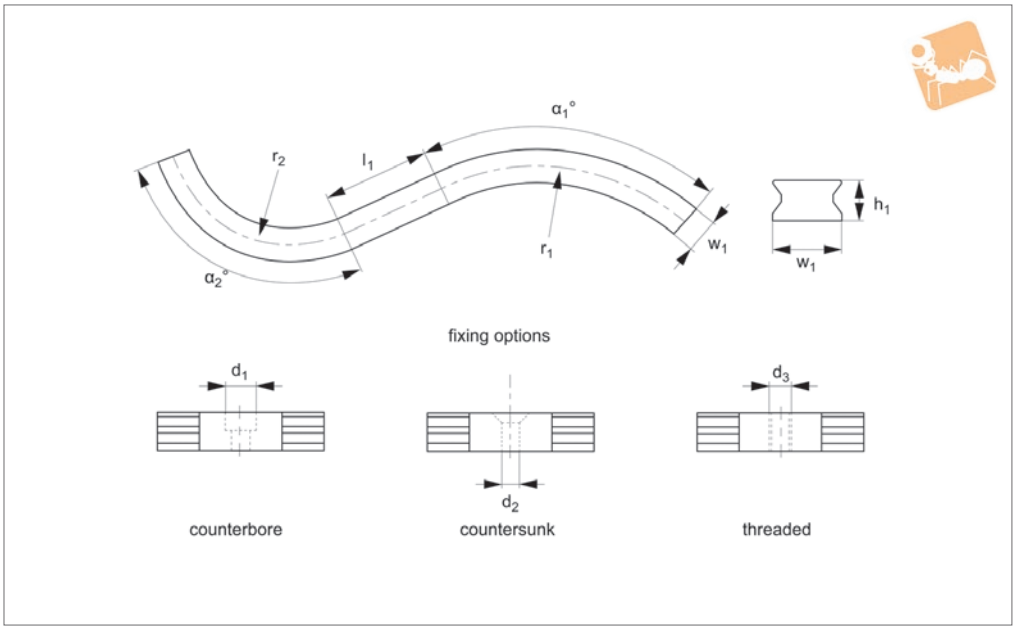
Important Notes
Not to be used in high-cycle applications.

Order No.	w_1	h_1	r_1	α	d_1 for	d_2 for	d_3 for
L1978.CRX23-0150-xx	23	13.5	150	tba	M6	M6	M8
L1978.CRX23-0200-xx	23	13.5	200	tba	M6	M6	M8
L1978.CRX23-0250-xx	23	13.5	250	tba	M6	M6	M8
L1978.CRX23-0300-xx	23	13.5	300	tba	M6	M6	M8
L1978.CRX23-0400-xx	23	13.5	400	tba	M6	M6	M8
L1978.CRX23-0500-xx	23	13.5	500	tba	M6	M6	M8
L1978.CRX23-0600-xx	23	13.5	600	tba	M6	M6	M8
L1978.CRX23-0700-xx	23	13.5	700	tba	M6	M6	M6
L1978.CRX23-0800-xx	23	13.5	800	tba	M6	M6	M8
L1978.CRX23-0900-xx	23	13.5	900	tba	M6	M6	M8
L1978.CRX23-1000-xx	23	13.5	1000	tba	M6	M6	M8

Constant Radius Rails
size 23

Ordering Example

L1978	.	CRX23	-	0200	-	060	-	X
Product Number		Rail width		Radius: r (mm) >120		Angle: α° 0 to 360°		Fixing hole type: CB - Counterbored CS - Countersunk TR - Threaded





L1978.VRX23

Material
Steel rail (C43), electrolytic zinc plated.
All stainless steel on request.

Technical Notes
Advise angles required and fixing option type.
Temperature range -30°C to +80°C.

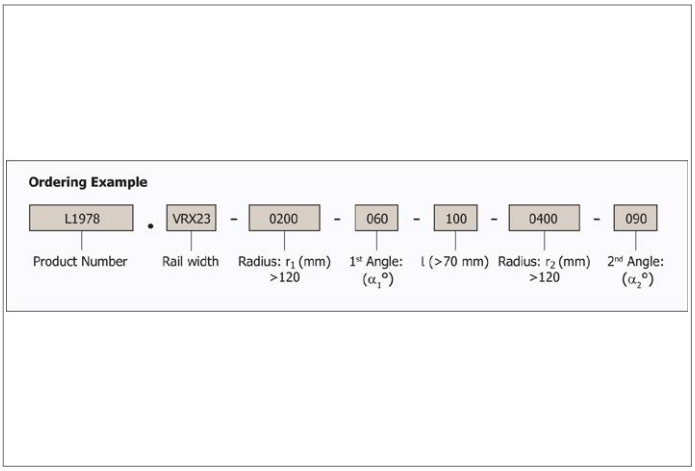
Rail weight 2,2 Kg/m.

Tips
Combine with curviline carriages L1978.CX23-100.
Recommended hole pitch on rail is 80mm.
Rail tolerance ± 0,5mm, angle tolerance ± 1°.

Recommended rail hole is counterbored (easy to install).

Important Notes
Not to be used in high-cycle applications.

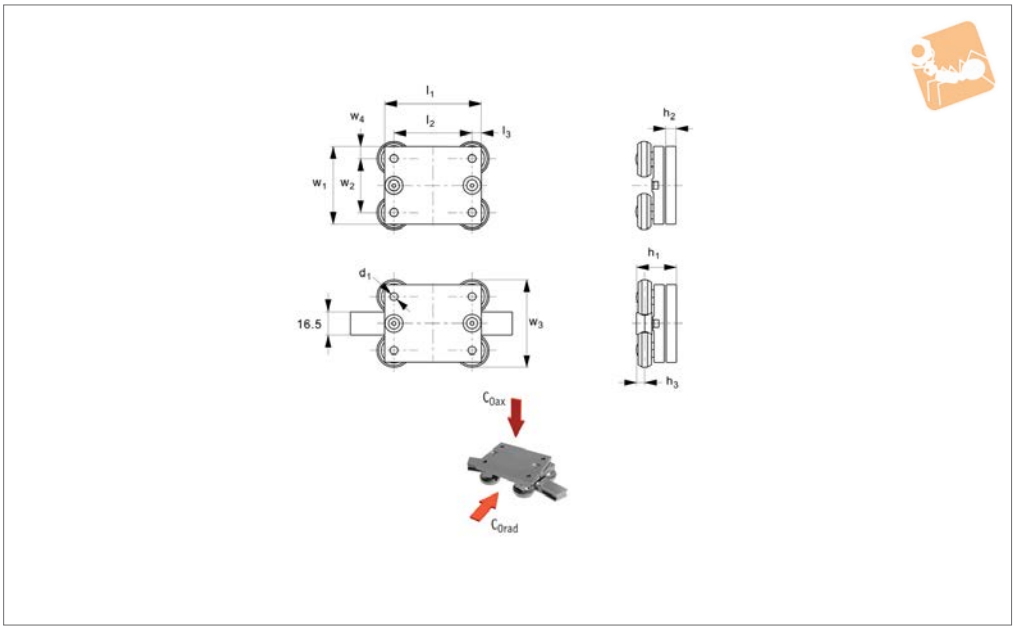
Order No.	w_1	h_1	r_1 & r_2	α_1 & α_2 °	d_1 for	d_2 for	d_3 for	l_1
L1978.VRX23-xxx-xx	23	13.5	tba	tba	M6	M6	M8	tba



Curviline Sliders
Stainless steel; size 16



L1979.CR16



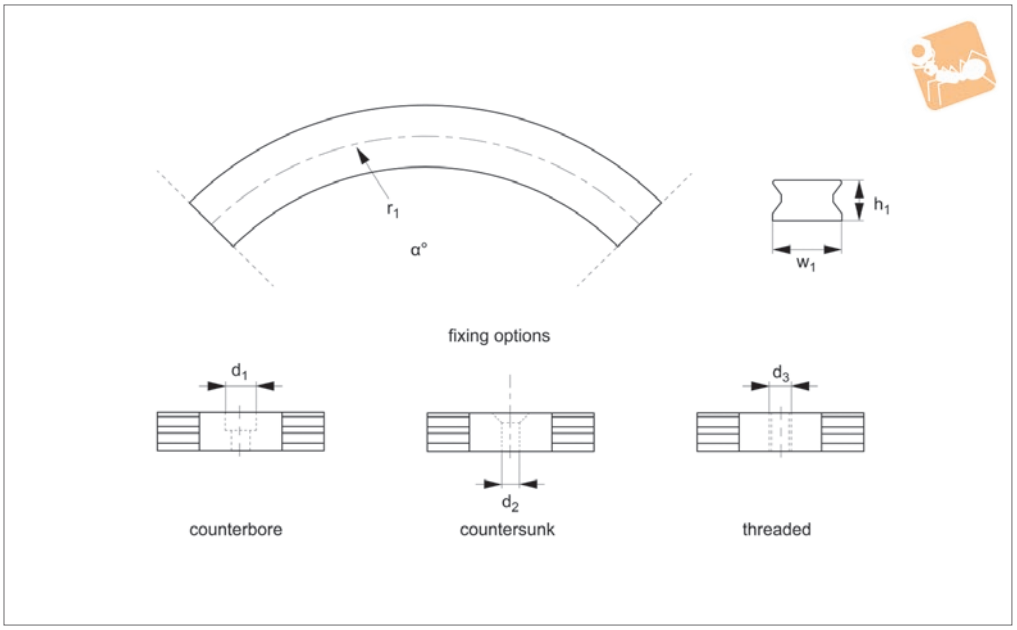
Material
Slider body: AISI 316L. Roller AISI 440.

Technical Notes
Where moment loads are present, use two or more sliders.
Temperature range -30oC to +100oC.

Tips
All stainless available.

Other coatings and finishes are also available.

Order No.	w_1	h_1	d_1	h_2	h_3	l_1	l_2	l_3	w_2	w_3	w_4	Load $C_{0\ rad}$ N max.	Load $C_{0\ ax}$ N max.	Weight kg
L1979.CR16-070	50	32.3	M5	10	5.7	70	50	10	30	60	10	570	400	0.45





L1979.CRX16

Material
Stainless steel rail AISI 316L.

Technical Notes
Standard radii are shown below but any radius (from r1>120mm) can be produced. Advise angle required and fixing option type.

Temperature range -30°C to +80°C.
Rail weight 1.2 Kg/m.

Tips
Combine with curviline sliders (L1979.CR16-070).
Recommended hole pitch on rail is 80mm.
Rail tolerance ±0.5mm, angle tolerance ±1°.
Recommended rail hole is counterbored (easy to install).

Important Notes
Not to be used in high-cycle applications.

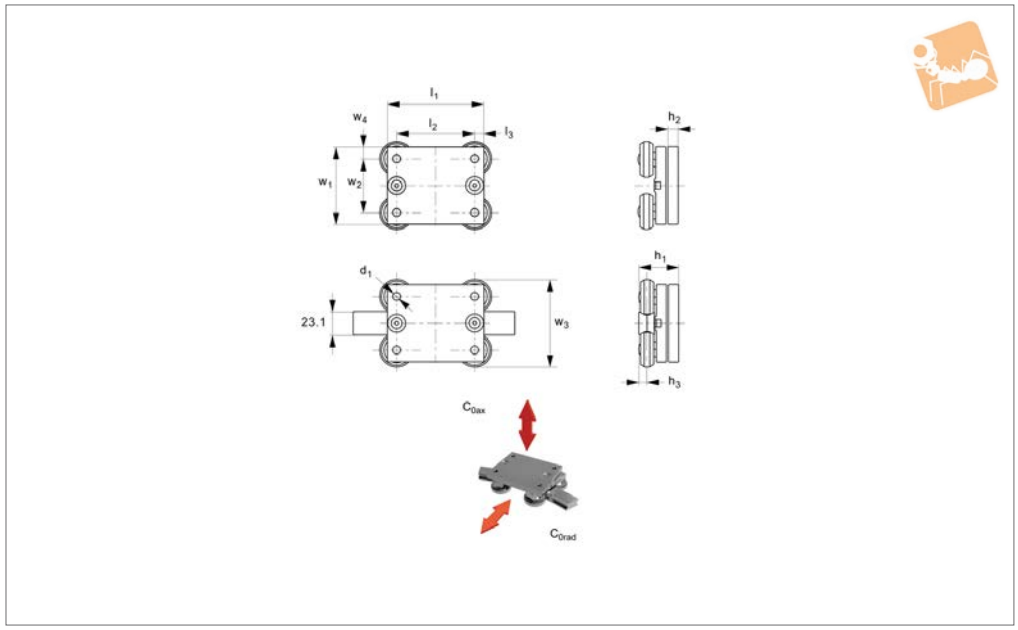
Order No.	w_1	h_1	r_1	α	d_1 for	d_2 for	d_3 for
L1979.CRX16-0150-xx	16.5	10	150	tba	M5	M5	M6
L1979.CRX16-0200-xx	16.5	10	200	tba	M5	M5	M6
L1979.CRX16-0250-xx	16.5	10	250	tba	M5	M5	M6
L1979.CRX16-0300-xx	16.5	10	300	tba	M5	M5	M6
L1979.CRX16-0400-xx	16.5	10	400	tba	M5	M5	M6
L1979.CRX16-0500-xx	16.5	10	500	tba	M5	M5	M6
L1979.CRX16-0600-xx	16.5	10	600	tba	M5	M5	M6
L1979.CRX16-0700-xx	16.5	10	700	tba	M5	M5	M6
L1979.CRX16-0800-xx	16.5	10	800	tba	M5	M5	M6
L1979.CRX16-0900-xx	16.5	10	900	tba	M5	M5	M6
L1979.CRX16-1000-xx	16.5	10	1000	tba	M5	M5	M6

Constant Radius Rails

Stainless steel; size 16

Ordering Example

L1979	.	CRX16	-	0200	-	060	-	X
Product Number		Rail width		Radius: r (mm) >120		Angle: α°		Fixing hole type: CB - Counterbored CS - Countersunk TR - Threaded





L1979.CR23

Material
Slider body: AISI 316L. Roller AISI 440.

Technical Notes
Where moment loads are present use two or more sliders.
Temperature range -30°C to +100°C.

Tips
All stainless steel available.

Other coatings and finishes are also available.

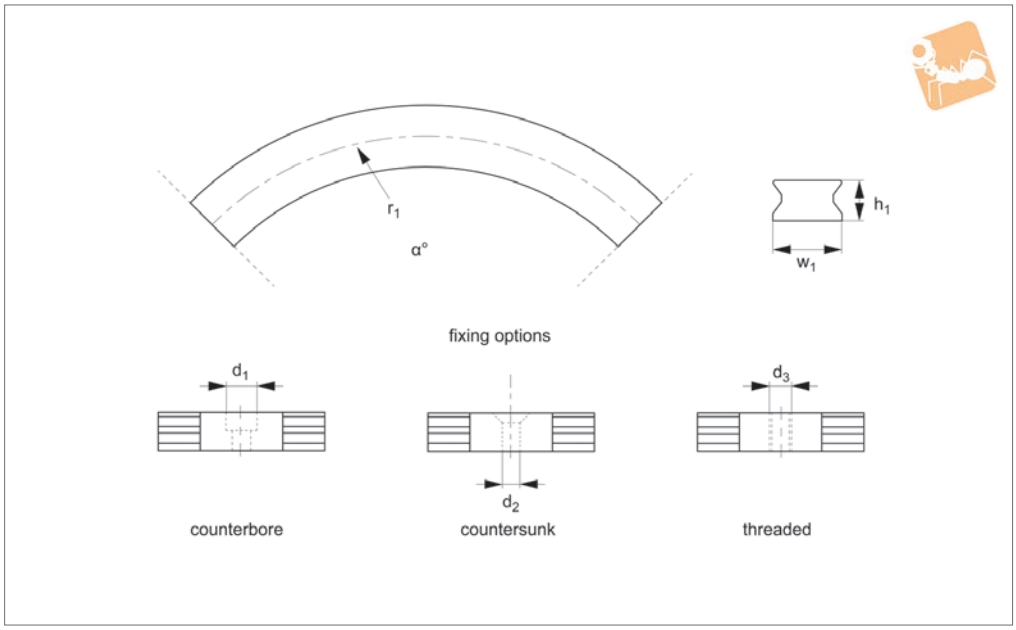
Order No.	w_1	h_1	d_1	h_2	h_3	l_1	l_2	l_3	w_2	w_3	w_4	Load $C_{0\ rad}$ N max.	Load $C_{0\ ax}$ N max.	Weight kg
L1979.CR23-100	80	36.4	M8	10	7.5	100	80	10	55	89.5	12.5	1615	1130	1.10

Constant Radius Rail

Stainless steel; size 23



L1979.CRX23



Material

Stainless steel rail AISI 316L.

Technical Notes

Standard radii are shown below, but any radius (from r1> 120mm) can be produced. Advise angle required and fixing option type.

Temperature range -30°C to +80C.
Rail weight 1.2Kg/m.

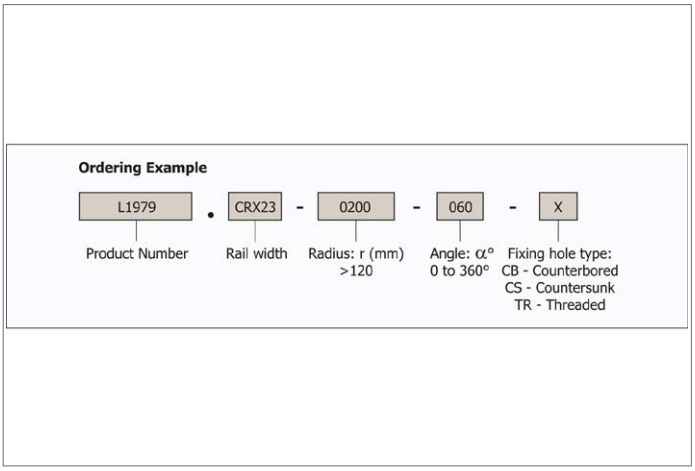
Tips

Combine with curviline sliders (L1979.CR23-100).
Recommended hole pitch on rail is 80mm.
Rail tolerance ±0.5mm and angle tolerance ±1°.
Recommended rail hole is counterbored (easy to install).

Important Notes

Not to be used in high-cycle applications.

Order No.	w_1	h_1	r_1	α	d_1 for	d_2 for	d_3 for
L1979.CRX23-0150-xx	23	13.5	150	tba	M6	M6	M8
L1979.CRX23-0200-xx	23	13.5	200	tba	M6	M6	M8
L1979.CRX23-0250-xx	23	13.5	250	tba	M6	M6	M8
L1979.CRX23-0300-xx	23	13.5	300	tba	M6	M6	M8
L1979.CRX23-0400-xx	23	13.5	400	tba	M6	M6	M8
L1979.CRX23-0500-xx	23	13.5	500	tba	M6	M6	M8
L1979.CRX23-0600-xx	23	13.5	600	tba	M6	M6	M8
L1979.CRX23-0700-xx	23	13.5	700	tba	M6	M6	M8
L1979.CRX23-0800-xx	23	13.5	800	tba	M6	M6	M8
L1979.CRX23-0900-xx	23	13.5	900	tba	M6	M6	M8
L1979.CRX23-1000-xx	23	13.5	1000	tba	M6	M6	M8


Ordering Example
L1979
CRX23
0200
060
X
Product Number
Rail width
Radius: r (mm) >120
Angle: α° 0 to 360°
Fixing hole type: CB - Counterbored CS - Countersunk TR - Threaded

Curviline Rail

Introduction

The Curviline rail system offers a cost-effective solution to curvi-linear applications.

Flexibility when you need it

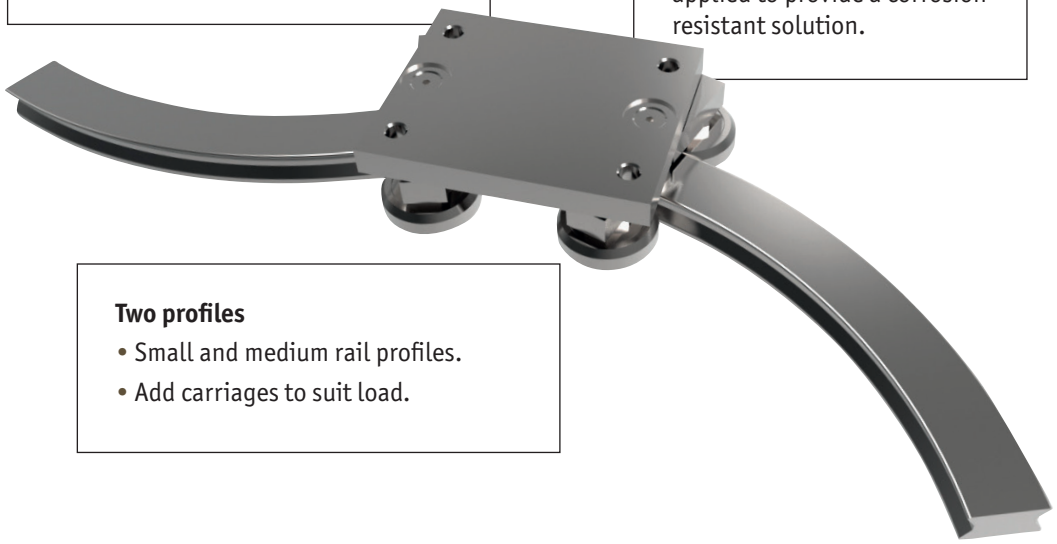
Constant radius, variable radius are available in standard radii, non-standard radii to your drawings are also possible. Straight and curved sections in a single length can be supplied.

Any radius

- From 120mm radius upwards.
- Standard and special radii.
- Angles up to 360°.

Anti-corrosion

Alloy coating or nickel plating of the rails and sliders can be applied to provide a corrosion resistant solution.

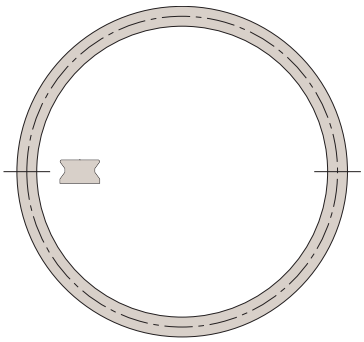


Two profiles

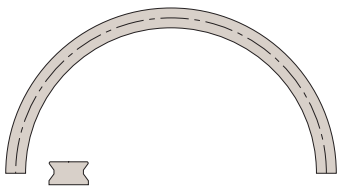
- Small and medium rail profiles.
- Add carriages to suit load.

Curviline Rail from Automotion Components

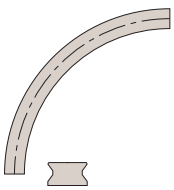
Examples



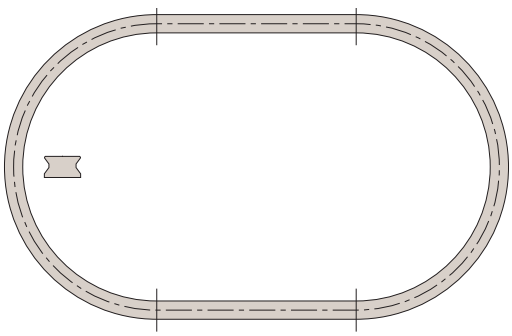
Circle



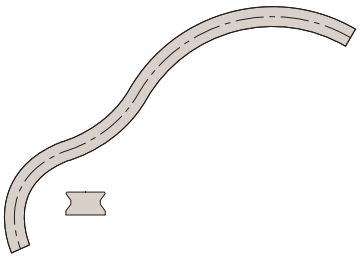
Semi-circle



Arcs

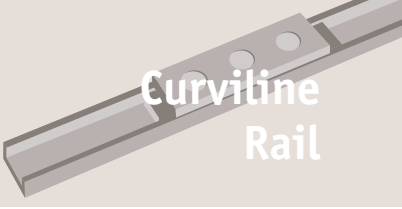


Ovals



Complex rails with varied radii and angles

ov-curviline-introduction-lnh-Updated-15-03-2023



Specifications

- Maximum speed 1,5 m/s.
- Maximum acceleration 2 m/s².
- Maximum rail length 3600 mm.
- Two rail sizes 16,5 and 23,5 mm width.
- Minimum radius 120 mm.
- Recommended hole pitch 80 mm.
- Radius tolerance ± 0,5 mm (± 1°).
- Maximum radial load per slider 1615N.
- Temperature range -30°C to +80°C.
- Roller bearing seals 2Z (dust proof), lubricated for life.
- Rollers from 100Cr6, (stainless versions with rubber seals 2RS available on request).
- Sliders are preload adjustable.
- Not suitable for moment loads.
- Special coatings and finishes available on request.

Applications

Sliding doors & windows
Internal sliding doors
gates • roof lights
display cases

Special purpose & packaging machines
Precision positioning systems
handling units • robotic systems
cutting machines

Safety guarding
Extending protective systems
sliding gates
automatic pick & place

Transport (naval)
Sliding hatches
pull-out storage

Transport (automotive)
Ambulance sliding systems
fire fighting vehicles
sliding panels

Transport (rail)
Seat adjustment
sliding doors
battery removal units

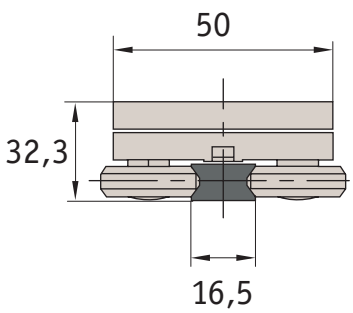
Transport (military)
Sliding seats
protective hatches
stretcher extensions

Curviline Rail from Automotion Components

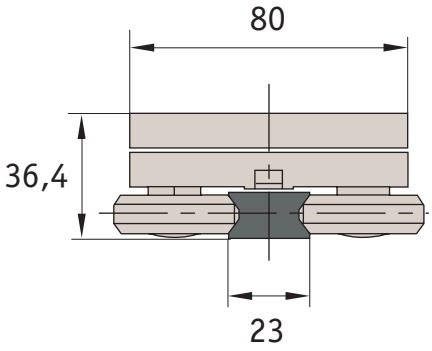


Curviline Rail from Automotion Components

Rail sizes



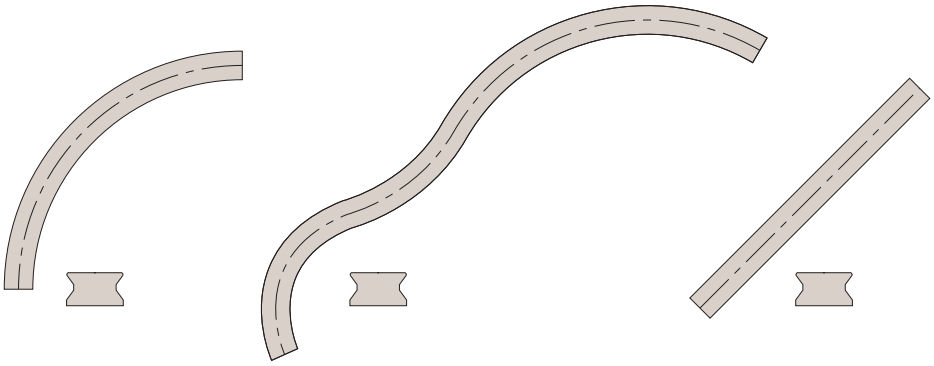
Size 16 (rail and slider)



Size 23 (rail and slider)

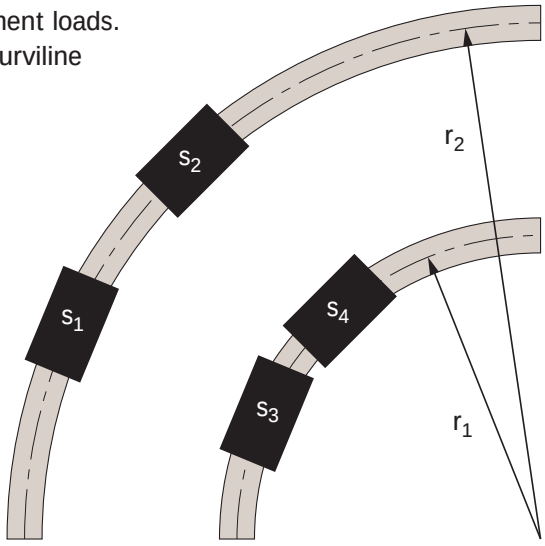
The sliders have eccentric rollers that are adjustable with the thin spanner that is supplied with them. This allows the preload of the system to be set as required – tight or free running.

Rail types

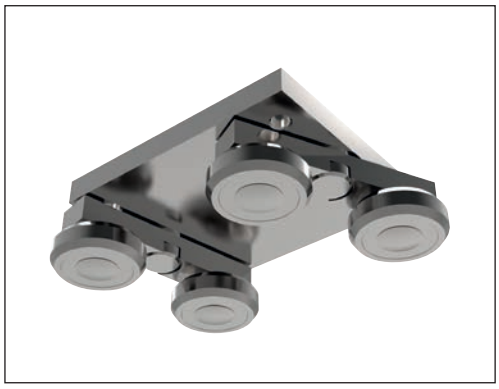


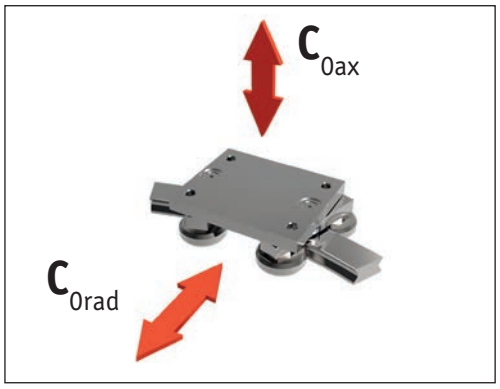
Constant radius | Variable radius rail | Straight sections

Using a pair of rails to reduce moment loads. s_1 - s_4 are Curviline Sliders.



Load capacities

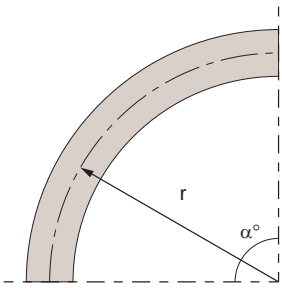




Slider type	C_{0ax} N	C_{0rad} N
L1978.CX16-070	390	560
L1978.CX23-100	1110	1600

Note: Reduce any moment loads by utilising two or more sliders and/or rails.

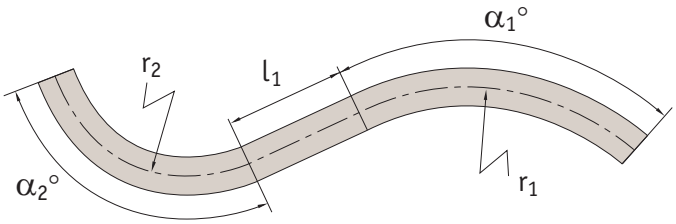
Constant radius



Ordering Example

L1978	.	CRX16	–	0200	–	060	–	X
Product Number		Rail width (16 or 23)		Radius: r (mm) 120 upwards		Angle: α° (0°-360°)		Fixing hole type: CB - Counterbored CS - Countersunk TR - Threaded

Variable radius



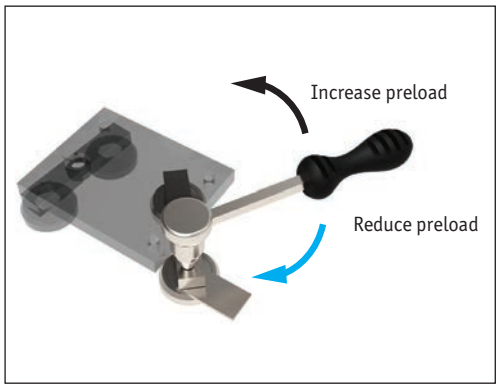
Ordering Example

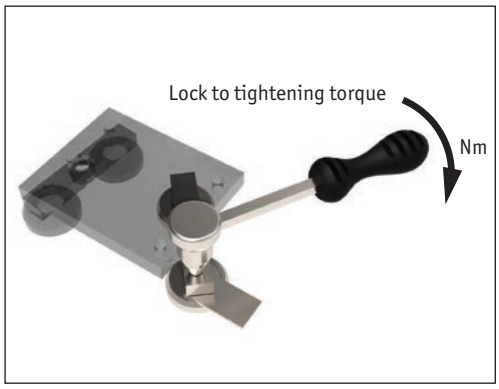
L1978	.	VRX16	–	0400	–	060	–	100	–	0200	–	090
Product Number		Rail width (16 or 23)		1st Radius (mm) r_1>120		1st Angle: (α_1°)		l_1 (>70 mm)		2nd Radius (mm) r_2>120		2nd Angle: (α_2°)

Curviline Rail from Automotion Components

LONG LINEAR RAILS

Setting the preload





Slider type	Tightening torque Nm
L1978.CX16-070	7
L1978.CX23-100	12

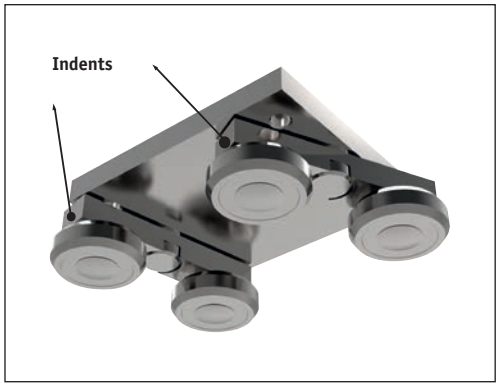
If the Curviline system is delivered as a system, the sliders are already set with no clearance. In this case fixing screws are secured with Loctite® at the factory.

If delivered separately, or if the sliders are to be installed in another track, the eccentric rollers must be re-adjusted.

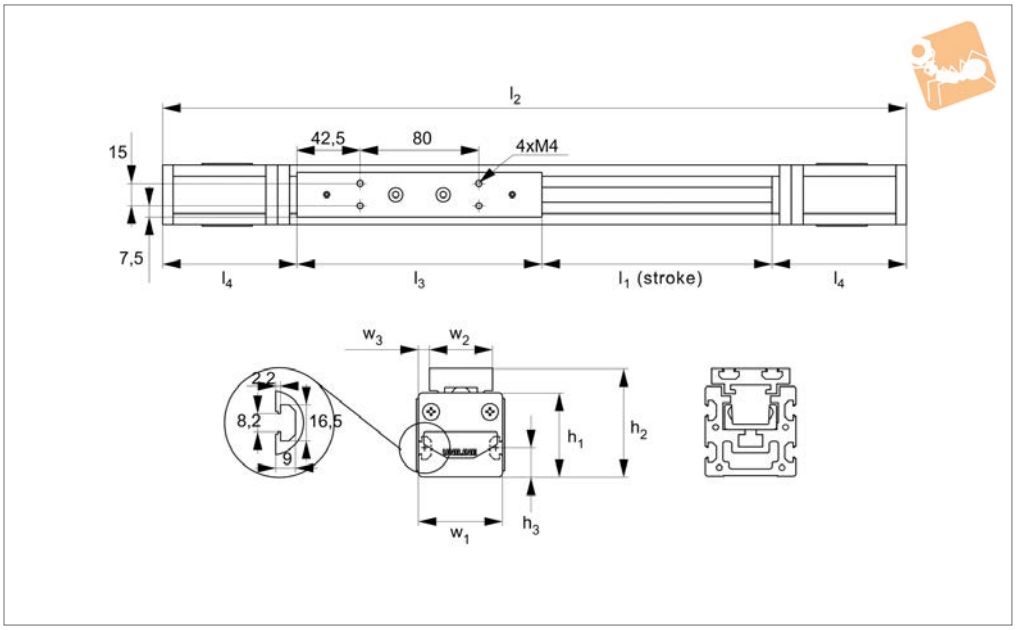
Important: Loctite® must be applied to the roller fixing screws to prevent loosening.

- Wipe the raceways clean.
- Slightly loosen the fixing screws of the rollers. See below for details on how to identify the eccentric rollers.
- Position the slider(s) at the ends of the rail.
- Insert the flat spanner (provided) onto the hexagonal nut at the top of the roller.
- By turning the spanner clockwise the roller is pressed against the raceway and thus reduces the clearance. Please note that with increasing preload, the friction is also increased and thus the service life is reduced.
- Hold the roller with the spanner in the desired position and carefully tighten the fixing screw. The exact tightening torque will be checked later.
- Move the slider on the rail and check the preload over the entire length of the rail.
  It should move easily and the slider should have no play at any point of the rail.
- Now tighten the fixing screws to the specified tightening torque, whilst securing the roller bearing with the spanner. A special thread in the roller secures the set position.

Identify the eccentric/fixed rollers



The fixed rollers are identified by an indentation on the roller mounts. The eccentric roller mounts have NO indents.





L3001.A40

Material
Special sliders on a single hardened steel rail, encased in an aluminium profile.

Technical Notes
Any length overall stroke unit can be supplied (up to 1,9 metres in a single section) for the A40 series. Longer strokes available.
Longer carriages and double carriages are available which increase the load capacity of the units.

Tips
See technical pages for more information on belt specification, long carriages, double carriages and motor connections. Can easily be combined to make an XY, XYZ or other set up gantry system.

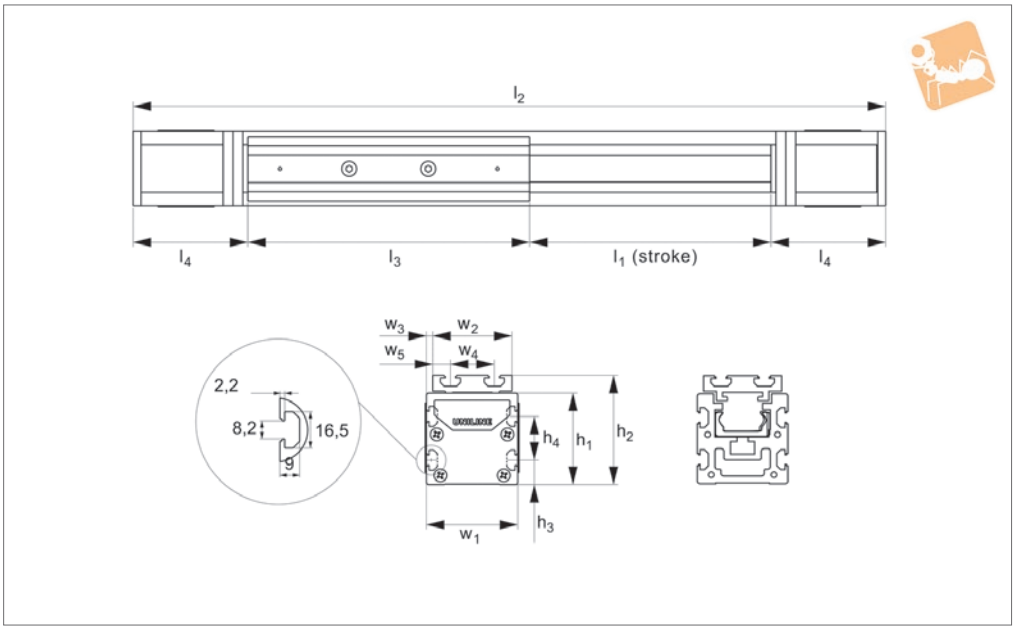
Important Notes
For loads with low moment loads.

Order No.	l_1	l_2	l_3	h_1 & w_1	h_2	h_3	l_4	w_2	w_3	C_{0ax} N	C_{0rad} N	M_x Nm	M_y Nm	M_z Nm
L3001.A40-0100	100	448	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-0200	200	548	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-0300	300	648	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-0400	400	748	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-0500	500	848	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-0600	600	948	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-0700	700	1048	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-0800	800	1148	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-0900	900	1248	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-1000	1000	1348	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-1100	1100	1448	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-1200	1200	1548	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-1300	1300	1648	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-1400	1400	1748	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-1500	1500	1848	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-1600	1600	1948	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-1700	1700	2048	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-1800	1800	2148	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1
L3001.A40-1900	1900	2248	165	40	51.5	14	91.5	30	5	300	820	2.8	5.6	13.1

Medium Duty Belt Driven Unit
size 55



L3001.A55



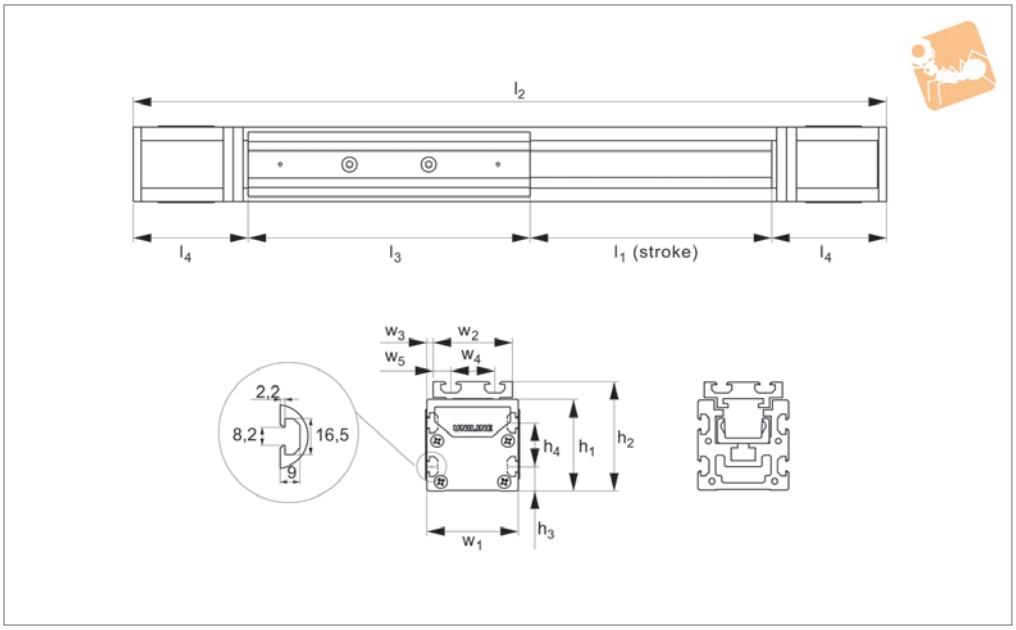
Material
Special sliders on a single hardened steel rail, encased in an aluminium profile.

Technical Notes
Any length overall stroke unit can be supplied (up to 3,0 metres in a single section) for the A55 series. Longer strokes available.
Longer carriages and double carriages are available which increase the load capacity of the units.

Tips
See technical pages for more information on belt specification, long carriages, double carriages and motor connections. Can easily be combined to make an XY, XYZ or other set up gantry system.

Important Notes
For loads with low moment loads.

Order No.	l_1	l_2	l_3	h_1 & w_1	h_2	h_3	h_4	l_4	w_2	w_3	w_4	w_5	C_{0ax} N	C_{0rad} N	M_x Nm	M_y Nm	M_z Nm
L3001.A55-0100	100	516	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-0200	200	616	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-0300	300	716	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-0400	400	816	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-0500	500	916	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-0600	600	1016	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-0700	700	1116	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-0800	800	1216	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-0900	900	1316	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-1000	1000	1416	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-1100	1100	1516	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-1200	1200	1616	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-1300	1300	1716	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-1400	1400	1816	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-1500	1500	1916	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-1600	1600	2016	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-1700	1700	2116	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-1800	1800	2216	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-1900	1900	2316	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-2000	2000	2416	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-2100	2100	2516	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-2200	2200	2616	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-2300	2300	2716	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-2400	2400	2816	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-2500	2500	2916	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-2600	2600	3016	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-2700	2700	3116	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-2800	2800	3216	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-2900	2900	3316	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5
L3001.A55-3000	3000	3416	200	55	71	15	25	108	52	1.5	28	12	750	2175	11.5	21.7	54.5





L3001.A75

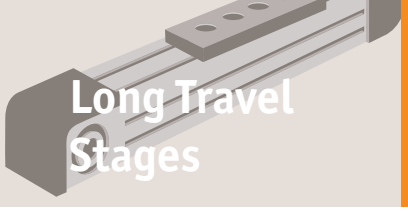
Material
Special sliders on a single hardened steel rail, encased in an aluminium profile.

Technical Notes
Any length overall stroke unit can be supplied (up to 3,4 metres in a single section) for the A75 series. Longer strokes available.
Longer carriages and double carriages are available which increase the load capacity of the units.

Tips
See technical pages for more information on belt specification, long carriages, double carriages and motor connections. Can easily be combined to make an XY, XYZ or other set up gantry system.

Important Notes
For loads with low moment loads.

Order No.	l_1	l_2	l_3	h_1 & w_1	h_2	h_3	h_4	l_4	w_2	w_3	w_4	w_5	C_{0ax} N	C_{0rad} N	M_x Nm	M_y Nm	M_z Nm
L3001.A75-0100	100	617	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-0200	200	717	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-0300	300	817	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-0400	400	917	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-0500	500	1017	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-0600	600	1117	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-0700	700	1217	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-0800	800	1317	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-0900	900	1417	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-1000	1000	1517	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-1100	1100	1617	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-1200	1200	1717	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-1300	1300	1817	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-1400	1400	1917	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-1500	1500	2017	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-1600	1600	2117	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-1700	1700	2217	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-1800	1800	2317	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-1900	1900	2417	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-2000	2000	2517	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-2100	2100	2617	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-2200	2200	2717	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-2300	2300	2817	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-2400	2400	2917	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-2500	2500	3017	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-2600	2600	3117	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-2700	2700	3217	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-2800	2800	3317	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-2900	2900	3417	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-3000	3000	3517	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209

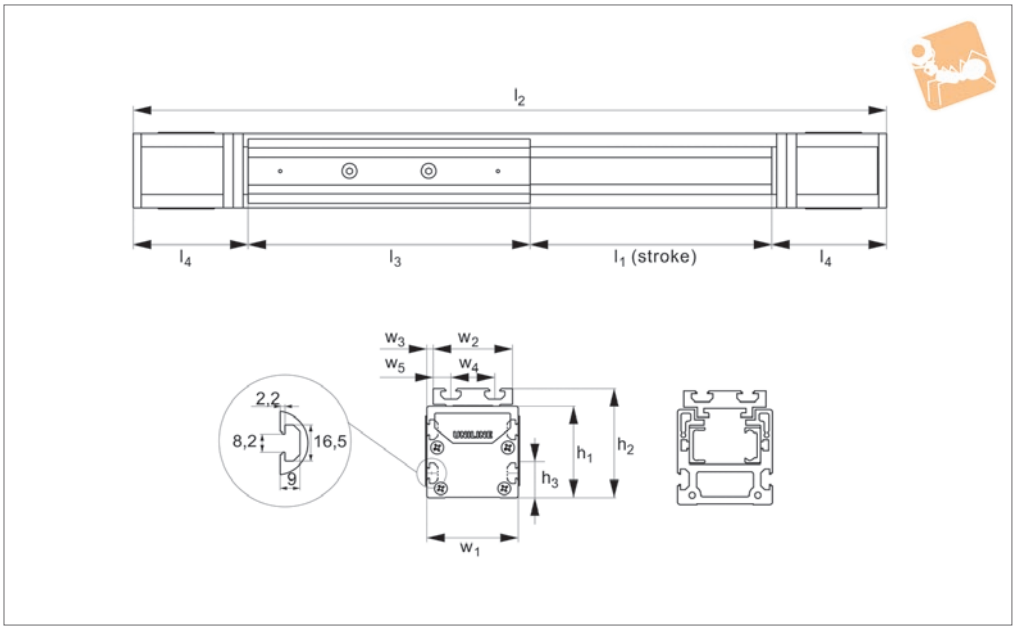


Heavy Duty Belt Driven Unit

size 75



Order No.	l_1	l_2	l_3	h_1 & w_1	h_2	h_3	h_4	l_4	w_2	w_3	w_4	w_5	C_{0ax} N	C_{0rad} N	M_x Nm	M_y Nm	M_z Nm
L3001.A75-3100	3100	3617	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-3200	3400	3917	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-3300	3200	3717	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209
L3001.A75-3400	3300	3817	285	75	90	20	35	116	65	5	36	14.5	1855	5500	43.6	81.5	209





L3003.C55

Material
Special sliders on a pair of hardened steel rails, encased in an aluminium profile.

Technical Notes
Any length overall stroke unit can be supplied (up to 1,9 metres in a single section) for the C55 series. Longer strokes available.
Longer carriages and double carriages are available which increase the load capacity of the units.

Tips
See technical pages for more information on belt specification, long carriages, double carriages and motor connections. Can easily be combined to make an XY, XYZ or other set up gantry system.

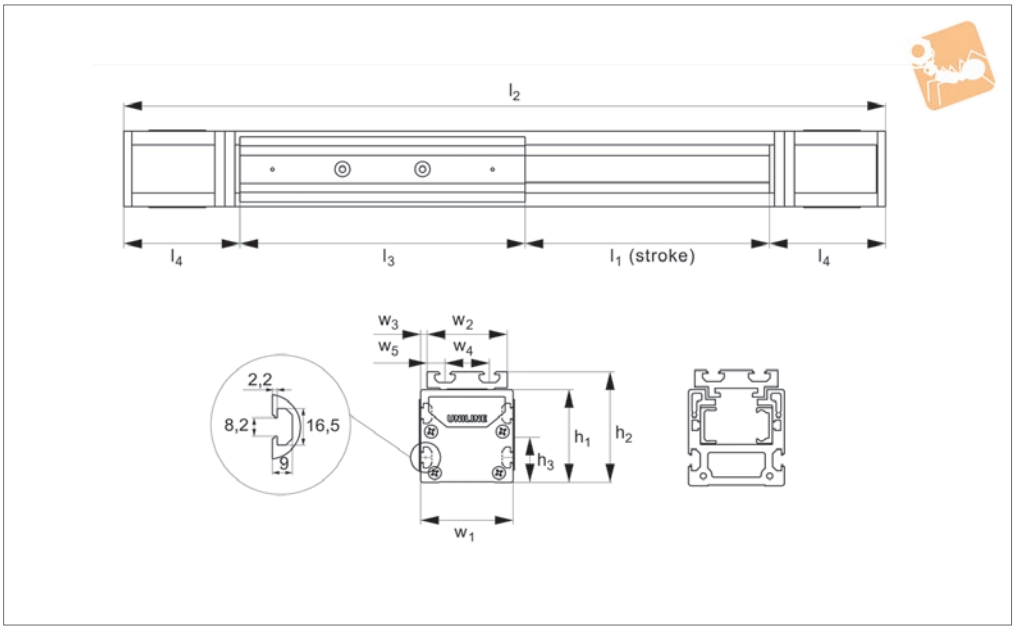
Important Notes
For loads with significant M_y moment loads.

Order No.	l_1	l_2	h_3	l_3	h_1 & w_1	h_2	l_4	w_2	w_3	w_4	w_5	C_{0ax} N	C_{0rad} N	M_x Nm	M_y Nm	M_z Nm
L3003.C55-0100	100	516	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-0200	200	616	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-0300	300	716	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-0400	400	816	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-0500	500	916	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-0600	600	1016	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-0700	700	1116	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-0800	800	1216	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-0900	900	1316	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-1000	1000	1416	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-1100	1100	1516	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-1200	1200	1616	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-1300	1300	1716	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-1400	1400	1816	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-1500	1500	1916	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-1600	1600	2016	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-1700	1700	2116	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7
L3003.C55-1800	1800	2216	15	200	55	71	108	52	1.5	28	12	1640	300	18.5	65.6	11.7

Heavy Duty Belt Driven Unit
size 75



L3003.C75



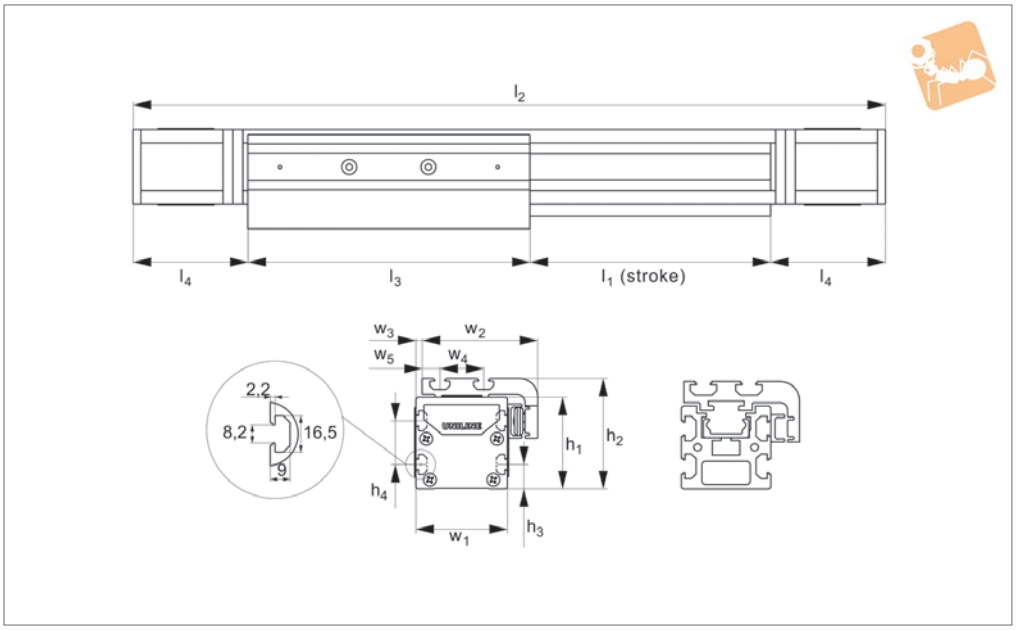
Material
Special sliders on a pair of hardened steel rails, encased in an aluminium profile.

Technical Notes
Any length overall stroke unit can be supplied (up to 3,0 metres in a single section) for the C75 series. Longer strokes available.
Longer carriages and double carriages are available which increase the load capacity of the units.

Tips
See technical pages for more information on belt specification, long carriages, double carriages and motor connections. Can easily be combined to make an XY, XYZ or other set up gantry system.

Important Notes
For loads with significant M_y moment loads.

Order No.	l_1	l_2	h_3	l_3	h_1 & w_1	h_2	l_4	w_2	w_3	w_4	w_5	C_{0ax} N	C_{0rad} N	M_x Nm	M_y Nm	M_z Nm
L3003.C75-0100	100	617	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-0200	200	717	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-0300	300	817	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-0400	400	917	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-0500	500	1017	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-0600	600	1117	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-0700	700	1217	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-0800	800	1317	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-0900	900	1417	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-1000	1000	1517	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-1100	1100	1617	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-1200	1200	1717	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-1300	1300	1817	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-1400	1400	1917	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-1500	1500	2017	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-1600	1600	2117	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-1700	1700	2217	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-1800	1800	2317	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-1900	1900	2417	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-2000	2000	2517	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-2100	2100	2617	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-2200	2200	2717	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-2300	2300	2817	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-2400	2400	2917	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-2500	2500	3017	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-2600	2600	3117	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-2700	2700	3217	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-2800	2800	3317	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-2900	2900	3417	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1
L3003.C75-3000	3000	3517	20	285	75	90	116	65	5	36	14.5	4350	750	85.2	217	36.1





L3004.E55

Material
Special sliders on a pair of hardened steel rails, encased in an aluminium profile.

Technical Notes
Any length overall stroke unit can be supplied (up to 3,0 metres in a single section) for the E55 series. Longer strokes available.
Longer carriages and double carriages are available which increase the load capacity of the units.

Tips
See technical pages for more information on belt specification, long carriages, double carriages and motor connections. Can easily be combined to make an XY, XYZ or other set up gantry system.

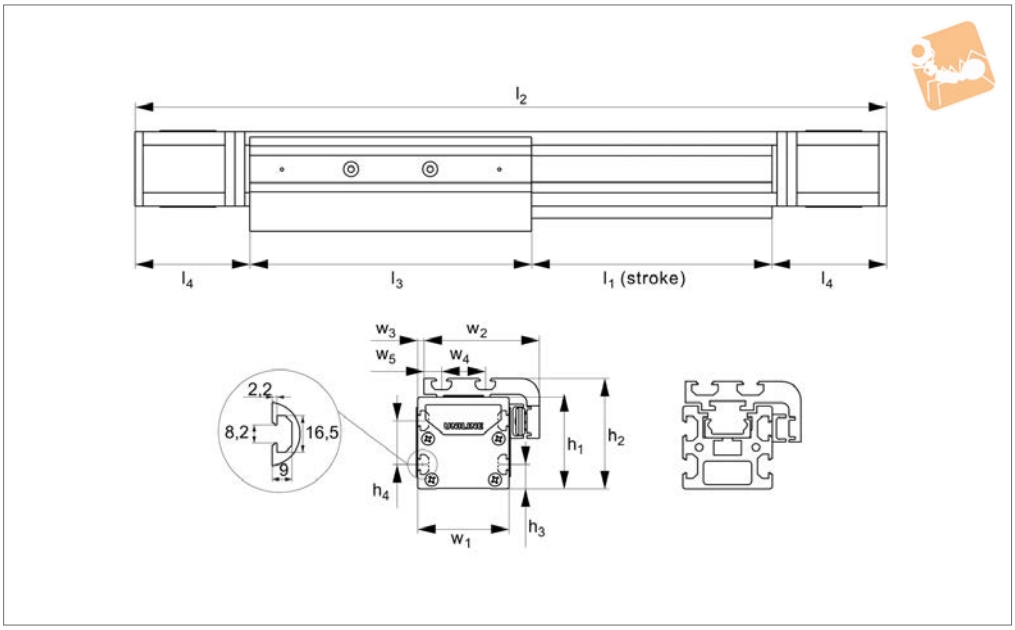
Important Notes
For extra rigidity and where significant M_x moment loads are present.

Order No.	l_1	l_2	l_3	l_4	h_1 & w_1	h_2	h_3	h_4	w_2	w_3	w_4	w_5	C_{0ax} N	C_{0rad} N	M_x Nm	M_y Nm	M_z Nm
L3004.E55-0100	100	516	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-0200	200	616	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-0300	300	716	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-0400	400	816	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-0500	500	916	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-0600	600	1016	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-0700	700	1116	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-0800	800	1216	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-0900	900	1316	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-1000	1000	1416	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-1100	1100	1516	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-1200	1200	1616	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-1300	1300	1716	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-1400	1400	1816	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-1500	1500	1916	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-1600	1600	2016	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-1700	1700	2116	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-1800	1800	2216	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-1900	1900	2316	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-2000	2000	2416	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-2100	2100	2516	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-2200	2200	2616	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-2300	2300	2716	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-2400	2400	2816	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-2500	2500	2916	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-2600	2600	3016	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-2700	2700	3116	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-2800	2800	3216	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-2900	2900	3316	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4
L3004.E55-3000	3000	3416	200	108	55	71	15	25	71	1.5	28	12	1500	2175	25.5	43.4	54.4

Heavy Duty Belt Driven Unit
size 75



L3004.E75



Material
Special sliders on a pair of hardened steel rails, encased in an aluminium profile.

Technical Notes
Any length overall stroke unit can be supplied (up to 3,4 metres in a single section) for the E75 series. Longer strokes available.
Longer carriages and double carriages are available which increase the load capacity of the units.

Tips
See technical pages for more information on belt specification, long carriages, double carriages and motor connections. Can easily be combined to make an XY, XYZ or other set up gantry system.

Important Notes
For extra rigidity and where significant M_x moment loads are present.

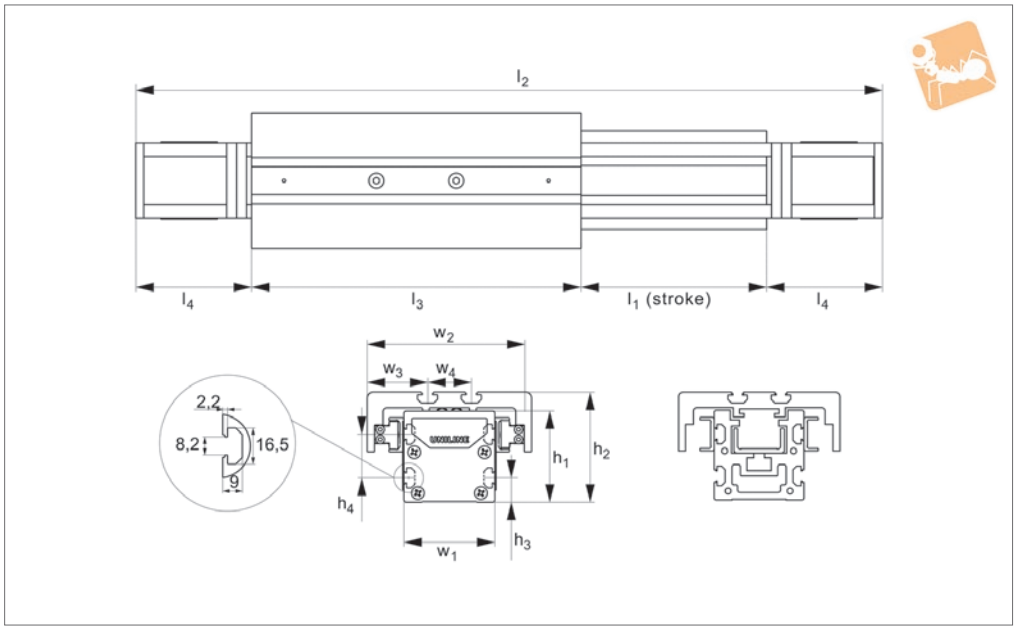
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L3004.E75-0100	100	617	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-0200	200	717	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-0300	300	817	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-0400	400	917	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-0500	500	1017	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-0600	600	1117	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-0700	700	1217	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-0800	800	1317	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-0900	900	1417	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-1000	1000	1517	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-1100	1100	1617	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-1200	1200	1717	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-1300	1300	1817	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-1400	1400	1917	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-1500	1500	2017	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-1600	1600	2117	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-1700	1700	2217	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-1800	1800	2317	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-1900	1900	2417	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-2000	2000	2517	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-2100	2100	2617	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-2200	2200	2717	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-2300	2300	2817	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-2400	2400	2917	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-2500	2500	3017	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-2600	2600	3117	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-2700	2700	3217	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-2800	2800	3317	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-2900	2900	3417	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-3000	3000	3517	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209

Order No.	l_1	l_2	l_3	l_4	h_1 & w_1	h_2	h_3	h_4	w_2	w_3	w_4	w_5	C_{0ax} N	C_{0rad} N	M_x Nm	M_y Nm	M_z Nm
L3004.E75-3100	3100	3617	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-3200	3200	3717	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-3300	3300	3817	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209
L3004.E75-3400	3400	3917	285	116	75	90	20	35	135	5	36	14.5	3710	5500	85.5	163	209

Heavy Duty Belt Driven Unit
size 75



L3004.ED75



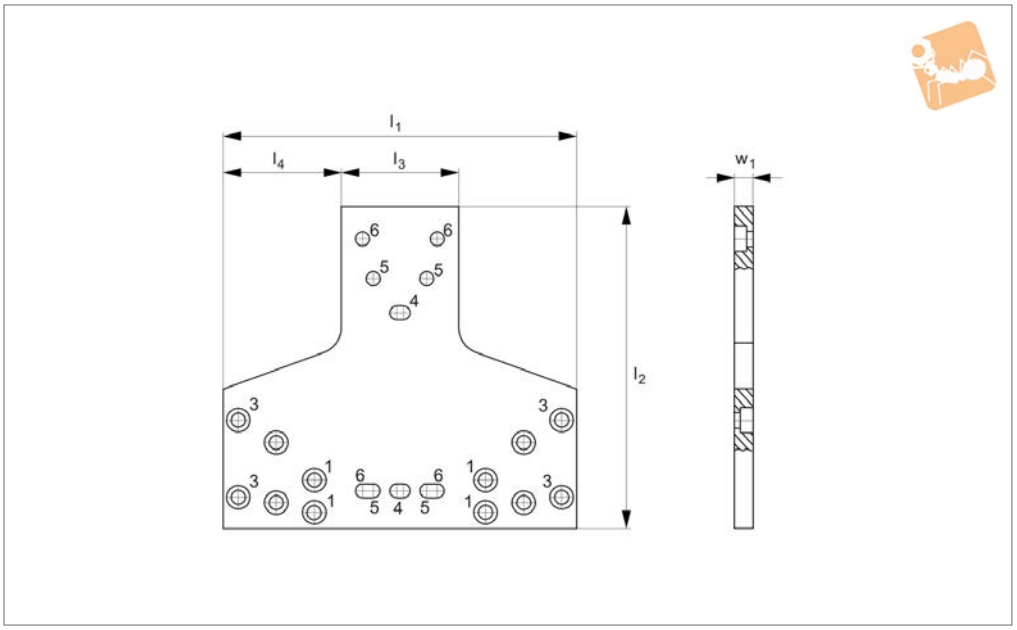
Material
Special sliders on three hardened steel rails, encased in an aluminium profile.

Technical Notes
Any length overall stroke unit can be supplied (up to 2,9 metres in a single section) for the ED75 series. Longer strokes available.
Longer carriages and double carriages are available which increase the load capacity of the units.

Tips
See technical pages for more information on belt specification, long carriages, double carriages and motor connections.
Can easily be combined to make an XY, XYZ or other set up gantry system.

Important Notes
For extra rigidity and where significant moment loads are present.

Order No.	l_1	l_2	l_3	l_4	h_1 & w_1	h_2	h_3	h_4	w_2	w_3	w_4	C_{0ax} N	C_{0rad} N	M_x Nm	M_y Nm	M_z Nm
L3004.ED75-0100	100	662	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-0200	200	762	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-0300	300	862	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-0400	400	962	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-0500	500	1062	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-0600	600	1162	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-0700	700	1262	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-0800	800	1362	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-0900	900	1462	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-1000	1000	1562	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-1100	1100	1662	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-1200	1200	1762	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-1300	1300	1862	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-1400	1400	1962	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-1500	1500	2062	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-1600	1600	2162	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-1700	1700	2262	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-1800	1800	2362	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-1900	1900	2462	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-2000	2000	2562	330	116	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-2100	2100	2662	330	160	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-2200	2200	2762	330	160	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-2300	2300	2862	330	160	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-2400	2400	2962	330	160	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-2500	2500	3062	330	160	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-2600	2600	3162	330	160	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-2700	2700	3262	330	160	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-2800	2800	3362	330	160	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-2900	2900	3462	330	160	75	90	20	35	135	49.5	36	8700	5500	400	868	209
L3004.ED75-3000	3000	3562	330	160	75	90	20	35	135	49.5	36	8700	5500	400	868	209





L3001.APC1

Material
Aluminium.

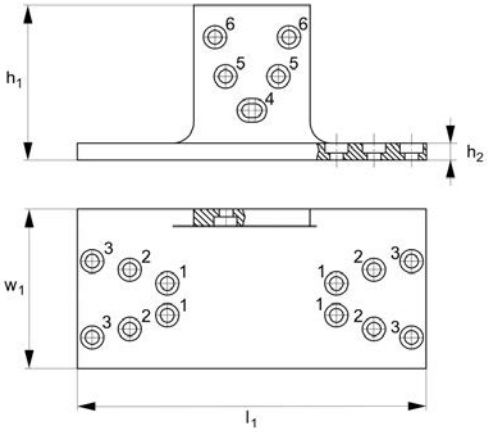
Technical Notes
Allows two units to be mounted perpendicularly to one another. Supplied with T-nuts and bolts.

Tips
Not suitable for L3004.E and L3004.ED units.
Size 40 - use holes 1 for carriages and 4 for profile.
Size 55 - use holes 2 for carriages and 5 for profile.
Size 40 - use holes 3 for carriages and 6 for profile.

Order No.	l_1	l_2	l_3	l_4	w_1
L3001.APC-1	165	150	55	55	8



L3001.APC2



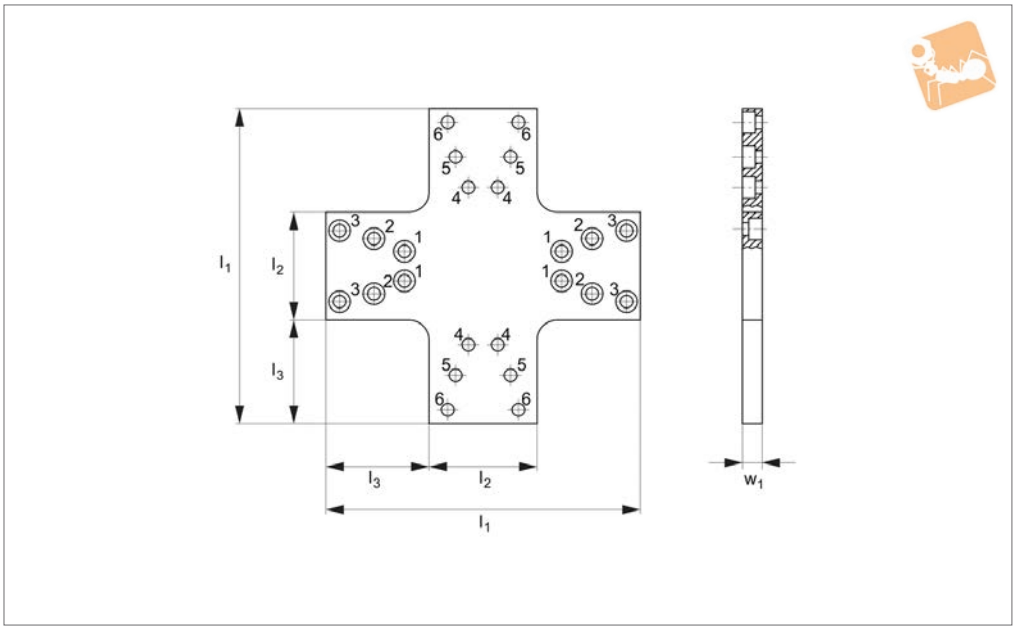
Material
Aluminium.

Technical Notes
Allows two units to be mounted at right angles to one another. Supplied with T-nuts and bolts.

The trolley of one unit can be mounted to the side of the other.

Tips
Not suitable for L3004.E and L3004.ED units.
Size 40 - use holes 1 for carriages and 4 for profile.
Size 55 - use holes 2 for carriages and 5 for profile.
Size 40 - use holes 3 for carriages and 6 for profile.

Order No.	l_1	h_1	h_2	w_1
L3001.APC-2	165	73	8	75





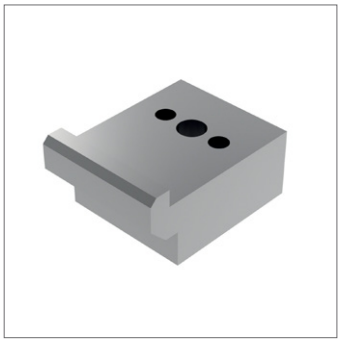
L3001.APC3

Material
Aluminium.

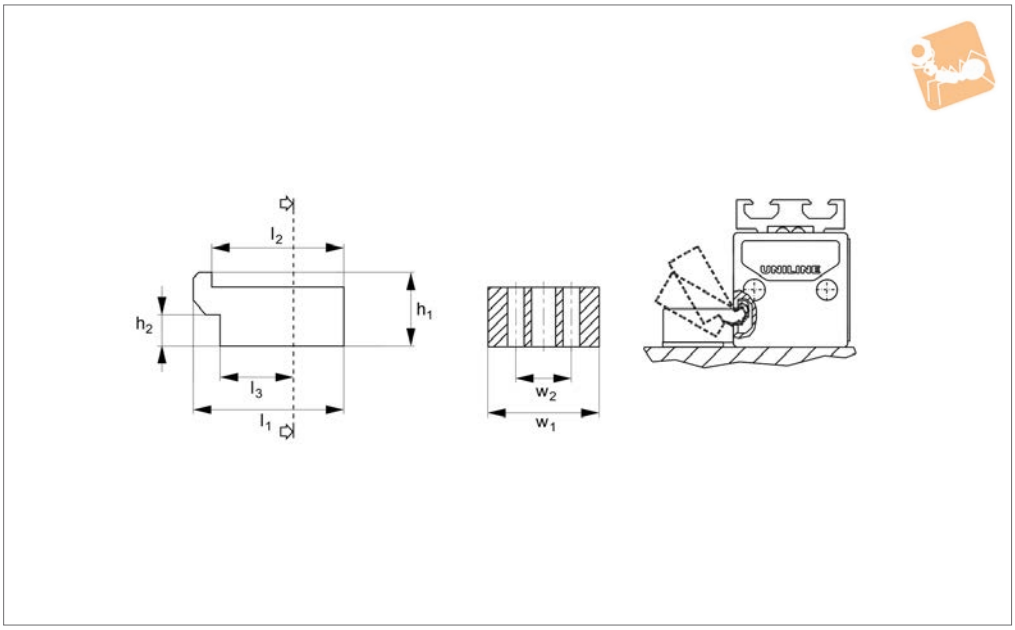
Technical Notes
Allows two units to be mounted perpendicularly to one another. Supplied with T-nuts and bolts.

Tips
Size 40 - use holes 1 for carriages and 4 for profile.
Size 55 - use holes 2 for carriages and 5 for profile.
Size 40 - use holes 3 for carriages and 6 for profile.

Order No.	l_1	l_2	l_3	w_1
L3001.APC-3	160	55	52.5	10



L3001.APF2



Material
Aluminium.

Technical Notes
Used to bolt the Uniline units to a surface or to mount to units to one another with or without an interface plate.
The clamps fit in the T-slots of any of the units.

Tips
Insert the lip of the clamp into the T slot of the Uniline unit, position the clamp and if necessary shim to required height. Insert screws and tighten.
Not suitable for L3001.A100 units.

Order No.	l_1	h_1	h_2	l_2	l_3	w_1	w_2
L3001.APF-2	40	20	8.5	35	20	50	15

The choice between different types of lead screws and lead screw nuts available is generally made after taking into account the following factors.

Choice of the screw

Working environment
For work environments where there are no particular corrosive or oxidising agents our steel (L1320 and L1321) lead screws can be used.

Where these conditions are not met, we recommend using our stainless steel screws (L1322 and L1323) which are particularly suitable in the following cases:

- With a relative humidity of 70-80% and above.
- Immersed in water (including sea water).
- In the presence of particular corrosive agents such as chlorides. In case of highly corrosive agents please contact our Technical Department.
- In the food industry or pharmaceutical industry, where they are used with stainless steel or bronze nuts.
- Where the lead screws cannot be reached for lubrication. In particular, for lubricating "maintenance free" fittings they are coupled with plastic nuts.
- Where working temperatures are relatively high (above 200°C) - because stainless steel has a structure that is more suited to higher temperatures.

Backdrive
Irreversibility defines how much the nut can "backdrive" down the lead screw. If a nut cannot backdrive down the screw then it is irreversible. This is especially important if the lead screw and nut are being used in a vertical application i.e. in this situation no backdrive is normally acceptable.

Lead screws with a lead angle of <2° 30' are completely irreversible i.e., they cannot backdrive.

Lead screws with a lead angle >5° but <6° still have a good degree of irreversibility and may in some instances exhibit some backdrive.

Lead screws with a lead angle >6° have zero irreversibility, therefore the nut may backdrive down the lead screw with little or no load applied.

This is important to know in vertical applications.

Choice of the nut

Working environment
Our bronze and stainless steel 303 lead screw nuts, are resistant to standard oxidizing agents that occur in various applications.

Where corrosive agents are present, please contact our Technical Department for advice.

In applications where the presence of added lubricant (grease or oil) is not allowed we recommend the use of self-lubricating plastic nuts.

The use of plastics can however be limited by the specific working conditions, therefore please consult our Technical Department should you wish. This is because plastics have excellent self-lubrication features, but at the same time have restrictions on the working temperature or moisture absorption problems, (as well as some mechanical properties that may not be suitable for the intended use).

Single start and double start

Pitch

The axial distance between threads. Pitch is equal to the lead in a single start screw.

Lead

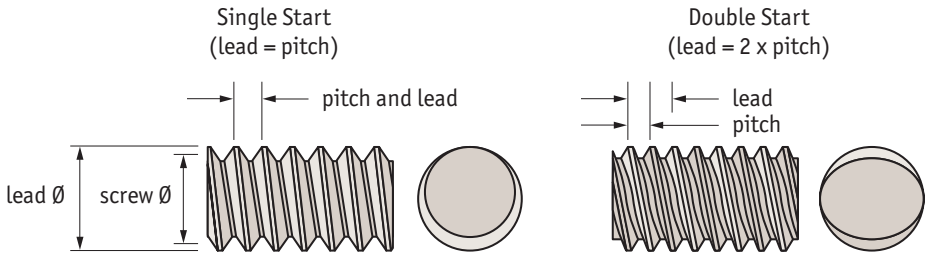
The axial distance the nut advances in one revolution of the screw. The lead is equal to the pitch times the number of starts.

Lead = Pitch x No. of starts

For example: A 10mm diameter lead screw has a pitch of 2mm. On a single start lead screw the lead is also 2mm. On a twin start lead screw the lead is 4mm.

Screw starts

The number of independent threads on the screw shaft, example one or two.



Straightness

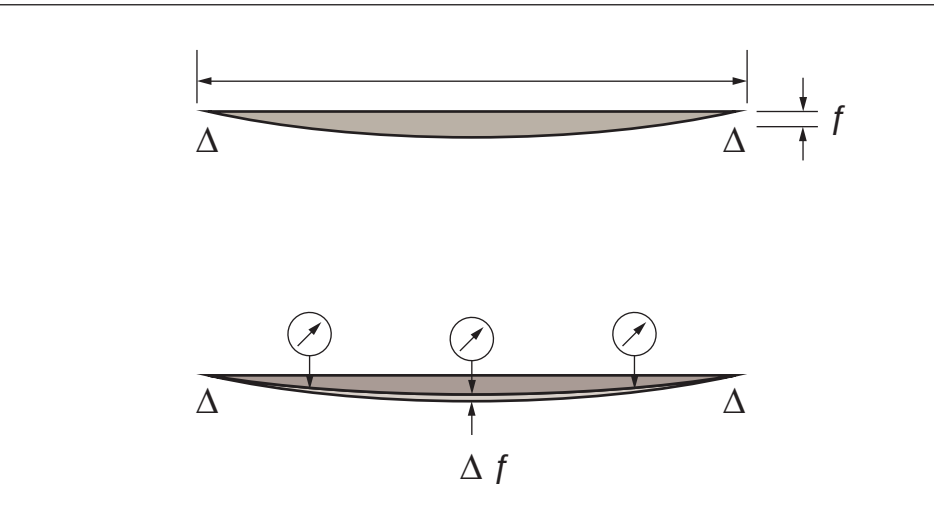
Automotion Components lead screws are produced with controlled straightness.
Screw straightness is checked by measuring the variation of the deflection f, when the screw is supported at the ends on two fixed points and slightly rotated.

For example, the screw L1320.R30-06 has a straightness of 0.2 mm over 300 mm.
This means that a screw 30x6 300 mm long resting on two fixed points at the ends and rotated slightly displays a camber variation Δf less than 0.2 mm at all points on the screw.

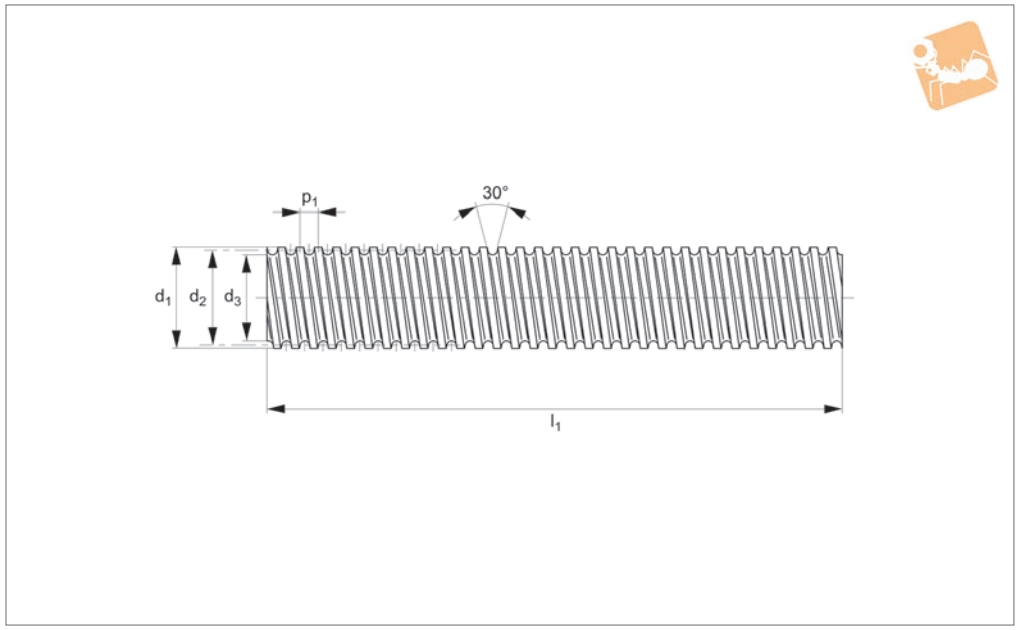
Straightness

Δf = lead screw weight camber.

Good screw straightness gives operation with load always centred on the axis, hence uniform distribution of surface contact pressure between screw and nut. This allows smooth running and a regular rotation.



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L1320

Material
Rolled trapezoidal thread, steel EN 10083-2 (C35, DIN 1.0501) or (C45, DIN 1.0503). Manufactured to ISO 2901/2903 (DIN 103).
Surface hardness approx. 250HB.

Technical Notes
‚Lead' refers to the distance that a nut will travel for a complete revolution of the screw.

Select a suitable lead screw nut (part nos. L1330 to L1343) to suit the lead screw - the most popular nuts are the flanged, bronze nuts part no. L1331.
Single start lead screws are less expensive than twin start lead screws.

Tips
These are the standard right hand thread lead screws - for left hand thread versions see part no. L1321.
For stainless steel right hand lead screws see part no. L1322.
Cutting to required length and machining of ends - on request.
Lead screw lengths of up to 6 metres can be provided for a diameter >30mm.

Order No.	Size	No. of starts	d_1 tol. 7e	Lead	p_1	d_2 tol. 7e min.	d_2 tol. 7e max.	d_3 tol. 7h min.	d_3 tol. 7h max.	l_1	Lead angle	Pitch accuracy mm/ 300mm	Straightness mm/300mm	Weight kg
L1320.R08-015-1.0	TR8x1.5	1	8	1.5	1.5	7.013	7.183	5.763	7.200	1000	3°50‘	0.20	0.5	0.311
L1320.R08-015-1.5	TR8x1.5	1	8	1.5	1.5	7.013	7.183	5.763	7.200	1500	3°50‘	0.20	0.5	0.466
L1320.R08-015-2.0	TR8x1.5	1	8	1.5	1.5	7.013	7.183	5.763	7.200	2000	3°50‘	0.20	0.5	0.622
L1320.R08-015-3.0	TR8x1.5	1	8	1.5	1.5	7.013	7.183	5.763	7.200	3000	3°50‘	0.20	0.5	0.933
L1320.R10-02-1.0	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	1000	4°07‘	0,2	0,5	0,48
L1320.R10-02-1.5	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	1500	4°07‘	0,2	0,5	0,72
L1320.R10-02-2.0	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	2000	4°07‘	0,2	0,5	0,96
L1320.R10-02-3.0	TR10x2	1	10	2	2	8,739	8,929	7,685	7,500	3000	4°07‘	0,2	0,5	1,44
L1320.R10-04-1.0	TR10x4	2	10	4	2	8,716	8,929	7,685	7,500	1000	8°12‘	0,3	0,5	0,48
L1320.R10-04-1.5	TR10x4	2	10	4	2	8,716	8,929	9,685	7,500	1500	8°12‘	0,3	0,5	0,72
L1320.R10-04-2.0	TR10x4	2	10	4	2	8,716	8,929	9,685	7,500	2000	8°12‘	0,3	0,5	0,96
L1320.R10-04-3.0	TR10x4	2	10	4	2	8,716	8,929	6,891	7,500	3000	8°12‘	0,3	0,5	1,44
L1320.R12-03-1.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	1000	5°17‘	0,2	0,5	0,65
L1320.R12-03-1.5	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	1500	5°17‘	0,2	0,5	0,97
L1320.R12-03-2.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	2000	5°17‘	0,2	0,5	1,30
L1320.R12-03-3.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	3000	5°17‘	0,2	0,5	1,95
L1320.R12-06-1.0	TR12x6	2	12	6	3	10,164	10,415	7,685	8,500	1000	10°30‘	0,3	0,5	0,65
L1320.R12-06-1.5	TR12X6	2	12	6	3	10,164	10,415	7,685	8,500	1500	10°30‘	0,3	0,5	0,97
L1320.R12-06-2.0	TR12x6	2	12	6	3	10,164	10,415	7,685	8,500	2000	10°30‘	0,3	0,5	1,30
L1320.R12-06-3.0	TR12x6	2	12	6	3	10,164	10,415	7,685	8,500	3000	10°30‘	0,3	0,5	1,95
L1320.R14-03-1.0	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	1000	4°26‘	0,2	0,5	0,93
L1320.R14-03-1.5	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	1500	4°26‘	0,2	0,5	1,39
L1320.R14-03-2.0	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	2000	4°26‘	0,2	0,5	1,86
L1320.R14-03-3.0	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	3000	4°26‘	0,2	0,5	2,79
L1320.R14-06-1.0	TR14x6	2	14	6	3	12,164	12,415	9,685	10,500	1000	8°49‘	0,3	0,5	0,93

Steel Lead Screws
right hand thread



Order No.	Size	No. of starts	d_1 tol. 7e	Lead	p_1	d_2 tol. 7e min.	d_2 tol. 7e max.	d_3 tol. 7h min.	d_3 tol. 7h max.	l_1	Lead angle	Pitch accuracy mm/ 300mm	Straightness mm/300mm	Weight kg
L1320.R14-06-1.5	TR14x6	2	14	6	3	12,164	12,415	9,685	10,500	1500	8°49‘	0,3	0,5	1,39
L1320.R14-06-2.0	TR14x6	2	14	6	3	12,164	12,415	9,685	10,500	2000	8°49‘	0,3	0,5	1,86
L1320.R14-06-3.0	TR14x6	2	14	6	3	12,164	12,415	9,685	10,500	3000	8°49‘	0,3	0,5	2,79
L1320.R16-04-1.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	1000	5°16‘	0,05	0,5	1,17
L1320.R16-04-1.5	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	1500	5°16‘	0,05	0,5	1,75
L1320.R16-04-2.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	2000	5°16‘	0,05	0,5	2,34
L1320.R16-04-3.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	3000	5°16‘	0,05	0,5	3,51
L1320.R16-08-1.0	TR16x8	2	16	8	4	13,608	13,905	10,474	11,500	1000	10°29‘	0,1	0,5	1,17
L1320.R16-08-1.5	TR16x8	2	16	8	4	13,608	13,905	10,474	11,500	1500	10°29‘	0,1	0,5	1,75
L1320.R16-08-2.0	TR16x8	2	16	8	4	13,608	13,905	10,474	11,500	2000	10°29‘	0,1	0,5	2,34
L1320.R16-08-3.0	TR16x8	2	16	8	4	13,608	13,905	10,474	11,500	3000	10°29‘	0,1	0,5	3,51
L1320.R18-04-1.0	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	1000	4°36‘	0,05	0,5	1,52
L1320.R18-04-1.5	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	1500	4°36‘	0,05	0,5	2,28
L1320.R18-04-2.0	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	2000	4°36‘	0,05	0,5	3,04
L1320.R18-04-3.0	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	3000	4°36‘	0,05	0,5	4,56
L1320.R18-08-1.0	TR18x8	2	18	8	4	15,608	15,905	12,474	13,500	1000	9°20‘	0,1	0,5	1,52
L1320.R18-08-1.5	TR18x8	2	18	8	4	15,608	15,905	12,474	13,500	1500	9°20‘	0,1	0,5	2,28
L1320.R18-08-2.0	TR18x8	2	18	8	4	15,608	15,905	12,474	13,500	2000	9°20‘	0,1	0,5	3,04
L1320.R18-08-3.0	TR18x8	2	18	8	4	15,608	15,905	12,474	13,500	3000	9°20‘	0,1	0,5	4,56
L1320.R20-04-1.0	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	1000	4°05‘	0,05	0,5	1,94
L1320.R20-04-1.5	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	1500	4°05‘	0,05	0,5	2,91
L1320.R20-04-2.0	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	2000	4°05‘	0,05	0,5	3,88
L1320.R20-04-3.0	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	3000	4°05‘	0,05	0,5	5,82
L1320.R20-08-1.0	TR20x8	2	20	8	4	17,608	17,905	14,474	15,500	1000	8°09‘	0,1	0,5	1,94
L1320.R20-08-1.5	TR20x8	2	20	8	4	17,608	17,905	14,474	15,500	1500	8°09‘	0,1	0,5	2,91
L1320.R20-08-2.0	TR20x8	2	20	8	4	17,608	17,905	14,474	15,500	2000	8°09‘	0,1	0,5	3,88
L1320.R20-08-3.0	TR20x8	2	20	8	4	17,608	17,905	14,474	15,500	3000	8°09‘	0,1	0,5	5,82
L1320.R22-05-1.0	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	1000	4°43‘	0,05	0,2	2,29
L1320.R22-05-1.5	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	1500	4°43‘	0,05	0,2	3,43
L1320.R22-05-2.0	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	2000	4°43‘	0,05	0,2	4,58
L1320.R22-05-3.0	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	3000	4°43‘	0,05	0,2	6,87
L1320.R22-10-1.0	TR22x10	2	22	10	5	19,058	19,394	15,294	16,500	1000	9°23‘	0,2	0,3	2,29
L1320.R22-10-1.5	TR22x10	2	22	10	5	19,058	19,394	15,294	16,500	1500	9°23‘	0,2	0,3	3,43
L1320.R22-10-2.0	TR22x10	2	22	10	5	19,058	19,394	15,294	16,500	2000	9°23‘	0,2	0,3	4,58
L1320.R22-10-3.0	TR22x10	2	22	10	5	19,058	19,394	15,294	16,500	3000	9°23‘	0,2	0,3	6,87
L1320.R24-05-1.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	1000	4°17‘	0,05	0,2	2,78
L1320.R24-05-1.5	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	1500	4°17‘	0,05	0,2	4.17
L1320.R24-05-2.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	2000	4°17‘	0,05	0,2	5,56
L1320.R24-05-3.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	3000	4°17‘	0,05	0,2	8,34
L1320.R24-10-1.0	TR24x10	2	24	10	5	21,058	21,394	17,269	18,500	1000	8°31‘	0,2	0,3	2,78
L1320.R24-10-1.5	TR24x10	2	24	10	5	21,094	21,394	17,269	18,500	1500	8°31‘	0,2	0,3	4.17
L1320.R24-10-2.0	TR24x10	2	24	10	5	21,094	21,394	17,269	18,500	2000	8°31‘	0,2	0,3	5,56
L1320.R24-10-3.0	TR24X10	2	24	10	5	21,094	21,394	17,269	18,500	3000	8°31‘	0,2	0,3	8,34
L1320.R26-05-1.0	TR26x5	1	26	5	5	23,094	23,394	19,269	20,500	1000	3°55‘	0,05	0,2	3,32
L1320.R26-05-1.5	TR26x5	1	26	5	5	23,094	23,394	19,269	20,500	1500	3°55‘	0,05	0,2	4,98
L1320.R26-05-2.0	TR26x5	1	26	5	5	23,094	23,394	19,269	20,500	2000	3°55‘	0,05	0,2	6,64
L1320.R26-05-3.0	TR26x5	1	26	5	5	23,094	23,394	19,269	20,500	13000	3°55‘	0,05	0,2	9,96
L1320.R26-10-1.0	TR26x10	2	26	10	5	23,058	23,394	19,269	20,500	1000	7°48‘	0,2	0,3	3,32
L1320.R26-10-1.5	TR26x10	2	26	10	5	23,094	23,394	19,269	20,500	1500	7°48‘	0,2	0,3	4,98
L1320.R26-10-2.0	TR26x10	2	26	10	5	23,094	23,394	19,269	20,500	2000	7°48‘	0,2	0,3	6,64
L1320.R26-10-3.0	TR26x10	2	26	10	5	23,094	23,394	19,269	20,500	3000	7°48‘	0,2	0,3	9,96
L1320.R28-05-1.0	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	1000	3°36‘	0,05	0,2	3,90
L1320.R28-05-1.5	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	1500	3°36‘	0,05	0,2	5,85
L1320.R28-05-2.0	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	2000	3°36‘	0,05	0,2	7.8
L1320.R28-05-3.0	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	3000	3°36‘	0,05	0,2	11,7
L1320.R28-10-1.0	TR28x10	2	28	10	5	25,058	25,394	21,269	22,500	1000	7°12‘	0,2	0,3	3,90
L1320.R28-10-1.5	TR28x10	2	28	10	5	25,094	25,394	21,269	22,500	1500	7°12‘	0,2	0,3	5,85
L1320.R28-10-2.0	TR28x10	2	28	10	5	25,094	25,394	21,269	22,500	2000	7°12‘	0,2	0,3	7,80
L1320.R28-10-3.0	TR28x10	2	28	10	5	25,094	25,394	21,269	22,500	3000	7°12‘	0,2	0,3	11,7
L1320.R30-06-1.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	1000	4°05‘	0,07	0,2	4,35
L1320.R30-06-1.5	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	1500	4°05‘	0,07	0,2	6,52
L1320.R30-06-2.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	2000	4°05‘	0,07	0,2	8,70
L1320.R30-06-3.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	3000	4°05‘	0,07	0,2	13,05
L1320.R30-12-1.0	TR30x12	2	30	12	6	26,058	26,882	21,563	23,000	1000	8°08‘	0,2	0,3	4,35
L1320.R30-12-1.5	TR30x12	2	30	12	6	26,547	26,882	21,563	23,000	1500	8°08‘	0,2	0,3	6,52
L1320.R30-12-2.0	TR30x12	2	30	12	6	26,547	26,882	21,563	23,000	2000	8°08‘	0,2	0,3	8,70

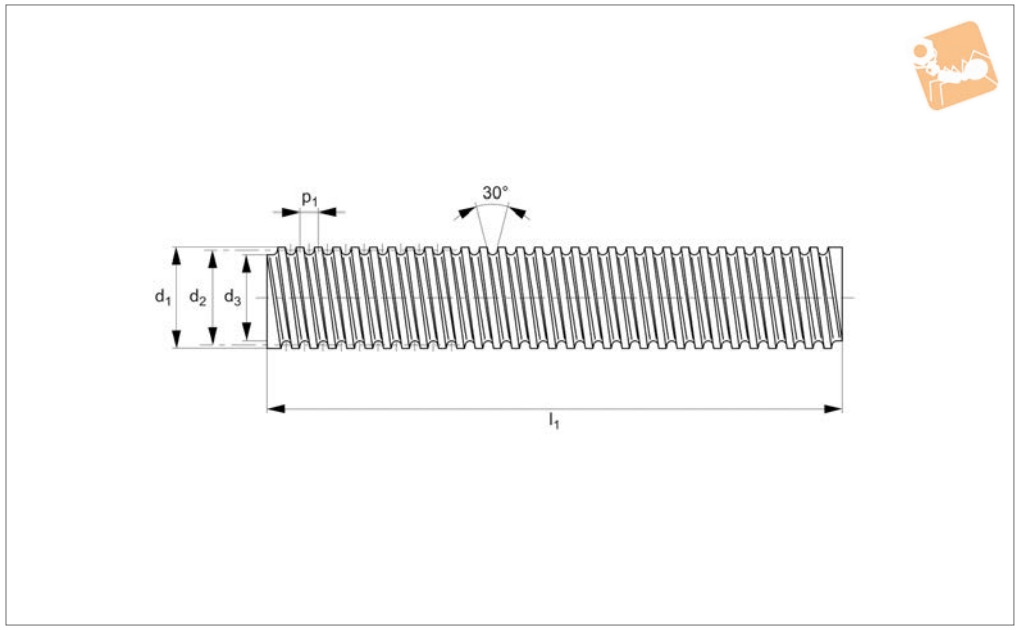


Order No.	Size	No. of starts	d_1 tol. 7e	Lead	p_1	d_2 tol. 7e min.	d_2 tol. 7e max.	d_3 tol. 7h min.	d_3 tol. 7h max.	l_1	Lead angle	Pitch accuracy mm/ 300mm	Straightness mm/300mm	Weight kg
L1320.R30-12-3.0	TR30x12	2	30	12	6	26,547	26,882	21,563	23,000	3000	8°08'	0,2	0,3	13,05
L1320.R32-06-1.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	1000	3°48'	0,07	0,2	5,03
L1320.R32-06-1.5	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	1500	3°48'	0,07	0,2	7,54
L1320.R32-06-2.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	2000	3°48'	0,07	0,2	10,06
L1320.R32-06-3.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	3000	3°48'	0,07	0,2	15,09
L1320.R32-12-1.0	TR32x12	2	32	12	6	28,507	28,882	23,563	25,000	1000	7°34'	0,2	0,3	5,03
L1320.R32-12-1.5	TR32x12	2	32	12	6	28,547	28,882	23,563	25,000	1500	7°34'	0,2	0,3	7,54
L1320.R32-12-2.0	TR32x12	2	32	12	6	28,547	28,882	23,563	25,000	2000	7°34'	0,2	0,3	10,06
L1320.R32-12-3.0	TR32x12	2	32	12	6	28,547	28,882	23,563	25,000	3000	7°34'	0,2	0,3	15,09
L1320.R36-06-1.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	1000	3°20'	0,07	0,2	6,54
L1320.R36-06-1.5	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	1500	3°20'	0,07	0,2	9,81
L1320.R36-06-2.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	2000	3°20'	0,07	0,2	13,08
L1320.R36-06-3.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	3000	3°20'	0,07	0,2	19,62
L1320.R36-12-1.0	TR36x12	2	36	12	6	32,507	32,882	27,563	29,000	1000	6°39'	0,2	0,3	6,54
L1320.R36-12-1.5	TR36x12	2	36	12	6	32,547	32,882	27,563	29,000	1500	6°39'	0,2	0,3	9,81
L1320.R36-12-2.0	TR36x12	2	36	12	6	32,547	32,882	27,563	29,000	2000	6°39'	0,2	0,3	13,08
L1320.R36-12-3.0	TR36x12	2	36	12	6	32,547	32,882	27,563	29,000	3000	6°39'	0,2	0,3	19,62
L1320.R40-07-1.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	1000	3°31'	0,08	0,2	7,98
L1320.R40-07-1.5	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	1500	3°31'	0,08	0,2	11,97
L1320.R40-07-2.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	2000	3°31'	0,08	0,2	15,96
L1320.R40-07-3.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	3000	3°31'	0,08	0,2	23,94
L1320.R40-14-1.0	TR40x14	2	40	14	7	35,977	36,375	30,381	32,000	1000	7°01'	0,2	0,3	7,98
L1320.R40-14-1.5	TR40x14	2	40	14	7	36,020	36,375	30,381	32,000	1500	7°01'	0,2	0,3	11,97
L1320.R40-14-2.0	TR40x14	2	40	14	7	36,020	36,375	30,381	32,000	2000	7°01'	0,2	0,3	15,96
L1320.R40-14-3.0	TR40x14	2	40	14	7	36,020	36,375	30,381	32,000	3000	7°01'	0,2	0,3	23,94
L1320.R44-07-1.0	TR44x7	1	44	7	7	40,020	40,375	34,381	36,000	1000	3°10'	0,08	0,2	9,85
L1320.R44-07-1.5	TR44x7	1	44	7	7	40,020	40,375	34,381	36,000	1500	3°10'	0,08	0,2	14,78
L1320.R44-07-2.0	TR44x7	1	44	7	7	40,020	40,375	34,381	36,000	2000	3°10'	0,08	0,2	19,70
L1320.R44-07-3.0	TR44x7	1	44	7	7	40,020	40,375	34,381	36,000	3000	3°10'	0,08	0,2	29,55
L1320.R44-14-1.0	TR44x14	2	44	14	7	39,977	40,375	34,381	36,000	1000	6°20'	0,2	0,3	9,85
L1320.R44-14-1.5	TR44x14	2	44	14	7	39,977	40,375	34,381	36,000	1500	6°20'	0,2	0,3	14,78
L1320.R44-14-2.0	TR44x14	2	44	14	7	39,977	40,375	34,381	36,000	2000	6°20'	0,2	0,3	19,70
L1320.R44-14-3.0	TR44x14	2	44	14	7	39,977	40,375	34,381	36,000	3000	6°20'	0,2	0,3	29,55
L1320.R50-08-1.0	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	1000	3°11'	0,1	0,2	12,69
L1320.R50-08-1.5	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	1500	3°11'	0,1	0,2	19,03
L1320.R50-08-2.0	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	2000	3°11'	0,1	0,2	25,38
L1320.R50-08-3.0	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	3000	3°11'	0,1	0,2	38,07
L1320.R55-09-1.0	TR55x9	1	55	9	9	49,935	50,360	42,979	45,000	1000	3°16'	0,1	0,2	15,40
L1320.R55-09-1.5	TR55x9	1	55	9	9	49,935	50,360	42,979	45,000	1500	3°16'	0,1	0,2	23,10
L1320.R55-09-2.0	TR55x9	1	55	9	9	49,935	50,360	42,979	45,000	2000	3°16'	0,1	0,2	30,80
L1320.R55-09-3.0	TR55x9	1	55	9	9	49,935	50,360	42,979	45,000	3000	3°16'	0,1	0,2	46,20
L1320.R60-09-1.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	1000	2°58'	0,1	0,2	18,49
L1320.R60-09-1.5	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	1500	2°58'	0,1	0,2	27,73
L1320.R60-09-2.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	2000	2°58'	0,1	0,2	36,98
L1320.R60-09-3.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	3000	2°58'	0,1	0,2	55,47
L1320.R70-10-1.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	1000	2°49'	0,1	0,4	25,62
L1320.R70-10-1.5	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	1500	2°49'	0,1	0,4	38,43
L1320.R70-10-2.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	2000	2°49'	0,1	0,4	51,24
L1320.R70-10-3.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	3000	2°49'	0,1	0,4	76,86
L1320.R80-10-1.0	TR80x10	1	80	10	10	74,425	74,850	66,819	69,000	1000	2°27'	0,1	0,4	34,18
L1320.R80-10-1.5	TR80x10	1	80	10	10	74,425	74,850	66,819	69,000	1500	2°27'	0,1	0,4	51,27
L1320.R80-10-2.0	TR80x10	1	80	10	10	74,425	74,850	66,819	69,000	2000	2°27'	0,1	0,4	68,36
L1320.R80-10-3.0	TR80x10	1	80	10	10	74,425	74,850	66,819	69,000	3000	2°27'	0,1	0,4	102,54
L1320.R90-12-1.0	TR90x12	1	90	12	12	83,365	83,840	74,446	77,000	1000	2°36'	0,2	0,5	43,00
L1320.R90-12-1.5	TR90x12	1	90	12	12	83,365	83,840	74,446	77,000	1500	2°36'	0,2	0,5	64,50
L1320.R90-12-2.0	TR90x12	1	90	12	12	83,365	83,840	74,446	77,000	2000	2°36'	0,2	0,5	86,00
L1320.R90-12-3.0	TR90x12	1	90	12	12	83,365	83,840	74,446	77,000	3000	2°36'	0,2	0,5	129,00
L1320.R95-16-1.0	TR95x16	1	95	16	16	86,250	86,810	73,710	77,000	1000	3°22'	0,2	1,0	45,60
L1320.R95-16-1.5	TR95x16	1	95	16	16	86,250	86,810	73,710	77,000	1500	3°22'	0,2	1,0	68,40
L1320.R95-16-2.0	TR95x16	1	95	16	16	86,250	86,810	73,710	77,000	2000	3°22'	0,2	1,0	91,20
L1320.R95-16-3.0	TR95x16	1	95	16	16	86,250	86,810	73,710	77,000	3000	3°22'	0,2	1,0	136,80
L1320.R100-16-1.0	TR100x16	1	100	16	16	91,250	91,810	78,710	82,000	1000	3°11'	0,2	1,0	51,00
L1320.R100-16-1.5	TR100x16	1	100	16	16	91,250	91,810	78,710	82,000	1500	3°11'	0,2	1,0	76,50
L1320.R100-16-2.0	TR100x16	1	100	16	16	91,250	91,810	78,710	82,000	2000	3°11'	0,2	1,0	102,00
L1320.R100-16-3.0	TR100x16	1	100	16	16	91,250	91,810	78,710	82,000	3000	3°11'	0,2	1,0	153,00
L1320.R120-16-1.0	TR120x16	1	120	16	16	111,25	111,81	98,710	102,00	1000	2°36'	0,2	1,0	76,00

Steel Lead Screws
right hand thread



Order No.	Size	No. of starts	d_1 tol. 7e	Lead	p_1	d_2 tol. 7e min.	d_2 tol. 7e max.	d_3 tol. 7h min.	d_3 tol. 7h max.	l_1	Lead angle	Pitch accuracy mm/ 300mm	Straightness mm/300mm	Weight kg
L1320.R120-16-1.5	TR120x16	1	120	16	16	111,25	111,81	98,710	102,00	1500	2°36‘	0,2	1,0	114,00
L1320.R120-16-2.0	TR120x16	1	120	16	16	111,25	111,81	98,710	102,00	2000	2°36‘	0,2	1,0	152,00
L1320.R120-16-3.0	TR120x16	1	120	16	16	111,25	111,81	98,710	102,00	3000	2°36‘	0,2	1,0	228,00





L1321

Material
Rolled trapezoidal thread, steel EN 10083-2 (C35, DIN 1.0501) or (C45, DIN 1.0503). Manufactured to ISO 2901/2903 (DIN 103).
Surface hardness approx. 250HB.

Technical Notes
‚Lead' refers to the distance that a nut will travel for a complete revolution of the screw.

Select a suitable lead screw nut (part nos. L1330 to L1343) to suit the lead screw - the most popular nuts are the flanged, bronze nuts part no. L1331.
Single start lead screws are less expensive than twin start lead screws.

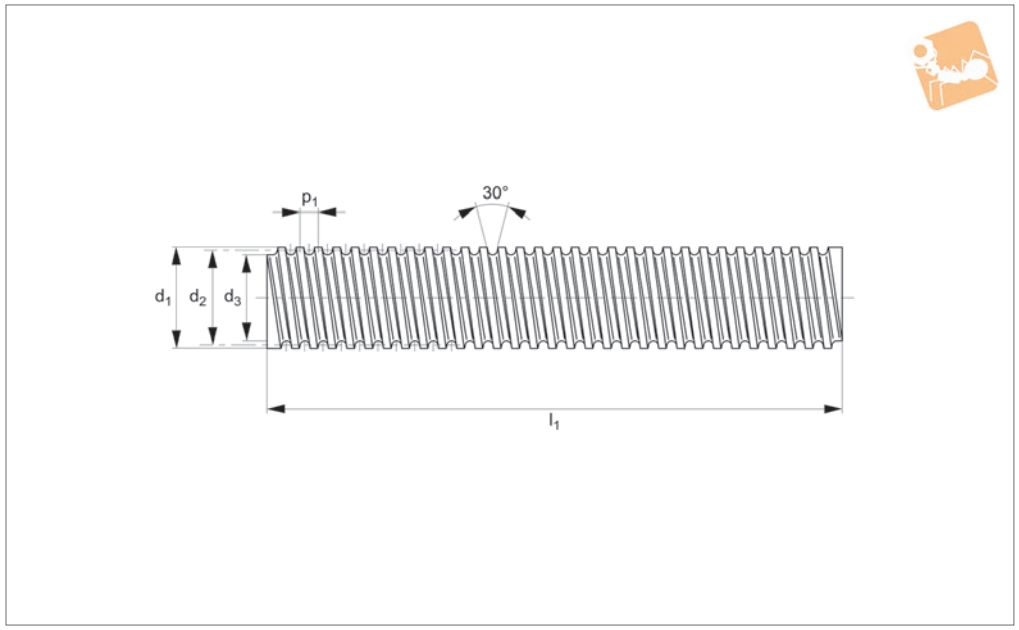
Tips
These are left hand thread lead screws - for the standard right hand threads see part no. L1320.
For stainless steel left hand lead screws see part no. L1323.
Cutting to required length and machining of ends - on request.
Lead screw lengths of up to 6 metres can be provided for a diameter >30mm.

Order No.	Size	No. of starts	d_1 tol. 7e	Lead	p_1	d_2 tol. 7e min.	d_2 tol. 7e max.	d_3 tol. 7h min.	d_3 tol. 7h max.	l_1	Lead angle	Pitch accuracy mm/300mm	Straightness mm/ 300mm	Weight kg
L1321.L10-02-1.0	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	1000	4°07‘	0,2	0.5	0,48
L1321.L10-02-1.5	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	1500	4°07‘	0,2	0.5	0,72
L1321.L10-02-2.0	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	2000	4°07‘	0,2	0.5	0,96
L1321.L10-02-3.0	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	3000	4°07‘	0,2	0.5	1,44
L1321.L12-03-1.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	1000	5°17‘	0,2	0.5	0,65
L1321.L12-03-1.5	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	1500	5°17‘	0,2	0.5	0,97
L1321.L12-03-2.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	2000	5°17‘	0,2	0.5	1,30
L1321.L12-03-3.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	3000	5°17‘	0,2	0.5	1,95
L1321.L14-03-1.0	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	1000	4°26‘	0,2	0.5	0,93
L1321.L14-03-1.5	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	1500	4°26‘	0,2	0.5	1,39
L1321.L14-03-2.0	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	2000	4°26‘	0,2	0.5	1,86
L1321.L14-03-3.0	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	3000	4°26‘	0,2	0.5	2,79
L1321.L16-04-1.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	1000	5°16‘	0,05	0.5	1,17
L1321.L16-04-1.5	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	1500	5°16‘	0,05	0.5	1,75
L1321.L16-04-2.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	2000	5°16‘	0,05	0.5	2,34
L1321.L16-04-3.0	TR15x4	1	16	4	4	13,640	13,905	10,474	11,500	3000	5°16‘	0,05	0.5	3,51
L1321.L18-04-1.0	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	1000	4°36‘	0,05	0.5	1,52
L1321.L18-04-1.5	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	1500	4°36‘	0,05	0.5	2,28
L1321.L18-04-2.0	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	2000	4°36‘	0,05	0.5	3,04
L1321.L18-04-3.0	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	3000	4°36‘	0,05	0.5	4,56
L1321.L20-04-1.0	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	1000	4°05‘	0,05	0.5	1,94
L1321.L20-04-1.5	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	1500	4°05‘	0,05	0.5	2,91
L1321.L20-04-2.0	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	2000	4°05‘	0,05	0.5	3,88
L1321.L20-04-3.0	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	3000	4°05‘	0,05	0.5	5,82
L1321.L22-05-1.0	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	1000	4°43‘	0,05	0.2	2,29

Steel Lead Screws
left hand thread



Order No.	Size	No. of starts	d_1 tol. 7e	Lead	p_1	d_2 tol. 7e min.	d_2 tol. 7e max.	d_3 tol. 7h min.	d_3 tol. 7h max.	l_1	Lead angle	Pitch accuracy mm/300mm	Straightness mm/ 300mm	Weight kg
L1321.L22-05-1.5	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	1500	4°43‘	0,05	0.2	3,43
L1321.L22-05-2.0	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	2000	4°43‘	0,05	0.2	4,58
L1321.L22-05-3.0	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	3000	4°43‘	0,05	0.2	6,87
L1321.L24-05-1.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	1000	4°17‘	0,05	0.2	2,78
L1321.L24-05-1.5	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	1500	4°17‘	0,05	0.2	4.17
L1321.L24-05-2.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	2000	4°17‘	0,05	0.2	5,56
L1321.L24-05-3.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	3000	4°17‘	0,05	0.2	8,34
L1321.L26-05-1.0	TR26x5	1	26	5	5	23,094	23,394	19,269	25,500	1000	3°55‘	0,05	0.2	3,32
L1321.L26-05-1.5	TR26x5	1	26	5	5	23,094	23,394	19,269	25,500	1500	3°55‘	0,05	0.2	4,98
L1321.L26-05-2.0	TR26x5	1	26	5	5	23,094	23,394	19,269	25,500	2000	3°55‘	0,05	0.2	6,64
L1321.L26-05-3.0	TR26x5	1	26	5	5	23,094	23,394	19,269	25,500	3000	3°55‘	0,05	0.2	9,96
L1321.L28-05-1.0	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	1000	3°36‘	0,05	0.2	3,90
L1321.L28-05-1.5	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	1500	3°36‘	0,05	0.2	5,85
L1321.L28-05-2.0	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	2000	3°36‘	0,05	0.2	7,80
L1321.L28-05-3.0	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	3000	3°36‘	0,05	0.2	11,7
L1321.L30-06-1.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	1000	4°05‘	0,07	0.2	4,35
L1321.L30-06-1.5	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	1500	4°05‘	0,07	0.2	6,52
L1321.L30-06-2.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	2000	4°05‘	0,07	0.2	8,70
L1321.L30-06-3.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	3000	4°05‘	0,07	0.2	13,05
L1321.L32-06-1.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	1000	3°48‘	0,07	0.2	5,03
L1321.L32-06-1.5	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	1500	3°48‘	0,07	0.2	7,54
L1321.L32-06-2.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	2000	3°48‘	0,07	0.2	10,06
L1321.L32-06-3.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	3000	3°48‘	0,07	0.2	15,09
L1321.L36-06-1.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	1000	3°20‘	0,07	0.2	6,54
L1321.L36-06-1.5	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	1500	3°20‘	0,07	0.2	9,81
L1321.L36-06-2.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	2000	3°20‘	0,07	0.2	13,08
L1321.L36-06-3.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	3000	3°20‘	0,07	0.2	19,62
L1321.L40-07-1.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	1000	3°31‘	0,08	0.2	7,98
L1321.L40-07-1.5	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	1500	3°31‘	0,08	0.2	11,97
L1321.L40-07-2.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	2000	3°31‘	0,08	0.2	15,96
L1321.L40-07-3.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	3000	3°31‘	0,08	0.2	23,94
L1321.L44-07-1.0	TR44x7	1	44	7	7	40,020	40,375	34,381	36,000	1000	3°10‘	0,08	0.2	9,58
L1321.L44-07-1.5	TR44x7	1	44	7	7	40,020	40,375	34,381	36,000	1500	3°10‘	0,08	0.2	14,37
L1321.L44-07-2.0	TR44x7	1	44	7	7	40,020	40,375	34,381	36,000	2000	3°10‘	0,08	0.2	19,16
L1321.L44-07-3.0	TR44x7	1	44	7	7	40,020	40,375	34,381	36,000	3000	3°10‘	0,08	0.2	28,74
L1321.L50-08-1.0	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	1000	3°11‘	0,1	0.2	12,69
L1321.L50-08-1.5	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	1500	3°11‘	0,1	0.2	19,03
L1321.L50-08-2.0	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	2000	3°11‘	0,1	0.2	25,38
L1321.L50-08-3.0	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	3000	3°11‘	0,1	0.2	38,07
L1321.L60-09-1.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	1000	2°58‘	0,1	0.2	18,49
L1321.L60-09-1.5	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	1500	2°58‘	0,1	0.2	27,73
L1321.L60-09-2.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	2000	2°58‘	0,1	0.2	36,98
L1321.L60-09-3.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	3000	2°58‘	0,1	0.2	55,47
L1321.L70-10-1.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	1000	2°49‘	0,1	0.4	25,62
L1321.L70-10-1.5	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	1500	2°49‘	0,1	0.4	38,43
L1321.L70-10-2.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	2000	2°49‘	0,1	0.4	51,24
L1321.L70-10-3.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	3000	2°49‘	0,1	0.4	76,86
L1321.L80-10-1.0	TR80x10	1	80	10	10	74,425	74,850	66,819	69,000	1000	2°27‘	0,1	0.4	34,18
L1321.L80-10-1.5	TR80x10	1	80	10	10	74,425	74,850	66,819	69,000	1500	2°27‘	0,1	0.4	51,27
L1321.L80-10-2.0	TR80x10	1	80	10	10	74,425	74,850	66,819	69,000	2000	2°27‘	0,1	0.4	68,36
L1321.L80-10-3.0	TR80x10	1	80	10	10	74,425	74,850	66,819	69,000	3000	2°27‘	0,1	0.4	102,54





L1322

Material
Rolled trapezoidal thread, stainless steel (AISI 316L, A4). Resistant to nearly all types of corrosion (can be used in a wet or corrosive environment). Manufactured to ISO 2901/2093, DIN103.
Surface hardness approx. 280HB.

Technical Notes
‚Lead' refers to the distance that a nut will travel for a complete revolution of the screw.
Select a suitable lead screw nut (part nos. L1330 to L1343) to suit the lead screw - the most popular nuts are the flanged, bronze nuts part no. L1331.

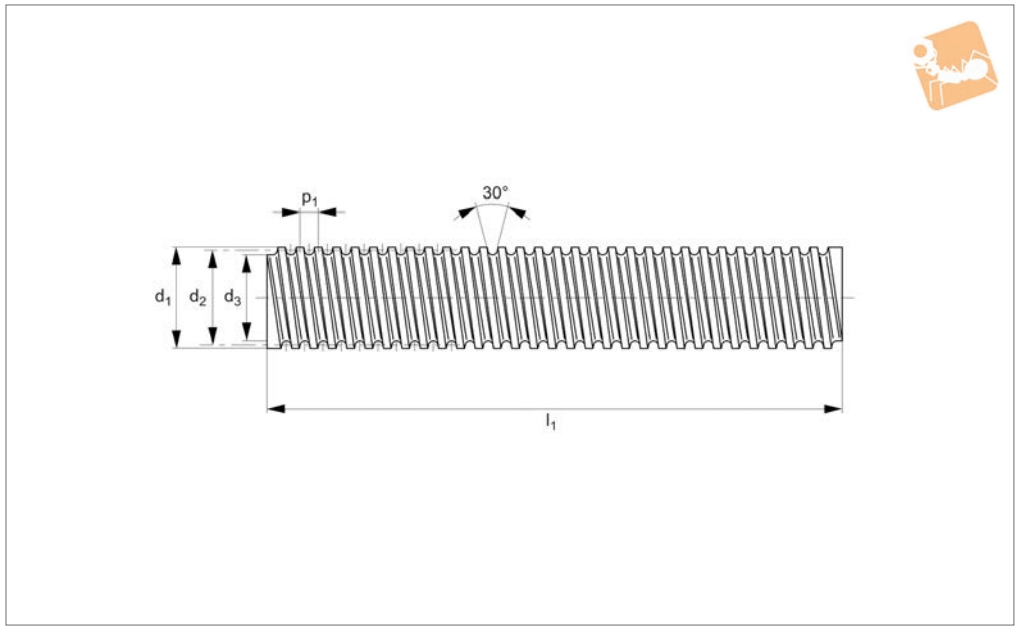
Tips
Right hand thread lead screws are standard.
For left hand stainless steel threads see part no. L1323.
Cutting to required length and machining of ends - on request.
Lead screw lengths of up to 6 metres can be provided for a diameter >30mm.

Order No.	Size	No. of starts	d_1 tol. 7e	Lead	p_1	d_2 tol. 7e min.	d_2 tol. 7e max.	d_3 tol. 7h min.	d_3 tol. 7h max.	l_1	Lead angle	Pitch accuracy mm/ 300mm	Straightness mm/300mm	Weight kg
L1322.R10-02-1.0	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	1000	4°07‘	0,3	1.5	0,48
L1322.R10-02-1.5	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	1500	4°07‘	0,3	1.5	0,72
L1322.R10-02-2.0	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	2000	4°07‘	0,3	1.5	0,96
L1322.R10-02-3.0	TR10x2	1	10	2	2	8,739	8,929	6,891	7,500	3000	4°07‘	0,3	1.5	1,44
L1322.R12-03-1.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	1000	5°17‘	0,3	1.5	0,65
L1322.R12-03-1.5	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	1500	5°17‘	0,3	1.5	0,97
L1322.R12-03-2.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	2000	5°17‘	0,3	1.5	1,30
L1322.R12-03-3.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	3000	5°17‘	0,3	1.5	1,95
L1322.R14-03-1.0	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	1000	4°26‘	0,3	1.5	0,93
L1322.R14-03-1.5	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	1500	4°26‘	0,3	1.5	1,39
L1322.R14-03-2.0	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	2000	4°26‘	0,3	1.5	1,86
L1322.R14-03-3.0	TR14x3	1	14	3	3	12,191	12,415	9,685	10,500	3000	4°26‘	0,3	1.5	2,79
L1322.R16-04-1.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	1000	5°16‘	0.1	1.5	1,17
L1322.R16-04-1.5	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	1500	5°16‘	0.1	1.5	1,75
L1322.R16-04-2.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	2000	5°16‘	0.1	1.5	2,34
L1322.R16-04-3.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	3000	5°16‘	0.1	1.5	3,51
L1322.R18-04-1.0	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	1000	4°36‘	0.1	1.5	1,52
L1322.R18-04-1.5	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	1500	4°36‘	0.1	1.5	2,28
L1322.R18-04-2.0	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	2000	4°36‘	0.1	1.5	3,04
L1322.R18-04-3.0	TR18x4	1	18	4	4	15,640	15,905	12,474	13,500	3000	4°36‘	0.1	1.5	4,56
L1322.R20-04-1.0	TR20x4	1	20	4	4	17.640	17,905	14,474	15,500	1000	4°05‘	0.1	1.5	1,94
L1322.R20-04-1.5	TR20x4	1	20	4	4	17.640	17,905	14,474	15,500	1500	4°05‘	0.1	1.5	2,91
L1322.R20-04-2.0	TR20x4	1	20	4	4	17.640	17,905	14,474	15,500	2000	4°05‘	0.1	1.5	3,88
L1322.R20-04-3.0	TR20x4	1	20	4	4	17.640	17,905	14,474	15,500	3000	4°05‘	0.1	1.5	5,82
L1322.R22-05-1.0	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	1000	4°43‘	0.1	1.5	2,29

Stainless Lead Screws
right hand thread



Order No.	Size	No. of starts	d_1 tol. 7e	Lead	p_1	d_2 tol. 7e min.	d_2 tol. 7e max.	d_3 tol. 7h min.	d_3 tol. 7h max.	l_1	Lead angle	Pitch accuracy mm/ 300mm	Straightness mm/300mm	Weight kg
L1322.R22-05-1.5	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	1500	4°43‘	0.1	1.5	3,43
L1322.R22-05-2.0	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	2000	4°43‘	0.1	1.5	4,58
L1322.R22-05-3.0	TR22x5	1	22	5	5	19,114	19,394	15,294	16,500	3000	4°43‘	0.1	1.5	6,87
L1322.R24-05-1.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	1000	4°17‘	0.1	1.5	2,78
L1322.R24-05-1.5	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	1500	4°17‘	0.1	1.5	4.17
L1322.R24-05-2.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	2000	4°17‘	0.1	1.5	5,56
L1322.R24-05-3.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	3000	4°17‘	0.1	1.5	8,34
L1322.R26-05-1.0	TR26x5	1	26	5	5	23,094	23,394	19,269	20,500	1000	3°55‘	0.1	1.5	3,32
L1322.R26-05-1.5	TR26x5	1	26	5	5	23,094	23,394	19,269	20,500	1500	3°55‘	0.1	1.5	4,98
L1322.R26-05-2.0	TR26x5	1	26	5	5	23,094	23,394	19,269	20,500	2000	3°55‘	0.1	1.5	6,64
L1322.R26-05-3.0	TR26x5	1	26	5	5	23,094	23,394	19,269	20,500	3000	3°55‘	0.1	1.5	9,96
L1322.R28-05-1.0	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	1000	3°36‘	0.1	1.5	3,90
L1322.R28-05-1.5	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	1500	3°36‘	0.1	1.5	5,85
L1322.R28-05-2.0	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	2000	3°36‘	0.1	1.5	7,80
L1322.R28-05-3.0	TR28x5	1	28	5	5	25,094	25,394	21,269	22,500	3000	3°36‘	0.1	1.5	11,7
L1322.R30-06-1.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	1000	4°05‘	0.1	1.5	4,35
L1322.R30-06-1.5	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	1500	4°05‘	0.1	1.5	6,52
L1322.R30-06-2.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	2000	4°05‘	0.1	1.5	8,70
L1322.R30-06-3.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	3000	4°05‘	0.1	1.5	13,05
L1322.R32-06-1.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	1000	3°48‘	0.1	1.5	5,03
L1322.R32-06-1.5	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	1500	3°48‘	0.1	1.5	7,54
L1322.R32-06-2.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	2000	3°48‘	0.1	1.5	10,06
L1322.R32-06-3.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	3000	3°48‘	0.1	1.5	15,09
L1322.R36-06-1.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	1000	3°20‘	0.1	1.5	6,54
L1322.R36-06-1.5	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	1500	3°20‘	0.1	1.5	9,81
L1322.R36-06-2.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	2000	3°20‘	0.1	1.5	13,08
L1322.R36-06-3.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	3000	3°20‘	0.1	1.5	19,62
L1322.R40-07-1.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	1000	3°31‘	0.015	1.5	7,98
L1322.R40-07-1.5	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	1500	3°31‘	0.015	1.5	11,97
L1322.R40-07-2.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	2000	3°31‘	0.015	1.5	15,96
L1322.R40-07-3.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	3000	3°31‘	0.015	1.5	23,94
L1322.R50-08-1.0	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	1000	3°11‘	0.015	0.2	12,69
L1322.R50-08-1.5	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	1500	3°11‘	0.015	0.2	19,03
L1322.R50-08-2.0	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	2000	3°11‘	0.015	0.2	25,38
L1322.R50-08-3.0	TR50x8	1	50	8	8	45,468	45,868	39,168	41,000	3000	3°11‘	0.015	0.2	38,07
L1322.R60-09-1.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	1000	2°58‘	0.015	0.2	18,49
L1322.R60-09-1.5	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	1500	2°58‘	0.015	0.2	27,73
L1322.R60-09-2.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	2000	2°58‘	0.015	0.2	36,98
L1322.R60-09-3.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	3000	2°58‘	0.015	0.2	55,47
L1322.R70-10-1.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	1000	2°49‘	0.015	0.2	25,62
L1322.R70-10-1.5	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	1500	2°49‘	0.015	0.2	38,43
L1322.R70-10-2.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	2000	2°49‘	0.015	0.2	51,24
L1322.R70-10-3.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	3000	2°49‘	0.015	0.2	76,86





L1323

Material
Rolled trapezoidal thread, stainless steel (AISI 316L, A4). Resistant to nearly all types of corrosion (can be used in a wet or corrosive environment). Manufactured to ISO 2901/2093, DIN103.
Surface hardness approx. 280HB.

Technical Notes
‚Lead' refers to the distance that a nut will travel for a complete revolution of the screw.
Select a suitable lead screw nut (part nos. L1330 to L1343) to suit the lead screw - the most popular nuts are the flanged, bronze nuts part no. L1331.

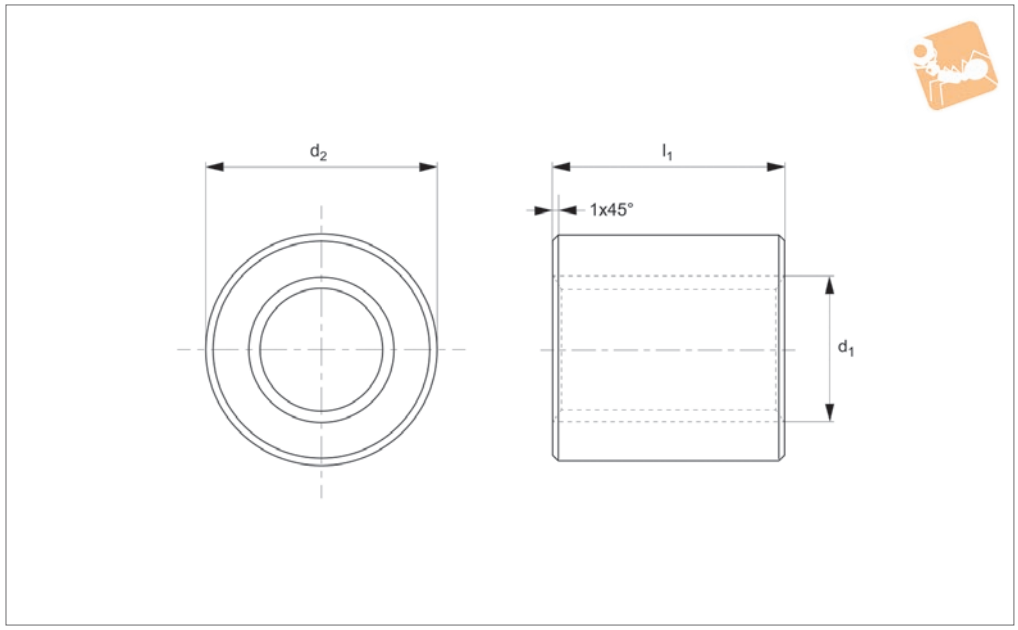
Tips
These are stainless steel left hand thread lead screws.
For the standard right hand threads in stainless steel see part no. L1322.
Cutting to required length and machining of ends - on request.
Lead screw lengths of up to 6 metres can be provided for a diameter >30mm.

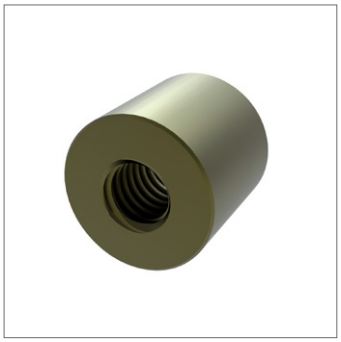
Order No.	Size	No. of starts	d_1 tol. 7e	Lead	p_1	d_2 tol. 7e min.	d_2 tol. 7e max.	d_3 tol. 7h min.	d_3 tol. 7h max.	l_1	Lead angle	Pitch accuracy mm/300mm	Straightness mm/ 300mm	Weight kg
L1323.L12-03-1.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	1000	5°17‘	0,3	0.5	0,65
L1323.L12-03-1.5	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	1500	5°17‘	0,3	0.5	0,97
L1323.L12-03-2.0	TR12X3	1	12	3	3	10,191	10,415	7,685	8,500	2000	5°17‘	0,3	0.5	1,30
L1323.L12-03-3.0	TR12x3	1	12	3	3	10,191	10,415	7,685	8,500	3000	5°17‘	0,3	0.5	1,95
L1323.L16-04-1.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	1000	5°16‘	0,2	0,1	1,17
L1323.L16-04-1.5	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	1500	5°16‘	0,2	0,1	1,75
L1323.L16-04-2.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	2000	5°16‘	0,2	0,1	2,34
L1323.L16-04-3.0	TR16x4	1	16	4	4	13,640	13,905	10,474	11,500	3000	5°16‘	0,2	0,1	3,51
L1323.L20-04-1.0	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	1000	4°05‘	0,2	0,1	1,94
L1323.L20-04-1.5	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	1500	4°05‘	0,2	0,1	2,91
L1323.L20-04-2.0	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	2000	4°05‘	0,2	0,1	3,88
L1323.L20-04-3.0	TR20x4	1	20	4	4	17,640	17,905	14,474	15,500	3000	4°05‘	0,2	0,1	5,82
L1323.L24-05-1.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	1000	4°17‘	0,5	0,1	2,78
L1323.L24-05-1.5	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	1500	4°17‘	0,5	0,1	4,17
L1323.L24-05-2.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	2000	4°17‘	0,5	0,1	5,56
L1323.L24-05-3.0	TR24x5	1	24	5	5	21,094	21,394	17,269	18,500	3000	4°17‘	0,5	0,1	8,34
L1323.L30-06-1.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	1000	4°05‘	0,5	0,1	4,35
L1323.L30-06-1.5	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	1500	4°05‘	0,5	0,1	6,52
L1323.L30-06-2.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	2000	4°05‘	0,5	0,1	8,70
L1323.L30-06-3.0	TR30x6	1	30	6	6	26,547	26,882	21,563	23,000	3000	4°05‘	0,5	0,1	13,05
L1323.L32-06-1.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	1000	3°48‘	0,5	0,1	5,03
L1323.L32-06-1.5	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	1500	3°48‘	0,5	0,1	7,54
L1323.L32-06-2.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	2000	3°48‘	0,5	0,1	10,06
L1323.L32-06-3.0	TR32x6	1	32	6	6	28,547	28,882	23,563	25,000	3000	3°48‘	0,5	0,1	15,09
L1323.L36-06-1.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	1000	3°20‘	0,5	0,1	6,54
L1323.L36-06-1.5	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	1500	3°20‘	0,5	0,1	9,81

Stainless Lead Screws
left hand thread



Order No.	Size	No. of starts	d_1 tol. 7e	Lead	p_1	d_2 tol. 7e min.	d_2 tol. 7e max.	d_3 tol. 7h min.	d_3 tol. 7h max.	l_1	Lead angle	Pitch accuracy mm/300mm	Straightness mm/ 300mm	Weight kg
L1323.L36-06-2.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	2000	3°20‘	0,5	0,1	13,08
L1323.L36-06-3.0	TR36x6	1	36	6	6	32,547	32,882	27,563	29,000	3000	3°20‘	0,5	0,1	19,62
L1323.L40-07-1.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	1000	3°31‘	0,5	0,15	7,98
L1323.L40-07-1.5	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	1500	3°31‘	0,5	0,15	11,97
L1323.L40-07-2.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	2000	3°31‘	0,5	0,15	15,96
L1323.L40-07-3.0	TR40x7	1	40	7	7	36,020	36,375	30,381	32,000	3000	3°31‘	0,5	0,15	23,94
L1323.L60-09-1.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	1000	2°58‘	0,05	0,15	18,49
L1323.L60-09-1.5	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	1500	2°58‘	0,05	0,15	27,73
L1323.L60-09-2.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	2000	2°58‘	0,05	0,15	36,98
L1323.L60-09-3.0	TR60x9	1	60	9	9	54,935	55,360	47,979	50,000	3000	2°58‘	0,05	0,15	55,47
L1323.L70-10-1.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	1000	2°49‘	0,05	0,15	25,62
L1323.L70-10-1.5	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	1500	2°49‘	0,05	0,15	38,43
L1323.L70-10-2.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	2000	2°49‘	0,05	0,15	51,24
L1323.L70-10-3.0	TR70x10	1	70	10	10	64,425	64,850	56,819	59,000	3000	2°49‘	0,05	0,15	76,86





L1330

Material
Bronze (CuSn7ZnPb). To ISO 2901/2903 and DIN 103.

Technical Notes
For manual or powered applications at low and medium rotation and under loads.

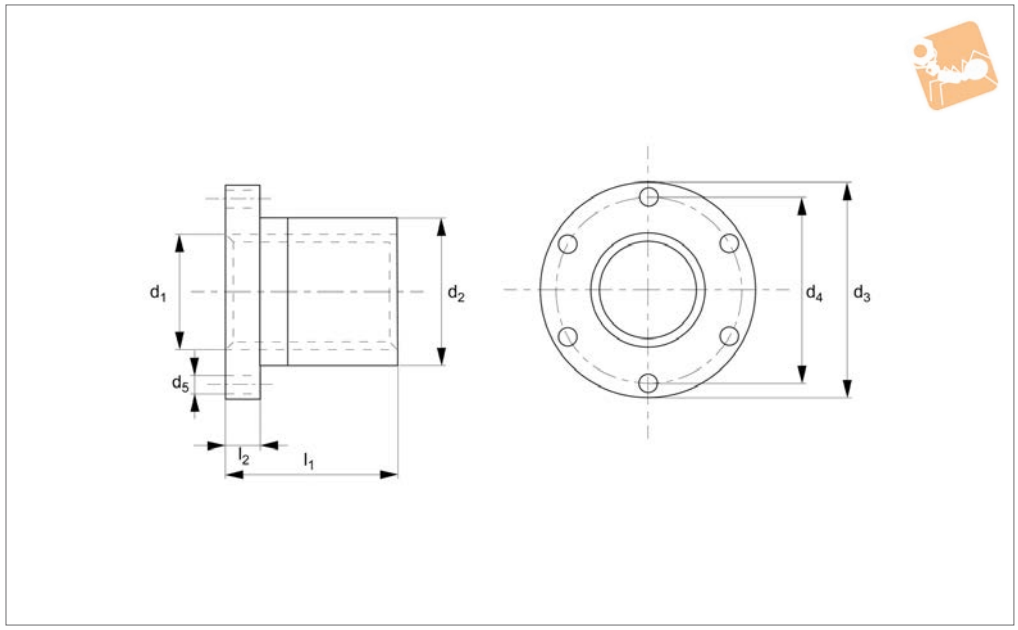
Tips
Standard nuts are right hand thread, single starts.
For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.

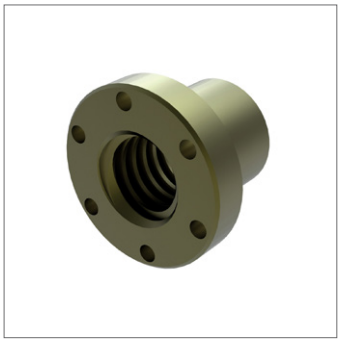
Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	d_2 tol. h10	l_1	Weight kg
L1330.R08-015	TR8x1.5	1	8	1.5	Right	150	18	16	0.029
L1330.R10-02	TR10x 2	1	10	2	Right	200	22	20	0.053
L1330.R10-04	TR10x 4	2	10	4	Right	200	22	20	0.053
L1330.R12-03	TR12x 3	1	12	3	Right	280	26	24	0.083
L1330.R12-06	TR12x 6	2	12	6	Right	280	26	24	0.083
L1330.R14-03	TR14x 3	1	14	3	Right	380	30	28	0.135
L1330.R14-06	TR14x 6	2	14	6	Right	380	30	28	0.135
L1330.R16-04	TR16x 4	1	16	4	Right	490	36	32	0.232
L1330.R16-08	TR16x 8	2	16	8	Right	490	36	32	0.232
L1330.R18-04	TR18x 4	1	18	4	Right	630	40	36	0.320
L1330.R18-08	TR18x 8	2	18	8	Right	630	40	36	0.320
L1330.R20-04	TR20x 4	1	20	4	Right	790	45	40	0.455
L1330.R20-08	TR20x 8	2	20	8	Right	790	45	40	0.455
L1330.R22-05	TR22x 5	1	22	5	Right	940	45	44	0.480
L1330.R22-10	TR22x10	2	22	10	Right	940	45	44	0.480
L1330.R24-05	TR24x 5	1	24	5	Right	1130	50	48	0.656
L1330.R24-10	TR24x10	2	24	10	Right	1130	50	48	0.656
L1330.R26-05	TR26x 5	1	26	5	Right	1340	50	52	0.670
L1330.R28-05	TR28x 5	1	28	5	Right	2400	60	56	1.102
L1330.R28-10	TR28x10	2	28	10	Right	1570	60	56	1.102
L1330.R30-06	TR30x 6	1	30	6	Right	1780	60	60	1.140
L1330.R30-12	TR30x12	2	30	12	Right	1780	60	60	1.140
L1330.R32-06	TR32x 6	1	32	6	Right	1910	60	64	1.177
L1330.R32-12	TR32x12	2	32	12	Right	1910	60	64	1.177
L1330.R36-06	TR36x 6	1	36	6	Right	2610	75	72	2.189
L1330.R36-12	TR36x12	2	36	12	Right	2610	75	72	2.189
L1330.R40-07	TR40x 7	1	40	7	Right	3210	80	80	2.725
L1330.R40-14	TR40x14	2	40	14	Right	3210	80	80	2.725
L1330.R44-07	TR44x 7	1	44	7	Right	3920	80	88	2.815
L1330.R50-08	TR50x 8	1	50	8	Right	5060	90	100	4.014
L1330.R60-09	TR60x 9	1	60	9	Right	7320	100	120	5.150
L1330.R70-10	TR70x10	1	70	10	Right	10000	110	140	7.805

Cylindrical Bronze Nuts
for lead screws



Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	d_2 tol. h10	l_1	Weight kg
L1330.R80-10	TR80x10	1	80	10	Right	12950	120	160	9.800
L1330.L10-02	TR10x 2	1	10	2	Left	200	22	20	0.053
L1330.L12-03	TR12x 3	1	12	3	Left	280	26	24	0.083
L1330.L14-03	TR14x 3	1	14	3	Left	380	30	28	0.136
L1330.L16-04	TR16x 4	1	16	4	Left	490	36	32	0.232
L1330.L18-04	TR18x 4	1	18	4	Left	630	40	36	0.320
L1330.L20-04	TR20x 4	1	20	4	Left	790	45	40	0.455
L1330.L22-05	TR22x 5	1	22	5	Left	940	45	44	0.480
L1330.L24-05	TR24x 5	1	24	5	Left	1130	50	48	0.656
L1330.L26-05	TR26x 5	1	26	5	Left	1340	50	52	0.670
L1330.L28-05	TR28x 5	1	28	5	Left	2400	60	56	1.102
L1330.L30-06	TR30x 6	1	30	6	Left	1780	60	60	1.140
L1330.L32-06	TR32x 6	1	32	6	Left	1910	60	64	1.177
L1330.L36-06	TR36x 6	1	36	6	Left	2610	75	72	2.189
L1330.L40-07	TR40x 7	1	40	7	Left	3210	80	80	2.725
L1330.L44-07	TR44x 7	1	44	7	Left	3920	80	88	2.815
L1330.L50-08	TR50x 8	1	50	8	Left	5060	90	100	4.014
L1330.L60-09	TR60x 9	1	60	9	Left	7320	100	120	5.150
L1330.L70-10	TR70x10	1	70	10	Left	10000	110	140	7.805
L1330.L80-10	TR80x10	1	80	10	Left	12950	120	160	9.800





L1331

Material
Bronze (CuSn7ZnPb).

Technical Notes
For manual or powered applications at medium/low rotation speeds under load.

Tips
Standard nuts are right hand thread, single starts.

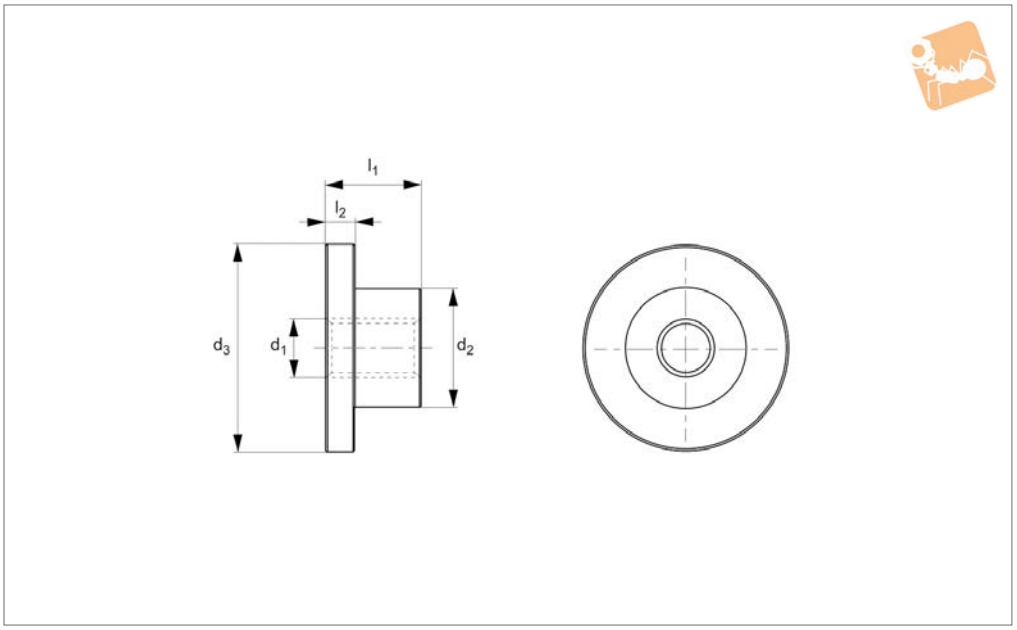
For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.

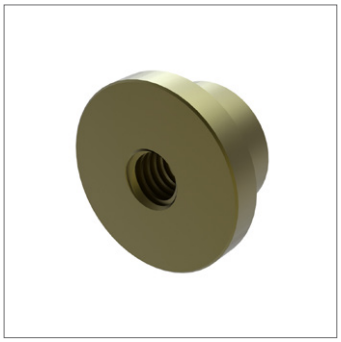
Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread hand	Contact surface mm²	d_2 tol. h9	d_3 tol. h11	d_4	d_5	l_1 ±0.2	l_2 +0.15|-0.0	Weight kg
L1331.R08-015	TR8x1.5	1	8	1.5	Right	170	18	35	26	6	20	7	0.135
L1331.R10-02	TR10x 2	1	10	2	Right	250	25	42	34	5	25	10	0.164
L1331.R10-04	TR10x 4	2	10	4	Right	250	25	42	34	5	25	10	0.164
L1331.R12-03	TR12x 3	1	12	3	Right	400	28	48	38	6	35	12	0.266
L1331.R12-06	TR12x 6	2	12	6	Right	400	28	48	38	6	35	12	0.266
L1331.R14-03	TR14x 3	1	14	3	Right	460	28	48	38	6	35	12	0.258
L1331.R14-06	TR14x 6	2	14	6	Right	460	28	48	38	6	35	12	0.258
L1331.R16-04	TR16x 4	1	16	4	Right	530	28	48	38	6	35	12	0.244
L1331.R16-08	TR16x 8	2	16	8	Right	530	28	48	38	6	35	12	0.244
L1331.R18-04	TR18x 4	1	18	4	Right	610	28	48	38	6	35	12	0.228
L1331.R18-08	TR18x 8	2	18	8	Right	610	28	48	38	6	35	12	0.228
L1331.R20-04	TR20x 4	1	20	4	Right	870	32	55	45	7	44	12	0.346
L1331.R20-08	TR20x 8	2	20	8	Right	870	32	55	45	7	44	12	0.346
L1331.R22-05	TR22x 5	1	22	5	Right	1030	32	55	45	7	44	12	0.322
L1331.R22-10	TR22x10	2	22	10	Right	1030	32	55	45	7	44	12	0.322
L1331.R24-05	TR24x 5	1	24	5	Right	1040	32	55	45	7	44	12	0.304
L1331.R24-10	TR24x10	2	24	10	Right	1040	32	55	45	7	44	12	0.304
L1331.R26-05	TR26x 5	1	26	5	Right	1280	38	62	50	7	46	14	0.474
L1331.R26-10	TR26x10	2	26	10	Right	1280	38	62	50	7	46	14	0.474
L1331.R28-05	TR28x 5	1	28	5	Right	1200	38	62	50	7	46	14	0.442
L1331.R28-10	TR28x10	2	28	10	Right	1200	38	62	50	7	46	14	0.442
L1331.R30-06	TR30x 6	1	30	6	Right	1370	38	62	50	7	46	14	0.408
L1331.R30-12	TR30x12	2	30	12	Right	1370	38	62	50	7	46	14	0.408
L1331.R32-06	TR32x 6	1	32	6	Right	1710	45	70	58	7	54	16	0.706
L1331.R32-12	TR32x12	2	32	12	Right	1710	45	70	58	7	54	16	0.706
L1331.R36-06	TR36x 6	1	36	6	Right	1950	45	70	58	7	54	16	0.606
L1331.R36-12	TR36x12	2	36	12	Right	1950	45	70	58	7	54	16	0.606
L1331.R40-07	TR40x 7	1	40	7	Right	2650	63	95	78	9	66	16	1.700
L1331.R40-14	TR40x14	2	40	14	Right	2650	63	95	78	9	66	16	1.700
L1331.R44-07	TR44x 7	1	44	7	Right	2940	63	95	78	9	66	16	1.524
L1331.R50-08	TR50x 8	1	50	8	Right	4540	72	110	90	11	75	18	2.324
L1331.R60-09	TR60x 9	1	60	9	Right	5490	88	130	110	13	90	20	3.942
L1331.R70-10	TR70x10	1	70	10	Right	7500	95	140	120	13	105	22	4.465
L1331.L10-02	TR10x 2	1	10	2	Left	250	25	42	34	5	25	10	0.164

Flanged Bronze Nuts
for lead screws



Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread hand	Contact surface mm²	d_2 tol. h9	d_3 tol. h11	d_4	d_5	l_1 ±0.2	l_2 +0.15|-0.0	Weight kg
L1331.L12-03	TR12x 3	1	12	3	Left	400	28	48	38	6	35	12	0.266
L1331.L14-03	TR14x 3	1	14	3	Left	460	28	48	38	6	35	12	0.258
L1331.L16-04	TR16x 4	1	16	4	Left	530	28	48	38	6	35	12	0.244
L1331.L18-04	TR18x 4	1	18	4	Left	610	28	48	38	6	35	12	0.228
L1331.L20-04	TR20x 4	1	20	4	Left	870	32	55	45	7	44	12	0.346
L1331.L22-05	TR22x 5	1	22	5	Left	1030	32	55	45	7	44	12	0.322
L1331.L24-05	TR24x 5	1	24	5	Left	1040	32	55	45	7	44	12	0.304
L1331.L26-05	TR26x 5	1	26	5	Left	1280	38	62	50	7	46	14	0.474
L1331.L28-05	TR28x 5	1	28	5	Left	1200	38	62	50	7	46	14	0.442
L1331.L30-06	TR30x 6	1	30	6	Left	1370	38	62	50	7	46	14	0.408
L1331.L32-06	TR32x 6	1	32	6	Left	1710	45	70	58	7	54	16	0.706
L1331.L36-06	TR36x 6	1	36	6	Left	1950	45	70	58	7	54	16	0.606
L1331.L40-07	TR40x 7	1	40	7	Left	2650	63	95	78	9	66	16	1.700
L1331.L44-07	TR44x 7	1	44	7	Left	2940	63	95	78	9	66	16	1.524
L1331.L50-08	TR50x 8	1	50	8	Left	4540	72	110	90	11	75	18	2.324
L1331.L60-09	TR60x 9	1	60	9	Left	5490	88	130	110	13	90	20	3.942
L1331.L70-10	TR70x10	1	70	10	Left	7500	95	140	120	13	105	22	4.465





L1332

Material
Bronze (CuSn7ZnPb).

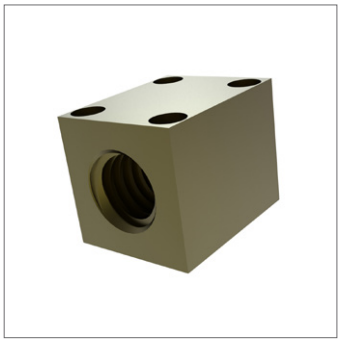
Technical Notes
For manual or powered applications at medium/low rotation speeds under load.

Tips
Standard nuts are right hand thread, single starts.

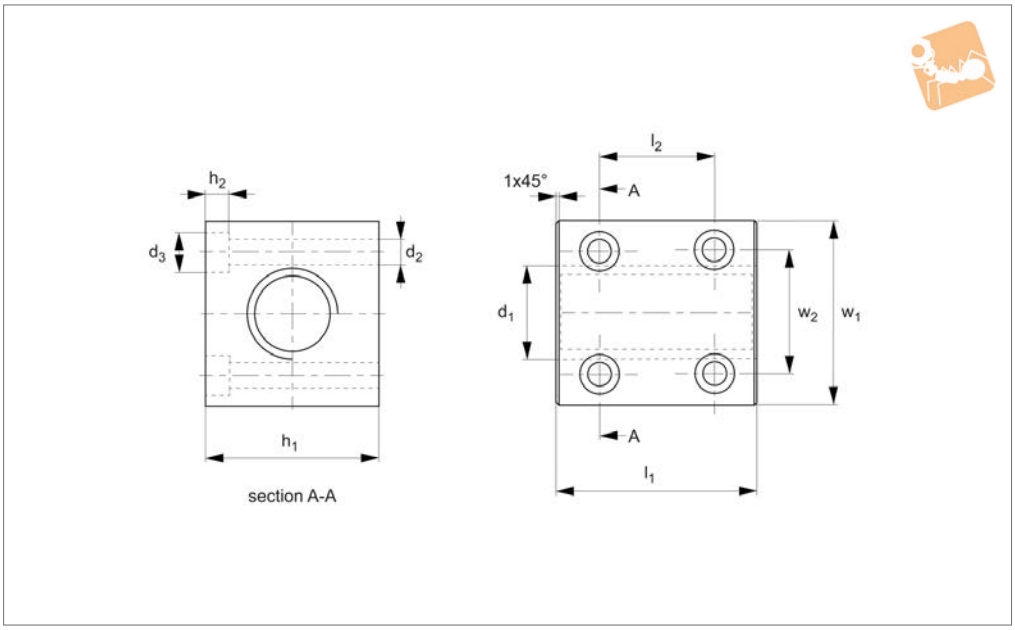
For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.

Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	d_2 tol. h11	d_3 tol. h9	l_1	l_2	Weight kg
L1332.R10-02	TR10x 2	1	10	2	Right	150	20	35	15	6	0.068
L1332.R10-04	TR10x 2	2	10	4	Right	150	20	35	15	6	0.068
L1332.R12-03	TR12x 3	1	12	3	Right	228	24	42	20	7	0.120
L1332.R12-06	TR12x 6	2	12	6	Right	262	24	42	20	7	0.120
L1332.R14-03	TR14x 3	1	14	3	Right	315	30	52	24	10	0.260
L1332.R16-04	TR16x 4	1	16	4	Right	363	30	52	24	10	0.250
L1332.R16-08	TR16x 8	2	16	8	Right	363	30	52	24	12	0.250
L1332.R20-04	TR20x 4	1	20	4	Right	514	38	62	26	11	0.400
L1332.R20-08	TR20x 8	2	20	8	Right	514	38	62	26	12	0.400
L1332.R24-05	TR24x 5	1	24	5	Right	780	50	77	33	13	0.750
L1332.R24-10	TR24x10	2	24	10	Right	780	50	77	33	12	0.750
L1332.R30-06	TR30x 6	1	30	6	Right	1430	58	90	48	15	1.400
L1332.R30-12	TR30x12	2	30	12	Right	1430	58	90	48	14	1.400
L1332.R36-06	TR36x 6	1	36	6	Right	2166	80	115	60	20	3.200
L1332.R36-12	TR36x12	2	36	12	Right	2166	80	115	60	16	3.200
L1332.R40-07	TR40x 7	1	40	7	Right	2610	80	140	65	20	4.100
L1332.R40-14	TR40x14	2	40	14	Right	2610	80	140	65	16	4.100
L1332.R50-08	TR50x 8	1	50	8	Right	4237	90	170	70	20	5.900
L1332.L10-02	TR10x2	1	10	2	Left	150	20	35	15	6	0.068
L1332.L12-03	TR12x3	1	12	3	Left	228	24	42	20	7	0.120
L1332.L14-03	TR14x3	1	14	3	Left	315	30	52	24	10	0.260
L1332.L16-04	TR16x4	1	16	4	Left	363	30	52	24	10	0.250
L1332.L20-04	TR20x4	1	20	4	Left	514	38	62	26	11	0.400
L1332.L24-05	TR24x5	1	24	5	Left	780	50	77	33	13	0.750
L1332.L30-06	TR30x6	1	30	6	Left	1430	58	90	48	15	1.400
L1332.L36-06	TR36x6	1	36	6	Left	2166	80	115	60	20	3.200
L1332.L40-07	TR40x7	1	40	7	Left	2610	80	140	65	20	4.100
L1332.L50-08	TR50x8	1	50	8	Left	4237	90	170	70	20	5.900

Square Bronze Nut with Through
for lead screws



L1334



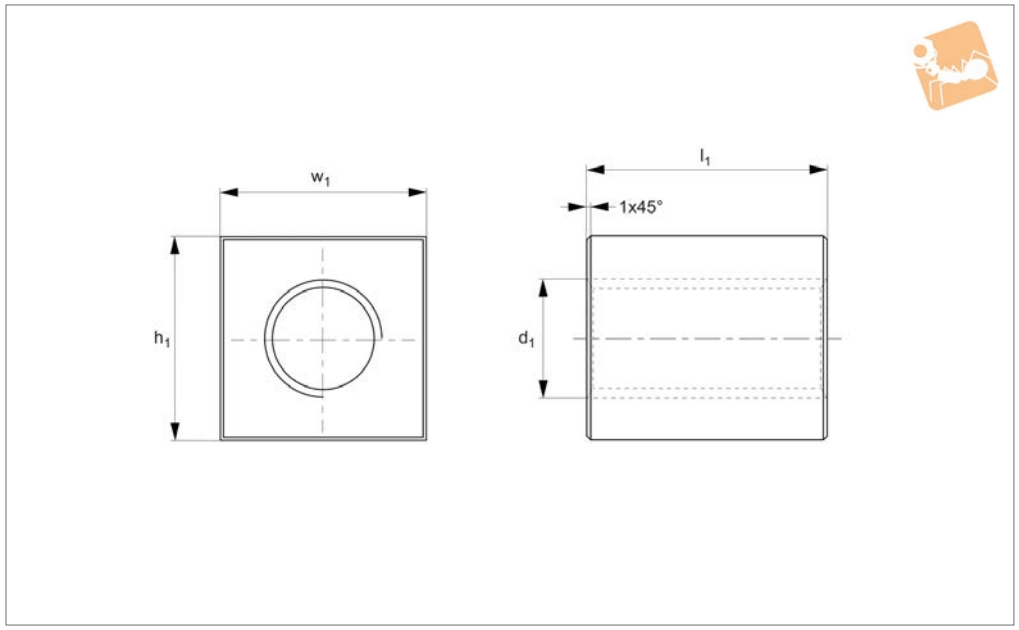
Material
Bronze (CuSn7ZnPb).

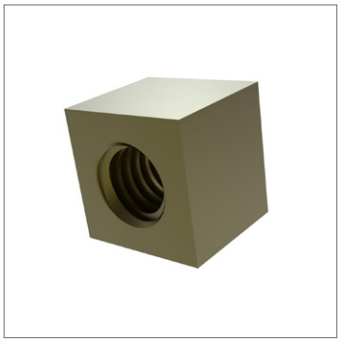
Technical Notes
Suitable for movements with medium duty loads.

Tips
Standard nuts are right hand thread, single starts.

For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.
*Special M8 fixing screw with a reduced head diameter.

Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	d_2	d_3	h_1 & w_1 tol. h9	h_2	l_1 +0.0|-0.2	l_2	w_2	For screw	Weight kg
L1334.R16-04	TR16x4	1	16	4	Right	770	5	9,5	35	5,2	40	26	24	M 5	0,34
L1334.R20-04	TR20x4	1	20	4	Right	1412	6	10,0	40	6,5	50	38	28	M 6	0,57
L1334.R30-06	TR30x6	1	30	6	Right	2544	6	10,0	50	6,5	60	49	38	M 6	0,98
L1334.R40-07	TR40x7	1	40	7	Right	4013	8*	9,9*	60	8,5	75	55	49	M 8*	1,60
L1334.L16-04	TR16x4	1	16	4	Left	770	5	9,5	35	5,2	40	26	24	M 5	0,34
L1334.L20-04	TR20x4	1	20	4	Left	1412	6	10,0	40	6,5	50	38	28	M 6	0,57
L1334.L30-06	TR30x6	1	30	6	Left	2544	6	10,0	50	6,5	60	49	38	M 6	0,98
L1334.L40-07	TR40x7	1	40	7	Left	4013	8*	9,9*	60	8,5	75	55	49	M 8*	1,60





L1335

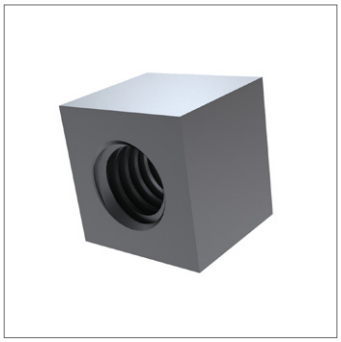
Material
Brass (EN 12164, CW614N-M).

Technical Notes
Used for fairly light loads.

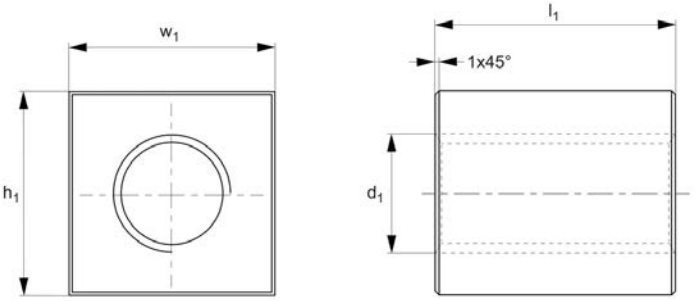
Tips
Standard nuts are right hand thread.
For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.

Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	h_1 & w_1 tol. h11	l_1 +0.0|-0.2	Weight kg
L1335.R12-03	TR12x3	1	12	3	Right	411	25	25	0.11
L1335.R16-04	TR16x4	1	16	4	Right	770	30	35	0.21
L1335.R18-04	TR18x4	1	18	4	Right	1131	35	45	0.38
L1335.R20-04	TR20x4	1	20	4	Right	1412	40	50	0.55
L1335.R30-06	TR30x6	1	30	6	Right	2544	50	60	0.95
L1335.R36-06	TR36x6	1	36	6	Right	3630	60	70	1.56
L1335.R40-07	TR40x7	1	40	7	Right	4013	60	70	1.46
L1335.L12-03	TR12x3	1	12	3	Left	411	25	25	0.11
L1335.L16-04	TR16x4	1	16	4	Left	770	30	35	0.21
L1335.L18-04	TR18x4	1	18	4	Left	1131	35	45	0.38
L1335.L20-04	TR20x4	1	20	4	Left	1412	40	50	0.55
L1335.L30-06	TR30x6	1	30	6	Left	2554	50	60	0.95
L1335.L36-06	TR32x6	1	36	6	Left	3630	60	70	1.56
L1335.L40-07	TR40x7	1	40	7	Left	4013	60	70	1.46

Square Steel Nuts
for lead screws



L1336



Material
Steel (11SMnPb37). Manufactured to ISO 2901/2903 (DIN 103).

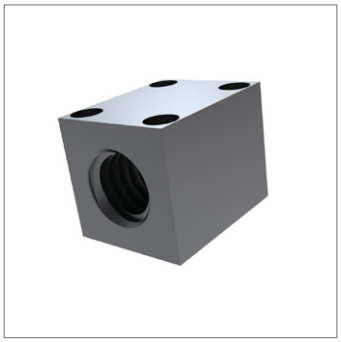
Technical Notes
Used for low rotation speeds, manual control, for clamping or locking functions and for receiving dead weights.
The use of steel to steel contact surface is not suitable for motorised motion.

Tips
Standard nuts are right hand thread, single starts.
For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.

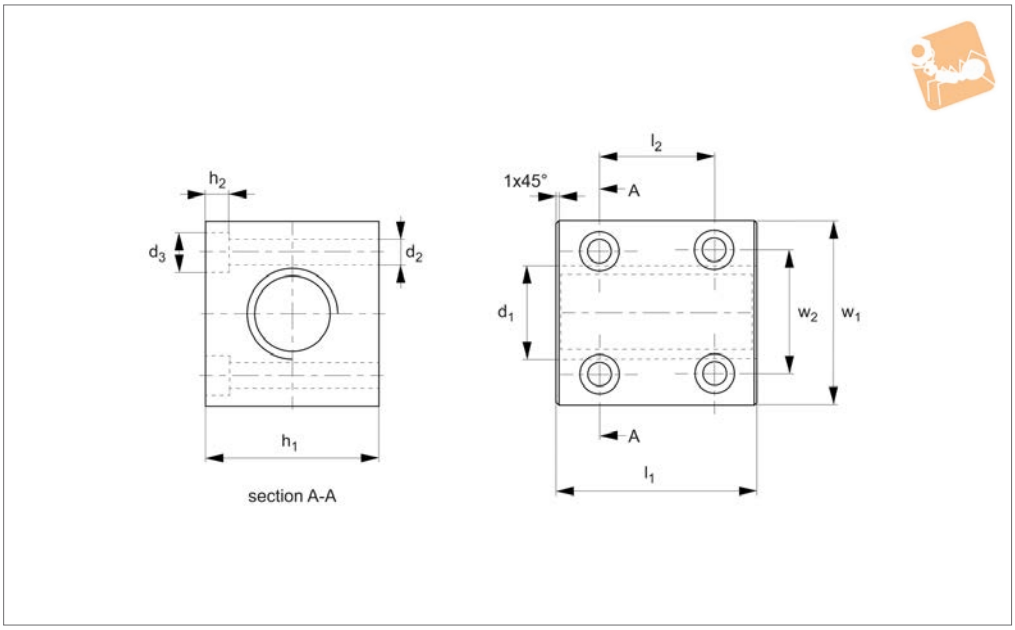
Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	h_1 & w_1 tol. h11	l_1 +0.0|-0.2	Weight kg
L1336.R10-02	TR10x 2	1	10	2	Right	150	17	15	0.027
L1336.R10-04	TR10x 4	2	10	4	Right	150	17	15	0.027
L1336.R12-03	TR12x 3	1	12	3	Right	210	25	18	0.076
L1336.R12-06	TR12x 6	2	12	6	Right	210	25	18	0.076
L1336.R14-03	TR14x 3	1	14	3	Right	285	25	20	0.079
L1336.R14-06	TR14x 6	2	14	6	Right	285	25	20	0.079
L1336.R16-04	TR16x 4	1	16	4	Right	770	28	24	0.199
L1336.R16-08	TR16x 8	2	16	8	Right	365	28	24	0.119
L1336.R18-04	TR18x 4	1	18	4	Right	1131	30	28	0.353
L1336.R18-08	TR18x 8	2	18	8	Right	470	30	28	0.154
L1336.R20-04	TR20x 4	1	20	4	Right	1412	35	30	0.517
L1336.R20-08	TR20x 8	2	20	8	Right	590	35	30	0.259
L1336.R22-05	TR22x 5	1	22	5	Right	700	35	33	0.240
L1336.R22-10	TR22x10	2	22	10	Right	700	35	33	0.240
L1336.R24-05	TR24x 5	1	24	5	Right	845	40	36	0.354
L1336.R24-10	TR24x19	2	24	10	Right	845	40	36	0.354
L1336.R26-05	TR26x 5	1	26	5	Right	1005	40	39	0.363
L1336.R26-10	TR26x10	2	26	10	Right	1005	40	39	0.363
L1336.R28-05	TR28x 5	1	28	5	Right	1175	45	42	0.506
L1336.R28-10	TR28x10	2	28	10	Right	1175	45	42	0.506
L1336.R30-06	TR30x 6	1	30	6	Right	2544	45	45	0.877
L1336.R30-12	TR30x12	2	30	12	Right	1335	45	45	0.513
L1336.R32-06	TR32x 6	1	32	6	Right	1430	55	48	0.891
L1336.R32-12	TR32x12	2	32	12	Right	1430	55	48	0.891
L1336.R36-06	TR36x 6	1	36	6	Right	3630	60	54	1.465
L1336.R36-12	TR36x12	2	36	12	Right	1950	60	54	1.163
L1336.R40-07	TR40x 7	1	40	7	Right	4013	60	60	1.347
L1336.R40-14	TR40x14	2	40	14	Right	2400	60	60	1.216
L1336.R44-07	TR44x 7	1	44	7	Right	2940	65	66	1.538
L1336.L10-02	TR10x2	1	10	2	Left	150	17	15	0.027
L1336.L12-03	TR12x3	1	12	3	Left	739	25	18	0.123
L1336.L14-03	TR14x3	1	14	3	Left	285	25	20	0.079

Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	h_1 & w_1 tol. h11	l_1 +0.0|-0.2	Weight kg
L1336.L16-04	TR16x4	1	16	4	Left	770	28	24	0.199
L1336.L18-04	TR18x4	1	18	4	Left	1131	30	28	0.353
L1336.L20-04	TR20x4	1	20	4	Left	1412	35	30	0.517
L1336.L22-05	TR22x5	1	22	5	Left	700	35	33	0.240
L1336.L24-05	TR24x5	1	24	5	Left	845	40	36	0.354
L1336.L26-05	TR26x5	1	26	5	Left	1005	40	39	0.363
L1336.L28-05	TR28x5	1	28	5	Left	1175	45	42	0.506
L1336.L30-06	TR30x6	1	30	6	Left	2544	45	45	0.877
L1336.L32-06	TR32x6	1	32	6	Left	1430	55	48	0.891
L1336.L36-06	TR36x6	1	36	6	Left	1950	60	54	1.163
L1336.L40-07	TR40x7	1	40	7	Left	4013	60	60	1.347
L1336.L44-07	TR44x7	1	44	7	Left	2940	65	66	1.538

Square Steel Nut with Holes
for lead screws



L1337

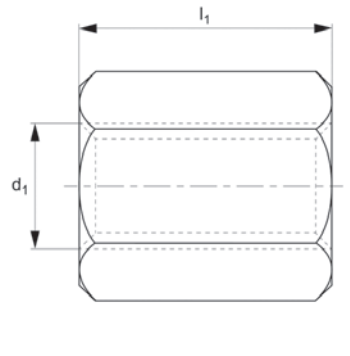


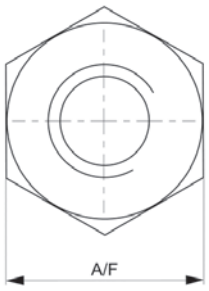
Material
Steel (EN 10277-3, 11SMnPb37).

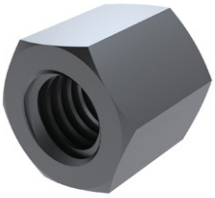
Technical Notes
Used as a fixing nut or for manual movements where the load is not important, as the steel to steel coupling used for moving under heavy loads tends to seize.
The use of steel/steel contact surface is not suitable for motorised motion.

Tips
Standard nuts are right hand thread.
For use with steel or stainless steel lead screws, L1320 and L1322.
*Special M8 fixing screw with a reduced head diameter.

Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	d_2	d_3	h_1 & w_1 tol. h11	h_2	l_1 +0.0|-0.2	l_2	w_2	Weight kg
L1337.R12-03	TR12x3	1	12	3	Right	739	4	7,0	25	4,2	30	20	17	0,123
L1337.R16-04	TR16x4	1	16	4	Right	770	5	9,5	35	5,2	40	24	21	0,199
L1337.R18-04	TR18x4	1	18	4	Right	1131	6	10,0	35	6,5	45	26	24	0,353
L1337.R20-04	TR20x4	1	20	4	Right	1412	6	10,0	40	6,5	50	38	28	0,517
L1337.R30-06	TR30x6	1	30	6	Right	2544	6	10,0	50	6,5	60	48	38	0,877
L1337.R40-07	TR40x7	1	40	7	Right	4013	8*	9,9*	60	8,5	70	55	49	1,347
L1337.R50-08	TR50x8	1	50	8	Right	6502	8*	9,9*	70	8,5	90	70	60	2,183
L1337.R60-09	TR60x9	1	60	9	Right	8718	8*	9,9*	80	8,5	100	80	69	2,990
L1337.L12-03	TR12x3	1	12	3	Left	739	4	7,0	25	4,2	30	20	17	0,123
L1337.L16-04	TR16x4	1	16	4	Left	770	5	9,5	35	5,2	40	24	21	0,199
L1337.L18-04	TR18x4	1	18	4	Left	1131	6	10,0	35	6,5	45	26	24	0,353
L1337.L20-04	TR20x4	1	20	4	Left	1412	6	10,0	40	6,5	50	38	28	0,517
L1337.L30-06	TR30x6	1	30	6	Left	2544	6	10,0	50	6,5	60	48	38	0,877
L1337.L40-07	TR40x7	1	40	7	Left	4013	8*	9,9*	60	8,5	70	55	49	1,347
L1337.L50-08	TR50x8	1	50	8	Left	6502	8*	9,9*	70	8,5	90	70	60	2,183
L1337.L60-09	TR60x9	1	60	9	Left	8718	8*	9,9*	80	8,5	100	80	69	2,990







L1338

Material
Steel (EN10277-3, 11SMnPb37). Manufactured to ISO 2901/2903 (DIN103).

Technical Notes
Used for low rotation speeds, manual control, for clamping or locking functions and for receiving dead weights.
The use of steel to steel contact surface is not suitable for motorised motion.

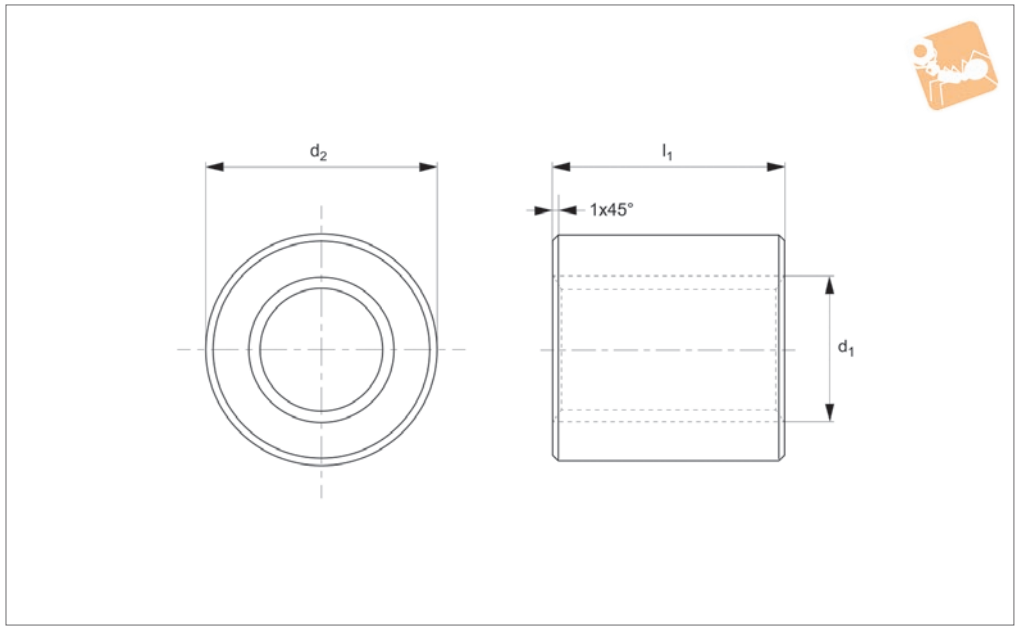
Tips
Standard nuts are right hand thread, single starts.
For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.

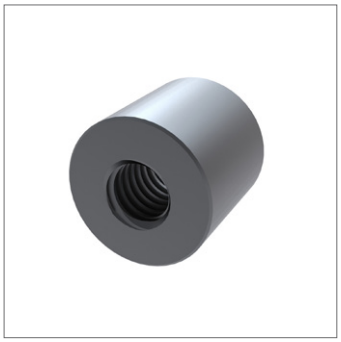
Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	A/F tol. h11	l_1 +0.0|-0.2	Weight kg
L1338.R08-015	TR8x1.5	1	8	1.5	Right	100	15	12	0.014
L1338.R10-02	TR10x 2	1	10	2	Right	150	17	15	0.022
L1338.R10-04	TR10x 4	2	10	4	Right	150	17	15	0.022
L1338.R12-03	TR12x 3	1	12	3	Right	210	19	18	0.032
L1338.R12-06	TR12x 6	2	12	6	Right	210	19	18	0.032
L1338.R14-03	TR14x 3	1	14	3	Right	285	22	21	0.049
L1338.R14-06	TR14x 6	2	14	6	Right	285	22	21	0.049
L1338.R16-04	TR16x 4	1	16	4	Right	365	24	24	0.065
L1338.R16-08	TR16x 8	2	16	8	Right	365	24	24	0.065
L1338.R18-04	TR18x 4	1	18	4	Right	470	27	27	0.091
L1338.R18-08	TR18x 8	2	18	8	Right	470	27	27	0.091
L1338.R20-04	TR20x 4	1	20	4	Right	590	30	30	0.124
L1338.R20-08	TR20x 8	2	20	8	Right	590	30	30	0.124
L1338.R22-05	TR22x 5	1	22	5	Right	700	30	33	0.125
L1338.R22-10	TR22x10	2	22	5	Right	700	30	33	0.125
L1338.R24-05	TR24x 5	1	24	5	Right	845	36	36	0.219
L1338.R24-10	TR24x10	2	24	10	Right	845	36	36	0.219
L1338.R26-05	TR26x 5	1	26	5	Right	1005	36	39	0.216
L1338.R26-10	TR26x10	2	26	10	Right	1005	36	39	0.216
L1338.R28-05	TR28x 5	1	28	5	Right	1175	41	42	0.318
L1338.R28-10	TR28x10	2	28	5	Right	1175	41	42	0.318
L1338.R30-06	TR30x 6	1	30	6	Right	1335	46	45	0.445
L1338.R30-12	TR30x12	2	30	12	Right	1335	55	54	0.445
L1338.R32-06	TR32x 6	1	32	6	Right	1430	50	48	0.567
L1338.R32-12	TR32x12	2	32	6	Right	1430	50	48	0.567
L1338.R36-06	TR36x 6	1	36	6	Right	1950	55	54	0.708
L1338.R36-12	TR36x12	2	36	12	Right	1950	55	54	0.708
L1338.R40-07	TR40x 7	1	40	7	Right	2400	60	60	0.893
L1338.R40-14	TR40x14	2	40	14	Right	2400	60	60	0.893
L1338.R44-07	TR44x 7	1	44	7	Right	2940	65	66	1.538
L1338.R50-08	TR50x 8	1	50	8	Right	3790	75	75	1.889
L1338.R60-09	TR60x 9	1	60	9	Right	5490	90	90	3.227

Hexagon Steel Nuts



Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	A/F tol. h11	l_1 +0.0|-0.2	Weight kg
L1338.L10-02	TR10x2	1	10	2	Left	150	17	15	0.022
L1338.L12-03	TR12x3	1	12	3	Left	210	19	18	0.032
L1338.L14-03	TR14x3	1	14	3	Left	285	22	21	0.049
L1338.L16-04	TR16x4	1	16	4	Left	365	24	24	0.065
L1338.L18-04	TR18x4	1	18	4	Left	470	27	27	0.091
L1338.L20-04	TR20x4	1	20	4	Left	590	30	30	0.124
L1338.L22-05	TR22x5	1	22	5	Left	700	30	33	0.125
L1338.L24-05	TR24x5	1	24	5	Left	845	36	36	0.219
L1338.L26-05	TR26x5	1	26	5	Left	1005	36	39	0.216
L1338.L28-05	TR28x5	1	28	5	Left	1175	41	42	0.318
L1338.L30-06	TR30x6	1	30	6	Left	1335	46	45	0.445
L1338.L32-06	TR32x6	1	32	6	Left	1430	50	48	0.567
L1338.L36-06	TR36x6	1	36	6	Left	1950	55	54	0.708
L1338.L40-07	TR40x7	1	40	7	Left	2400	60	60	0.893
L1338.L44-07	TR44x7	1	44	7	Left	2940	65	66	1.538
L1338.L50-08	TR50x8	1	50	8	Left	3790	75	75	1.889
L1338.L60-09	TR60x9	1	60	9	Left	5490	90	90	3.227





L1339

Material
Steel (EN10277-3, 11SMnPb37). Manufactured to ISO2901/2903 (DIN 103).

Technical Notes
Used for low rotation speeds, manual control, for clamping or locking functions and for receiving dead weights.
The use of steel to steel contact surface is not suitable for motorised motion.

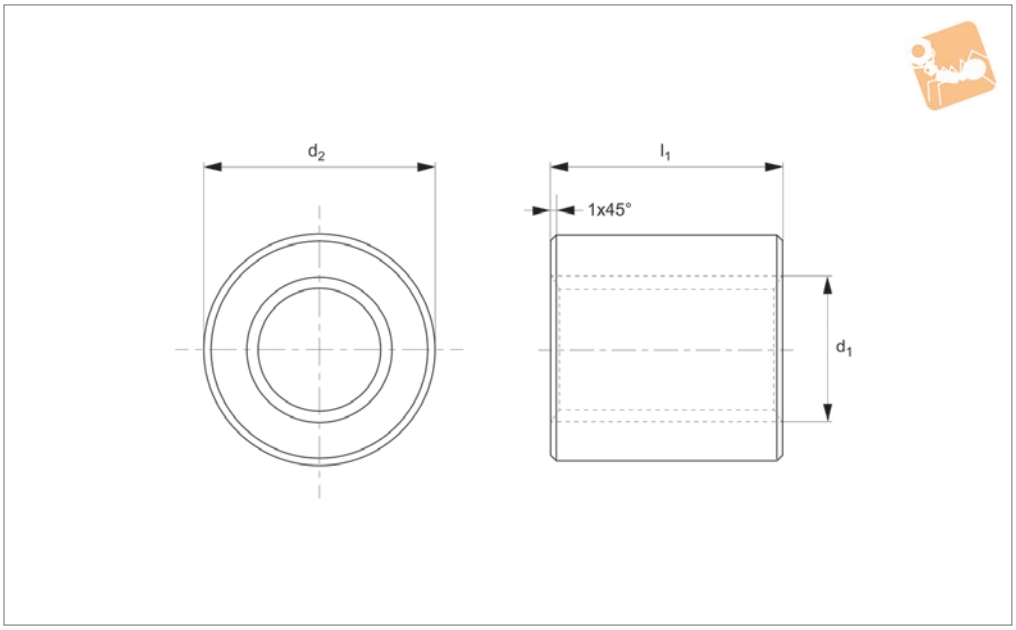
Tips
Standard nuts are right hand thread, single starts.
For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.

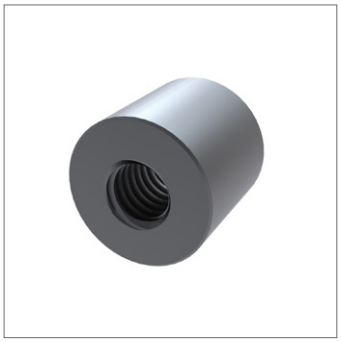
Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread hand	Contact surface mm²	d_2 tol. h10	l_1 +0.0|-0.1	Weight kg
L1339.R08-015	TR8x1.5	1	8	1.5	Right	100	18	12	0.016
L1339.R10-02	TR10x 2	1	10	2	Right	150	22	15	0.04
L1339.R10-04	TR10x 4	2	10	4	Right	150	22	15	0.04
L1339.R12-03	TR12x 3	1	12	3	Right	210	26	18	0.06
L1339.R12-06	TR12x 6	2	12	6	Right	210	26	18	0.06
L1339.R14-03	TR14x 3	1	14	3	Right	285	30	21	0.09
L1339.R14-06	TR14x 6	2	14	6	Right	285	30	21	0.09
L1339.R16-04	TR16x 4	1	16	4	Right	365	36	24	0.16
L1339.R16-08	TR16x 8	2	16	8	Right	365	36	24	0.16
L1339.R18-04	TR18x 4	1	18	4	Right	470	40	27	0.22
L1339.R18-08	TR18x 8	2	18	8	Right	470	40	27	0.22
L1339.R20-04	TR20x 4	1	20	4	Right	590	45	30	0.31
L1339.R20-08	TR20x 8	2	20	8	Right	590	45	30	0.31
L1339.R22-05	TR22x 5	1	22	5	Right	700	45	33	0.32
L1339.R22-10	TR22x10	2	22	10	Right	700	45	33	0.32
L1339.R24-05	TR24x 5	1	24	5	Right	845	50	36	0.44
L1339.R24-10	TR24x10	2	24	10	Right	845	50	36	0.44
L1339.R26-05	TR26x 5	1	26	5	Right	1005	50	39	0.45
L1339.R26-10	TR26x10	2	26	10	Right	1005	50	39	0.45
L1339.R28-05	TR28x 5	1	28	5	Right	1175	60	42	0.75
L1339.R28-10	TR28x10	2	28	10	Right	1175	60	42	0.75
L1339.R30-06	TR30x 6	1	30	6	Right	1335	60	45	0.77
L1339.R30-12	TR30x12	2	30	12	Right	1335	60	45	0.77
L1339.R32-06	TR32x 6	1	32	6	Right	1430	60	48	0.79
L1339.R32-12	TR32x12	2	32	12	Right	1430	60	48	0.79
L1339.R36-06	TR36x 6	1	36	6	Right	1950	75	54	1.48
L1339.R36-12	TR36x12	2	36	12	Right	1950	75	54	1.49
L1339.R40-07	TR40x 7	1	40	7	Right	2400	80	60	1.83
L1339.R40-14	TR40x14	2	40	14	Right	2400	80	60	1.83
L1339.R44-07	TR44x 7	1	44	7	Right	2940	80	66	1.89
L1339.R50-08	TR50x 8	1	50	8	Right	3790	90	75	2.69

Cylindrical Steel Nuts
for lead screws



Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread hand	Contact surface mm²	d_2 tol. h10	l_1 +0.0|-0.1	Weight kg
L1339.R60-09	TR60x 9	1	60	9	Right	5490	100	90	3.87
L1339.R70-10	TR70x10	1	70	10	Right	7140	110	100	5.12
L1339.R80-10	TR80x10	1	80	10	Right	8900	120	110	6.00
L1339.L10-02	TR10x 2	1	10	2	Left	150	22	15	0.04
L1339.L12-03	TR12x 3	1	12	3	Left	210	26	18	0.06
L1339.L14-03	TR14x 3	1	14	3	Left	210	30	21	0.09
L1339.L16-04	TR16x 4	1	16	4	Left	365	36	24	0.16
L1339.L18-04	TR18x 4	1	18	4	Left	470	40	27	0.22
L1339.L20-04	TR20x 4	1	20	4	Left	590	45	30	0.31
L1339.L22-05	TR22x 5	1	22	5	Left	700	45	33	0.32
L1339.L24-05	TR24x 5	1	24	5	Left	845	50	36	0.44
L1339.L26-05	TR26x 5	1	26	5	Left	1005	50	39	0.45
L1339.L28-05	TR28x 5	1	28	5	Left	1175	60	42	0.75
L1339.L30-06	TR30x 6	1	30	6	Left	1335	60	45	0.77
L1339.L32-06	TR32x 6	1	32	6	Left	1430	60	48	0.79
L1339.L36-06	TR36x 6	1	36	6	Left	1950	75	54	1.48
L1339.L40-07	TR40x 7	1	40	7	Left	2400	80	60	1.83
L1339.L44-07	TR44x 7	1	44	7	Left	2940	80	66	1.88
L1339.L50-08	TR50x 8	1	50	8	Left	3790	90	75	2.69
L1339.L60-09	TR60x 9	1	60	9	Left	5490	100	90	3.87
L1339.L70-10	TR70x10	1	70	10	Left	7140	110	100	5.12
L1339.L80-10	TR80x10	1	80	10	Left	8900	120	110	6.00





L1340

Material
Steel (EN10277-3, 11SMnPb37). Manufactured to ISO2901/2903 (DIN 103).

Technical Notes
Used for low rotation speeds, manual control, for clamping or locking functions and for receiving dead weights.
The use of steel to steel contact surface is not suitable for motorised motion.

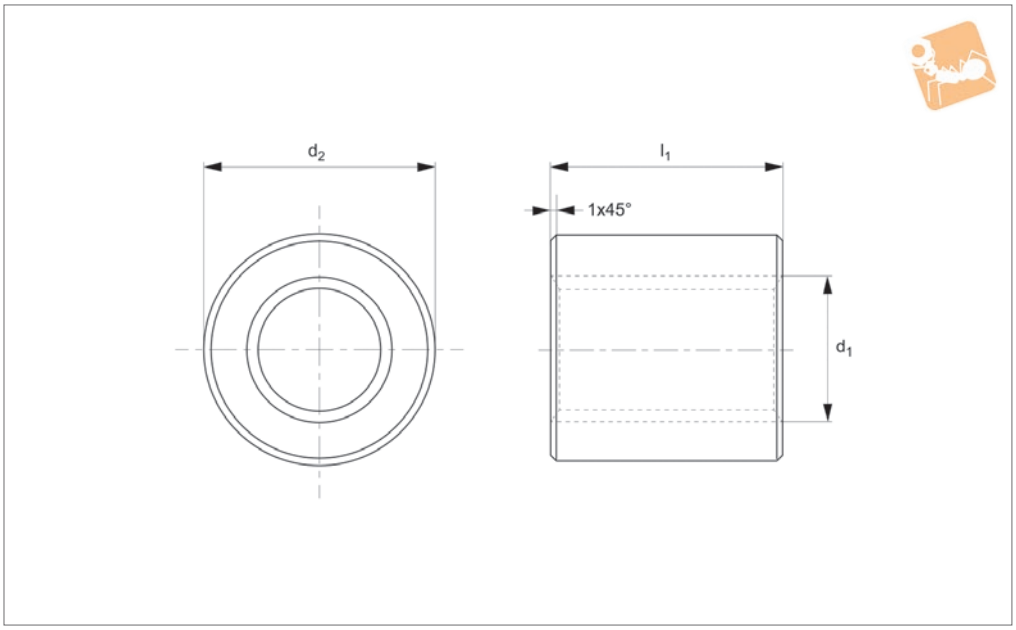
Tips
Standard nuts are right hand thread, single starts.
For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.

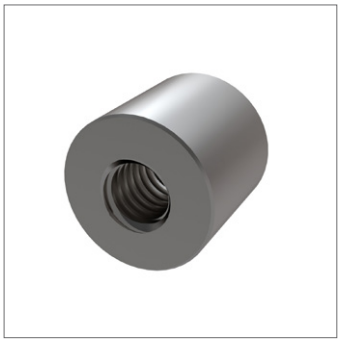
Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	d_2 tol. h10	l_1 +0.0|-0.1	Weight kg
L1340.R10-02	TR10x 2	1	10	2	Right	150	22	20	0.05
L1340.R10-04	TR10x 4	2	10	4	Right	150	22	20	0.05
L1340.R12-03	TR12x 3	1	12	3	Right	210	26	24	0.07
L1340.R12-06	TR12x 6	2	12	6	Right	210	26	24	0.07
L1340.R14-03	TR14x 3	1	14	3	Right	285	30	28	0.12
L1340.R14-06	TR14x 6	2	14	6	Right	285	30	28	0.12
L1340.R16-04	TR16x 4	1	16	4	Right	365	36	32	0.21
L1340.R16-08	TR16x 8	2	16	8	Right	365	36	32	0.21
L1340.R18-04	TR18x 4	1	18	4	Right	470	40	36	0.29
L1340.R18-08	TR18x 8	2	18	8	Right	470	40	36	0.29
L1340.R20-04	TR20x 4	1	20	4	Right	590	45	40	0.41
L1340.R20-08	TR20x 8	2	20	8	Right	590	45	40	0.41
L1340.R22-05	TR22x 5	1	22	5	Right	700	45	44	0.43
L1340.R22-10	TR22x10	2	22	10	Right	700	45	44	0.43
L1340.R24-05	TR24x 5	1	24	5	Right	845	50	48	0.59
L1340.R24-10	TR24x10	2	24	10	Right	845	50	48	0.59
L1340.R26-05	TR26x 5	1	26	5	Right	1005	50	52	0.60
L1340.R26-10	TR26x10	2	26	10	Right	1005	50	52	0.60
L1340.R28-05	TR28x 5	1	28	5	Right	1175	60	56	0.98
L1340.R30-06	TR30x 6	1	30	6	Right	1335	60	60	1.02
L1340.R30-12	TR30x12	2	30	12	Right	1335	60	60	1.02
L1340.R32-06	TR32x 6	1	32	6	Right	1430	60	64	1.05
L1340.R32-12	TR32x12	2	32	12	Right	1430	60	64	1.05
L1340.R36-06	TR36x 6	1	36	6	Right	1950	75	72	1.96
L1340.R36-12	TR36x12	2	36	12	Right	1950	75	72	1.96
L1340.R40-07	TR40x 7	1	40	7	Right	2400	80	80	2.43
L1340.R40-14	TR40x14	2	40	14	Right	2400	80	80	2.43
L1340.R44-07	TR44x 7	1	44	7	Right	2940	80	88	2.51
L1340.L10-02	TR10x2	1	10	2	Left	150	22	20	0.05
L1340.L12-03	TR12x3	1	12	3	Left	210	26	24	0.07
L1340.L14-03	TR14x3	1	14	3	Left	285	30	28	0.12
L1340.L16-04	TR16x4	1	16	4	Left	365	36	32	0.21

Long Cylindrical Steel Nuts
for lead screws



Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	d_2 tol. h10	l_1 +0.0|-0.1	Weight kg
L1340.L18-04	TR18x4	1	18	4	Left	470	40	36	0.29
L1340.L20-04	TR20x4	1	20	4	Left	590	45	40	0.41
L1340.L22-05	TR22x5	1	22	5	Left	700	45	44	0.43
L1340.L24-05	TR24x5	1	24	5	Left	845	50	48	0.59
L1340.L26-05	TR26x5	1	26	5	Left	1005	50	52	0.60
L1340.L28-05	TR28x5	1	28	5	Left	1175	60	56	0.98
L1340.L30-06	TR30x6	1	30	6	Left	1335	60	60	1.02
L1340.L32-06	TR32x6	1	32	6	Left	1430	60	64	1.05
L1340.L36-06	TR36x6	1	36	6	Left	1950	75	72	1.96
L1340.L40-07	TR40x7	1	40	7	Left	2400	80	80	2.43
L1340.L44-07	TR44x7	1	44	7	Left	2940	80	88	2.51





L1341

Material
Stainless steel (AISI 303).

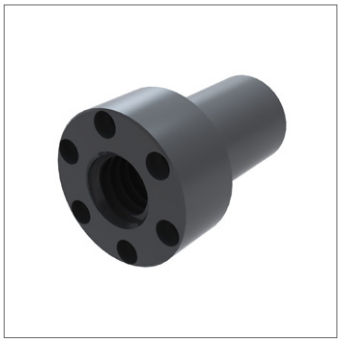
Technical Notes
Especially suitable to withstand corrosive chemicals.

Tips
Standard nuts are right hand thread.
For use with stainless steel lead screws nos. L1322 and L1323.

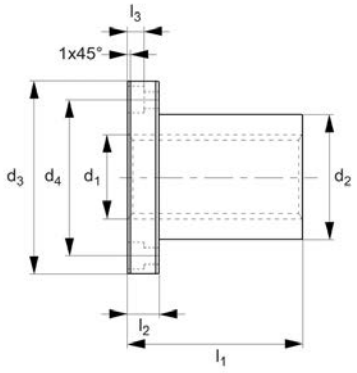
Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	d_2 tol. h11	l_1 +0.0|-0.2	Weight kg
L1341.R12-03	TR12x3	1	12	3	Right	297	26	18	0.060
L1341.R16-04	TR16x4	1	16	4	Right	528	36	24	0.157
L1341.R20-04	TR20x4	1	20	4	Right	847	45	30	0.305
L1341.R24-05	TR24x5	1	24	5	Right	1215	50	36	0.436
L1341.R30-06	TR30x6	1	30	6	Right	1908	60	45	0.766
L1341.R36-06	TR36x6	1	36	6	Right	2799	75	54	1.462
L1341.R40-07	TR40x7	1	40	7	Right	3440	80	60	1.808
L1341.R50-08	TR50x8	1	50	8	Right	5418	90	75	2.653
L1341.L12-03	TR12x3	1	12	3	Left	297	26	18	0.060
L1341.L16-04	TR16x4	1	16	4	Left	528	36	24	0.157
L1341.L20-04	TR20x4	1	20	4	Left	847	45	30	0.305
L1341.L24-05	TR24x5	1	24	5	Left	1215	50	36	0.436
L1341.L30-06	TR30x6	1	30	6	Left	1908	60	45	0.766
L1341.L36-06	TR36x6	1	36	6	Left	2799	75	54	1.462
L1341.L40-07	TR40x7	1	40	7	Left	3440	80	60	1.808
L1341.L50-08	TR50x8	1	50	8	Left	5418	90	75	2.653

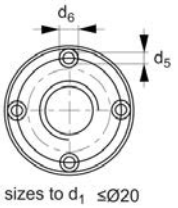
Flanged Self-Lubricating Plastic Nut

for lead screws

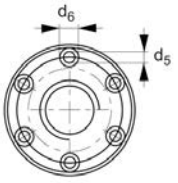


L1342





sizes to d_1 ≤Ø20



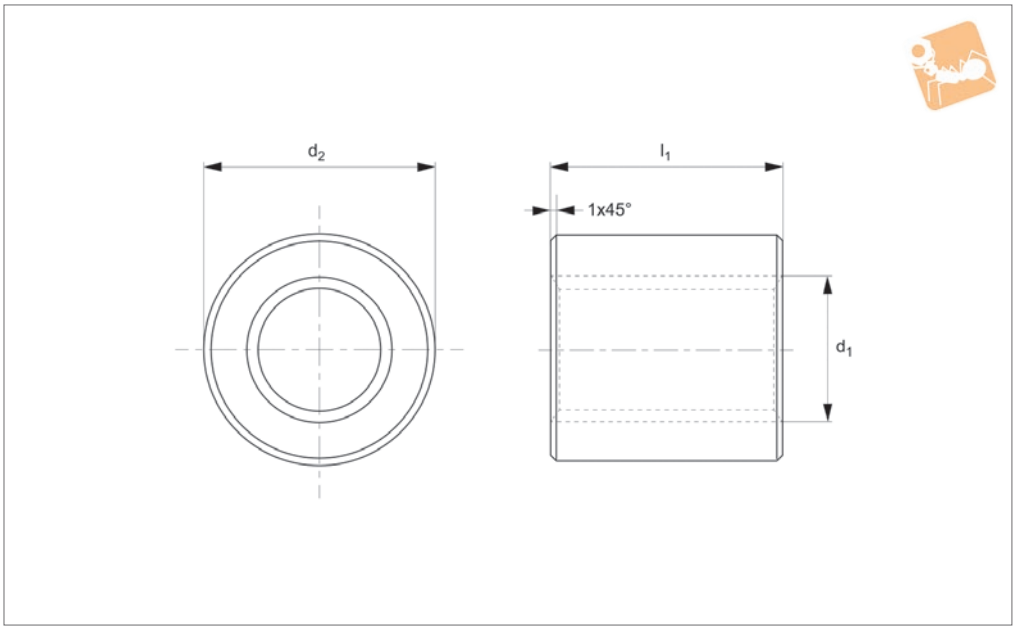
sizes to d_1 ≥Ø28

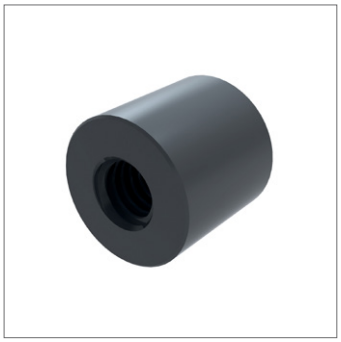
Material
Plastic (PA6.6 & MoS2).

Technical Notes
This nut type is made of a very wear resistant, self-lubricating plastic.
The extra length of these lead screw nuts (three x nominal thread Ø) greatly reduces wear.

Tips
Standard nuts are right hand thread.
For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.

Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread hand	Contact surface mm²	d_2 +0.0|-0.3	d_3 +0.0|-0.1	d_4	d_5	d_6	l_1	l_2	l_3	Weight kg
L1342.R12-03	TR12x 3	1	12	3	Right	594	18	37	26	4,5	7,5	36	12	4,2	0,02
L1342.R16-04	TR16x 4	1	16	4	Right	1056	22	45	32	5,5	9,5	48	16	5,2	0,03
L1342.R20-04	TR20x 4	1	20	4	Right	1696	30	52	40	5,5	9,5	60	20	5,2	0,06
L1342.R20-08	TR20x 8	2	20	8	Right	1696	30	52	40	5,5	9,5	60	20	5,2	0,06
L1342.R28-05	TR28x 5	1	28	5	Right	3600	40	68	53	6,5	11,0	90	30	6,5	0,14
L1342.R28-10	TR28x10	2	28	10	Right	3600	40	68	53	6,5	11,0	90	30	6,5	0,14
L1342.R30-06	TR30x 6	1	30	6	Right	3816	40	68	53	6,5	11,0	90	30	6,5	0,13
L1342.R40-07	TR40x 7	1	40	7	Right	6880	55	84	68	8,5	14,0	120	40	8,5	0,29
L1342.R50-08	TR50x 8	1	50	8	Right	10840	65	100	80	10,5	17,0	150	50	10,5	0,48
L1342.L12-03	TR12x3	1	12	3	Left	594	18	37	26	4,5	7,5	36	12	4,2	0,02
L1342.L16-04	TR16x4	1	16	4	Left	1056	22	45	32	5,5	9,5	48	16	5,2	0,03
L1342.L20-04	TR20x4	1	20	4	Left	1696	30	52	40	5,5	9,5	60	20	5,2	0,06
L1342.L28-05	TR28x5	1	28	5	Left	3600	40	68	53	6,5	11,0	90	30	6,5	0,14
L1342.L30-06	TR30x6	1	30	6	Left	3816	40	68	53	6,5	11,0	90	30	6,5	0,13
L1342.L40-07	TR40x7	1	40	7	Left	6880	55	84	68	8,5	14,0	120	40	8,5	0,29
L1342.L50-08	TR50x8	1	50	8	Left	10840	65	100	80	10,5	17,0	150	50	10,5	0,48





L1343

Material
Nylon (PA 6.6).

Technical Notes
For manual or powered control and medium/high speeds under moderate loads. Low sound levels.
Can be used without lubrication but this reduces service life.

Tips
Standard nuts are right hand thread, single starts.
For use with steel or stainless steel lead screws, L1320, L1321, L1322, and L1323.

Order No.	Size	No. of starts	d_1 tol. 7H	Lead	Thread direction	Contact surface mm²	d_2 tol. h10	l_1 +0.0|-0.1	Weight kg
L1343.R08-015	TR8x1.5	1	8	1.5	Right	150	18	16	0.005
L1343.R10-02	TR10x 2	1	10	2	Right	200	22	20	0.010
L1343.R10-04	TR10x 4	2	10	4	Right	200	22	20	0.010
L1343.R12-03	TR12x 3	1	12	3	Right	280	26	24	0.012
L1343.R12-06	TR12x 6	2	12	6	Right	280	26	24	0.012
L1343.R16-04	TR16x 4	1	16	4	Right	490	36	32	0.032
L1343.R16-08	TR16x 8	2	16	8	Right	490	36	32	0.032
L1343.R20-04	TR20x 4	1	20	4	Right	790	45	40	0.060
L1343.R20-08	TR20x 8	2	20	8	Right	790	45	40	0.060
L1343.R24-05	TR24x 5	1	24	5	Right	1130	50	48	0.088
L1343.R24-10	TR24x10	2	24	10	Right	1130	50	48	0.088
L1343.R30-06	TR30x 6	1	30	6	Right	1780	60	60	0.150
L1343.R30-12	TR30x12	2	30	12	Right	1780	60	60	0.150
L1343.R36-06	TR36x 6	1	36	6	Right	2160	75	72	0.300
L1343.R36-12	TR36x12	2	36	12	Right	2160	75	72	0.300
L1343.R40-07	TR40x 7	1	40	7	Right	3210	80	80	0.370
L1343.R40-14	TR40x14	2	40	14	Right	3210	80	80	0.370
L1343.L10-02	TR10x2	1	10	2	Left	200	22	20	0.010
L1343.L12-03	TR12x3	1	12	3	Left	280	26	24	0.012
L1343.L16-04	TR16x4	1	16	4	Left	490	36	32	0.032
L1343.L20-04	TR20x4	1	20	4	Left	790	45	40	0.060
L1343.L24-05	TR24x5	1	24	5	Left	1130	50	48	0.088
L1343.L30-06	TR30x6	1	30	6	Left	1780	60	60	0.150
L1343.L36-06	TR36x6	1	36	6	Left	2160	75	72	0.300
L1343.L40-07	TR40x7	1	40	7	Left	3210	80	80	0.370

Lead Screws

General sizing data



To select the correct size of lead screw and nut to use, please take into consideration the following three points:

1. The size required to minimise the wear of the nut due to friction.
2. The maximum load the screw can take before it bends.
3. The maximum rpm the screw can run at before it begins to vibrate.

Finding a size to minimise the wear of a nut

Due to friction between the lead screw and nut, some of the power put into the lead screw is lost as heat. The solution is to limit the contact surface area between the lead screw and nut as this will help reduce the amount of friction and wear on the nut.

Lead screws are used to convert rotary motion into linear motion.

The efficiency of a lead screw and nut is defined as the amount of power you get from the nut in relation to the amount of power you put into the lead screw to begin with.
For example, Pt (the power you put into the screw) divided by Pu (the power you get from the nut) = the efficiency.

The efficiency depends on the friction between the contact surfaces of the lead screw and nut, and the lead angle of the thread.

The speed the nut moves along the lead screw must also be taken into consideration in order to limit the amount of friction in the system.

Please see the formulae on the next page which help in calculating the speeds in your application.

Calculation of the Contact Surface Pressure p

The contact surface pressure p is calculated using the following formula.

$$p = \frac{F}{A_t}$$

F = Axial Force (N)

A_t = Contact Surface Area (mm^2)

For standard nuts each At value has been listed in the product tables



Calculating of the sliding speed Vst

The sliding speed is the result of the speed at which the nut moves and the friction.
Calculating the sliding speed helps you to calculate the required rpm of a screw if you know what speed the nut must move at, or help to calculate how fast the nut will move if you know the rpm of the screw.

You must first find the sliding speed of your lead screw and nut using one of the below formulae and then use this to calculate either rpm or output speed of the nut.

The sliding speed is calculated using one of the following formulae.

If the rpm of the screw has already been defined:

$$Vst = \frac{n \cdot P}{1000 \cdot \sin \alpha}$$

Vst= sliding speed on mean diameter (m/min)
n = rpm
P = thread pitch (mm)
α = thread helix angle

If you have already established at which speed the nut must move:

$$Vst = \frac{Vtr}{\sin \alpha}$$

Vst = sliding speed on mean diameter (m/min)
Vtr = motion speed (m/min)
α = thread helix angle

Please note that the rpm and the speed at which the nut moves are bounded as follows:

$$n\ (rpm) = \frac{1000 \cdot Vtr}{P}$$

n = rpm
Vtr = speed at which the nut moves (m/min)
P = thread pitch (mm)

Lead Screws

Critical RPM



The critical rpm is the speed at which screw vibration begins to appear. This rpm speed must never be reached because the vibrations cause serious operating issues. The critical rpm depends on lead screw diameter, how the ends of the lead screw are supported, the free length (lg), and how accurately the lead screw is assembled.

For values shown in the following graphs assume a minimum safety factor for assembly accuracy as per the following chart.

Assembly accuracy coefficient

Assembly accuracy	Conditions	Safety coefficient
Good assembly accuracy: Nut alignment to screw within 0,05mm	Assembly to which the bearing mounts are assembled CNC machined very accurately.	1,3 – 1,6
Average assembly accuracy: Nut alignment to screw within 0,10mm	Bearing mounts installed onto assembly that has not been CNC machined, alignments accurately checked after mounting.	1,7 – 2,5
Low assembly accuracy: Nut alignment to screw within 0,25mm	Bearing mounts installed onto assembly that has not been CNC machined and alignment is not checked accurately.	2,6 – 4,5

Example

To find the critical rpm of a lead screw 40 mm diameter with 7 mm lead, 3 metres long with end support configuration double bearing one end, single bearing the other end (see graph 3) with average assembly accuracy.

Critical rpm graph 3 gives the critical rotation speed of 1000 rpm.

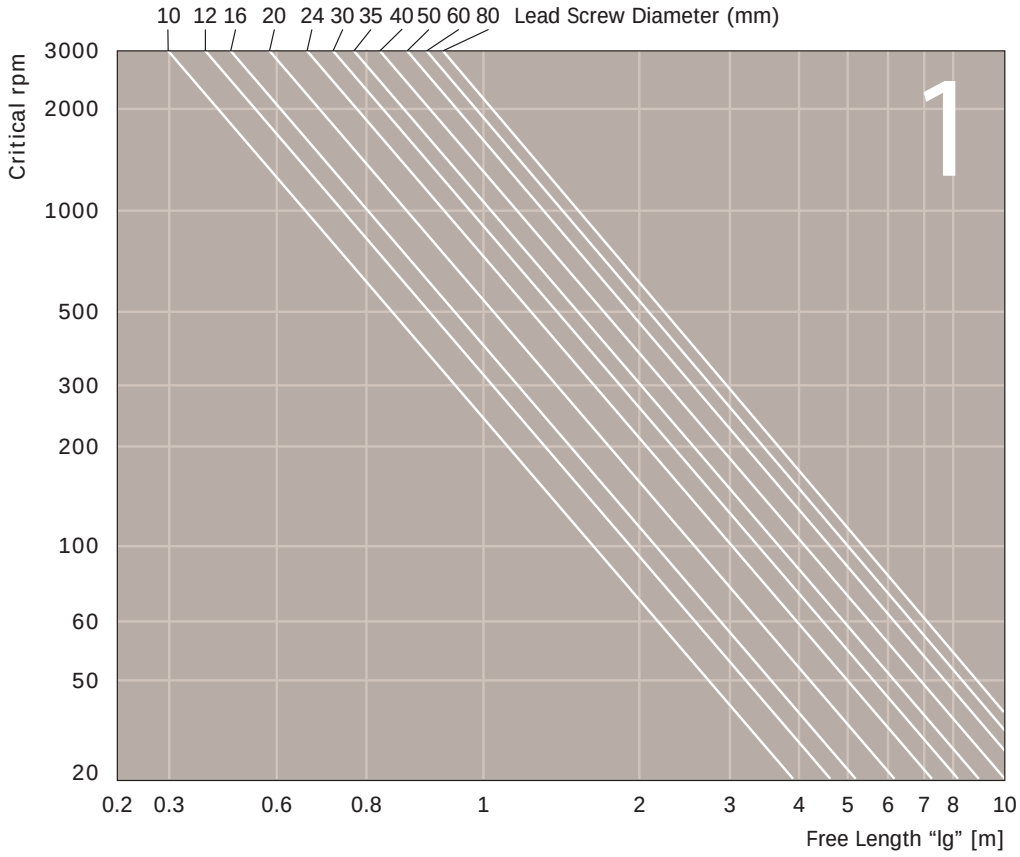
From the assembly accuracy coefficient chart we take the maximum value for the safety coefficient = 2,5

We can calculate the acceptable working speed at a maximum rpm of
N_{max} = 1000/2,5 = 400 rpm

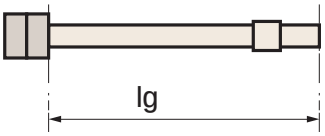
Lead Screws from Automotion Components



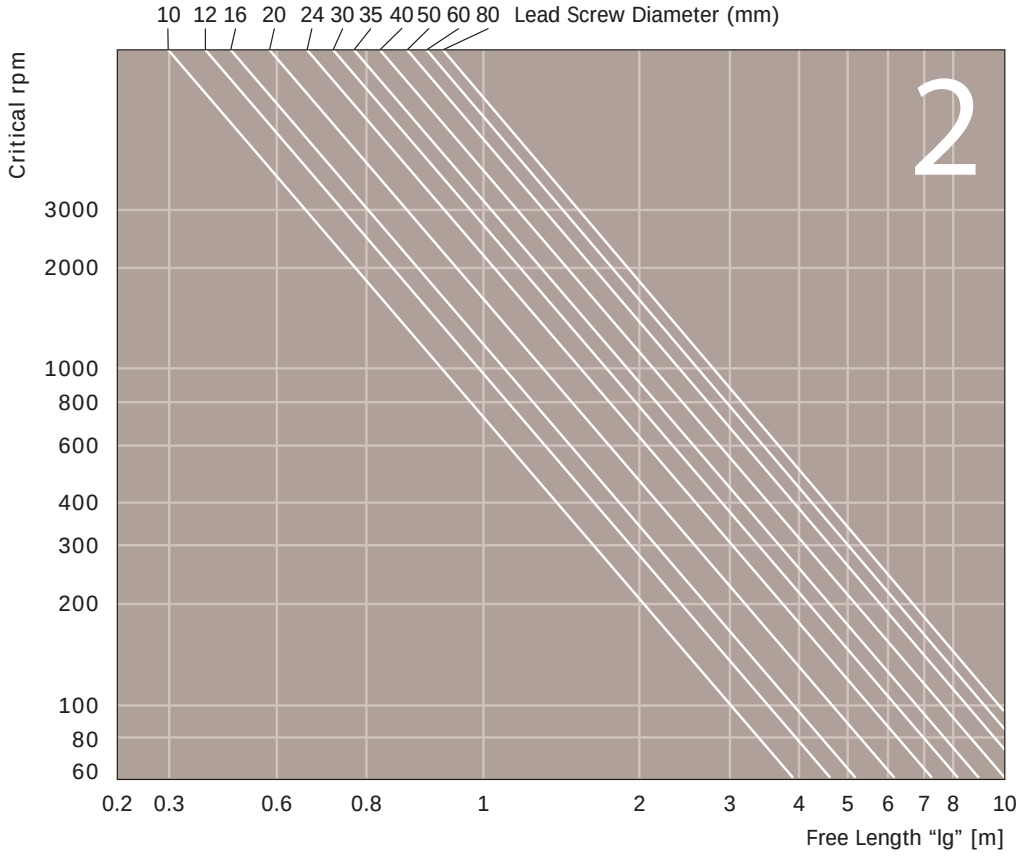
Critical RPM - Graph 1



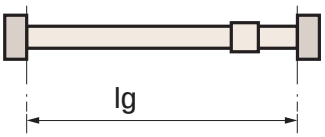
Supported one end only by double bearing



Critical RPM - Graph 2



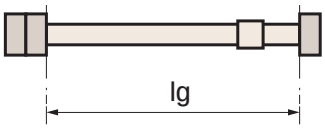
Supported each end by single bearings



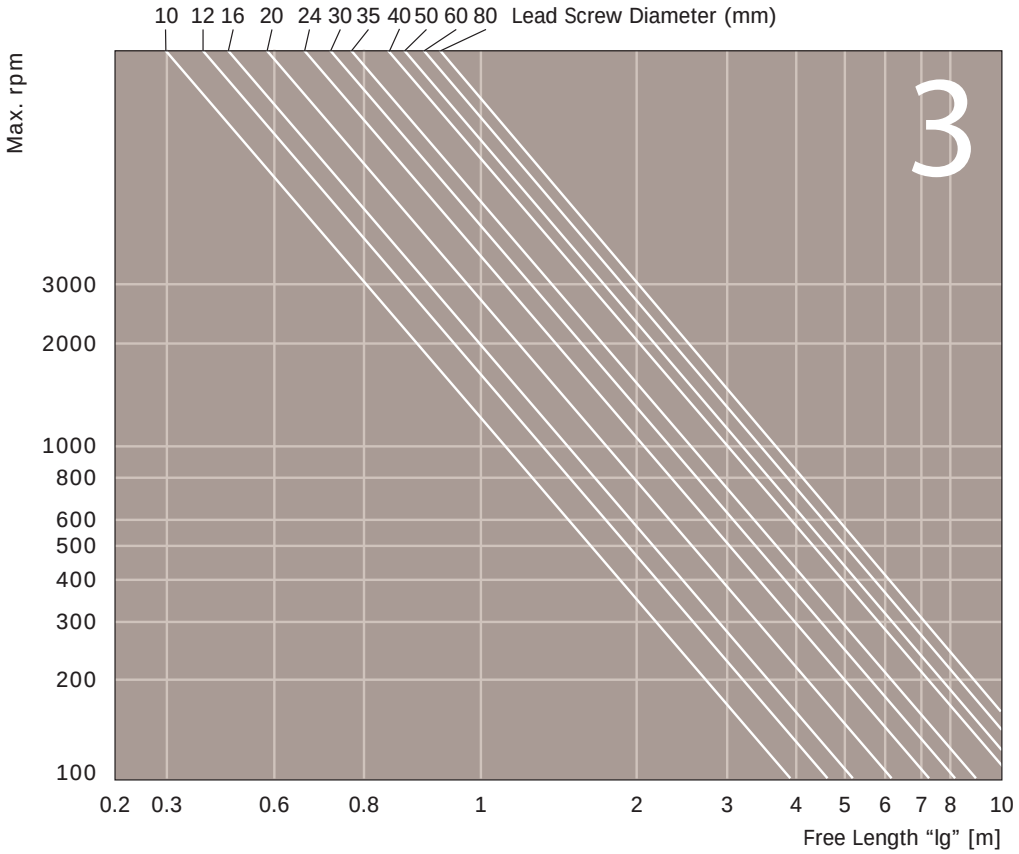
Lead Screws

Critical RPM

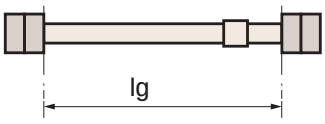
Supported each end. Double bearing one end, single bearing the other end



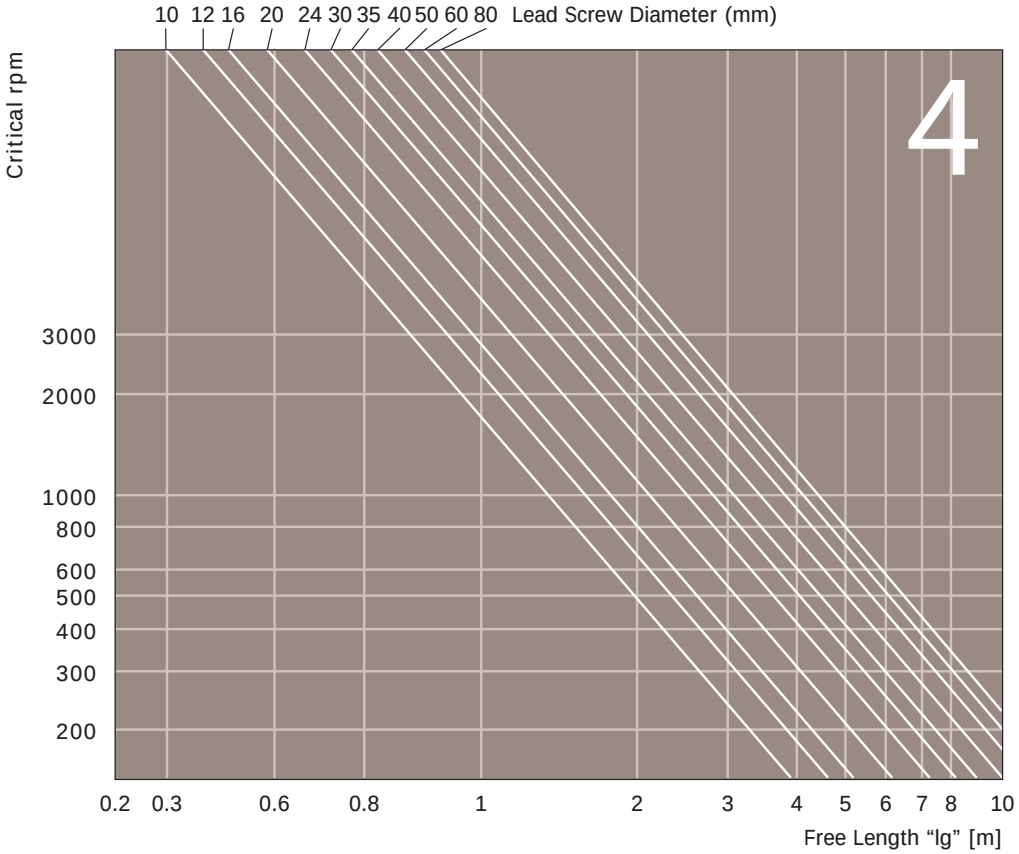
Critical RPM Graph 3



Supported by double bearings each end



Critical RPM Graph 4



ov-lead-screw-critical-rpm-graphs-b-lnh-Updated-16-03-2023

Efficiency

The numerical efficiency values of each limit are shown in the table 'Trapezoidal Lead Screw and Nut Specifications'.

The larger the lead angle of a lead screw, the greater the efficiency is for the lead screw.
It is therefore recommended, where possible, to use a lead screw with a lead angle as high as possible.

The lead angle for each size of screw can also be found in the trapezoidal lead screw and nut specifications table. To help reduce friction as far as possible, we make precision rolled trapezoidal lead screws with minimal roughness on the side of the threads, always less than 1µ Ra (usually 0.2 to 0.7 µ).

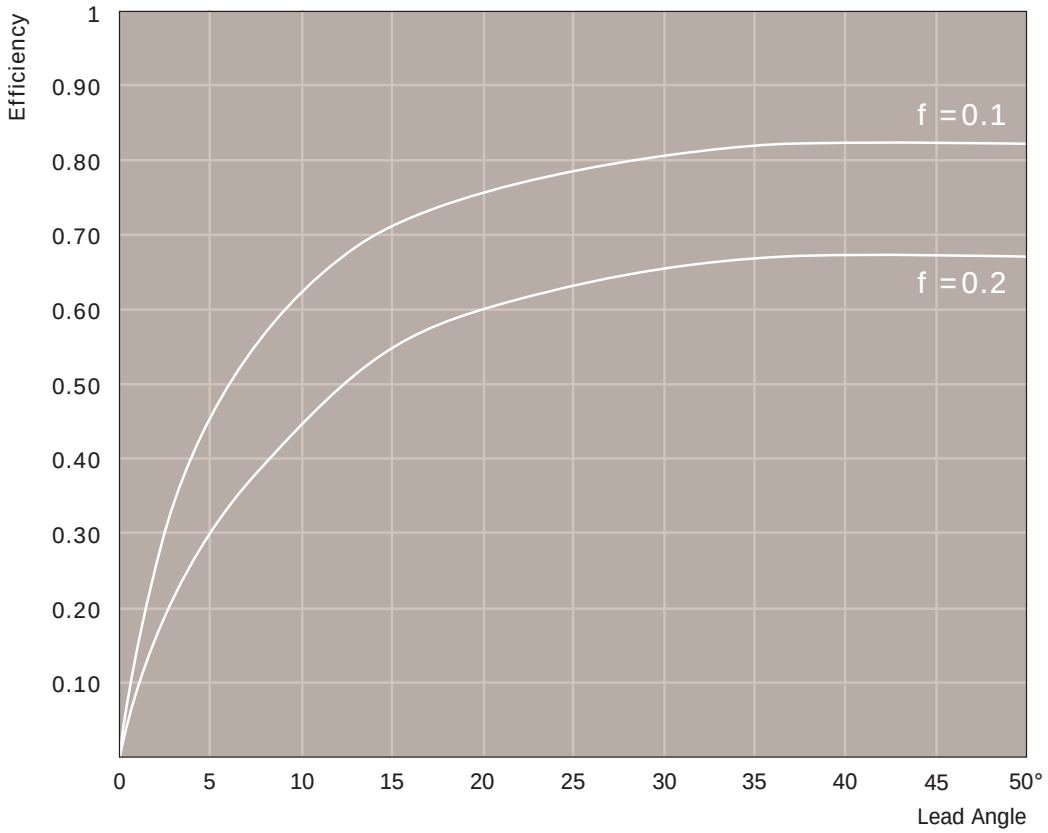
For applications where low friction is important, we also make wear resistant self lubricating flanged plastic nuts. The friction factor of these is 0.1 with the initial breakaway friction factor being 0.15.

$$\eta = \frac{1 - f \cdot \tan\alpha}{1 + \frac{f}{\tan\alpha}}$$

η = efficiency
f = dynamic friction factor between screw and nut materials
α = lead angle of threads

The numerical efficiency values of each limit are shown in the 'Trapezoidal Lead Screw and Nut Specifications' table.

Efficiency



Lead Screws

Trapezoidal screw specifications



Diameter x lead	Lead angle	Max. efficiency η f=0.1*	Min. efficiency η f=0.2*	Moment of inertia mm⁴	Radial play between screw and nut min.	Radial play between screw and nut max.	Axial play between screw and nut min.	Axial play between screw and nut max.
10 x 2	4°02′	0,41	0,26	131	0,071	0,511	0,019	0,137
10 x 4	8°03′	0,58	0,40	131	0,071	0,511	0,019	0,137
12 x 3	5°12′	0,47	0,31	215	0,085	0,609	0,023	0,163
12 x 6	10°19′	0,63	0,46	215	0,085	0,609	0,023	0,163
14 x 3	4°22′	0,43	0,27	518	0,085	0,609	0,023	0,163
14 x 6	8°41′	0,59	0,42	518	0,085	0,609	0,023	0,163
16 x 4	5°12′	0,47	0,31	738	0,095	0,715	0,025	0,192
16 x 8	10°19′	0,63	0,46	738	0,095	0,715	0,025	0,192
18 x 4	4°33′	0,44	0,28	1434	0,095	0,715	0,025	0,192
18 x 8	9°02′	0,60	0,43	1434	0,095	0,715	0,025	0,192
20 x 4	4°03′	0,41	0,26	2534	0,095	0,715	0,025	0,192
20 x 8	8°03′	0,58	0,40	2534	0,095	0,715	0,025	0,192
22 x 5	4°40′	0,45	0,28	3232	0,106	0,761	0,028	0,204
22 x 10	9°16′	0,61	0,43	3232	0,106	0,761	0,028	0,204
24 x 5	4°14′	0,42	0,27	5175	0,106	0,806	0,028	0,216
24 x 10	8°25′	0,59	0,41	5175	0,106	0,806	0,028	0,216
26 x 5	3°52′	0,40	0,25	7884	0,106	0,806	0,028	0,216
26 x 10	7°42′	0,57	0,39	7884	0,106	0,806	0,028	0,216
28 x 5	3°34′	0,38	0,23	11539	0,106	0,806	0,028	0,216
28 x 10	7°07′	0,55	0,37	11539	0,106	0,806	0,028	0,216
30 x 6	4°03′	0,41	0,26	13650	0,118	0,903	0,032	0,242
30 x 12	8°03′	0,58	0,40	13650	0,118	0,903	0,032	0,242
32 x 6	3°46′	0,39	0,24	17580	0,118	0,903	0,032	0,242
32 x 12	7°30′	0,56	0,38	17580	0,118	0,903	0,032	0,242
36 x 6	3°19′	0,36	0,22	34540	0,118	0,903	0,032	0,242
36 x 12	6°36′	0,53	0,36	34540	0,118	0,903	0,032	0,242
40 x 7	3°30′	0,38	0,23	51030	0,125	0,955	0,033	0,256
40 x 14	6°58′	0,54	0,37	51030	0,125	0,955	0,033	0,256
44 x 7	3°09′	0,35	0,21	81820	0,125	0,955	0,033	0,256
50 x 8	3°10′	0,35	0,21	136900	0,132	1,062	0,035	0,285
55 x 9	3°15′	0,36	0,22	189550	0,140	1,125	0,038	0,301
60 x 9	2°57′	0,34	0,20	302600	0,140	1,125	0,038	0,301
70 x 10	2°48′	0,33	0,19	587500	0,150	1,135	0,040	0,304
80 x 10	2°26′	0,30	0,17	1069000	0,150	1,135	0,040	0,304
90 x 12	2°36′	0,31	0,18	1658000	0,170	1,295	0,046	0,347
95 x 16	3°21′	0,37	0,22	1647000	0,190	1,500	0,051	0,402
100 x 16	3°10′	0,35	0,21	2124000	0,190	1,500	0,051	0,402
120 x 16	2°36′	0,31	0,16	5130000	0,190	1,500	0,051	0,402

* Please refer to page 248 for more information on the efficiency.

Diameter x lead	Lead accuracy µ/300mm	Straightness mm/µ
10 x 2 to 20 x 4	0,1	0,5/300
22 x 5 to 60 x 9	0,1	0,2/300
70 x 10 to 80 x 10	0,1	0,4/300
90 x 12	0,2	0,5/300
95 x 16 to 120 x 16	0,2	1,0/300

ov-lead-screw-trapezoidal-screw-specifications-lnh-Updated-16-03-2023

$h_1 = 0{,}5\ P$

$h_3 = h_4 = h_1 + x = 0{,}5\ P + x$

$z = 0{,}25\ P = h_1/2$

$d_3 = d - 2\ h_3$

$d_2 = D_2 = d - 2\ z = d - 0{,}5\ P$

$D_2 = d + 2\ x$

P = thread pitch

d_1 = nominal thread diameter

d_3 = core thread diameter

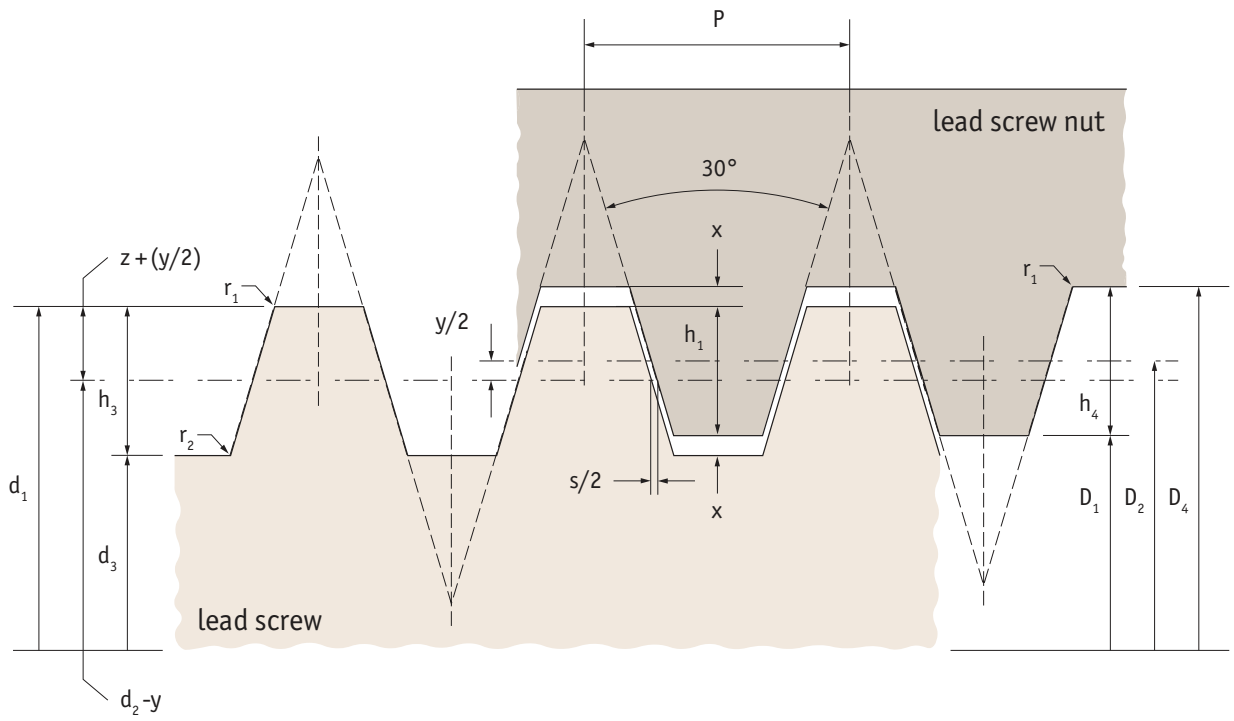
x = bottom play

y = top deviation for screw

s = 0,26795 y

r_1 max. = 0,5 x

r_2 max. = x



Reversibility/backdrive

No backdrive where lead angle <2° 30′.

At angles up to 5-6° there is a low potential of system backdrive.

Backdrive is important in vertical applications.

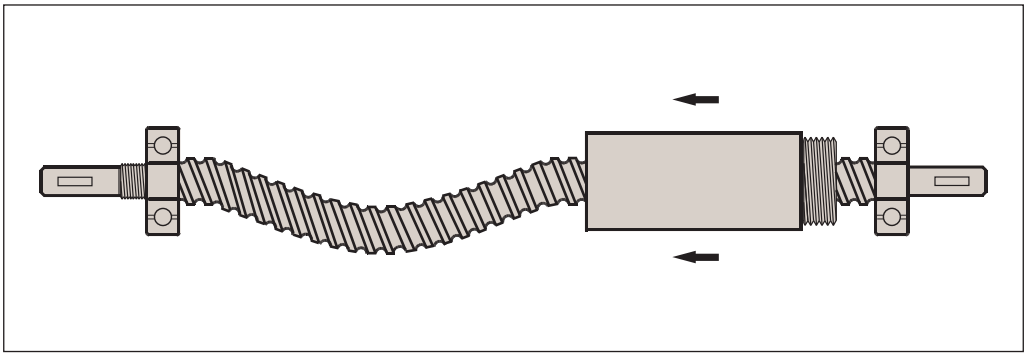
Lead Screws

Compression and tension loading

Maximum compression load

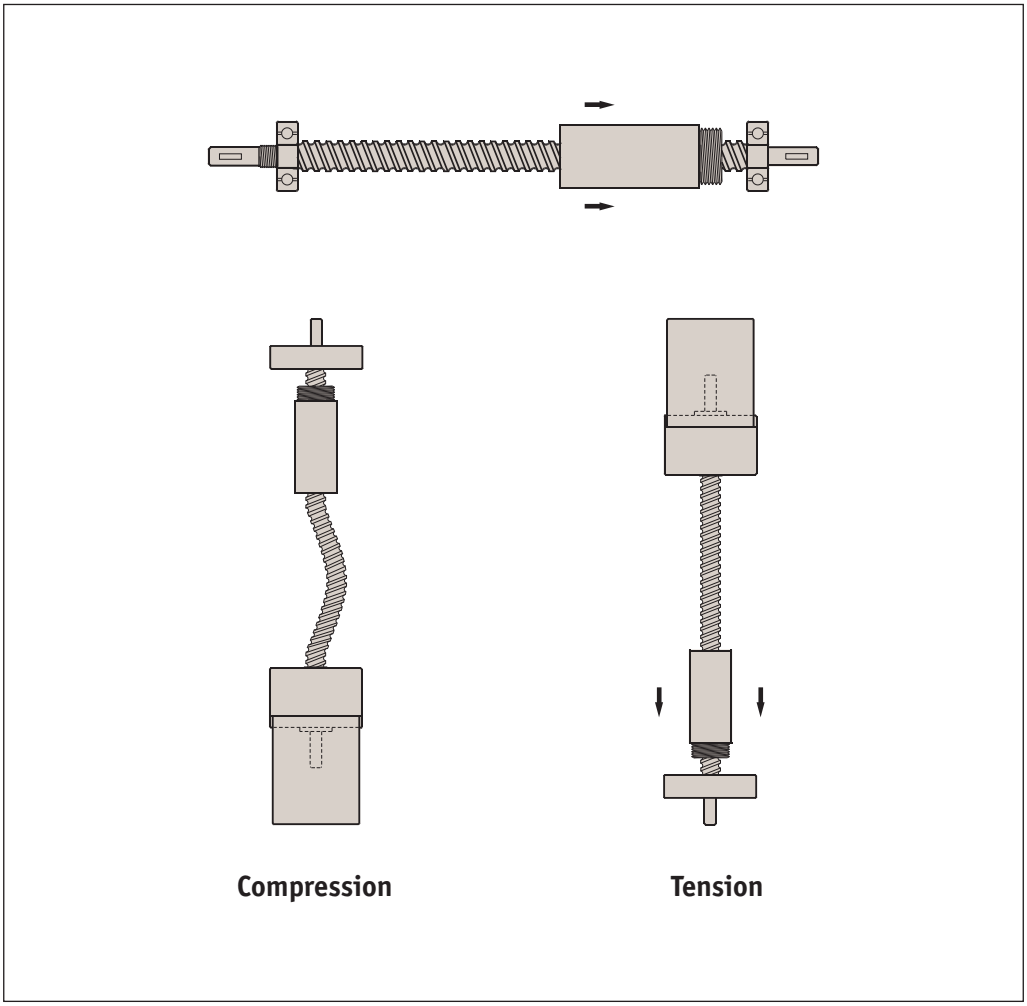
The load acting upon a nut that would tend to compress or buckle the screw. Also referred to as column loading, this rating is effected by the load, support type, screw diameter, and length between the load point and support housing.

Normally, a screw also experiences a tension load (a force which attempts to stretch the screw). For vertical applications, it is better to configure the screw assembly so that the screw is in tension, and not in compression. To find maximum compression load a screw can take, please refer to critical axial load technical pages.



Tension loading

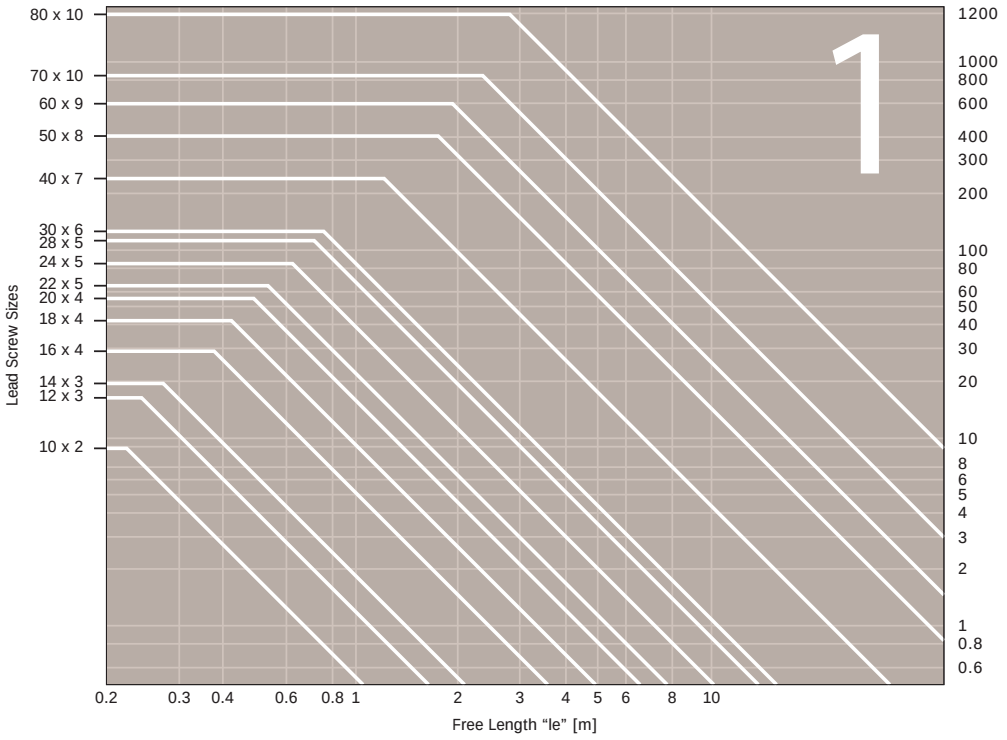
The load acting upon a nut that would tend to stretch the screw. The maximum tension load of a screw assembly is the load rating of the nut. For vertical applications, it is better to configure the ball screw assembly so that the screw is in tension and not in compression.



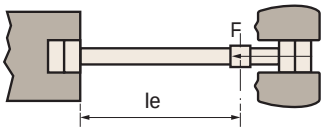
ov-lead-screw-compression-and-tension-loading-lnh-Updated-16-03-2023

When choosing a lead screw you need to consider the critical axial load to avoid the screw bending under excessive loads. This is the buckling load. This is important where the end screws are being used in compression. The critical axial load depends on the core diameter of the lead screw (d_3), how the lead screw is supported at each end, and the free length of screw (le). In the graphs below, please allow a minimum safety factor of > 2.

Critical axial load - Double bearings



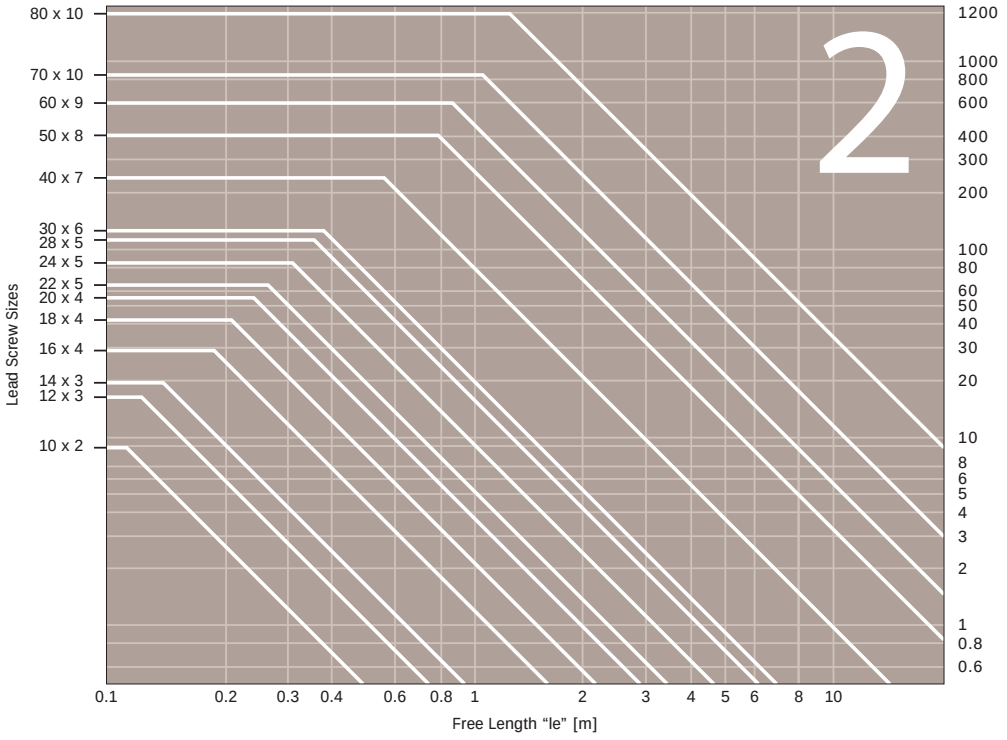
Supported each end by double bearings



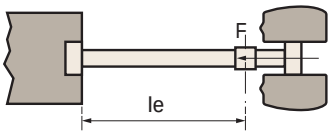
Example

Find the allowable axial load of a 30x6 screw 3000mm long with constraint conditions as in drawing 1. From the accompanying graph take Fmax=11kN with safety factor of 2 and assume Fallw =11/2=5,5kN.

Critical axial load - Single bearings



Supported each end by single bearings

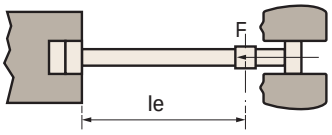


ov-lead-screw-critical-axial-load-peak-load-a-rnh-Updated-17-03-2023

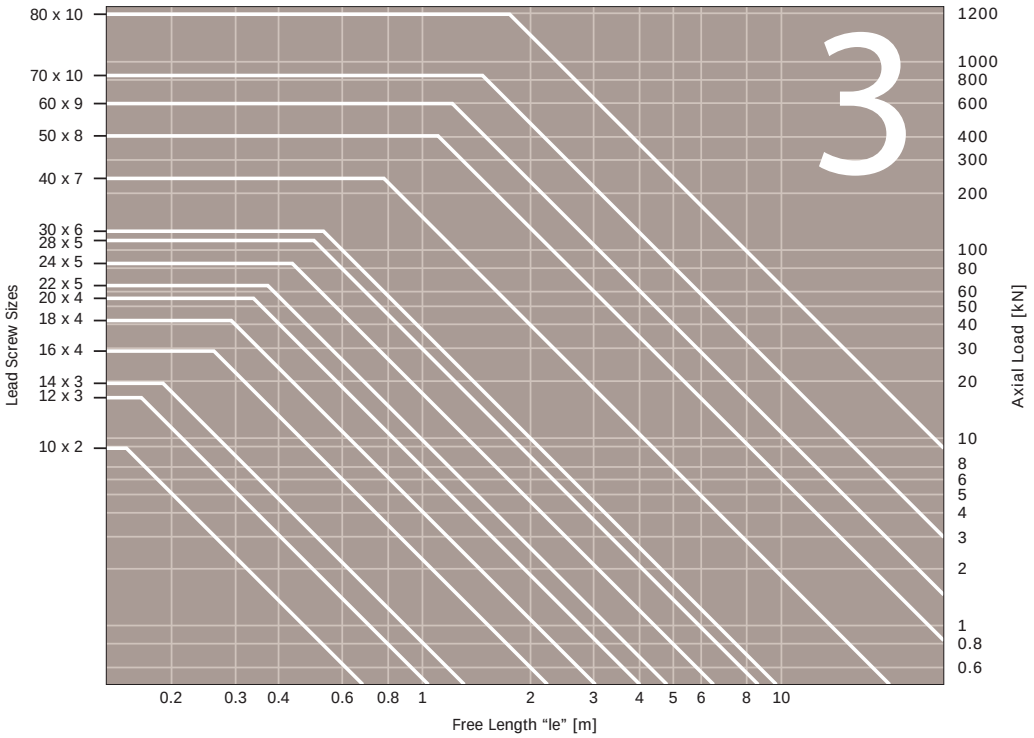
Lead Screws

Critical axial load - Peak load

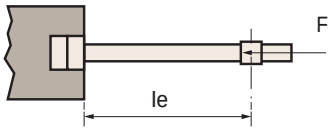
Supported each end.
Double bearings one end,
single bearing the other end



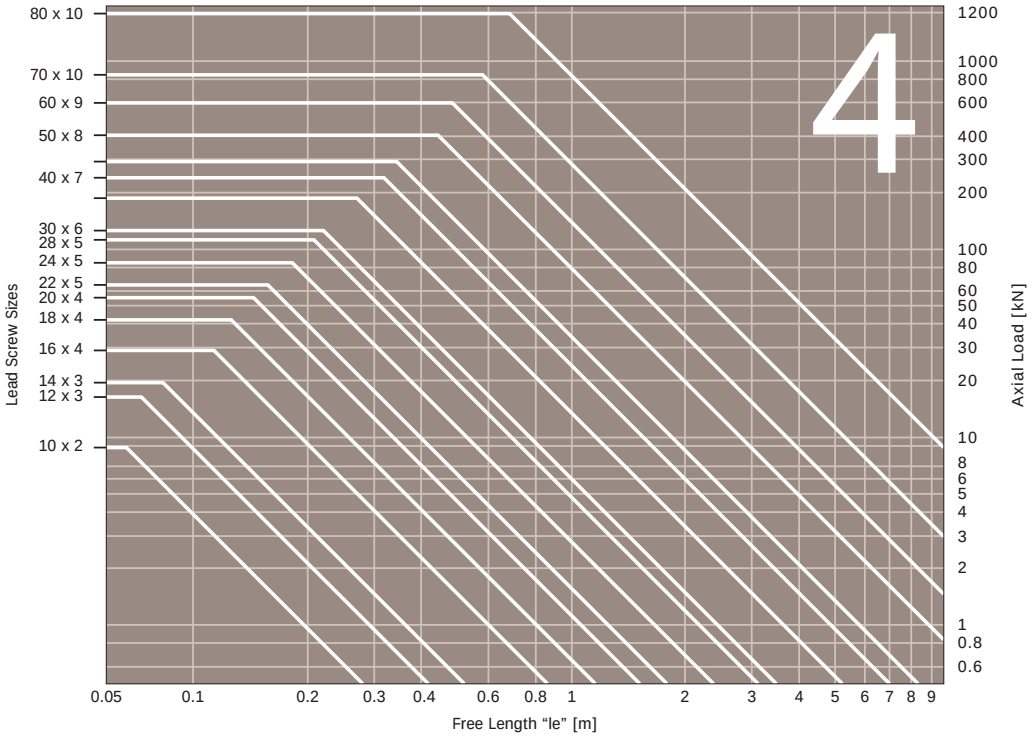
Critical axial load- Double/single bearings



Supported one end only by
double bearing



Critical axial load- Double bearing one end



ov-lead-screw-critical-axial-load-peak-load-b-lnh-Updated-17-03-2023



Torque

The torque necessary to move a screw and nut system is calculated from the following equation.

$$C = \frac{F \cdot P}{2\pi \cdot n \cdot 1000}$$

C = torque (input) (Nm)
F = axial force on nut (N)
P = true lead of screw (mm)
η = efficiency (assume efficiency with first breakaway friction factor f = 0.2

Example

Find the torque required to move a 30x6 lead screw and nut

Resistant axial force = 10.000 N
Screw lead = 6 mm
η = 0.26

$$\text{Torque} = \frac{F \cdot P}{2\pi \cdot n \cdot 1000} = \frac{10.000\ (N) \cdot 6\ (mm)}{2 \cdot \pi \cdot 0.26 \cdot 1000} = 36.7\ Nm$$

The torque value however does not consider the efficiency of mechanical parts moving together with the screw system, such as bearings, belts or other transmission components.
In a planning project phase, an increase between the 20% and 30% of the theoretical value is recommended. If electric motors with low static torque are used assume another increase of 50% to find nominal torque.

$$C = 36.7\ (Nm) \cdot 1.3 \cdot 1.5 = 71.6\ Nm$$

Power

The power necessary to move a trapezoidal screw and nut system is calculated from the following equation.

$$P = \frac{C \cdot n}{9550}$$

9550 is a constant P = power (kW) C = torque (Nm) n = rpm

Example of calculation

Calculate the power necessary to move the screw 30 x 6 in the above example at 600 rpm

$$C = \frac{C \cdot n}{9550} = \frac{71.6\ (Nm) \cdot 600\ (rpm)}{9550} = 4.5kW$$

This is the minimum power necessary to move the system

Lead Screws

Bronze nut sizing



General considerations for bronze nuts

In all three situations described, the wear of the nut is affected by the lubrication used during operation and as such, giving accurate figures for the life expectancy of the nut is impossible.

Extra care must be taken when the temperature of the application is above +140°/150°C, as such temperatures can damage lubricants and as a consequence, cause the nut to wear quicker. In these situations we recommend the use of lubricants designed for high temperatures.

Safety factor for the forces of inertia f_i

During the selection process we must also check that the inertia forces present during acceleration and deceleration are relatively low so that the value of p●Vst remains within the controlled limits. Whereas this calculation is difficult, in the presence of a non-uniform movement or under great variations, safety factors reported in the chart below must be considered.

Safety factors with respect to the forces of inertia

Load type	f_i
Loads with constant acc. / dec. controlled	from 1,00 to 0,50
Loads with constant start and stop at tear	from 0,50 to 0,33
Loads and speed greatly variable	from 0,33 to 0,25
Loads in presence of shocks and vibrations	from 0,25 to 0,17

The coefficient f_i is used to correct the value of (p●Vst) max derived from the 'Sliding Condition for Bronze' graph, considering the maximum allowable sliding speed in relation to the contact surface in working conditions. Working area limits (A, B or C) must be taken into consideration.

To calculate the admissible p●Vst of the nut in working conditions the following must be used

$$p\bullet Vst\ am = (p\bullet Vst)_{max} \bullet f_i$$

Example of calculation with bronze nut

Selecting a bronze nut which must operate continuously and remain within the maximum limit value of p●Vst = 21 (Area A), with good lubrication. Constant axial load without relevant variations, with forces of inertia limited by controlled acceleration/deceleration.

Axial Load F = 1200N (1Kg *f*=9,81N)
Constant motion speed Vtr = 2,8m/min

Evaluation of p●Vst using nut L1331.R30-06
(bronze flanged nut with thread Tr 30x6 1 start, right)

$$P = \frac{F}{At} = \frac{1200\ (N)}{1370\ (mm^2)} = 0{,}87\ N/mm^2$$

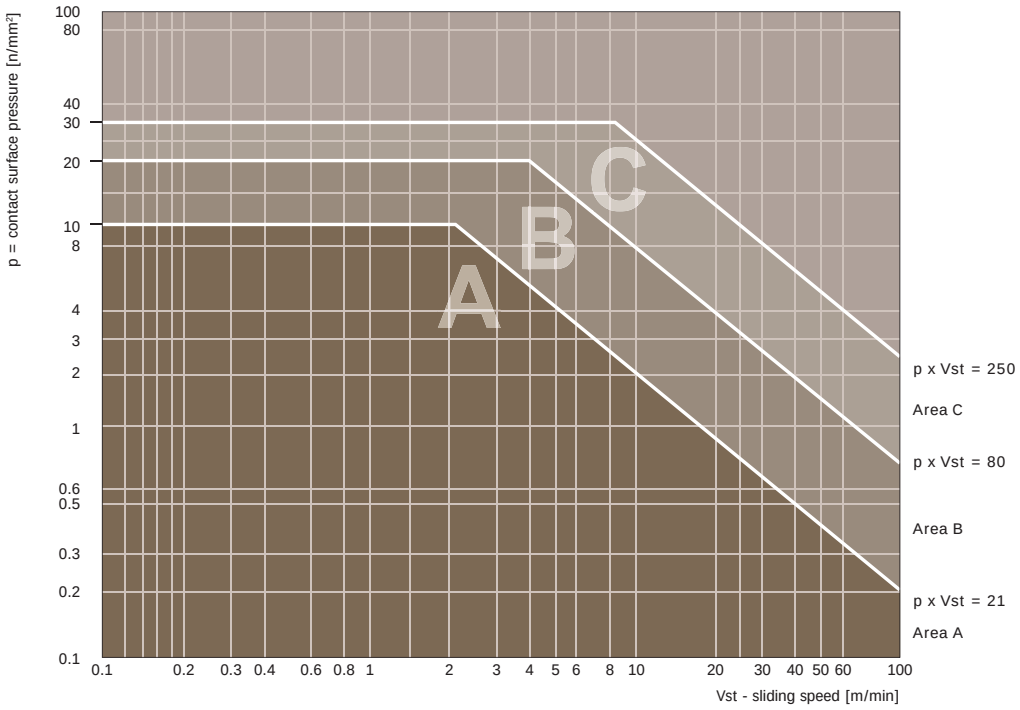
F = Axial Force (N)
At = Contact Surface Area (mm^2).
For standard nuts each At value is listed in the product tables.

ov-lead-screw-bronze-nut-sizing-lnh-Updated-17-03-2023

Bronze nut sizing

When using a bronze nut, calculate the sliding speed and use the graph below to see if it is suitable. The graph has three areas each characterised by certain working conditions. These figures are evaluations obtained from the results of experiments we have carried out. Good lubrication is always required, if little or no lubrication is used the working conditions may vary greatly.

Sliding condition for bronze.



Area A Area A is enclosed by the limit p•Vst = 21 (N/mm²•m/min)

These are the best operating conditions.

Continuous operation is possible as the amount of friction produced within these limits p•Vst is pretty low. Therefore the life of the nut is very good.

Area B Area B is enclosed by the limit p•Vst = 80 (N/mm² • m/min)

These operating conditions are more severe. Constant lubrication is required to help prevent wear of the nut and improve its lifetime.

Continuous operation is possible for limited periods only as the amount of friction produces overheating of the nut. Although lubrication helps reduce heat, the life of the nut is limited.

Area C Area C is enclosed by the limit p • Vst = 250 (N/mm² • m/min)

In this area, the operating conditions are very severe.

Continuous operation is not possible.
Even with good lubrication the amount of friction and heat produced causes rapid wear of the nut.

Lead Screws

Example of calculation with bronze nut



The sliding speed is calculated using formulae:

$$Vst = \frac{Vtr}{\sin \alpha} = \frac{2.8\ m/min}{\sin 4°03'}$$

$$Vst \cong 39{,}84\ m/min$$

Vtr = motion speed (m/mm) α = thread helix angle

The value p●Vst is:

$$p \bullet Vst = 0{,}87 N/mm^2 \bullet 39{,}84\ m/min \cong 34{,}66\ N/mm^2 \bullet m/min$$

In order to remain within the continuous working conditions, corrected by the safety factor f_i from the table, in this case =0,77, the maximum allowable value of p●Vst is:

$$p \bullet Vst\ am = (p \bullet Vst)_{max} \bullet f_i = 21 \bullet 0{,}77\ N/mm^2 \bullet m/min$$

$$p \bullet Vst\ am = 16{,}15\ N/mm^2 \bullet m/min$$

As the maximum allowable value of p●Vst is lower than the value obtained with a nut L1331. R30-06, we shall try using a nut L1335.R36-06 (square bronze nut with 36x6 thread)

The contact surface pressure is:

$$p = \frac{F}{At} = \frac{1200\ (N)}{3630\ (mm^2)} = 0{,}33\ N/mm^2$$

F = Axial Force (N)
At = Contact Surface Area (mm^2)

The sliding speed remains the same as the previous calculation

$$Vst = 39{,}84\ N/mm^2$$

The value of p●Vst is now:

$$p \bullet Vst = 0{,}33\ N/mm^2 \bullet 39{,}84\ m/min \cong 13{,}15\ N/mm^2 \bullet m/min$$

The value obtained is now lower than the allowable one, therefore the L1335.R36-06 will be suitable.

ov-lead-screw-example-of-calculation-with-bronze-nut-lnh-Updated-17-03-2023

In applications where low noise is important or where lubrication is not allowed (grease or oil), self lubricating plastic nuts are recommended. The use of plastics is very constrained by the actual working conditions, we suggest discussing the application with our technical department and not relying on a choice based only on intuition. This is because plastic materials have good features such as low friction and self-lubrication, but at the same time limitations caused by operating temperatures, hygroscopic problems, or certain mechanical features that may not be suitable for the intended use. An advanced study of the application in this case is therefore required in order to obtain optimum performance.

Regarding the plastic nuts, the study of the product p●Vst allows you to draw a chart which shows a curve that limits the values of p●Vst within which we have a gentle flow of the surfaces in contact with limited wearing of the nut and constant in time. Operating outside the limit drawn on the chart is not possible as in this case as the nut would wear quickly.

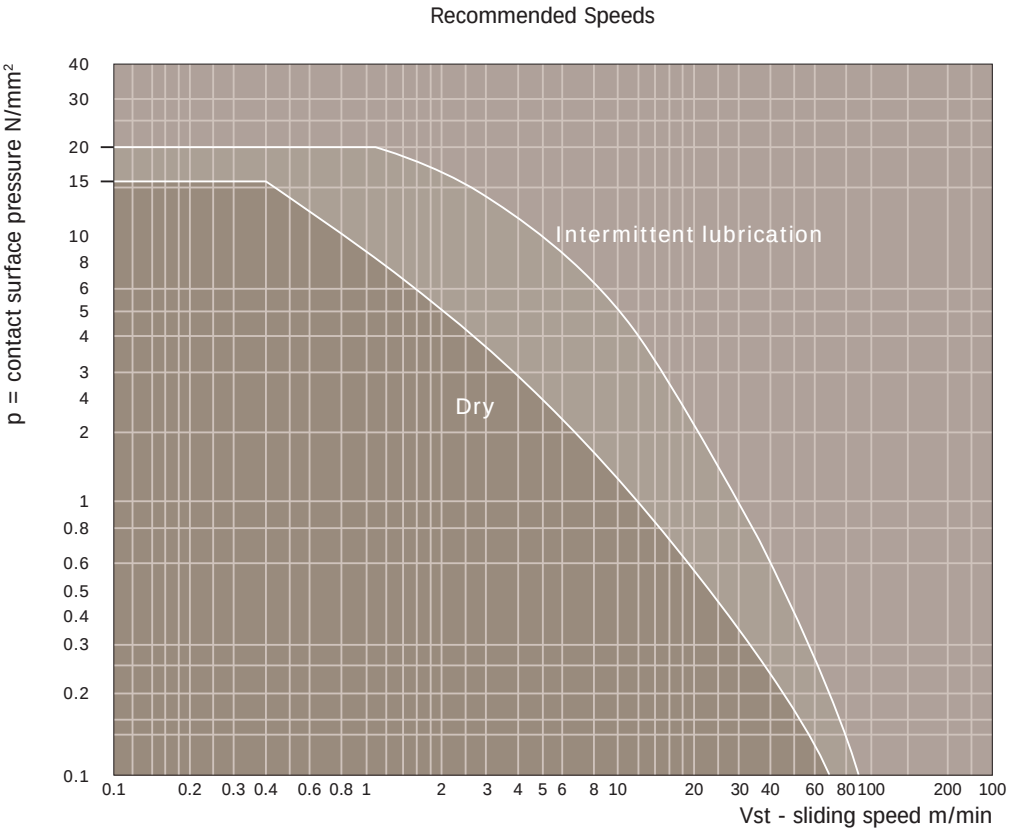
Cylindrical Nut L1343

The graph below shows the limit of p●Vst of the cylindrical nut L1343. As this plastic is resistant to wear but not self-lubricating, the following limits have been shown when the nut is dry, and when it is lubricated intermittently.

Sliding condition for nuts L1343

Test conditions:

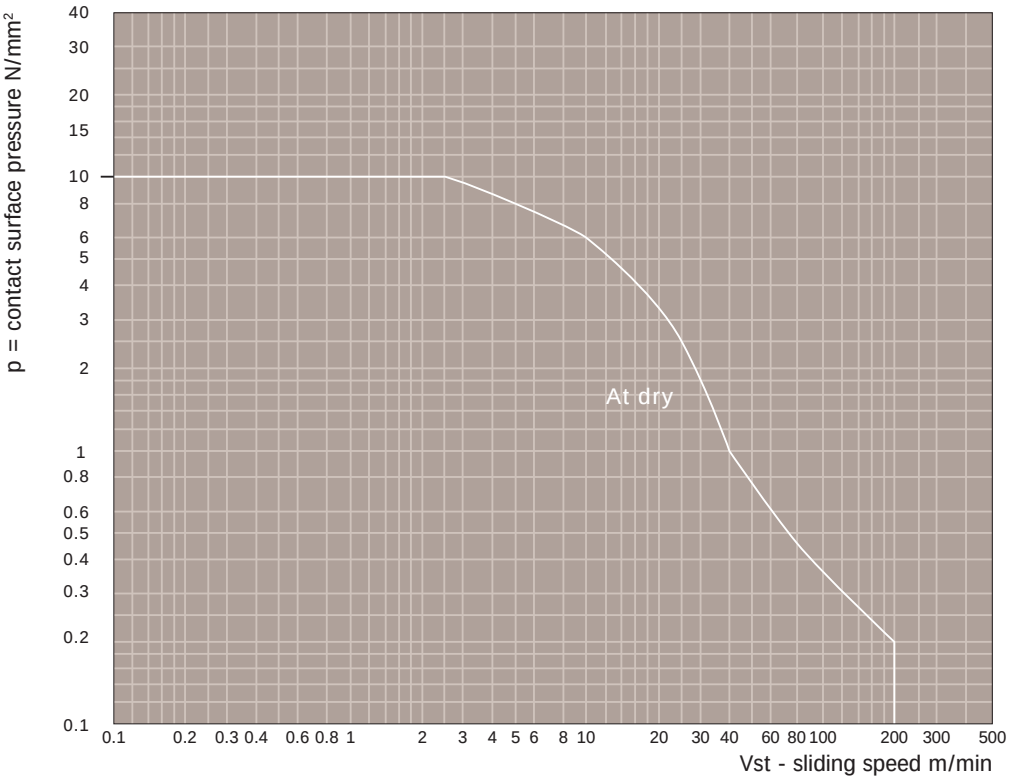
- Continuous operation.
- Temperature 23°C.
- Relative humidity approx 50%.



Lead Screws from Automotion Components

The graph below shows the limit of p●Vst of nut L1342. The plastic used for the L1342 features a strong resistance to wear and complete self-lubricating properties.

Prior to using the L1342, please read the previous pages.



Sliding conditions for self-lubricating plastic nuts L1342

Test conditions:

- Continuous operation.
- Temperature 23°C.
- Relative humidity approx 50% with no lubrication.

Lead Screws from Automotion Components

Compact rail

Advantages

Easy to install. Allows for some misalignment at installation.
Compact system, small footprint compared to other rail systems.
Preload adjustable by hand.

Disadvantages

Although it can take very large loads it cannot take anywhere near as much load as the linear guideways rail system.



X Rail

Advantages

Cheaper alternative to the compact rail. Use of T and U rails allows for misalignment at installation.
Preload adjustable by hand.

Available in AISI 316L stainless steel suitable for use in applications requiring a high level of corrosion resistance, including sea water.

Disadvantages

Cannot take as much load as other systems. Not suitable for moment loads.



Linear guideways

Advantages

Can take extremely high loads including moment loads. Very smooth in operation.

Disadvantages

Must be aligned very accurately which costs time and money preparing the mounting surface properly.



Technical Information

Lead screws supporting rail systems

Shafts + bearings

Advantages

Available in a range of materials and sizes. A length of shaft bar is typically cheaper than the cost of an equivalent size precision linear rail.

Disadvantages

A larger diameter shaft would be required when there are long lengths and high loads involved compared with the size of an equivalent shaft support rail you would need. This is because they would only be supported at the ends and the shaft ends could bend in the middle if the diameter was too small.



Shaft support rail

Advantages

Shaft support rail systems have a shaft support along the full length so are less likely to flex.

Disadvantages

Similar to linear guideways, must be aligned very accurately otherwise any mis-alignment may cause the system to ‘snatch’.



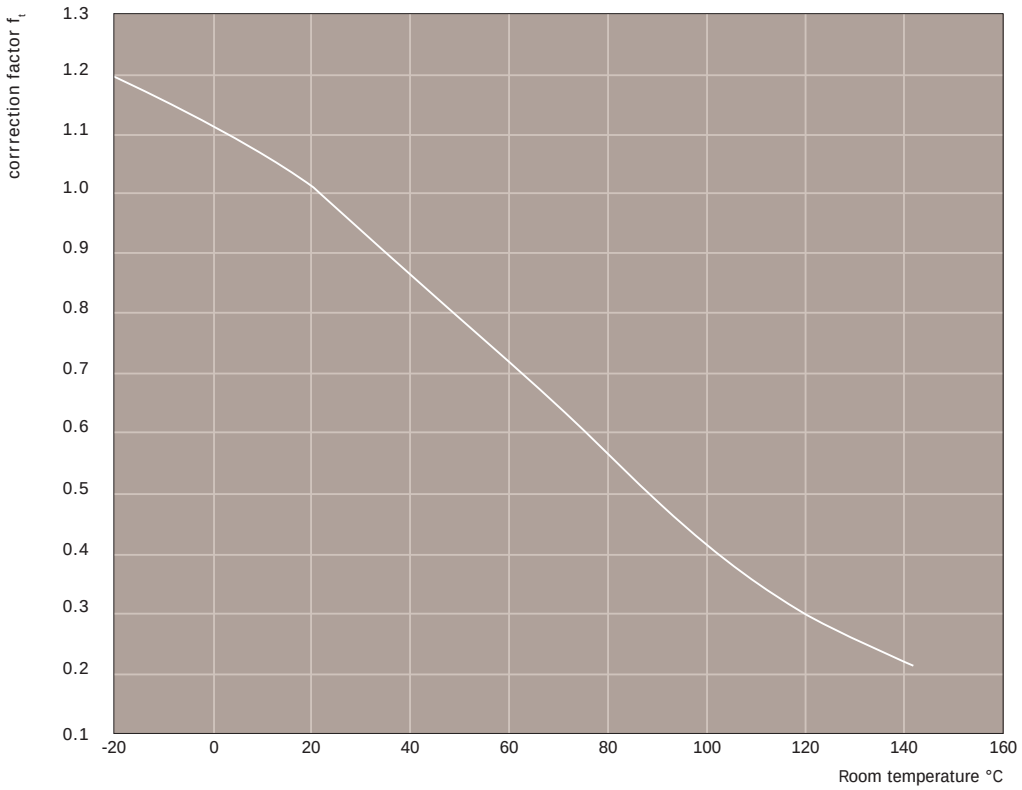
Safety factor or the forces of inertia f_i

During the selection process check that the inertia forces present during acceleration and deceleration are relatively low so that the value of p●Vst remains within the required controlled limits. Whereas this calculation is difficult, in the presence of a non-uniform movement or under great variations a safety factor in the chart below must be applied.

Load type	f_i
Loads with constant ramps of acc. / dec. controlled	from 1,00 to 0,50
Loads with constant start and stops	from 0,50 to 0,33
Loads and speed greatly variable	from 0,33 to 0,25
Loads in presence of shocks and vibrations	from 0,25 to 0,17

Correction factor for working environment temperature

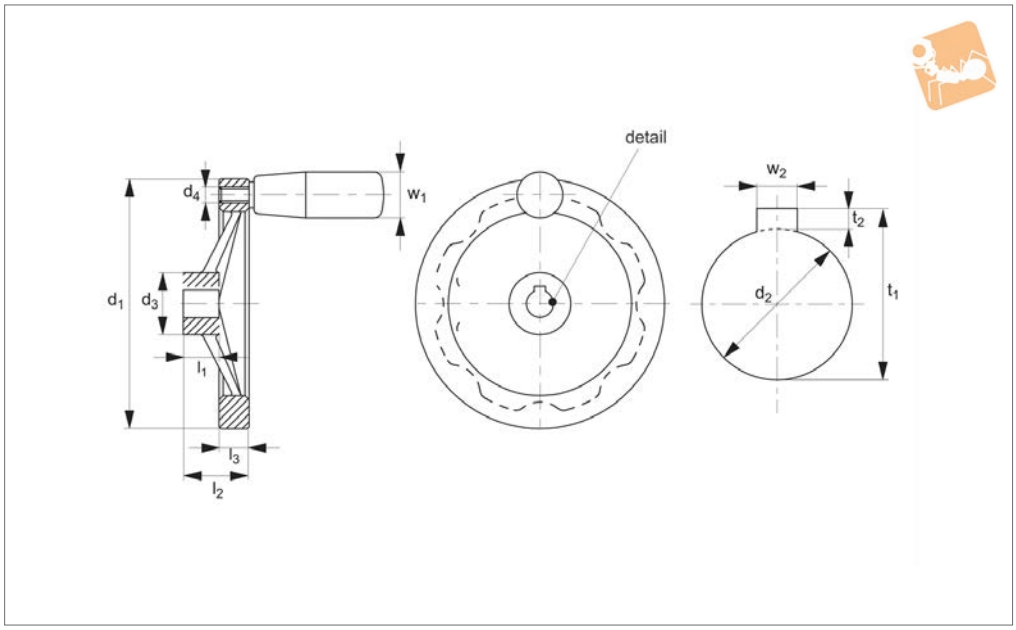
Using plastic nuts L1343 or L1342, the value of p●Vst must be corrected in relation to the working temperature. Plastic becomes softer at higher temperature and can handle less load. At lower temperatures, it becomes harder and takes heavier loads. Correction factor f_t is shown in the graph below.



Disc Type Handwheels



L1458

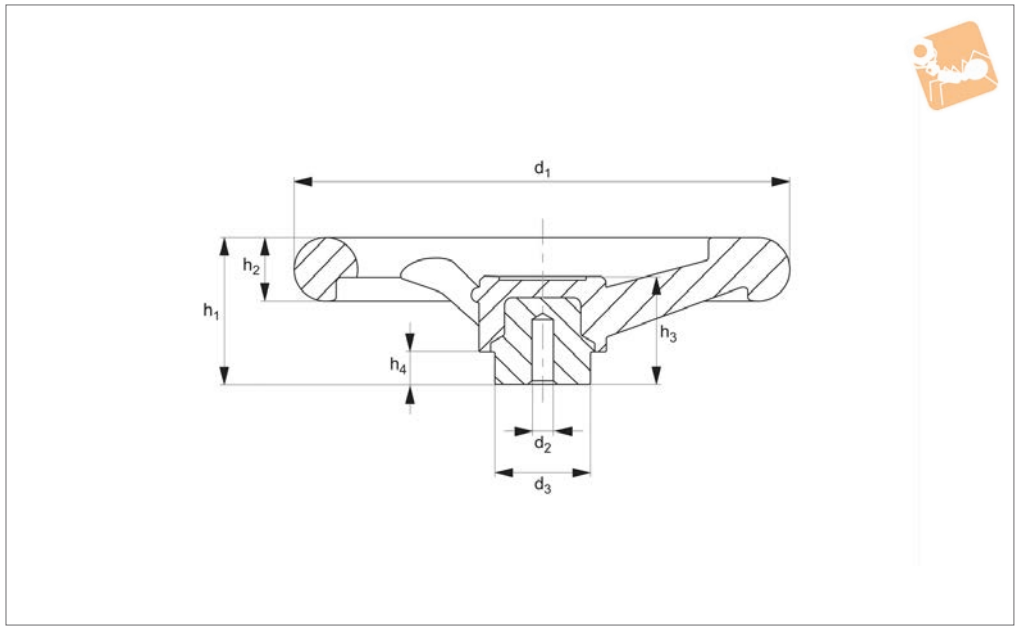


Material
Aluminium mould casting. Handle duroplast DF 31 black.
Hub machined;rim turned and mirror-finished on all sides, non-machined surfaces cleanly blasted.
For corresponding handle details see no. rotating handle.

Technical Notes
There are gripping indentations on the rear sides.
The non-machined, raw surfaces are blasted; together with the mirror-polished rim these handwheels are therefore showing a finish which in most cases does not require additional lacquering.

Temperature range up to110°C. Also available in black plastic coated - on request.
For keyways information (dim. t_1 and b_3) to DIN 6885.

Order No.	Finish	Bore dia.	d_1	d_2 tol. H7 Small	d_2 tol. H7 Large	d_3	d_4	l_1	l_2 ≈	l_3	w_1	Weight g
L1458.080-C	W/o Keyway, With Handle	d2 Large	80	10	12	26	M 6	16	26	13.0	18	160
L1458.100-C	W/o Keyway, With Handle	d2 Large	100	10	12	28	M 6	17	30	14.0	21	255
L1458.125-C	W/o Keyway, With Handle	d2 Large	125	12	14	31	M 8	18	33	15.0	23	390
L1458.140-C	W/o Keyway, With Handle	d2 Large	140	14	16	36	M 8	19	36	16.5	23	510
L1458.160-C	W/o Keyway, With Handle	d2 Large	160	14	16	36	M10	20	39	18.0	26	675
L1458.200-C	W/o Keyway, With Handle	d2 Large	200	18	20	42	M10	24	45	20.5	26	995
L1458.250-C	W/o Keyway, With Handle	d2 Large	250	22	26	48	M10	28	51	23.0	28	1625
L1458.080-D	With Keyway, With Handle	d2 Large	80	10	12	26	M 6	16	26	13.0	18	160
L1458.100-D	With Keyway, With Handle	d2 Large	100	10	12	28	M 6	17	30	14.0	21	255
L1458.125-D	With Keyway, With Handle	d2 Large	125	12	14	31	M 8	18	33	15.0	23	390
L1458.140-D	With Keyway, With Handle	d2 Large	140	14	16	36	M 8	19	36	16.5	23	510
L1458.160-D	With Keyway, With Handle	d2 Large	160	14	16	36	M10	20	39	18.0	26	675
L1458.200-D	With Keyway, With Handle	d2 Large	200	18	20	42	M10	24	45	20.5	26	995
L1458.250-D	With Keyway, With Handle	d2 Large	250	22	26	48	M10	28	51	23.0	28	1625





L1459

Material
Standard: Duroplast, black. Zinc plated steel hub.
Reinforced: Duroplast with glass fibre beads of increased strength, black zinc plated steel hub.

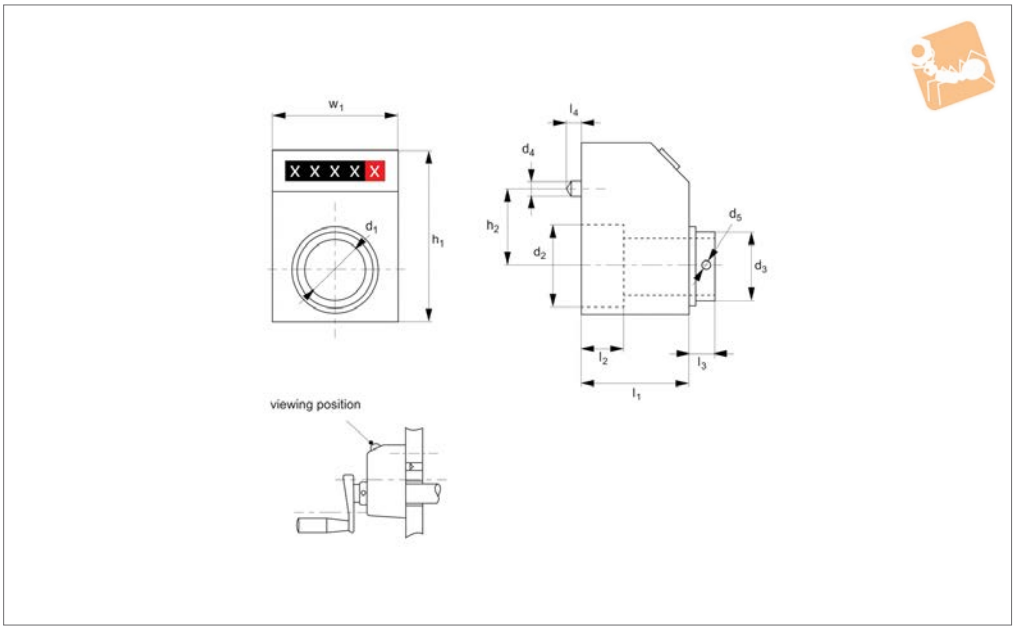
Technical Notes
The pilot hole allows various sizes of holes, keyways etc. to be machined into the boss.

Order No.	d_1	d_3	Weight g
L1459.100-A	100	24	159
L1459.125-A	125	24	240
L1459.150-A	150	32	380
L1459.175-A	175	40	603
L1459.200-A	200	40	736
L1459.250-A	250	48	1200
L1459.300-A	300	58	2032
L1459.100-B	100	24	162
L1459.125-B	125	24	260
L1459.175-B	175	40	611
L1459.200-B	200	40	761

Position Counters
4 digit display



L1470



Material
Black thermoplastic, burnished steel bushing.

Technical Notes
Max. temperature +70°C.

Other ratios and spacers available on request. Different location of position indicator on counter available on request.
Four digit readout, red indicates decimals.

Tips
Clockwise rotation: part numbers end with -C.
Anti-Clockwise rotation: part numbers end with -A.

Order No.	Ratio	Pitch	Counter after one revolution	d_1 tol. H7	d_2	d_3	d_4	d_5	l_1
L1470.005-C	1:05	0.5	0005	14	26	20	6	M4	24
L1470.010-C	1:10	1.0	0010	14	26	20	6	M4	24
L1470.015-C	1:15	1.5	0015	14	26	20	6	M4	24
L1470.020-C	1:20	2.0	0020	14	26	20	6	M4	24
L1470.025-C	1:25	2.5	0025	14	26	20	6	M4	24
L1470.030-C	1:30	3.0	0030	14	26	20	6	M4	24
L1470.040-C	1:40	4.0	0040	14	26	20	6	M4	24
L1470.050-C	1:50	5.0	0050	14	26	20	6	M4	24
L1470.060-C	1:60	6.0	0060	14	26	20	6	M4	24
L1470.100-C	1:100	10.0	0100	14	26	20	6	M4	24
L1470.005-A	1:05	0.5	0005	14	26	20	6	M4	24
L1470.010-A	1:10	1.0	0010	14	26	20	6	M4	24
L1470.015-A	1:15	1.5	0015	14	26	20	6	M4	24
L1470.020-A	1:20	2.0	0020	14	26	20	6	M4	24
L1470.025-A	1:25	2.5	0025	14	26	20	6	M4	24
L1470.030-A	1:30	3.0	0030	14	26	20	6	M4	24
L1470.040-A	1:40	4.0	0040	14	26	20	6	M4	24
L1470.050-A	1:50	5.0	0050	14	26	20	6	M4	24
L1470.060-A	1:60	6.0	0060	14	26	20	6	M4	24
L1470.100-A	1:100	10.0	0100	14	26	20	6	M4	24

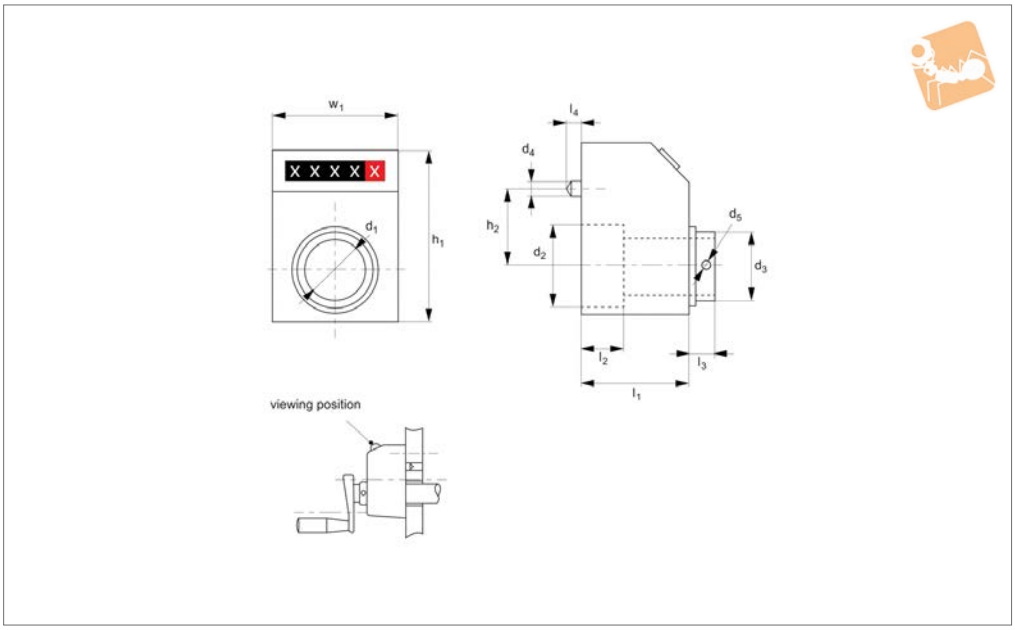
Order No.	l_2	l_3	w_1	h_1	h_2	h_3	Speed rpm max.	Revolution
L1470.005-C	7.5	6.5	33	45	16.5	22	500	Clockwise
L1470.010-C	7.5	6.5	33	45	16.5	22	300	Clockwise
L1470.015-C	7.5	6.5	33	45	16.5	22	300	Clockwise
L1470.020-C	7.5	6.5	33	45	16.5	22	300	Clockwise
L1470.025-C	7.5	6.5	33	45	16.5	22	300	Clockwise
L1470.030-C	7.5	6.5	33	45	16.5	22	300	Clockwise
L1470.040-C	7.5	6.5	33	45	16.5	22	200	Clockwise
L1470.050-C	7.5	6.5	33	45	16.5	22	200	Clockwise

Order No.	l_2	l_3	w_1	h_1	h_2	h_3	Speed rpm max.	Revolution
L1470.060-C	7.5	6.5	33	45	16.5	22	200	Clockwise
L1470.100-C	7.5	6.5	33	45	16.5	22	150	Clockwise
L1470.005-A	7.5	6.5	33	45	16.5	22	500	Anti-clockwise
L1470.010-A	7.5	6.5	33	45	16.5	22	300	Anti-clockwise
L1470.015-A	7.5	6.5	33	45	16.5	22	300	Anti-clockwise
L1470.020-A	7.5	6.5	33	45	16.5	22	300	Anti-clockwise
L1470.025-A	7.5	6.5	33	45	16.5	22	300	Anti-clockwise
L1470.030-A	7.5	6.5	33	45	16.5	22	300	Anti-clockwise
L1470.040-A	7.5	6.5	33	45	16.5	22	200	Anti-clockwise
L1470.050-A	7.5	6.5	33	45	16.5	22	200	Anti-clockwise
L1470.060-A	7.5	6.5	33	45	16.5	22	200	Anti-clockwise
L1470.100-A	7.5	6.5	33	45	16.5	22	150	Anti-clockwise

Position Counters
5 digit display



L1472



Material
Black thermoplastic, burnished steel bushing.

Technical Notes
Max. temperature +70°C.

Other ratios and spacers available on request. Different location of position indicator on counter available on request.
Five digit readout, red indicates decimals.

Tips
Clockwise rotation: part numbers end with -C.
Anti-Clockwise rotation: part numbers end with -A.

Order No.	Ratio	Pitch	Counter after one revolution	d_1 tol. H7	d_2	d_3	d_4	d_5	l_1
L1472.005-C	1:05	0.5	00005	20	40	27	6	M5	42
L1472.015-C	1:15	1.5	00015	20	40	27	6	M5	42
L1472.020-C	1:20	2.0	00020	20	40	27	6	M5	42
L1472.025-C	1:25	2.5	00025	20	40	27	6	M5	42
L1472.030-C	1:30	3.0	00030	20	40	27	6	M5	42
L1472.040-C	1:40	4.0	00040	20	40	27	6	M5	42
L1472.100-C	1:100	10.0	00100	20	40	27	6	M5	42
L1472.120-C	1:120	12.0	00120	20	40	27	6	M5	42
L1472.005-A	1:05	0.5	00005	20	40	27	6	M5	42
L1472.010-A	1:10	1.0	00010	20	40	27	6	M5	42
L1472.015-A	1:15	1.5	00015	20	40	27	6	M5	42
L1472.020-A	1:20	2.0	00020	20	40	27	6	M5	42
L1472.025-A	1:25	2.5	00025	20	40	27	6	M5	42
L1472.030-A	1:30	3.0	00030	20	40	27	6	M5	42
L1472.040-A	1:40	4.0	00040	20	40	27	6	M5	42
L1472.050-A	1:50	5.0	00050	20	40	27	6	M5	42
L1472.060-A	1:60	6.0	00060	20	40	27	6	M5	42
L1472.100-A	1:100	10.0	00100	20	40	27	6	M5	42
L1472.120-A	1:120	12.0	00120	20	40	27	6	M5	42

Order No.	l_2	l_3	l_4	w_1	h_1	h_2	Speed rpm max.	Revolution
L1472.005-C	16.5	10	6	49	67	30	500	Clockwise
L1472.015-C	16.5	10	6	49	67	30	300	Clockwise
L1472.020-C	16.5	10	6	49	67	30	300	Clockwise
L1472.025-C	16.5	10	6	49	67	30	300	Clockwise
L1472.030-C	16.5	10	6	49	67	30	300	Clockwise
L1472.040-C	16.5	10	6	49	67	30	200	Clockwise
L1472.100-C	16.5	10	6	49	67	30	150	Clockwise
L1472.120-C	16.5	10	6	49	67	30	150	Clockwise
L1472.005-A	16.5	10	6	49	67	30	500	Anti-clockwise

Order No.	l_2	l_3	l_4	w_1	h_1	h_2	Speed rpm max.	Revolution
L1472.010-A	16.5	10	6	49	67	30	300	Anti-clockwise
L1472.015-A	16.5	10	6	49	67	30	300	Anti-clockwise
L1472.020-A	16.5	10	6	49	67	30	300	Anti-clock wise
L1472.025-A	16.5	10	6	49	67	30	300	Anti-clockwise
L1472.030-A	16.5	10	6	49	67	30	300	Anti-clockwise
L1472.040-A	16.5	10	6	49	67	30	200	Anti-clockwise
L1472.050-A	16.5	10	6	49	67	30	200	Anti-clockwise
L1472.060-A	16.5	10	6	49	67	30	200	Anti-clockwise
L1472.100-A	16.5	10	6	49	67	30	150	Anti-clockwise
L1472.120-A	16.5	10	6	49	67	30	150	Anti-clockwise

Technical Information

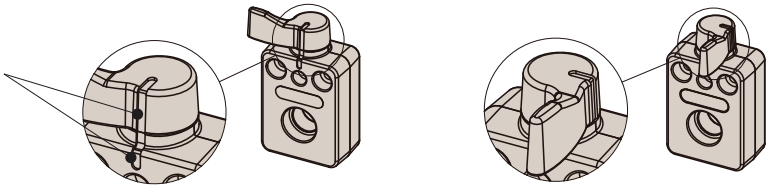
One-touch spindle locks



Features

- One-touch spindle locks enable quick and secure locking of shafts with one click of the knob.
- When the one-touch spindle lock is operated, the knob clicks and the shaft is locked with a steady force. This provides reliable locking of shafts.
- The knob position and the indication line clearly indicate lock/unlock position.

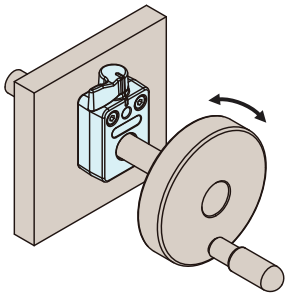
The indication line aligns when one-touch spindle lock is locked



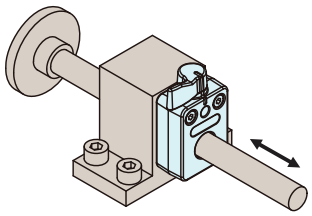
(locked) (unlocked)

How to use

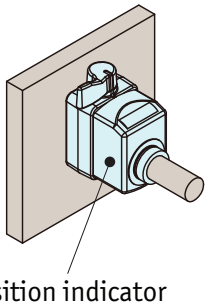
For locking of spindles



For locking of sliding shafts



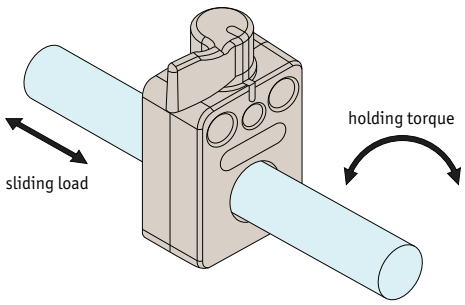
Can be used with position indicators



Technical Information

One-touch spindle locks can fix both revolving and sliding of shafts.

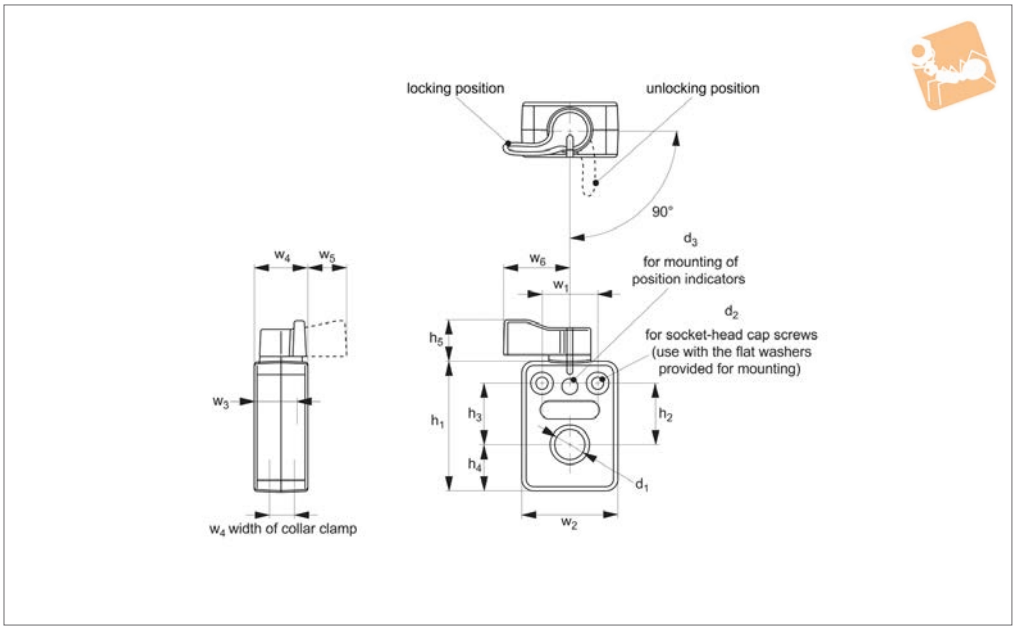
Part Numbers	Max. holding torque (N•m)	Max. sliding load (N)
L1480.008-040	3	400
L1480.010-040		
L1480.012-040	4	
L1480.014-040		
L1480.012-050	5	500
L1480.015-050		
L1480.016-050	6	
L1480.020-050		



Note: The above information is for cold finished hardened steel shafts with a h7 tolerance.

Sliding Clamps - for Solid Round Bar

quarter turn lock- l-handle grip - polyamide





L1480

LEAD SCREWS & NUTS

Material

Housing: Polyamide (glass-fibre reinforced)
Boss: Polyamide (glass-fibre reinforced)
Base: Polyamide (glass-fibre reinforced)
Insert: Stainless steel

Technical Notes

It has teeth inside and it engages at every 7.2° (=360°/ 50).

pulls the spindle by the inner spring with 70N force to prevent chattering of the spindle. Note: The spindle should be fully inserted into the knob for 25mm.

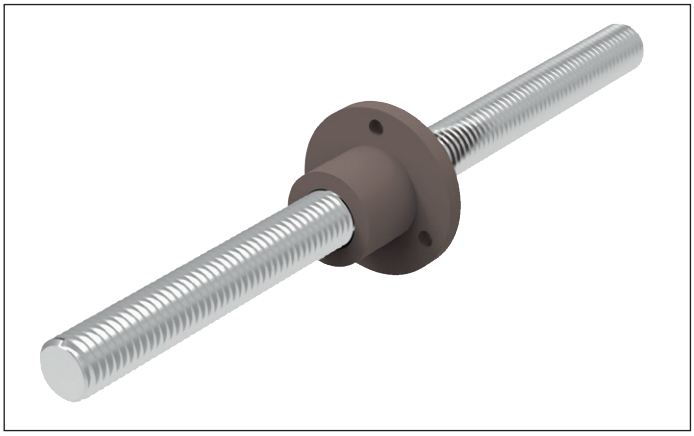
Order No.	Handle	d_1 for shaft dia. tol. h7	d_2	d_3	h_1	h_2	h_3	h_4	Weight g
L1480.008-040	Orange	8	M 4	6	48.5	23.5	22	17	50
L1480.010-040	Orange	10	M 4	6	48.5	23.5	22	17	50
L1480.012-040	Orange	12	M 4	6	48.5	23.5	22	17	50
L1480.014-040	Orange	14	M 4	6	48.5	23.5	22	17	50
L1480.012-050	Orange	12	M 5	6	69.0	17.0	30	26	100
L1480.015-050	Orange	15	M 5	6	69.0	17.0	30	26	100
L1480.016-050	Orange	16	M 5	6	69.0	17.0	30	26	100
L1480.020-050	Orange	20	M 5	6	69.0	17.0	30	26	100

Order No.	h_5	w_1	w_2	w_3	w_4	w_5	w_6	Allowable holding torque Nm max.	Allowable sliding torque Nm max.
L1480.008-040	15.5	21	36	14.0	20	15	25	3	400
L1480.010-040	15.5	21	36	14.0	20	15	25	3	400
L1480.012-040	15.5	21	36	14.0	20	15	25	4	400
L1480.014-040	15.5	21	36	14.0	20	15	25	4	400
L1480.012-050	15.5	34	51	12.5	20	15	25	5	500
L1480.015-050	15.5	34	51	12.5	20	15	25	5	500
L1480.016-050	15.5	34	51	12.5	20	15	25	6	500
L1480.020-050	15.5	34	51	12.5	20	15	25	6	500

Precision Miniature Lead Screws

Overview

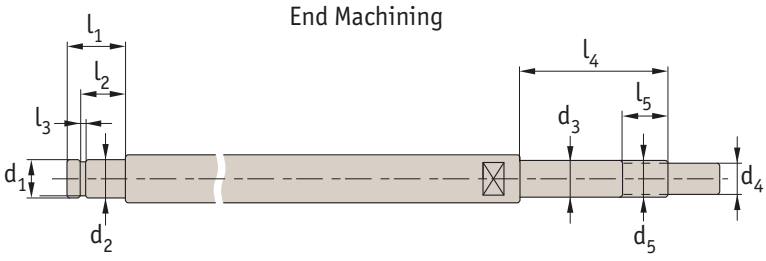
- Select the relevant size lead screw diameter and load required.



- These are precision, high helix lead screws from stainless steel (304 grade)
- We can cut length to suit and/or machine the ends to your requirements
- They have an accumulative lead error of ±0.20/300mm (C10 grade)
- The actual clearance depends on the nut selected L1350 standard flanged nut or L1351 anti-backlash nut
- Nuts are very smooth running with little friction. They are made from plastic resin (PPS).
- The anti-backlash nuts are longer than the standard length nuts as they incorporate a spring pushing the two halves of the unit apart.

Lead screw Ø	Lead (distance travelled per revolution)														
	1	2	4	5	6	8	9	10	12	15	18	20	24	30	36
4	●	●													
6	●	●					●				●				
8	●	●							●				●		
10		●			●			●		●				●	
12		●	●			●			●		●				●
15				●				●				●			
20								●				●			

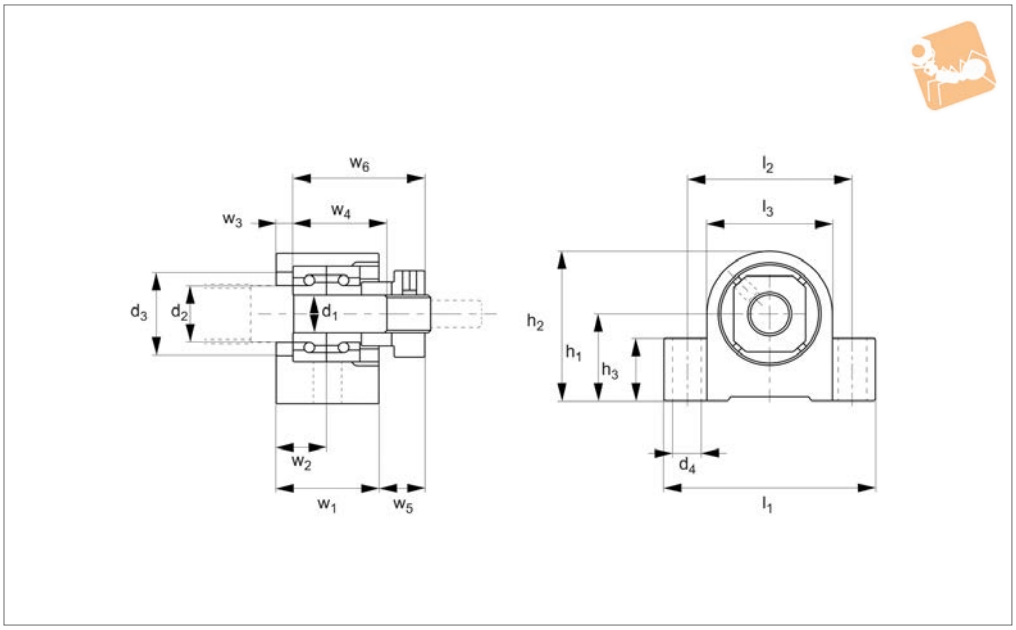
End machining to suit miniature bearing support units

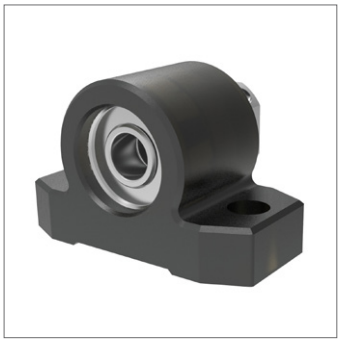




Screw Ø	Type	Floating	Fixed	d_1		d_2		l_1	l_2		l_3		d_3		d_4	l_4	l_5	d_5 x p
4	Pillow	L1355.030	L1353.030	2	-0,010 -0,028	1,59	0 -0,06	5	4	+0,05 0	0,5	+0,05 0	3	-0,010 -0,028	2	17,5	6,5	M3x0,5
4	Flanged	L1356.030	L1354.030															
6	Pillow	L1355.040	L1353.040	3		2,73		5,5	4,5		0,5		4		3	18,5	7	M4x0,5
6	Flanged	L1356.040	L1354.040															
6	Pillow	L1355.050	L1353.050	4		3,73		6,5	5,5		0,5		5		4	19,5	7	M5x0,5
6	Flanged	L1356.050	L1354.050															
8	Pillow	L1355.060	L1353.060	6		5,7		8	6,8	+0,1 0	0,8	+0,1 0	6		5	23	7	M6x0,75
8	Flanged	L1356.060	L1354.060															
10	Pillow	L1355.080	L1353.080	6		5,7		8	6,8		0,8		8	-0,013 -0,035	6.5	27	8,5	M8x1,0
10	Flanged	L1356.080	L1354.080															

ov-precision-lead-screws-overview-lnh - Updated - 03-03-2023



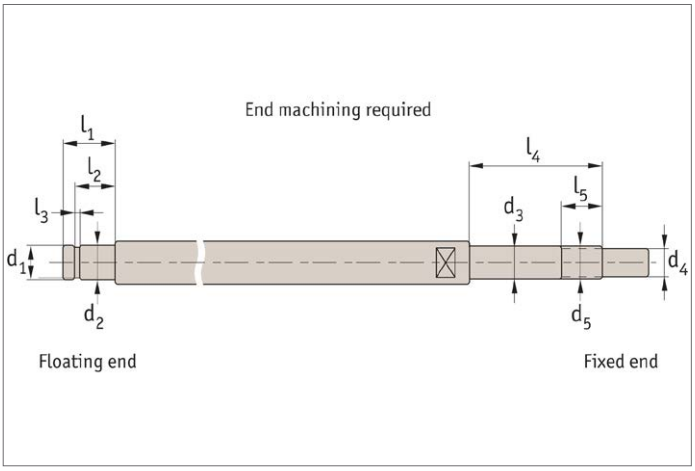


L1353

Technical Notes
Generally used with small diameter lead screws - see technical pages for lead screw core diameters and end machining required.
Use with floating support unit (L1355). For required end machining of the lead screws see technical pages.

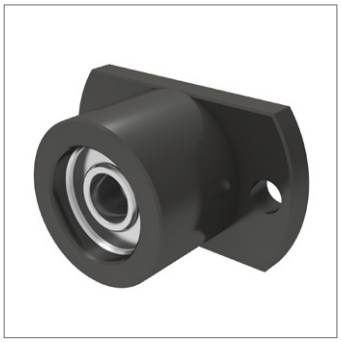
Tips
End machining of lead screws on request.

Order No.	d_1	h_1 +0|-0.03	d_2	d_3	d_4	h_2	h_3	l_1	l_2	l_3	w_1	w_2	w_3	w_4	w_5	w_6
L1353.030	3	9	4.3	7.3	3.5	14.5	5	24.0	18	11	12.5	6.25	1.5	11.0	5.5	16.5
L1353.040	4	10	6.0	9.5	3.5	17.0	6	27.0	21	14	14.0	7.0	2.0	11.5	5.5	17.5
L1353.050	5	11	8.0	11.5	4.5	19.5	6	30.5	23	17	15.0	7.5	2.0	12.5	5.5	18.5
L1353.060	6	13	9.5	13.3	5.5	22.5	8	35.0	26	19	17.0	8.5	2.5	16.0	7.5	22.0
L1353.080	8	17	11.5	16.5	5.6	29.0	12	41.0	32	24	20.0	10.0	3.0	18.5	9.0	26.0

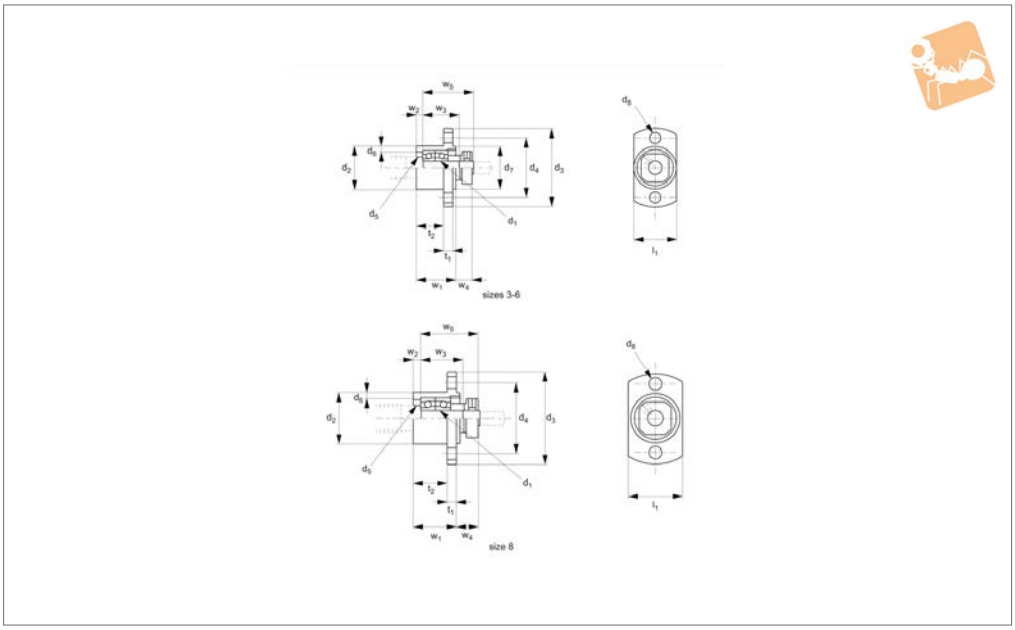


Miniature Flanged Fixed Support

for miniature lead screws



L1354



Technical Notes

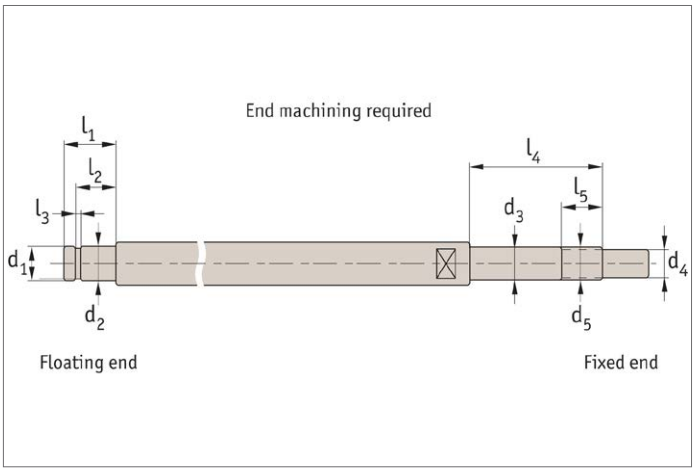
Generally used with small diameter lead screws - see technical pages for lead screw core diameters and end machining required.

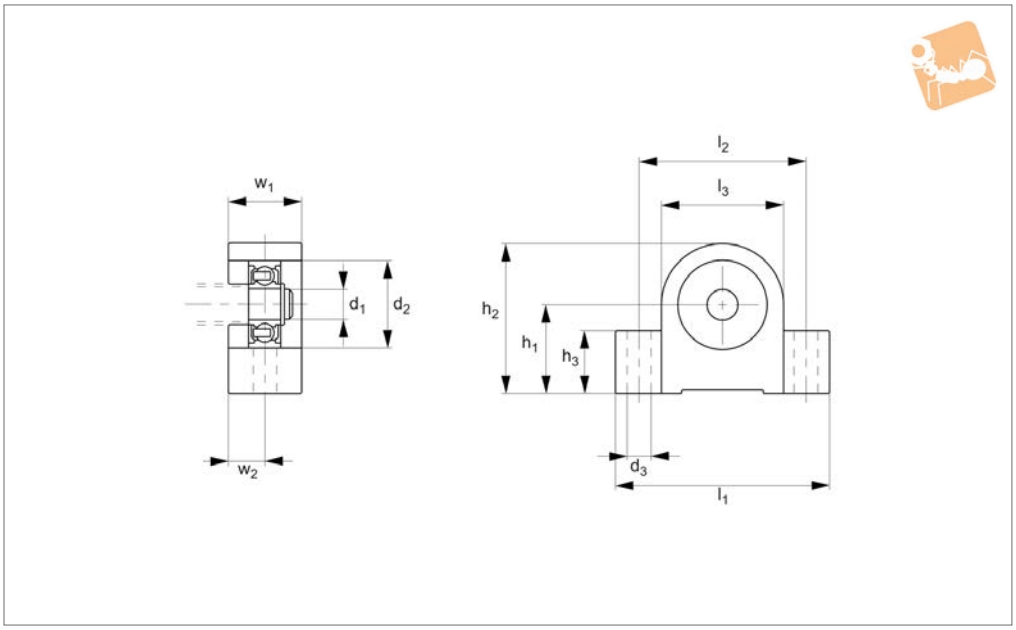
Use with floating support unit (L1356). For required end machining of the lead screws see technical pages.

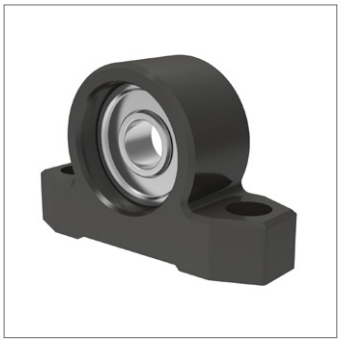
Tips

End machining of lead screws on request.

Order No.	d_1	d_2 -0.007|-0.020	d_3	d_4	d_5	d_6	d_7	d_8	l_1	t_1	t_2	w_1	w_2	w_3	w_4	w_5
L1354.030	3	11	23	17	4.3	7.3	11.0	3.5	11	3	7.5	12.5	1.5	11.0	5.5	16.5
L1354.040	4	14	26	20	6.0	9.5	14.0	3.5	14	3	8.5	13.5	1.5	11.5	5.5	1.5
L1354.050	5	17	29	23	8.0	11.5	17.0	3.5	17	3	10.0	15.0	2.0	12.5	5.5	18.5
L1354.060	6	19	34	26	9.5	13.3	18.5	4.5	19	4	12.0	17.0	2.5	16.	7.5	22.0
L1354.080	8	24	39	31	11.5	16.5	-	4.5	24	4	16.0	20.0	3.0	18.5	9.0	26.0





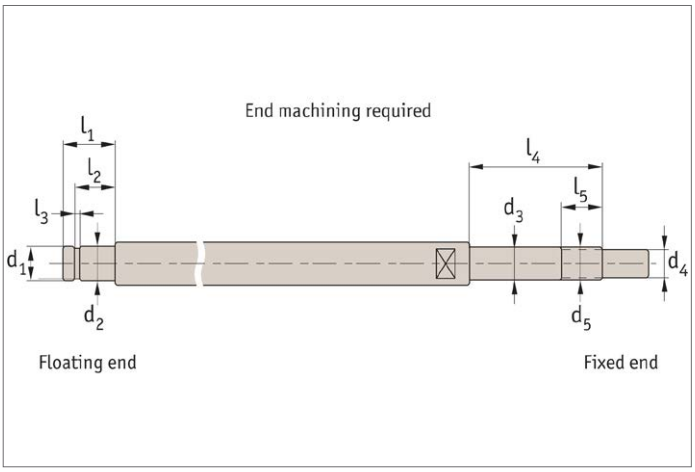


L1355

Technical Notes
Generally used with small diameter lead screws - see technical pages for lead screw core diameters and end machining required.
Use with fixed support unit (L1353). For required end machining of the lead screws see technical pages.

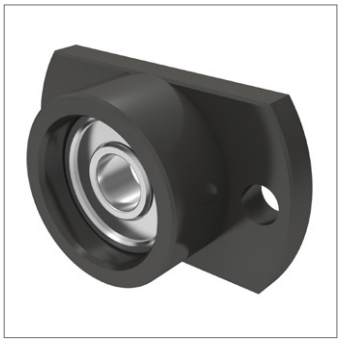
Tips
End machining of lead screws on request.

Order No.	d_1	h_1 +0|-0.03	d_2	d_3	h_2	h_3	l_1	l_2	l_3	w_1	w_2
L1355.030	2	9	7	3.5	14.5	5	24.0	18	11	8	4
L1355.040	3	10	10	3.5	17.0	6	27.0	21	14	10	5
L1355.050	4	11	13	4.5	19.5	6	30.5	23	17	10	5
L1355.060	6	13	15	5.5	22.5	8	35.0	26	19	12	6
L1355.080	6	17	17	5.5	29.0	12	41.0	32	24	14	7

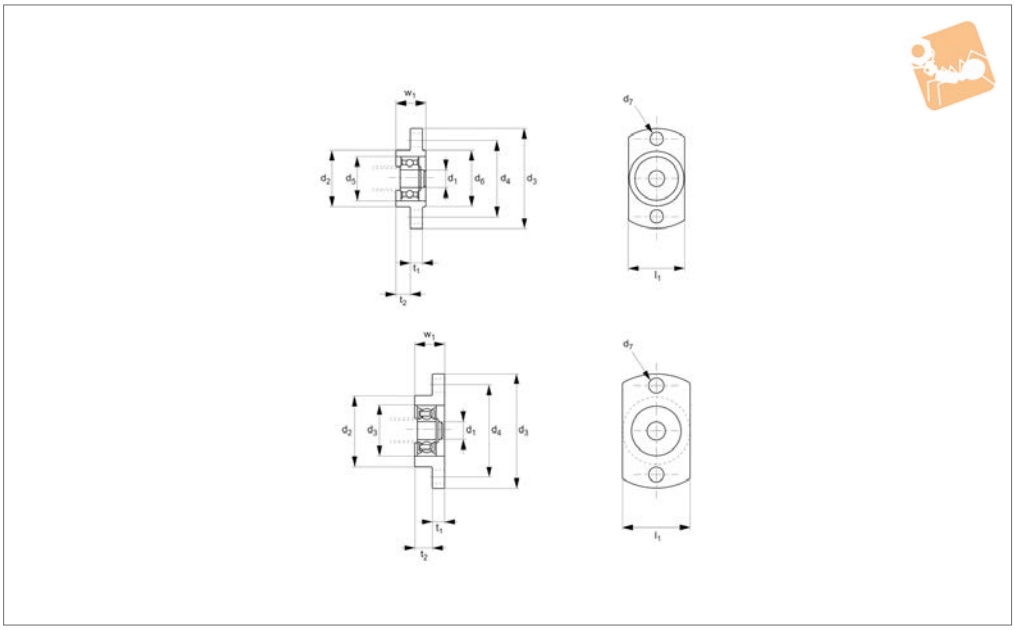


Minature Flanged Floating Support

for miniature lead screws



L1356



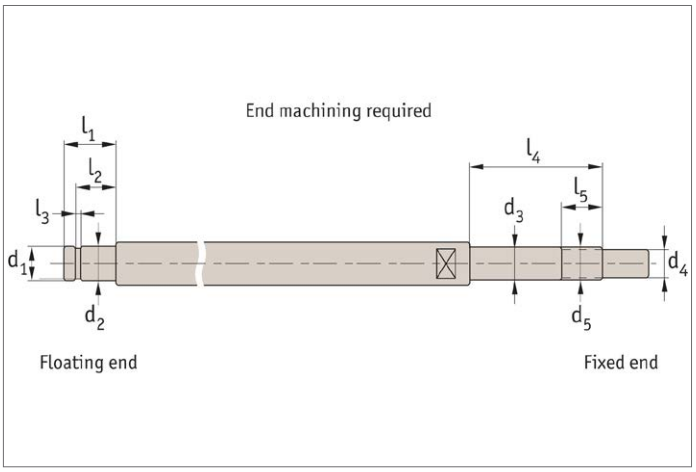
Technical Notes

Generally used with small diameter lead screws - see technical pages for lead screw core diameters and end machining required.
Use with fixed support unit (L1354). For required end machining of the lead screws see technical pages.

Tips

End machining of lead screws on request.

Order No.	d_1	d_2 -0.007 | -0.020	d_3	d_4	d_5	d_6	d_7	l_1	t_1	t_2	w_1
L1356.030	2	11	23	17	7	11.0	3.5	11	3	3	8
L1356.040	3	14	26	20	10	14.0	3.5	14	3	5	10
L1356.050	4	17	29	23	13	17.0	3.5	17	3	5	10
L1356.060	6	19	34	26	15	18.5	4.5	19	4	5	10
L1356.080	6	24	39	31	17	-	4.5	24	4	6	10



Precision lead screws

The high lead thread form maximises linear motion and minimises shaft rotation. The close tolerance, free running nuts are individually matched to their lead screws and are ideal for miniature applications requiring rotary to linear, or linear to rotary actuation.

Anti-backlash nuts

For applications requiring precision positioning there is now a newly patented Anti-backlash nut. This device, consisting of only three components, utilises the constant force of a compression spring to push two halves apart. This action eliminates any play (backlash) which exists between the internal thread of the nut and the external screw thread.

To ensure accuracy and repeatability the nut can be fine tuned through the use of many available spring constants, to meet any preload design requirements.

Lead screw specification	High precision lead screw
Lead error	±0,2mm/300mm
Repeatability	0,01mm
Straightness	0,03mm/100mm
Backlash	0,08mm (zero when using anti-backlash nut)
Temperature range	-30°C to +90°C

Design considerations

Critical speed

The critical speed of a lead screw is the maximum speed (rpm) before the screw will become dynamically unstable. This results when the forced frequency of the rotating screw corresponds to its natural frequency. Its value is dependent on the length of the screw, the diameter of the thread, and the support configuration. The critical speed value is governed by the following equation.

$$\text{Critical screw speed (RPM)} = K \times C \times 10^6 \times (d/L^2)$$

Where;

K = End support factor
- 0,36 one end fixed, other free
- 1,00 simple supports both ends
- 1,47 one end fixed, one simple
- 2,23 both ends fixed

C = Material factor
- 4,5 for Stainless Steel screws
- 1,6 for Aluminium screws

d = Root diameter of the screws

L = Length between bearing supports

Precision Lead Screws from Automotion Components



Load

In order to properly incorporate a lead screw into a design, load requirements must be taken into account. These numbers are based on the shear of the nuts and does not take shaft buckling into account. Wherever possible, nuts should be positioned so as to be put in tension, pulling the load. This eliminates the need for buckling considerations.

Listed below are some helpful formulae to assist in proper lead screw selection.

Critical load (N) = K x C x 10^6 x (d^4/D^2)

Where;

K = End support factor
- 0,25 one end fixed, other free (figure 1)
- 1,00 simple supports both ends (figure 2)
- 2,00 one end fixed, one simple (figure 3)
- 4,00 both ends fixed (figure 4)

C = Material factor
- 13,4 for Stainless Steel screws
- 4,8 for Aluminium screws

d = Root diameter of the screws

D = Length between bearing supports

Torque to move a load (T) = F x L/2 x π x E

Where;

F = Load

L = Lead

E = Efficiency (see product pages)

End fixing configurations

Figure 1



Double bearing, one end only

Figure 3



Double bearing one end, single bearing other end

Figure 2



Single bearing both ends

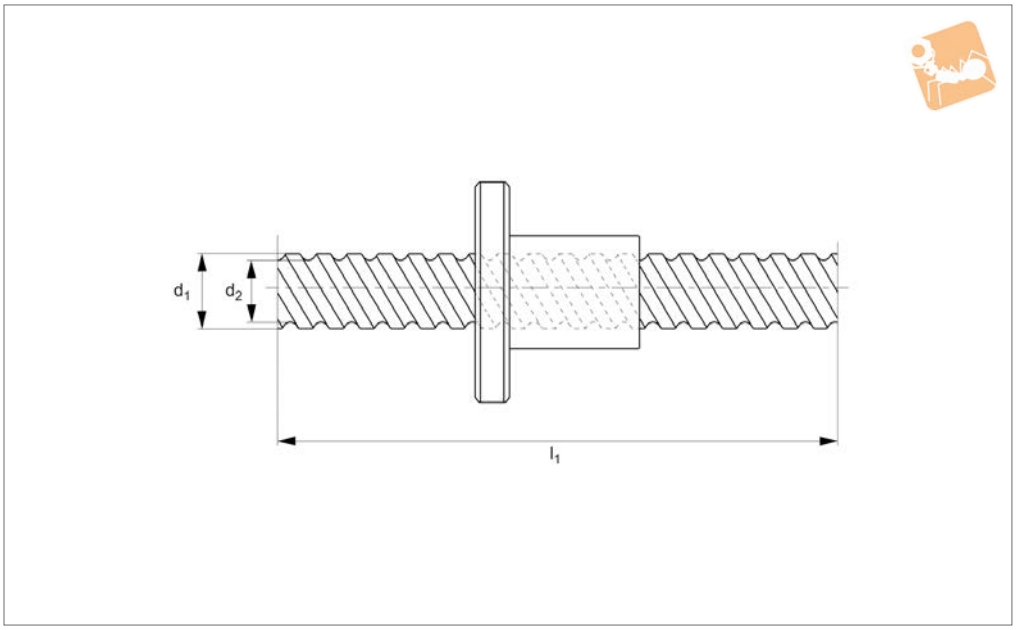
Figure 4



Double bearing both ends

High Helix Lead Screws - Stainless

lead screw only (to suit L1350 nuts)





L1349

Material
Stainless steel screw (SUS 304).

Technical Notes
High precision.

The ‚lead' refers to the distance the nut will travel for one complete revolution of the thread.
Order corresponding lead screw- see part L1350.

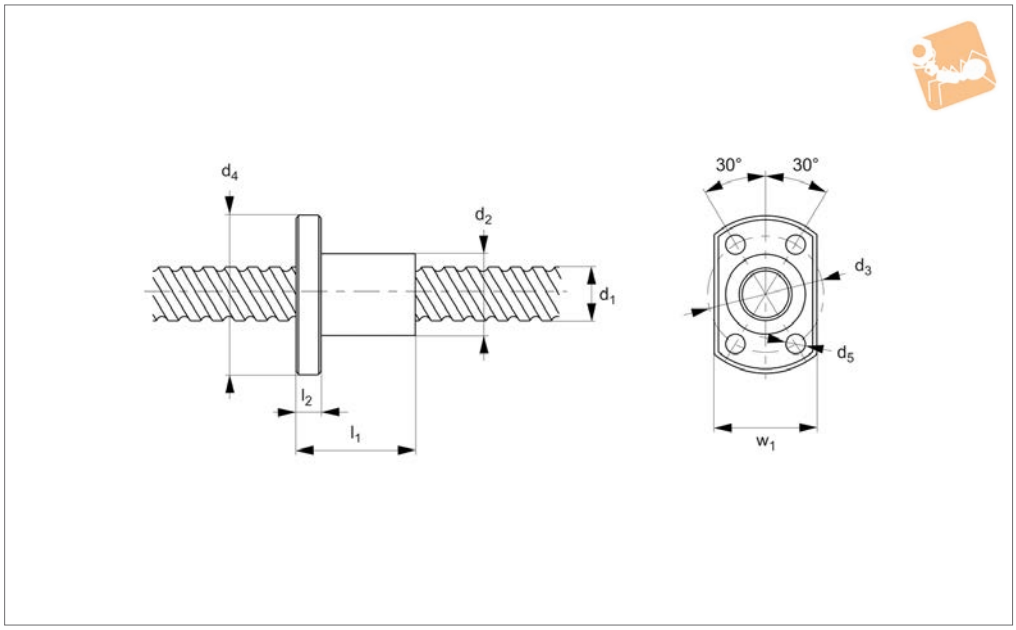
Order No.	Lead	d_1	l_1	d_2 core
L1349.04-01-0.2	1	4	200	3.3
L1349.04-02-0.2	2	4	200	3.3
L1349.06-01-0.3	1	6	300	5.3
L1349.06-02-0.3	2	6	300	5.3
L1349.06-09-0.3	9	6	300	5.4
L1349.06-18-0.3	18	6	300	5.6
L1349.08-01-0.3	1	8	300	7.3
L1349.08-02-0.3	2	8	300	6.6
L1349.08-12-0.4	12	8	400	6.7
L1349.08-24-0.4	24	8	400	7.5
L1349.10-02-0.3	2	10	300	8.6
L1349.10-06-1.0	6	10	1000	8.0
L1349.10-10-1.0	10	10	1000	8.0
L1349.10-15-0.5	15	10	450	8.4
L1349.10-30-0.5	30	10	450	8.9
L1349.12-02-0.3	2	12	300	10.6
L1349.12-04-1.0	4	12	1000	10.0
L1349.12-08-1.0	8	12	1000	9.8
L1349.12-12-1.0	12	12	1000	10.3
L1349.12-18-0.5	18	12	500	10.6
L1349.12-36-0.5	36	12	500	10.9
L1349.15-05-2.0	5	15	2000	12.2
L1349.15-10-2.0	10	15	2000	12.3
L1349.15-20-2.0	20	15	2000	12.6
L1349.20-10-2.0	10	20	2000	17.5
L1349.20-20-2.0	20	20	2000	17.6

Flanged High Helix Lead Screw Nuts

nut only (to suit L1349)



L1350



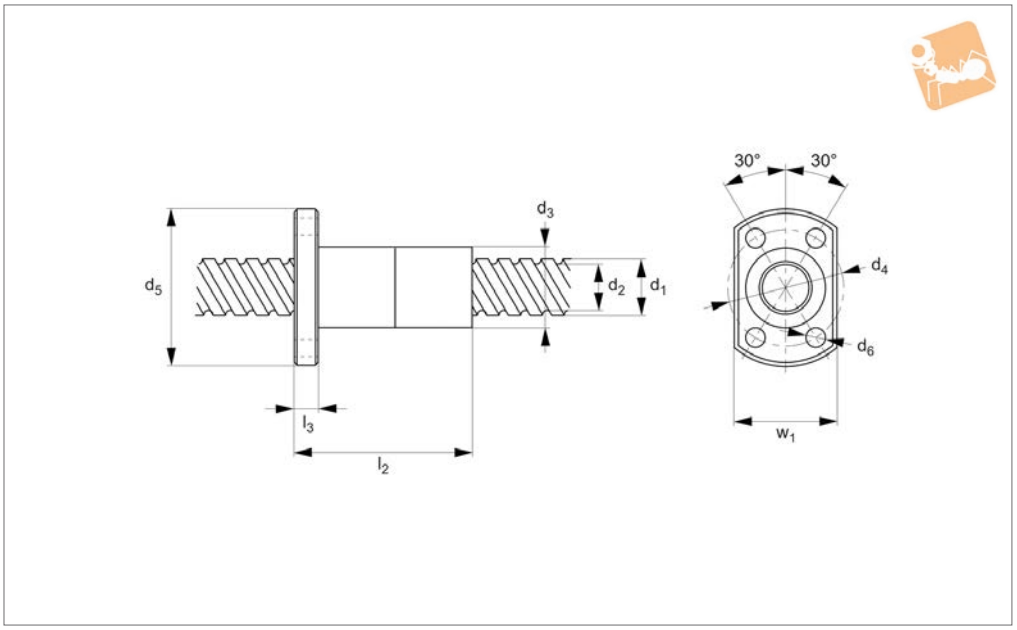
Material
Resin nut (PPS), to suit lead screw L1349.

Technical Notes
High precision.

The ‚lead' refers to the distance the nut will travel for one complete revolution of the thread.
Tight axial clearance.

Order corresponding nut - see part L1349.

Order No.	Lead	d_1 nom.	l_1	w_1	l_2	d_2	d_3 pcd	d_4	d_5	Axial clearance µm	Thrust load N max.	rpm max.	Torque screw to Nm
L1350.04-01	1	4	11.5	15	3.5	10	15	23	2.9	50	50	2000	0.25
L1350.04-02	2	4	11.5	15	3.5	10	15	23	2.9	50	60	2000	0.25
L1350.06-01	1	6	14.5	17	3.5	12	18	26	3.4	50	120	2000	0.60
L1350.06-02	2	6	14.5	17	3.5	12	18	26	3.4	50	60	2000	0.60
L1350.06-09	9	6	14.5	17	3.5	12	18	26	3.4	100	90	2000	0.60
L1350.06-18	18	6	14.5	17	3.5	12	18	26	3.4	100	70	2000	0.60
L1350.08-01	1	8	18.0	18	4.0	14	21	29	4.5	50	200	2000	0.60
L1350.08-02	2	8	18.0	18	4.0	14	21	29	4.5	50	290	2000	0.60
L1350.08-12	12	8	18.0	18	4.0	14	21	29	4.5	100	210	2000	0.60
L1350.08-24	24	8	18.0	18	4.0	14	21	29	4.5	100	210	2000	0.60
L1350.10-02	2	10	22.0	22	5.0	16	24	33	4.5	50	460	1500	0.80
L1350.10-06	6	10	22.0	22	5.0	16	24	33	4.5	100	370	1500	0.80
L1350.10-10	10	10	22.0	22	5.0	16	24	33	4.5	100	250	1500	0.80
L1350.10-15	15	10	22.0	22	5.0	16	24	33	4.5	100	410	1500	0.80
L1350.10-30	30	10	22.0	22	5.0	16	24	33	4.5	100	410	1500	0.80
L1350.12-02	2	12	25.0	25	5.0	18	26	35	4.5	50	660	1000	0.80
L1350.12-04	4	12	25.0	25	5.0	18	26	35	4.5	100	620	1000	0.80
L1350.12-08	8	12	25.0	25	5.0	18	26	35	4.5	100	820	1000	0.80
L1350.12-12	12	12	25.0	25	5.0	18	26	35	4.5	100	470	1000	0.80
L1350.12-18	18	12	25.0	25	5.0	18	26	35	4.5	100	750	1000	0.80
L1350.12-36	36	12	25.0	25	5.0	18	26	35	4.5	100	540	1000	0.80
L1350.15-05	5	15	30.0	30	6.0	24	33	42	4.5	100	890	800	0.80
L1350.15-10	10	15	30.0	30	6.0	24	33	42	4.5	100	1040	800	0.80
L1350.15-20	20	15	30.0	30	6.0	24	33	42	4.5	100	1100	800	0.80
L1350.20-10	10	20	36.0	36	7.0	30	40	50	5.5	100	1240	600	1.0
L1350.20-20	20	20	36.0	36	7.0	30	40	50	5.5	100	1420	600	1.0





L1351

Material
Stainless steel screw (SUS 304), resin nut (PPS).

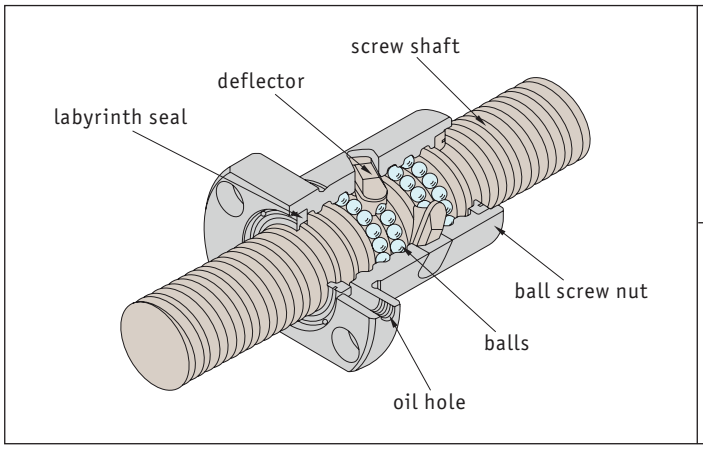
Technical Notes
High precision. No backlash.

The ‚lead' refers to the distance the nut will travel for one complete revolution of the thread.
Nut fitted to screw, to ensure anti-backlash - unlike L1349 and L1350 which can be ordered separately.

Order No.	Lead	d_1 nom.	l_1	w_1	l_2	d_2 core	d_3	d_4 pcd	d_5	d_6	l_3	Axial clearance µm	Thrust load N max.	rpm max.	Torque screw to Nm
L1351.04-01-0.2	1	4	200	15	17,5	3,3	10	15	23	2,9	3,5	50	50	2000	0,25
L1351.04-02-0.2	2	4	200	15	17,5	3,3	10	15	23	2,9	3,5	50	60	2000	0,25
L1351.06-01-0.3	1	6	300	17	23,5	5,3	12	18	26	3,4	3,5	50	120	2000	0,6
L1351.06-02-0.3	2	6	300	17	23,5	5,3	12	18	26	3,4	3,5	50	60	2000	0,6
L1351.06-09-0.3	9	6	300	17	23,5	5,4	12	18	26	3,4	3,5	100	90	2000	0,6
L1351.06-18-0.3	18	6	300	17	23,5	5,6	12	18	26	3,4	3,5	100	70	2000	0,6
L1351.08-01-0.3	1	8	300	18	29,0	7,3	14	21	29	4,5	4,0	50	200	2000	0,6
L1351.08-02-0.3	2	8	300	18	29,0	6,6	14	21	29	4,5	4,0	50	290	2000	0,6
L1351.08-12-0.4	12	8	400	18	29,0	6,7	14	21	29	4,5	4,0	100	210	2000	0,6
L1351.08-24-0.4	24	8	400	18	29,0	7,5	14	21	29	4,5	4,	100	210	2000	0,6
L1351.10-02-0.3	2	10	300	21	35,0	8,6	16	24	33	4,5	5,0	50	460	1500	0,8
L1351.10-06-1.0	6	10	1000	21	35,0	8,0	16	24	33	4,5	5,0	100	370	1500	0,8
L1351.10-10-1.0	10	10	1000	21	35,0	8,0	16	24	33	4,5	5,0	100	250	1500	0,8
L1351.10-15-0.5	15	10	450	21	35,0	8,4	16	24	33	4,5	5,0	100	410	1500	0,8
L1351.10-30-0.5	30	10	450	21	35,0	8,9	16	24	33	4,5	5,0	100	410	1500	0,8
L1351.12-02-0.3	2	12	300	22	40,0	10,6	18	26	35	4,5	5,0	50	660	1000	0,8
L1351.12-04-1.0	4	12	1000	22	40,0	10,0	18	26	35	4,5	5,0	100	620	1000	0,8
L1351.12-08-1.0	8	12	1000	22	40,0	9,8	18	26	35	4,5	5,0	100	820	1000	0,8
L1351.12-12-1.0	12	12	1000	22	40,0	10,3	18	26	35	4,5	5,0	100	470	1000	0,8
L1351.12-18-0.5	18	12	500	22	40,0	10,6	18	26	35	4,5	5,0	100	750	1000	0,8
L1351.12-36-0.5	36	12	500	22	40,0	10,9	18	26	35	4,5	5,0	100	540	1000	0,8
L1351.15-05-2.0	5	15	2000	27	48,0	12,2	24	33	42	4,5	6,0	100	890	800	0,8
L1351.15-10-2.0	10	15	2000	27	48,0	12,3	24	33	42	4,5	6,0	100	1040	800	0,8
L1351.15-20-2.0	20	15	2000	27	48,0	12,6	24	33	42	4,5	6,0	100	1100	800	0,8
L1351.20-10-2.0	10	20	2000	32	57,0	17,5	30	40	50	5,5	7,0	100	1240	600	1,0
L1351.20-20-2.0	20	20	2000	32	57,0	17,6	30	40	50	5,5	7,0	100	1420	600	1,0

Ball Screws

Overview




L1370


L1388


L1375


L1390



Standard ball screws


L1370


L1371


L1372


L1373

Miniature ball screws


L1379.F


L1379.C



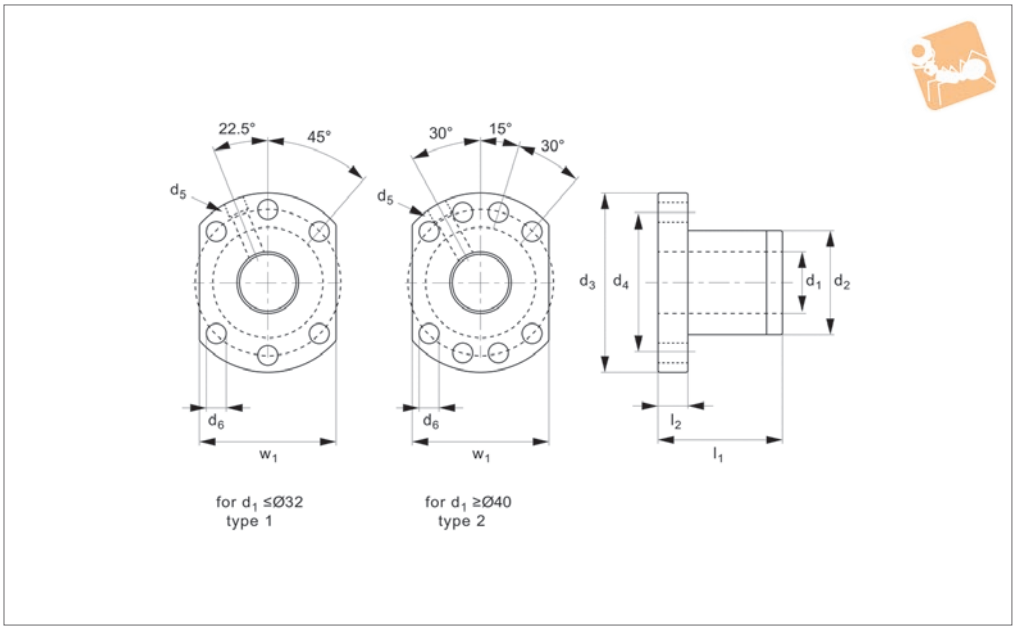
Rolled ball screws

	Pitch (travel per revolution)						
Ø	5	10	16	20	25	40	50
16	●	●	●				
20	●	●		●			
25	●	●			●		
32	●	●		●			
40	●	●		●		●	
50		●		●			●
63		●		●			
80		●		●			

Miniature ball screws

	Pitch (travel per revolution)					
Ø	1	2	2.5	4	5	Nut
6	●					flanged
8	●	●	●			flanged
10		●		●		flanged/cylinder
12		●		●	●	flanged/cylinder
14		●				flanged/cylinder

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L1370

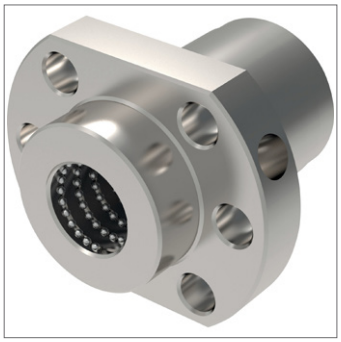
Material
Steel (16MnCr5 or 100Cr6), with Vulkollan seals.

Technical Notes
To DIN 69051 form B.
Axial play for 5mm pitch = 0,05mm; for 10mm pitch = 0,10mm; for multi-starts = 0,20mm.
Preload max. 5% of max. dynamic load.
For axial run-out, concentricity and parallelism figures see technical pages.
With lubrication and fixing holes.
For use with ball screws no. L1375.

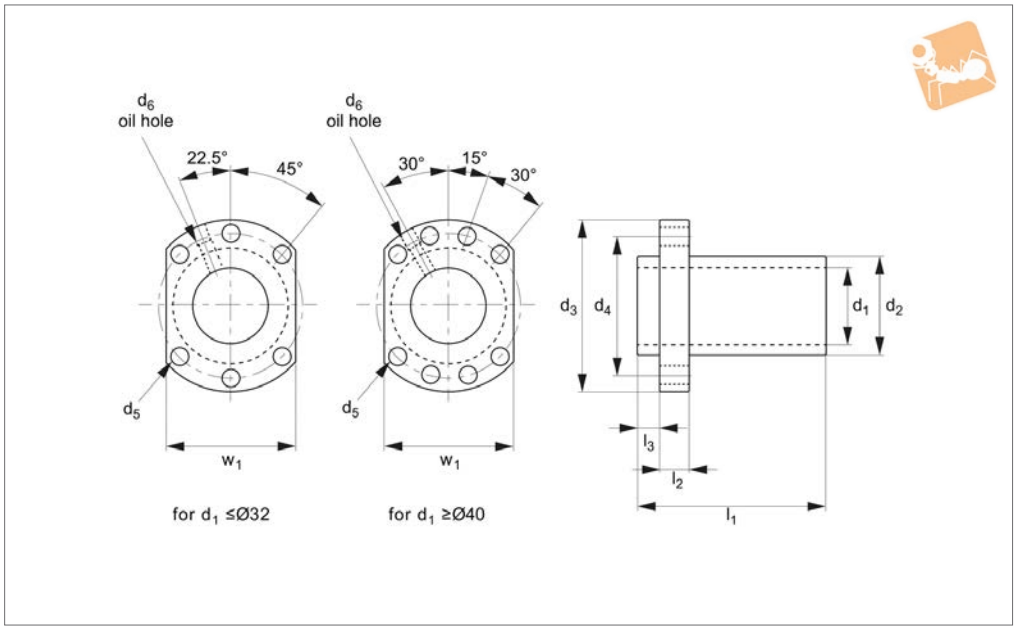
Tips
For easy mounting of the ball screw nuts see the nut bracket - part L1377.
For miniature ball screws Ø6 to Ø14 see part no. L1379.

Important Notes
Fit ball nut to screw using the sleeve provided. Offer up the ball nut to the screw and slide carefully on. Do not remove the ball nut from the sleeve provided - the ball bearings can come loose rendering the ball nut unusable.

Order No.	d_1 for screw	Pitch	Type	d_2 tol. G6	d_3 ±0.15	d_4 ±0.15	d_5 for	d_6	l_1	l_2	w_1 ±0.15	Ball dia.	Dyn. load C kN max.	Static load C_0 kN max.	Stiffness N/µm
L1370.16-05	16	5	Type 1	28	48	38	M 6	5,5	45	10	40	3,175	13,53	29,92	314
L1370.16-10	16	10	Type 1	28	48	38	M 6	5,5	57	10	40	3,175	10,82	23,55	255
L1370.20-05	20	5	Type 1	36	58	47	M 6	6,6	51	10	44	3,175	15,21	38,00	382
L1370.25-05	25	5	Type 1	40	62	51	M 6	6,6	51	10	48	3,175	16,91	48,09	441
L1370.25-10	25	10	Type 1	40	62	51	M 6	6,6	80	12	48	4,762	28,96	71,54	490
L1370.32-05	32	5	Type 1	50	80	65	M 6	9,0	52	12	62	3,175	18,85	62,21	529
L1370.32-10	32	10	Type 1	50	80	65	M 6	9,0	85	12	62	6,350	47,12	119,72	598
L1370.40-05	40	5	Type 2	63	93	78	M 8	9,0	55	14	70	3,175	20,69	78,34	617
L1370.40-10	40	10	Type 2	63	93	78	M 8	9,0	88	14	70	6,340	52,95	152,00	715
L1370.50-10	50	10	Type 2	75	110	93	M 8	11,0	88	16	85	6,350	58,88	192,35	833
L1370.63-10	63	10	Type 2	90	125	108	M 8	11,0	93	18	95	6,350	65,89	248,68	970
L1370.80-10	80	10	Type 2	105	145	125	M 8	13,5	93	20	110	6,350	72,04	313,36	1068



L1372



Material
Steel (16MnCr5 or 100Cr6), with Vulkolan seals.

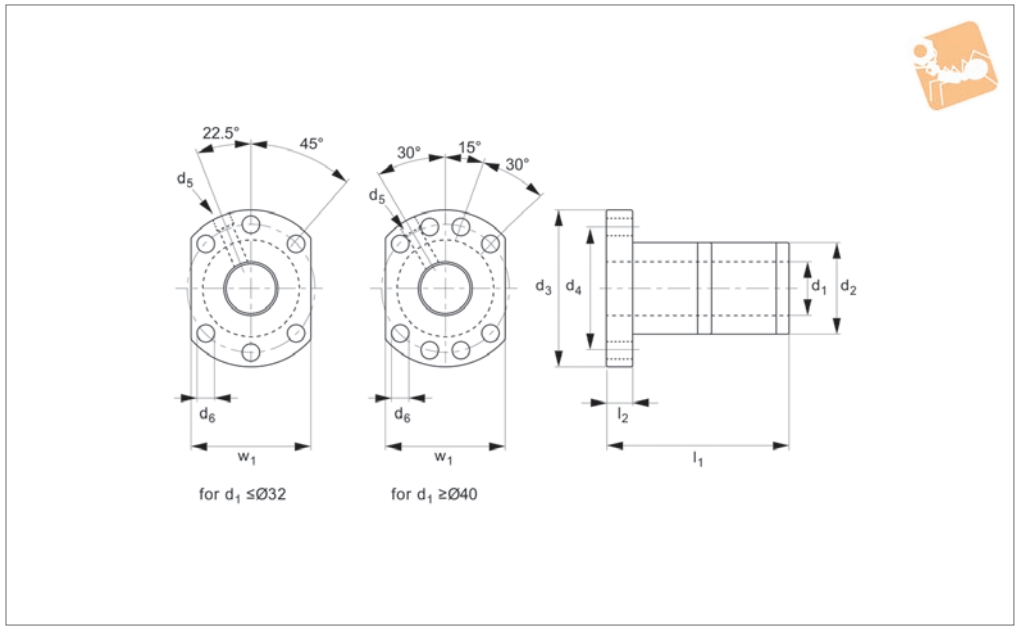
Technical Notes
Produced to DIN 69051 form B.
Axial play for 5mm pitch = 0,05mm; for 10mm pitch = 0,10mm; for multi-starts = 0,20mm.

Preload max. 5% of max. dynamic load.
For axial run-out, concentricity and parallelism figures see technical pages.
With lubrication and fixing holes.
For use with ball screws no. L1375.

Tips
For miniature ball screws Ø6 to Ø14 see part no. L1379.

Important Notes
Fit ball nut to screw using the sleeve provided. Offer up the ball nut to the screw and slide carefully on. Do not remove the ball nut from the sleeve provided - the ball bearings can come loose rendering the ball nut unusable.

Order No.	d_1 for screw	Pitch	d_2 tol. G6	d_3	d_4	d_5	d_6	l_1	l_2	l_3	w_1	Ball dia.	Dyn. load C kN max.	Static load C_0 kN max.	Stiffness N/µm
L1372.16-16-1.8	15	16	28	48	38	5.5	M 6	43	10	5.0	40	2.78	5.41	11.15	14
L1372.16-16-2.8	15	16	28	48	38	5.5	M 6	59	10	5.0	40	2.78	7.92	17.34	22
L1372.16-20-1.8	15	20	28	48	38	5.5	M 6	50	10	5.0	40	2.78	5.43	11.47	14
L1372.20-10-3.8	20	10	36	58	47	6.6	M 6	52	10	7.0	44	3.18	14.86	37.58	40
L1372.20-20-1.8	20	20	36	58	47	6.6	M 6	52	10	7.0	44	3.18	7.49	17.24	19
L1372.20-20-2.8	20	20	36	58	47	6.6	M 6	72	10	7.0	44	3.18	10.96	26.81	29
L1372.25-25-1.8	25	25	40	62	51	6.6	M 6	60	12	7.0	48	3.18	8.26	21.56	22
L1372.25-25-2.8	25	25	40	62	51	6.6	M 6	85	12	7.0	48	3.18	12.08	33.54	34
L1372.32-20-2.8	31	20	50	80	65	9.0	M 6	72	12	9.0	62	3.97	18.70	53.76	43
L1372.32-32-1.8	31	32	50	80	65	9.0	M 6	78	12	9.0	62	3.97	12.32	33.59	27
L1372.32-32-2.8	31	32	50	80	65	9.0	M 6	110	12	9.0	62	3.97	18.02	52.25	42
L1372.40-20-2.8	38	20	63	93	78	9.0	M 8	78	14	9.0	70	6.35	38.82	105.07	54
L1372.40-40-1.8	38	40	63	93	78	9.0	M 8	96	14	9.0	70	6.35	25.35	65.19	34
L1372.40-40-2.8	38	40	63	93	78	9.0	M 8	136	14	9.0	70	6.35	37.06	101.41	52
L1372.50-20-3.8	48	20	75	110	93	11.0	M 8	98	18	10.5	85	6.35	56.37	181.27	87
L1372.50-50-1.8	48	50	75	110	93	11.0	M 8	117	18	10.5	85	6.35	28.89	85.79	42
L1372.50-50-2.8	48	50	75	110	93	11.0	M 8	167	18	10.5	85	6.35	42.24	133.46	65





L1371

Material
Steel (16MnCr5 or 100Cr6), with Vulkolan seals.

Technical Notes
Axial play for 5mm pitch = 0,05mm; for 10mm pitch = 0,10mm; for multi-starts = 0,20mm.
Preload max. 5% of max. dynamic load.

For axial run-out, concentricity and parallelism figures see technical pages.
With lubrication and fixing holes.
For use with ball screws no. L1375.

Tips
For miniature ball screws Ø6 to Ø14 see part no. L1379.

Important Notes
Fit ball nut to screw using the sleeve provided. Offer up the ball nut to the screw and slide carefully on. Do not remove the ball nut from the sleeve provided - the ball bearings can come loose rendering the ball nut unusable.

Order No.	d_1 for screw	Pitch	d_2 tol. G6	d_3	d_4	d_5 for	d_6	l_1	l_2	w_1 ±0.15	Ball dia.	Dyn. load C kN max.	Static load C_0 kN max.	Stiffness N/µm
L1371.16-05	16	5	28	48	38	M 6	5.5	100	10	40	3.175	13.53	29.93	431
L1371.20-05	20	5	36	58	47	M 6	6.6	85	10	44	3.175	15.21	38.00	519
L1371.25-05	25	5	40	62	51	M 6	6.6	86	10	48	3.175	16.91	48.09	608
L1371.25-10	25	10	40	62	51	M 6	6.6	130	12	48	4.762	28.96	71.54	657
L1371.32-05	32	5	50	80	65	M 6	9.0	87	12	62	3.175	18.85	62.21	725
L1371.32-10	32	10	50	80	65	M 6	9.0	145	12	62	6.350	47.12	119.72	804
L1371.40-05	40	5	63	93	78	M 8	9.0	90	14	70	3.175	20.69	78.34	853
L1371.40-10	40	10	63	93	78	M 8	9.0	148	14	70	6.350	52.95	152.00	970
L1371.50-10	50	10	75	110	93	M 8	11.0	148	16	85	6.350	58.88	192.35	1147
L1371.63-10	63	10	90	125	108	M 8	11.0	153	18	95	6.350	65.89	248.68	1362
L1371.80-10	80	10	105	145	125	M 8	13.5	153	20	110	6.350	72.04	313.36	1529

Ball Screws

Selecting a suitable size

When selecting a ball screw some of the main factors to consider are:

- Maximum required travel speed
- Maximum axial compression (buckling load)
- Method of support of the ball screws
- Type of unit required, flanged, cylindrical etc.

In general it is best to support the ball screws with our ball screw support units (L1388 to L1406) with a fixed end (generally where the motor is mounted) and a floating (support) end. The support units are selected to suit the loads likely to be required, the size of the ball screw (especially its core diameter) and the type of mounting required. Details of the machining required for each end of the ball screw are shown in the bearing mounts technical section.

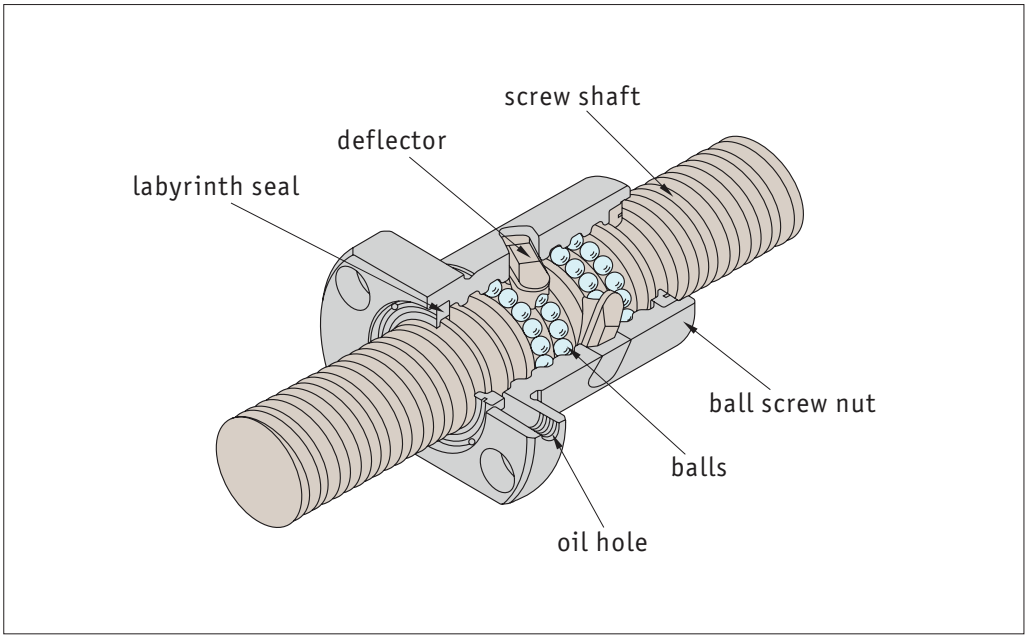
The data table for the ball screws show the diameter, the lead of the ball screw (i.e. how far the nut travels for one complete revolution of the screw) as well as the mass moment of inertia (also known as the rotational moment of inertia) - this is the extent to which an object resists rotational acceleration about its axis.

Maximum speeds and buckling load data are shown in the technical pages.

When using a ball screw the ambient temperature should not exceed +80°C.

During assembly, the parallel alignment of the guides should be ensure.

The details on the concentricity of the ball nuts to the ball screws are shown on the technical pages. For linear guideways for use with ball screws please see our part numbers L1016 etc.



Lubrication - the ball screws must be adequately lubricated. This is dependent on load, speed, motion sequence and temperature. Do not use lubricants containing Mo/So or graphite.

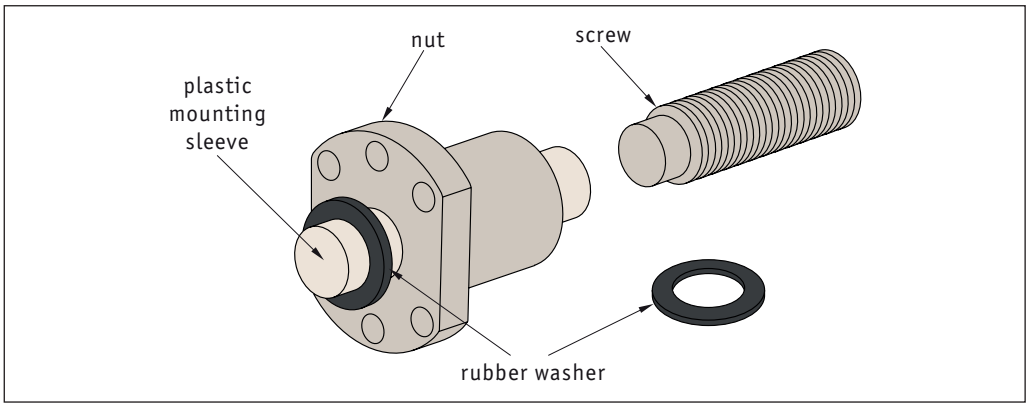
ov-ball-screw-selecting-a-suitable-size-lnh-Updated-28-02-2023



In general, the ball nut is already on the ball screw and should not be removed. If you need to machine the ball screw, then the plastic mounting sleeve should be used to retain the ball bearings whilst the nut is removed.

Mounting the nut on the screw

Sometimes ball screws are delivered with a separate ball nut. When mounting the nut on to the screw take care as if done incorrectly the ball bearings may come off the ball nut.



Ball nuts should be mounted only with the help of a plastic mounting sleeve (delivered with the nut). The start of the thread should be aligned so that the seal and the internal parts of the nut are not damaged.

1. Remove the rubber washer from one side of the sleeve. Push on the nut with the sleeve on the end of the screw. Press the sleeve against the start of the screw thread.
2. Screw the nut onto the thread using a slight axial pressure, then screw the nut on for it's entire length.
3. Remove the mounting sleeve only when the nut is completely threaded on to the screw.
4. Lock the nut on to the screw (to prevent any unscrewing) using an O ring or similar - whilst installing the system.

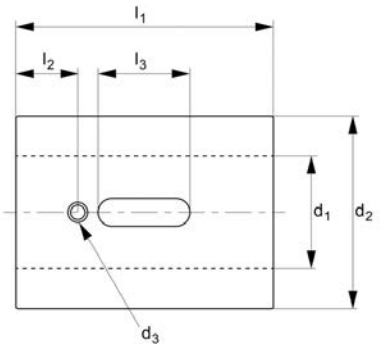
If the balls do unfortunately escape...

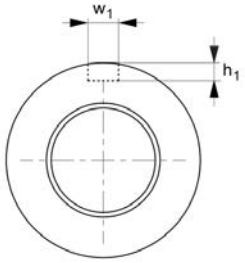
1. Pick them up (the nut is only compatible with the original balls). The load capacity can still be achieved if one or two balls are missing.
2. Carefully clean all parts, use the sleeve as a mounting jig and replace the balls.
3. Start with the lowest circuit. Insert the balls into the nut circuit - the sleeve prevents the balls from falling out again.
4. Do not place the balls in the empty circuit located between the two deflectors.

If you have any technical queries please call **0333 207 4498.**



L1373





Material
Steel (16MnCr5 or 100Cr6), with Vulkolan seals.

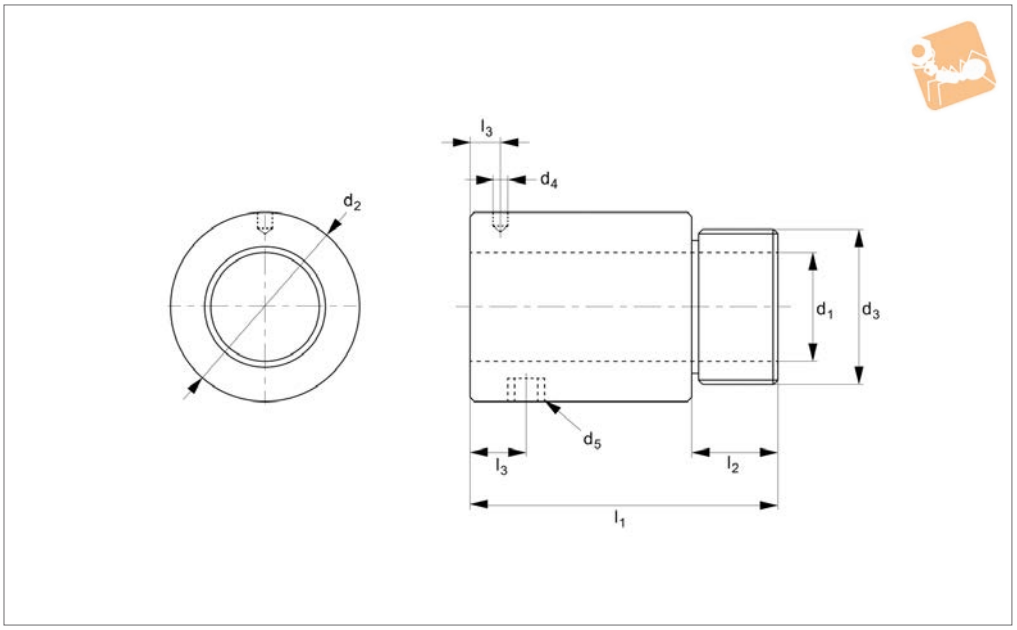
Technical Notes
Axial play for 5mm pitch = 0,05mm; for 10mm pitch = 0,10mm; for multi-starts = 0,20mm.
Preload max. 5% of max. dynamic load.

For axial run-out, concentricity and parallelism figures see technical pages.
With lubrication and fixing holes.
For use with ball screws no. L1375.

Tips
For miniature ball screws Ø6 to Ø14 see part no. L1379.

Important Notes
Fit ball nut to screw using the sleeve provided. Offer up the ball nut to the screw and slide carefully on. Do not remove the ball nut from the sleeve provided - the ball bearings can come loose rendering the ball nut unusable.

Order No.	d_1 for screw	Pitch	d_2 tol. G6	d_3	h_1 ±0.05	l_1	l_2	l_3	w_1	Ball dia.	Dyn. load C kN max.	Static load C_0 kN max.	Stiffness N/µm
L1373.016-05	16	5	30	3.5	3	45	9	20	5	3,175	13.53	29.93	324
L1373.020-05	20	5	34	3.5	3	45	9	20	5	3,175	15.21	38.00	382
L1373.025-05	25	5	40	3.5	3	45	9	20	5	3,175	16.91	48.09	441
L1373.025-10	25	10	46	3.5	3	85	13	30	5	4,762	28.97	71.54	500
L1373.032-05	32	5	46	3.5	3	45	9	20	5	3,175	18.84	62.20	510
L1373.032-10	32	10	54	3.5	3	85	13	30	5	6,350	47.12	119.72	608
L1373.040-05	40	5	56	3.5	3	45	9	20	5	3,175	20.69	78.33	579
L1373.040-10	40	10	62	3.5	3	85	13	30	5	6,350	52.95	152.00	706





L1374

Material
Steel (16MnCr5 or 100Cr6), with Vulkolan seals.

Technical Notes
Axial play for 5mm pitch = 0,05mm; for 10mm pitch = 0,10mm; for multi-starts = 0,20mm.
Preload max. 5% of max. dynamic load.

For axial run-out, concentricity and parallelism figures see technical pages.
With lubrication and fixing holes.
For use with ball screws no. L1375.

Tips
For miniature ball screws Ø6 to Ø14 see part no. L1379.

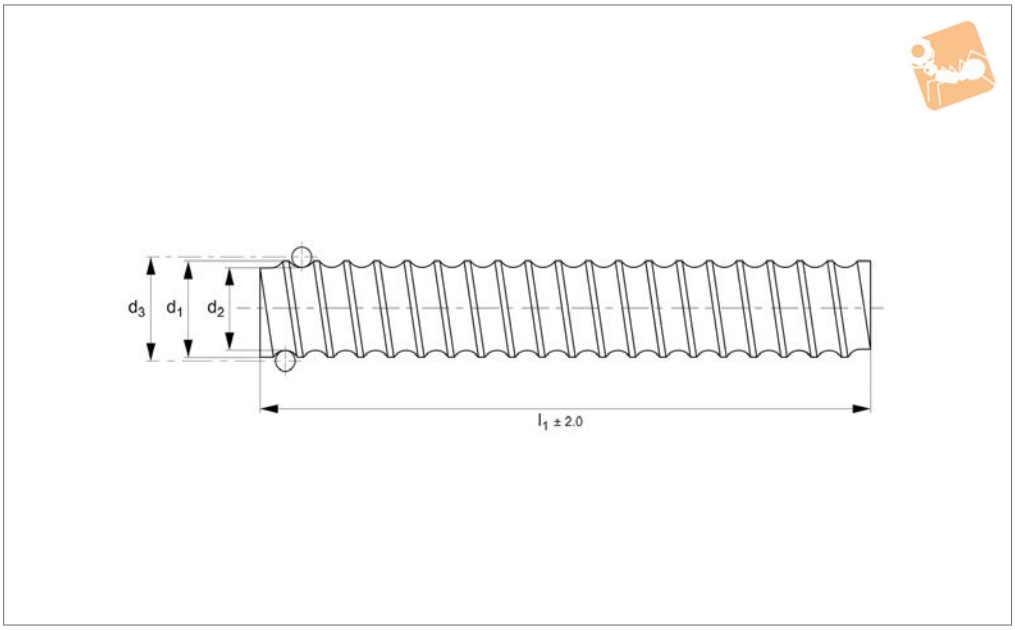
Important Notes
Fit ball nut to screw using the sleeve provided. Offer up the ball nut to the screw and slide carefully on. Do not remove the ball nut from the sleeve provided - the ball bearings can come loose rendering the ball nut unusable.

Order No.	d_1 for screw	Pitch	d_2 tol. G6	d_3	d_4	d_5	l_1 ±0.15	l_2	l_3	l_4	No. of circuits	Ball dia.	Dyn. load C kN max.	Static load C_0 kN max.	Stiffness N/µm
L1374.16-05	16	5	32,5	M26x1,5P	3,0		42	12	19,25		3x1	3,175	10,56	22,44	245
L1374.16-10	16	10	32,0	M26x1,5P	4,0	M 4	50	12	3,00	3	2x1	3,175	6,61	11,09	245
L1374.20-05	20	5	38,0	M35x1,5P	3,0		45	15	20,30		3x1	3,175	11,87	28,49	294
L1374.25-05	25	5	43,0	M40x1,5P	3,0	M 6	69	19	32,11	8	4x1	3,175	16,90	48,08	363
L1374.25-10	25	10	43,0	M40x1,5P	6,0	M 6	84	19	8,00	8	4x1	3,175	28,96	71,53	363

Ø 16 Ball Screws
rolled



L1375.16



Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5 or 10mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 3000mm available.
For ball screw nuts see parts L1370-L1374 & L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

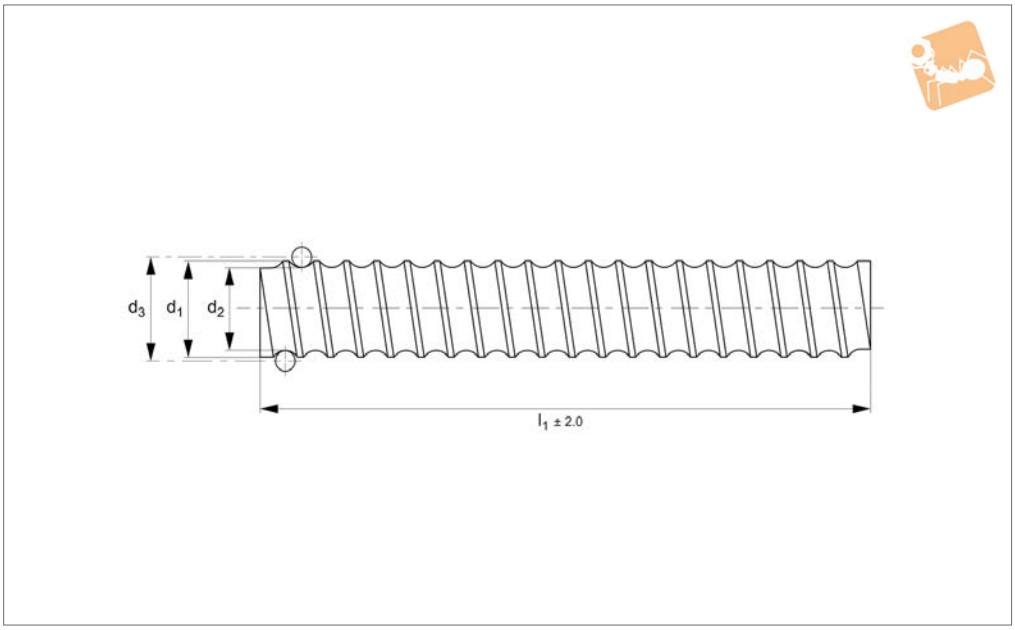
Order No.	Screw dia. x lead	Lead	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.16-05-0500	16x 5	5	16	13.90	17.08	500	$4{,}45\times10^{-5}$	0.71
L1375.16-05-0600	16x 5	5	16	13.90	17.08	600	$4{,}45\times10^{-5}$	0.85
L1375.16-05-0800	16x 5	5	16	13.90	17.08	800	$4{,}45\times10^{-5}$	1.13
L1375.16-05-1000	16x 5	5	16	13.90	17.08	1000	$4{,}45\times10^{-5}$	1.41
L1375.16-05-1500	16x 5	5	16	13.90	17.08	1500	$4{,}45\times10^{-5}$	2.12
L1375.16-05-2000	16x 5	5	16	13.90	17.08	2000	$4{,}45\times10^{-5}$	2.82
L1375.16-05-2500	16x 5	5	16	13.90	17.08	2500	$4{,}45\times10^{-5}$	3.53
L1375.16-05-3000	16x 5	5	16	13.90	17.08	3000	$4{,}45\times10^{-5}$	4.23
L1375.16-10-0500	16x10	10	16	12.90	17.08	500	$4{,}36\times10^{-5}$	0.73
L1375.16-10-0600	16x10	10	16	12.90	17.08	600	$4{,}36\times10^{-5}$	0.88
L1375.16-10-0800	16x10	10	16	12.90	17.08	800	$4{,}36\times10^{-5}$	1.17
L1375.16-10-1000	16x10	10	16	12.90	17.08	1000	$4{,}36\times10^{-5}$	1.46
L1375.16-10-1500	16x10	10	16	12.90	17.08	1500	$4{,}36\times10^{-5}$	2.19
L1375.16-10-2000	16x10	10	16	12.90	17.08	2000	$4{,}36\times10^{-5}$	2.92
L1375.16-10-2500	16x10	10	16	12.90	17.08	2500	$4{,}36\times10^{-5}$	3.65
L1375.16-10-3000	16x10	10	16	12.90	17.08	3000	$4{,}36\times10^{-5}$	4.38
L1375.16-16-0500	16x16	16	16	12.90	17.08	500	$4{,}36\times10^{-5}$	0.73
L1375.16-16-0600	16x16	16	16	12.90	17.08	600	$4{,}36\times10^{-5}$	0.88
L1375.16-16-0800	16x16	16	16	12.90	17.08	800	$4{,}36\times10^{-5}$	1.17
L1375.16-16-1000	16x16	16	16	12.90	17.08	1000	$4{,}36\times10^{-5}$	1.46
L1375.16-16-1500	16x16	16	16	12.90	17.08	1500	$4{,}36\times10^{-5}$	2.19
L1375.16-16-2000	16x16	16	16	12.90	17.08	2000	$4{,}36\times10^{-5}$	2.92
L1375.16-16-2500	16x16	16	16	12.90	17.08	2500	$4{,}36\times10^{-5}$	3.65
L1375.16-16-3000	16x16	16	16	12.90	17.08	3000	$4{,}36\times10^{-5}$	4.38
L1375.16-20-0500	16x20	20	16	12.90	17.08	500	$4{,}36\times10^{-5}$	0.73
L1375.16-20-0600	16x20	20	16	12.90	17.08	600	$4{,}36\times10^{-5}$	0.88
L1375.16-20-0800	16x20	20	16	12.90	17.08	800	$4{,}36\times10^{-5}$	1.17
L1375.16-20-1000	16x20	20	16	12.90	17.08	1000	$4{,}36\times10^{-5}$	1.46
L1375.16-20-1500	16x20	20	16	12.90	17.08	1500	$4{,}36\times10^{-5}$	2.19
L1375.16-20-2000	16x20	20	16	12.90	17.08	2000	$4{,}36\times10^{-5}$	2.92

Order No.	Screw dia. x lead	Lead	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.16-20-2500	16x20	20	16	12.90	17.08	2500	$4{,}36x10^{-5}$	3.65
L1375.16-20-3000	16x20	20	16	12.90	17.08	3000	$4{,}36x10^{-5}$	4.38
L1375.16-32-0500	16x32	32	16	12.90	17.08	500	$4{,}36x10^{-5}$	0.73
L1375.16-32-0600	16x32	32	16	12.90	17.08	600	$4{,}36x10^{-5}$	0.88
L1375.16-32-0800	16x32	32	16	12.90	17.08	800	$4{,}36x10^{-5}$	1.17
L1375.16-32-1000	16x32	32	16	12.90	17.08	1000	$4{,}36x10^{-5}$	1.46
L1375.16-32-1500	16x32	32	16	12.90	17.08	1500	$4{,}36x10^{-5}$	2.19
L1375.16-32-2000	16x32	32	16	12.90	17.08	2000	$4{,}36x10^{-5}$	2.92
L1375.16-32-2500	16x32	32	16	12.90	17.08	2500	$4{,}36x10^{-5}$	3.65
L1375.16-32-3000	16x32	32	16	12.90	17.08	3000	$4{,}36x10^{-5}$	4.38

Ø 20 Ball Screws
rolled



L1375.20



Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,20 or 50mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 3000mm available.

For ball screw nuts see parts L1370-L1374 & L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.
Also available as a left hand thread for 5mm pitch.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

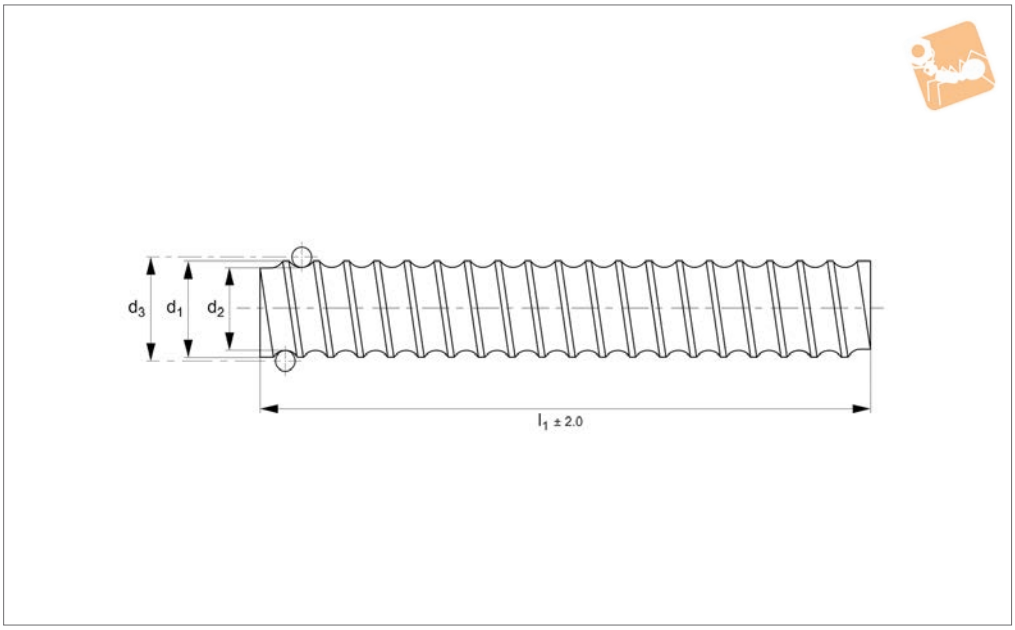
Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.20-05-0500	20x 5	5	20	17.9	21.08	500	$1{,}12x10^{-4}$	1.18
L1375.20-05-0600	20x 5	5	20	17.9	21.08	600	$1{,}12x10^{-4}$	1.41
L1375.20-05-0800	20x 5	5	20	17.9	21.08	800	$1{,}12x10^{-4}$	1.88
L1375.20-05-1000	20x 5	5	20	17.9	21.08	1000	$1{,}12x10^{-4}$	2.35
L1375.20-05-1500	20x 5	5	20	17.9	21.08	1500	$1{,}12x10^{-4}$	3.53
L1375.20-05-2000	20x 5	5	20	17.9	21.08	2000	$1{,}12x10^{-4}$	4.70
L1375.20-05-2500	20x 5	5	20	17.9	21.08	2500	$1{,}12x10^{-4}$	5.88
L1375.20-05-3000	20x 5	5	20	17.9	21.08	3000	$1{,}12x10^{-4}$	7.05
L1375.20-10-0500	20x10	10	10	17.9	21.08	500	$1{,}18x10^{-4}$	1.21
L1375.20-10-0600	20x10	10	10	17.9	21.08	600	$1{,}18x10^{-4}$	1.45
L1375.20-10-0800	20x10	10	10	17.9	21.08	800	$1{,}18x10^{-4}$	1.93
L1375.20-10-1000	20x10	10	10	17.9	21.08	1000	$1{,}18x10^{-4}$	2.41
L1375.20-10-1500	20x10	10	10	17.9	21.08	1500	$1{,}18x10^{-4}$	3.62
L1375.20-10-2000	20x10	10	10	17.9	21.08	2000	$1{,}18x10^{-4}$	4.82
L1375.20-10-2500	20x10	10	10	17.9	21.08	2500	$1{,}18x10^{-4}$	6.03
L1375.20-10-3000	20x10	10	10	17.9	21.08	3000	$1{,}18x10^{-4}$	7.23
L1375.20-20-0500	20x20	20	20	17.6	20.76	500	$1{,}00x10^{-4}$	1.11
L1375.20-20-0600	20x20	20	20	17.6	20.76	600	$1{,}00x10^{-4}$	1.33
L1375.20-20-0800	20x20	20	20	17.6	20.76	800	$1{,}00x10^{-4}$	1.77
L1375.20-20-1000	20x20	20	20	17.6	20.76	1000	$1{,}00x10^{-4}$	2.21
L1375.20-20-1500	20x20	20	20	17.6	20.76	1500	$1{,}00x10^{-4}$	3.32
L1375.20-20-2000	20x20	20	20	17.6	20.76	2000	$1{,}00x10^{-4}$	4.42
L1375.20-20-2500	20x20	20	20	17.6	20.76	2500	$1{,}00x10^{-4}$	5.53
L1375.20-20-3000	20x20	20	20	17.6	20.76	3000	$1{,}00x10^{-4}$	6.63
L1375.20-40-0500	20x40	40	20	17.6	20.76	500	$1{,}00x10^{-4}$	1.11
L1375.20-40-0600	20x40	40	20	17.6	20.76	600	$1{,}00x10^{-4}$	1.33
L1375.20-40-0800	20x40	40	20	17.6	20.76	800	$1{,}00x10^{-4}$	1.77
L1375.20-40-1000	20x40	40	20	17.6	20.76	1000	$1{,}00x10^{-4}$	2.21
L1375.20-40-1500	20x40	40	20	17.6	20.76	1500	$1{,}00x10^{-4}$	3.32

Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.20-40-2000	20x40	40	20	17.6	20.76	2000	$1{,}00x10^{-4}$	4.42
L1375.20-40-2500	20x40	40	20	17.6	20.76	2500	$1{,}00x10^{-4}$	5.53
L1375.20-40-3000	20x40	40	20	17.6	20.76	3000	$1{,}00x10^{-4}$	6.63

Ø 25 Ball Screws
rolled



L1375.25



Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,10 or 2mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.
For ball screw nuts see parts L1370-L1374 & L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

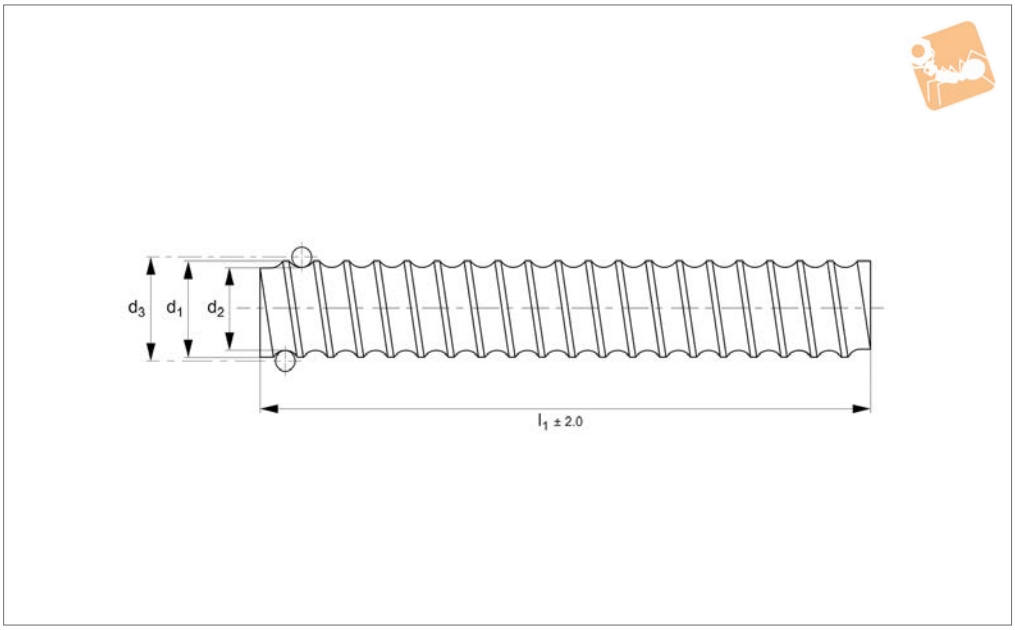
Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.25-05-0500	25x 5	5	25	22.9	26.08	500	$2{,}62\times10^{-4}$	1.80
L1375.25-05-0600	25x 5	5	25	22.9	26.08	600	$2{,}62\times10^{-4}$	2.15
L1375.25-05-0800	25x 5	5	25	22.9	26.08	800	$2{,}62\times10^{-4}$	2.87
L1375.25-05-1000	25x 5	5	25	22.9	26.08	1000	$2{,}62\times10^{-4}$	3.59
L1375.25-05-1500	25x 5	5	25	22.9	26.08	1500	$2{,}62\times10^{-4}$	5.39
L1375.25-05-2000	25x 5	5	25	22.9	26.08	2000	$2{,}62\times10^{-4}$	7.18
L1375.25-05-2500	25x 5	5	25	22.9	26.08	2500	$2{,}62\times10^{-4}$	8.98
L1375.25-05-3000	25x 5	5	25	22.9	26.08	3000	$2{,}62\times10^{-4}$	10.77
L1375.25-05-3500	25x 5	5	25	22.9	26.08	3500	$2{,}62\times10^{-4}$	2.87
L1375.25-05-4000	25x 5	5	25	22.9	26.08	4000	$2{,}62\times10^{-4}$	3.59
L1375.25-05-4500	25x 5	5	25	22.9	26.08	4500	$2{,}62\times10^{-4}$	5.39
L1375.25-05-5000	25x 5	5	25	22.9	26.08	5000	$2{,}62\times10^{-4}$	7.18
L1375.25-05-5500	25x 5	5	25	22.9	26.08	5500	$2{,}62\times10^{-4}$	8.98
L1375.25-05-6000	25x 5	5	25	22.9	26.08	6000	$2{,}62\times10^{-4}$	10.77
L1375.25-10-0500	25x10	10	25	20.8	27.15	500	$2{,}94\times10^{-4}$	1.91
L1375.25-10-0600	25x10	10	25	20.8	27.15	600	$2{,}94\times10^{-4}$	2.29
L1375.25-10-0800	25x10	10	25	20.8	27.15	800	$2{,}94\times10^{-4}$	3.05
L1375.25-10-1000	25x10	10	25	20.8	27.15	1000	$2{,}94\times10^{-4}$	3.81
L1375.25-10-1500	25x10	10	25	20.8	27.15	1500	$2{,}94\times10^{-4}$	5.72
L1375.25-10-2000	25x10	10	25	20.8	27.15	2000	$2{,}94\times10^{-4}$	7.62
L1375.25-10-2500	25x10	10	25	20.8	27.15	2500	$2{,}94\times10^{-4}$	9.53
L1375.25-10-3000	25x10	10	25	20.8	27.15	3000	$2{,}94\times10^{-4}$	11.43
L1375.25-10-3500	25x10	10	25	22.9	26.08	3500	$2{,}62\times10^{-4}$	2.87
L1375.25-10-4000	25x10	10	25	22.9	26.08	4000	$2{,}62\times10^{-4}$	3.59
L1375.25-10-4500	25x10	10	25	22.9	26.08	4500	$2{,}62\times10^{-4}$	5.39
L1375.25-10-5000	25x10	10	25	22.9	26.08	5000	$2{,}62\times10^{-4}$	7.18
L1375.25-10-5500	25x10	10	25	22.9	26.08	5500	$2{,}62\times10^{-4}$	8.98
L1375.25-10-6000	25x10	10	25	22.9	26.08	6000	$2{,}62\times10^{-4}$	10.77
L1375.25-25-0500	25x25	25	25	22.9	26.09	500	$2{,}60\times10^{-4}$	1.82
L1375.25-25-0600	25x25	25	25	22.9	26.09	600	$2{,}60\times10^{-4}$	2.18

Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.25-25-0800	25x25	25	25	22.9	26.09	800	$2{,}60 \times 10^{-4}$	2.91
L1375.25-25-1000	25x25	25	25	22.9	26.09	1000	$2{,}60 \times 10^{-4}$	3.64
L1375.25-25-1500	25x25	25	25	22.9	26.09	1500	$2{,}60 \times 10^{-4}$	5.46
L1375.25-25-2000	25x25	25	25	22.9	26.09	2000	$2{,}60 \times 10^{-4}$	7.28
L1375.25-25-2500	25x25	25	25	22.9	26.09	2500	$2{,}60 \times 10^{-4}$	9.10
L1375.25-25-3000	25x25	25	25	22.9	26.09	3000	$2{,}60 \times 10^{-4}$	10.92
L1375.25-25-3500	25x25	25	25	22.9	26.08	3500	$2{,}62 \times 10^{-4}$	2.87
L1375.25-25-4000	25x25	25	25	22.9	26.08	4000	$2{,}62 \times 10^{-4}$	3.59
L1375.25-25-4500	25x25	25	25	22.9	26.08	4500	$2{,}62 \times 10^{-4}$	5.39
L1375.25-25-5000	25x25	25	25	22.9	26.08	5000	$2{,}62 \times 10^{-4}$	7.18
L1375.25-25-5500	25x25	25	25	22.9	26.08	5500	$2{,}62 \times 10^{-4}$	8.98
L1375.25-25-6000	25x25	25	25	22.9	26.08	6000	$2{,}62 \times 10^{-4}$	10.77
L1375.25-50-0500	25x50	50	25	22.9	26.09	500	$2{,}60 \times 10^{-4}$	1.82
L1375.25-50-0600	25x50	50	25	22.9	26.09	600	$2{,}60 \times 10^{-4}$	2.18
L1375.25-50-0800	25x50	50	25	22.9	26.09	800	$2{,}60 \times 10^{-4}$	2.91
L1375.25-50-1000	25x50	50	25	22.9	26.09	1000	$2{,}60 \times 10^{-4}$	3.64
L1375.25-50-1500	25x50	50	25	22.9	26.09	1500	$2{,}60 \times 10^{-4}$	5.46
L1375.25-50-2000	25x50	50	25	22.9	26.09	2000	$2{,}60 \times 10^{-4}$	7.28
L1375.25-50-2500	25x50	50	25	22.9	26.09	2500	$2{,}60 \times 10^{-4}$	9.10
L1375.25-50-3000	25x50	50	25	22.9	26.09	3000	$2{,}60 \times 10^{-4}$	10.92
L1375.25-50-3500	25x50	50	25	22.9	26.08	3500	$2{,}62 \times 10^{-4}$	2.87
L1375.25-50-4000	25x50	50	25	22.9	26.08	4000	$2{,}62 \times 10^{-4}$	3.59
L1375.25-50-4500	25x50	50	25	22.9	26.08	4500	$2{,}62 \times 10^{-4}$	5.39
L1375.25-50-5000	25x50	50	25	22.9	26.08	5000	$2{,}62 \times 10^{-4}$	7.18
L1375.25-50-5500	25x50	50	25	22.9	26.08	5500	$2{,}62 \times 10^{-4}$	8.98
L1375.25-50-6000	25x50	50	25	22.9	26.08	6000	$2{,}62 \times 10^{-4}$	10.77

Ø 32 Ball Screws
rolled



L1375.32



Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,10,20 or 40mm lead.
Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.
For ball screw nuts see partsL1370-L1374 & L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.
Also available as a left hand thread for 5mm pitch.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

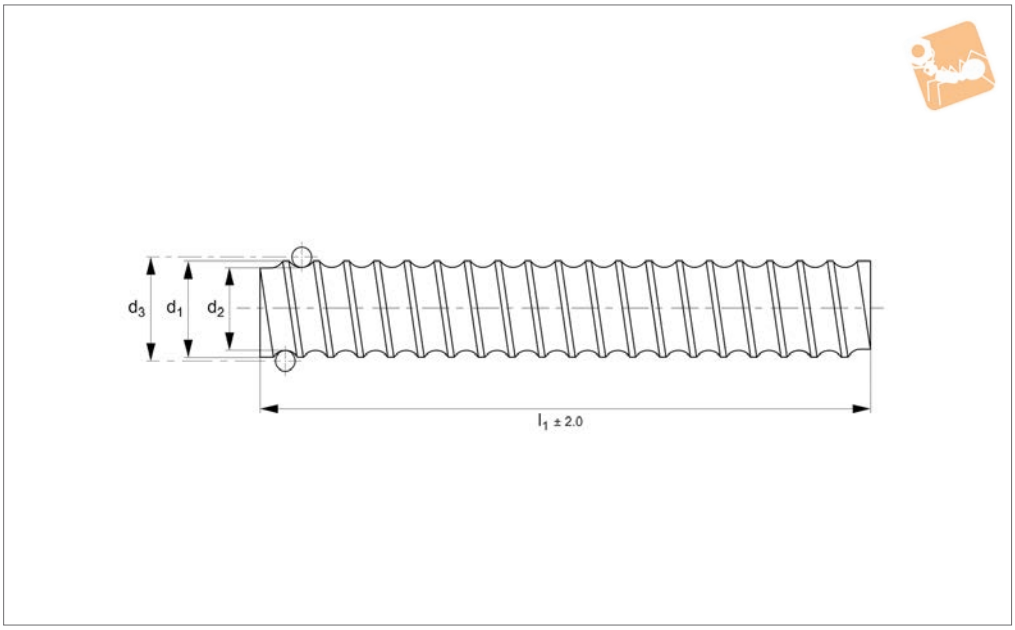
Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.32-05-0500	32x 5	5	32	29.90	33.08	500	$7{,}25\times10^{-4}$	2.99
L1375.32-05-0600	32x 5	5	32	29.90	33.08	600	$7{,}25\times10^{-4}$	3.59
L1375.32-05-0800	32x 5	5	32	29.90	33.08	800	$7{,}25\times10^{-4}$	4.78
L1375.32-05-1000	32x 5	5	32	29.90	33.08	1000	$7{,}25\times10^{-4}$	5.98
L1375.32-05-1500	32x 5	5	32	29.90	33.08	1500	$7{,}25\times10^{-4}$	8.97
L1375.32-05-2000	32x 5	5	32	29.90	33.08	2000	$7{,}25\times10^{-4}$	11.96
L1375.32-05-2500	32x 5	5	32	29.90	33.08	2500	$7{,}25\times10^{-4}$	14.95
L1375.32-05-3000	32x 5	5	32	29.90	33.08	3000	$7{,}25\times10^{-4}$	17.94
L1375.32-05-3500	32x 5	5	32	29.90	33.08	3500	$7{,}25\times10^{-4}$	4.78
L1375.32-05-4000	32x 5	5	32	29.90	33.08	4000	$7{,}25\times10^{-4}$	5.98
L1375.32-05-4500	32x 5	5	32	29.90	33.08	4500	$7{,}25\times10^{-4}$	8.97
L1375.32-05-5000	32x 5	5	32	29.90	33.08	5000	$7{,}25\times10^{-4}$	11.96
L1375.32-05-5500	32x 5	5	32	29.90	33.08	5500	$7{,}25\times10^{-4}$	14.95
L1375.32-05-6000	32x 5	5	32	29.90	33.08	6000	$7{,}25\times10^{-4}$	14.95
L1375.32-10-0500	32x10	10	32	27.80	34.15	500	$7{,}69\times10^{-4}$	3.08
L1375.32-10-0600	32x10	10	32	27.80	34.15	600	$7{,}69\times10^{-4}$	3.70
L1375.32-10-0800	32x10	10	32	27.80	34.15	800	$7{,}69\times10^{-4}$	4.93
L1375.32-10-1000	32x10	10	32	27.80	34.15	1000	$7{,}69\times10^{-4}$	6.16
L1375.32-10-1500	32x10	10	32	27.80	34.15	1500	$7{,}69\times10^{-4}$	9.24
L1375.32-10-2000	32x10	10	32	27.80	34.15	2000	$7{,}69\times10^{-4}$	12.32
L1375.32-10-2500	32x10	10	32	27.80	34.15	2500	$7{,}69\times10^{-4}$	15.40
L1375.32-10-3000	32x10	10	32	27.80	34.15	3000	$7{,}69\times10^{-4}$	18.48
L1375.32-10-3500	32x10	10	32	29.90	33.08	3500	$7{,}25\times10^{-4}$	4.78
L1375.32-10-4000	32x10	10	32	29.90	33.08	4000	$7{,}25\times10^{-4}$	5.98
L1375.32-10-4500	32x10	10	32	29.90	33.08	4500	$7{,}25\times10^{-4}$	8.97
L1375.32-10-5000	32x10	10	32	29.90	33.08	5000	$7{,}25\times10^{-4}$	11.96
L1375.32-10-5500	32x10	10	32	29.90	33.08	5500	$7{,}25\times10^{-4}$	14.95
L1375.32-10-6000	32x10	10	32	29.90	33.08	6000	$7{,}25\times10^{-4}$	14.95
L1375.32-20-0500	32x20	20	32	29.38	33.35	500	$7{,}76\times10^{-4}$	3.19

Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.32-20-0600	32x20	20	32	29.38	33.35	600	$7{,}76x10^{-4}$	3.82
L1375.32-20-0800	32x20	20	32	29.38	33.35	800	$7{,}76x10^{-4}$	5.10
L1375.32-20-1000	32x20	20	32	29.38	33.35	1000	$7{,}76x10^{-4}$	6.37
L1375.32-20-1500	32x20	20	32	29.38	33.35	1500	$7{,}76x10^{-4}$	9.56
L1375.32-20-2000	32x20	20	32	29.38	33.35	2000	$7{,}76x10^{-4}$	12.74
L1375.32-20-2500	32x20	20	32	29.38	33.35	2500	$7{,}76x10^{-4}$	15.93
L1375.32-20-3000	32x20	20	32	29.38	33.35	3000	$7{,}76x10^{-4}$	19.11
L1375.32-20-3500	32x20	20	32	29.90	33.08	3500	$7{,}25x10^{-4}$	4.78
L1375.32-20-4000	32x20	20	32	29.90	33.08	4000	$7{,}25x10^{-4}$	5.98
L1375.32-20-4500	32x20	20	32	29.90	33.08	4500	$7{,}25x10^{-4}$	8.97
L1375.32-20-5000	32x20	20	32	29.90	33.08	5000	$7{,}25x10^{-4}$	11.96
L1375.32-20-5500	32x20	20	32	29.90	33.08	5500	$7{,}25x10^{-4}$	14.95
L1375.32-20-6000	32x20	20	32	29.90	33.08	6000	$7{,}25x10^{-4}$	14.95
L1375.32-32-0500	32x32	32	32	28.40	32.35	500	$6{,}89x10^{-4}$	2.91
L1375.32-32-0600	32x32	32	32	28.40	32.35	600	$6{,}89x10^{-4}$	3.49
L1375.32-32-0800	32x32	32	32	28.40	32.35	800	$6{,}89x10^{-4}$	4.65
L1375.32-32-1000	32x32	32	32	28.40	32.35	1000	$6{,}89x10^{-4}$	5.81
L1375.32-32-1500	32x32	32	32	28.40	32.35	1500	$6{,}89x10^{-4}$	8.72
L1375.32-32-2000	32x32	32	32	28.40	32.35	2000	$6{,}89x10^{-4}$	11.62
L1375.32-32-2500	32x32	32	32	28.40	32.35	2500	$6{,}89x10^{-4}$	14.53
L1375.32-32-3000	32x32	32	32	28.40	32.35	3000	$6{,}89x10^{-4}$	17.43
L1375.32-32-3500	32x32	32	32	28.40	32.35	3500	$6{,}89x10^{-4}$	4.65
L1375.32-32-4000	32x32	32	32	28.40	32.35	4000	$6{,}89x10^{-4}$	5.81
L1375.32-32-4500	32x32	32	32	28.40	32.35	4500	$6{,}89x10^{-4}$	8.72
L1375.32-32-5000	32x32	32	32	28.40	32.35	5000	$6{,}89x10^{-4}$	11.62
L1375.32-32-5500	32x32	32	32	28.40	32.35	5500	$6{,}89x10^{-4}$	14.53
L1375.32-32-6000	32x32	32	32	28.40	32.35	6000	$6{,}89x10^{-4}$	17.43
L1375.32-64-0500	32x64	64	32	28.40	32.35	500	$6{,}89x10^{-4}$	2.91
L1375.32-64-0600	32x64	64	32	28.40	32.35	600	$6{,}89x10^{-4}$	3.49
L1375.32-64-0800	32x64	64	32	28.40	32.35	800	$6{,}89x10^{-4}$	4.65
L1375.32-64-1000	32x64	64	32	28.40	32.35	1000	$6{,}89x10^{-4}$	5.81
L1375.32-64-1500	32x64	64	32	28.40	32.35	1500	$6{,}89x10^{-4}$	8.72
L1375.32-64-2000	32x64	64	32	28.40	32.35	2000	$6{,}89x10^{-4}$	11.62
L1375.32-64-2500	32x64	64	32	28.40	32.35	2500	$6{,}89x10^{-4}$	14.53
L1375.32-64-3000	32x64	64	32	28.40	32.35	3000	$6{,}89x10^{-4}$	17.43
L1375.32-64-3500	32x64	64	32	28.40	32.35	3500	$6{,}89x10^{-4}$	4.65
L1375.32-64-4000	32x64	64	32	28.40	32.35	4000	$6{,}89x10^{-4}$	5.81
L1375.32-64-4500	32x64	64	32	28.40	32.35	4500	$6{,}89x10^{-4}$	8.72
L1375.32-64-5000	32x64	64	32	28.40	32.35	5000	$6{,}89x10^{-4}$	11.62
L1375.32-64-5500	32x64	64	32	28.40	32.35	5500	$6{,}89x10^{-4}$	14.53
L1375.32-64-6000	32x64	64	32	28.40	32.35	6000	$6{,}89x10^{-4}$	17.43

Ø 40 Ball Screws
rolled



L1375.40



Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,10 or 20mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.
For ball screw nuts see partsL1370-L1374 & L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

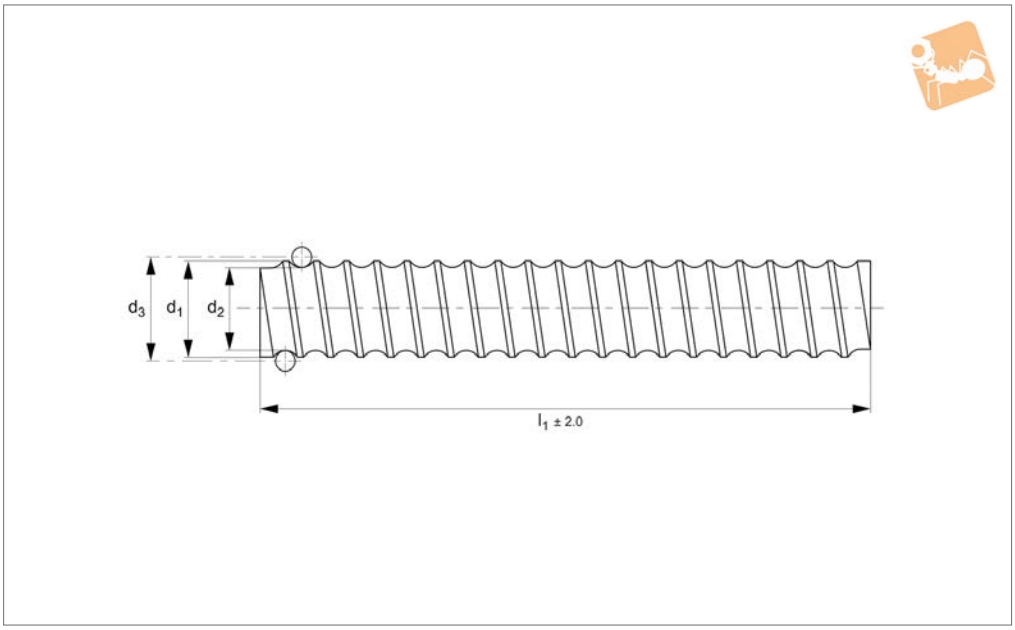
Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.40-05-0500	40x 5	5	40	37.9	41.08	500	$1{,}81\times10^{-3}$	4.72
L1375.40-05-0600	40x 5	5	40	37.9	41.08	600	$1{,}81\times10^{-3}$	5.66
L1375.40-05-0800	40x 5	5	40	37.9	41.08	800	$1{,}81\times10^{-3}$	7.55
L1375.40-05-1000	40x 5	5	40	37.9	41.08	1000	$1{,}81\times10^{-3}$	9.44
L1375.40-05-1500	40x 5	5	40	37.9	41.08	1500	$1{,}81\times10^{-3}$	14.16
L1375.40-05-2000	40x 5	5	40	37.9	41.08	2000	$1{,}81\times10^{-3}$	18.88
L1375.40-05-2500	40x 5	5	40	37.9	41.08	2500	$1{,}81\times10^{-3}$	23.60
L1375.40-05-3000	40x 5	5	40	37.9	41.08	3000	$1{,}81\times10^{-3}$	28.32
L1375.40-05-3500	40x 5	5	40	37.9	41.08	3500	$1{,}81\times10^{-3}$	7.55
L1375.40-05-4000	40x 5	5	40	37.9	41.08	4000	$1{,}81\times10^{-3}$	9.44
L1375.40-05-4500	40x 5	5	40	37.9	41.08	4500	$1{,}81\times10^{-3}$	14.16
L1375.40-05-5000	40x 5	5	40	37.9	41.08	5000	$1{,}81\times10^{-3}$	18.88
L1375.40-05-5500	40x 5	5	40	37.9	41.08	5500	$1{,}81\times10^{-3}$	23.60
L1375.40-05-6000	40x 5	5	40	37.9	41.08	6000	$1{,}81\times10^{-3}$	28.32
L1375.40-10-0500	40x10	10	40	35.8	42.15	500	$1{,}66\times10^{-3}$	4.51
L1375.40-10-0600	40x10	10	40	35.8	42.15	600	$1{,}66\times10^{-3}$	5.41
L1375.40-10-0800	40x10	10	40	35.8	42.15	800	$1{,}66\times10^{-3}$	7.22
L1375.40-10-1000	40x10	10	40	35.8	42.15	1000	$1{,}66\times10^{-3}$	9.02
L1375.40-10-1500	40x10	10	40	35.8	42.15	1500	$1{,}66\times10^{-3}$	13.53
L1375.40-10-2000	40x10	10	40	35.8	42.15	2000	$1{,}66\times10^{-3}$	18.04
L1375.40-10-2500	40x10	10	40	35.8	42.15	2500	$1{,}66\times10^{-3}$	22.55
L1375.40-10-3000	40x10	10	40	35.8	42.15	3000	$1{,}66\times10^{-3}$	27.06
L1375.40-10-3500	40x10	10	40	37.9	42.15	3500	$1{,}81\times10^{-3}$	7.55
L1375.40-10-4000	40x10	10	40	37.9	42.15	4000	$1{,}81\times10^{-3}$	9.44
L1375.40-10-4500	40x10	10	40	37.9	42.15	4500	$1{,}81\times10^{-3}$	14.16
L1375.40-10-5000	40x10	10	40	37.9	42.15	5000	$1{,}81\times10^{-3}$	18.88
L1375.40-10-5500	40x10	10	40	37.9	42.15	5500	$1{,}81\times10^{-3}$	23.60
L1375.40-10-6000	40x10	10	40	37.9	42.15	6000	$1{,}81\times10^{-3}$	28.32
L1375.40-20-0500	40x20	20	40	35.8	42.15	500	$1{,}66\times10^{-3}$	4.51
L1375.40-20-0600	40x20	20	40	35.8	42.15	600	$1{,}66\times10^{-3}$	5.41

Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.40-20-0800	40x20	20	40	35.8	42.15	800	$1{,}66x10^{-3}$	7.22
L1375.40-20-1000	40x20	20	40	35.8	42.15	1000	$1{,}66x10^{-3}$	9.02
L1375.40-20-1500	40x20	20	40	35.8	42.15	1500	$1{,}66x10^{-3}$	13.53
L1375.40-20-2000	40x20	20	40	35.8	42.15	2000	$1{,}66x10^{-3}$	18.04
L1375.40-20-2500	40x20	20	40	35.8	42.15	2500	$1{,}66x10^{-3}$	22.55
L1375.40-20-3000	40x20	20	40	35.8	42.15	3000	$1{,}66x10^{-3}$	27.06
L1375.40-20-3500	40x20	20	40	37.9	41.08	3500	$1{,}81x10^{-3}$	7.55
L1375.40-20-4000	40x20	20	40	37.9	41.08	4000	$1{,}81x10^{-3}$	9.44
L1375.40-20-4500	40x20	20	40	37.9	41.08	4500	$1{,}81x10^{-3}$	14.16
L1375.40-20-5000	40x20	20	40	37.9	41.08	5000	$1{,}81x10^{-3}$	18.88
L1375.40-20-5500	40x20	20	40	37.9	41.08	5500	$1{,}81x10^{-3}$	23.60
L1375.40-20-6000	40x20	20	40	37.9	41.08	6000	$1{,}81x10^{-3}$	28.32
L1375.40-40-0500	40x40	40	40	33.2	39.52	500	$1{,}43x10^{-3}$	4.15
L1375.40-40-0600	40x40	40	40	33.2	39.52	600	$1{,}43x10^{-3}$	4.97
L1375.40-40-0800	40x40	40	40	33.2	39.52	800	$1{,}43x10^{-3}$	6.63
L1375.40-40-1000	40x40	40	40	33.2	39.52	1000	$1{,}43x10^{-3}$	8.29
L1375.40-40-1500	40x40	40	40	33.2	39.52	1500	$1{,}43x10^{-3}$	12.44
L1375.40-40-2000	40x40	40	40	33.2	39.52	2000	$1{,}43x10^{-3}$	16.58
L1375.40-40-2500	40x40	40	40	33.2	39.52	2500	$1{,}43x10^{-3}$	20.73
L1375.40-40-3000	40x40	40	40	33.2	39.52	3000	$1{,}43x10^{-3}$	24.87
L1375.40-40-3500	40x40	40	40	37.9	41.08	3500	$1{,}81x10^{-3}$	7.55
L1375.40-40-4000	40x40	40	40	37.9	41.08	4000	$1{,}81x10^{-3}$	9.44
L1375.40-40-4500	40x40	40	40	37.9	41.08	4500	$1{,}81x10^{-3}$	14.16
L1375.40-40-5000	40x40	40	40	37.9	41.08	5000	$1{,}81x10^{-3}$	18.88
L1375.40-40-5500	40x40	40	40	37.9	41.08	5500	$1{,}81x10^{-3}$	23.60
L1375.40-40-6000	40x40	40	40	37.9	41.08	6000	$1{,}81x10^{-3}$	28.32
L1375.40-80-0500	40x80	80	40	33.2	39.52	500	$1{,}43x10^{-3}$	4.15
L1375.40-80-0600	40x80	80	40	33.2	39.52	600	$1{,}43x10^{-3}$	4.97
L1375.40-80-0800	40x80	80	40	33.2	39.52	800	$1{,}43x10^{-3}$	6.63
L1375.40-80-1000	40x80	80	40	33.2	39.52	1000	$1{,}43x10^{-3}$	8.29
L1375.40-80-1500	40x80	80	40	33.2	39.52	1500	$1{,}43x10^{-3}$	12.44
L1375.40-80-2000	40x80	80	40	33.2	39.52	2000	$1{,}43x10^{-3}$	16.58
L1375.40-80-2500	40x80	80	40	33.2	39.52	2500	$1{,}43x10^{-3}$	20.73
L1375.40-80-3000	40x80	80	40	33.2	39.52	3000	$1{,}43x10^{-3}$	24.87
L1375.40-80-3500	40x80	80	40	37.9	41.08	3500	$1{,}81x10^{-3}$	7.55
L1375.40-80-4000	40x80	80	40	37.9	41.08	4000	$1{,}81x10^{-3}$	9.44
L1375.40-80-4500	40x80	80	40	37.9	41.08	4500	$1{,}81x10^{-3}$	14.16
L1375.40-80-5000	40x80	80	40	37.9	41.08	5000	$1{,}81x10^{-3}$	18.88
L1375.40-80-5500	40x80	80	40	37.9	41.08	5500	$1{,}81x10^{-3}$	23.60
L1375.40-80-6000	40x80	80	40	37.9	41.08	6000	$1{,}81x10^{-3}$	28.32

Ø 50 Ball Screws
rolled



L1375.50



Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 10 or 20mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.
For ball screw nuts see parts L1370-L1374 & L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

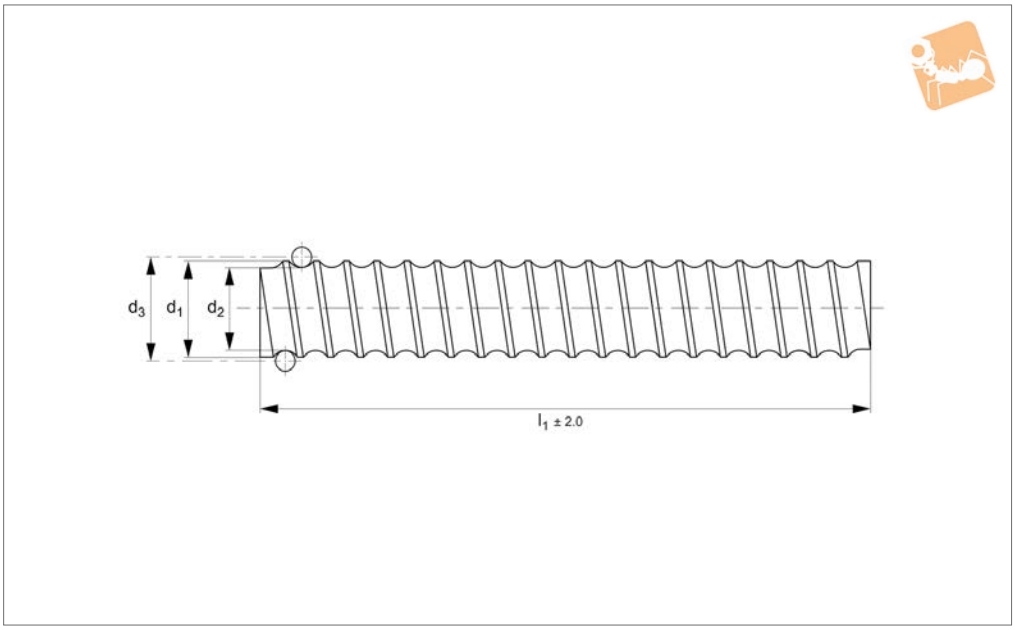
Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.50-05-0500	50x05	05	50	45.80	52.15	500	$4{,}19\times10^{-3}$	7.18
L1375.50-05-0600	50x05	05	50	45.80	52.15	600	$4{,}19\times10^{-3}$	8.61
L1375.50-05-0800	50x05	05	50	45.80	52.15	800	$4{,}19\times10^{-3}$	11.48
L1375.50-05-1000	50x05	05	50	45.80	52.15	1000	$4{,}19\times10^{-3}$	14.35
L1375.50-05-1500	50x05	05	50	45.80	52.15	1500	$4{,}19\times10^{-3}$	21.53
L1375.50-05-2000	50x05	05	50	45.80	52.15	2000	$4{,}19\times10^{-3}$	28.70
L1375.50-05-2500	50x05	05	50	45.80	52.15	2500	$4{,}19\times10^{-3}$	35.88
L1375.50-05-3000	50x05	05	50	45.80	52.15	3000	$4{,}19\times10^{-3}$	43.05
L1375.50-05-3500	50x05	05	50	45.80	52.15	3500	$4{,}19\times10^{-3}$	11.48
L1375.50-05-4000	50x05	05	50	45.80	52.15	4000	$4{,}19\times10^{-3}$	14.35
L1375.50-05-4500	50x05	05	50	45.80	52.15	4500	$4{,}19\times10^{-3}$	21.53
L1375.50-05-5000	50x05	05	50	45.80	52.15	5000	$4{,}19\times10^{-3}$	28.70
L1375.50-05-5500	50x05	05	50	45.80	52.15	5500	$4{,}19\times10^{-3}$	35.88
L1375.50-05-6000	50x05	05	50	45.80	52.15	6000	$4{,}19\times10^{-3}$	43.05
L1375.50-10-0500	50x10	10	50	45.80	52.15	500	$4{,}19\times10^{-3}$	7.18
L1375.50-10-0600	50x10	10	50	45.80	52.15	600	$4{,}19\times10^{-3}$	8.61
L1375.50-10-0800	50x10	10	50	45.80	52.15	800	$4{,}19\times10^{-3}$	11.48
L1375.50-10-1000	50x10	10	50	45.80	52.15	1000	$4{,}19\times10^{-3}$	14.35
L1375.50-10-1500	50x10	10	50	45.80	52.15	1500	$4{,}19\times10^{-3}$	21.53
L1375.50-10-2000	50x10	10	50	45.80	52.15	2000	$4{,}19\times10^{-3}$	28.70
L1375.50-10-2500	50x10	10	50	45.80	52.15	2500	$4{,}19\times10^{-3}$	35.88
L1375.50-10-3000	50x10	10	50	45.80	52.15	3000	$4{,}19\times10^{-3}$	43.05
L1375.50-10-3500	50x10	10	50	45.80	52.15	3500	$4{,}19\times10^{-3}$	11.48
L1375.50-10-4000	50x10	10	50	45.80	52.15	4000	$4{,}19\times10^{-3}$	14.35
L1375.50-10-4500	50x10	10	50	45.80	52.15	4500	$4{,}19\times10^{-3}$	21.53
L1375.50-10-5000	50x10	10	50	45.80	52.15	5000	$4{,}19\times10^{-3}$	28.70
L1375.50-10-5500	50x10	10	50	45.80	52.15	5500	$4{,}19\times10^{-3}$	35.88
L1375.50-10-6000	50x10	10	50	45.80	52.15	6000	$4{,}19\times10^{-3}$	43.05
L1375.50-20-0500	50x20	20	50	44.05	53.58	500	$4{,}45\times10^{-3}$	7.41
L1375.50-20-0600	50x20	20	50	44.05	53.58	600	$4{,}45\times10^{-3}$	8.89

Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.50-20-0800	50x20	20	50	44.05	53.58	800	$4{,}45x10^{-3}$	11.86
L1375.50-20-1000	50x20	20	50	44.05	53.58	1000	$4{,}45x10^{-3}$	14.82
L1375.50-20-1500	50x20	20	50	44.05	53.58	1500	$4{,}45x10^{-3}$	22.23
L1375.50-20-2000	50x20	20	50	44.05	53.58	2000	$4{,}45x10^{-3}$	29.64
L1375.50-20-2500	50x20	20	50	44.05	53.58	2500	$4{,}45x10^{-3}$	37.05
L1375.50-20-3000	50x20	20	50	44.05	53.58	3000	$4{,}45x10^{-3}$	44.46
L1375.50-20-3500	50x20	20	50	44.05	53.58	3500	$4{,}45x10^{-3}$	11.86
L1375.50-20-4000	50x20	20	50	44.05	53.58	4000	$4{,}45x10^{-3}$	14.82
L1375.50-20-4500	50x20	20	50	44.05	53.58	4500	$4{,}45x10^{-3}$	22.23
L1375.50-20-5000	50x20	20	50	44.05	53.58	5000	$4{,}45x10^{-3}$	29.64
L1375.50-20-5500	50x20	20	50	44.05	53.58	5500	$4{,}45x10^{-3}$	37.05
L1375.50-20-6000	50x20	20	50	44.05	53.58	6000	$4{,}45x10^{-3}$	44.46
L1375.50-50-0500	50x50	50	50	44.05	53.58	500	$4{,}45x10^{-3}$	7.30
L1375.50-50-0600	50x50	50	50	44.05	53.58	600	$4{,}45x10^{-3}$	8.76
L1375.50-50-0800	50x50	50	50	44.05	53.58	800	$4{,}45x10^{-3}$	11.68
L1375.50-50-1000	50x50	50	50	44.05	53.58	1000	$4{,}45x10^{-3}$	14.59
L1375.50-50-1500	50x50	50	50	44.05	53.58	1500	$4{,}45x10^{-3}$	21.89
L1375.50-50-2000	50x50	50	50	44.05	53.58	2000	$4{,}45x10^{-3}$	29.18
L1375.50-50-2500	50x50	50	50	44.05	53.58	2500	$4{,}45x10^{-3}$	36.48
L1375.50-50-3000	50x50	50	50	44.05	53.58	3000	$4{,}45x10^{-3}$	43.77
L1375.50-50-3500	50x50	50	50	44.05	53.58	3500	$4{,}45x10^{-3}$	11.68
L1375.50-50-4000	50x50	50	50	44.05	53.58	4000	$4{,}45x10^{-3}$	14.59
L1375.50-50-4500	50x50	50	50	44.05	53.58	4500	$4{,}45x10^{-3}$	21.89
L1375.50-50-5000	50x50	50	50	44.05	53.58	5000	$4{,}45x10^{-3}$	29.18
L1375.50-50-5500	50x50	50	50	44.05	53.58	5500	$4{,}45x10^{-3}$	36.48
L1375.50-50-6000	50x50	50	50	44.05	53.58	6000	$4{,}45x10^{-3}$	43.77
L1375.50-100-0500	50x100	100	50	44.05	53.58	500	$4{,}45x10^{-3}$	7.30
L1375.50-100-0600	50x100	100	50	44.05	53.58	600	$4{,}45x10^{-3}$	8.76
L1375.50-100-0800	50x100	100	50	44.05	53.58	800	$4{,}45x10^{-3}$	11.68
L1375.50-100-1000	50x100	100	50	44.05	53.58	1000	$4{,}45x10^{-3}$	14.59
L1375.50-100-1500	50x100	100	50	44.05	53.58	1500	$4{,}45x10^{-3}$	21.89
L1375.50-100-2000	50x100	100	50	44.05	53.58	2000	$4{,}45x10^{-3}$	29.18
L1375.50-100-2500	50x100	100	50	44.05	53.58	2500	$4{,}45x10^{-3}$	36.48
L1375.50-100-3000	50x100	100	50	44.05	53.58	3000	$4{,}45x10^{-3}$	43.77
L1375.50-100-3500	50x100	100	50	44.05	53.58	3500	$4{,}45x10^{-3}$	11.68
L1375.50-100-4000	50x100	100	50	44.05	53.58	4000	$4{,}45x10^{-3}$	14.59
L1375.50-100-4500	50x100	100	50	44.05	53.58	4500	$4{,}45x10^{-3}$	21.89
L1375.50-100-5000	50x100	100	50	44.05	53.58	5000	$4{,}45x10^{-3}$	29.18
L1375.50-100-5500	50x100	100	50	44.05	53.58	5500	$4{,}45x10^{-3}$	36.48
L1375.50-100-6000	50x100	100	50	44.05	53.58	6000	$4{,}45x10^{-3}$	43.77

Ø 80 Ball Screws
rolled



L1375.80

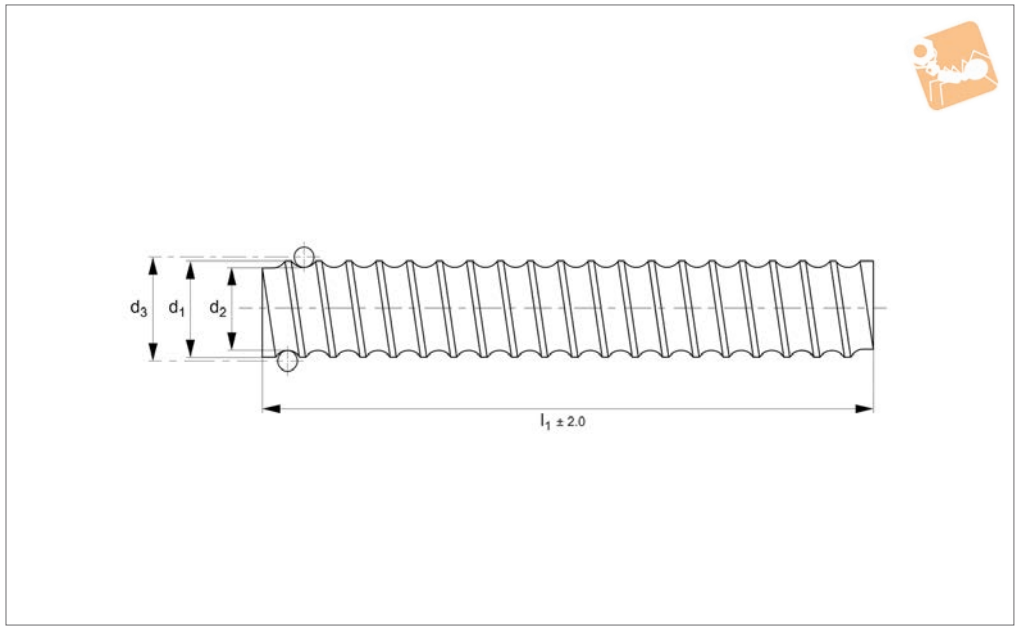


Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 10mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6500mm available.
For ball screw nuts see partsL1370-L1374 & L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.80-10-0500	80x10	10	80	75.8	82.15	500	$2,89x10^{-2}$	18.88
L1375.80-10-0600	80x10	10	80	75.8	82.15	600	$2,89x10^{-2}$	22.66
L1375.80-10-0700	80x10	10	80	75.8	82.15	700	$2,89x10^{-2}$	26.43
L1375.80-10-0800	80x10	10	80	75.8	82.15	800	$2,89x10^{-2}$	30.21
L1375.80-10-1000	80x10	10	80	75.8	82.15	1000	$2,89x10^{-2}$	37.76
L1375.80-10-1500	80x10	10	80	75.8	82.15	1500	$2,89x10^{-2}$	56.64
L1375.80-10-2000	80x10	10	80	75.8	82.15	2000	$2,89x10^{-2}$	75.52
L1375.80-10-2500	80x10	10	80	75.8	82.15	2500	$2,89x10^{-2}$	94.40
L1375.80-10-3000	80x10	10	80	75.8	82.15	3000	$2,89x10^{-2}$	113.28
L1375.80-10-3500	80x10	10	80	75.8	82.15	3500	$2,89x10^{-2}$	30.21
L1375.80-10-4000	80x10	10	80	75.8	82.15	4000	$2,89x10^{-2}$	37.76
L1375.80-10-4500	80x10	10	80	75.8	82.15	4500	$2,89x10^{-2}$	56.64
L1375.80-10-5000	80x10	10	80	75.8	82.15	5000	$2,89x10^{-2}$	75.52
L1375.80-10-5500	80x10	10	80	75.8	82.15	5500	$2,89x10^{-2}$	94.40
L1375.80-10-6000	80x10	10	80	75.8	82.15	6000	$2,89x10^{-2}$	113.28
L1375.80-10-6500	80x10	10	80	75.8	82.15	6500	$2,89x10^{-2}$	113.28





L1375.63

Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 10mm lead.
Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.
For ball screw nuts see parts L1370-L1374 & L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

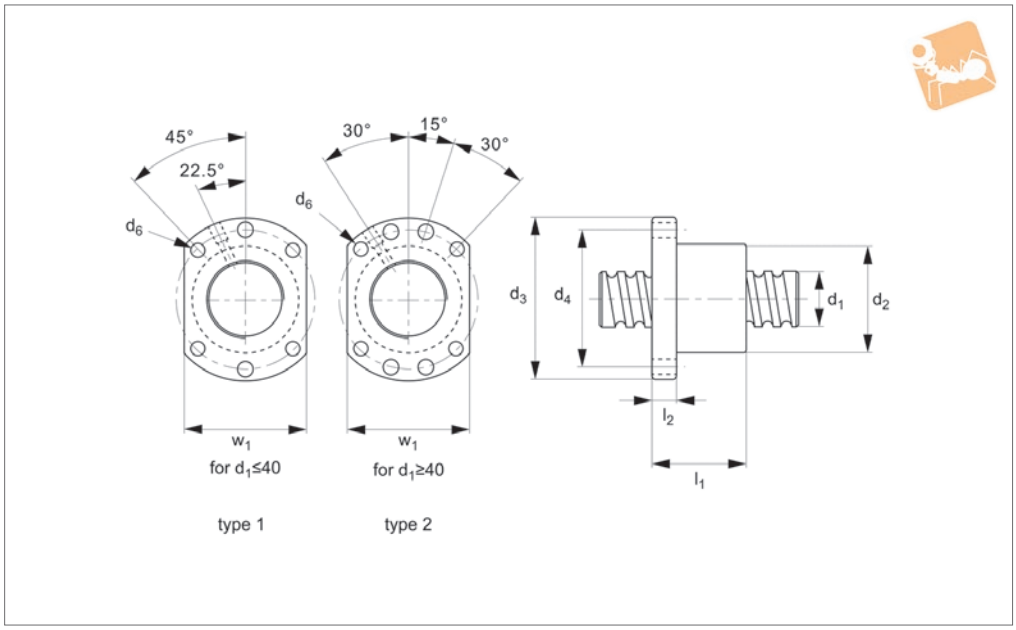
Order No.	Screw dia. x lead	Lead w_1	d_1	d_2	d_3	l_1	Mass moment of inertia kg·m²	Weight kg
L1375.63-10-0500	63x10	10	63	58.8	65.15	500	$1{,}09 \times 10^{-2}$	11.56
L1375.63-10-0600	63x10	10	63	58.8	65.15	600	$1{,}09 \times 10^{-2}$	13.87
L1375.63-10-0700	63x10	10	63	58.8	65.15	700	$1{,}09 \times 10^{-2}$	16.18
L1375.63-10-0800	63x10	10	63	58.8	65.15	800	$1{,}09 \times 10^{-2}$	18.50
L1375.63-10-1000	63x10	10	63	58.8	65.15	1000	$1{,}09 \times 10^{-2}$	23.12
L1375.63-10-1500	63x10	10	63	58.8	65.15	1500	$1{,}09 \times 10^{-2}$	34.68
L1375.63-10-2000	63x10	10	63	58.8	65.15	2000	$1{,}09 \times 10^{-2}$	46.24
L1375.63-10-2500	63x10	10	63	58.8	65.15	2500	$1{,}09 \times 10^{-2}$	57.80
L1375.63-10-3000	63x10	10	63	58.8	65.15	3000	$1{,}09 \times 10^{-2}$	69.36
L1375.63-10-3500	63x10	10	63	58.8	65.15	3500	$1{,}09 \times 10^{-2}$	18.50
L1375.63-10-4000	63x10	10	63	58.8	65.15	4000	$1{,}09 \times 10^{-2}$	23.12
L1375.63-10-4500	63x10	10	63	58.8	65.15	4500	$1{,}09 \times 10^{-2}$	34.68
L1375.63-10-5000	63x10	10	63	58.8	65.15	5000	$1{,}09 \times 10^{-2}$	46.24
L1375.63-10-5500	63x10	10	63	58.8	65.15	5500	$1{,}09 \times 10^{-2}$	57.80
L1375.63-10-6000	63x10	10	63	58.8	65.15	6000	$1{,}09 \times 10^{-2}$	69.36
L1375.63-10-6500	63x10	10	63	58.8	65.15	6500	$1{,}09 \times 10^{-2}$	69.36

Flanged Ball Nuts- Anti corrosion

DIN 69051, form B



L1377



Material

Black chrome steel (16MnCr5 or 100Cr6), with Vulkolan seals.
Precision class C7.

Technical Notes

Axial play for 5mm pitch = 0,05mm; for 10mm pitch = 0,10mm; for multi-starts = 0,20mm.
Preload max. 5% of max. dynamic load.
For axial run-out, concentricity and parallelism figures see technical pages.
With lubrication and fixing holes.
For use with ball screws no. L1377.
Anti corrosion finish consists of a thin layer of black chrome and produces good resistance to wear, and a protective effect against corrosion. Layer thickness 2-10µm.

Tips

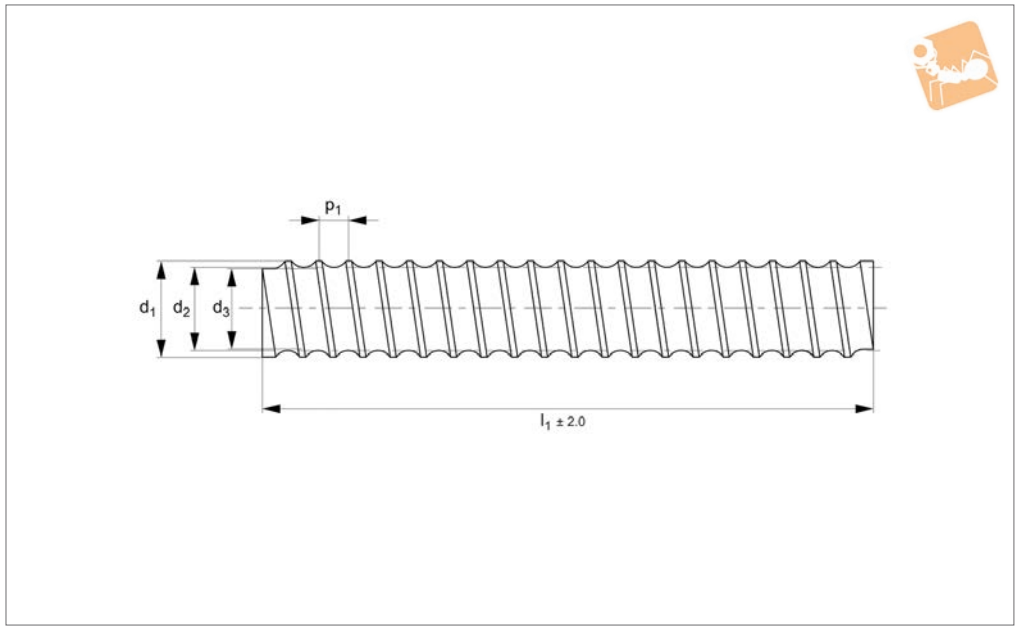
For easy mounting of the ball screw nuts see the nut bracket - part L1377.

Important Notes

Fit ball nut to screw using the sleeve provided. Offer up the ball nut to the screw and slide carefully on. Do not remove the ball nut from the sleeve provided - the ball bearings can come loose rendering the ball nut unusable.

Order No.	Type	Pitch	d_1 for screw	l_1	l_2	d_2 tol. G6	d_3 ±0.15	d_4 ±0.15	d_5 for	d_6	w_1 ±0.15	Ball dia.	Dyn. load C kN max.	Static load C_0 kN max.
L1377.16-05	Type 1	5	16	45	10	28	48	38	M 6	5.5	40	3.175	13.53	29.92
L1377.20-05	Type 1	5	20	51	10	36	58	47	M 6	6.6	44	3.175	15.21	38.00
L1377.25-05	Type 1	5	25	51	10	40	62	51	M 6	6.6	48	3.175	16.91	48.09
L1377.25-10	Type 1	10	25	80	12	40	62	51	M 6	6.6	48	4.762	28.96	71.54
L1377.32-05	Type 1	5	32	52	12	50	80	65	M 6	9.0	62	3.175	18.85	62.21
L1377.32-10	Type 1	10	32	85	12	50	80	65	M 6	9.0	62	6.350	47.12	119.72
L1377.40-05	Type 2	5	40	55	14	63	93	78	M 8	9.0	70	3.175	20.69	78.34
L1377.40-10	Type 2	10	40	88	14	63	93	78	M 8	9.0	70	6.340	52.95	152.00

Ø 16 Ball Screws- Anti Corrosion
rolled





L1377.16

Material
Black chrome steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5 or 10mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.

For ball screw nuts see part L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request. Anti corrosion finish consists of a thin layer of black chrome and produces good resistance to wear, and a protective effect against corrosion. Layer thickness 2µm to 10µm.

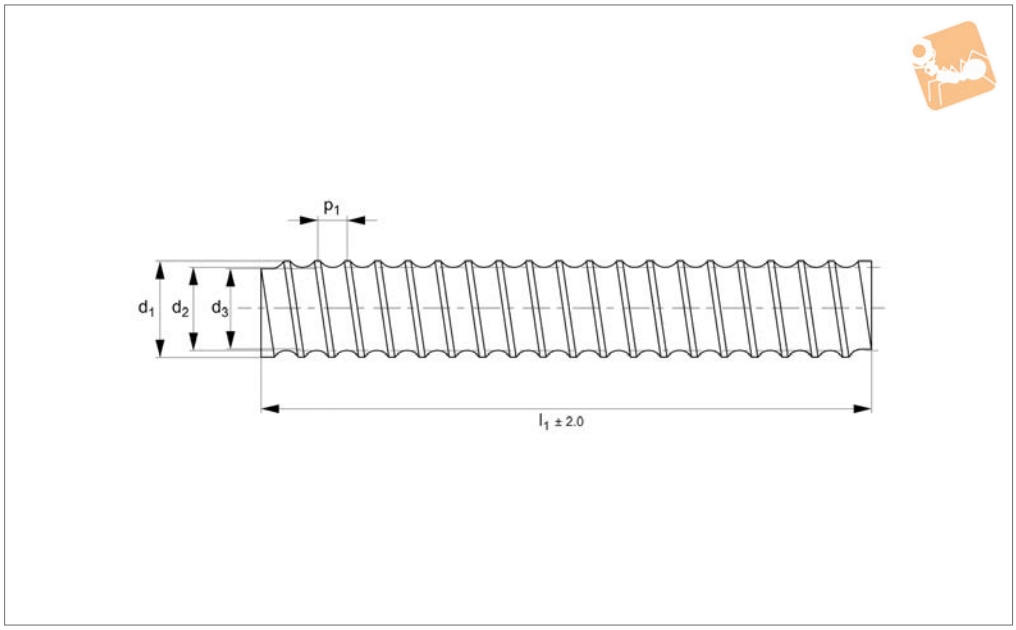
Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.

Order No.	Screw dia. x lead	d_1	l_1	d_2	d_3	Lead w_1	Mass moment of inertia kg·m²	Weight kg
L1377.16-05-0500	16x 5	17.08	500	16	13.9	5	$4{,}45x10^{-5}$	0.71
L1377.16-05-0600	16x 5	17.08	600	16	13.9	5	$4{,}45x10^{-5}$	0.845
L1377.16-05-0800	16x 5	17.08	800	16	13.9	5	$4{,}45x10^{-5}$	1.13
L1377.16-05-1000	16x 5	17.08	1000	16	13.9	5	$4{,}45x10^{-5}$	1.41
L1377.16-05-1500	16x 5	17.08	1500	16	13.9	5	$4{,}45x10^{-5}$	2.12
L1377.16-05-2000	16x 5	17.08	2000	16	13.9	5	$4{,}45x10^{-5}$	2.82
L1377.16-05-2500	16x 5	17.08	2500	16	13.9	5	$4{,}45x10^{-5}$	3.53
L1377.16-05-3000	16x 5	17.08	3000	16	13.9	5	$4{,}45x10^{-5}$	4.23

Ø 20 Ball Screws- Anti Corrosion
rolled



L1377.20



Material
Black chrome steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

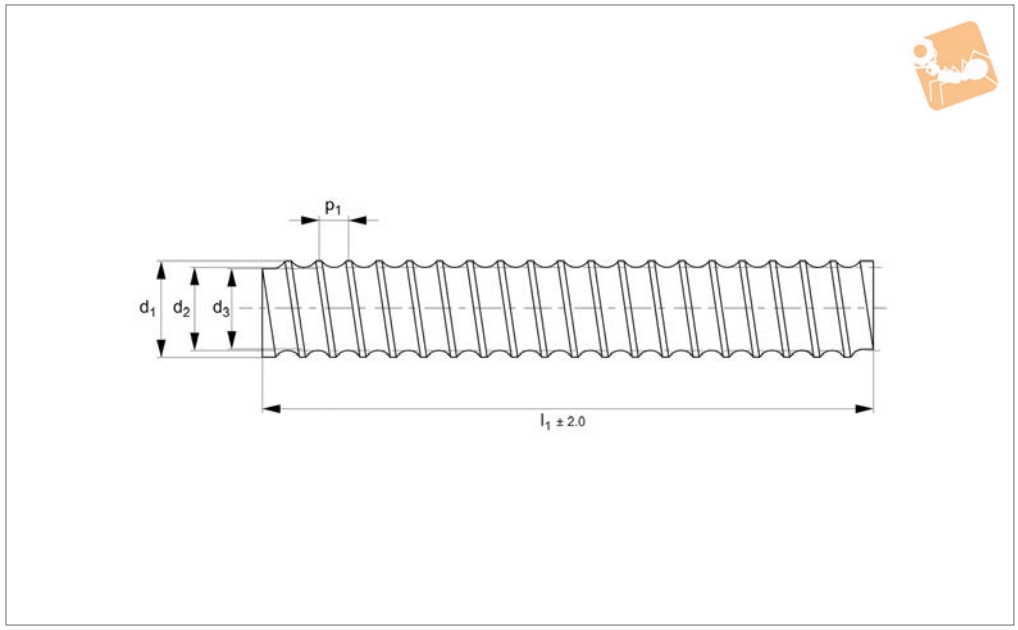
Technical Notes
Gothic profile with a 5,20 or 50mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.
For ball screw nuts see part L1377.

For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.
Also available as a left hand thread for 5mm pitch. Anti corrosion finish consists of a thin layer of black chrome and produces good resistance to wear, and a protective effect against corrosion. Layer thickness 2µm to 10µm.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.

Order No.	Screw dia. x lead	d_1	l_1	d_2	d_3	Lead w_1	Mass moment of inertia kg·m²	Weight kg
L1377.20-05-0500	20x 5	21.08	500	20	17.9	5	$1{,}12x10^{-4}$	1.18
L1377.20-05-0600	20x 5	21.08	600	20	17.9	5	$1{,}12x10^{-4}$	1.41
L1377.20-05-0800	20x 5	21.08	800	20	17.9	5	$1{,}12x10^{-4}$	1.88
L1377.20-05-1000	20x 5	21.08	1000	20	17.9	5	$1{,}12x10^{-4}$	2.35
L1377.20-05-1500	20x 5	21.08	1500	20	17.9	5	$1{,}12x10^{-4}$	3.53
L1377.20-05-2000	20x 5	21.08	2000	20	17.9	5	$1{,}12x10^{-4}$	4.70
L1377.20-05-2500	20x 5	21.08	2500	20	17.9	5	$1{,}12x10^{-4}$	5.88
L1377.20-05-3000	20x 5	21.08	3000	20	17.9	5	$1{,}12x10^{-4}$	7.05

Ø 25 Ball Screws - Anti Corrosion
rolled





L1377.25

Material
Black chrome steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,10 or 2mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.

For ball screw nuts see part L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request. Anti corrosion finish consists of a thin layer of black chrome and produces good resistance to wear, and a protective effect against corrosion. Layer thickness 2µm to 10µm.

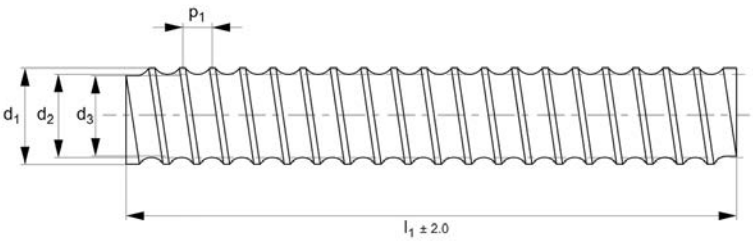
Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.

Order No.	Screw dia. x lead	d_1	l_1	d_2	d_3	Lead w_1	Mass moment of inertia kg·m²	Weight kg
L1377.25-05-0500	25x 5	26.08	500	25	22.9	5	$2{,}62x10^{-4}$	1.80
L1377.25-05-0600	25x 5	26.08	600	25	22.9	5	$2{,}62x10^{-4}$	2.15
L1377.25-05-0800	25x 5	26.08	800	25	22.9	5	$2{,}62x10^{-4}$	2.87
L1377.25-05-1000	25x 5	26.08	1000	25	22.9	5	$2{,}62x10^{-4}$	3.59
L1377.25-05-1500	25x 5	26.08	1500	25	22.9	5	$2{,}62x10^{-4}$	5.39
L1377.25-05-2000	25x 5	26.08	2000	25	22.9	5	$2{,}62x10^{-4}$	7.18
L1377.25-05-2500	25x 5	26.08	2500	25	22.9	5	$2{,}62x10^{-4}$	8.98
L1377.25-05-3000	25x 5	26.08	3000	25	22.9	5	$2{,}62x10^{-4}$	10.77
L1377.25-05-3500	25x 5	26.08	3500	25	22.9	5	$2{,}62x10^{-4}$	2.87
L1377.25-05-4000	25x 5	26.08	4000	25	22.9	5	$2{,}62x10^{-4}$	3.59
L1377.25-05-4500	25x 5	26.08	4500	25	22.9	5	$2{,}62x10^{-4}$	5.39
L1377.25-05-5000	25x 5	26.08	5000	25	22.9	5	$2{,}62x10^{-4}$	7.18
L1377.25-05-5500	25x 5	26.08	5500	25	22.9	5	$2{,}62x10^{-4}$	8.98
L1377.25-05-6000	25x 5	26.08	6000	25	22.9	5	$2{,}62x10^{-4}$	10.77
L1377.25-10-0500	25x10	27.15	500	25	20.8	10	$2{,}94x10^{-4}$	1.91
L1377.25-10-0600	25x10	27.15	600	25	20.8	10	$2{,}94x10^{-4}$	2.29
L1377.25-10-0800	25x10	27.15	800	25	20.8	10	$2{,}94x10^{-4}$	3.05
L1377.25-10-1000	25x10	27.15	1000	25	20.8	10	$2{,}94x10^{-4}$	3.81
L1377.25-10-1500	25x10	27.15	1500	25	20.8	10	$2{,}94x10^{-4}$	5.72
L1377.25-10-2000	25x10	27.15	2000	25	20.8	10	$2{,}94x10^{-4}$	7.62
L1377.25-10-2500	25x10	27.15	2500	25	20.8	10	$2{,}94x10^{-4}$	9.53
L1377.25-10-3000	25x10	27.15	3000	25	20.8	10	$2{,}94x10^{-4}$	11.43
L1377.25-10-3500	25x10	26.08	3500	25	22.9	10	$2{,}62x10^{-4}$	2.87
L1377.25-10-4000	25x10	26.08	4000	25	22.9	10	$2{,}62x10^{-4}$	3.59
L1377.25-10-4500	25x10	26.08	4500	25	22.9	10	$2{,}62x10^{-4}$	5.39
L1377.25-10-5000	25x10	26.08	5000	25	22.9	10	$2{,}62x10^{-4}$	7.18
L1377.25-10-5500	25x10	26.08	5500	25	22.9	10	$2{,}62x10^{-4}$	8.98
L1377.25-10-6000	25x10	26.08	6000	25	22.9	10	$2{,}62x10^{-4}$	10.77

Ø 32 Ball Screws- Anti Corrosion
rolled



L1377.32



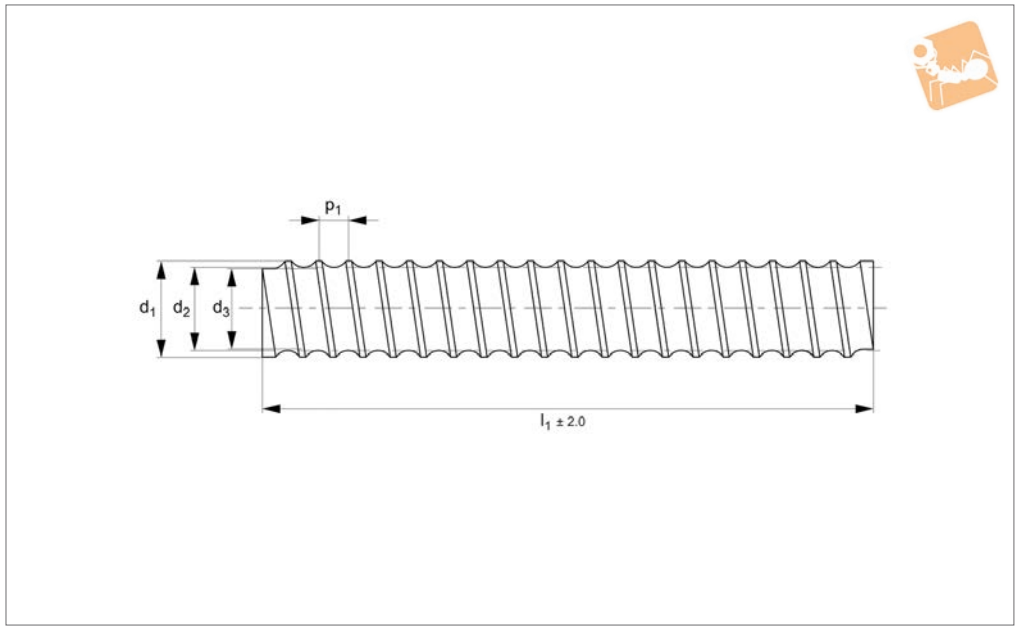
Material
Black chrome steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,10,20 or 40mm lead.
Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.

For ball screw nuts see part L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.
Also available as a left hand thread for 5mm pitch. Anti corrosion finish consists of a thin layer of black chrome and produces good resistance to wear, and a protective effect against corrosion. Layer thickness 2µm to 10µm.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.

Order No.	Screw dia. x lead	d_1	l_1	d_2	d_3	Lead w_1	Mass moment of inertia kg·m²	Weight kg
L1377.32-05-0500	32x 5	33.08	500	32	29.9	5	$7{,}25\times10^{-4}$	2.99
L1377.32-05-0600	32x 5	33.08	600	32	29.9	5	$7{,}25\times10^{-4}$	3.59
L1377.32-05-0800	32x 5	33.08	800	32	29.9	5	$7{,}25\times10^{-4}$	4.78
L1377.32-05-1000	32x 5	33.08	1000	32	29.9	5	$7{,}25\times10^{-4}$	5.98
L1377.32-05-1500	32x 5	33.08	1500	32	29.9	5	$7{,}25\times10^{-4}$	8.97
L1377.32-05-2000	32x 5	33.08	2000	32	29.9	5	$7{,}25\times10^{-4}$	11.96
L1377.32-05-2500	32x 5	33.08	2500	32	29.9	5	$7{,}25\times10^{-4}$	14.95
L1377.32-05-3000	32x 5	33.08	3000	32	29.9	5	$7{,}25\times10^{-4}$	17.94
L1377.32-05-3500	32x 5	33.08	3500	32	29.9	5	$7{,}25\times10^{-4}$	4.78
L1377.32-05-4000	32x 5	33.08	4000	32	29.9	5	$7{,}25\times10^{-4}$	5.98
L1377.32-05-4500	32x 5	33.08	4500	32	29.9	5	$7{,}25\times10^{-4}$	8.97
L1377.32-05-5000	32x 5	33.08	5000	32	29.9	5	$7{,}25\times10^{-4}$	11.96
L1377.32-05-5500	32x 5	33.08	5500	32	29.9	5	$7{,}25\times10^{-4}$	14.95
L1377.32-05-6000	32x 5	33.08	6000	32	29.9	5	$7{,}25\times10^{-4}$	14.95
L1377.32-10-0500	32x10	34.15	500	32	27.8	10	$7{,}69\times10^{-4}$	3.08
L1377.32-10-0600	32x10	34.15	600	32	27.8	10	$7{,}69\times10^{-4}$	3.70
L1377.32-10-0800	32x10	34.15	800	32	27.8	10	$7{,}69\times10^{-4}$	4.93
L1377.32-10-1000	32x10	34.15	1000	32	27.8	10	$7{,}69\times10^{-4}$	6.16
L1377.32-10-1500	32x10	34.15	1500	32	27.8	10	$7{,}69\times10^{-4}$	9.24
L1377.32-10-2000	32x10	34.15	2000	32	27.8	10	$7{,}69\times10^{-4}$	12.32
L1377.32-10-2500	32x10	34.15	2500	32	27.8	10	$7{,}69\times10^{-4}$	15.40
L1377.32-10-3000	32x10	34.15	3000	32	27.8	10	$7{,}69\times10^{-4}$	18.48
L1377.32-10-3500	32x10	33.08	3500	32	29.9	10	$7{,}25\times10^{-4}$	4.78
L1377.32-10-4000	32x10	33.08	4000	32	29.9	10	$7{,}25\times10^{-4}$	5.98
L1377.32-10-4500	32x10	33.08	4500	32	29.9	10	$7{,}25\times10^{-4}$	8.97
L1377.32-10-5000	32x10	33.08	5000	32	29.9	10	$7{,}25\times10^{-4}$	11.96
L1377.32-10-5500	32x10	33.08	5500	32	29.9	10	$7{,}25\times10^{-4}$	14.95
L1377.32-10-6000	32x10	33.08	6000	32	29.9	10	$7{,}25\times10^{-4}$	14.95





L1377.40

Material
Black chrome steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,10 or 20mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.

For ball screw nuts see part L1377.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request. Anti corrosion finish consists of a thin layer of black chrome and produces good resistance to wear, and a protective effect against corrosion. Layer thickness 2µm to 10µm.

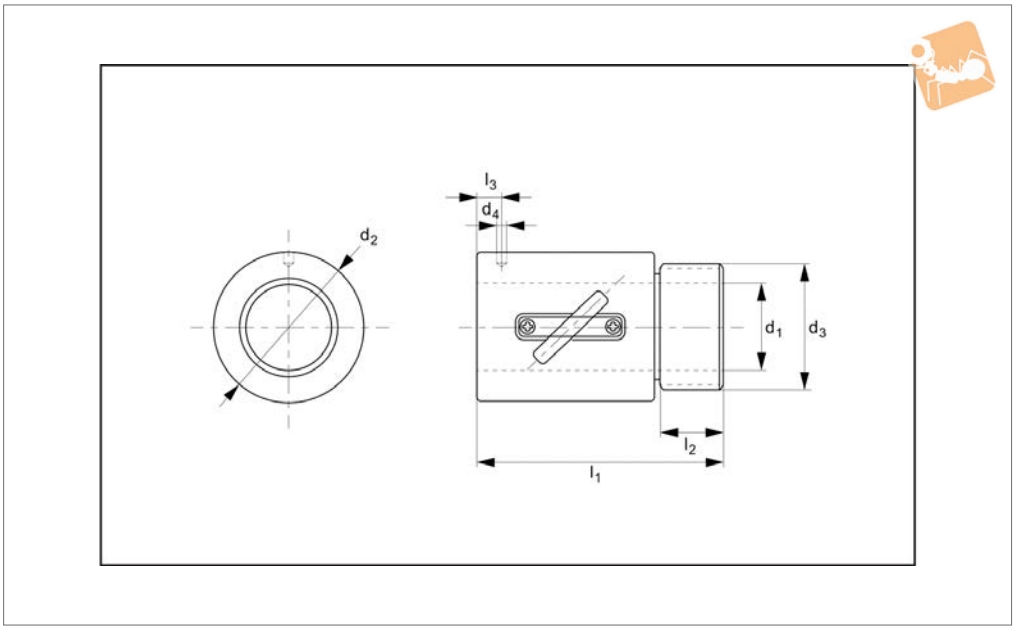
Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.

Order No.	Screw dia. x lead	d_1	l_1	d_2	d_3	Lead w_1	Mass moment of inertia kg·m²	Weight kg
L1377.40-05-0500	40x 5	41.08	500	40	37.9	5	$1{,}81x10^{-3}$	4.72
L1377.40-05-0600	40x 5	41.08	600	40	37.9	5	$1{,}81x10^{-3}$	5.66
L1377.40-05-0800	40x 5	41.08	800	40	37.9	5	$1{,}81x10^{-3}$	7.55
L1377.40-05-1000	40x 5	41.08	1000	40	37.9	5	$1{,}81x10^{-3}$	9.44
L1377.40-05-1500	40x 5	41.08	1500	40	37.9	5	$1{,}81x10^{-3}$	14.16
L1377.40-05-2000	40x 5	41.08	2000	40	37.9	5	$1{,}81x10^{-3}$	18.88
L1377.40-05-2500	40x 5	41.08	2500	40	37.9	5	$1{,}81x10^{-3}$	23.60
L1377.40-05-3000	40x 5	41.08	3000	40	37.9	5	$1{,}81x10^{-3}$	28.32
L1377.40-05-3500	40x 5	41.08	3500	40	37.9	5	$1{,}81x10^{-3}$	7.55
L1377.40-05-4000	40x 5	41.08	4000	40	37.9	5	$1{,}81x10^{-3}$	9.44
L1377.40-05-4500	40x 5	41.08	4500	40	37.9	5	$1{,}81x10^{-3}$	14.16
L1377.40-05-5000	40x 5	41.08	5000	40	37.9	5	$1{,}81x10^{-3}$	18.88
L1377.40-05-5500	40x 5	41.08	5500	40	37.9	5	$1{,}81x10^{-3}$	23.60
L1377.40-05-6000	40x 5	41.08	6000	40	37.9	5	$1{,}81x10^{-3}$	28.32
L1377.40-10-0500	40x10	42.15	500	40	35.8	10	$1{,}66x10^{-3}$	4.51
L1377.40-10-0600	40x10	42.15	600	40	35.8	10	$1{,}66x10^{-3}$	5.41
L1377.40-10-0800	40x10	42.15	800	40	35.8	10	$1{,}66x10^{-3}$	7.22
L1377.40-10-1000	40x10	42.15	1000	40	35.8	10	$1{,}66x10^{-3}$	9.02
L1377.40-10-1500	40x10	42.15	1500	40	35.8	10	$1{,}66x10^{-3}$	13.53
L1377.40-10-2000	40x10	42.15	2000	40	35.8	10	$1{,}66x10^{-3}$	18.04
L1377.40-10-2500	40x10	42.15	2500	40	35.8	10	$1{,}66x10^{-3}$	22.55
L1377.40-10-3000	40x10	42.15	3000	40	35.8	10	$1{,}66x10^{-3}$	27.06
L1377.40-10-3500	40x10	41.08	3500	40	37.9	10	$1{,}81x10^{-3}$	7.55
L1377.40-10-4000	40x10	41.08	4000	40	37.9	10	$1{,}81x10^{-3}$	9.44
L1377.40-10-4500	40x10	41.08	4500	40	37.9	10	$1{,}81x10^{-3}$	14.16
L1377.40-10-5000	40x10	41.08	5000	40	37.9	10	$1{,}81x10^{-3}$	18.88
L1377.40-10-5500	40x10	41.08	5500	40	37.9	10	$1{,}81x10^{-3}$	23.60
L1377.40-10-6000	40x10	41.08	6000	40	37.9	10	$1{,}81x10^{-3}$	28.32

Miniature Cylindrical Ball Nut



L1379.C



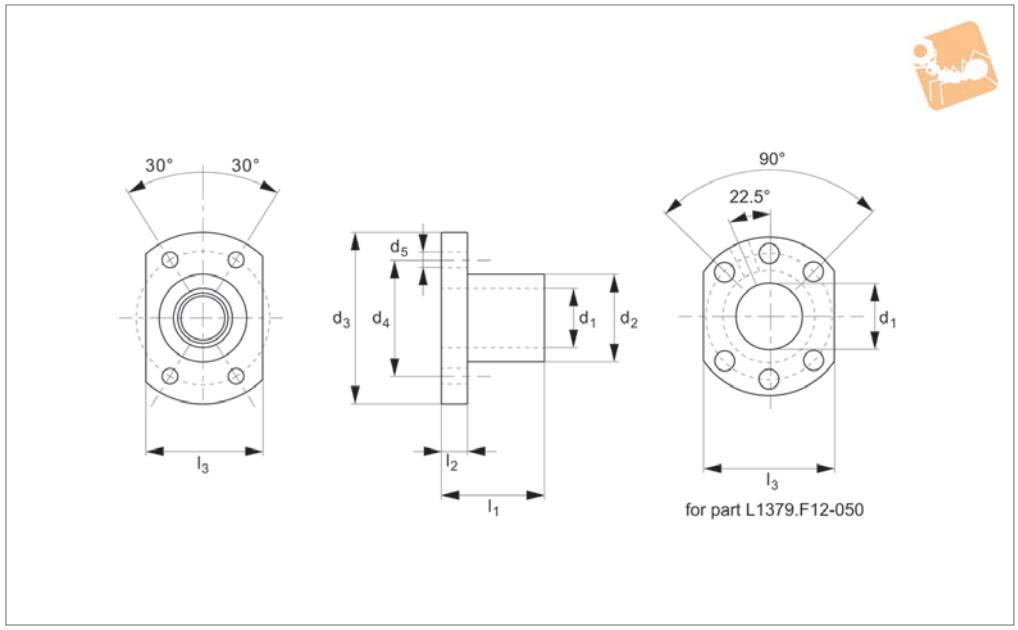
Material
Steel body (16MnCr5), balls (100Cr6) and polyurethane (Vulkolan) seals.

Technical Notes
Axial clearance 0,05mm.
Preload max. 5% of dynamic load.

For axial run-out, concentricity and parallelism figures see technical pages.
For use with miniature ball screws L1379.

Tips
Fit ball nut to screw using the sleeve provided. Offer up the ball nut to the screw and slide carefully on. Do not remove the ball nut from the sleeve provided - the ball bearings can come loose rendering the ball nut unusable.

Order No.	d_1 for screw	Pitch	d_2 tol. G6	d_3	d_4	l_1 ±0.15	l_2	l_3	No. of circuits	Ball dia.	Dyn. load C kN max.	Static load C_0 kN max.	Stiffness N/µm
L1379.C08-250	8	2,5	17,5	M15x1,0P	3,0	23,5	7,5	10,0	2,5x1	1,2	1,85	3,73	167
L1379.C10-020	10	2,0	19,5	M17x1,0P	3,2	22,0	7,5	3,0	3,5x1	1,2	2,72	6,51	167
L1379.C10-040	10	4,0	25,0	M20x1,0P	3,0	34,0	10,0	3,0	2,5x1	2,0	3,92	7,39	137
L1379.C12-040	12	4,0	25,5	M20x1,0P	3,0	34,0	10,0	13,0	3,5x1	2,5	7,88	16,16	226
L1379.C12-050	12	5,0	25,5	M20x1,0P	3,0	39,0	10,0	16,3	3,5x1	2,5	7,85	16,11	235
L1379.C14-040	14	4,0	32,1	M25x1,5P	3,0	35,0	10,0	11,0	3,0x1	2,5	7.33	15.77	235





L1379.F

Material
Steel body (16MnCr5), balls (100Cr6) and polyurethane (Vulkolan) seals.

Technical Notes
Axial clearance 0,05mm.
Preload max. 5% of dynamic load.

For axial run-out, concentricity and parallelism figures see technical pages.
For use with miniature ball screws L1379.06- L1379.14.

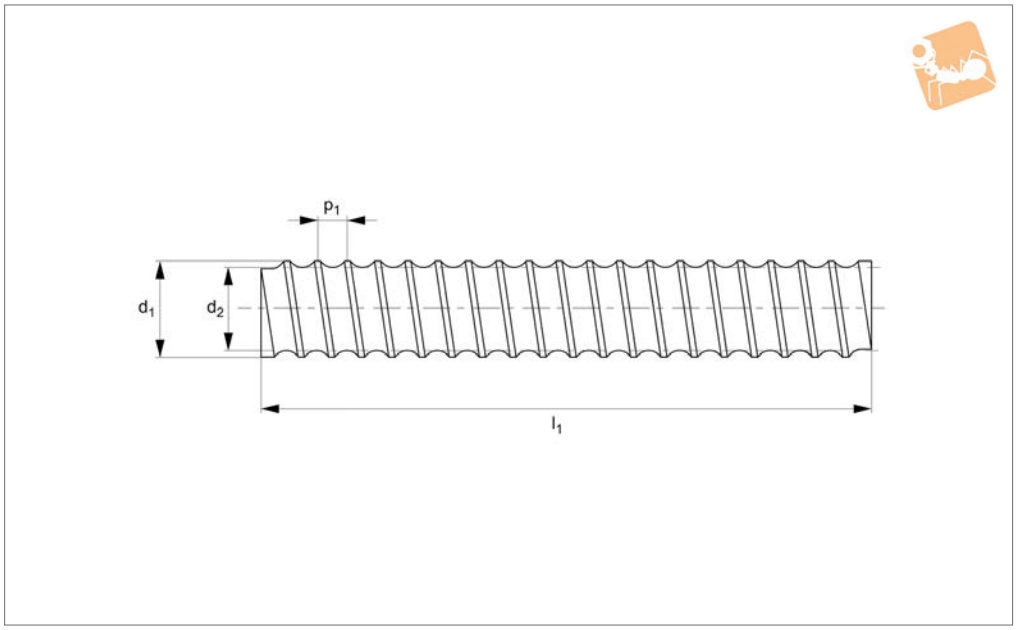
Tips
Fit ball nut to screw using the sleeve provided. Offer up the ball nut to the screw and slide carefully on. Do not remove the ball nut from the sleeve provided - the ball bearings can come loose rendering the ball nut unusable.

Order No.	d_1 for screw	Pitch	d_2 tol. G6	d_3	d_4	d_5	l_1	l_2	l_3 ±0.10	No. of circuits	Ball dia.	Dyn. load C kN max.	Static load C_0 kN max.	Stiffness N/µm
L1379.F06-010	6	1.0	12	24	18	3.4	15	3.5	16	3	0.8	1.09	2.19	88
L1379.F08-010	8	1.0	14	27	21	3.4	16	4.0	18	4	0.8	1.58	3.95	137
L1379.F08-020	8	2.0	14	27	21	3.4	16	4.0	18	3	1.2	2.17	4.49	127
L1379.F08-025	8	2.5	16	29	23	3.4	26	4.0	20	3	1.2	2.17	4.49	127
L1379.F10-020	10	2.0	18	35	27	4.5	28	5.0	22	3	1.2	2.38	5.58	147
L1379.F10-040	10	4.0	26	46	36	4.5	34	10.0	28	3	2.0	4.59	8.88	167
L1379.F12-020	12	2.0	20	37	29	4.5	28	5.0	24	4	1.2	3.17	8.88	216
L1379.F12-050	12	5.0	22	37	29	4.5	39	8.0	24	3	2.5	6.61	12.9	186
L1379.F14-020	14	2.0	21	40	31	5.5	23	6.0	26	4	1.2	3.48	10.3	235

Ø 6 Miniature Rolled Ball Screw



L1379.06



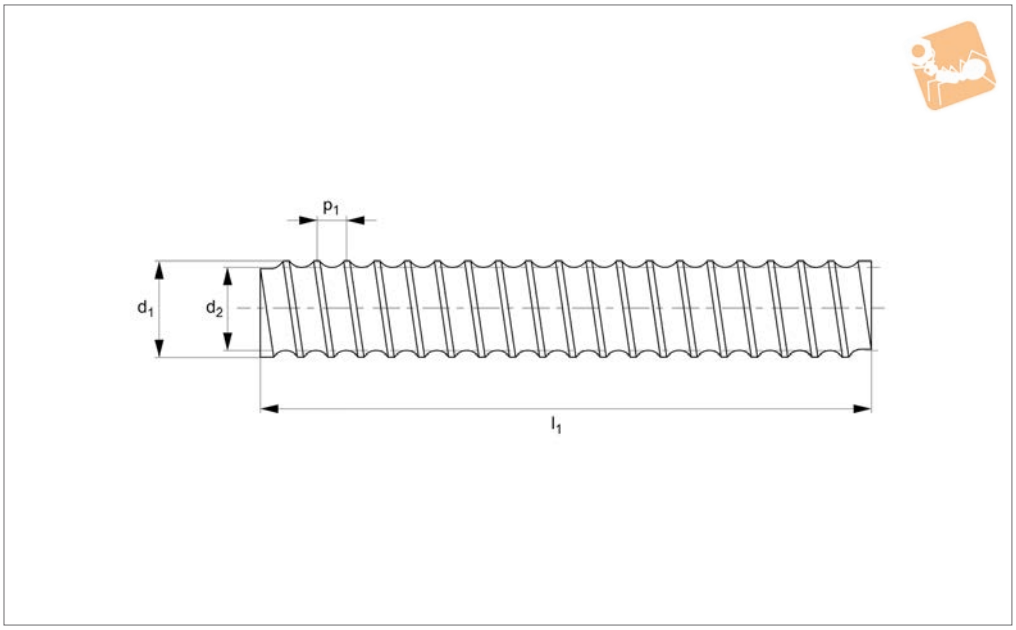
Material
Steel (Cf53 or C55R), hardened, rust proof chrome plated (X90CrMoV5).

Technical Notes
Tolerance T7 - 50µ/300mm.
For ball screw nuts L1379.F (flanged) and L1379.C (cylindrical).

For end machining of ball screws to suit miniature or standard ball screw support units please see technical pages.
We provide a service to cut and machine ball screws as required.
Chrome plating for use in food industry etc. contains 98% pure chromium.

Tips
Do not remove the ball nut from the sleeve that it comes with prior to installation - the balls come free rendering the ball nut unusable. Offer up the ball nut still on it's mounting sleeve to the ball screw and screw carefully on.

Order No.	d_1	d_2 core dia.	l_1	Lead w_1	Mass moment of inertia kg·m²	Screw dia. x lead	Weight kg
L1379.06-10-0100	6	5.47	100	1	$0{,}83x10^{-7}$	6x1	0.02
L1379.06-10-0200	6	5.47	200	1	$0{,}83x10^{-7}$	6x1	0.04
L1379.06-10-0300	6	5.47	300	1	$0{,}83x10^{-7}$	6x1	0.06
L1379.06-10-0400	6	5.47	400	1	$0{,}83x10^{-7}$	6x1	0.08
L1379.06-10-0500	6	5.47	500	1	$0{,}83x10^{-7}$	6x1	0.10
L1379.06-10-0600	6	5.47	600	1	$0{,}83x10^{-7}$	6x1	0.12
L1379.06-10-0700	6	5.47	700	1	$0{,}83x10^{-7}$	6x1	0.14
L1379.06-10-0800	6	5.47	800	1	$0{,}83x10^{-7}$	6x1	0.16
L1379.06-10-0900	6	5.47	900	1	$0{,}83x10^{-7}$	6x1	0.18
L1379.06-10-1000	6	5.47	1000	1	$0{,}83x10^{-7}$	6x1	0.18





L1379.08

Material
Steel (Cf53 or C55R), hardened, rust proof chrome plated (X90CrMoV5).

Technical Notes
Tolerance T7 - 50µ/300mm.
For ball screw nuts L1379.F (flanged) and L1379.C (cylindrical).

For end machining of ball screws to suit miniature or standard ball screw support units please see technical pages.
We provide a service to cut and machine ball screws as required.
Chrome plating for use in food industry etc. contains 98% pure chromium.

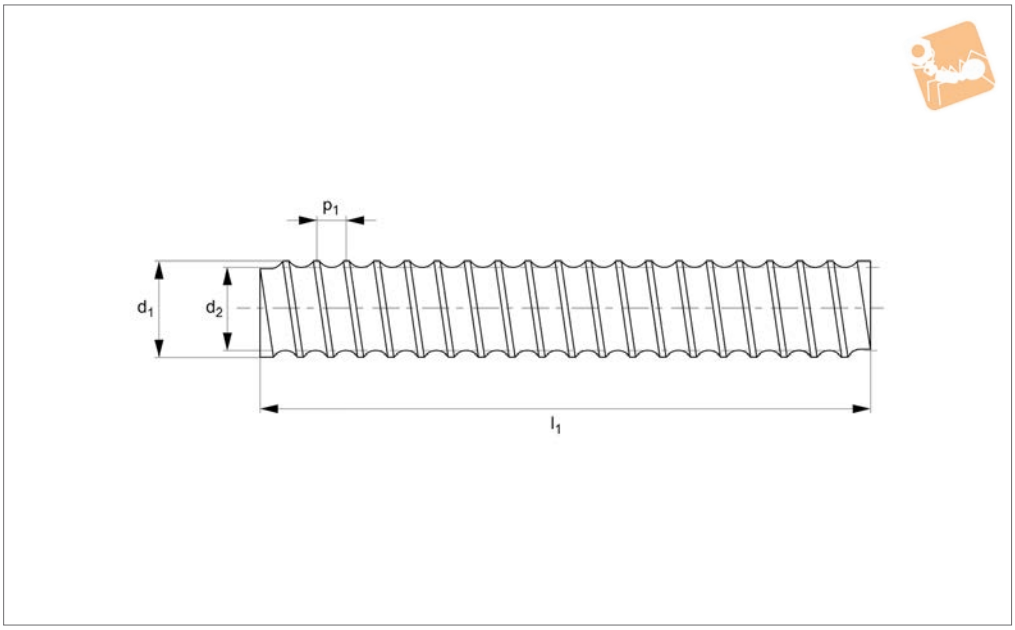
Tips
Do not remove the ball nut from the sleeve that it comes with prior to installation - the balls come free rendering the ball nut unusable. Offer up the ball nut still on it's mounting sleeve to the ball screw and screw carefully on.

Order No.	d_1	d_2 core dia.	l_1	Lead w_1	Mass moment of inertia kg·m²	Screw dia. x lead	Weight kg
L1379.08-10-0100	8	7.40	100	1.0	$2{,}67x10^{-6}$	8x1,0	0.04
L1379.08-10-0200	8	7.40	200	1.0	$2{,}67x10^{-6}$	8x1,0	0.07
L1379.08-10-0300	8	7.40	300	1.0	$2{,}67x10^{-6}$	8x1,0	0.11
L1379.08-10-0400	8	7.40	400	1.0	$2{,}67x10^{-6}$	8x1,0	0.14
L1379.08-10-0500	8	7.40	500	1.0	$2{,}67x10^{-6}$	8x1,0	0.18
L1379.08-10-0600	8	7.40	600	1.0	$2{,}67x10^{-6}$	8x1,0	0.22
L1379.08-10-0700	8	7.40	700	1.0	$2{,}67x10^{-6}$	8x1,0	0.25
L1379.08-10-0800	8	7.40	800	1.0	$2{,}67x10^{-6}$	8x1,0	0.29
L1379.08-10-0900	8	7.40	900	1.0	$2{,}67x10^{-6}$	8x1,0	0.32
L1379.08-10-1000	8	7.40	1000	1.0	$2{,}67x10^{-6}$	8x1,0	0.36
L1379.08-20-0100	8	7.21	100	2.0	$2{,}71x10^{-6}$	8x2,0	0.04
L1379.08-20-0200	8	7.21	200	2.0	$2{,}71x10^{-6}$	8x2,0	0.07
L1379.08-20-0300	8	7.21	300	2.0	$2{,}71x10^{-6}$	8x2,0	0.11
L1379.08-20-0400	8	7.21	400	2.0	$2{,}71x10^{-6}$	8x2,0	0.14
L1379.08-20-0500	8	7.21	500	2.0	$2{,}71x10^{-6}$	8x2,0	0.18
L1379.08-20-0600	8	7.21	600	2.0	$2{,}71x10^{-6}$	8x2,0	0.22
L1379.08-20-0700	8	7.21	700	2.0	$2{,}71x10^{-6}$	8x2,0	0.25
L1379.08-20-0800	8	7.21	800	2.0	$2{,}71x10^{-6}$	8x2,0	0.29
L1379.08-20-0900	8	7.21	900	2.0	$2{,}71x10^{-6}$	8x2,0	0.32
L1379.08-20-1000	8	7.21	1000	2.0	$2{,}71x10^{-6}$	8x2,0	0.36
L1379.08-25-0100	8	7.21	100	2.5	$2{,}80x10^{-6}$	8x2,5	0.04
L1379.08-25-0200	8	7.21	200	2.5	$2{,}80x10^{-6}$	8x2,5	0.07
L1379.08-25-0300	8	7.21	300	2.5	$2{,}80x10^{-6}$	8x2,5	0.11
L1379.08-25-0400	8	7.21	400	2.5	$2{,}80x10^{-6}$	8x2,5	0.15
L1379.08-25-0500	8	7.21	500	2.5	$2{,}80x10^{-6}$	8x2,5	0.18
L1379.08-25-0600	8	7.21	600	2.5	$2{,}80x10^{-6}$	8x2,5	0.22
L1379.08-25-0700	8	7.21	700	2.5	$2{,}80x10^{-6}$	8x2,5	0.26
L1379.08-25-0800	8	7.21	800	2.5	$2{,}80x10^{-6}$	8x2,5	0.27
L1379.08-25-0900	8	7.21	900	2.5	$2{,}80x10^{-6}$	8x2,5	0.33
L1379.08-25-1000	8	7.21	1000	2.5	$2{,}80x10^{-6}$	8x2,5	0.37

10Ø Miniature Rolled Ball Screw



L1379.10



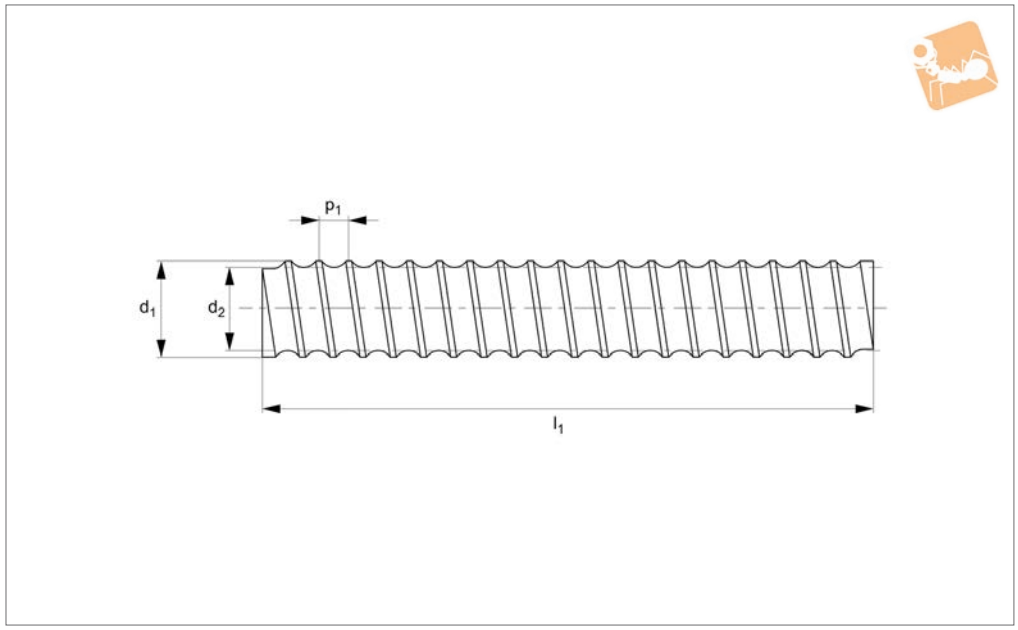
Material
Steel (Cf53 or C55R), hardened, rust proof chrome plated (X90CrMoV5).

Technical Notes
Tolerance T7 - 50µ/300mm.
For ball screw nuts see parts L1379.F and L1379.C.

For end machining of ball screws to suit miniature or standard ball screw support units please see technical pages.
We provide a service to cut and machine ball screws as required.
Chrome plating for use in food industry etc. contains 98% pure chromium.

Tips
Do not remove the ball nut from the sleeve that it comes with prior to installation - the balls come free rendering the ball nut unusable. Offer up the ball nut still on it's mounting sleeve to the ball screw and screw carefully on.

Order No.	d_1	d_2 core dia.	l_1	Lead w_1	Mass moment of inertia kg·m²	Screw dia. x lead	Weight kg
L1379.10-20-0100	10	9.21	100	2	$5{,}11\times10^{-6}$	10x2	0.06
L1379.10-20-0200	10	9.21	200	2	$5{,}11\times10^{-6}$	10x2	0.12
L1379.10-20-0300	10	9.21	300	2	$5{,}11\times10^{-6}$	10x2	0.17
L1379.10-20-0400	10	9.21	400	2	$5{,}11\times10^{-6}$	10x2	0.23
L1379.10-20-0500	10	9.21	500	2	$5{,}11\times10^{-6}$	10x2	0.29
L1379.10-20-0600	10	9.21	600	2	$5{,}11\times10^{-6}$	10x2	0.35
L1379.10-20-0700	10	9.21	700	2	$5{,}11\times10^{-6}$	10x2	0.41
L1379.10-20-0800	10	9.21	800	2	$5{,}11\times10^{-6}$	10x2	0.46
L1379.10-20-0900	10	9.21	900	2	$5{,}11\times10^{-6}$	10x2	0.52
L1379.10-20-1000	10	9.21	1000	2	$5{,}11\times10^{-6}$	10x2	0.58
L1379.10-40-0100	10	8.68	100	4	$6{,}53\times10^{-6}$	10x4	0.06
L1379.10-40-0200	10	8.68	200	4	$6{,}53\times10^{-6}$	10x4	0.11
L1379.10-40-0300	10	8.68	300	4	$6{,}53\times10^{-6}$	10x4	0.17
L1379.10-40-0400	10	8.68	400	4	$6{,}53\times10^{-6}$	10x4	0.23
L1379.10-40-0500	10	8.68	500	4	$6{,}53\times10^{-6}$	10x4	0.28
L1379.10-40-0600	10	8.68	600	4	$6{,}53\times10^{-6}$	10x4	0.34
L1379.10-40-0700	10	8.68	700	4	$6{,}53\times10^{-6}$	10x4	0.40
L1379.10-40-0800	10	8.68	800	4	$6{,}53\times10^{-6}$	10x4	0.46
L1379.10-40-0900	10	8.68	900	4	$6{,}53\times10^{-6}$	10x4	0.51
L1379.10-40-1000	10	8.68	1000	4	$6{,}53\times10^{-6}$	10x4	0.57





L1379.12

Material
Steel (Cf53 or C55R), hardened, rust proof chrome plated (X90CrMoV5).

Technical Notes
Tolerance T7 - 50µ/300mm.
For ball screw nuts see parts L1379.F and L1379.C.

For end machining of ball screws to suit miniature or standard ball screw support units please see technical pages.
We provide a service to cut and machine ball screws as required.
Chrome plating for use in food industry etc. contains 98% pure chromium.

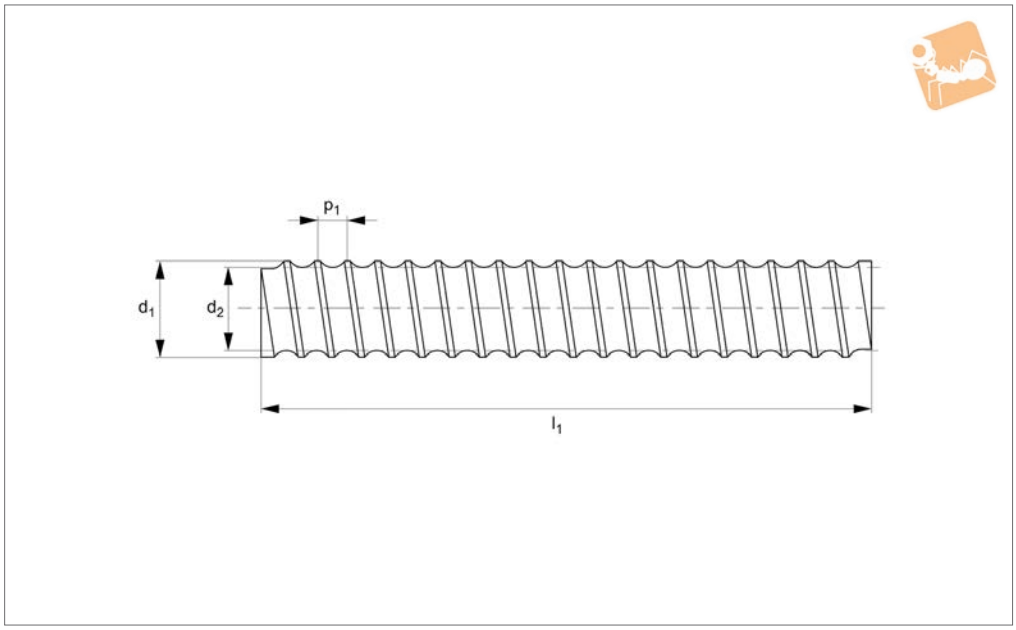
Tips
Do not remove the ball nut from the sleeve that it comes with prior to installation - the balls come free rendering the ball nut unusable. Offer up the ball nut still on it's mounting sleeve to the ball screw and screw carefully on.

Order No.	d_1	d_2 core dia.	l_1	Lead w_1	Mass moment of inertia kg·m²	Screw dia. x lead	Weight kg
L1379.12-20-0100	12	11.21	100	2	$1{,}07x10^{-5}$	12x2	0.06
L1379.12-20-0200	12	11.21	200	2	$1{,}07x10^{-5}$	12x2	0.12
L1379.12-20-0300	12	11.21	300	2	$1{,}07x10^{-5}$	12x2	0.19
L1379.12-20-0400	12	11.21	400	2	$1{,}07x10^{-5}$	12x2	0.25
L1379.12-20-0500	12	11.21	500	2	$1{,}07x10^{-5}$	12x2	0.31
L1379.12-20-0600	12	11.21	600	2	$1{,}07x10^{-5}$	12x2	0.37
L1379.12-20-0700	12	11.21	700	2	$1{,}07x10^{-5}$	12x2	0.43
L1379.12-20-0800	12	11.21	800	2	$1{,}07x10^{-5}$	12x2	0.50
L1379.12-20-0900	12	11.21	900	2	$1{,}07x10^{-5}$	12x2	0.56
L1379.12-20-1000	12	11.21	1000	2	$1{,}07x10^{-5}$	12x2	0.62
L1379.12-40-0100	12	9.80	100	4	$1{,}51x10^{-5}$	12x4	0.09
L1379.12-40-0200	12	9.80	200	4	$1{,}51x10^{-5}$	12x4	0.17
L1379.12-40-0300	12	9.80	300	4	$1{,}51x10^{-5}$	12x4	0.26
L1379.12-40-0400	12	9.80	400	4	$1{,}51x10^{-5}$	12x4	0.35
L1379.12-40-0500	12	9.80	500	4	$1{,}51x10^{-5}$	12x4	0.43
L1379.12-40-0600	12	9.80	600	4	$1{,}51x10^{-5}$	12x4	0.52
L1379.12-40-0700	12	9.80	700	4	$1{,}51x10^{-5}$	12x4	0.61
L1379.12-40-0800	12	9.80	800	4	$1{,}51x10^{-5}$	12x4	0.69
L1379.12-40-0900	12	9.80	900	4	$1{,}51x10^{-5}$	12x4	0.77
L1379.12-40-1000	12	9.80	1000	4	$1{,}51x10^{-5}$	12x4	0.86
L1379.12-50-0100	12	9.80	100	5	$7{,}64x10^{-6}$	12x5	0.09
L1379.12-50-0200	12	9.80	200	5	$7{,}64x10^{-6}$	12x5	0.16
L1379.12-50-0300	12	9.80	300	5	$7{,}64x10^{-6}$	12x5	0.23
L1379.12-50-0400	12	9.80	400	5	$7{,}64x10^{-6}$	12x5	0.31
L1379.12-50-0500	12	9.80	500	5	$7{,}64x10^{-6}$	12x5	0.39
L1379.12-50-0600	12	9.80	600	5	$7{,}64x10^{-6}$	12x5	0.47
L1379.12-50-0700	12	9.80	700	5	$7{,}64x10^{-6}$	12x5	0.55
L1379.12-50-0800	12	9.80	800	5	$7{,}64x10^{-6}$	12x5	0.62
L1379.12-50-0900	12	9.80	900	5	$7{,}64x10^{-6}$	12x5	0.70
L1379.12-50-1000	12	9.80	1000	5	$7{,}64x10^{-6}$	12x5	0.78

Ø14 Miniature Rolled Ball Screws



L1379.14



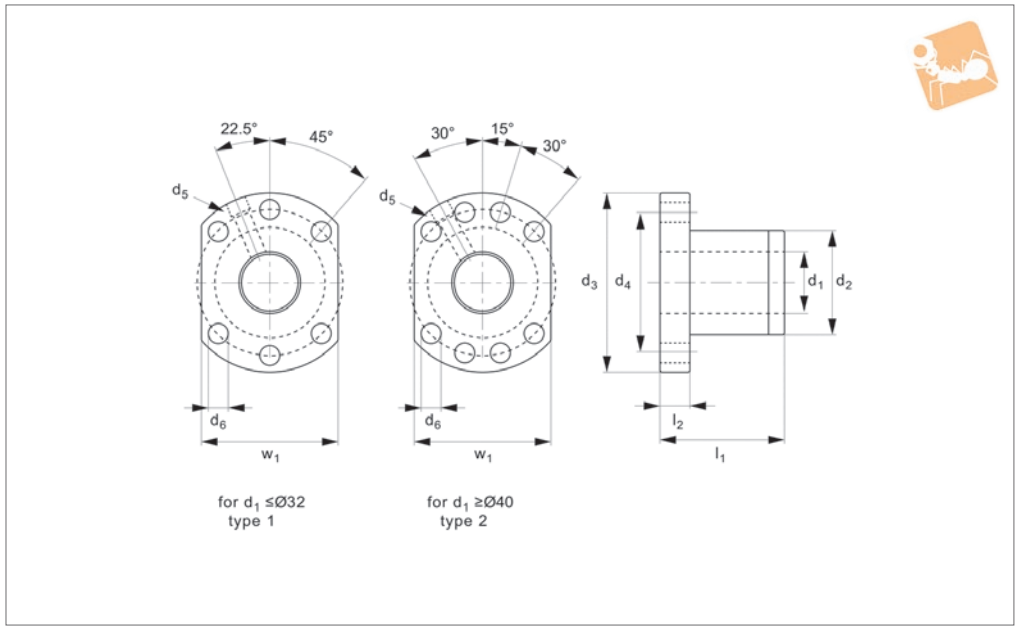
Material
Steel (Cf53 or C55R), hardened, rust proof chrome plated (X90CrMoV5).

Technical Notes
Tolerance T7 - 50µ/300mm.
For ball screw nuts L1379.F (flanged) and L1379.C (cylindrical).

For end machining of ball screws to suit miniature or standard ball screw support units please see technical pages.
We provide a service to cut and machine ball screws as required.
Chrome plating for use in food industry etc. contains 98% pure chromium.

Tips
Do not remove the ball nut from the sleeve that it comes with prior to installation - the balls come free rendering the ball nut unusable. Offer up the ball nut still on it's mounting sleeve to the ball screw and screw carefully on.

Order No.	d_1	d_2 core dia.	l_1	Lead w_1	Mass moment of inertia kg·m²	Size dia. x lead	Weight kg
L1379.14-20-0100	14	13.21	100	2	$2{,}01\times10^{-5}$	14x2	0.08
L1379.14-20-0200	14	13.21	200	2	$2{,}01\times10^{-5}$	14x2	0.17
L1379.14-20-0300	14	13.21	300	2	$2{,}01\times10^{-5}$	14x2	0.26
L1379.14-20-0400	14	13.21	400	2	$2{,}01\times10^{-5}$	14x2	0.34
L1379.14-20-0500	14	13.21	500	2	$2{,}01\times10^{-5}$	14x2	0.46
L1379.14-20-0600	14	13.21	600	2	$2{,}01\times10^{-5}$	14x2	0.51
L1379.14-20-0700	14	13.21	700	2	$2{,}01\times10^{-5}$	14x2	0.60
L1379.14-20-0800	14	13.21	800	2	$2{,}01\times10^{-5}$	14x2	0.68
L1379.14-20-0900	14	13.21	900	2	$2{,}01\times10^{-5}$	14x2	0.77
L1379.14-20-1000	14	13.21	1000	2	$2{,}01\times10^{-5}$	14x2	0.85





L1370.L

Material
Steel (16MnCr5 or 100Cr6), with Vulkolan seals.

Technical Notes
To DIN 69051 form B.
Axial play for 5mm pitch = 0,05mm; for 10mm pitch = 0,10mm; for multi-starts = 0,20mm.
Preload max. 5% of max. dynamic load.
For axial run-out, concentricity and parallelism figures see technical pages.
With lubrication and fixing holes.
For use with ball screws no. L1375.

Tips
For easy mounting of the ball screw nuts see the nut bracket - part L1377.
For miniature ball screws Ø6 to Ø14 see part no. L1379.

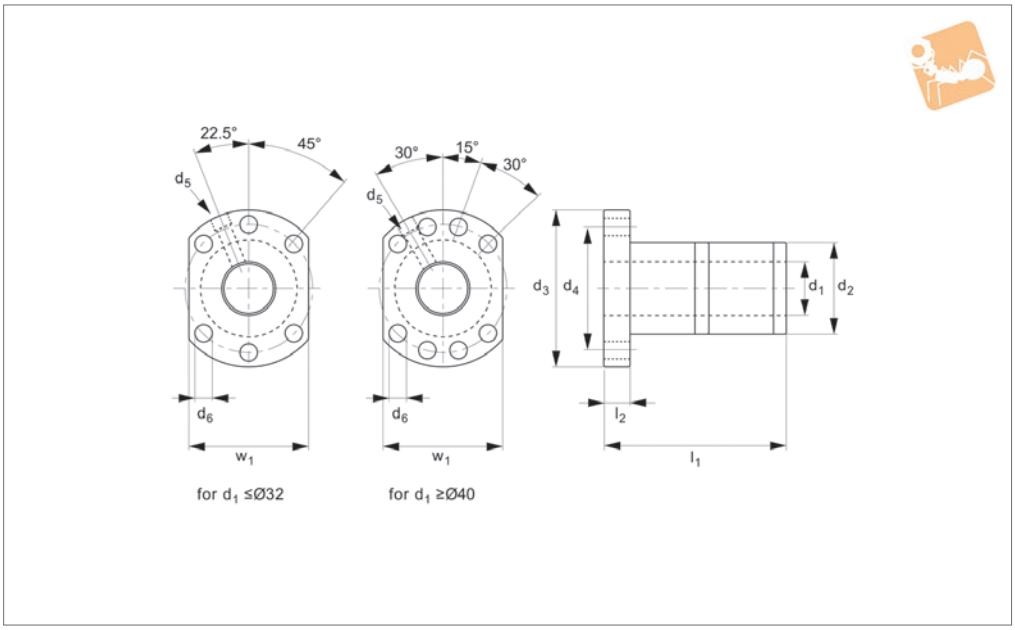
Important Notes
Fit ball nut to screw using the sleeve provided. Offer up the ball nut to the screw and slide carefully on. Do not remove the ball nut from the sleeve provided - the ball bearings can come loose rendering the ball nut unusable.

Order No.	Lead	d_1 for screw	Type	l_1	d_2 tol. G6	d_3 ±0.15	d_4 ±0.15	d_5 for	d_6	l_2	w_1 ±0.15	Ball dia.	Dyn. load C kN max.	Static load C_0 kN max.	Stiffness N/µm
L1370.16L-05	5	16	Type 1	45	28	48	38	M 6	5,5	10	40	3,175	13,53	29,92	314
L1370.16L-10	10	16	Type 1	57	28	48	38	M 6	5,5	10	40	3,175	10,82	23,55	255
L1370.20L-05	5	20	Type 1	51	36	58	47	M 6	6,6	10	44	3,175	15,21	38,00	382
L1370.25L-05	5	25	Type 1	51	40	62	51	M 6	6,6	10	48	3,175	16,91	48,09	441
L1370.25L-10	10	25	Type 1	80	40	62	51	M 6	6,6	12	48	4,762	28,96	71,54	490
L1370.32L-05	5	32	Type 1	52	50	80	65	M 6	9,0	12	62	3,175	18,85	62,21	529
L1370.32L-10	10	32	Type 1	85	50	80	65	M 6	9,0	12	62	6,350	47,12	119,72	598
L1370.40L-05	5	40	Type 2	55	63	93	78	M 8	9,0	14	70	3,175	20,69	78,34	617
L1370.40L-10	10	40	Type 2	88	63	93	78	M 8	9,0	14	70	6,340	52,95	152,00	715
L1370.50L-10	10	50	Type 2	88	75	110	93	M 8	11,0	16	85	6,350	58,88	192,35	833
L1370.63L-10	10	63	Type 2	93	90	125	108	M 8	11,0	18	95	6,350	65,89	248,68	970
L1370.80L-10	10	80	Type 2	93	105	145	125	M 8	13,5	20	110	6,350	72,04	313,36	1068

Left Hand Flanged Double Ball Nuts



L1371.L



Material
Steel (16MnCr5 or 100Cr6), with Vulkolan seals.

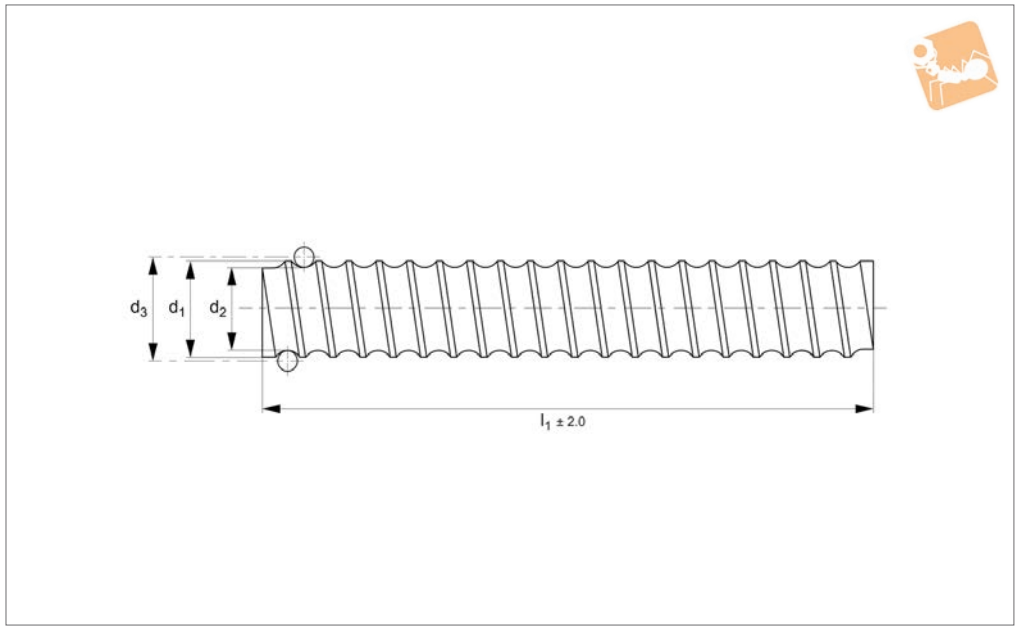
Technical Notes
Axial play for 5mm pitch = 0,05mm; for 10mm pitch = 0,10mm; for multi-starts = 0,20mm.
Preload max. 5% of max. dynamic load.

For axial run-out, concentricity and parallelism figures see technical pages.
With lubrication and fixing holes.
For use with ball screws no. L1375.

Tips
For miniature ball screws Ø6 to Ø14 see part no. L1379.

Important Notes
Fit ball nut to screw using the sleeve provided. Offer up the ball nut to the screw and slide carefully on. Do not remove the ball nut from the sleeve provided - the ball bearings can come loose rendering the ball nut unusable.

Order No.	d_1 for screw	Pitch	l_1	d_2 tol. G6	d_3	d_4	d_5 for	d_6	l_2	w_1 ±0.15	Ball dia.	Dyn. load C kN max.	Static load C_0 kN max.	Stiffness N/µm
L1371.16L-05	16	5	100	28	48	38	M 6	5.5	10	40	3.175	13.53	29.93	431
L1371.20L-05	20	5	101	36	55	47	M 6	7.0	10	44	3.175	15.21	38.00	519
L1371.25L-05	25	5	101	40	62	51	M 6	7.0	10	48	3.175	16.91	48.09	608
L1371.32L-05	32	5	102	50	70	65	M 6	7.0	12	62	3.175	18.85	62.21	725
L1371.32L-10	32	10	162	50	80	65	M 8	7.0	12	62	6.350	47.12	119.72	804
L1371.40L-05	40	5	105	63	80	78	M 6	7.0	14	70	3.175	20.69	78.34	853
L1371.40L-10	40	10	165	63	95	78	M 8	9.0	14	70	6.350	52.92	152.00	970
L1371.50L-10	50	10	171	75	110	93	M 8	11.0	16	85	6.350	58.88	192.35	1147





L1375.16L

Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5 or 10mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 3000mm available.

For ball screw nuts see parts L1370.L& L1371.L - these are left hand nuts.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.

Tips
These are non-standard left hand thread ball screws.

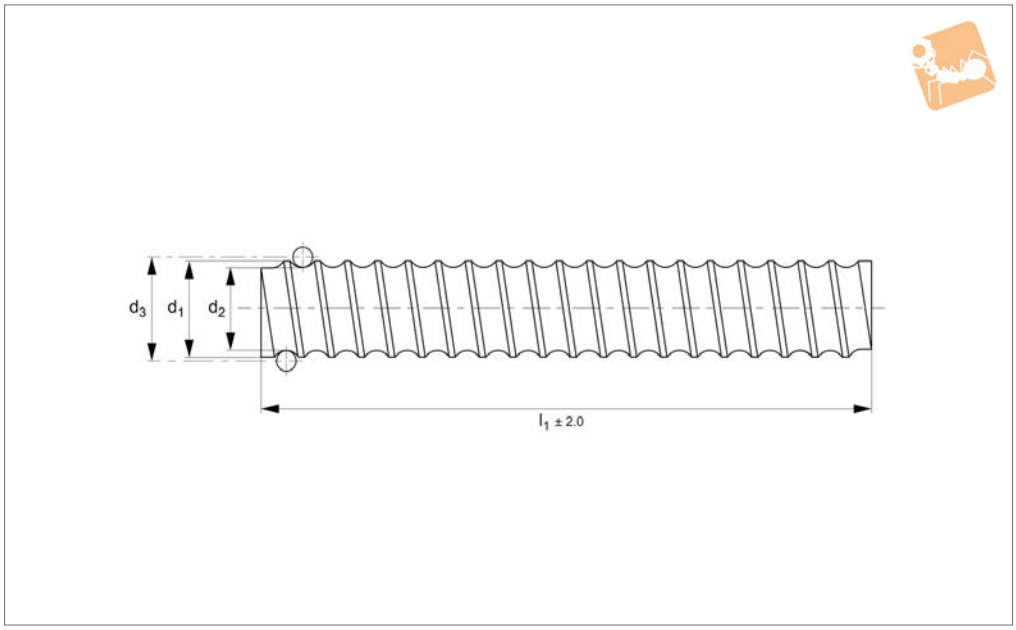
Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

Order No.	Screw dia. x lead	Lead	d_1	l_1	d_2	d_3	Mass moment of inertia kg·m²	Weight kg
L1375.16L-05-0500	16x 5	5	16	500	13.90	17.08	$4{,}45x10^{-5}$	0.71
L1375.16L-05-0600	16x 5	5	16	600	13.90	17.08	$4{,}45x10^{-5}$	0.85
L1375.16L-05-0800	16x 5	5	16	800	13.90	17.08	$4{,}45x10^{-5}$	1.13
L1375.16L-05-1000	16x 5	5	16	1000	13.90	17.08	$4{,}45x10^{-5}$	1.41
L1375.16L-05-1500	16x 5	5	16	1500	13.90	17.08	$4{,}45x10^{-5}$	2.12
L1375.16L-05-2000	16x 5	5	16	2000	13.90	17.08	$4{,}45x10^{-5}$	2.82
L1375.16L-05-2500	16x 5	5	16	2500	13.90	17.08	$4{,}45x10^{-5}$	3.53
L1375.16L-05-3000	16x 5	5	16	3000	13.90	17.08	$4{,}45x10^{-5}$	4.23

Left Hand Ø 20 Ball Screws
rolled



L1375.20L



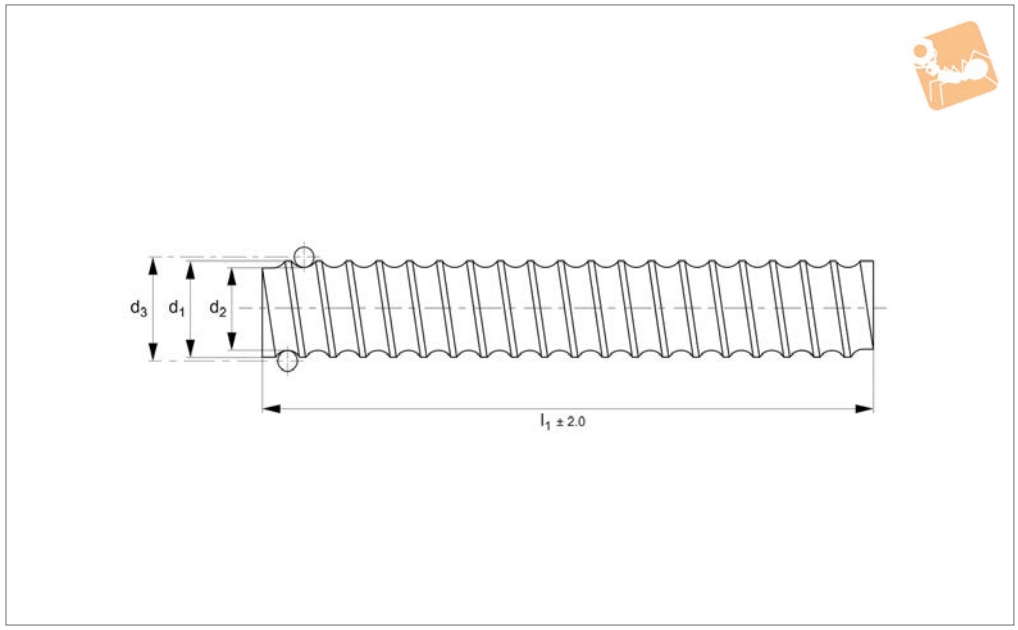
Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,20 or 50mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 3000mm available.
For ball screw nuts see parts L1370.L & L1371.L - these are left hand nuts.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.
Also available as a left hand thread for 5mm pitch.

Tips
These are non-standard left hand thread ball screws.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

Order No.	Screw dia. x lead	d_1	l_1	Lead w_1	d_2	d_3	Mass moment of inertia kg·m²	Weight kg
L1375.20L-05-0500	20x 5	20	500	5	17.09	21.08	$1{,}12\text{x}10^{-4}$	1.18
L1375.20L-05-0600	20x 5	20	600	5	17.09	21.08	$1{,}12\text{x}10^{-4}$	1.41
L1375.20L-05-0800	20x 5	20	800	5	17.09	21.08	$1{,}12\text{x}10^{-4}$	1.88
L1375.20L-05-1000	20x 5	20	1000	5	17.09	21.08	$1{,}12\text{x}10^{-4}$	2.35
L1375.20L-05-1500	20x 5	20	1500	5	17.09	21.08	$1{,}12\text{x}10^{-4}$	3.53
L1375.20L-05-2000	20x 5	20	2000	5	17.09	21.08	$1{,}12\text{x}10^{-4}$	4.70
L1375.20L-05-2500	20x 5	20	2500	5	17.09	21.08	$1{,}12\text{x}10^{-4}$	5.88
L1375.20L-05-3000	20x 5	20	3000	5	17.09	21.08	$1{,}12\text{x}10^{-4}$	7.05





L1375.25L

Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,10 or 2mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.

For ball screw nuts see parts L1370.L & L1371.L - these are left hand nuts.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.

Tips
These are non-standard left hand thread ball screws.

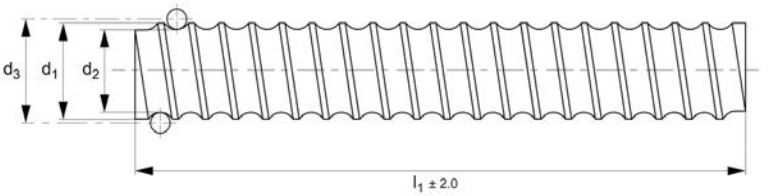
Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

Order No.	Screw dia. x lead	d_1	l_1	Lead w_1	d_2	d_3	Mass moment of inertia kg·m²	Weight kg
L1375.25L-05-0500	25x 5	25	500	5	22.9	26.08	$2{,}62x10^{-4}$	1.80
L1375.25L-05-0600	25x 5	25	600	5	22.9	26.08	$2{,}62x10^{-4}$	2.15
L1375.25L-05-0800	25x 5	25	800	5	22.9	26.08	$2{,}62x10^{-4}$	2.87
L1375.25L-05-1000	25x 5	25	1000	5	22.9	26.08	$2{,}62x10^{-4}$	3.59
L1375.25L-05-1500	25x 5	25	1500	5	22.9	26.08	$2{,}62x10^{-4}$	5.39
L1375.25L-05-2000	25x 5	25	2000	5	22.9	26.08	$2{,}62x10^{-4}$	7.18
L1375.25L-05-2500	25x 5	25	2500	5	22.9	26.08	$2{,}62x10^{-4}$	8.98
L1375.25L-05-3000	25x 5	25	3000	5	22.9	26.08	$2{,}62x10^{-4}$	10.77
L1375.25L-05-3500	25x 5	25	3500	5	22.9	26.08	$2{,}62x10^{-4}$	2.87
L1375.25L-05-4000	25x 5	25	4000	5	22.9	26.08	$2{,}62x10^{-4}$	3.59
L1375.25L-05-4500	25x 5	25	4500	5	22.9	26.08	$2{,}62x10^{-4}$	5.39
L1375.25L-05-5000	25x 5	25	5000	5	22.9	26.08	$2{,}62x10^{-4}$	7.18
L1375.25L-05-5500	25x 5	25	5500	5	22.9	26.08	$2{,}62x10^{-4}$	8.98
L1375.25L-05-6000	25x 5	25	6000	5	22.9	26.08	$2{,}62x10^{-4}$	10.77
L1375.25L-10-0500	25x10	25	500	10	22.9	26.08	$2{,}62x10^{-4}$	1.80
L1375.25L-10-0600	25x10	25	600	10	22.9	26.08	$2{,}62x10^{-4}$	2.15
L1375.25L-10-0800	25x10	25	800	10	22.9	26.08	$2{,}62x10^{-4}$	2.87
L1375.25L-10-1000	25x10	25	1000	10	22.9	26.08	$2{,}62x10^{-4}$	3.59
L1375.25L-10-1500	25x10	25	1500	10	22.9	26.08	$2{,}62x10^{-4}$	5.39
L1375.25L-10-2000	25x10	25	2000	10	22.9	26.08	$2{,}62x10^{-4}$	7.18
L1375.25L-10-2500	25x10	25	2500	10	22.9	26.08	$2{,}62x10^{-4}$	8.98
L1375.25L-10-3000	25x10	25	3000	10	22.9	26.08	$2{,}62x10^{-4}$	10.77
L1375.25L-10-3500	25x10	25	3500	10	22.9	26.08	$2{,}62x10^{-4}$	2.87
L1375.25L-10-4000	25x10	25	4000	10	22.9	26.08	$2{,}62x10^{-4}$	3.59
L1375.25L-10-4500	25x10	25	4500	10	22.9	26.08	$2{,}62x10^{-4}$	5.39
L1375.25L-10-5000	25x10	25	5000	10	22.9	26.08	$2{,}62x10^{-4}$	7.18
L1375.25L-10-5500	25x10	25	5500	10	22.9	26.08	$2{,}62x10^{-4}$	8.98
L1375.25L-10-6000	25x10	25	6000	10	22.9	26.08	$2{,}62x10^{-4}$	10.77

Left Hand Ø 32 Ball Screws
rolled



L1375.32L



Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,10,20 or 40mm lead.
Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.
For ball screw nuts see parts L1370.L & L1371.L - these are left hand nuts.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.
Also available as a left hand thread for 5mm pitch.

Tips
These are non-standard left hand thread ball screws.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

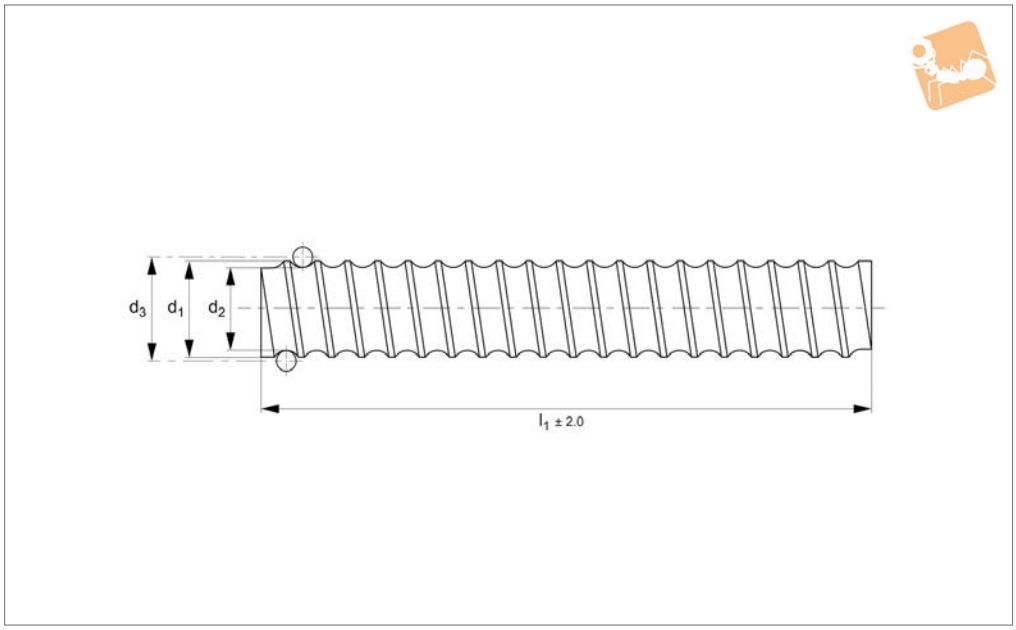
Order No.	Screw dia. x lead	d_1	l_1	Lead w_1	d_2	d_3	Mass moment of inertia kg·m²	Weight kg
L1375.32L-05-0500	32x 5	32	500	5	29.9	33.08	$7{,}25\times10^{-4}$	2.99
L1375.32L-05-0600	32x 5	32	600	5	29.9	33.08	$7{,}25\times10^{-4}$	3.59
L1375.32L-05-0800	32x 5	32	800	5	29.9	33.08	$7{,}25\times10^{-4}$	4.78
L1375.32L-05-1000	32x 5	32	1000	5	29.9	33.08	$7{,}25\times10^{-4}$	5.98
L1375.32L-05-1500	32x 5	32	1500	5	29.9	33.08	$7{,}25\times10^{-4}$	8.97
L1375.32L-05-2000	32x 5	32	2000	5	29.9	33.08	$7{,}25\times10^{-4}$	11.96
L1375.32L-05-2500	32x 5	32	2500	5	29.9	33.08	$7{,}25\times10^{-4}$	14.95
L1375.32L-05-3000	32x 5	32	3000	5	29.9	33.08	$7{,}25\times10^{-4}$	17.94
L1375.32L-05-3500	32x 5	32	3500	5	29.9	33.08	$7{,}25\times10^{-4}$	4.78
L1375.32L-05-4000	32x 5	32	4000	5	29.9	33.08	$7{,}25\times10^{-4}$	5.98
L1375.32L-05-4500	32x 5	32	3500	5	29.9	33.08	$7{,}25\times10^{-4}$	8.97
L1375.32L-05-5000	32x 5	32	4000	5	29.9	33.08	$7{,}25\times10^{-4}$	11.96
L1375.32L-05-5500	32x 5	32	4500	5	29.9	33.08	$7{,}25\times10^{-4}$	14.95
L1375.32L-05-6000	32x 5	32	6000	5	29.9	33.08	$7{,}25\times10^{-4}$	17.94
L1375.32L-10-0500	32x10	32	500	10	29.9	34.15	$7{,}69\times10^{-4}$	3.08
L1375.32L-10-0600	32x10	32	600	10	29.9	34.15	$7{,}69\times10^{-4}$	3.70
L1375.32L-10-0800	32x10	32	800	10	29.9	34.15	$7{,}69\times10^{-4}$	4.93
L1375.32L-10-1000	32x10	32	1000	10	29.9	34.15	$7{,}69\times10^{-4}$	6.16
L1375.32L-10-1500	32x10	32	1500	10	29.9	34.15	$7{,}69\times10^{-4}$	9.24
L1375.32L-10-2000	32x10	32	2000	10	29.9	34.15	$7{,}69\times10^{-4}$	12.32
L1375.32L-10-2500	32x10	32	2500	10	29.9	34.15	$7{,}69\times10^{-4}$	15.40
L1375.32L-10-3000	32x10	32	3000	10	29.9	34.15	$7{,}69\times10^{-4}$	18.48
L1375.32L-10-3500	32x10	32	3500	10	29.9	33.08	$7{,}25\times10^{-4}$	4.78
L1375.32L-10-4000	32x10	32	4000	10	29.9	33.08	$7{,}25\times10^{-4}$	5.98
L1375.32L-10-4500	32x10	32	4500	10	29.9	33.08	$7{,}25\times10^{-4}$	8.97
L1375.32L-10-5000	32x10	32	5000	10	29.9	33.08	$7{,}25\times10^{-4}$	11.96

Order No.	Screw dia. x lead	d_1	l_1	Lead w_1	d_2	d_3	Mass moment of inertia kg·m²	Weight kg
L1375.32L-10-5500	32x10	32	5500	10	29.9	33.08	$7{,}25x10^{-4}$	14.95
L1375.32L-10-6000	32x10	32	6000	10	29.9	33.08	$7{,}25x10^{-4}$	17.94

Left Hand Ø 40 Ball Screws
rolled



L1375.40L



Material
Steel (CF53 or C55R), induction hardened to 60 HRC ±2, polished.

Technical Notes
Gothic profile with a 5,10 or 20mm lead. Tolerance T7 - 50µ/300mm. Shorter lengths or longer lengths up to a maximum of 6000mm available.

For ball screw nuts see parts L1370.L & L1371.L - these are left hand nuts.
For end screw machining to suit ball screw support units see relevant ball screw supports (L1388-L1406). End machining on request.

Tips
These are non-standard left hand thread ball screws.

Important Notes
Ensure the ball nut can be fitted to the ball screw after machining. Do not remove the ball nut from the sleeve prior to installation - the balls come free rendering the ball nut unusable.
d3 = pitch diameter.

Order No.	Screw dia. x lead	d_1	l_1	Lead w_1	d_2	d_3	Mass moment of inertia kg·m²	Weight kg
L1375.40L-05-0500	40x 5	40	500	5	37.9	41.08	$1{,}81x10^{-3}$	4.72
L1375.40L-05-0600	40x 5	40	600	5	37.9	41.08	$1{,}81x10^{-3}$	5.66
L1375.40L-05-0800	40x 5	40	800	5	37.9	41.08	$1{,}81x10^{-3}$	7.55
L1375.40L-05-1000	40x 5	40	1000	5	37.9	41.08	$1{,}81x10^{-3}$	9.44
L1375.40L-05-1500	40x 5	40	1500	5	37.9	41.08	$1{,}81x10^{-3}$	14.16
L1375.40L-05-2000	40x 5	40	2000	5	37.9	41.08	$1{,}81x10^{-3}$	18.88
L1375.40L-05-2500	40x 5	40	2500	5	37.9	41.08	$1{,}81x10^{-3}$	23.60
L1375.40L-05-3000	40x 5	40	3000	5	37.9	41.08	$1{,}81x10^{-3}$	28.32
L1375.40L-05-3500	40x 5	40	3500	5	37.9	41.08	$1{,}81x10^{-3}$	7.55
L1375.40L-05-4000	40x 5	40	4000	5	37.9	41.08	$1{,}81x10^{-3}$	9.44
L1375.40L-05-4500	40x 5	40	4500	5	37.9	41.08	$1{,}81x10^{-3}$	14.16
L1375.40L-05-5000	40x 5	40	5000	5	37.9	41.08	$1{,}81x10^{-3}$	18.88
L1375.40L-05-5500	40x 5	40	5500	5	37.9	41.08	$1{,}81x10^{-3}$	23.60
L1375.40L-05-6000	40x 5	40	6000	5	37.9	41.08	$1{,}81x10^{-3}$	28.32
L1375.40L-10-0500	40x10	40	500	10	35.8	42.15	$1{,}66x10^{-3}$	4.51
L1375.40L-10-0600	40x10	40	600	10	35.8	42.15	$1{,}66x10^{-3}$	5.41
L1375.40L-10-0800	40x10	40	800	10	35.8	42.15	$1{,}66x10^{-3}$	7.22
L1375.40L-10-1000	40x10	40	1000	10	35.8	42.15	$1{,}66x10^{-3}$	9.02
L1375.40L-10-1500	40x10	40	1500	10	35.8	42.15	$1{,}66x10^{-3}$	13.53
L1375.40L-10-2000	40x10	40	2000	10	35.8	42.15	$1{,}66x10^{-3}$	18.04
L1375.40L-10-2500	40x10	40	2500	10	35.8	42.15	$1{,}66x10^{-3}$	22.55
L1375.40L-10-3000	40x10	40	3000	10	35.8	42.15	$1{,}66x10^{-3}$	27.06
L1375.40L-10-3500	40x10	40	3500	10	37.9	41.08	$1{,}81x10^{-3}$	7.55
L1375.40L-10-4000	40x10	40	4000	10	37.9	41.08	$1{,}81x10^{-3}$	9.44
L1375.40L-10-4500	40x10	40	4500	10	37.9	41.08	$1{,}81x10^{-3}$	14.16
L1375.40L-10-5000	40x10	40	5000	10	37.9	41.08	$1{,}81x10^{-3}$	18.88
L1375.40L-10-5500	40x10	40	5500	10	37.9	41.08	$1{,}81x10^{-3}$	23.60
L1375.40L-10-6000	40x10	40	6000	10	37.9	41.08	$1{,}81x10^{-3}$	28.32

Fixed mounts

L1388.AK



L1390.FK



L1392.BK



L1394.EK



L1400.FKA



L1402.LK



Floating mounts

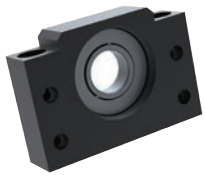
L1389.AF



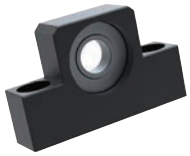
L1391.FF



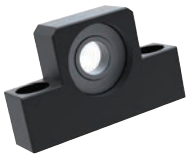
L1393.BF



L1395.EF



L1403.LF



Other Mounts

L1405.WBK



L1406.SBK



L1408.MBA



Bearing Supports from Automotion Components

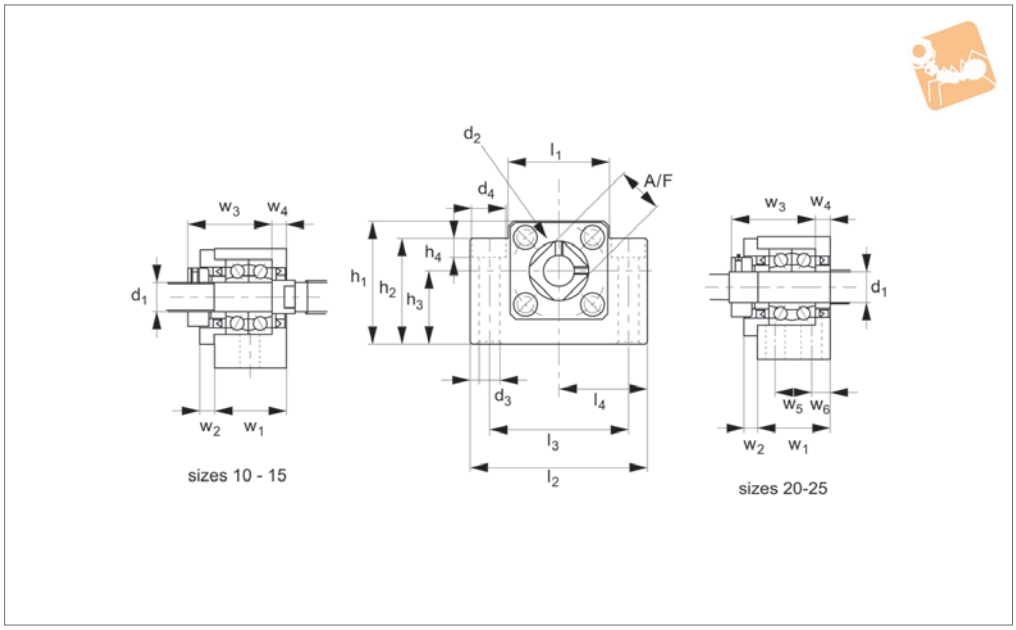
BEARING SUPPORTS

Fixed Rectangular Support Units (AK)

for ball & lead screws



L1388



Material
Steel with black oxide finish.
Bearings, sealed and lubricated for life.

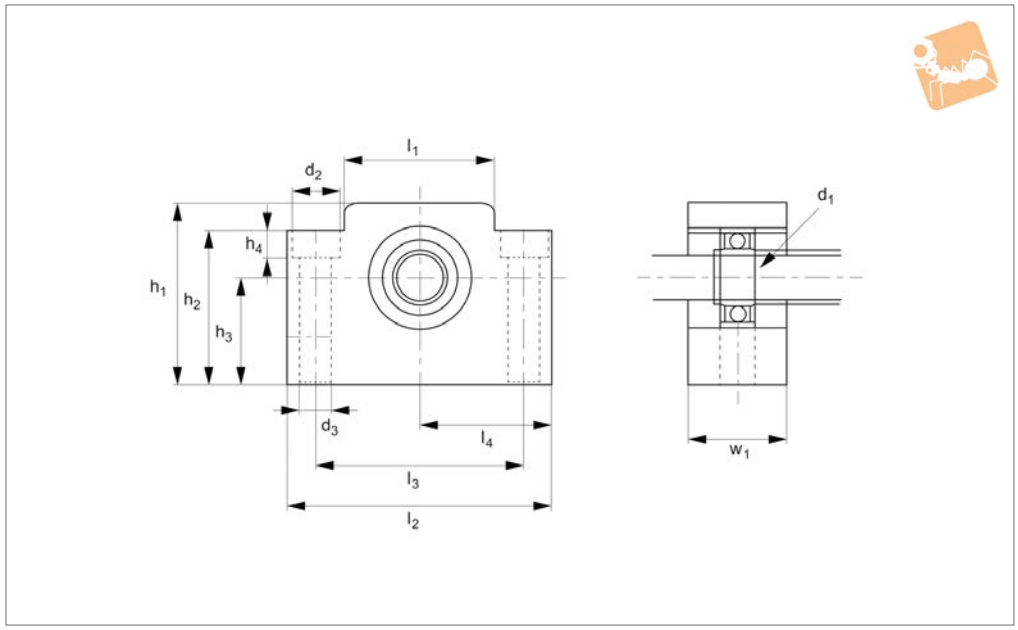
Technical Notes
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade.

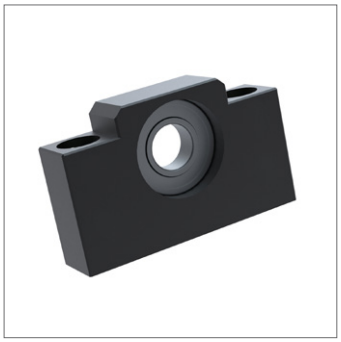
The bearings are not preloaded and have a maximum axial clearance of 18µ.
For dimensions to machine the ends of the screws see technical pages.

Tips
Electroless nickel plated versions of these bearing mounts are available for clean room and other applications. **For lead screw sizes up to 80 and ball screw sizes up to 63 see part no. L1392.**

Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1	d_2	d_3	d_4	h_1	h_2	h_3 ±0.02	h_4	l_1	l_2
L1388.AK10	14 - 16	12	10	M3	9	14.0	43	35	25	11	36	70
L1388.AK12	18 - 20	14 - 16	12	M4	9	14.0	43	35	25	11	36	70
L1388.AK15	22 - 24	20	15	M4	11	17.0	49	40	30	15	41	80
L1388.AK20	26 - 32	25 - 28	20	M4	11	17.0	58	45	30	15	56	95
L1388.AK25	36	32 - 36	25	M5	11	7.8	68	25	35	8	66	105

Order No.	l_3	l_4 ±0.02	w_1	w_2	w_3	w_4	w_5	w_6	A/F	Axial load kgf max.	rpm max.	Static load kgf max.
L1388.AK10	52	35.0	24	6	29.5	6	-	-	16	195	24000	530
L1388.AK12	52	35.0	24	6	29.5	6	-	-	19	217	22000	610
L1388.AK15	60	40.0	25	6	36.0	5	-	-	22	240	19000	700
L1388.AK20	75	47.5	42	10	50.0	10	22	10	30	587	13000	1690
L1388.AK25	85	52.5	48	12	56.0	14	30	9	35	709	12000	2090





L1389

Material
Steel with black oxide finish.
Bearings, sealed and lubricated for life.

Technical Notes
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade.

The bearings are not preloaded and have a max. axial clearance of 18µ.
For dimensions to machine the ends of the screws see technical pages.

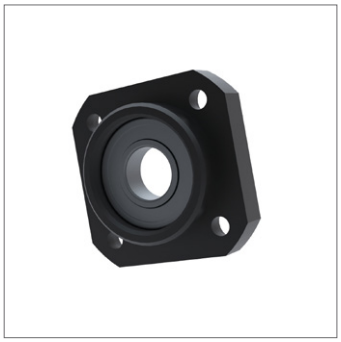
Tips
Electroless nickel plated versions of these bearing mounts are available for clean room and other applications. **For lead screw sizes up to 80 and ball screw sizes up to 63 see part no. L1393.**

Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1	d_2	d_3	h_1	h_2	h_3 ±0.02	h_4
L1389.AF10	12	10	8	14	11	43	35	25	11
L1389.AF12	14 - 16	12	10	14	11	43	35	25	11
L1389.AF15	22 - 24	20	15	14	11	49	40	30	11
L1389.AF20	26 - 32	25 - 28	20	14	11	58	45	30	15
L1389.AF25	36	32 - 36	25	14	11	68	25	35	-

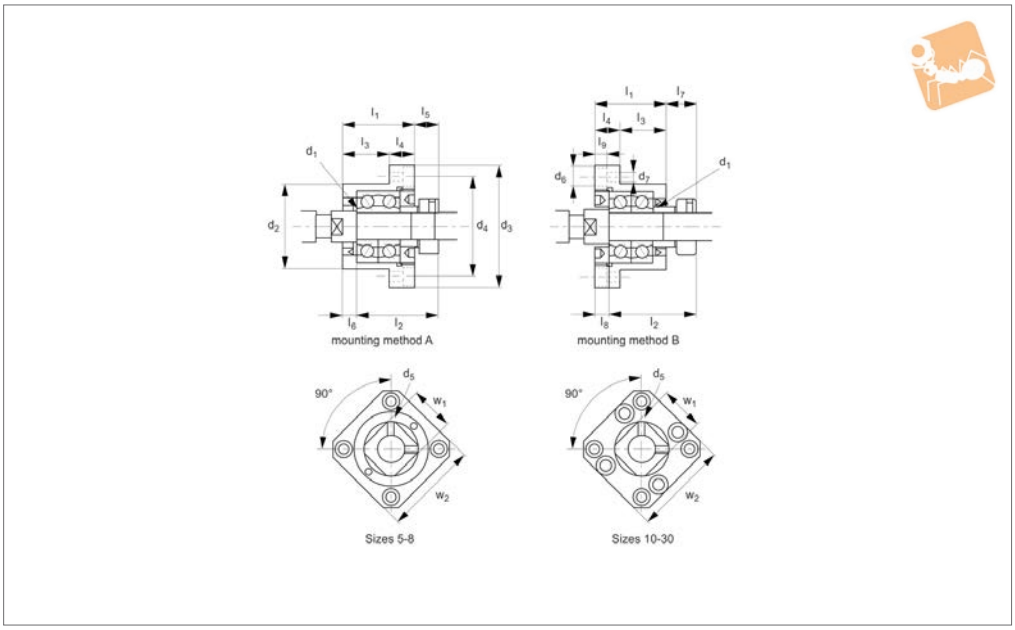
Order No.	l_1	l_2	l_3	l_4 ±0.02	w_1	Axial load kgf max.	rpm max.	Static load kgf max.
L1389.AF10	36	70	52	35.0	20	195	24000	530
L1389.AF12	36	70	52	35.0	20	217	22000	610
L1389.AF15	41	80	60	40.0	20	240	19000	700
L1389.AF20	56	95	75	47.5	26	587	13000	1690
L1389.AF25	66	105	85	52.5	30	820	8500	1920

Fixed Round Support Units (FK)

for ball & lead screws



L1390



Material

Steel with black oxide finish. Bearings, sealed and lubricated for life.

Technical Notes

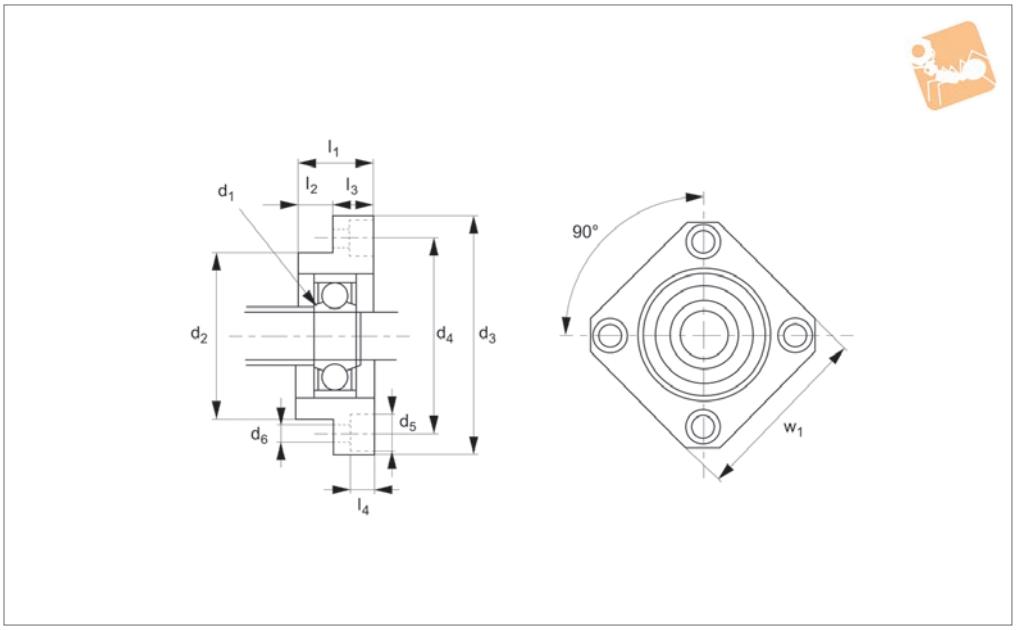
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade. The bearings are not preloaded and have a max. axial clearance of 18µ.
For dimensions to machine the ends of the screws see technical pages.

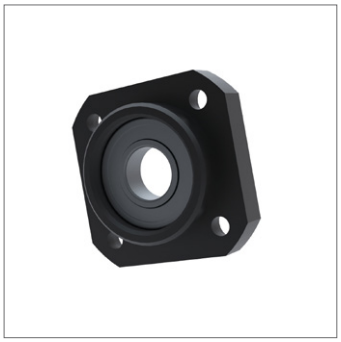
Tips

Electroless nickel plated versions of these bearing mounts are available for clean room and other applications.

Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1	d_2 tol. g6	d_3	d_4	d_5	d_6	d_7	l_1	l_2	l_3
L1390.FK05		6	5	20	34	26	M3	6,5	3,4	16,5	18,5	10,5
L1390.FK06	10	8	6	22	36	28	M3	6,5	3,4	20,0	22,0	13,0
L1390.FK08	12	10	8	28	43	35	M3	6,5	3,4	23,0	26,0	14,0
L1390.FK10	14 - 16	12	10	34	52	42	M3	8,0	4,5	27,0	29,5	17,0
L1390.FK12	18 - 20	14 - 16	12	36	54	44	M4	8,0	4,5	27,0	29,5	17,0
L1390.FK15	22 - 24	20	15	40	63	50	M4	9,5	5,5	32,0	36,0	17,0
L1390.FK17	24	20 - 25	17	50	77	62	M4	11,0	6,6	45,0	47,0	23,0
L1390.FK20	26 - 32	25 - 28	20	57	85	70	M4	11,0	6,6	52,0	50,0	30,0
L1390.FK25	36	32 - 36	25	63	98	80	M5	15,0	9,0	57,0	60,0	30,0
L1390.FK30	40	40- 45	30	75	117	95	M6	17,5	11,0	62,0	61,0	32,0

Order No.	l_4	l_5	l_6	l_7	l_8	l_9	w_1	w_2	Axial load kgf	rpm	Static load kgf
L1390.FK05	6	5.5	3.5	3.0	5.0	4	11	26	74	52800	200
L1390.FK06	7	5.5	3.5	4.5	6.5	4	12	28	74	52800	200
L1390.FK08	9	7.0	4.0	5.0	7.0	4	14	35	103	40000	280
L1390.FK10	10	7.5	5.0	8.5	6.0	4	16	42	195	24000	530
L1390.FK12	10	7.5	5.0	8.5	6.0	4	19	44	217	22000	610
L1390.FK15	15	10.0	6.0	12.0	8.0	6	22	52	240	19000	700
L1390.FK17	22	11.0	9.0	14.0	12.0	10	24	61	413	16000	1220
L1390.FK20	22	8.0	10.0	12.0	14.0	10	30	68	587	13000	1690
L1390.FK25	27	13.0	10.0	20.0	17.0	13	35	79	709	12000	2090
L1390.FK30	30	11.0	12.0	17.0	18.0	15	40	93	939	10000	3000





L1391

Material
Steel with black oxide finish. Bearings, sealed and lubricated for life.

Technical Notes
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade. The bearings are not preloaded and have a max. axial clearance of 18µ.
For dimensions to machine the ends of the screws see technical pages.

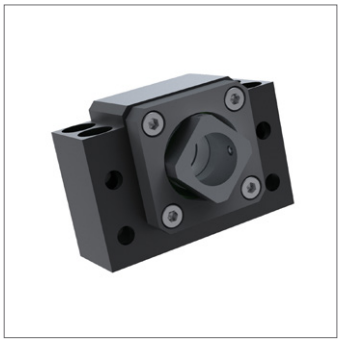
Tips
Electroless nickel plated versions of these bearing mounts are available for clean room and other applications.

Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1 tol. H7	d_2 tol. g6	d_3	d_4	d_5	d_6	l_1
L1391.FF06	10	8	6	22	36	28	6.5	3.4	10
L1391.FF10	12	10	8	28	43	35	6.5	3.4	12
L1391.FF12	14 - 16	12	10	34	52	42	8.0	4.5	15
L1391.FF15	22 - 24	20	15	40	63	50	9.5	5.5	17
L1391.FF17	24	20 - 25	17	50	77	62	11.0	6.6	20
L1391.FF20	24	20 - 25	20	57	85	70	11.0	6.6	20
L1391.FF25	36	32 - 36	25	63	98	80	14.0	9.0	24
L1391.FF30	40	40 - 45	30	75	117	95	17.0	11.0	27

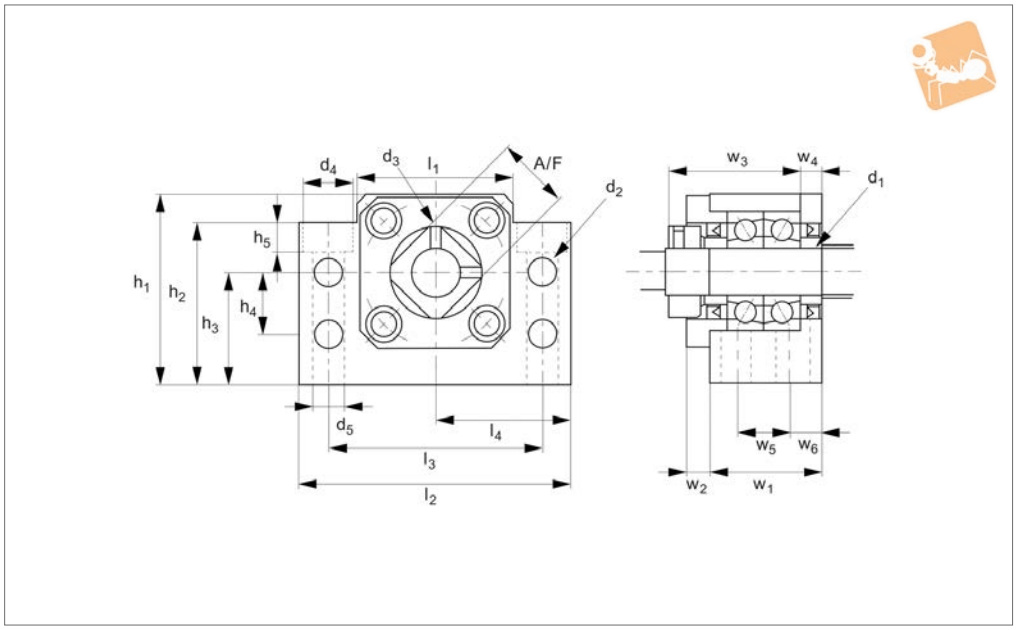
Order No.	l_2	l_3	l_4	w_1	Axial load kgf max.	rpm max.	Static load kgf max.
L1391.FF06	4	6	4.0	28	74	2	200
L1391.FF10	5	7	4.0	35	608ZZ	530	195
L1391.FF12	8	7	4.0	42	6000ZZ	610	214
L1391.FF15	8	9	5.5	52	6002ZZ	400	240
L1391.FF17	9	11	6.5	61	413	16000	1220
L1391.FF20	9	11	6.5	68	587	13000	1690
L1391.FF25	10	14	8.5	79	709	12000	2090
L1391.FF30	9	18	11.0	93	1082	7100	2760

Fixed Rectangular Support Units (BK)

for ball & lead screws



L1392



Material

Steel with black oxide finish. Bearings, sealed and lubricated for life.

Technical Notes

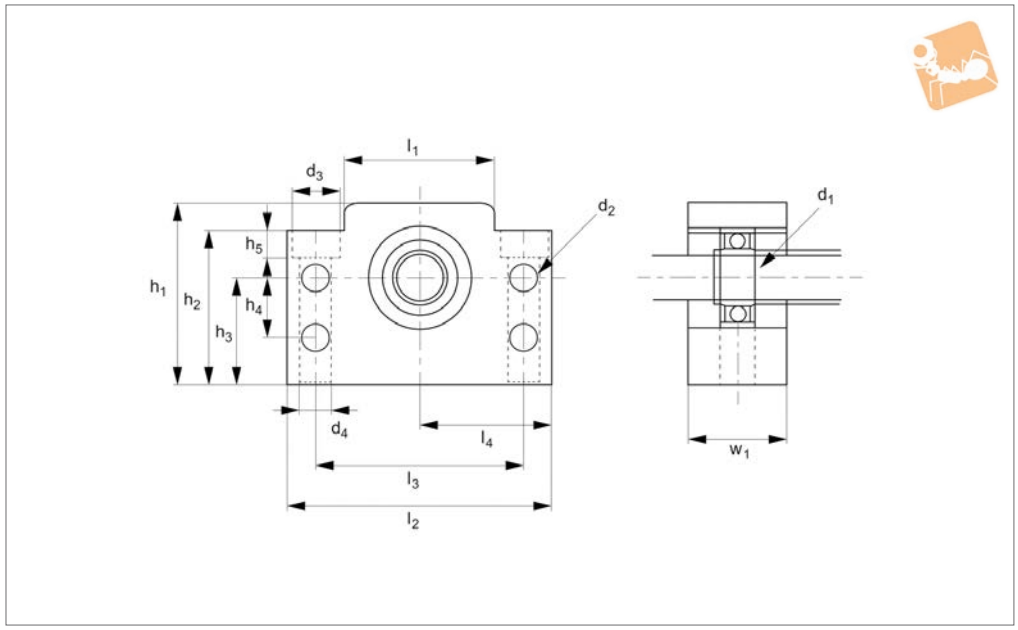
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade. The bearings are not preloaded and have a max. axial clearance of 18µ.
For dimensions to machine the ends of the screws see technical pages.

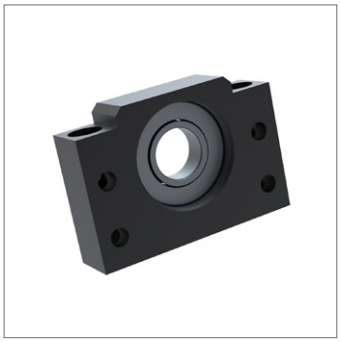
Tips

Electroless nickel plated versions of these bearing mounts are available for clean room and other applications.

Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1 tol. H7	d_2	d_3	d_4	d_5	h_1	h_2	h_3 ±0.02	h_4	h_5	l_1	l_2
L1392.BK10	14 - 16	12	10	5.5	M3	10.8	6.6	39	32.5	22	15	5.0	34	60
L1392.BK12	18 - 20	14 - 16	12	5.5	M4	10.8	6.6	43	32.5	25	18	5.0	34	60
L1392.BK15	22 - 24	20	15	5.5	M4	11.0	6.6	48	38.0	28	18	6.5	40	70
L1392.BK17	24	20 - 25	17	6.6	M4	14.0	9.0	64	55.0	39	28	8.5	50	86
L1392.BK20	26 - 32	25 - 28	20	6.6	M4	14.0	9.0	60	50.0	34	22	8.5	52	88
L1392.BK25	36	32 - 36	25	9.0	M5	17.5	11.0	80	70.0	48	33	11.0	64	106
L1392.BK30	40	40 - 45	30	11.0	M6	20.0	14.0	89	78.0	51	33	13.0	76	128
L1392.BK35	44 - 50	50	35	11.0	M8	20.0	14.0	96	79.0	52	35	13.0	88	140
L1392.BK40	55 - 80	63	40	14.0	M8	26.0	18.0	110	90.0	60	37	17.5	100	160

Order No.	l_3	l_4 ±0.02	w_1	w_2	w_3	w_4	w_5	w_6	A/F	Axial load kgf max.	rpm max.	Static load kgf max.
L1392.BK10	46	30	25	5	29	5	13	6	16	195	24000	530
L1392.BK12	46	30	25	5	29	5	13	6	19	217	22000	610
L1392.BK15	54	35	27	6	32	6	15	6	22	240	19000	700
L1392.BK17	68	43	35	9	44	7	19	8	24	413	16000	1220
L1392.BK20	70	44	35	8	43	8	19	8	30	428	15000	1340
L1392.BK25	85	53	42	12	54	9	22	10	35	709	12000	2090
L1392.BK30	102	64	45	14	61	9	23	11	40	939	10000	3000
L1392.BK35	114	70	50	14	67	12	26	12	50	1466	6000	3750
L1392.BK40	130	80	61	18	76	15	33	14	60	1834	5300	4700





L1393

Material
Steel with black oxide finish. Bearings, sealed and lubricated for life.

Technical Notes
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade. The bearings are not preloaded and have a max. axial clearance of 18µ.
For dimensions to machine the ends of the screws see technical pages.

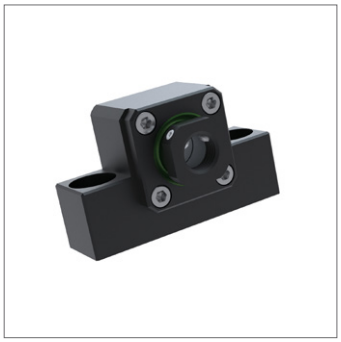
Tips
Electroless nickel plated versions of these bearing mounts are available for clean room and other applications.

Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1 tol. h7	d_2	d_3	d_4	h_1	h_2	h_3 ±0.02	h_4	h_5
L1393.BF10	12	10	8	5.5	10.8	6.6	39	32.5	22	15	5.0
L1393.BF12	14 - 16	12	10	5.5	10.8	6.6	43	32.5	25	18	5.0
L1393.BF15	22 - 24	20	15	5.5	11.0	6.6	48	38.0	28	18	6.5
L1393.BF17	24	20 - 25	17	6.6	14.0	9.0	64	55.0	39	28	8.5
L1393.BF20	26 - 32	25 - 28	20	6.6	14.0	9.0	60	50.0	34	22	8.5
L1393.BF25	36	32 - 36	25	9.0	17.5	11.0	80	70.0	48	33	11.0
L1393.BF30	40	40 - 45	30	11.0	20.0	14.0	89	78.0	51	33	13.0
L1393.BF35	44 - 50	50	35	11.0	20.0	14.0	96	79.0	52	35	13.0
L1393.BF40	55 - 80	63	40	14.0	26.0	18.0	110	90.0	60	37	17.5

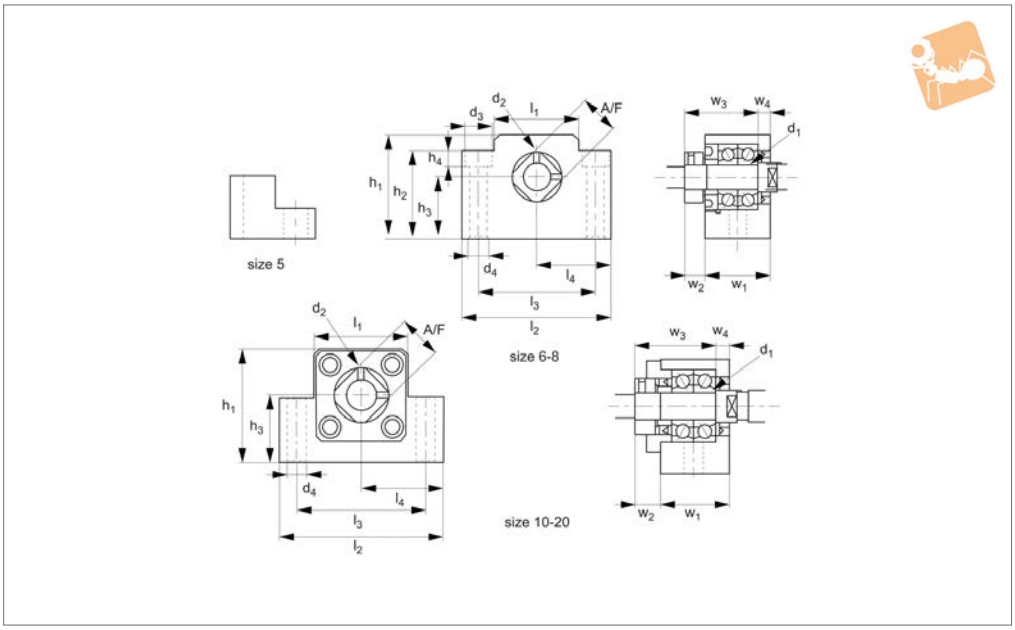
Order No.	l_1	l_2	l_3	l_4 ±0.02	w_1	Axial load kgf max.	rpm max.	Static load kgf max.
L1393.BF10	34	60	46	30	20	195	24000	530
L1393.BF12	34	60	46	30	20	217	22000	610
L1393.BF15	40	70	54	35	20	240	19000	700
L1393.BF17	50	86	68	43	23	413	16000	1220
L1393.BF20	52	88	70	44	26	428	15000	1340
L1393.BF25	64	106	85	53	30	709	12000	2090
L1393.BF30	76	128	102	64	32	1082	7100	2760
L1393.BF35	88	140	114	70	32	1466	6000	3750
L1393.BF40	100	160	130	80	37	1834	5300	4700

Fixed Rectangular Support Units (EK)

for ball & lead screws



L1394



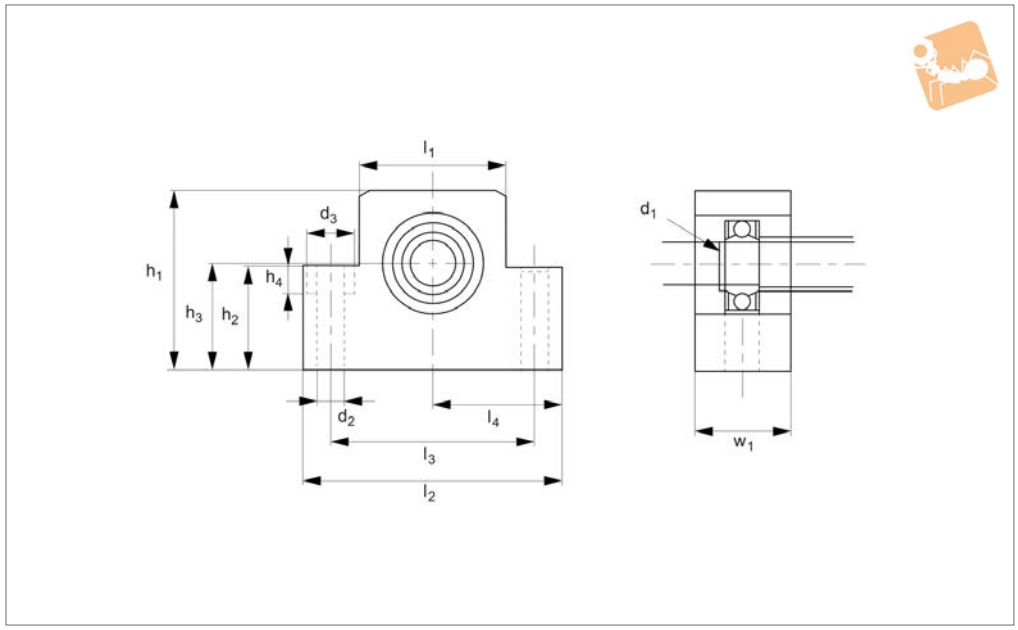
Material
Steel with black oxide finish. Bearings, sealed and lubricated for life.

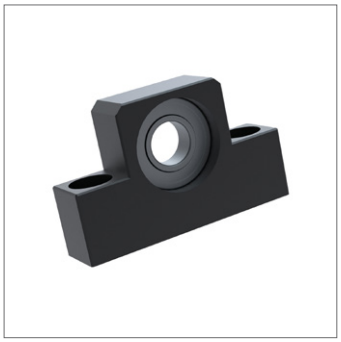
Technical Notes
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade. The bearings are not preloaded and have a max. axial clearance of 18µ.
For dimensions to machine the ends of the screws see technical pages.

Tips
Electroless nickel plated versions of these bearing mounts are available for clean room and other applications.

Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1 tol. H7	d_2	d_3	d_4	h_1	h_2	h_3 ±0.02	h_4	l_1	l_2	l_3
L1394.EK05	-	6	5	M3	-	4.5	21	8	11	-	20	36	28
L1394.EK06	10	8	6	M3	9.5	5.5	25	20	13	11	18	42	30
L1394.EK08	12	10	8	M3	11.0	6.5	32	26	17	12	25	52	38
L1394.EK10	14 - 16	12	10	M3	-	9.0	43	24	25	-	36	70	52
L1394.EK12	18 - 20	14 - 16	12	M4	-	9.0	43	24	25	-	36	70	52
L1394.EK15	22 - 24	20	15	M4	-	11.0	49	25	30	-	41	80	60
L1394.EK20	26 - 32	25 - 28	20	M4	-	11.0	58	25	30	-	56	95	75

Order No.	l_4 ±0.02	w_1	w_2	w_3	w_4	A/F	Axial load kgf max.	rpm max.	Static load kgf max.
L1394.EK05	18.0	16.5	5.5	18.5	3.5	11	74	52800	200
L1394.EK06	21.0	20.0	5.5	22.0	3.5	12	74	52800	200
L1394.EK08	26.0	23.0	7.0	26.0	4.0	14	103	4000	280
L1394.EK10	35.0	24.0	6.0	29.5	6.0	16	195	24000	530
L1394.EK12	35.0	24.0	6.0	29.5	6.0	19	217	22000	610
L1394.EK15	40.0	25.0	6.0	36.0	5.0	22	240	19000	700
L1394.EK20	47.5	20.0	10.0	50.0	10.0	30	587	13000	1690





L1395

Material
Steel with black oxide finish. Bearings, sealed and lubricated for life.

Technical Notes
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade. The bearings are not preloaded and have a max. axial clearance of 18µ.
For dimensions to machine the ends of the screws see technical pages.

Tips
Electroless nickel plated versions of these bearing mounts are available for clean room and other applications.

Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1 tol. h7	d_2	d_3	h_1	h_2	h_3 ±0.02	h_4	l_1
L1395.EF06	10	8	6	5.5	9.5	25	20	13	11	18
L1395.EF08	10	8	6	6.6	11.0	32	26	17	12	25
L1395.EF10	12	10	8	9.0	-	43	24	25	-	36
L1395.EF12	14 - 16	12	10	9.0	-	43	24	25	-	36
L1395.EF15	22 - 24	20	15	9.0	-	49	25	30	-	41
L1395.EF20	26 - 32	25 - 28	20	11.0	-	58	25	30	-	56

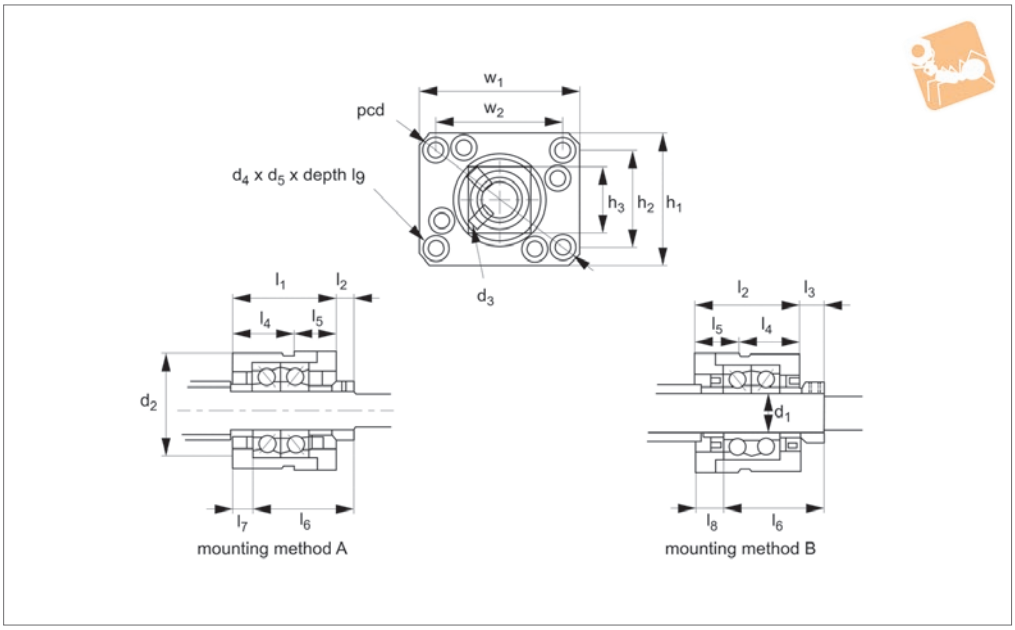
Order No.	l_2	l_3	l_4 ±0.02	w_1	Axial load kgf max.	rpm max.	Static load kgf max.
L1395.EF06	42	30	21.0	12	74	52800	200
L1395.EF08	52	38	26.0	14	103	40000	280
L1395.EF10	70	52	35.0	20	195	24000	530
L1395.EF12	70	52	35.0	20	217	22000	610
L1395.EF15	80	60	40.0	20	240	19000	700
L1395.EF20	95	75	47.5	26	587	13000	1690

Fixed Round Support Units (FKA)

for ball & lead screws



L1400



Material

Steel with black oxide finish.
Bearings, sealed and lubricated for life.

Technical Notes

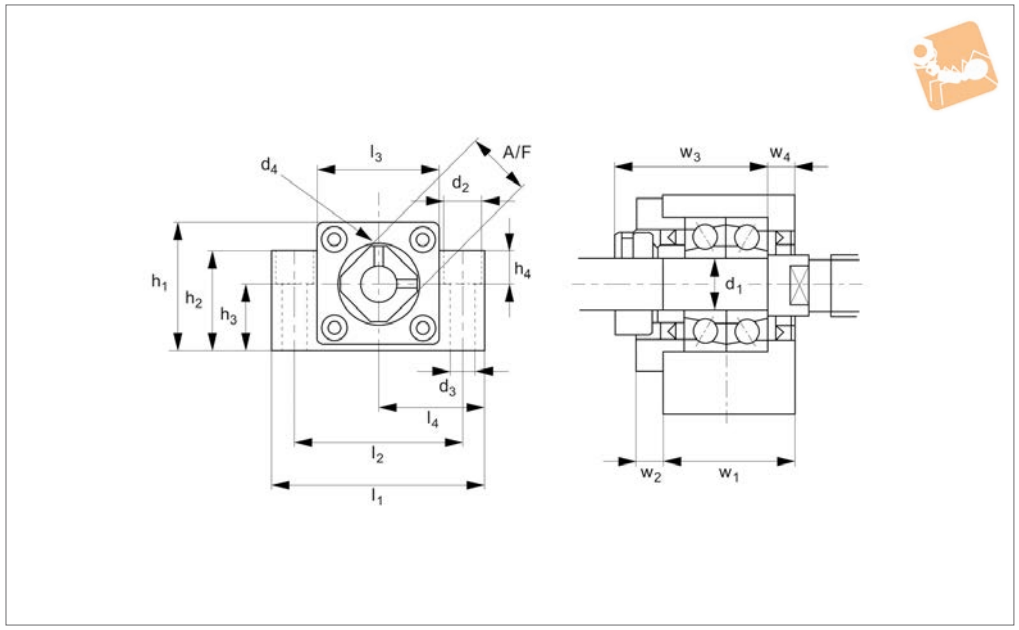
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade.
The bearings are not preloaded and have a max. axial clearance of 0,018mm.
For dimensions to machine the ends of the screws to see technical pages.

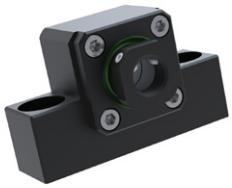
Tips

Electroless nickel plated versions of these bearing mounts are available for clean room and other applications.

Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1 tol. H7	d_2 tol. g6	d_3	d_4	d_5	h_1	h_2	h_3	l_1
L1400.FKA06	10	8	6	28	M3	6.5	3.4	30	20.93	12	20
L1400.FKA08	12	10	8	28	M3	6.5	3.4	30	20.93	14	23
L1400.FKA10	14 - 16	12	10	36	M3	8.0	4.5	39	27.39	16	27
L1400.FKA12	18 - 20	14 - 16	12	36	M4	8.0	4.5	39	27.39	19	27
L1400.FKA15	22 - 24	20	15	40	M4	9.5	5.5	43	30.78	22	32
L1400.FKA20	26 - 32	25 - 28	20	57	M4	11.0	6.6	59	44.33	30	52

Order No.	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	w_1	w_2	Axial load kgf max.	pcd	rpm max.	Static load kgf max.
L1400.FKA06	5.5	6.5	13	7	22.0	3.5	4.5	4	36	26.79	74	44	52800	200
L1400.FKA08	7.0	8.0	14	9	26.0	4.0	5.0	4	36	26.79	103	44	40000	280
L1400.FKA10	7.5	8.5	17	10	29.5	5.0	6.0	4	48	35.70	195	56	24000	530
L1400.FKA12	7.5	8.5	17	10	29.5	5.0	6.0	4	48	35.70	217	56	22000	210
L1400.FKA15	10.0	12.0	17	15	36.0	6.0	8.0	6	56	39.40	240	65	19000	700
L1400.FKA20	8.0	12.0	30	22	50.0	10.0	14.0	10	72	56.74	587	86	13000	1690





L1402

Material
Steel with black oxide finish.
Bearings, sealed and lubricated for life.

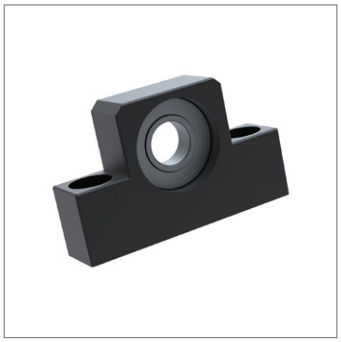
Technical Notes
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade.
The bearings are not preloaded and have a max. axial clearance of 0,018mm.
For dimensions to machine the ends of the screws to see technical pages.

Tips
Electroless nickel plated versions of these bearing mounts are available for clean room and other applications.

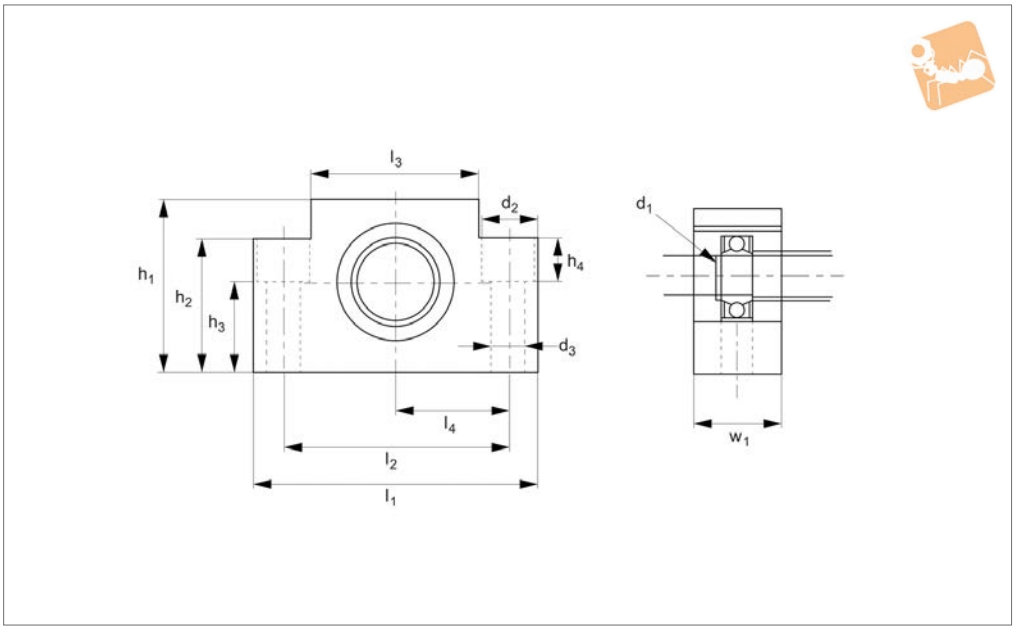
Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1 tol. H7	d_2	d_3	d_4	h_1	h_2	h_3 ±0.02	h_4
L1402.LK08	12	10	8	14	9	M3	31	25.5	15.5	12.5
L1402.LK10	14 - 16	12	10	14	9	M3	38	30.0	20.0	10.0
L1402.LK12	18 - 20	14 - 16	12	14	9	M4	38	30.0	20.0	10.0
L1402.LK15	26 - 32	20	15	17	11	M4	41	32.0	22.0	13.0

Order No.	l_1	l_2	l_3	l_4	w_1	w_2	w_3	w_4 ±0.02	A/F	Axial load kgf max.	rpm max.	Static load kgf max.
L1402.LK08	62	46	30	31	22.5	-	26.0	3.5	14	103	40000	280
L1402.LK10	70	52	36	35	24.0	6	29.5	6.0	16	195	24000	530
L1402.LK12	70	52	36	35	24.0	6	29.5	6.0	19	217	22000	610
L1402.LK15	80	60	41	40	25.0	6	36.0	10.0	22	240	19000	700

Floating Low Profile Support Units
for ball & lead screws



L1403



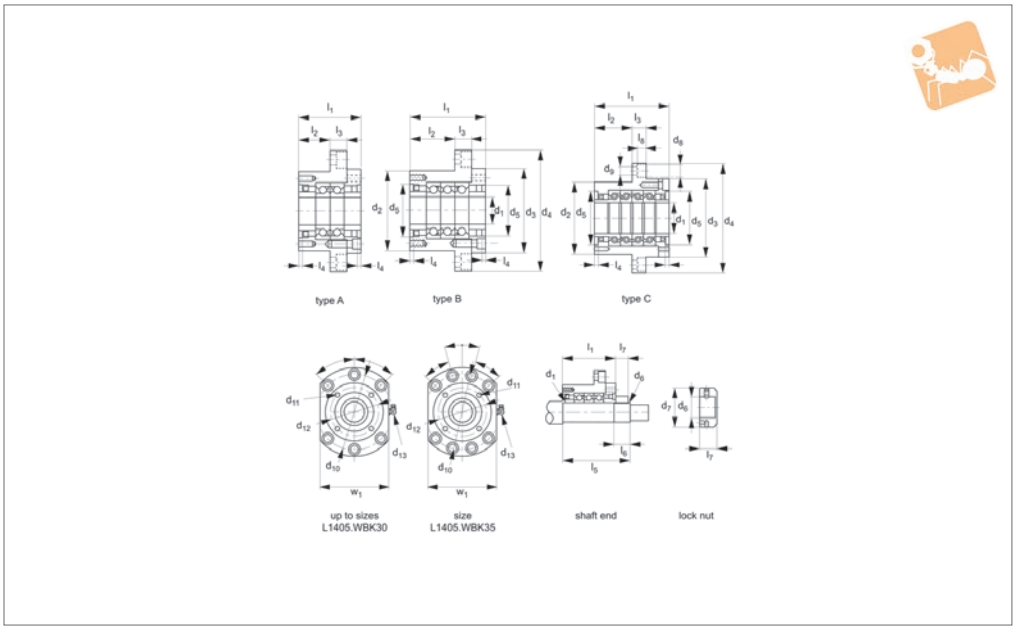
Material
Steel with black oxide finish.
Bearings, sealed and lubricated for life.

Technical Notes
Standard units are suitable for ball screws and lead screws to C5/C7 accuracy grade.
The bearings are not preloaded and have a max. axial clearance of 0,018mm.
For dimensions to machine the ends of the screw to see technical pages.

Tips
Electroless nickel plated versions of these bearing mounts are available for clean room and other applications.

Order No.	For lead screw o.d dia.	For ball screw o.d dia.	d_1 tol. h7	d_2	d_3	h_1	h_2	h_3 ±0.02
L1403.LF08	12	10	8	14	6.6	31	25.5	15.5
L1403.LF12	14 - 16	12	10	14	9.0	38	30.0	20.0
L1403.LF15	22 - 24	20	15	14	9.0	41	32.0	22.0

Order No.	h_4	l_1	l_2	l_3	l_4 ±0.02	w_1	Axial load kgf max.	rpm max.	Static load kgf max.
L1403.LF08	12.5	62	46	30	31	16	103	40000	S 06280
L1403.LF12	10.0	70	52	36	35	20	217	22000	610
L1403.LF15	11.0	80	60	41	40	20	240	19000	S 17005





L1405

Material
Steel with black oxide finish.
Bearings, sealed and lubricated for life.

Technical Notes
These supports come with a pair of duplex angular contact bearings (type A), three angular bearings (type B), or four angular contact bearings (type C), for a true fixed support.
For dimensions to machine the ends of the screw to see technical pages.

Order No.	Type	d_1 tol. H7	d_2 tol. g6	d_3	d_4	d_5 tol. H5	d_6	d_7	d_8	d_9	d_{10}	d_{11}	d_{12}	d_{13}	Weight kg
L1405.WBK17-A	A	17	70	72	106	45	M17 x 1,0	37	14	9	88	M5	58	M6*	1.2
L1405.WBK20-A	A	20	70	72	106	45	M20 x 1,0	40	14	9	88	M5	58	M6*	1.2
L1405.WBK25-A	A	25	85	90	130	57	M25 x 1,5	45	17	11	110	M6	70	M6	2.3
L1405.WBK25-B	B	25	85	90	130	57	M25 x 1,5	45	17	11	110	M6	70	M6	3.1
L1405.WBK25-C	C	25	85	90	130	57	M25 x 1,5	45	17	11	110	M6	70	M6	3.4
L1405.WBK30-A	A	30	85	90	130	57	M30 x 1,5	50	17	11	110	M6	70	M6	3.0
L1405.WBK30-B	B	30	85	90	130	57	M30 x 1,5	50	17	11	110	M6	70	M6	3.0
L1405.WBK30-C	C	30	85	90	130	57	M30 x 1,5	50	17	11	110	M6	70	M6	3.3
L1405.WBK35-A	A	35	95	102	142	69	M35 x 1,5	55	17	11	110	M6	80	M6	3.4
L1405.WBK35-B	B	35	95	102	142	69	M35 x 1,5	55	17	11	110	M6	80	M6	3.4
L1405.WBK35-C	C	35	95	102	142	69	M35 x 1,5	55	17	11	110	M6	80	M6	4.3

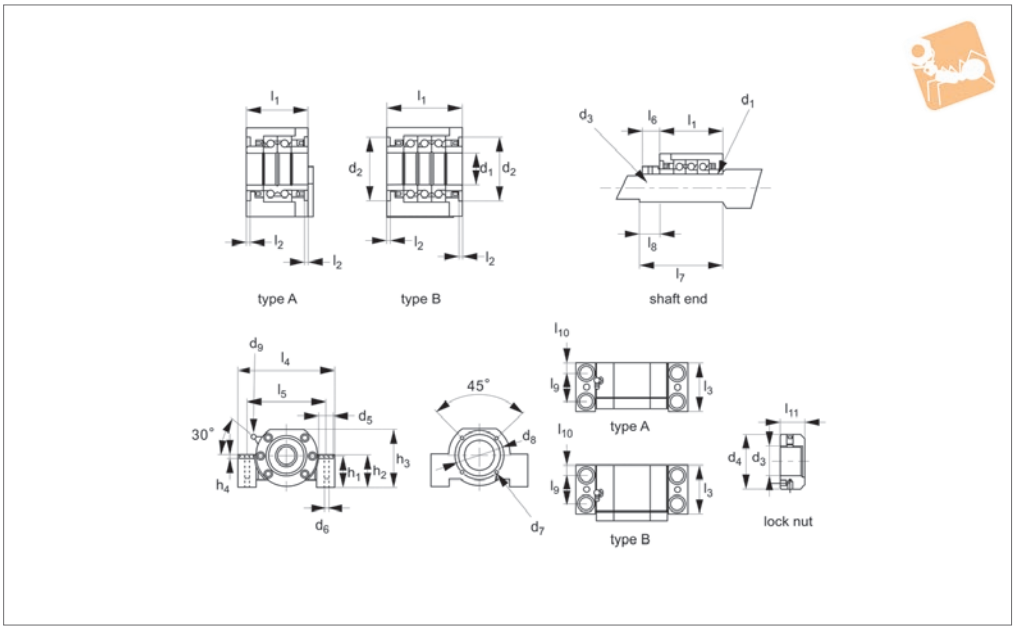
Order No.	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	w	Dynamic load kgf	Axial load kgf	Preload kgf	Rigidity kgf/cm	Starting torque kgf/cm
L1405.WBK17-A	60	32	15	3	81	23	18	8.5	80	2240	2710	220	75	1,0 - 1,9
L1405.WBK20-A	60	32	15	3	81	23	18	8.5	80	2240	2710	220	75	1,0 - 1,9
L1405.WBK25-A	66	33	18	4	89	26	20	11.0	100	2910	4150	320	100	1,6 - 2,9
L1405.WBK25-B	81	48	18	4	104	26	20	11.0	100	4700	8300	440	150	2,2 - 4,0
L1405.WBK25-C	96	48	18	4	119	26	20	11.0	100	4700	8300	640	200	2,8 - 5,0
L1405.WBK30-A	66	33	18	4	89	26	20	11.0	100	2980	4400	340	105	1,7 - 3,0
L1405.WBK30-B	81	48	18	4	104	26	20	11.0	100	4850	8800	460	155	2,2 - 4,0
L1405.WBK30-C	96	48	18	4	119	26	20	11.0	100	4850	8800	680	205	2,9 - 5,2
L1405.WBK35-A	66	33	18	4	92	30	22	11.0	106	3150	5100	390	120	1,9 - 3,5
L1405.WBK35-B	81	48	18	4	107	30	22	11.0	106	5150	10200	530	175	2,5 - 4,6
L1405.WBK35-C	96	48	18	4	122	30	22	11.0	106	5150	10200	780	240	3,3 - 6,0

Heavy Load Support Units (SBK)

for ball & lead screws



L1406

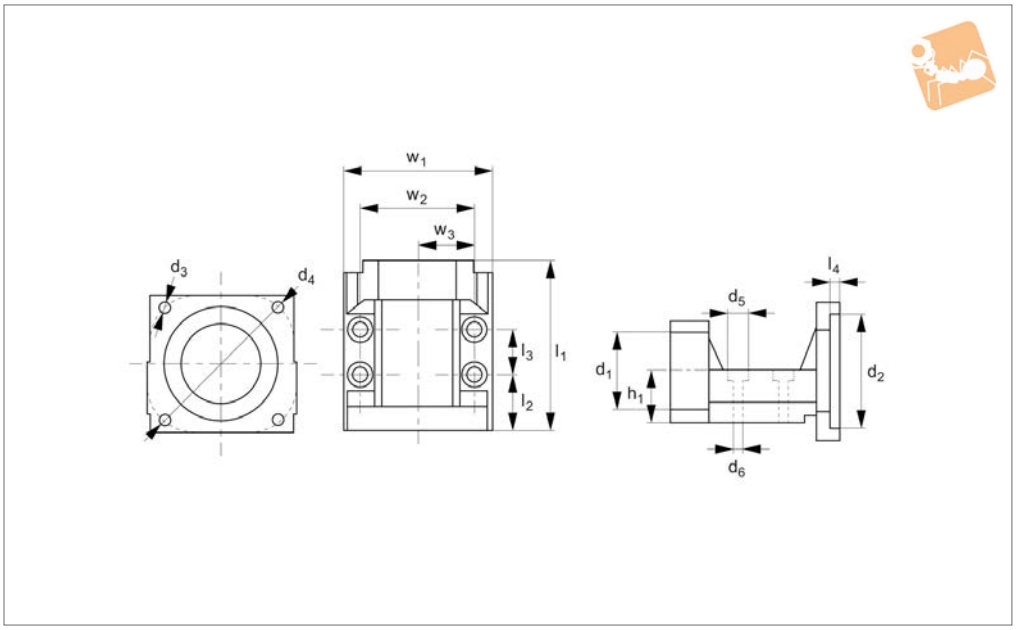


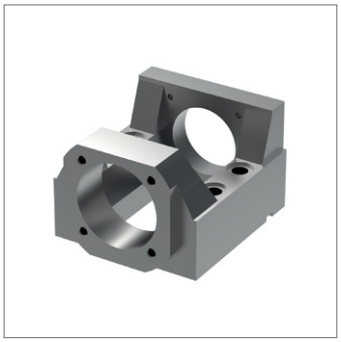
Material
Steel with black oxide finish.

Technical Notes
These supports come with a pair of duplex angular contact bearings (type A), three angular bearings (type B), for a true fixed support.
For dimensions to machine the ends of the screw to see technical pages.

Order No.	d_1	d_2	d_3	d_4	d_5	d_6	d_7	d_8	d_9	h_1	h_2	h_3	h_4	l_1	l_{10}
L1406.SBK25-A	25	57	M25 x 1,5	45	26	18	M6	70	M6	51	53	89	2	66	15.5
L1406.SBK25-B	25	57	M25 x 1,5	45	26	18	M6	70	M6	51	53	89	2	81	15.5
L1406.SBK30-A	30	57	M30 x 1,5	50	26	18	M6	70	M6	51	53	89	2	66	15.5
L1406.SBK30-B	30	57	M30 x 1,5	50	26	18	M6	70	M6	51	53	89	2	81	15.5
L1406.SBK35-A	35	69	M35 x 1,5	55	26	18	M6	80	M6	52	54	96	2	66	15.5
L1406.SBK35-B	35	69	M35 x 1,5	55	26	18	M6	80	M6	52	54	96	2	81	15.5
L1406.SBK40-A	40	69	M40 x 1,5	60	26	18	M6	80	M6	52	54	96	2	66	15.5
L1406.SBK40-B	40	69	M40 x 1,5	60	26	18	M6	80	M6	52	54	96	2	81	15.5

Order No.	l_{11}	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	Dynamic load kgf	Axial load kgf	Preload kgf	Rigidity kgf/cm	Torque kgf/cm
L1406.SBK25-A	20	4	71	160	130	18	89	26	40	2910	4150	320	100	1,6 - 2,9
L1406.SBK25-B	20	4	71	160	130	18	104	26	40	4700	8300	440	150	2,2 - 4,0
L1406.SBK30-A	20	4	71	160	130	18	89	26	40	2980	4400	340	105	1,7 - 3,0
L1406.SBK30-B	20	4	71	160	130	18	104	26	40	4850	8800	460	155	2,2 - 4,0
L1406.SBK35-A	22	4	71	160	130	18	92	30	40	3150	5100	390	120	1,9 - 3,5
L1406.SBK35-B	22	4	71	160	130	18	107	30	40	5150	10200	530	175	2,5 - 4,6
L1406.SBK40-A	22	4	71	160	130	18	92	30	40	3250	5300	400	125	2,0 - 3,7
L1406.SBK40-B	22	4	71	160	130	18	107	30	40	5250	10600	540	185	2,6 - 4,8





L1408

Material
Steel with black oxide finish.

Technical Notes
Parallelism between the two faces is 0.02.

This provides a quick and easy solution to combine a motor with the fixed bearing unit.

Order No.	d_1 tol. H7	d_2 tol. H7	d_3	d_4	d_5	d_6	h_1 ±0.02	l_1	l_2	l_3	l_4	w_1	w_2	w_3	Compatible support unit
L1408.MBA06A	28	30.0	M3	45.0	9.5	5.5	17	61	19	20	4	52	41	26.0	L1400.FKA06
L1408.MBA08A	28	30.0	M4	46.0	9.5	5.5	17	61	19	20	4	52	41	26.0	L1400.FKA08
L1408.MBA10A	34	30.0	M3	45.0	11.0	6.6	22	74	24	20	4	65	50	32.5	L1390.FK10
L1408.MBA10B	34	30.0	M4	46.0	11.0	6.6	22	74	24	20	4	65	50	32.5	L1390.FK10
L1408.MBA10C	34	38.1	M4	66.7	11.0	6.6	22	74	24	20	4	65	50	32.5	L1390.FK10
L1408.MBA10D	34	50.0	M5	70.0	11.0	6.6	22	74	24	20	4	65	50	32.5	L1390.FK10
L1408.MBA10E	34	50.0	M4	70.0	11.0	6.6	22	74	24	20	4	65	50	32.5	L1390.FK10
L1408.MBA12A	36	30.0	M3	45.0	11.0	6.6	25	74	24	20	4	65	50	32.5	L1390.FK12
L1408.MBA12B	36	30.0	M4	46.0	11.0	6.6	25	74	24	20	4	65	50	32.5	L1390.FK12
L1408.MBA12C	36	38.1	M4	66.7	11.0	6.6	25	74	24	20	4	65	50	32.5	L1390.FK12
L1408.MBA12D	36	50.0	M5	70.0	11.0	6.6	25	74	24	20	4	65	50	32.5	L1390.FK12
L1408.MBA12E	36	50.0	M4	70.0	11.0	6.6	25	74	24	20	4	65	50	32.5	L1390.FK12
L1408.MBA15A	40	38.1	M4	66.7	11.0	6.6	28	82	24	28	4	70	55	35.0	L1390.FK15
L1408.MBA15B	40	50.0	M5	70.0	14.0	6.6	28	82	24	28	4	70	55	35.0	L1390.FK15
L1408.MBA15C	40	50.0	M4	70.0	14.0	6.6	28	82	24	28	4	70	55	35.0	L1390.FK15
L1408.MBA15D	40	73.0	M6	98.4	14.0	8.5	28	92	29	28	6	88	70	44.0	L1390.FK15
L1408.MBA15E	40	70.0	M6	90.0	14.0	8.5	28	92	29	28	6	88	70	44.0	L1390.FK15
L1408.MBA15F	40	70.0	M5	90.0	14.0	8.5	28	92	29	42	6	88	70	44.0	L1390.FK15
L1408.MBA20A	57	50.0	M5	70.0	14.0	8.5	34	113	29	42	4	88	70	44.0	L1400.FKA20
L1408.MBA20B	57	50.0	M4	70.0	14.0	8.5	34	113	29	42	4	88	70	44.0	L1400.FKA20
L1408.MBA20C	57	73.0	M6	98.4	14.0	8.5	34	113	29	42	6	88	70	44.0	L1400.FKA20
L1408.MBA20D	57	70.0	M6	90.0	14.0	8.5	34	113	29	42	6	88	70	44.0	L1400.FKA20
L1408.MBA20E	57	70.0	M5	90.0	14.0	8.5	34	113	29	42	6	88	70	44.0	L1400.FKA20

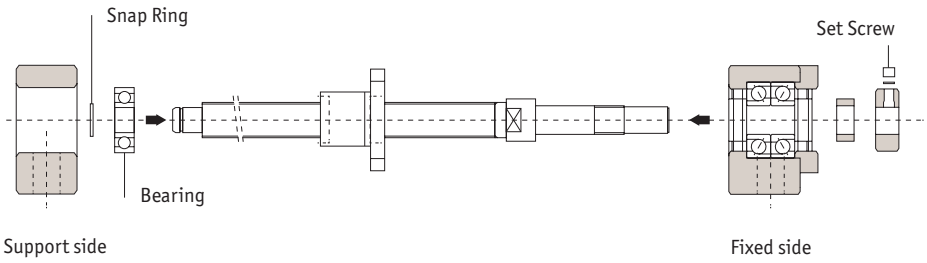
Notes

When inserting the screw shaft to the support unit, take care not to let the oil seal lip turn upward.

When securing the set piece with a hexagonal socket head set screw, apply an adhesive to the hexagonal socket head set screw before tightening it in order to prevent the screw from loosening. If planning to use the product in a harsh environment, it is also necessary to take measures to prevent other components/parts from loosening. Contact our Technical Department for details.

Installing the support unit

1. Install the fixed side support unit to the screw shaft.
2. After inserting the fixed side support unit, secure the lock nut using the fastening set piece and the hexagonal socket head set screw.
3. Attach the support side bearing to the screw shaft and secure the bearing using the snap ring, and then install the assembly to the housing on the supported side.



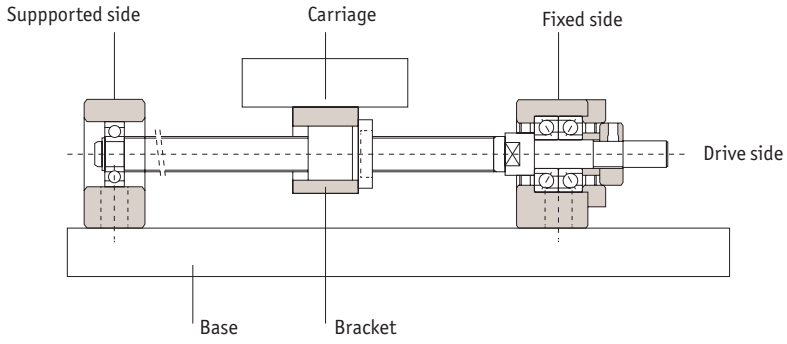
Notes

If using the fixed side support unit as the reference point, secure a clearance between the ball screw nut and the table or inside the bracket when making adjustment.

If using the table as a reference point, make the adjustment either by using the shim (for a square type support unit), or securing the clearance between the outer surface of the nut and the inner surface of the mounting section (for a round type support unit).

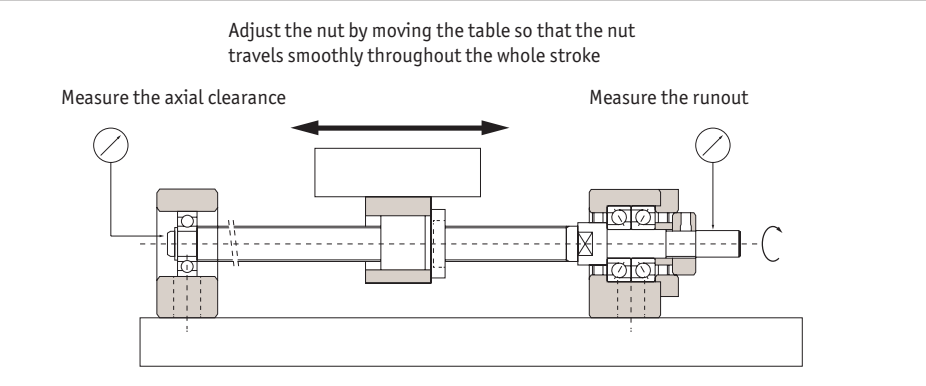
Installation onto the table and the base

1. If using a bracket when mounting the ball screw nut to the carriage, insert the nut into the bracket and temporarily fasten it.
2. Temporarily fasten the fixed side support unit to the base. In doing so, press the table toward the fixed side support unit to align the axial centre, and adjust the carriage so that it can travel freely.
3. Press the carriage toward the fixed side support unit to align the axial centre. Make the adjustment by reciprocating the table several times so that the nut travels slowly over the whole stroke, and temporarily secure the support unit to the base.



Checking the accuracy and fully fastening the support unit

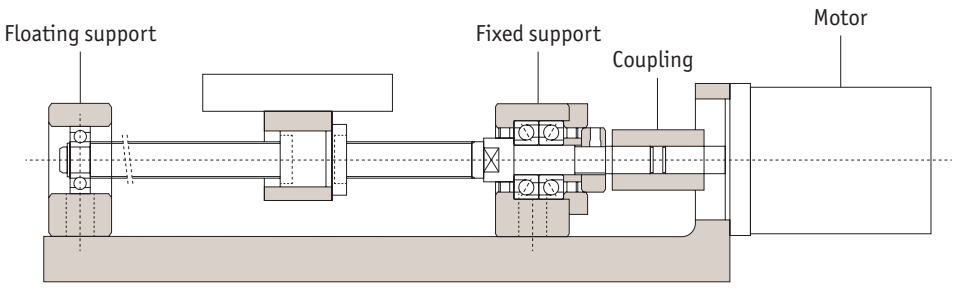
1. While checking the runout of the ball screw shaft end and the axial clearance using a dial gauge, fully fasten the ball screw nut, the nut bracket, the fixed side support unit and the support side unit, in this order.



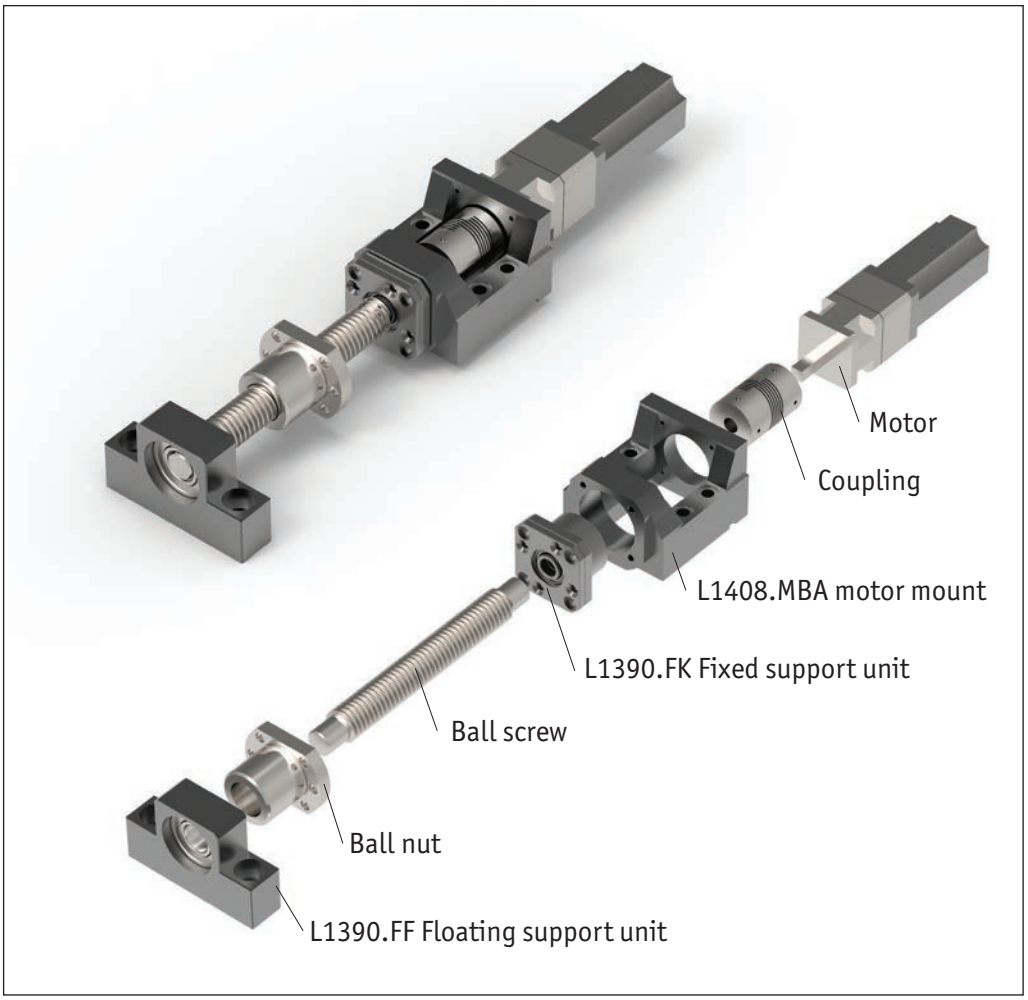
ov-bearing-supports-mounting-procedure-lnh-Updated-15-03-2023

Connection with motor

1. Mount motor bracket to the base.
2. Connect the motor and the ball screw using a coupling (make sure the mounting accuracy is maintained).
3. Mount motor bracket to the base.

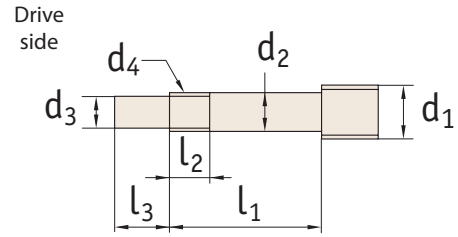


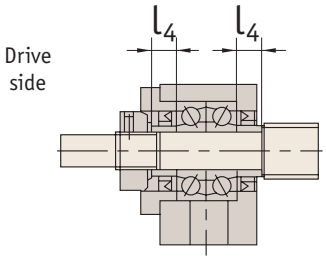
The fixed support unit is always positioned at the end where the motor/handwheel is.



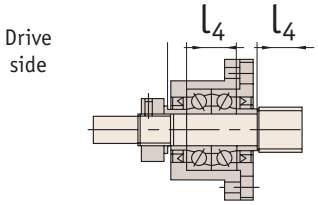
Technical Information

Fixed side for unit types; FK, EK, AK, FKA and LK

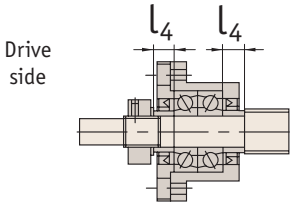




All Other Types



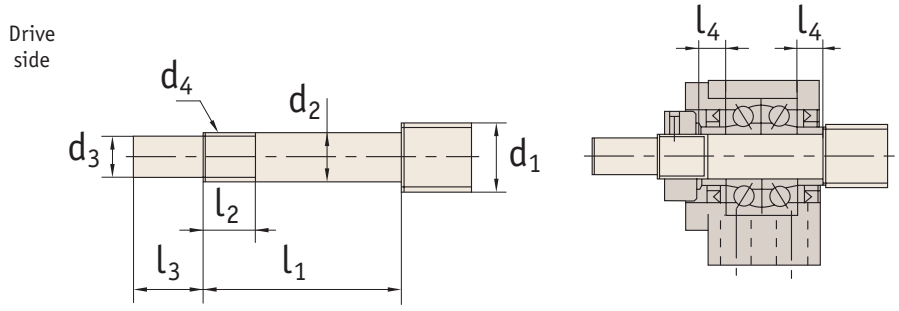
Type L1390.FK (Option 1)
L1400.FKA



Type L1390.FK (Option 2)
L1400.FKA

Part no.					Thread ø	Shaft support ø					For thread		
FK	EK	AK	FKA	LK	d_1	d_2		h_7	l_1	l_3	d_4	l_2	l_4
L1390.FK05	L1394.EK05	-	-	-	8	5	-0,008 -0,015	4	23	6	M5x0,5	7	3,5
L1390.FK06	L1394.EK06	-	-	-	8	6	-0,008 -0,015	4	28	8	M6x0,75	8	5,0
L1390.FK08	L1394.EK08	-	L1400.FKA08	L1402.LK08	10/12	8	-0,008 -0,015	6	32	9	M8x1,0	10	5,5
L1390.FK10	L1394.EK10	L1388.AK10	L1400.FKA10	L1402.LK08	12/14/15	10	-0,008 -0,015	8	35	15	M10x1,0	12	5,5
L1390.FK12	L1394.EK12	L1388.AK12	L1400.FKA12	L1402.LK08	14/15/16	12	-0,008 -0,015	10	35	15	M12x1,0	12	5,5
L1390.FK15	L1394.EK15	L1388.AK15	L1400.FKA15	L1402.LK08	18/20	15	-0,008 -0,017	12	48	20	M15x1,0	13	10,0
L1390.FK17	-	-	-	-	20/25	17	-0,008 -0,017	15	59	23	M17x1,0	17	10,0
L1390.FK20	L1394.EK20	L1388.AK20	L1400.FKA20	-	25/28/30	20	-0,008 -0,017	17	63	25	M20x1,0	15	11,0
L1390.FK25	-	-	-	-	30/32/36	25	-0,008 -0,017	20	76	30	M25x1,5	20	14,0
L1390.FK30	-	-	-	-	36/40	30	-0,008 -0,018	25	73	38	M30x1,5	25	9,0

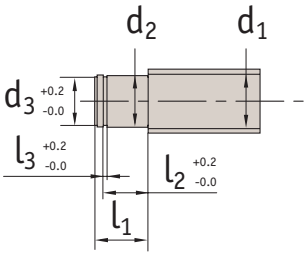
ov-bearing-supports-fixed-side-unit-types-a-lnh-Updated-16-03-2023

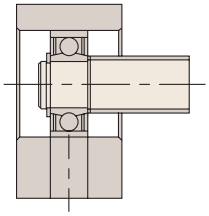


Part sno.	Thread ø	Shaft support ø					Thread		
BK	d_1	d_2		d_3	l_1	l_3	d_4	l_2	l_4
L1392.BK10	12/14/15	10	-0,008 -0,015	8	36	15	M10x1,0	12	5,5
L1392.BK12	14/15/16	12	-0,008 -0,015	10	36	15	M12x1,0	12	5,5
L1392.BK15	18/20	15	-0,008 -0,017	12	40	20	M15x1,0	12	6,0
L1392.BK17	20/25	17	-0,008 -0,017	15	53	23	M17x1,0	17	7,0
L1392.BK20	25/28	20	-0,008 -0,017	17	53	25	M20x1,0	15	8,0
L1392.BK25	32/36	25	-0,008 -0,017	20	66	30	M25x1,5	20	9,0
L1392.BK30	36/40	30	-0,008 -0,018	25	73	38	M30x1,5	25	9,0
L1392.BK35	45	35	-0,008 -0,018	30	82	45	M35x1,5	26	12,0
L1392.BK40	50	40	-0,008 -0,018	35	94	50	M40x1,5	30	15,0

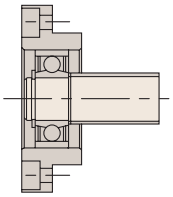
Technical Information

Floating side for unit type; FF, EF, BF, AF and LF

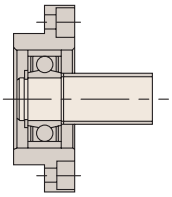




All Other Types



Type L1391.FF (Option 1)



Type L1391.FF (Option 2)

Part no.					Thread ø	Shaft support ø					
FF	EF	BF	AF	LF	d_1	d_2		l_1	d_3	l_2	l_3
L1391.FF06	L1395.EF06	-	-	-	8	6	-0,008 -0,015	9	5,7	6,8	0,80
-	L1395.EF08	-	-	L1403. LF08	10	6	-0,008 -0,015	9	5,7	6,8	0,80
L1391.FF10	L1395.EF10	L1393.BF10	L1389.AF10	-	12/14/15	8	-0,008 -0,015	10	7,6	7,9	0,90
L1391.FF12	L1395.EF12	L1393.BF12	L1389.AF12	L1403.LF12	14/15/16	10	-0,008 -0,015	11	9,6	9,15	1,15
L1391.FF15	L1395.EF15	L1393.BF15	L1389.AF15	L1403.LF15	18/20	15	-0,008 -0,017	13	14,3	10,15	1,15
L1391.FF17	-	L1393.BF17	-	-	20/25	17	-0,008 -0,017	16	16,2	13,15	1,15
L1391.FF20	L1395.EF20	(L1393.BF20)	L1389.AF20	-	25/28/30	20	-0,008 -0,017	19 (16*)	19,0	15,35 (13,15)	1,35
L1391.FF25	-	L1393.BF25	L1389.AF25	-	30/32/36	25	-0,008 -0,017	20	23,9	16,35	1,35
L1391.FF30	-	L1393.BF30	L1389.AF30	-	36/40	30	-0,008 -0,018	21	28,6	17,75	1,75
-	-	L1393.BF35	-	-	40/45	35	-0,008 -0,018	22	33,0	18,75	1,75
-	-	L1393.BF40	-	-	50	40	-0,008 -0,018	23	38,0	19,95	1,95

*applies to L1393.BF20 only.

ov-bearing-supports-floating-side-unit-types-lnh-Updated-16-03-2023

Linear Shafts from Automotion Components

L1770 - Hardened steel shafts



For use with linear bearings.

Ø6 to Ø60

L1771 - Hardened hollow shafts



For use with linear bearings. Hollowed for lighter weight.

Ø12 to Ø50

L1772 - Hardened Stainless shafts



For use with linear bearings

Anti-corrosion.

Ø6 to Ø60

L1773 - Stainless 303 shafts



Soft stainless, high anti-corrosion.

Not for use with ball bush linear bearings.

Ø6 to Ø60

L1774 - Stainless 316 shafts



Soft stainless, very high anti-corrosion.

Not for use with ball bushing linear bearings.

Ø6 to Ø60

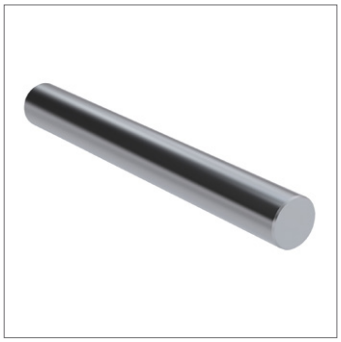
L1778 - Aluminium shafts



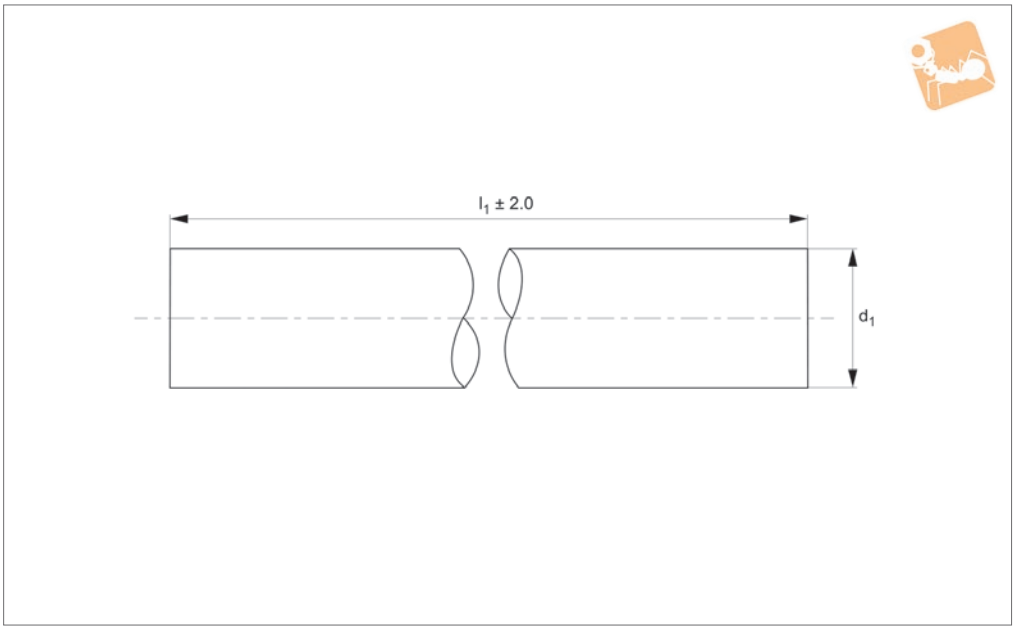
Light weight, non-magnetic.

Ø10 to Ø50

5Ø Hardened Steel Shafts



L1770.05



Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm^2, tensile strength: >630 N/mm^2.

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,3mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

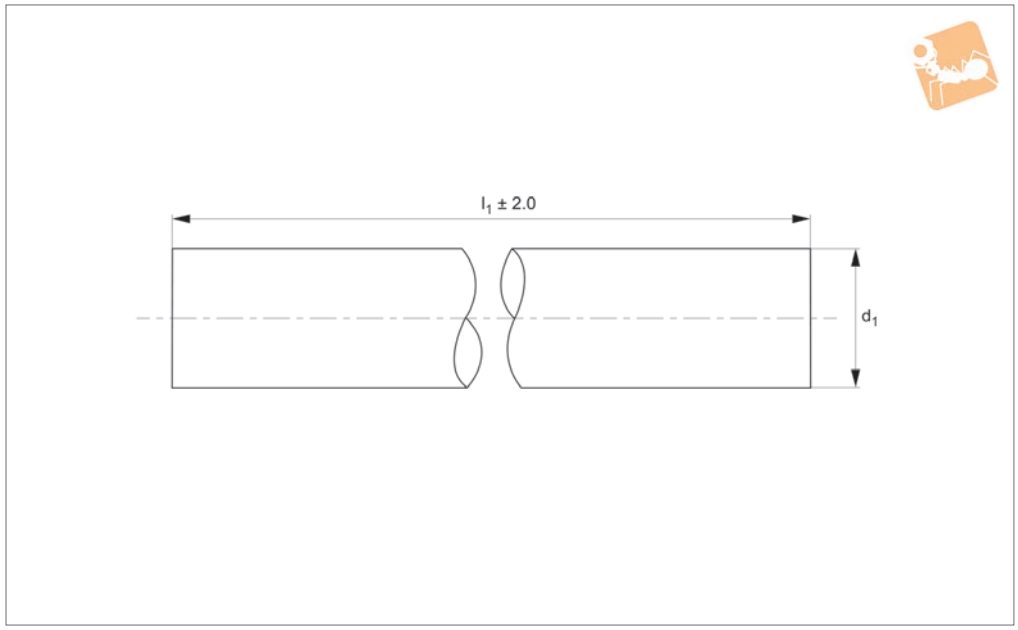
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.05-0100	5	100	0.4	0.016
L1770.05-0150	5	150	0.4	0.024
L1770.05-0200	5	200	0.4	0.032
L1770.05-0250	5	250	0.4	0.040
L1770.05-0300	5	300	0.4	0.048
L1770.05-0350	5	350	0.4	0.056
L1770.05-0400	5	400	0.4	0.064
L1770.05-0450	5	450	0.4	0.072
L1770.05-0500	5	500	0.4	0.080
L1770.05-0550	5	550	0.4	0.088
L1770.05-0600	5	600	0.4	0.096
L1770.05-0650	5	650	0.4	0.104
L1770.05-0700	5	700	0.4	0.112
L1770.05-0750	5	750	0.4	0.120
L1770.05-0800	5	800	0.4	0.128
L1770.05-0850	5	850	0.4	0.136
L1770.05-0900	5	900	0.4	0.144
L1770.05-0950	5	950	0.4	0.152
L1770.05-1000	5	1000	0.4	0.160
L1770.05-1050	5	1050	0.4	0.168
L1770.05-1100	5	1100	0.4	0.176
L1770.05-1150	5	1150	0.4	0.184
L1770.05-1200	5	1200	0.4	0.192
L1770.05-1250	5	1250	0.4	0.200
L1770.05-1300	5	1300	0.4	0.208
L1770.05-1350	5	1350	0.4	0.216
L1770.05-1400	5	1400	0.4	0.224
L1770.05-1450	5	1450	0.4	0.232
L1770.05-1500	5	1500	0.4	0.240
L1770.05-1550	5	1550	0.4	0.248
L1770.05-1600	5	1600	0.4	0.256

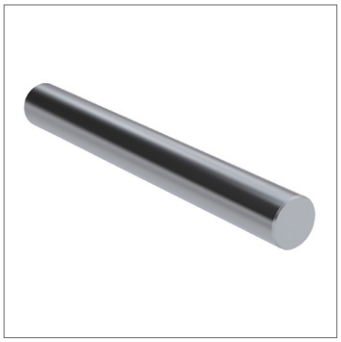
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.05-1650	5	1650	0.4	0.264
L1770.05-1700	5	1700	0.4	0.272
L1770.05-1750	5	1750	0.4	0.280
L1770.05-1800	5	1800	0.4	0.288
L1770.05-1850	5	1850	0.4	0.296
L1770.05-1900	5	1900	0.4	0.304
L1770.05-1950	5	1950	0.4	0.312
L1770.05-2000	5	2000	0.4	0.320
L1770.05-2050	5	2050	0.4	0.328
L1770.05-2100	5	2100	0.4	0.336
L1770.05-2150	5	2150	0.4	0.344
L1770.05-2200	5	2200	0.4	0.352
L1770.05-2250	5	2250	0.4	0.360
L1770.05-2300	5	2300	0.4	0.368
L1770.05-2350	5	2350	0.4	0.376
L1770.05-2400	5	2400	0.4	0.384
L1770.05-2450	5	2450	0.4	0.392
L1770.05-2500	5	2500	0.4	0.400
L1770.05-2550	5	2550	0.4	0.408
L1770.05-2600	5	2600	0.4	0.416
L1770.05-2650	5	2650	0.4	0.424
L1770.05-2700	5	2700	0.4	0.432
L1770.05-2750	5	2750	0.4	0.440
L1770.05-2800	5	2800	0.4	0.448
L1770.05-2850	5	2850	0.4	0.456
L1770.05-2900	5	2900	0.4	0.464
L1770.05-2950	5	2950	0.4	0.472
L1770.05-3000	5	3000	0.4	0.480
L1770.05-3050	5	3050	0.4	0.488
L1770.05-3100	5	3100	0.4	0.496
L1770.05-3150	5	3150	0.4	0.504
L1770.05-3200	5	3200	0.4	0.512
L1770.05-3250	5	3250	0.4	0.520
L1770.05-3300	5	3300	0.4	0.528
L1770.05-3350	5	3350	0.4	0.536
L1770.05-3400	5	3400	0.4	0.544
L1770.05-3450	5	3450	0.4	0.552
L1770.05-3500	5	3500	0.4	0.560
L1770.05-3550	5	3550	0.4	0.568
L1770.05-3600	5	3600	0.4	0.576
L1770.05-3650	5	3650	0.4	0.584
L1770.05-3700	5	3700	0.4	0.592
L1770.05-3750	5	3750	0.4	0.600
L1770.05-3800	5	3800	0.4	0.608
L1770.05-3850	5	3850	0.4	0.616
L1770.05-3900	5	3900	0.4	0.624
L1770.05-3950	5	3950	0.4	0.632
L1770.05-4000	5	4000	0.4	0.640
L1770.05-4050	5	4050	0.4	0.648
L1770.05-4100	5	4100	0.4	0.656
L1770.05-4150	5	4150	0.4	0.664
L1770.05-4200	5	4200	0.4	0.672
L1770.05-4250	5	4250	0.4	0.680
L1770.05-4300	5	4300	0.4	0.688
L1770.05-4350	5	4350	0.4	0.696
L1770.05-4400	5	4400	0.4	0.704
L1770.05-4450	5	4450	0.4	0.712
L1770.05-4500	5	4500	0.4	0.720
L1770.05-4550	5	4550	0.4	0.728
L1770.05-4600	5	4600	0.4	0.736
L1770.05-4650	5	4650	0.4	0.744
L1770.05-4700	5	4700	0.4	0.752
L1770.05-4750	5	4750	0.4	0.760
L1770.05-4800	5	4800	0.4	0.768
L1770.05-4850	5	4850	0.4	0.776
L1770.05-4900	5	4900	0.4	0.784
L1770.05-4950	5	4950	0.4	0.792
L1770.05-5000	5	5000	0.4	0.800

5Ø Hardened Steel Shafts



Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.05-5050	5	5050	0.4	0.808
L1770.05-5100	5	5100	0.4	0.816
L1770.05-5150	5	5150	0.4	0.824
L1770.05-5200	5	5200	0.4	0.832
L1770.05-5250	5	5250	0.4	0.840
L1770.05-5300	5	5300	0.4	0.848
L1770.05-5350	5	5350	0.4	0.856
L1770.05-5400	5	5400	0.4	0.864
L1770.05-5450	5	5450	0.4	0.872
L1770.05-5500	5	5500	0.4	0.880
L1770.05-5550	5	5550	0.4	0.888
L1770.05-5600	5	5600	0.4	0.896
L1770.05-5650	5	5650	0.4	0.904
L1770.05-5700	5	5700	0.4	0.912
L1770.05-5750	5	5750	0.4	0.920
L1770.05-5800	5	5800	0.4	0.928
L1770.05-5850	5	5850	0.4	0.936
L1770.05-5900	5	5900	0.4	0.944
L1770.05-5950	5	5950	0.4	0.952
L1770.05-6000	5	6000	0.4	0.960





L1770.06

Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm^2, tensile strength: >630 N/mm^2.

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,3mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.06-0100	6	100	0.4	0.023
L1770.06-0150	6	150	0.4	0.035
L1770.06-0200	6	200	0.4	0.046
L1770.06-0250	6	250	0.4	0.058
L1770.06-0300	6	300	0.4	0.069
L1770.06-0350	6	350	0.4	0.081
L1770.06-0400	6	400	0.4	0.092
L1770.06-0450	6	450	0.4	0.104
L1770.06-0500	6	500	0.4	0.115
L1770.06-0550	6	550	0.4	0.127
L1770.06-0600	6	600	0.4	0.138
L1770.06-0650	6	650	0.4	0.150
L1770.06-0700	6	700	0.4	0.161
L1770.06-0750	6	750	0.4	0.173
L1770.06-0800	6	800	0.4	0.184
L1770.06-0850	6	850	0.4	0.196
L1770.06-0900	6	900	0.4	0.207
L1770.06-0950	6	950	0.4	0.219
L1770.06-1000	6	1000	0.4	0.230
L1770.06-1050	6	1050	0.4	0.242
L1770.06-1100	6	1100	0.4	0.253
L1770.06-1150	6	1150	0.4	0.265
L1770.06-1200	6	1200	0.4	0.276
L1770.06-1250	6	1250	0.4	0.288
L1770.06-1300	6	1300	0.4	0.299
L1770.06-1350	6	1350	0.4	0.311
L1770.06-1400	6	1400	0.4	0.322
L1770.06-1450	6	1450	0.4	0.334
L1770.06-1500	6	1500	0.4	0.345
L1770.06-1550	6	1550	0.4	0.357
L1770.06-1600	6	1600	0.4	0.368

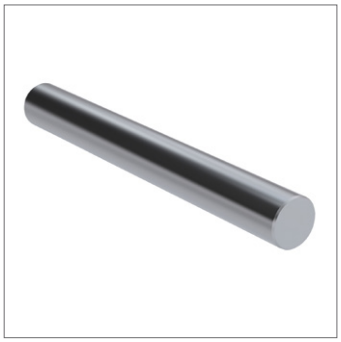
6Ø Hardened Steel Shafts



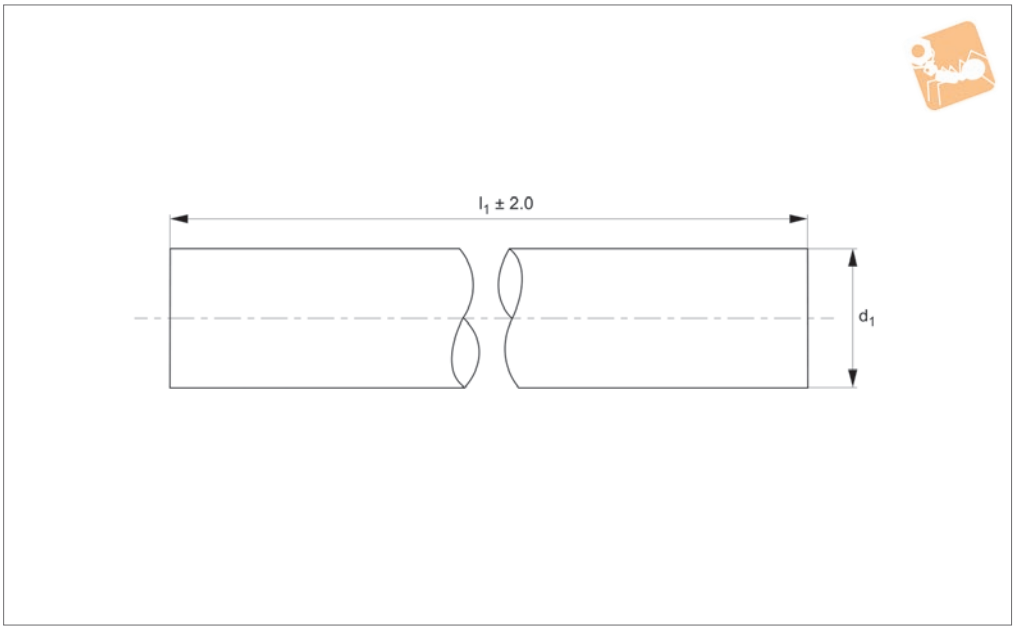
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.06-1650	6	1650	0.4	0.380
L1770.06-1700	6	1700	0.4	0.391
L1770.06-1750	6	1750	0.4	0.403
L1770.06-1800	6	1800	0.4	0.414
L1770.06-1850	6	1850	0.4	0.426
L1770.06-1900	6	1900	0.4	0.437
L1770.06-1950	6	1950	0.4	0.449
L1770.06-2000	6	2000	0.4	0.460
L1770.06-2050	6	2050	0.4	0.472
L1770.06-2100	6	2100	0.4	0.483
L1770.06-2150	6	2150	0.4	0.495
L1770.06-2200	6	2200	0.4	0.506
L1770.06-2250	6	2250	0.4	0.518
L1770.06-2300	6	2300	0.4	0.529
L1770.06-2350	6	2350	0.4	0.541
L1770.06-2400	6	2400	0.4	0.552
L1770.06-2450	6	2450	0.4	0.564
L1770.06-2500	6	2500	0.4	0.575
L1770.06-2550	6	2550	0.4	0.587
L1770.06-2600	6	2650	0.4	0.598
L1770.06-2650	6	2650	0.4	0.610
L1770.06-2700	6	2700	0.4	0.621
L1770.06-2750	6	2750	0.4	0.633
L1770.06-2800	6	2800	0.4	0.644
L1770.06-2850	6	2850	0.4	0.656
L1770.06-2900	6	2900	0.4	0.667
L1770.06-2950	6	2950	0.4	0.679
L1770.06-3000	6	3000	0.4	0.690
L1770.06-3050	6	3050	0.4	0.702
L1770.06-3100	6	3100	0.4	0.713
L1770.06-3150	6	3150	0.4	0.725
L1770.06-3200	6	3200	0.4	0.736
L1770.06-3250	6	3250	0.4	0.748
L1770.06-3300	6	3300	0.4	0.759
L1770.06-3350	6	3350	0.4	0.771
L1770.06-3400	6	3400	0.4	0.782
L1770.06-3450	6	3450	0.4	0.794
L1770.06-3500	6	3500	0.4	0.805
L1770.06-3550	6	3550	0.4	0.817
L1770.06-3600	6	3600	0.4	0.828
L1770.06-3650	6	3650	0.4	0.840
L1770.06-3700	6	3700	0.4	0.851
L1770.06-3750	6	3750	0.4	0.863
L1770.06-3800	6	3800	0.4	0.874
L1770.06-3850	6	3850	0.4	0.886
L1770.06-3900	6	3900	0.4	0.897
L1770.06-3950	6	3950	0.4	0.909
L1770.06-4000	6	4000	0.4	0.920
L1770.06-4050	6	4050	0.4	0.932
L1770.06-4100	6	4100	0.4	0.943
L1770.06-4150	6	4150	0.4	0.955
L1770.06-4200	6	4200	0.4	0.966
L1770.06-4250	6	4250	0.4	0.978
L1770.06-4300	6	4300	0.4	0.989
L1770.06-4350	6	4350	0.4	1.001
L1770.06-4400	6	4400	0.4	1.012
L1770.06-4450	6	4450	0.4	1.024
L1770.06-4500	6	4500	0.4	1.035
L1770.06-4550	6	4550	0.4	1.047
L1770.06-4600	6	4600	0.4	1.058
L1770.06-4650	6	4650	0.4	1.070
L1770.06-4700	6	4700	0.4	1.081
L1770.06-4750	6	4750	0.4	1.093
L1770.06-4800	6	4800	0.4	1.104
L1770.06-4850	6	4850	0.4	1.116
L1770.06-4900	6	4900	0.4	1.127
L1770.06-4950	6	4950	0.4	1.139
L1770.06-5000	6	5000	0.4	1.150

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.06-5050	6	5050	0.4	1.162
L1770.06-5100	6	5100	0.4	1.173
L1770.06-5150	6	5150	0.4	1.185
L1770.06-5200	6	5200	0.4	1.196
L1770.06-5250	6	5250	0.4	1.208
L1770.06-5300	6	5300	0.4	1.219
L1770.06-5350	6	5350	0.4	1.231
L1770.06-5400	6	5400	0.4	1.242
L1770.06-5450	6	5450	0.4	1.254
L1770.06-5500	6	5500	0.4	1.265
L1770.06-5550	6	5550	0.4	1.277
L1770.06-5600	6	5600	0.4	1.288
L1770.06-5650	6	5650	0.4	1.300
L1770.06-5700	6	5700	0.4	1.311
L1770.06-5750	6	5750	0.4	1.323
L1770.06-5800	6	5800	0.4	1.334
L1770.06-5850	6	5850	0.4	1.346
L1770.06-5900	6	5900	0.4	1.357
L1770.06-5950	6	5950	0.4	1.369
L1770.06-6000	6	6000	0.4	1.380

8Ø Hardened Steel Shafts



L1770.08



Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm², tensile strength: >630 N/mm².

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,3mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

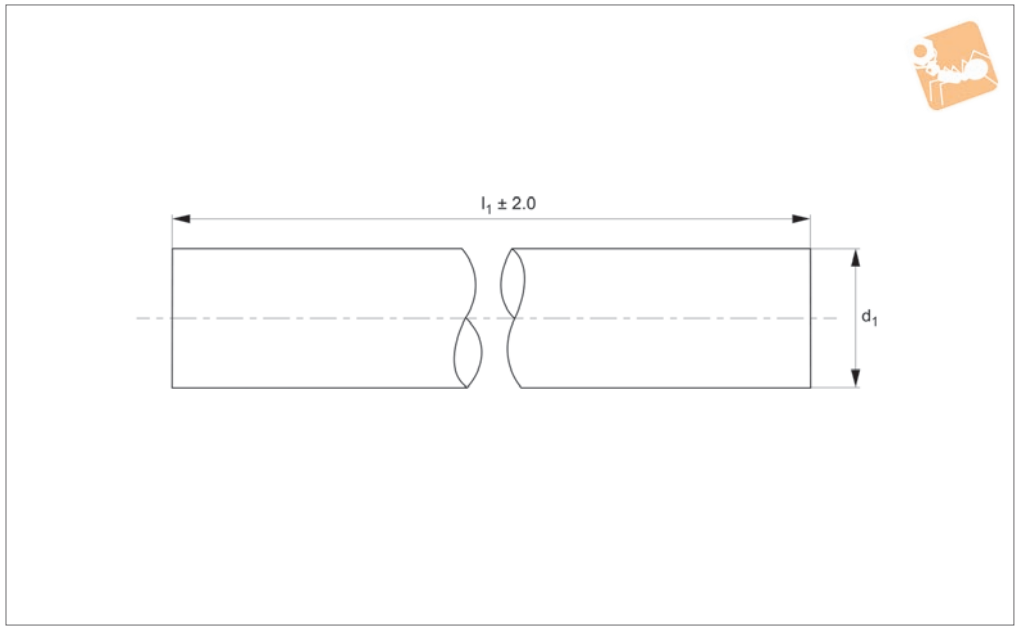
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.08-0100	8	100	0.4	0.040
L1770.08-0150	8	150	0.4	0.060
L1770.08-0200	8	200	0.4	0.080
L1770.08-0250	8	250	0.4	0.100
L1770.08-0300	8	300	0.4	0.120
L1770.08-0350	8	350	0.4	0.140
L1770.08-0400	8	400	0.4	0.160
L1770.08-0450	8	450	0.4	0.180
L1770.08-0500	8	500	0.4	0.200
L1770.08-0550	8	550	0.4	0.220
L1770.08-0600	8	600	0.4	0.240
L1770.08-0650	8	650	0.4	0.260
L1770.08-0700	8	700	0.4	0.280
L1770.08-0750	8	750	0.4	0.300
L1770.08-0800	8	800	0.4	0.320
L1770.08-0850	8	850	0.4	0.340
L1770.08-0900	8	900	0.4	0.360
L1770.08-0950	8	950	0.4	0.380
L1770.08-1000	8	1000	0.4	0.400
L1770.08-1050	8	1050	0.4	0.420
L1770.08-1100	8	1100	0.4	0.440
L1770.08-1150	8	1150	0.4	0.460
L1770.08-1200	8	1200	0.4	0.480
L1770.08-1250	8	1250	0.4	0.500
L1770.08-1300	8	1300	0.4	0.520
L1770.08-1350	8	1350	0.4	0.540
L1770.08-1400	8	1400	0.4	0.560
L1770.08-1450	8	1450	0.4	0.580
L1770.08-1500	8	1500	0.4	0.600
L1770.08-1550	8	1550	0.4	0.620
L1770.08-1600	8	1600	0.4	0.640

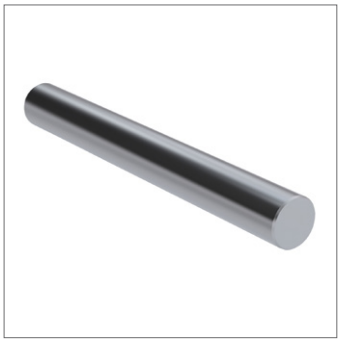
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.08-1650	8	1650	0.4	0.660
L1770.08-1700	8	1700	0.4	0.680
L1770.08-1750	8	1750	0.4	0.700
L1770.08-1800	8	1800	0.4	0.720
L1770.08-1850	8	1850	0.4	0.740
L1770.08-1900	8	1900	0.4	0.760
L1770.08-1950	8	1950	0.4	0.780
L1770.08-2000	8	2000	0.4	0.800
L1770.08-2050	8	2050	0.4	0.820
L1770.08-2100	8	2100	0.4	0.840
L1770.08-2150	8	2150	0.4	0.860
L1770.08-2200	8	2200	0.4	0.880
L1770.08-2250	8	2250	0.4	0.900
L1770.08-2300	8	2300	0.4	0.920
L1770.08-2350	8	2350	0.4	0.940
L1770.08-2400	8	2400	0.4	0.960
L1770.08-2450	8	2450	0.4	0.980
L1770.08-2500	8	2500	0.4	1.000
L1770.08-2550	8	2550	0.4	1.020
L1770.08-2600	8	2600	0.4	1.040
L1770.08-2650	8	2650	0.4	1.060
L1770.08-2700	8	2700	0.4	1.080
L1770.08-2750	8	2750	0.4	1.100
L1770.08-2800	8	2800	0.4	1.120
L1770.08-2850	8	2850	0.4	1.140
L1770.08-2900	8	2900	0.4	1.160
L1770.08-2950	8	2950	0.4	1.180
L1770.08-3000	8	3000	0.4	1.200
L1770.08-3050	8	3050	0.4	1.220
L1770.08-3100	8	3100	0.4	1.240
L1770.08-3150	8	3150	0.4	1.260
L1770.08-3200	8	3200	0.4	1.280
L1770.08-3250	8	3250	0.4	1.300
L1770.08-3300	8	3300	0.4	1.320
L1770.08-3350	8	3350	0.4	1.340
L1770.08-3400	8	3400	0.4	1.360
L1770.08-3450	8	3450	0.4	1.380
L1770.08-3500	8	3500	0.4	1.400
L1770.08-3550	8	3550	0.4	1.420
L1770.08-3600	8	3600	0.4	1.440
L1770.08-3650	8	3650	0.4	1.460
L1770.08-3700	8	3700	0.4	1.480
L1770.08-3750	8	3750	0.4	1.500
L1770.08-3800	8	3800	0.4	1.520
L1770.08-3850	8	3850	0.4	1.540
L1770.08-3900	8	3900	0.4	1.560
L1770.08-3950	8	3950	0.4	1.580
L1770.08-4000	8	4000	0.4	1.600
L1770.08-4050	8	4050	0.4	1.620
L1770.08-4100	8	4100	0.4	1.640
L1770.08-4150	8	4150	0.4	1.660
L1770.08-4200	8	4200	0.4	1.680
L1770.08-4250	8	4250	0.4	1.700
L1770.08-4300	8	4300	0.4	1.720
L1770.08-4350	8	4350	0.4	1.740
L1770.08-4400	8	4400	0.4	1.760
L1770.08-4450	8	4450	0.4	1.780
L1770.08-4500	8	4500	0.4	1.800
L1770.08-4550	8	4550	0.4	1.820
L1770.08-4600	8	4600	0.4	1.840
L1770.08-4650	8	4650	0.4	1.860
L1770.08-4700	8	4700	0.4	1.880
L1770.08-4750	8	4750	0.4	1.900
L1770.08-4800	8	4800	0.4	1.920
L1770.08-4850	8	4850	0.4	1.940
L1770.08-4900	8	4900	0.4	1.960
L1770.08-4950	8	4950	0.4	1.980
L1770.08-5000	8	5000	0.4	2.000

8Ø Hardened Steel Shafts



Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.08-5050	8	5050	0.4	2.020
L1770.08-5100	8	5100	0.4	2.040
L1770.08-5150	8	5150	0.4	2.060
L1770.08-5200	8	5200	0.4	2.080
L1770.08-5250	8	5250	0.4	2.100
L1770.08-5300	8	5300	0.4	2.120
L1770.08-5350	8	5350	0.4	2.140
L1770.08-5400	8	5400	0.4	2.160
L1770.08-5450	8	5450	0.4	2.180
L1770.08-5500	8	5500	0.4	2.200
L1770.08-5550	8	5550	0.4	2.220
L1770.08-5600	8	5600	0.4	2.240
L1770.08-5650	8	5650	0.4	2.260
L1770.08-5700	8	5700	0.4	2.280
L1770.08-5750	8	5750	0.4	2.300
L1770.08-5800	8	5800	0.4	2.320
L1770.08-5850	8	5850	0.4	2.340
L1770.08-5900	8	5900	0.4	2.360
L1770.08-5950	8	5950	0.4	2.380
L1770.08-6000	8	6000	0.4	2.400





L1770.10

Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm^2, tensile strength: >630 N/mm^2.

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.10-0100	10	100	0.4	0.062
L1770.10-0150	10	150	0.4	0.093
L1770.10-0200	10	200	0.4	0.124
L1770.10-0250	10	250	0.4	0.155
L1770.10-0300	10	300	0.4	0.186
L1770.10-0350	10	350	0.4	0.217
L1770.10-0400	10	400	0.4	0.248
L1770.10-0450	10	450	0.4	0.279
L1770.10-0500	10	500	0.4	0.310
L1770.10-0550	10	550	0.4	0.341
L1770.10-0600	10	600	0.4	0.372
L1770.10-0650	10	650	0.4	0.403
L1770.10-0700	10	700	0.4	0.434
L1770.10-0750	10	750	0.4	0.465
L1770.10-0800	10	800	0.4	0.496
L1770.10-0850	10	850	0.4	0.527
L1770.10-0900	10	900	0.4	0.558
L1770.10-0950	10	950	0.4	0.589
L1770.10-1000	10	1000	0.4	0.620
L1770.10-1050	10	1050	0.4	0.651
L1770.10-1100	10	1100	0.4	0.682
L1770.10-1150	10	1150	0.4	0.713
L1770.10-1200	10	1200	0.4	0.744
L1770.10-1250	10	1250	0.4	0.775
L1770.10-1300	10	1300	0.4	0.806
L1770.10-1350	10	1350	0.4	0.837
L1770.10-1400	10	1400	0.4	0.868
L1770.10-1450	10	1450	0.4	0.899
L1770.10-1500	10	1500	0.4	0.930
L1770.10-1550	10	1550	0.4	0.961
L1770.10-1600	10	1600	0.4	0.992

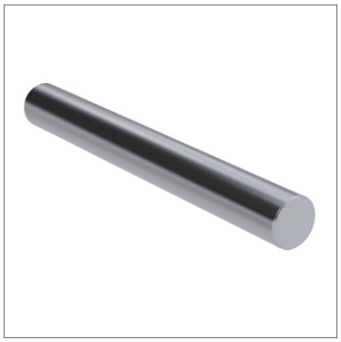
10Ø Hardened Steel Shafts



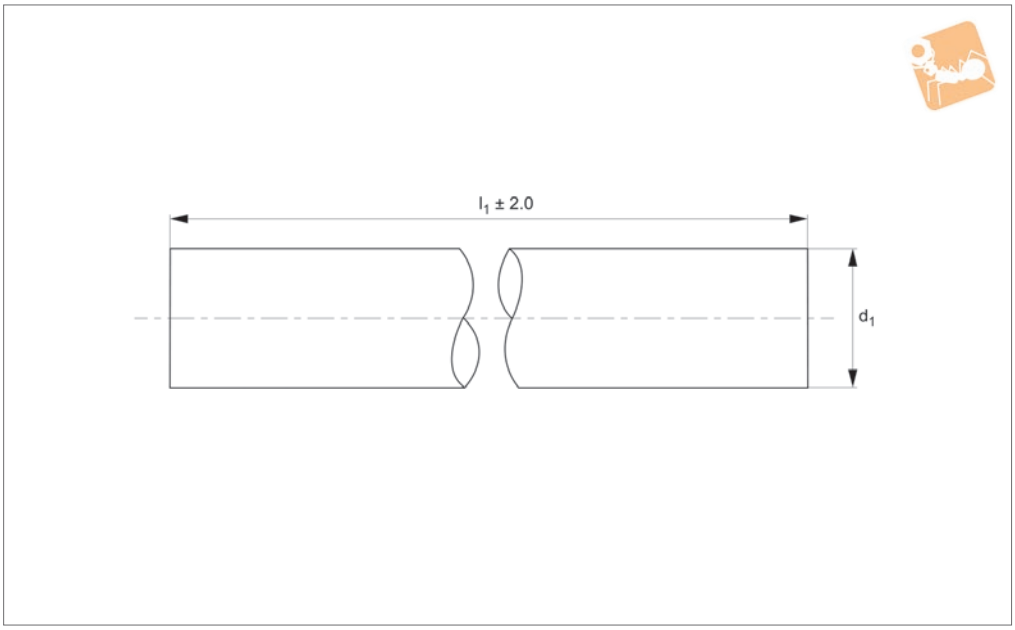
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.10-1650	10	1650	0.4	1.023
L1770.10-1700	10	1700	0.4	1.054
L1770.10-1750	10	1750	0.4	1.085
L1770.10-1800	10	1800	0.4	1.116
L1770.10-1850	10	1850	0.4	1.147
L1770.10-1900	10	1900	0.4	1.178
L1770.10-1950	10	1950	0.4	1.209
L1770.10-2000	10	2000	0.4	1.240
L1770.10-2050	10	2050	0.4	1.271
L1770.10-2100	10	2100	0.4	1.302
L1770.10-2150	10	2150	0.4	1.333
L1770.10-2200	10	2200	0.4	1.364
L1770.10-2250	10	2250	0.4	1.395
L1770.10-2300	10	2300	0.4	1.426
L1770.10-2350	10	2350	0.4	1.457
L1770.10-2400	10	2400	0.4	1.488
L1770.10-2450	10	2450	0.4	1.519
L1770.10-2500	10	2500	0.4	1.550
L1770.10-2550	10	2550	0.4	1.581
L1770.10-2600	10	2600	0.4	1.612
L1770.10-2650	10	2650	0.4	1.643
L1770.10-2700	10	2700	0.4	1.674
L1770.10-2750	10	2750	0.4	1.705
L1770.10-2800	10	2800	0.4	1.736
L1770.10-2850	10	2850	0.4	1.767
L1770.10-2900	10	2900	0.4	1.798
L1770.10-2950	10	2950	0.4	1.829
L1770.10-3000	10	3000	0.4	1.860
L1770.10-3050	10	3050	0.4	1.891
L1770.10-3100	10	3100	0.4	1.922
L1770.10-3150	10	3150	0.4	1.953
L1770.10-3200	10	3200	0.4	1.984
L1770.10-3250	10	3250	0.4	2.015
L1770.10-3300	10	3300	0.4	2.046
L1770.10-3350	10	3350	0.4	2.077
L1770.10-3400	10	3400	0.4	2.108
L1770.10-3450	10	3450	0.4	2.139
L1770.10-3500	10	3500	0.4	2.170
L1770.10-3550	10	3550	0.4	2.201
L1770.10-3600	10	3600	0.4	2.232
L1770.10-3650	10	3650	0.4	2.263
L1770.10-3700	10	3700	0.4	2.294
L1770.10-3750	10	3750	0.4	2.325
L1770.10-3800	10	3800	0.4	2.356
L1770.10-3850	10	3850	0.4	2.387
L1770.10-3900	10	3900	0.4	2.418
L1770.10-3950	10	3950	0.4	2.449
L1770.10-4000	10	4000	0.4	2.480
L1770.10-4050	10	4050	0.4	2.511
L1770.10-4100	10	4100	0.4	2.542
L1770.10-4150	10	4150	0.4	2.573
L1770.10-4200	10	4200	0.4	2.604
L1770.10-4250	10	4250	0.4	2.635
L1770.10-4300	10	4300	0.4	2.666
L1770.10-4350	10	4350	0.4	2.697
L1770.10-4400	10	4400	0.4	2.728
L1770.10-4450	10	4450	0.4	2.759
L1770.10-4500	10	4500	0.4	2.790
L1770.10-4550	10	4550	0.4	2.821
L1770.10-4600	10	4600	0.4	2.852
L1770.10-4650	10	4650	0.4	2.883
L1770.10-4700	10	4700	0.4	2.914
L1770.10-4750	10	4750	0.4	2.945
L1770.10-4800	10	4800	0.4	2.976
L1770.10-4850	10	4850	0.4	3.007
L1770.10-4900	10	4900	0.4	3.038
L1770.10-4950	10	4950	0.4	3.069
L1770.10-5000	10	5000	0.4	3.100

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.10-5050	10	5050	0.4	3.131
L1770.10-5100	10	5100	0.4	3.162
L1770.10-5150	10	5150	0.4	3.193
L1770.10-5200	10	5200	0.4	3.224
L1770.10-5250	10	5250	0.4	3.255
L1770.10-5300	10	5300	0.4	3.286
L1770.10-5350	10	5350	0.4	3.317
L1770.10-5400	10	5400	0.4	3.348
L1770.10-5450	10	5450	0.4	3.379
L1770.10-5500	10	5500	0.4	3.410
L1770.10-5550	10	5550	0.4	3.441
L1770.10-5600	10	5600	0.4	3.472
L1770.10-5650	10	5650	0.4	3.503
L1770.10-5700	10	5700	0.4	3.534
L1770.10-5750	10	5750	0.4	3.565
L1770.10-5800	10	5800	0.4	3.596
L1770.10-5850	10	5850	0.4	3.627
L1770.10-5900	10	5900	0.4	3.658
L1770.10-5950	10	5950	0.4	3.689
L1770.10-6000	10	6000	0.4	3.720

12Ø Hardened Steel Shafts



L1770.12



Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm², tensile strength: >630 N/mm².

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

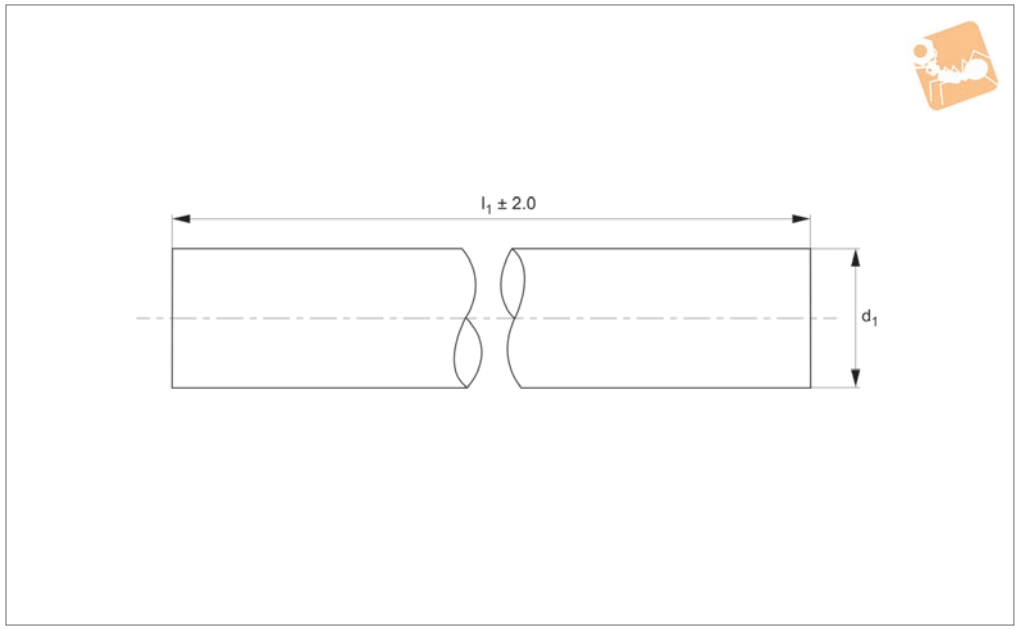
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.12-0100	12	100	0.6	0.089
L1770.12-0150	12	150	0.6	0.134
L1770.12-0200	12	200	0.6	0.178
L1770.12-0250	12	250	0.6	0.223
L1770.12-0300	12	300	0.6	0.267
L1770.12-0350	12	350	0.6	0.312
L1770.12-0400	12	400	0.6	0.356
L1770.12-0450	12	450	0.6	0.401
L1770.12-0500	12	500	0.6	0.445
L1770.12-0550	12	550	0.6	0.490
L1770.12-0600	12	600	0.6	0.534
L1770.12-0650	12	650	0.6	0.579
L1770.12-0700	12	700	0.6	0.623
L1770.12-0750	12	750	0.6	0.668
L1770.12-0800	12	800	0.6	0.712
L1770.12-0850	12	850	0.6	0.757
L1770.12-0900	12	900	0.6	0.801
L1770.12-0950	12	950	0.6	0.846
L1770.12-1000	12	1000	0.6	0.890
L1770.12-1050	12	1050	0.6	0.935
L1770.12-1100	12	1100	0.6	0.979
L1770.12-1150	12	1150	0.6	1.024
L1770.12-1200	12	1200	0.6	1.068
L1770.12-1250	12	1250	0.6	1.113
L1770.12-1300	12	1300	0.6	1.157
L1770.12-1350	12	1350	0.6	1.202
L1770.12-1400	12	1400	0.6	1.246
L1770.12-1450	12	1450	0.6	1.291
L1770.12-1500	12	1500	0.6	1.335
L1770.12-1550	12	1550	0.6	1.380
L1770.12-1600	12	1600	0.6	1.424

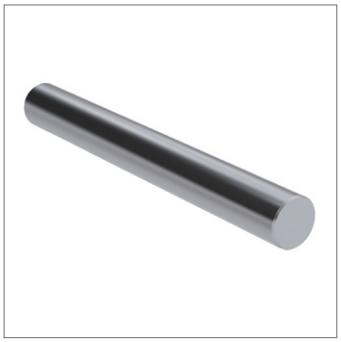
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.12-1650	12	1650	0.6	1.469
L1770.12-1700	12	1700	0.6	1.513
L1770.12-1750	12	1750	0.6	1.558
L1770.12-1800	12	1800	0.6	1.602
L1770.12-1850	12	1850	0.6	1.647
L1770.12-1900	12	1900	0.6	1.691
L1770.12-1950	12	1950	0.6	1.736
L1770.12-2000	12	2000	0.6	1.780
L1770.12-2050	12	2050	0.6	1.825
L1770.12-2100	12	2100	0.6	1.869
L1770.12-2150	12	2150	0.6	1.914
L1770.12-2200	12	2200	0.6	1.958
L1770.12-2250	12	2500	0.6	2.003
L1770.12-2300	12	2300	0.6	2.047
L1770.12-2350	12	2350	0.6	2.092
L1770.12-2400	12	2400	0.6	2.136
L1770.12-2450	12	2450	0.6	2.181
L1770.12-2500	12	2500	0.6	2.225
L1770.12-2550	12	2550	0.6	2.270
L1770.12-2600	12	2600	0.6	2.314
L1770.12-2650	12	2650	0.6	2.359
L1770.12-2700	12	2700	0.6	2.403
L1770.12-2750	12	2750	0.6	2.448
L1770.12-2800	12	2800	0.6	2.492
L1770.12-2850	12	2850	0.6	2.537
L1770.12-2900	12	2900	0.6	2.581
L1770.12-2950	12	2950	0.6	2.626
L1770.12-3000	12	3000	0.6	2.670
L1770.12-3050	12	3050	0.6	2.715
L1770.12-3100	12	3100	0.6	2.759
L1770.12-3150	12	3150	0.6	2.804
L1770.12-3200	12	3200	0.6	2.848
L1770.12-3250	12	3250	0.6	2.893
L1770.12-3300	12	3300	0.6	2.937
L1770.12-3350	12	3350	0.6	2.982
L1770.12-3400	12	3400	0.6	3.026
L1770.12-3450	12	3450	0.6	3.071
L1770.12-3500	12	3500	0.6	3.115
L1770.12-3550	12	3550	0.6	3.160
L1770.12-3600	12	3600	0.6	3.204
L1770.12-3650	12	3650	0.6	3.249
L1770.12-3700	12	3700	0.6	3.293
L1770.12-3750	12	3750	0.6	3.338
L1770.12-3800	12	3800	0.6	3.382
L1770.12-3850	12	3850	0.6	3.427
L1770.12-3900	12	3900	0.6	3.471
L1770.12-3950	12	3950	0.6	3.516
L1770.12-4000	12	4000	0.6	3.560
L1770.12-4050	12	4050	0.6	3.605
L1770.12-4100	12	4100	0.6	3.649
L1770.12-4150	12	4150	0.6	3.694
L1770.12-4200	12	4200	0.6	3.738
L1770.12-4250	12	4250	0.6	3.783
L1770.12-4300	12	4300	0.6	3.827
L1770.12-4350	12	4350	0.6	3.872
L1770.12-4400	12	4400	0.6	3.916
L1770.12-4450	12	4450	0.6	3.961
L1770.12-4500	12	4500	0.6	4.005
L1770.12-4550	12	4550	0.6	4.050
L1770.12-4600	12	4600	0.6	4.094
L1770.12-4650	12	4650	0.6	4.139
L1770.12-4700	12	4700	0.6	4.183
L1770.12-4750	12	4750	0.6	4.228
L1770.12-4800	12	4800	0.6	4.272
L1770.12-4850	12	4850	0.6	4.317
L1770.12-4900	12	4900	0.6	4.361
L1770.12-4950	12	4950	0.6	4.406
L1770.12-5000	12	5000	0.6	4.450

12Ø Hardened Steel Shafts



Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.12-5050	12	5050	0.6	4.495
L1770.12-5100	12	5100	0.6	4.539
L1770.12-5150	12	5150	0.6	4.584
L1770.12-5200	12	5200	0.6	4.628
L1770.12-5250	12	5250	0.6	4.673
L1770.12-5300	12	5300	0.6	4.717
L1770.12-5350	12	5350	0.6	4.762
L1770.12-5400	12	5400	0.6	4.806
L1770.12-5450	12	5450	0.6	4.851
L1770.12-5500	12	5500	0.6	4.895
L1770.12-5550	12	5550	0.6	4.940
L1770.12-5600	12	5600	0.6	4.984
L1770.12-5650	12	5650	0.6	5.029
L1770.12-5700	12	5700	0.6	5.073
L1770.12-5750	12	5750	0.6	5.118
L1770.12-5800	12	5800	0.6	5.162
L1770.12-5850	12	5850	0.6	5.207
L1770.12-5900	12	5900	0.6	5.251
L1770.12-5950	12	5950	0.6	5.296
L1770.12-6000	12	6000	0.6	5.340





L1770.16

Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm^2, tensile strength: >630 N/mm^2.

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.16-0100	16	100	0.6	0.158
L1770.16-0150	16	150	0.6	0.237
L1770.16-0200	16	200	0.6	0.316
L1770.16-0250	16	250	0.6	0.395
L1770.16-0300	16	300	0.6	0.474
L1770.16-0350	16	350	0.6	0.553
L1770.16-0400	16	400	0.6	0.632
L1770.16-0450	16	450	0.6	0.711
L1770.16-0500	16	500	0.6	0.790
L1770.16-0550	16	550	0.6	0.869
L1770.16-0600	16	600	0.6	0.948
L1770.16-0650	16	650	0.6	1.027
L1770.16-0700	16	700	0.6	1.106
L1770.16-0750	16	750	0.6	1.185
L1770.16-0800	16	800	0.6	1.264
L1770.16-0850	16	850	0.6	1.343
L1770.16-0900	16	900	0.6	1.422
L1770.16-0950	16	950	0.6	1.501
L1770.16-1000	16	1000	0.6	1.580
L1770.16-1050	16	1050	0.6	1.659
L1770.16-1100	16	1100	0.6	1.738
L1770.16-1150	16	1150	0.6	1.817
L1770.16-1200	16	1200	0.6	1.896
L1770.16-1250	16	1250	0.6	1.975
L1770.16-1300	16	1300	0.6	2.054
L1770.16-1350	16	1350	0.6	2.133
L1770.16-1400	16	1400	0.6	2.212
L1770.16-1450	16	1450	0.6	2.291
L1770.16-1500	16	1500	0.6	2.370
L1770.16-1550	16	1550	0.6	2.449
L1770.16-1600	16	1600	0.6	2.528

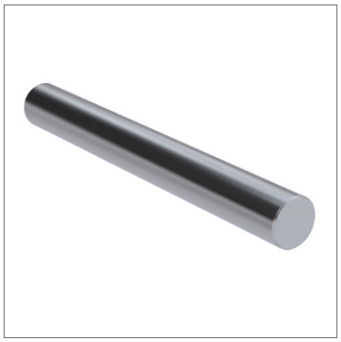
16Ø Hardened Steel Shafts



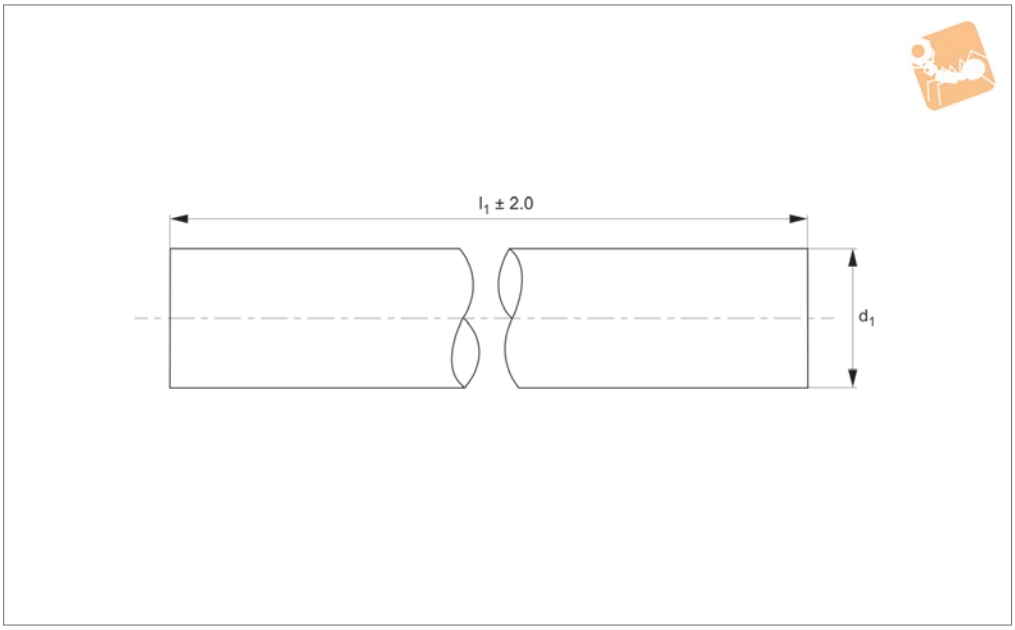
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.16-1650	16	1650	0.6	2.607
L1770.16-1700	16	1700	0.6	2.686
L1770.16-1750	16	1750	0.6	2.765
L1770.16-1800	16	1800	0.6	2.844
L1770.16-1850	16	1850	0.6	2.923
L1770.16-1900	16	1900	0.6	3.002
L1770.16-1950	16	1950	0.6	3.081
L1770.16-2000	16	2000	0.6	3.160
L1770.16-2050	16	2050	0.6	3.239
L1770.16-2100	16	2100	0.6	3.318
L1770.16-2150	16	2150	0.6	3.397
L1770.16-2200	16	2200	0.6	3.476
L1770.16-2250	16	2250	0.6	3.555
L1770.16-2300	16	2300	0.6	3.634
L1770.16-2350	16	2350	0.6	3.713
L1770.16-2400	16	2400	0.6	3.792
L1770.16-2450	16	2450	0.6	3.871
L1770.16-2500	16	2500	0.6	3.950
L1770.16-2550	16	2550	0.6	4.029
L1770.16-2600	16	2600	0.6	4.108
L1770.16-2650	16	2650	0.6	4.187
L1770.16-2700	16	2700	0.6	4.266
L1770.16-2750	16	2750	0.6	4.345
L1770.16-2800	16	2800	0.6	4.424
L1770.16-2850	16	2850	0.6	4.503
L1770.16-2900	16	2900	0.6	4.582
L1770.16-2950	16	2950	0.6	4.661
L1770.16-3000	16	3000	0.6	4.740
L1770.16-3050	16	3050	0.6	4.819
L1770.16-3100	16	3100	0.6	4.898
L1770.16-3150	16	3150	0.6	4.977
L1770.16-3200	16	3200	0.6	5.056
L1770.16-3250	16	3250	0.6	5.135
L1770.16-3300	16	3300	0.6	5.214
L1770.16-3350	16	3350	0.6	5.293
L1770.16-3400	16	3400	0.6	5.372
L1770.16-3450	16	3450	0.6	5.451
L1770.16-3500	16	3500	0.6	5.530
L1770.16-3550	16	3550	0.6	5.609
L1770.16-3600	16	3600	0.6	5.688
L1770.16-3650	16	3650	0.6	5.767
L1770.16-3700	16	3700	0.6	5.846
L1770.16-3750	16	3750	0.6	5.925
L1770.16-3800	16	3800	0.6	6.004
L1770.16-3850	16	3850	0.6	6.083
L1770.16-3900	16	3900	0.6	6.162
L1770.16-3950	16	3950	0.6	6.241
L1770.16-4000	16	4000	0.6	6.320
L1770.16-4050	16	4050	0.6	6.399
L1770.16-4100	16	4100	0.6	6.478
L1770.16-4150	16	4150	0.6	6.557
L1770.16-4200	16	4200	0.6	6.636
L1770.16-4250	16	4250	0.6	6.715
L1770.16-4300	16	4300	0.6	6.794
L1770.16-4350	16	4350	0.6	6.873
L1770.16-4400	16	4400	0.6	6.952
L1770.16-4450	16	4450	0.6	7.031
L1770.16-4500	16	4500	0.6	7.110
L1770.16-4550	16	4500	0.6	7.189
L1770.16-4600	16	4600	0.6	7.268
L1770.16-4650	16	4650	0.6	7.347
L1770.16-4700	16	4700	0.6	7.426
L1770.16-4750	16	4750	0.6	7.505
L1770.16-4800	16	4800	0.6	7.584
L1770.16-4850	16	4850	0.6	7.663
L1770.16-4900	16	4900	0.6	7.742
L1770.16-4950	16	4950	0.6	7.821
L1770.16-5000	16	5000	0.6	7.900

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.16-5050	16	5050	0.6	7.979
L1770.16-5100	16	5100	0.6	8.058
L1770.16-5150	16	5150	0.6	8.137
L1770.16-5200	16	5200	0.6	8.216
L1770.16-5250	16	5250	0.6	8.295
L1770.16-5300	16	5300	0.6	8.374
L1770.16-5350	16	5350	0.6	8.453
L1770.16-5400	16	5400	0.6	8.532
L1770.16-5450	16	5450	0.6	8.611
L1770.16-5500	16	5500	0.6	8.690
L1770.16-5550	16	5550	0.6	8.769
L1770.16-5600	16	5600	0.6	8.848
L1770.16-5650	16	5650	0.6	8.927
L1770.16-5700	16	5700	0.6	9.006
L1770.16-5750	16	5750	0.6	9.085
L1770.16-5800	16	5800	0.6	9.164
L1770.16-5850	16	5850	0.6	9.243
L1770.16-5900	16	5900	0.6	9.322
L1770.16-5950	16	5950	0.6	9.401
L1770.16-6000	16	6000	0.6	9.480

20Ø Hardened Steel Shafts



L1770.20



Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm², tensile strength: >630 N/mm².

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

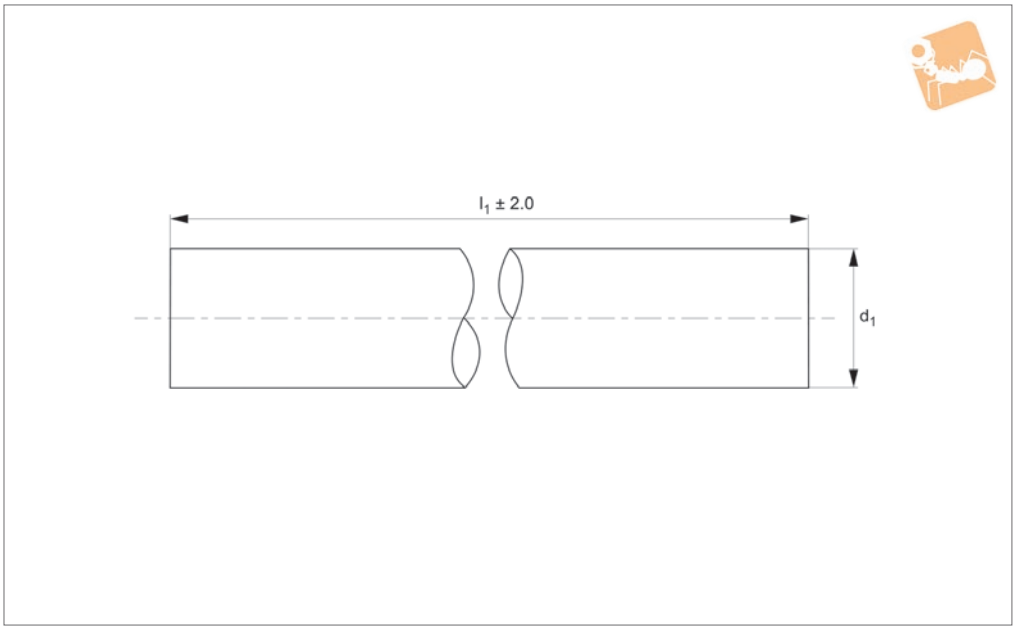
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.20-0100	20	100	0.9	0.247
L1770.20-0150	20	150	0.9	0.371
L1770.20-0200	20	200	0.9	0.494
L1770.20-0250	20	250	0.9	0.618
L1770.20-0300	20	300	0.9	0.741
L1770.20-0350	20	350	0.9	0.865
L1770.20-0400	20	400	0.9	0.988
L1770.20-0450	20	450	0.9	1.112
L1770.20-0500	20	500	0.9	1.235
L1770.20-0550	20	550	0.9	1.359
L1770.20-0600	20	600	0.9	1.482
L1770.20-0650	20	650	0.9	1.606
L1770.20-0700	20	700	0.9	1.729
L1770.20-0750	20	750	0.9	1.853
L1770.20-0800	20	800	0.9	1.976
L1770.20-0850	20	850	0.9	2.100
L1770.20-0900	20	900	0.9	2.223
L1770.20-0950	20	950	0.9	2.347
L1770.20-1000	20	1000	0.9	2.470
L1770.20-1050	20	1050	0.9	2.594
L1770.20-1100	20	1100	0.9	2.717
L1770.20-1150	20	1150	0.9	2.841
L1770.20-1200	20	1200	0.9	2.964
L1770.20-1250	20	1250	0.9	3.088
L1770.20-1300	20	1300	0.9	3.211
L1770.20-1350	20	1350	0.9	3.335
L1770.20-1400	20	1400	0.9	3.458
L1770.20-1450	20	1450	0.9	3.582
L1770.20-1500	20	1500	0.9	3.705
L1770.20-1550	20	1550	0.9	3.829
L1770.20-1600	20	1600	0.9	3.952

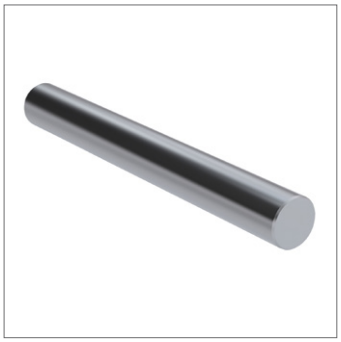
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.20-1650	20	1650	0.9	4.076
L1770.20-1700	20	1700	0.9	4.199
L1770.20-1750	20	1750	0.9	4.323
L1770.20-1800	20	1800	0.9	4.446
L1770.20-1850	20	1850	0.9	4.570
L1770.20-1900	20	1900	0.9	4.693
L1770.20-1950	20	1950	0.9	4.817
L1770.20-2000	20	2000	0.9	4.940
L1770.20-2050	20	2050	0.9	5.064
L1770.20-2100	20	2100	0.9	5.187
L1770.20-2150	20	2150	0.9	5.311
L1770.20-2200	20	2200	0.9	5.434
L1770.20-2250	20	2250	0.9	5.558
L1770.20-2300	20	2300	0.9	5.681
L1770.20-2350	20	2350	0.9	5.805
L1770.20-2400	20	2400	0.9	5.928
L1770.20-2450	20	2450	0.9	6.052
L1770.20-2500	20	2500	0.9	6.175
L1770.20-2550	20	2550	0.9	6.299
L1770.20-2600	20	2600	0.9	6.422
L1770.20-2650	20	2650	0.9	6.546
L1770.20-2700	20	2700	0.9	6.669
L1770.20-2750	20	2750	0.9	6.793
L1770.20-2800	20	2800	0.9	6.916
L1770.20-2850	20	2850	0.9	7.040
L1770.20-2900	20	2900	0.9	7.163
L1770.20-2950	20	2950	0.9	7.287
L1770.20-3000	20	3000	0.9	7.410
L1770.20-3050	20	3050	0.9	7.534
L1770.20-3100	20	3100	0.9	7.657
L1770.20-3150	20	3150	0.9	7.781
L1770.20-3200	20	3200	0.9	7.904
L1770.20-3250	20	3250	0.9	8.028
L1770.20-3300	20	3300	0.9	8.151
L1770.20-3350	20	3350	0.9	8.275
L1770.20-3400	20	3400	0.9	8.398
L1770.20-3450	20	3450	0.9	8.522
L1770.20-3500	20	3500	0.9	8.645
L1770.20-3550	20	3550	0.9	8.769
L1770.20-3600	20	3600	0.9	8.892
L1770.20-3650	20	3650	0.9	9.016
L1770.20-3700	20	3700	0.9	9.139
L1770.20-3750	20	3750	0.9	9.263
L1770.20-3800	20	3800	0.9	9.386
L1770.20-3850	20	3850	0.9	9.510
L1770.20-3900	20	3900	0.9	9.633
L1770.20-3950	20	3950	0.9	9.757
L1770.20-4000	20	4000	0.9	9.880
L1770.20-4050	20	4050	0.9	10.004
L1770.20-4100	20	4100	0.9	10.127
L1770.20-4150	20	4150	0.9	10.251
L1770.20-4200	20	4200	0.9	10.374
L1770.20-4250	20	4250	0.9	10.498
L1770.20-4300	20	4300	0.9	10.621
L1770.20-4350	20	4350	0.9	10.745
L1770.20-4400	20	4400	0.9	10.868
L1770.20-4450	20	4450	0.9	10.992
L1770.20-4500	20	4500	0.9	11.115
L1770.20-4550	20	4550	0.9	11.239
L1770.20-4600	20	4600	0.9	11.362
L1770.20-4650	20	4650	0.9	11.486
L1770.20-4700	20	4700	0.9	11.609
L1770.20-4750	20	4750	0.9	11.733
L1770.20-4800	20	4800	0.9	11.856
L1770.20-4850	20	4850	0.9	11.980
L1770.20-4900	20	4900	0.9	12.103
L1770.20-4950	20	4950	0.9	12.227
L1770.20-5000	20	5000	0.9	12.350

20Ø Hardened Steel Shafts



Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1770.20-5050	20	5050	0.9	12.474
L1770.20-5100	20	5100	0.9	12.597
L1770.20-5150	20	5150	0.9	12.721
L1770.20-5200	20	5200	0.9	12.844
L1770.20-5250	20	5250	0.9	12.968
L1770.20-5300	20	5300	0.9	13.091
L1770.20-5350	20	5350	0.9	13.215
L1770.20-5400	20	5400	0.9	13.338
L1770.20-5450	20	5450	0.9	13.462
L1770.20-5500	20	5500	0.9	13.585
L1770.20-5550	20	5550	0.9	13.709
L1770.20-5600	20	5600	0.9	13.832
L1770.20-5650	20	5650	0.9	13.956
L1770.20-5700	20	5700	0.9	14.079
L1770.20-5750	20	5750	0.9	14.203
L1770.20-5800	20	5800	0.9	14.326
L1770.20-5850	20	5850	0.9	14.450
L1770.20-5900	20	5900	0.9	14.573
L1770.20-5950	20	5950	0.9	14.697
L1770.20-6000	20	6000	0.9	14.820





L1770.25

Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm^2, tensile strength: >630 N/mm^2.

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.25-0100	25	100	0.9	0.385
L1770.25-0150	25	150	0.9	0.578
L1770.25-0200	25	200	0.9	0.770
L1770.25-0250	25	250	0.9	0.963
L1770.25-0300	25	300	0.9	1.155
L1770.25-0350	25	350	0.9	1.348
L1770.25-0400	25	400	0.9	1.540
L1770.25-0450	25	450	0.9	1.733
L1770.25-0500	25	500	0.9	1.925
L1770.25-0550	25	550	0.9	2.118
L1770.25-0600	25	600	0.9	2.310
L1770.25-0650	25	650	0.9	2.503
L1770.25-0700	25	700	0.9	2.695
L1770.25-0750	25	750	0.9	2.888
L1770.25-0800	25	800	0.9	3.080
L1770.25-0850	25	850	0.9	3.273
L1770.25-0900	25	900	0.9	3.465
L1770.25-0950	25	950	0.9	3.658
L1770.25-1000	25	1000	0.9	3.850
L1770.25-1050	25	1050	0.9	4.043
L1770.25-1100	25	1100	0.9	4.235
L1770.25-1150	25	1150	0.9	4.428
L1770.25-1200	25	1200	0.9	4.620
L1770.25-1250	25	1250	0.9	4.813
L1770.25-1300	25	1300	0.9	5.005
L1770.25-1350	25	1350	0.9	5.198
L1770.25-1400	25	1400	0.9	5.390
L1770.25-1450	25	1450	0.9	5.583
L1770.25-1500	25	1500	0.9	5.775
L1770.25-1550	25	1550	0.9	5.968
L1770.25-1600	25	1600	0.9	6.160

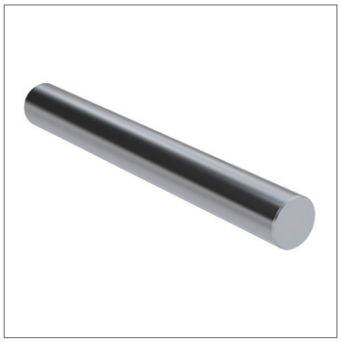
25Ø Hardened Steel Shafts



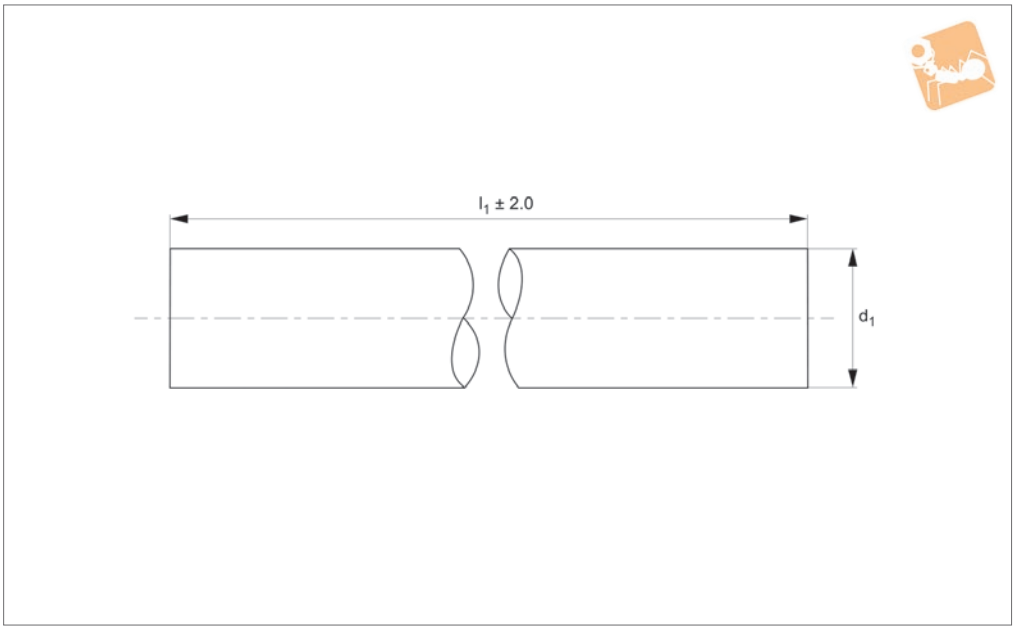
Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.25-1650	25	1650	0.9	6.353
L1770.25-1700	25	1700	0.9	6.545
L1770.25-1750	25	1750	0.9	6.738
L1770.25-1800	25	1800	0.9	6.930
L1770.25-1850	25	1850	0.9	7.123
L1770.25-1900	25	1900	0.9	7.315
L1770.25-1950	25	1950	0.9	7.508
L1770.25-2000	25	2000	0.9	7.700
L1770.25-2050	25	2050	0.9	7.893
L1770.25-2100	25	2100	0.9	8.085
L1770.25-2150	25	2150	0.9	8.278
L1770.25-2200	25	2200	0.9	8.470
L1770.25-2250	25	2250	0.9	8.663
L1770.25-2300	25	2300	0.9	8.855
L1770.25-2350	25	2350	0.9	9.048
L1770.25-2400	25	2400	0.9	9.240
L1770.25-2450	25	2450	0.9	9.433
L1770.25-2500	25	2500	0.9	9.625
L1770.25-2550	25	2550	0.9	9.818
L1770.25-2600	25	2600	0.9	10.010
L1770.25-2650	25	2650	0.9	10.203
L1770.25-2700	25	2700	0.9	10.395
L1770.25-2750	25	2750	0.9	10.588
L1770.25-2800	25	2800	0.9	10.780
L1770.25-2850	25	2850	0.9	10.973
L1770.25-2900	25	2900	0.9	11.165
L1770.25-2950	25	2950	0.9	11.358
L1770.25-3000	25	3000	0.9	11.550
L1770.25-3050	25	3050	0.9	11.743
L1770.25-3100	25	3100	0.9	11.935
L1770.25-3150	25	3150	0.9	12.128
L1770.25-3200	25	3200	0.9	12.320
L1770.25-3250	25	3250	0.9	12.513
L1770.25-3300	25	3300	0.9	12.705
L1770.25-3350	25	3350	0.9	12.898
L1770.25-3400	25	3400	0.9	13.090
L1770.25-3450	25	3450	0.9	13.283
L1770.25-3500	25	3500	0.9	13.475
L1770.25-3550	25	3550	0.9	13.668
L1770.25-3600	25	3600	0.9	13.860
L1770.25-3650	25	3650	0.9	14.053
L1770.25-3700	25	3700	0.9	14.245
L1770.25-3750	25	3750	0.9	14.438
L1770.25-3800	25	3800	0.9	14.630
L1770.25-3850	25	3850	0.9	14.823
L1770.25-3900	25	3900	0.9	15.015
L1770.25-3950	25	3950	0.9	15.208
L1770.25-4000	25	4000	0.9	15.400
L1770.25-4050	25	4050	0.9	15.593
L1770.25-4100	25	4100	0.9	15.785
L1770.25-4150	25	4150	0.9	15.978
L1770.25-4200	25	4200	0.9	16.170
L1770.25-4250	25	4250	0.9	16.363
L1770.25-4300	25	4300	0.9	16.555
L1770.25-4350	25	4350	0.9	16.748
L1770.25-4400	25	4400	0.9	16.940
L1770.25-4450	25	4450	0.9	17.133
L1770.25-4500	25	4500	0.9	17.325
L1770.25-4550	25	4550	0.9	17.518
L1770.25-4600	25	4600	0.9	17.710
L1770.25-4650	25	4650	0.9	17.903
L1770.25-4700	25	4700	0.9	18.095
L1770.25-4750	25	4750	0.9	18.288
L1770.25-4800	25	4800	0.9	18.480
L1770.25-4850	25	4850	0.9	18.673
L1770.25-4900	25	4900	0.9	18.865
L1770.25-4950	25	4950	0.9	19.058
L1770.25-5000	25	5000	0.9	19.250

Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.25-5050	25	5050	0.9	19.443
L1770.25-5100	25	5100	0.9	19.635
L1770.25-5150	25	5150	0.9	19.828
L1770.25-5200	25	5200	0.9	20.020
L1770.25-5250	25	5250	0.9	20.213
L1770.25-5300	25	5300	0.9	20.405
L1770.25-5350	25	5350	0.9	20.598
L1770.25-5400	25	5400	0.9	20.790
L1770.25-5450	25	5450	0.9	20.983
L1770.25-5500	25	5500	0.9	21.175
L1770.25-5550	25	5550	0.9	21.368
L1770.25-5600	25	5600	0.9	21.560
L1770.25-5650	25	5650	0.9	21.753
L1770.25-5700	25	5700	0.9	21.945
L1770.25-5750	25	5750	0.9	22.138
L1770.25-5800	25	5800	0.9	22.330
L1770.25-5850	25	5850	0.9	22.523
L1770.25-5900	25	5900	0.9	22.715
L1770.25-5950	25	5950	0.9	22.908
L1770.25-6000	25	6000	0.9	23.100

30Ø Hardened Steel Shafts



L1770.30



Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm², tensile strength: >630 N/mm².

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

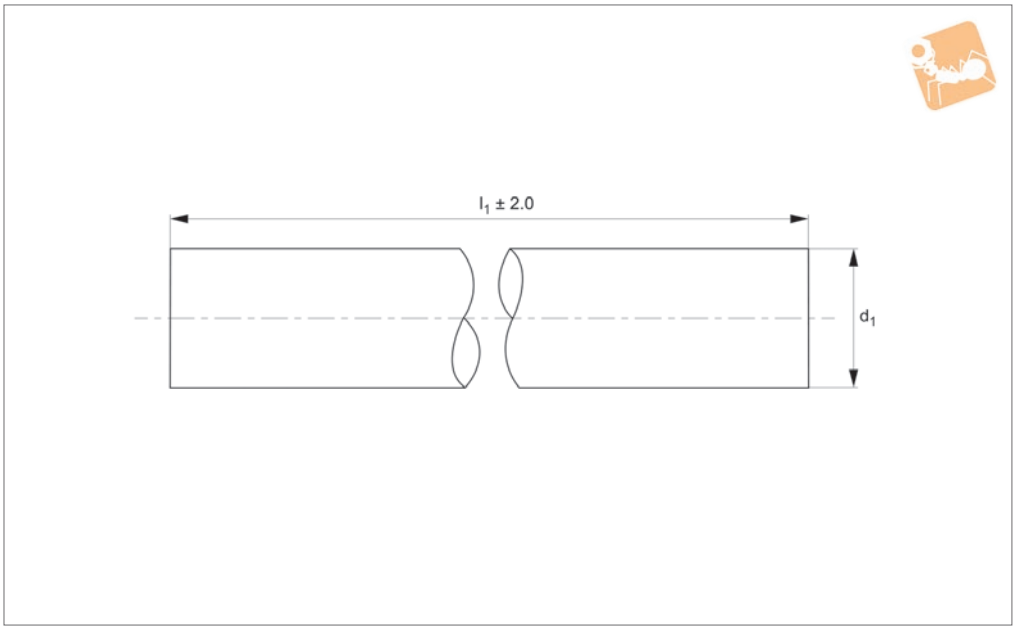
Order No.	d_1	l	l_1	Depth of hardness min.	Weight kg
L1770.30-0100	30	100	100	1.5	0.555
L1770.30-0150	30	150	150	1.5	0.833
L1770.30-0200	30	200	200	1.5	1.110
L1770.30-0250	30	250	250	1.5	1.388
L1770.30-0300	30	300	300	1.5	1.665
L1770.30-0350	30	350	350	1.5	1.943
L1770.30-0400	30	400	400	1.5	2.220
L1770.30-0450	30	450	450	1.5	2.498
L1770.30-0500	30	500	500	1.5	2.775
L1770.30-0550	30	550	550	1.5	3.053
L1770.30-0600	30	600	600	1.5	3.330
L1770.30-0650	30	650	650	1.5	3.608
L1770.30-0700	30	700	700	1.5	3.885
L1770.30-0750	30	750	750	1.5	4.163
L1770.30-0800	30	800	800	1.5	4.440
L1770.30-0850	30	-	850	1.5	4.718
L1770.30-0900	30	-	900	1.5	4.995
L1770.30-0950	30	-	950	1.5	5.273
L1770.30-1000	30	-	1000	1.5	5.550
L1770.30-1050	30	-	1050	1.5	5.828
L1770.30-1100	30	-	1100	1.5	6.105
L1770.30-1150	30	-	1150	1.5	6.383
L1770.30-1200	30	-	1200	1.5	6.660
L1770.30-1250	30	-	1250	1.5	6.938
L1770.30-1300	30	-	1300	1.5	7.215
L1770.30-1350	30	-	1350	1.5	7.493
L1770.30-1400	30	-	1400	1.5	7.770
L1770.30-1450	30	-	1450	1.5	8.048
L1770.30-1500	30	-	1500	1.5	8.325
L1770.30-1550	30	-	1550	1.5	8.603
L1770.30-1600	30	-	1600	1.5	8.880

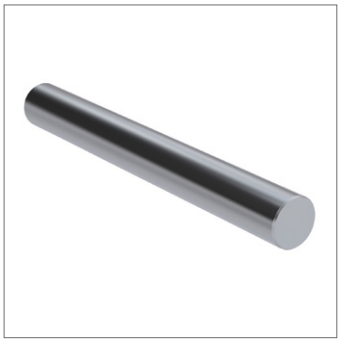
Order No.	d_1	l	l_1	Depth of hardness min.	Weight kg
L1770.30-1650	30	-	1650	1.5	9.158
L1770.30-1700	30	-	1700	1.5	9.435
L1770.30-1750	30	-	1750	1.5	9.713
L1770.30-1800	30	-	1800	1.5	9.990
L1770.30-1850	30	-	1850	1.5	10.268
L1770.30-1900	30	-	1900	1.5	10.545
L1770.30-1950	30	-	1950	1.5	10.823
L1770.30-2000	30	-	2000	1.5	11.100
L1770.30-2050	30	-	2050	1.5	11.378
L1770.30-2100	30	-	2100	1.5	11.655
L1770.30-2150	30	-	2150	1.5	11.933
L1770.30-2200	30	-	2200	1.5	12.210
L1770.30-2250	30	-	2250	1.5	12.488
L1770.30-2300	30	-	2300	1.5	12.765
L1770.30-2350	30	-	2350	1.5	13.043
L1770.30-2400	30	-	2400	1.5	13.320
L1770.30-2450	30	-	2450	1.5	13.598
L1770.30-2500	30	-	2500	1.5	13.875
L1770.30-2550	30	-	2550	1.5	14.153
L1770.30-2600	30	-	2600	1.5	14.430
L1770.30-2650	30	-	2650	1.5	14.708
L1770.30-2700	30	-	2700	1.5	14.985
L1770.30-2750	30	-	2750	1.5	15.263
L1770.30-2800	30	-	2800	1.5	15.540
L1770.30-2850	30	-	2850	1.5	15.818
L1770.30-2900	30	-	2900	1.5	16.095
L1770.30-2950	30	-	2950	1.5	16.373
L1770.30-3000	30	-	3000	1.5	16.650
L1770.30-3050	30	-	3050	1.5	16.928
L1770.30-3100	30	-	3100	1.5	17.205
L1770.30-3150	30	-	3150	1.5	17.483
L1770.30-3200	30	-	3200	1.5	17.760
L1770.30-3250	30	-	3250	1.5	18.038
L1770.30-3300	30	-	3300	1.5	18.315
L1770.30-3350	30	-	3350	1.5	18.593
L1770.30-3400	30	-	3400	1.5	18.870
L1770.30-3450	30	-	3450	1.5	19.148
L1770.30-3500	30	-	3500	1.5	19.425
L1770.30-3550	30	-	3550	1.5	19.703
L1770.30-3600	30	-	3600	1.5	19.980
L1770.30-3650	30	-	3650	1.5	20.258
L1770.30-3700	30	-	3700	1.5	20.535
L1770.30-3750	30	-	3750	1.5	20.813
L1770.30-3800	30	-	3800	1.5	21.090
L1770.30-3850	30	-	3850	1.5	21.368
L1770.30-3900	30	-	3900	1.5	21.645
L1770.30-3950	30	-	3950	1.5	21.923
L1770.30-4000	30	-	4000	1.5	22.200
L1770.30-4050	30	-	4050	1.5	22.478
L1770.30-4100	30	-	4100	1.5	22.755
L1770.30-4150	30	-	4150	1.5	23.033
L1770.30-4200	30	-	4200	1.5	23.310
L1770.30-4250	30	-	4250	1.5	23.588
L1770.30-4300	30	-	4300	1.5	23.865
L1770.30-4350	30	-	4350	1.5	24.143
L1770.30-4400	30	-	4400	1.5	24.420
L1770.30-4450	30	-	4450	1.5	24.698
L1770.30-4500	30	-	4500	1.5	24.975
L1770.30-4550	30	-	4550	1.5	25.253
L1770.30-4600	30	-	4600	1.5	25.530
L1770.30-4650	30	-	4650	1.5	25.808
L1770.30-4700	30	-	4700	1.5	26.085
L1770.30-4750	30	-	4750	1.5	26.363
L1770.30-4800	30	-	4800	1.5	26.640
L1770.30-4850	30	-	4850	1.5	26.918
L1770.30-4900	30	-	4900	1.5	27.195
L1770.30-4950	30	-	4950	1.5	27.473
L1770.30-5000	30	-	5000	1.5	27.750

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Order No.	d_1	l	l_1	Depth of hardness min.	Weight kg
L1770.30-5050	30	-	5050	1.5	28.028
L1770.30-5100	30	-	5100	1.5	28.305
L1770.30-5150	30	-	5150	1.5	28.583
L1770.30-5200	30	-	5200	1.5	28.860
L1770.30-5250	30	-	5250	1.5	29.138
L1770.30-5300	30	-	5300	1.5	29.415
L1770.30-5350	30	-	5350	1.5	29.693
L1770.30-5400	30	-	5400	1.5	29.970
L1770.30-5450	30	-	5450	1.5	30.248
L1770.30-5500	30	-	5500	1.5	30.525
L1770.30-5550	30	-	5550	1.5	30.803
L1770.30-5600	30	-	5600	1.5	31.080
L1770.30-5650	30	-	5650	1.5	31.358
L1770.30-5700	30	-	5700	1.5	31.635
L1770.30-5750	30	-	5750	1.5	31.913
L1770.30-5800	30	-	5800	1.5	32.190
L1770.30-5850	30	-	5850	1.5	32.468
L1770.30-5900	30	-	5900	1.5	32.745
L1770.30-5950	30	-	5950	1.5	33.023
L1770.30-6000	30	-	6000	1.5	33.300





L1770.40

Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm^2, tensile strength: >630 N/mm^2.

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.40-0100	40	100	1.5	0.987
L1770.40-0150	40	150	1.5	1.481
L1770.40-0200	40	200	1.5	1.974
L1770.40-0250	40	250	1.5	2.468
L1770.40-0300	40	300	1.5	2.961
L1770.40-0350	40	350	1.5	3.455
L1770.40-0400	40	400	1.5	3.948
L1770.40-0450	40	450	1.5	4.442
L1770.40-0500	40	500	1.5	4.935
L1770.40-0550	40	550	1.5	5.429
L1770.40-0600	40	600	1.5	5.922
L1770.40-0650	40	650	1.5	6.416
L1770.40-0700	40	700	1.5	6.909
L1770.40-0750	40	750	1.5	7.403
L1770.40-0800	40	800	1.5	7.896
L1770.40-0850	40	850	1.5	8.390
L1770.40-0900	40	900	1.5	8.883
L1770.40-0950	40	950	1.5	9.377
L1770.40-1000	40	1000	1.5	9.870
L1770.40-1050	40	1050	1.5	10.364
L1770.40-1100	40	1100	1.5	10.857
L1770.40-1150	40	1150	1.5	11.351
L1770.40-1200	40	1200	1.5	11.844
L1770.40-1250	40	1250	1.5	12.338
L1770.40-1300	40	1300	1.5	12.831
L1770.40-1350	40	1350	1.5	13.325
L1770.40-1400	40	1400	1.5	13.818
L1770.40-1450	40	1450	1.5	14.312
L1770.40-1500	40	1500	1.5	14.805
L1770.40-1550	40	1550	1.5	15.299
L1770.40-1600	40	1600	1.5	15.792

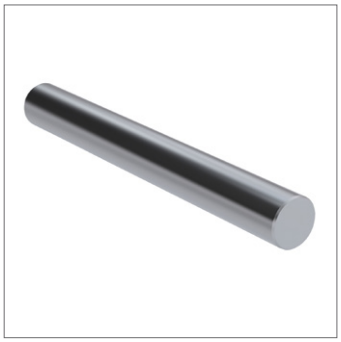
40Ø Hardened Steel Shafts



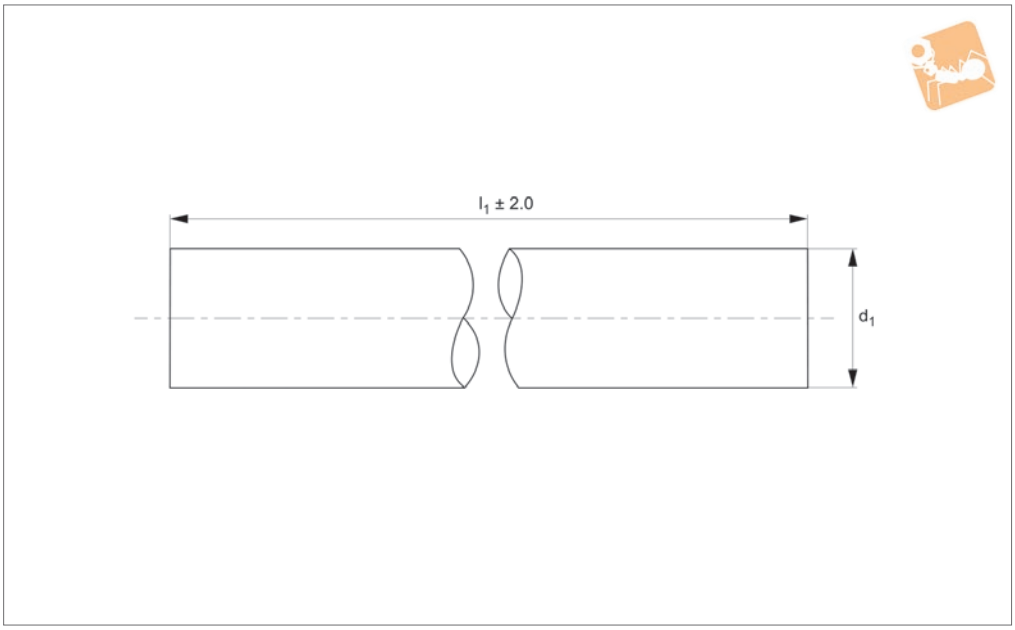
Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.40-1650	40	1650	1.5	16.286
L1770.40-1700	40	1700	1.5	16.779
L1770.40-1750	40	1750	1.5	17.273
L1770.40-1800	40	1800	1.5	17.766
L1770.40-1850	40	1850	1.5	18.260
L1770.40-1900	40	1900	1.5	18.753
L1770.40-1950	40	1950	1.5	19.247
L1770.40-2000	40	2000	1.5	19.740
L1770.40-2050	40	2050	1.5	20.234
L1770.40-2100	40	2100	1.5	20.727
L1770.40-2150	40	2150	1.5	21.221
L1770.40-2200	40	2200	1.5	21.714
L1770.40-2250	40	2250	1.5	22.208
L1770.40-2300	40	2300	1.5	22.701
L1770.40-2350	40	2350	1.5	23.195
L1770.40-2400	40	2400	1.5	23.688
L1770.40-2450	40	2450	1.5	24.182
L1770.40-2500	40	2500	1.5	24.675
L1770.40-2550	40	2550	1.5	25.169
L1770.40-2600	40	2600	1.5	25.662
L1770.40-2650	40	2650	1.5	26.156
L1770.40-2700	40	2700	1.5	26.649
L1770.40-2750	40	2750	1.5	27.143
L1770.40-2800	40	2800	1.5	27.636
L1770.40-2850	40	2850	1.5	28.130
L1770.40-2900	40	2900	1.5	28.623
L1770.40-2950	40	2950	1.5	29.117
L1770.40-3000	40	3000	1.5	29.610
L1770.40-3050	40	3050	1.5	30.104
L1770.40-3100	40	3100	1.5	30.597
L1770.40-3150	40	3150	1.5	31.091
L1770.40-3200	40	3200	1.5	31.584
L1770.40-3250	40	3250	1.5	32.078
L1770.40-3300	40	3300	1.5	32.571
L1770.40-3350	40	3350	1.5	33.065
L1770.40-3400	40	3400	1.5	33.558
L1770.40-3450	40	3450	1.5	34.052
L1770.40-3500	40	3500	1.5	34.545
L1770.40-3550	40	3550	1.5	35.039
L1770.40-3600	40	3600	1.5	35.532
L1770.40-3650	40	3650	1.5	36.026
L1770.40-3700	40	3700	1.5	36.519
L1770.40-3750	40	3750	1.5	37.013
L1770.40-3800	40	3800	1.5	37.506
L1770.40-3850	40	3850	1.5	38.000
L1770.40-3900	40	3900	1.5	38.493
L1770.40-3950	40	3950	1.5	38.987
L1770.40-4000	40	4000	1.5	39.480
L1770.40-4050	40	4050	1.5	39.974
L1770.40-4100	40	4100	1.5	40.467
L1770.40-4150	40	4150	1.5	40.961
L1770.40-4200	40	4200	1.5	41.454
L1770.40-4250	40	4250	1.5	41.948
L1770.40-4300	40	4300	1.5	42.441
L1770.40-4350	40	4350	1.5	42.935
L1770.40-4400	40	4400	1.5	43.428
L1770.40-4450	40	4450	1.5	43.922
L1770.40-4500	40	4500	1.5	44.415
L1770.40-4550	40	4550	1.5	44.909
L1770.40-4600	40	4600	1.5	45.402
L1770.40-4650	40	4650	1.5	45.896
L1770.40-4700	40	4700	1.5	46.389
L1770.40-4750	40	4750	1.5	46.883
L1770.40-4800	40	4800	1.5	47.376
L1770.40-4850	40	4850	1.5	47.870
L1770.40-4900	40	4900	1.5	48.363
L1770.40-4950	40	4950	1.5	48.857
L1770.40-5000	40	5000	1.5	49.350

Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.40-5050	40	5050	1.5	49.844
L1770.40-5100	40	5100	1.5	50.337
L1770.40-5150	40	5150	1.5	50.831
L1770.40-5200	40	5200	1.5	51.324
L1770.40-5250	40	5250	1.5	51.818
L1770.40-5300	40	5300	1.5	52.311
L1770.40-5350	40	5350	1.5	52.805
L1770.40-5400	40	5400	1.5	53.298
L1770.40-5450	40	5450	1.5	53.792
L1770.40-5500	40	5500	1.5	54.285
L1770.40-5550	40	5550	1.5	54.779
L1770.40-5600	40	5600	1.5	55.272
L1770.40-5650	40	5650	1.5	55.766
L1770.40-5700	40	5700	1.5	56.259
L1770.40-5750	40	5750	1.5	56.753
L1770.40-5800	40	5800	1.5	57.246
L1770.40-5850	40	5850	1.5	57.740
L1770.40-5900	40	5900	1.5	58.233
L1770.40-5950	40	5950	1.5	58.727
L1770.40-6000	40	6000	1.5	59.220

50Ø Hardened Steel Shafts



L1770.50



Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm², tensile strength: >630 N/mm².

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

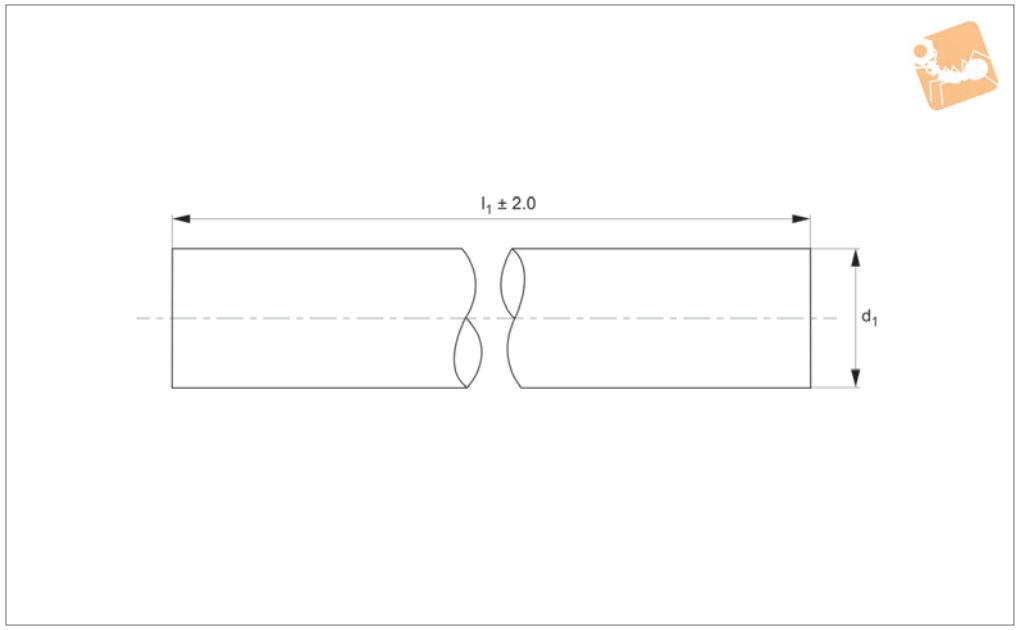
Order No.	d tol. h6	d_1	l_1	Depth of hardness min.	Weight kg
L1770.50-0100	-	50	100	1.5	1.540
L1770.50-0150	-	50	150	1.5	2.310
L1770.50-0200	-	50	200	1.5	3.080
L1770.50-0250	-	50	250	1.5	3.850
L1770.50-0300	-	50	300	1.5	4.620
L1770.50-0350	-	50	350	1.5	5.390
L1770.50-0400	-	50	400	1.5	6.160
L1770.50-0450	-	50	450	1.5	6.930
L1770.50-0500	-	50	500	1.5	7.700
L1770.50-0550	-	50	550	1.5	8.470
L1770.50-0600	-	50	600	1.5	9.240
L1770.50-0650	-	50	650	1.5	10.010
L1770.50-0700	-	50	700	1.5	10.780
L1770.50-0750	-	50	750	1.5	11.550
L1770.50-0800	-	50	800	1.5	12.320
L1770.50-0850	-	50	850	1.5	13.090
L1770.50-0900	-	50	900	1.5	13.860
L1770.50-1000	-	50	1000	1.5	15.400
L1770.50-1050	-	50	1050	1.5	16.170
L1770.50-1100	-	50	1100	1.5	16.940
L1770.50-1150	-	50	1150	1.5	17.710
L1770.50-1200	-	50	1200	1.5	18.480
L1770.50-1250	-	50	1250	1.5	19.250
L1770.50-1300	-	50	1300	1.5	20.020
L1770.50-1350	-	50	1350	1.5	20.790
L1770.50-1400	-	50	1400	1.5	21.560
L1770.50-1450	-	50	1450	1.5	22.330
L1770.50-1500	-	50	1500	1.5	23.100
L1770.50-1550	-	50	1550	1.5	23.870
L1770.50-1600	-	50	1600	1.5	24.640
L1770.50-1650	-	50	1650	1.5	25.410

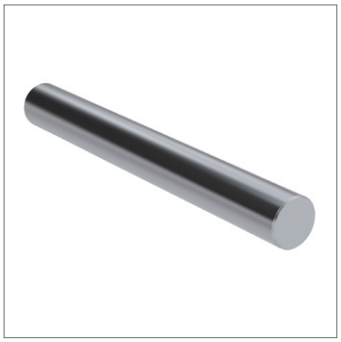
Order No.	d tol. h6	d_1	l_1	Depth of hardness min.	Weight kg
L1770.50-1700	-	50	1700	1.5	26.180
L1770.50-1750	-	50	1750	1.5	26.950
L1770.50-1800	-	50	1800	1.5	27.720
L1770.50-1850	-	50	1850	1.5	28.490
L1770.50-1900	-	50	1900	1.5	29.260
L1770.50-1950	-	50	1950	1.5	30.030
L1770.50-2000	-	50	2000	1.5	30.800
L1770.50-2050	-	50	2050	1.5	31.570
L1770.50-2100	-	50	2100	1.5	32.340
L1770.50-2150	-	50	2150	1.5	33.110
L1770.50-2200	-	50	2200	1.5	33.880
L1770.50-2250	-	50	2250	1.5	34.650
L1770.50-2300	-	50	2300	1.5	35.420
L1770.50-2350	-	50	2350	1.5	36.190
L1770.50-2400	-	50	2400	1.5	36.960
L1770.50-2450	-	50	2450	1.5	37.730
L1770.50-2500	-	50	2500	1.5	38.500
L1770.50-2550	-	50	2550	1.5	39.270
L1770.50-2600	-	50	2600	1.5	40.040
L1770.50-2650	-	50	2650	1.5	40.810
L1770.50-2700	-	50	2700	1.5	41.580
L1770.50-2750	-	50	2750	1.5	42.350
L1770.50-2800	-	50	2800	1.5	43.120
L1770.50-2850	-	50	2850	1.5	43.890
L1770.50-2900	-	50	2900	1.5	44.660
L1770.50-2950	-	50	2950	1.5	45.430
L1770.50-3000	-	50	3000	1.5	46.200
L1770.50-3050	-	50	3050	1.5	46.970
L1770.50-3100	-	50	3100	1.5	47.740
L1770.50-3150	-	50	3150	1.5	48.510
L1770.50-3200	-	50	3200	1.5	49.280
L1770.50-3250	-	50	3250	1.5	50.050
L1770.50-3300	-	50	3300	1.5	50.820
L1770.50-3350	-	50	3350	1.5	51.590
L1770.50-3400	-	50	3400	1.5	52.360
L1770.50-3450	-	50	3450	1.5	53.130
L1770.50-3500	-	50	3500	1.5	53.900
L1770.50-3550	-	50	3550	1.5	54.670
L1770.50-3600	-	50	3600	1.5	55.440
L1770.50-3650	-	50	3650	1.5	56.210
L1770.50-3700	-	50	3700	1.5	56.980
L1770.50-3750	-	50	3750	1.5	57.750
L1770.50-3800	-	50	3800	1.5	58.520
L1770.50-3850	-	50	3850	1.5	59.290
L1770.50-3900	-	50	3900	1.5	60.060
L1770.50-3950	-	50	3950	1.5	60.830
L1770.50-4000	-	50	4000	1.5	61.600
L1770.50-4050	-	50	4050	1.5	62.370
L1770.50-4100	-	50	4100	1.5	63.140
L1770.50-4150	-	50	4150	1.5	63.910
L1770.50-4200	-	50	4200	1.5	64.680
L1770.50-4250	-	50	4250	1.5	65.450
L1770.50-4300	-	50	4300	1.5	66.220
L1770.50-4350	-	50	4350	1.5	66.990
L1770.50-4400	-	50	4400	1.5	67.760
L1770.50-4450	-	50	4450	1.5	68.530
L1770.50-4500	-	50	4500	1.5	69.300
L1770.50-4550	-	50	4550	1.5	70.070
L1770.50-4600	-	50	4600	1.5	70.840
L1770.50-4650	-	50	4650	1.5	71.610
L1770.50-4700	-	50	4700	1.5	72.380
L1770.50-4750	-	50	4750	1.5	73.150
L1770.50-4800	-	50	4800	1.5	73.920
L1770.50-4850	-	50	4850	1.5	74.690
L1770.50-4900	-	50	4900	1.5	75.460
L1770.50-4950	-	50	4950	1.5	76.230
L1770.50-5000	-	50	5000	1.5	77.000
L1770.50-5050	-	50	5050	1.5	77.770

50Ø Hardened Steel Shafts



Order No.	d tol. h6	d_1	l_1	Depth of hardness min.	Weight kg
L1770.50-5100	-	50	5100	1.5	78.540
L1770.50-5150	-	50	5150	1.5	79.310
L1770.50-5200	50	-	5200	1.5	80.080
L1770.50-5250	50	-	5250	1.5	80.850
L1770.50-5300	50	-	5300	1.5	81.620
L1770.50-5350	50	-	5350	1.5	82.390
L1770.50-5400	50	-	5400	1.5	83.160
L1770.50-5450	50	-	5450	1.5	83.930
L1770.50-5500	50	-	5500	1.5	84.700
L1770.50-5550	50	-	5550	1.5	85.470
L1770.50-5600	50	-	5600	1.5	86.240
L1770.50-5650	-	50	5650	1.5	87.010
L1770.50-5700	-	50	5700	1.5	87.780
L1770.50-5750	-	50	5750	1.5	88.550
L1770.50-5800	-	50	5800	1.5	89.320
L1770.50-5850	-	50	5850	1.5	90.090
L1770.50-5900	-	50	5900	1.5	90.860
L1770.50-5950	-	50	5950	1.5	91.630
L1770.50-6000	50	-	6000	1.5	92.400





L1770.60

Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm^2, tensile strength: >630 N/mm^2.

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.60-0100	60	100	1.5	2.220
L1770.60-0150	60	150	1.5	3.330
L1770.60-0200	60	200	1.5	4.440
L1770.60-0250	60	250	1.5	5.550
L1770.60-0300	60	300	1.5	6.660
L1770.60-0350	60	350	1.5	7.770
L1770.60-0400	60	400	1.5	8.880
L1770.60-0450	60	450	1.5	9.990
L1770.60-0500	60	500	1.5	11.100
L1770.60-0550	60	550	1.5	12.210
L1770.60-0600	60	600	1.5	13.320
L1770.60-0650	60	650	1.5	14.430
L1770.60-0700	60	700	1.5	15.540
L1770.60-0750	60	750	1.5	16.650
L1770.60-0800	60	800	1.5	17.760
L1770.60-0850	60	850	1.5	18.870
L1770.60-0900	60	900	1.5	19.980
L1770.60-0950	60	950	1.5	21.090
L1770.60-1000	60	1000	1.5	22.200
L1770.60-1050	60	1050	1.5	23.310
L1770.60-1100	60	1100	1.5	24.420
L1770.60-1150	60	1150	1.5	25.530
L1770.60-1200	60	1200	1.5	26.640
L1770.60-1250	60	1250	1.5	27.750
L1770.60-1300	60	1300	1.5	28.860
L1770.60-1350	60	1350	1.5	29.970
L1770.60-1400	60	1400	1.5	31.080
L1770.60-1450	60	1450	1.5	32.190
L1770.60-1500	60	1500	1.5	33.300

60Ø Hardened Steel Shafts



Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.60-1550	60	1550	1.5	34.410
L1770.60-1600	60	1600	1.5	35.520
L1770.60-1650	60	1650	1.5	36.630
L1770.60-1700	60	1700	1.5	37.740
L1770.60-1750	60	1750	1.5	38.850
L1770.60-1800	60	1800	1.5	39.960
L1770.60-1850	60	1850	1.5	41.070
L1770.60-1900	60	1900	1.5	42.180
L1770.60-1950	60	1950	1.5	43.290
L1770.60-2000	60	2000	1.5	44.400
L1770.60-2050	60	2050	1.5	45.510
L1770.60-2100	60	2100	1.5	46.620
L1770.60-2150	60	2150	1.5	47.730
L1770.60-2200	60	2200	1.5	48.840
L1770.60-2250	60	2250	1.5	49.950
L1770.60-2300	60	2300	1.5	51.060
L1770.60-2350	60	2350	1.5	52.170
L1770.60-2400	60	2400	1.5	53.280
L1770.60-2450	60	2450	1.5	54.390
L1770.60-2500	60	2500	1.5	55.500
L1770.60-2550	60	2550	1.5	56.610
L1770.60-2600	60	2600	1.5	57.720
L1770.60-2650	60	2650	1.5	58.830
L1770.60-2700	60	2700	1.5	59.940
L1770.60-2750	60	2750	1.5	61.050
L1770.60-2800	60	2800	1.5	62.160
L1770.60-2850	60	2850	1.5	63.270
L1770.60-2900	60	2900	1.5	64.380
L1770.60-2950	60	2950	1.5	65.490
L1770.60-3000	60	3000	1.5	66.600
L1770.60-3050	60	3050	1.5	67.710
L1770.60-3100	60	3100	1.5	68.820
L1770.60-3150	60	3150	1.5	69.930
L1770.60-3200	60	3200	1.5	71.040
L1770.60-3250	60	3250	1.5	72.150
L1770.60-3300	60	3300	1.5	73.260
L1770.60-3350	60	3350	1.5	74.370
L1770.60-3400	60	3400	1.5	75.480
L1770.60-3450	60	3450	1.5	76.590
L1770.60-3500	60	3500	1.5	77.700
L1770.60-3550	60	3550	1.5	78.810
L1770.60-3600	60	3600	1.5	79.920
L1770.60-3650	60	3650	1.5	81.030
L1770.60-3700	60	3700	1.5	82.140
L1770.60-3750	60	3750	1.5	83.250
L1770.60-3800	60	3800	1.5	84.360
L1770.60-3850	60	3850	1.5	85.470
L1770.60-3900	60	3900	1.5	86.580
L1770.60-3950	60	3950	1.5	87.690
L1770.60-4000	60	4000	1.5	88.800
L1770.60-4050	60	4050	1.5	89.910
L1770.60-4100	60	4100	1.5	91.020
L1770.60-4150	60	4150	1.5	92.130
L1770.60-4200	60	4200	1.5	93.240
L1770.60-4250	60	4250	1.5	94.350
L1770.60-4300	60	4300	1.5	95.460
L1770.60-4350	60	4350	1.5	96.570
L1770.60-4400	60	4400	1.5	97.680
L1770.60-4450	60	4450	1.5	98.790
L1770.60-4500	60	4500	1.5	99.900
L1770.60-4550	60	4550	1.5	101.010
L1770.60-4600	60	4600	1.5	102.120
L1770.60-4650	60	4650	1.5	103.230
L1770.60-4700	60	4700	1.5	104.340
L1770.60-4750	60	4750	1.5	105.450
L1770.60-4800	60	4800	1.5	106.560
L1770.60-4850	60	4850	1.5	107.670
L1770.60-4900	60	4900	1.5	108.780

Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.60-4950	60	4950	1.5	109.890
L1770.60-5000	60	5000	1.5	111.000
L1770.60-5050	60	5050	1.5	112.110
L1770.60-5100	60	5100	1.5	113.220
L1770.60-5150	60	5150	1.5	114.330
L1770.60-5200	60	5200	1.5	115.440
L1770.60-5250	60	5250	1.5	116.550
L1770.60-5300	60	5300	1.5	117.660
L1770.60-5350	60	5350	1.5	118.770
L1770.60-5400	60	5400	1.5	119.880
L1770.60-5450	60	5450	1.5	120.990
L1770.60-5500	60	5500	1.5	122.100
L1770.60-5550	60	5550	1.5	123.210
L1770.60-5600	60	5600	1.5	124.320
L1770.60-5650	60	5650	1.5	125.430
L1770.60-5700	60	5700	1.5	126.540
L1770.60-5750	60	5750	1.5	127.650
L1770.60-5800	60	5800	1.5	128.760
L1770.60-5850	60	5850	1.5	129.870
L1770.60-5900	60	5900	1.5	130.980
L1770.60-5950	60	5950	1.5	132.090
L1770.60-6000	60	6000	1.5	133.200



Linear Shafts from Automotion Components

Hardened steel linear shafting (L1770 – L1771)

Carbon steel to BS 070M55 hardened to 60-65 HRC. Carbon Steel B.S. 070M55 is a medium carbon steel which is used when greater strength and hardness is desired than in it's as rolled condition. Extreme size accuracy, straightness and concentricity are combined to minimise wear in high speed applications. Suitable for use with all types of linear bushings.

Corrosion resistant steel (L1772)

440C is a high carbon chromium martensitic stainless steel, generally supplied in the annealed condition with a maximum hardness of 50-55 HR_C. Characterised by good corrosion resistance in mild domestic and industrial environments, including fresh water, organic materials, mild acids, various petroleum products, coupled with extreme high strength, hardness and wear resistance when in the hardened and tempered condition. Used for parts requiring a combination of excellent wear resistance, plus reasonable corrosion resistance. Typical applications are: ball bearings and races, bushings, cutlery, chisels, knife blades, pump parts, surgical instruments, valve seats etc. Material magnetic in all conditions. Suitable for use with all types of linear bushings.

Stainless steel AISI 303 (L1773)

303 is a free machining chromium-nickel austenitic stainless steel with good strength and good corrosion resistance, as supplied in the annealed condition. Characterised by excellent machinability and non galling properties due to its higher sulphur content, which has the effect of slightly lowering its corrosion resistance. It is however, fairly resistant to general atmospheric corrosion, general foodstuffs, sterilizing solutions, dyestuffs, most organic chemicals, plus some inorganic chemicals. But has very limited resistance to acids. 303 cannot be hardened by thermal treatment, but strength and hardness can be increased substantially by cold working, with subsequent reduction in ductility. It is used primarily for production runs involving extensive machining, or complex parts requiring excellent machinability. Typical uses are: architectural components, food processing equipment, dairy equipment, dying industry, hardware and kitchenware manufacturing and allied industries. Commonly used to manufacture bolts and nuts, bushes, gears, shafts, valve bodies and fittings etc. Material is non magnetic in the annealed condition, but can become mildly magnetic following heavy cold working. Annealing is required to rectify if necessary.

Not suitable for use with linear ball bushings, please use ceramic bearings.

Stainless steel AISI 303 (L1774)

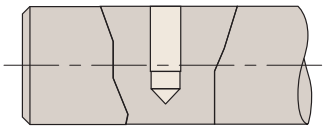
316 is a chromium-nickel-molybdenum austenitic stainless steel with good strength and excellent corrosion resistance, as supplied in the annealed condition. Characterised by high corrosion resistance in marine and industrial atmospheres, it exhibits excellent resistance to chloride attack and against complex sulphur compounds employed in the pulp and paper processing industries. The addition of 2% to 3% of molybdenum increases its resistance to pitting corrosion and improves its creep resistance at elevated temperatures. Also it displays good oxidation resistance at elevated temperatures and has excellent weldability. AISI 316 cannot be hardened by thermal treatment, but strength and hardness can be increased substantially by cold working, with subsequent reduction in ductility. It is used extensively by the marine, chemical, petrochemical, pulp and paper, textile, transport, manufacturing and allied industries. Typical uses are: architectural components, textile equipment, pulp and paper processing equipment, marine equipment and fittings, photographic equipment and x-ray equipment etc. Material non magnetic in the annealed condition, but can become mildly magnetic following heavy cold working. Annealing is required to rectify if necessary.

Note: Optimum corrosion resistance is achieved in the annealed condition. Not suitable for use with linear ball bushings; please use ceramic bearings.

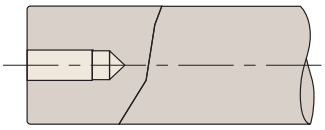
As well as standard cut to length shafting, Automotion can offer many specials including imperial shafts, different tolerances and non-standard diameters.

We can also machine shafts to your requirements so if you have a specific requirement, please contact our Sales team. Below are examples of just some of the machining we can do to shafting on a quick turnaround.

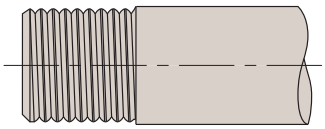
Drilled and tapped radial hole



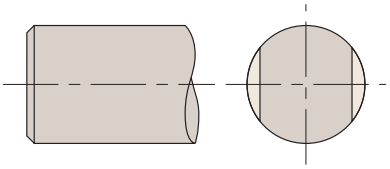
Drilled and tapped coaxial hole



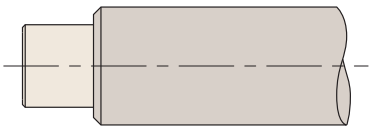
Threaded diameters



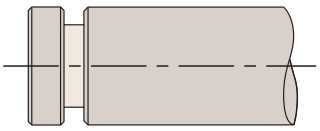
Flats



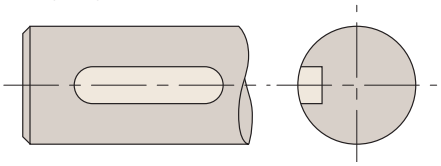
Reduced diameter



Circlip groove

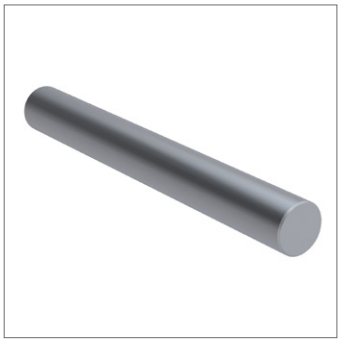


Keyways

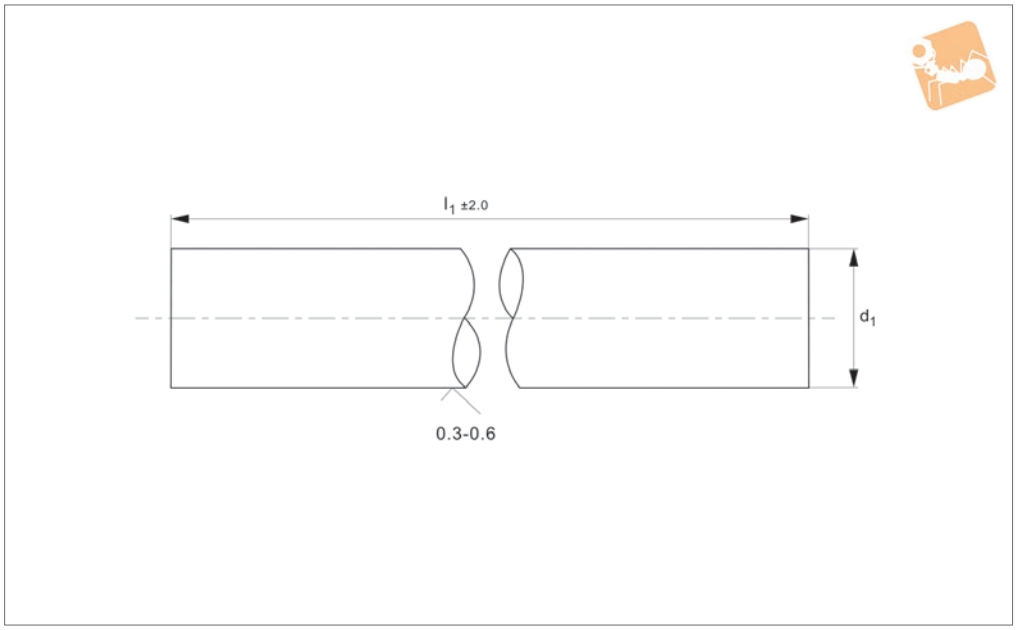


Linear Shafts from Automotion Components

Ø6 Hardened Stainless Shafts
for linear bearings



L1772.06



Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

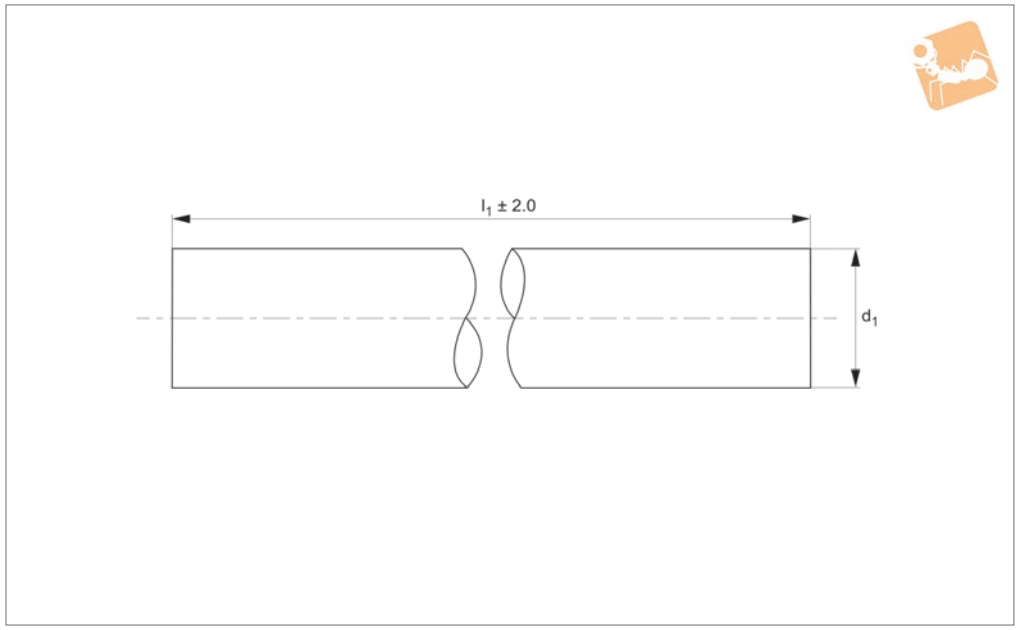
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.06-0100	6	100	0.4	0.023
L1772.06-0150	6	150	0.4	0.035
L1772.06-0200	6	200	0.4	0.046
L1772.06-0250	6	250	0.4	0.058
L1772.06-0300	6	300	0.4	0.069
L1772.06-0350	6	350	0.4	0.081
L1772.06-0400	6	400	0.4	0.092
L1772.06-0450	6	450	0.4	0.104
L1772.06-0500	6	500	0.4	0.115
L1772.06-0550	6	550	0.4	0.127
L1772.06-0600	6	600	0.4	0.138
L1772.06-0650	6	650	0.4	0.150
L1772.06-0700	6	700	0.4	0.161
L1772.06-0750	6	750	0.4	0.173
L1772.06-0800	6	800	0.4	0.184
L1772.06-0850	6	850	0.4	0.196
L1772.06-0900	6	900	0.4	0.207
L1772.06-0950	6	950	0.4	0.219
L1772.06-1000	6	1000	0.4	0.230
L1772.06-1050	6	1050	0.4	0.242
L1772.06-1100	6	1100	0.4	0.253
L1772.06-1150	6	1150	0.4	0.265
L1772.06-1200	6	1200	0.4	0.276
L1772.06-1250	6	1250	0.4	0.288
L1772.06-1300	6	1300	0.4	0.299
L1772.06-1350	6	1350	0.4	0.311
L1772.06-1400	6	1400	0.4	0.322
L1772.06-1450	6	1450	0.4	0.334
L1772.06-1500	6	1500	0.4	0.345
L1772.06-1550	6	1550	0.4	0.357
L1772.06-1600	6	1600	0.4	0.368

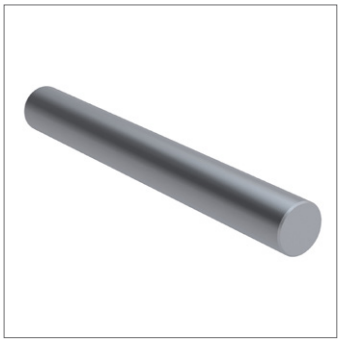
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.06-1650	6	1650	0.4	0.380
L1772.06-1700	6	1700	0.4	0.391
L1772.06-1750	6	1750	0.4	0.403
L1772.06-1800	6	1800	0.4	0.414
L1772.06-1850	6	1850	0.4	0.426
L1772.06-1900	6	1900	0.4	0.437
L1772.06-1950	6	1950	0.4	0.449
L1772.06-2000	6	2000	0.4	0.460
L1772.06-2050	6	2050	0.4	0.472
L1772.06-2100	6	2100	0.4	0.483
L1772.06-2150	6	2150	0.4	0.495
L1772.06-2200	6	2200	0.4	0.506
L1772.06-2250	6	2250	0.4	0.518
L1772.06-2300	6	2300	0.4	0.529
L1772.06-2350	6	2350	0.4	0.541
L1772.06-2400	6	2400	0.4	0.552
L1772.06-2450	6	2450	0.4	0.564
L1772.06-2500	6	2500	0.4	0.575
L1772.06-2550	6	2550	0.4	0.587
L1772.06-2600	6	2600	0.4	0.598
L1772.06-2650	6	2650	0.4	0.610
L1772.06-2700	6	2700	0.4	0.621
L1772.06-2750	6	2750	0.4	0.633
L1772.06-2800	6	2800	0.4	0.644
L1772.06-2850	6	2850	0.4	0.656
L1772.06-2900	6	2900	0.4	0.667
L1772.06-2950	6	2950	0.4	0.679
L1772.06-3000	6	3000	0.4	0.690
L1772.06-3050	6	3050	0.4	0.702
L1772.06-3100	6	3100	0.4	0.713
L1772.06-3150	6	3150	0.4	0.725
L1772.06-3200	6	3200	0.4	0.736
L1772.06-3250	6	3250	0.4	0.748
L1772.06-3300	6	3300	0.4	0.759
L1772.06-3350	6	3350	0.4	0.771
L1772.06-3400	6	3400	0.4	0.782
L1772.06-3450	6	3450	0.4	0.794
L1772.06-3500	6	3500	0.4	0.805
L1772.06-3550	6	3550	0.4	0.817
L1772.06-3600	6	3600	0.4	0.828
L1772.06-3650	6	3650	0.4	0.840
L1772.06-3700	6	3700	0.4	0.851
L1772.06-3750	6	3750	0.4	0.863
L1772.06-3800	6	3800	0.4	0.874
L1772.06-3850	6	3850	0.4	0.886
L1772.06-3900	6	3900	0.4	0.897
L1772.06-3950	6	3950	0.4	0.909
L1772.06-4000	6	4000	0.4	0.920
L1772.06-4050	6	4050	0.4	0.932
L1772.06-4100	6	4100	0.4	0.943
L1772.06-4150	6	4150	0.4	0.955
L1772.06-4200	6	4200	0.4	0.966
L1772.06-4250	6	4250	0.4	0.978
L1772.06-4300	6	4300	0.4	0.989
L1772.06-4350	6	4350	0.4	1.001
L1772.06-4400	6	4400	0.4	1.012
L1772.06-4450	6	4450	0.4	1.024
L1772.06-4500	6	4500	0.4	1.035
L1772.06-4550	6	4550	0.4	1.047
L1772.06-4600	6	4600	0.4	1.058
L1772.06-4650	6	4650	0.4	1.070
L1772.06-4700	6	4700	0.4	1.081
L1772.06-4750	6	4750	0.4	1.093
L1772.06-4800	6	4800	0.4	1.104
L1772.06-4850	6	4850	0.4	1.116
L1772.06-4900	6	4900	0.4	1.127
L1772.06-4950	6	4950	0.4	1.139
L1772.06-5000	6	5000	0.4	1.150

Ø6 Hardened Stainless Shafts
for linear bearings



Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.06-5050	6	5050	0.4	1.162
L1772.06-5100	6	5100	0.4	1.173
L1772.06-5150	6	5150	0.4	1.185
L1772.06-5200	6	5200	0.4	1.196
L1772.06-5250	6	5250	0.4	1.208
L1772.06-5300	6	5300	0.4	1.219
L1772.06-5350	6	5350	0.4	1.231
L1772.06-5400	6	5400	0.4	1.242
L1772.06-5450	6	5450	0.4	1.254
L1772.06-5500	6	5500	0.4	1.265
L1772.06-5550	6	5550	0.4	1.277
L1772.06-5600	6	5600	0.4	1.288
L1772.06-5650	6	5650	0.4	1.300
L1772.06-5700	6	5700	0.4	1.311
L1772.06-5750	6	5750	0.4	1.323
L1772.06-5800	6	5800	0.4	1.334
L1772.06-5850	6	5850	0.4	1.346
L1772.06-5900	6	5900	0.4	1.357
L1772.06-5950	6	5950	0.4	1.369
L1772.06-6000	6	6000	0.4	1.380





L1772.08

Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.08-0100	8	100	0.4	0.040
L1772.08-0150	8	150	0.4	0.060
L1772.08-0200	8	200	0.4	0.080
L1772.08-0250	8	250	0.4	0.100
L1772.08-0300	8	300	0.4	0.120
L1772.08-0350	8	350	0.4	0.140
L1772.08-0400	8	400	0.4	0.160
L1772.08-0450	8	450	0.4	0.180
L1772.08-0500	8	500	0.4	0.200
L1772.08-0550	8	550	0.4	0.220
L1772.08-0600	8	600	0.4	0.240
L1772.08-0650	8	650	0.4	0.260
L1772.08-0700	8	700	0.4	0.280
L1772.08-0750	8	750	0.4	0.300
L1772.08-0800	8	800	0.4	0.320
L1772.08-0850	8	850	0.4	0.340
L1772.08-0900	8	900	0.4	0.360
L1772.08-0950	8	950	0.4	0.380
L1772.08-1000	8	1000	0.4	0.400
L1772.08-1050	8	1050	0.4	0.420
L1772.08-1100	8	1100	0.4	0.440
L1772.08-1150	8	1150	0.4	0.460
L1772.08-1200	8	1200	0.4	0.480
L1772.08-1250	8	1250	0.4	0.500
L1772.08-1300	8	1300	0.4	0.520
L1772.08-1350	8	1350	0.4	0.540
L1772.08-1400	8	1400	0.4	0.560
L1772.08-1450	8	1450	0.4	0.580
L1772.08-1500	8	1500	0.4	0.600
L1772.08-1550	8	1550	0.4	0.620
L1772.08-1600	8	1600	0.4	0.640

Ø8 Hardened Stainless Shafts

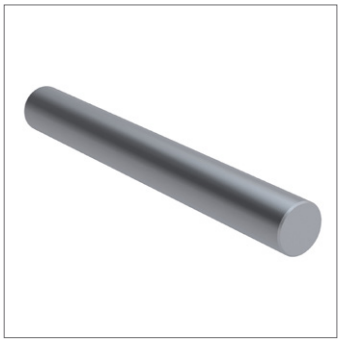
for linear bearings



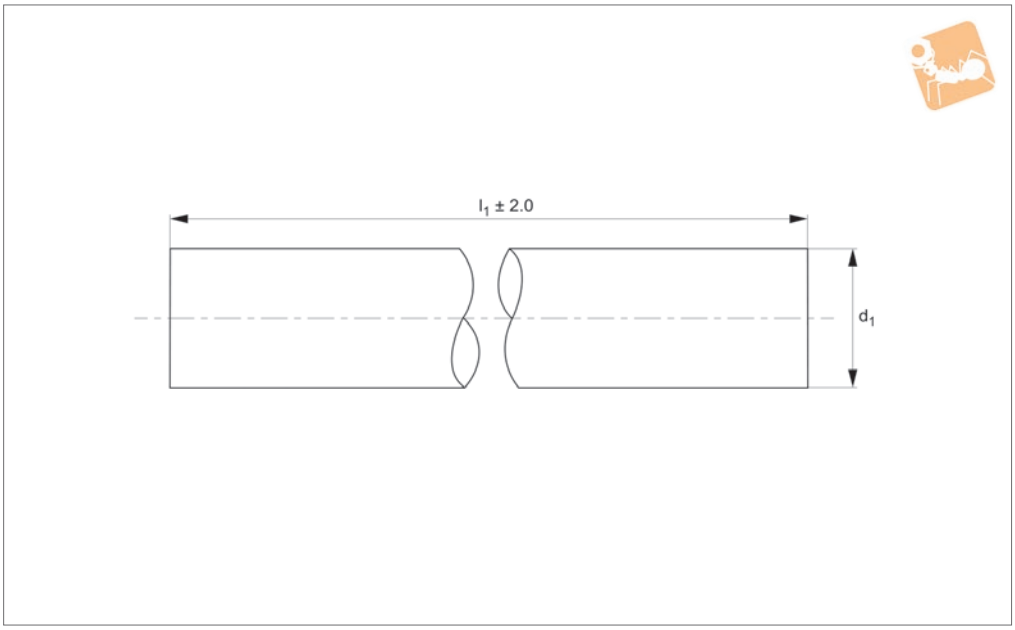
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.08-1650	8	1650	0.4	0.660
L1772.08-1700	8	1700	0.4	0.680
L1772.08-1750	8	1750	0.4	0.700
L1772.08-1800	8	1800	0.4	0.720
L1772.08-1850	8	1850	0.4	0.740
L1772.08-1900	8	1900	0.4	0.760
L1772.08-1950	8	1950	0.4	0.780
L1772.08-2000	8	2000	0.4	0.800
L1772.08-2050	8	2050	0.4	0.820
L1772.08-2100	8	2100	0.4	0.840
L1772.08-2150	8	2150	0.4	0.860
L1772.08-2200	8	2200	0.4	0.880
L1772.08-2250	8	2250	0.4	0.900
L1772.08-2300	8	2300	0.4	0.920
L1772.08-2350	8	2350	0.4	0.940
L1772.08-2400	8	2400	0.4	0.960
L1772.08-2450	8	2450	0.4	0.980
L1772.08-2500	8	2500	0.4	1.000
L1772.08-2550	8	2550	0.4	1.020
L1772.08-2600	8	2600	0.4	1.040
L1772.08-2650	8	2650	0.4	1.060
L1772.08-2700	8	2700	0.4	1.080
L1772.08-2750	8	2750	0.4	1.100
L1772.08-2800	8	2800	0.4	1.120
L1772.08-2850	8	2850	0.4	1.140
L1772.08-2900	8	2900	0.4	1.160
L1772.08-2950	8	2950	0.4	1.180
L1772.08-3000	8	3000	0.4	1.200
L1772.08-3050	8	3050	0.4	1.220
L1772.08-3100	8	3100	0.4	1.240
L1772.08-3150	8	3150	0.4	1.260
L1772.08-3200	8	3200	0.4	1.280
L1772.08-3250	8	3250	0.4	1.300
L1772.08-3300	8	3300	0.4	1.320
L1772.08-3350	8	3350	0.4	1.340
L1772.08-3400	8	3400	0.4	1.360
L1772.08-3450	8	3450	0.4	1.380
L1772.08-3500	8	3500	0.4	1.400
L1772.08-3550	8	3550	0.4	1.420
L1772.08-3600	8	3600	0.4	1.440
L1772.08-3650	8	3650	0.4	1.460
L1772.08-3700	8	3700	0.4	1.480
L1772.08-3750	8	3750	0.4	1.500
L1772.08-3800	8	3800	0.4	1.520
L1772.08-3850	8	3850	0.4	1.540
L1772.08-3900	8	3900	0.4	1.560
L1772.08-3950	8	3950	0.4	1.580
L1772.08-4000	8	4000	0.4	1.600
L1772.08-4050	8	4050	0.4	1.620
L1772.08-4100	8	4100	0.4	1.640
L1772.08-4150	8	4150	0.4	1.660
L1772.08-4200	8	4200	0.4	1.680
L1772.08-4250	8	4250	0.4	1.700
L1772.08-4300	8	4300	0.4	1.720
L1772.08-4350	8	4350	0.4	1.740
L1772.08-4400	8	4400	0.4	1.760
L1772.08-4450	8	4450	0.4	1.780
L1772.08-4500	8	4500	0.4	1.800
L1772.08-4550	8	4550	0.4	1.820
L1772.08-4600	8	4600	0.4	1.840
L1772.08-4650	8	4650	0.4	1.860
L1772.08-4700	8	4700	0.4	1.880
L1772.08-4750	8	4750	0.4	1.900
L1772.08-4800	8	4800	0.4	1.920
L1772.08-4850	8	4850	0.4	1.940
L1772.08-4900	8	4900	0.4	1.960
L1772.08-4950	8	4950	0.4	1.980
L1772.08-5000	8	5000	0.4	2.000

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.08-5050	8	5050	0.4	2.020
L1772.08-5100	8	5100	0.4	2.040
L1772.08-5150	8	5150	0.4	2.060
L1772.08-5200	8	5200	0.4	2.080
L1772.08-5250	8	5250	0.4	2.100
L1772.08-5300	8	5300	0.4	2.120
L1772.08-5350	8	5350	0.4	2.140
L1772.08-5400	8	5400	0.4	2.160
L1772.08-5450	8	5450	0.4	2.180
L1772.08-5500	8	5500	0.4	2.200
L1772.08-5550	8	5550	0.4	2.220
L1772.08-5600	8	5600	0.4	2.240
L1772.08-5650	8	5650	0.4	2.260
L1772.08-5700	8	5700	0.4	2.280
L1772.08-5750	8	5750	0.4	2.300
L1772.08-5800	8	5800	0.4	2.320
L1772.08-5850	8	5850	0.4	2.340
L1772.08-5900	8	5900	0.4	2.360
L1772.08-5950	8	5950	0.4	2.380
L1772.08-6000	8	6000	0.4	2.400

Ø10 Hardened Stainless Shafts
for linear bearings



L1772.10



Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

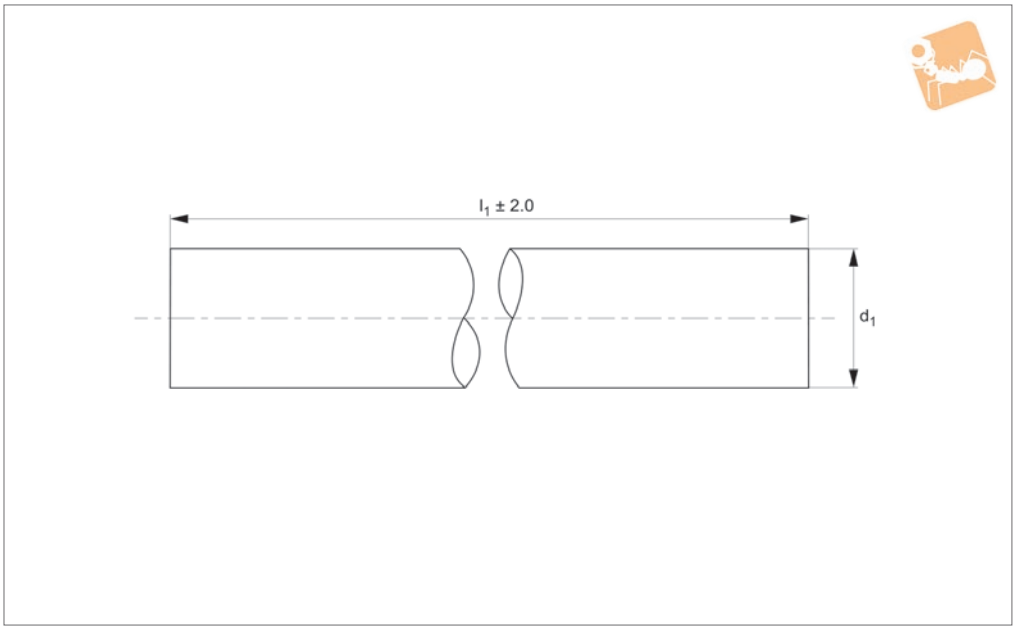
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.10-0100	10	100	0.4	0.062
L1772.10-0150	10	150	0.4	0.093
L1772.10-0200	10	200	0.4	0.124
L1772.10-0250	10	250	0.4	0.155
L1772.10-0300	10	300	0.4	0.186
L1772.10-0350	10	350	0.4	0.217
L1772.10-0400	10	400	0.4	0.248
L1772.10-0450	10	450	0.4	0.279
L1772.10-0500	10	500	0.4	0.310
L1772.10-0550	10	550	0.4	0.341
L1772.10-0600	10	600	0.4	0.372
L1772.10-0650	10	650	0.4	0.403
L1772.10-0700	10	700	0.4	0.434
L1772.10-0750	10	750	0.4	0.465
L1772.10-0800	10	800	0.4	0.496
L1772.10-0850	10	850	0.4	0.527
L1772.10-0900	10	900	0.4	0.558
L1772.10-0950	10	950	0.4	0.589
L1772.10-1000	10	1000	0.4	0.620
L1772.10-1050	10	1050	0.4	0.651
L1772.10-1100	10	1100	0.4	0.682
L1772.10-1150	10	1150	0.4	0.713
L1772.10-1200	10	1200	0.4	0.744
L1772.10-1250	10	1250	0.4	0.775
L1772.10-1300	10	1300	0.4	0.806
L1772.10-1350	10	1350	0.4	0.837
L1772.10-1400	10	1400	0.4	0.868
L1772.10-1450	10	1450	0.4	0.899
L1772.10-1500	10	1500	0.4	0.930
L1772.10-1550	10	1550	0.4	0.961
L1772.10-1600	10	1600	0.4	0.992

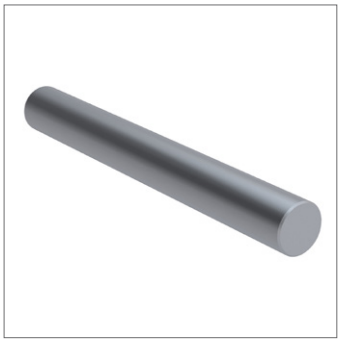
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.10-1650	10	1650	0.4	1.023
L1772.10-1700	10	1700	0.4	1.054
L1772.10-1750	10	1750	0.4	1.085
L1772.10-1800	10	1800	0.4	1.116
L1772.10-1850	10	1850	0.4	1.147
L1772.10-1900	10	1900	0.4	1.178
L1772.10-1950	10	1950	0.4	1.209
L1772.10-2000	10	2000	0.4	1.240
L1772.10-2050	10	2050	0.4	1.271
L1772.10-2100	10	2100	0.4	1.302
L1772.10-2150	10	2150	0.4	1.333
L1772.10-2200	10	2200	0.4	1.364
L1772.10-2250	10	2250	0.4	1.395
L1772.10-2300	10	2300	0.4	1.426
L1772.10-2350	10	2350	0.4	1.457
L1772.10-2400	10	2400	0.4	1.488
L1772.10-2450	10	2450	0.4	1.519
L1772.10-2500	10	2500	0.4	1.550
L1772.10-2550	10	2550	0.4	1.581
L1772.10-2600	10	2600	0.4	1.612
L1772.10-2650	10	2650	0.4	1.643
L1772.10-2700	10	2700	0.4	1.674
L1772.10-2750	10	2750	0.4	1.705
L1772.10-2800	10	2800	0.4	1.736
L1772.10-2850	10	2850	0.4	1.767
L1772.10-2900	10	2900	0.4	1.798
L1772.10-2950	10	2950	0.4	1.829
L1772.10-3000	10	3000	0.4	1.860
L1772.10-3050	10	3050	0.4	1.891
L1772.10-3100	10	3100	0.4	1.922
L1772.10-3150	10	3150	0.4	1.953
L1772.10-3200	10	3200	0.4	1.984
L1772.10-3250	10	3250	0.4	2.015
L1772.10-3300	10	3300	0.4	2.046
L1772.10-3350	10	3350	0.4	2.077
L1772.10-3400	10	3400	0.4	2.108
L1772.10-3450	10	3450	0.4	2.139
L1772.10-3500	10	3500	0.4	2.170
L1772.10-3550	10	3550	0.4	2.201
L1772.10-3600	10	3600	0.4	2.232
L1772.10-3650	10	3650	0.4	2.263
L1772.10-3700	10	3700	0.4	2.294
L1772.10-3750	10	3750	0.4	2.325
L1772.10-3800	10	3800	0.4	2.356
L1772.10-3850	10	3850	0.4	2.387
L1772.10-3900	10	3900	0.4	2.418
L1772.10-3950	10	3950	0.4	2.449
L1772.10-4000	10	4000	0.4	2.480
L1772.10-4050	10	4050	0.4	2.511
L1772.10-4100	10	4100	0.4	2.542
L1772.10-4150	10	4150	0.4	2.573
L1772.10-4200	10	4200	0.4	2.604
L1772.10-4250	10	4250	0.4	2.635
L1772.10-4300	10	4300	0.4	2.666
L1772.10-4350	10	4350	0.4	2.697
L1772.10-4400	10	4400	0.4	2.728
L1772.10-4450	10	4450	0.4	2.759
L1772.10-4500	10	4500	0.4	2.790
L1772.10-4550	10	4550	0.4	2.821
L1772.10-4600	10	4600	0.4	2.852
L1772.10-4650	10	4650	0.4	2.883
L1772.10-4700	10	4700	0.4	2.914
L1772.10-4750	10	4750	0.4	2.945
L1772.10-4800	10	4800	0.4	2.976
L1772.10-4850	10	4850	0.4	3.007
L1772.10-4900	10	4900	0.4	3.038
L1772.10-4950	10	4950	0.4	3.069
L1772.10-5000	10	5000	0.4	3.100

Ø10 Hardened Stainless Shafts
for linear bearings



Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.10-5050	10	5050	0.4	3.131
L1772.10-5100	10	5100	0.4	3.162
L1772.10-5150	10	5150	0.4	3.193
L1772.10-5200	10	5200	0.4	3.224
L1772.10-5250	10	5250	0.4	3.255
L1772.10-5300	10	5300	0.4	3.286
L1772.10-5350	10	5350	0.4	3.317
L1772.10-5400	10	5400	0.4	3.348
L1772.10-5450	10	5450	0.4	3.379
L1772.10-5500	10	5500	0.4	3.410
L1772.10-5550	10	5550	0.4	3.441
L1772.10-5600	10	5600	0.4	3.472
L1772.10-5650	10	5650	0.4	3.503
L1772.10-5700	10	5700	0.4	3.534
L1772.10-5750	10	5750	0.4	3.565
L1772.10-5800	10	5800	0.4	3.596
L1772.10-5850	10	5850	0.4	3.627
L1772.10-5900	10	5900	0.4	3.658
L1772.10-5950	10	5950	0.4	3.689
L1772.10-6000	10	6000	0.4	3.720





L1772.12

Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.12-0100	12	100	0.6	0.089
L1772.12-0150	12	150	0.6	0.134
L1772.12-0200	12	200	0.6	0.178
L1772.12-0250	12	250	0.6	0.223
L1772.12-0300	12	300	0.6	0.267
L1772.12-0350	12	350	0.6	0.312
L1772.12-0400	12	400	0.6	0.356
L1772.12-0450	12	450	0.6	0.401
L1772.12-0500	12	500	0.6	0.445
L1772.12-0550	12	550	0.6	0.490
L1772.12-0600	12	600	0.6	0.534
L1772.12-0650	12	650	0.6	0.579
L1772.12-0700	12	700	0.6	0.623
L1772.12-0750	12	750	0.6	0.668
L1772.12-0800	12	800	0.6	0.712
L1772.12-0850	12	850	0.6	0.757
L1772.12-0900	12	900	0.6	0.801
L1772.12-0950	12	950	0.6	0.846
L1772.12-1000	12	1000	0.6	0.890
L1772.12-1050	12	1050	0.6	0.935
L1772.12-1100	12	1100	0.6	0.979
L1772.12-1150	12	1150	0.6	1.024
L1772.12-1200	12	1200	0.6	1.068
L1772.12-1250	12	1250	0.6	1.113
L1772.12-1300	12	1300	0.6	1.157
L1772.12-1350	12	1350	0.6	1.202
L1772.12-1400	12	1400	0.6	1.246
L1772.12-1450	12	1450	0.6	1.291
L1772.12-1500	12	1500	0.6	1.335
L1772.12-1550	12	1550	0.6	1.380
L1772.12-1600	12	1600	0.6	1.424

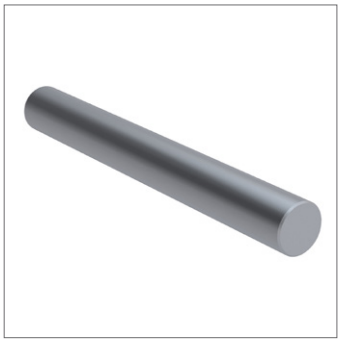
Ø12 Hardened Stainless Shafts
for linear bearings



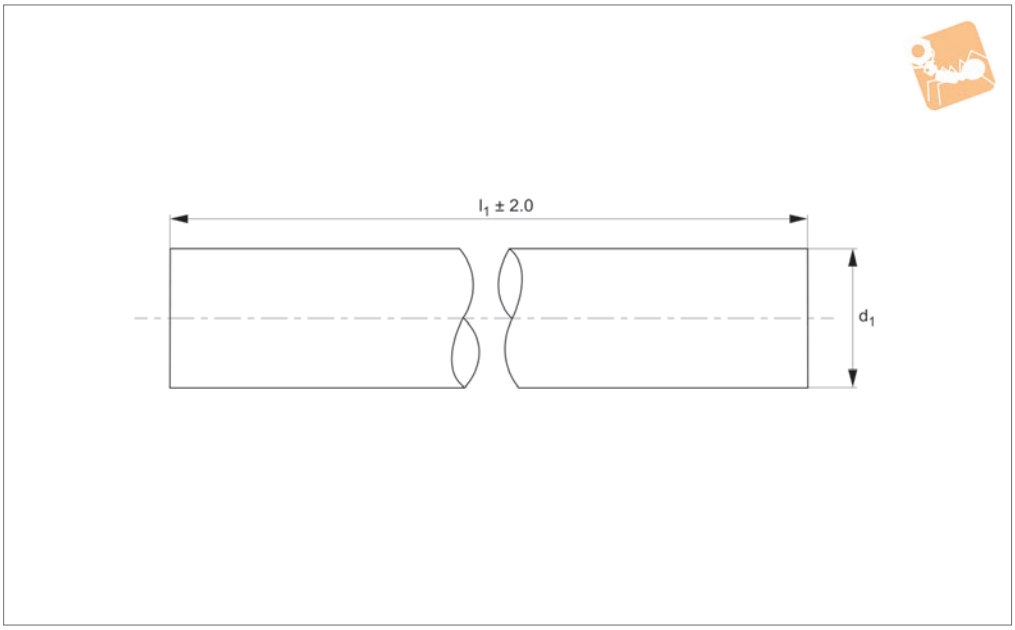
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.12-1650	12	1650	0.6	1.469
L1772.12-1700	12	1700	0.6	1.513
L1772.12-1750	12	1750	0.6	1.558
L1772.12-1800	12	1800	0.6	1.602
L1772.12-1850	12	1850	0.6	1.647
L1772.12-1900	12	1900	0.6	1.691
L1772.12-1950	12	1950	0.6	1.736
L1772.12-2000	12	2000	0.6	1.780
L1772.12-2050	12	2050	0.6	1.825
L1772.12-2100	12	2100	0.6	1.869
L1772.12-2150	12	2150	0.6	1.914
L1772.12-2200	12	2200	0.6	1.958
L1772.12-2250	12	2250	0.6	2.003
L1772.12-2300	12	2300	0.6	2.047
L1772.12-2350	12	2350	0.6	2.092
L1772.12-2400	12	2400	0.6	2.136
L1772.12-2450	12	2450	0.6	2.181
L1772.12-2500	12	2500	0.6	2.225
L1772.12-2550	12	2550	0.6	2.270
L1772.12-2600	12	2600	0.6	2.314
L1772.12-2650	12	2650	0.6	2.359
L1772.12-2700	12	2700	0.6	2.403
L1772.12-2750	12	2750	0.6	2.448
L1772.12-2800	12	2800	0.6	2.492
L1772.12-2850	12	2850	0.6	2.537
L1772.12-2900	12	2900	0.6	2.581
L1772.12-2950	12	2950	0.6	2.626
L1772.12-3000	12	3000	0.6	2.670
L1772.12-3050	12	3050	0.6	2.715
L1772.12-3100	12	3100	0.6	2.759
L1772.12-3150	12	3150	0.6	2.804
L1772.12-3200	12	3200	0.6	2.848
L1772.12-3250	12	3250	0.6	2.893
L1772.12-3300	12	3300	0.6	2.937
L1772.12-3350	12	3350	0.6	2.982
L1772.12-3400	12	3400	0.6	3.026
L1772.12-3450	12	3450	0.6	3.071
L1772.12-3500	12	3500	0.6	3.115
L1772.12-3550	12	3550	0.6	3.160
L1772.12-3600	12	3600	0.6	3.204
L1772.12-3650	12	3650	0.6	3.249
L1772.12-3700	12	3700	0.6	3.293
L1772.12-3750	12	3750	0.6	3.338
L1772.12-3800	12	3800	0.6	3.382
L1772.12-3850	12	3850	0.6	3.427
L1772.12-3900	12	3900	0.6	3.471
L1772.12-3950	12	3950	0.6	3.516
L1772.12-4000	12	4000	0.6	3.560
L1772.12-4050	12	4050	0.6	3.605
L1772.12-4100	12	4100	0.6	3.649
L1772.12-4150	12	4150	0.6	3.694
L1772.12-4200	12	4200	0.6	3.738
L1772.12-4250	12	4250	0.6	3.783
L1772.12-4300	12	4300	0.6	3.827
L1772.12-4350	12	4350	0.6	3.872
L1772.12-4400	12	4400	0.6	3.916
L1772.12-4450	12	4450	0.6	3.961
L1772.12-4500	12	4500	0.6	4.005
L1772.12-4550	12	4550	0.6	4.050
L1772.12-4600	12	4600	0.6	4.094
L1772.12-4650	12	4650	0.6	4.139
L1772.12-4700	12	4700	0.6	4.183
L1772.12-4750	12	4750	0.6	4.228
L1772.12-4800	12	4800	0.6	4.272
L1772.12-4850	12	4850	0.6	4.317
L1772.12-4900	12	4900	0.6	4.361
L1772.12-4950	12	4950	0.6	4.406
L1772.12-5000	12	5000	0.6	4.450

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.12-5050	12	5050	0.6	4.495
L1772.12-5100	12	5100	0.6	4.539
L1772.12-5150	12	5150	0.6	4.584
L1772.12-5200	12	5200	0.6	4.628
L1772.12-5250	12	5250	0.6	4.673
L1772.12-5300	12	5300	0.6	4.717
L1772.12-5350	12	5350	0.6	4.762
L1772.12-5400	12	5400	0.6	4.806
L1772.12-5450	12	5450	0.6	4.851
L1772.12-5500	12	5500	0.6	4.895
L1772.12-5550	12	5550	0.6	4.940
L1772.12-5600	12	5600	0.6	4.984
L1772.12-5650	12	5650	0.6	5.029
L1772.12-5700	12	5700	0.6	5.073
L1772.12-5750	12	5750	0.6	5.118
L1772.12-5800	12	5800	0.6	5.162
L1772.12-5850	12	5850	0.6	5.207
L1772.12-5900	12	5900	0.6	5.251
L1772.12-5950	12	5950	0.6	5.296
L1772.12-6000	12	6000	0.6	5.340

Ø16 Hardened Stainless Shafts
for linear bearings



L1772.16



Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

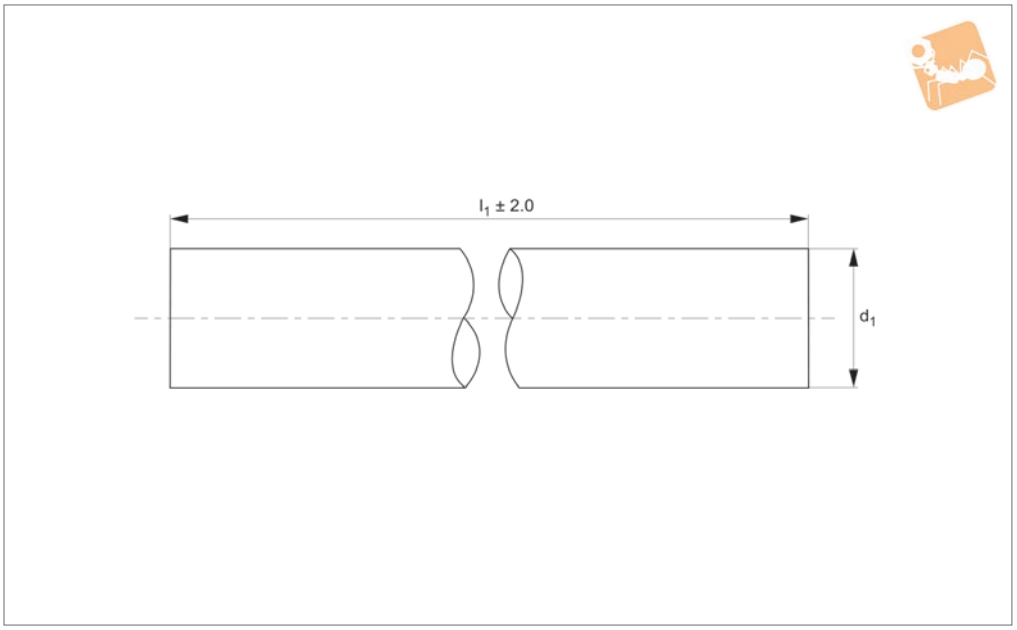
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.16-0100	16	100	0.6	0.158
L1772.16-0150	16	150	0.6	0.237
L1772.16-0200	16	200	0.6	0.316
L1772.16-0250	16	250	0.6	0.395
L1772.16-0300	16	300	0.6	0.474
L1772.16-0350	16	350	0.6	0.553
L1772.16-0400	16	400	0.6	0.632
L1772.16-0450	16	450	0.6	0.711
L1772.16-0500	16	500	0.6	0.790
L1772.16-0550	16	550	0.6	0.869
L1772.16-0600	16	600	0.6	0.948
L1772.16-0650	16	650	0.6	1.027
L1772.16-0700	16	700	0.6	1.106
L1772.16-0750	16	750	0.6	1.185
L1772.16-0800	16	800	0.6	1.264
L1772.16-0850	16	850	0.6	1.343
L1772.16-0900	16	900	0.6	1.422
L1772.16-0950	16	950	0.6	1.501
L1772.16-1000	16	1000	0.6	1.580
L1772.16-1050	16	1050	0.6	1.659
L1772.16-1100	16	1100	0.6	1.738
L1772.16-1150	16	1150	0.6	1.817
L1772.16-1200	16	1200	0.6	1.896
L1772.16-1250	16	1250	0.6	1.975
L1772.16-1300	16	1300	0.6	2.054
L1772.16-1350	16	1350	0.6	2.133
L1772.16-1400	16	1400	0.6	2.212
L1772.16-1450	16	1450	0.6	2.291
L1772.16-1500	16	1500	0.6	2.370
L1772.16-1550	16	1550	0.6	2.449
L1772.16-1600	16	1600	0.6	2.528

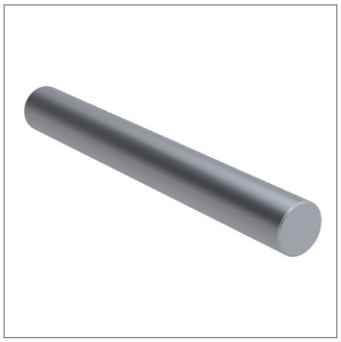
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.16-1650	16	1650	0.6	2.607
L1772.16-1700	16	1700	0.6	2.686
L1772.16-1750	16	1750	0.6	2.765
L1772.16-1800	16	1800	0.6	2.844
L1772.16-1850	16	1850	0.6	2.923
L1772.16-1900	16	1900	0.6	3.002
L1772.16-1950	16	1950	0.6	3.081
L1772.16-2000	16	2000	0.6	3.160
L1772.16-2050	16	2050	0.6	3.239
L1772.16-2100	16	2100	0.6	3.318
L1772.16-2150	16	2150	0.6	3.397
L1772.16-2200	16	2200	0.6	3.476
L1772.16-2250	16	2250	0.6	3.555
L1772.16-2300	16	2300	0.6	3.634
L1772.16-2350	16	2350	0.6	3.713
L1772.16-2400	16	2400	0.6	3.792
L1772.16-2450	16	2450	0.6	3.871
L1772.16-2500	16	2500	0.6	3.950
L1772.16-2550	16	2550	0.6	4.029
L1772.16-2600	16	2600	0.6	4.108
L1772.16-2650	16	2650	0.6	4.187
L1772.16-2700	16	2700	0.6	4.266
L1772.16-2750	16	2750	0.6	4.345
L1772.16-2800	16	2800	0.6	4.424
L1772.16-2850	16	2850	0.6	4.503
L1772.16-2900	16	2900	0.6	4.582
L1772.16-2950	16	2950	0.6	4.661
L1772.16-3000	16	3000	0.6	4.740
L1772.16-3050	16	3050	0.6	4.819
L1772.16-3100	16	3100	0.6	4.898
L1772.16-3150	16	3150	0.6	4.977
L1772.16-3200	16	3200	0.6	5.056
L1772.16-3250	16	3250	0.6	5.135
L1772.16-3300	16	3300	0.6	5.214
L1772.16-3350	16	3350	0.6	5.293
L1772.16-3400	16	3400	0.6	5.372
L1772.16-3450	16	3450	0.6	5.451
L1772.16-3500	16	3500	0.6	5.530
L1772.16-3550	16	3550	0.6	5.609
L1772.16-3600	16	3600	0.6	5.688
L1772.16-3650	16	3650	0.6	5.767
L1772.16-3700	16	3700	0.6	5.846
L1772.16-3750	16	3750	0.6	5.925
L1772.16-3800	16	3800	0.6	6.004
L1772.16-3850	16	3850	0.6	6.083
L1772.16-3900	16	3900	0.6	6.162
L1772.16-3950	16	3950	0.6	6.241
L1772.16-4000	16	4000	0.6	6.320
L1772.16-4050	16	4050	0.6	6.399
L1772.16-4100	16	4100	0.6	6.478
L1772.16-4150	16	4150	0.6	6.557
L1772.16-4200	16	4200	0.6	6.636
L1772.16-4250	16	4250	0.6	6.715
L1772.16-4300	16	4300	0.6	6.794
L1772.16-4350	16	4350	0.6	6.873
L1772.16-4400	16	4400	0.6	6.952
L1772.16-4450	16	4450	0.6	7.031
L1772.16-4500	16	4500	0.6	7.110
L1772.16-4550	16	4550	0.6	7.189
L1772.16-4600	16	4600	0.6	7.268
L1772.16-4650	16	4650	0.6	7.347
L1772.16-4700	16	4700	0.6	7.426
L1772.16-4750	16	4750	0.6	7.505
L1772.16-4800	16	4800	0.6	7.584
L1772.16-4850	16	4850	0.6	7.663
L1772.16-4900	16	4900	0.6	7.742
L1772.16-4950	16	4950	0.6	7.821
L1772.16-5000	16	5000	0.6	7.900

Ø16 Hardened Stainless Shafts
for linear bearings



Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.16-5050	16	5050	0.6	7.979
L1772.16-5100	16	5100	0.6	8.058
L1772.16-5150	16	5150	0.6	8.137
L1772.16-5200	16	5200	0.6	8.216
L1772.16-5250	16	5250	0.6	8.295
L1772.16-5300	16	5300	0.6	8.374
L1772.16-5350	16	5350	0.6	8.453
L1772.16-5400	16	5400	0.6	8.532
L1772.16-5450	16	5450	0.6	8.611
L1772.16-5500	16	5500	0.6	8.690
L1772.16-5550	16	5550	0.6	8.769
L1772.16-5600	16	5600	0.6	8.848
L1772.16-5650	16	5650	0.6	8.927
L1772.16-5700	16	5700	0.6	9.006
L1772.16-5750	16	5750	0.6	9.085
L1772.16-5800	16	5800	0.6	9.164
L1772.16-5850	16	5850	0.6	9.243
L1772.16-5900	16	5900	0.6	9.322
L1772.16-5950	16	5950	0.6	9.401
L1772.16-6000	16	6000	0.6	9.480





L1772.20

Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.20-0100	20	100	0.9	0.247
L1772.20-0150	20	150	0.9	0.371
L1772.20-0200	20	200	0.9	0.494
L1772.20-0250	20	250	0.9	0.618
L1772.20-0300	20	300	0.9	0.741
L1772.20-0350	20	350	0.9	0.865
L1772.20-0400	20	400	0.9	0.988
L1772.20-0450	20	450	0.9	1.112
L1772.20-0500	20	500	0.9	1.235
L1772.20-0550	20	550	0.9	1.359
L1772.20-0600	20	600	0.9	1.482
L1772.20-0650	20	650	0.9	1.606
L1772.20-0700	20	700	0.9	1.729
L1772.20-0750	20	750	0.9	1.853
L1772.20-0800	20	800	0.9	1.976
L1772.20-0850	20	850	0.9	2.100
L1772.20-0900	20	900	0.9	2.223
L1772.20-0950	20	950	0.9	2.347
L1772.20-1000	20	1000	0.9	2.470
L1772.20-1050	20	1050	0.9	2.594
L1772.20-1100	20	1100	0.9	2.717
L1772.20-1150	20	1150	0.9	2.841
L1772.20-1200	20	1200	0.9	2.964
L1772.20-1250	20	1250	0.9	3.088
L1772.20-1300	20	1300	0.9	3.211
L1772.20-1350	20	1350	0.9	3.335
L1772.20-1400	20	1400	0.9	3.458
L1772.20-1450	20	1450	0.9	3.582
L1772.20-1500	20	1500	0.9	3.705
L1772.20-1550	20	1550	0.9	3.829
L1772.20-1600	20	1600	0.9	3.952

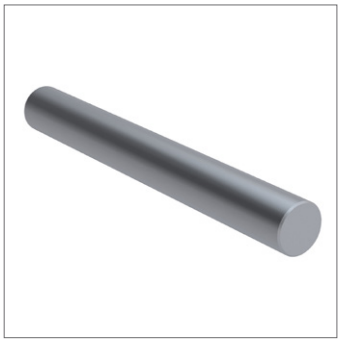
Ø20 Hardened Stainless Shafts
for linear bearings



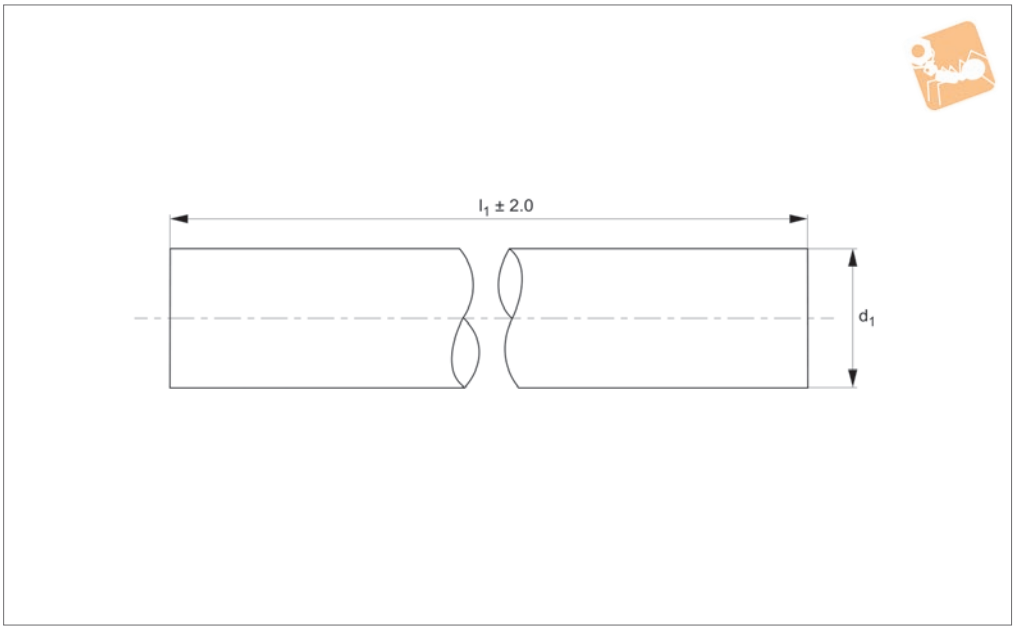
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.20-1650	20	1650	0.9	4.076
L1772.20-1700	20	1700	0.9	4.199
L1772.20-1750	20	1750	0.9	4.323
L1772.20-1800	20	1800	0.9	4.446
L1772.20-1850	20	1850	0.9	4.570
L1772.20-1900	20	1900	0.9	4.693
L1772.20-1950	20	1950	0.9	4.817
L1772.20-2000	20	2000	0.9	4.940
L1772.20-2050	20	2050	0.9	5.064
L1772.20-2100	20	2100	0.9	5.187
L1772.20-2150	20	2150	0.9	5.311
L1772.20-2200	20	2200	0.9	5.434
L1772.20-2250	20	2200	0.9	5.558
L1772.20-2300	20	2300	0.9	5.681
L1772.20-2350	20	2350	0.9	5.805
L1772.20-2400	20	2400	0.9	5.928
L1772.20-2450	20	2450	0.9	6.052
L1772.20-2500	20	2500	0.9	6.175
L1772.20-2550	20	2550	0.9	6.299
L1772.20-2600	20	2600	0.9	6.422
L1772.20-2650	20	2650	0.9	6.546
L1772.20-2700	20	2700	0.9	6.669
L1772.20-2750	20	2750	0.9	6.793
L1772.20-2800	20	2800	0.9	6.916
L1772.20-2850	20	2850	0.9	7.040
L1772.20-2900	20	2900	0.9	7.163
L1772.20-2950	20	2950	0.9	7.287
L1772.20-3000	20	3000	0.9	7.410
L1772.20-3050	20	3050	0.9	7.534
L1772.20-3100	20	3100	0.9	7.657
L1772.20-3150	20	3150	0.9	7.781
L1772.20-3200	20	3200	0.9	7.904
L1772.20-3250	20	3250	0.9	8.028
L1772.20-3300	20	3300	0.9	8.151
L1772.20-3350	20	3350	0.9	8.275
L1772.20-3400	20	3400	0.9	8.398
L1772.20-3450	20	3450	0.9	8.522
L1772.20-3500	20	3500	0.9	8.645
L1772.20-3550	20	3550	0.9	8.769
L1772.20-3600	20	3600	0.9	8.892
L1772.20-3650	20	3650	0.9	9.016
L1772.20-3700	20	3700	0.9	9.139
L1772.20-3750	20	3750	0.9	9.263
L1772.20-3800	20	3800	0.9	9.386
L1772.20-3850	20	3850	0.9	9.510
L1772.20-3900	20	3900	0.9	9.633
L1772.20-3950	20	3950	0.9	9.757
L1772.20-4000	20	4000	0.9	9.880
L1772.20-4050	20	4050	0.9	10.004
L1772.20-4100	20	4100	0.9	10.127
L1772.20-4150	20	4150	0.9	10.251
L1772.20-4200	20	4200	0.9	10.374
L1772.20-4250	20	4250	0.9	10.498
L1772.20-4300	20	4300	0.9	10.621
L1772.20-4350	20	4350	0.9	10.745
L1772.20-4400	20	4400	0.9	10.868
L1772.20-4450	20	4450	0.9	10.992
L1772.20-4500	20	4500	0.9	11.115
L1772.20-4550	20	4550	0.9	11.239
L1772.20-4600	20	4600	0.9	11.362
L1772.20-4650	20	4650	0.9	11.486
L1772.20-4700	20	4700	0.9	11.609
L1772.20-4750	20	4750	0.9	11.733
L1772.20-4800	20	4800	0.9	11.856
L1772.20-4850	20	4850	0.9	11.980
L1772.20-4900	20	4900	0.9	12.103
L1772.20-4950	20	4950	0.9	12.227
L1772.20-5000	20	5000	0.9	12.350

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.20-5050	20	5050	0.9	12.474
L1772.20-5100	20	5100	0.9	12.597
L1772.20-5150	20	5150	0.9	12.721
L1772.20-5200	20	5200	0.9	12.844
L1772.20-5250	20	5250	0.9	12.968
L1772.20-5300	20	5300	0.9	13.091
L1772.20-5350	20	5350	0.9	13.215
L1772.20-5400	20	5400	0.9	13.338
L1772.20-5450	20	5450	0.9	13.462
L1772.20-5500	20	5500	0.9	13.585
L1772.20-5550	20	5550	0.9	13.709
L1772.20-5600	20	5600	0.9	13.832
L1772.20-5650	20	5650	0.9	13.956
L1772.20-5700	20	5700	0.9	14.079
L1772.20-5750	20	5750	0.9	14.203
L1772.20-5800	20	5800	0.9	14.326
L1772.20-5850	20	5850	0.9	14.450
L1772.20-5900	20	5900	0.9	14.573
L1772.20-5950	20	5950	0.9	14.697
L1772.20-6000	20	6000	0.9	14.820

Ø25 Hardened Stainless Shafts
for linear bearings



L1772.25



Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.25-0100	25	100	0.9	0.385
L1772.25-0150	25	150	0.9	0.578
L1772.25-0200	25	200	0.9	0.770
L1772.25-0250	25	250	0.9	0.963
L1772.25-0300	25	300	0.9	1.155
L1772.25-0350	25	350	0.9	1.348
L1772.25-0400	25	400	0.9	1.540
L1772.25-0450	25	450	0.9	1.733
L1772.25-0500	25	500	0.9	1.925
L1772.25-0550	25	550	0.9	2.118
L1772.25-0600	25	600	0.9	2.310
L1772.25-0650	25	650	0.9	2.503
L1772.25-0700	25	700	0.9	2.695
L1772.25-0750	25	750	0.9	2.888
L1772.25-0800	25	800	0.9	3.080
L1772.25-0850	25	850	0.9	3.273
L1772.25-0900	25	900	0.9	3.465
L1772.25-0950	25	950	0.9	3.658
L1772.25-1000	25	1000	0.9	3.850
L1772.25-1050	25	1050	0.9	4.043
L1772.25-1100	25	1100	0.9	4.235
L1772.25-1150	25	1150	0.9	4.428
L1772.25-1200	25	1200	0.9	4.620
L1772.25-1250	25	1250	0.9	4.813
L1772.25-1300	25	1300	0.9	5.005
L1772.25-1350	25	1350	0.9	5.198
L1772.25-1400	25	1400	0.9	5.390
L1772.25-1450	25	1450	0.9	5.583
L1772.25-1500	25	1500	0.9	5.775
L1772.25-1550	25	1550	0.9	5.968
L1772.25-1600	25	1600	0.9	6.160

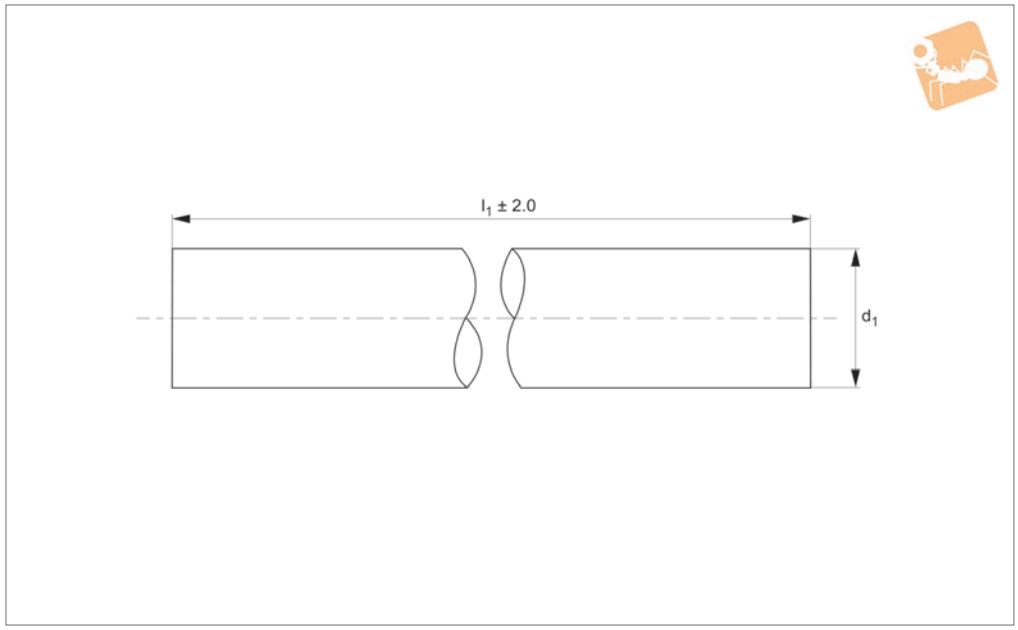
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.25-1650	25	1650	0.9	6.353
L1772.25-1700	25	1700	0.9	6.545
L1772.25-1750	25	1750	0.9	6.738
L1772.25-1800	25	1800	0.9	6.930
L1772.25-1850	25	1850	0.9	7.123
L1772.25-1900	25	1900	0.9	7.315
L1772.25-1950	25	1950	0.9	7.508
L1772.25-2000	25	2000	0.9	7.700
L1772.25-2050	25	2050	0.9	7.893
L1772.25-2100	25	2100	0.9	8.085
L1772.25-2150	25	2150	0.9	8.278
L1772.25-2200	25	2200	0.9	8.470
L1772.25-2250	25	2250	0.9	8.663
L1772.25-2300	25	2300	0.9	8.855
L1772.25-2350	25	2350	0.9	9.048
L1772.25-2400	25	2400	0.9	9.240
L1772.25-2450	25	2450	0.9	9.433
L1772.25-2500	25	2500	0.9	9.625
L1772.25-2550	25	2550	0.9	9.818
L1772.25-2600	25	2600	0.9	10.010
L1772.25-2650	25	2650	0.9	10.203
L1772.25-2700	25	2700	0.9	10.395
L1772.25-2750	25	2750	0.9	10.588
L1772.25-2800	25	2800	0.9	10.780
L1772.25-2850	25	2850	0.9	10.973
L1772.25-2900	25	2900	0.9	11.165
L1772.25-2950	25	2950	0.9	11.358
L1772.25-3000	25	3000	0.9	11.550
L1772.25-3050	25	3050	0.9	11.743
L1772.25-3100	25	3100	0.9	11.935
L1772.25-3150	25	3150	0.9	12.128
L1772.25-3200	25	3200	0.9	12.320
L1772.25-3250	25	3250	0.9	12.513
L1772.25-3300	25	3300	0.9	12.705
L1772.25-3350	25	3350	0.9	12.898
L1772.25-3400	25	3400	0.9	13.090
L1772.25-3450	25	3450	0.9	13.283
L1772.25-3500	25	3500	0.9	13.475
L1772.25-3550	25	3550	0.9	13.668
L1772.25-3600	25	3600	0.9	13.860
L1772.25-3650	25	3650	0.9	14.053
L1772.25-3700	25	3700	0.9	14.245
L1772.25-3750	25	3750	0.9	14.438
L1772.25-3800	25	3800	0.9	14.630
L1772.25-3850	25	3850	0.9	14.823
L1772.25-3900	25	3900	0.9	15.015
L1772.25-3950	25	3950	0.9	15.208
L1772.25-4000	25	4000	0.9	15.400
L1772.25-4050	25	4050	0.9	15.593
L1772.25-4100	25	4100	0.9	15.785
L1772.25-4150	25	4150	0.9	15.978
L1772.25-4200	25	4200	0.9	16.170
L1772.25-4250	25	4250	0.9	16.363
L1772.25-4300	25	4300	0.9	16.555
L1772.25-4350	25	4350	0.9	16.748
L1772.25-4400	25	4400	0.9	16.940
L1772.25-4450	25	4450	0.9	17.133
L1772.25-4500	25	4500	0.9	17.325
L1772.25-4550	25	4550	0.9	17.518
L1772.25-4600	25	4600	0.9	17.710
L1772.25-4650	25	4650	0.9	17.903
L1772.25-4700	25	4700	0.9	18.095
L1772.25-4750	25	4750	0.9	18.288
L1772.25-4800	25	4800	0.9	18.480
L1772.25-4850	25	4850	0.9	18.673
L1772.25-4900	25	4900	0.9	18.865
L1772.25-4950	25	4950	0.9	19.058
L1772.25-5000	25	5000	0.9	19.250

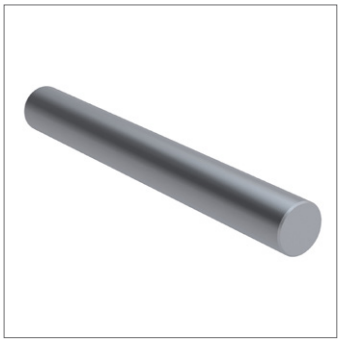
Ø25 Hardened Stainless Shafts

for linear bearings



Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.25-5050	25	5050	0.9	19.443
L1772.25-5100	25	5100	0.9	19.635
L1772.25-5150	25	5150	0.9	19.828
L1772.25-5200	25	5200	0.9	20.020
L1772.25-5250	25	5250	0.9	20.213
L1772.25-5300	25	5300	0.9	20.405
L1772.25-5350	25	5350	0.9	20.598
L1772.25-5400	25	5400	0.9	20.790
L1772.25-5450	25	5450	0.9	20.983
L1772.25-5500	25	5500	0.9	21.175
L1772.25-5550	25	5550	0.9	21.368
L1772.25-5600	25	5600	0.9	21.560
L1772.25-5650	25	5650	0.9	21.753
L1772.25-5700	25	5700	0.9	21.945
L1772.25-5750	25	5750	0.9	22.138
L1772.25-5800	25	5800	0.9	22.330
L1772.25-5850	25	5850	0.9	22.523
L1772.25-5900	25	5900	0.9	22.715
L1772.25-5950	25	5950	0.9	22.908
L1772.25-6000	25	6000	0.9	23.100





L1772.30

Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.30-0100	30	100	1.5	0.555
L1772.30-0150	30	150	1.5	0.833
L1772.30-0200	30	200	1.5	1.110
L1772.30-0250	30	250	1.5	1.388
L1772.30-0300	30	300	1.5	1.665
L1772.30-0350	30	350	1.5	1.943
L1772.30-0400	30	400	1.5	2.220
L1772.30-0450	30	450	1.5	2.498
L1772.30-0500	30	500	1.5	2.775
L1772.30-0550	30	550	1.5	3.053
L1772.30-0600	30	600	1.5	3.330
L1772.30-0650	30	650	1.5	3.608
L1772.30-0700	30	700	1.5	3.885
L1772.30-0750	30	750	1.5	4.163
L1772.30-0800	30	800	1.5	4.440
L1772.30-0850	30	850	1.5	4.718
L1772.30-0900	30	900	1.5	4.995
L1772.30-0950	30	950	1.5	5.273
L1772.30-1000	30	1000	1.5	5.550
L1772.30-1050	30	1050	1.5	5.828
L1772.30-1100	30	1100	1.5	6.105
L1772.30-1150	30	1150	1.5	6.383
L1772.30-1200	30	1200	1.5	6.660
L1772.30-1250	30	1250	1.5	6.938
L1772.30-1300	30	1300	1.5	7.215
L1772.30-1350	30	1350	1.5	7.493
L1772.30-1400	30	1400	1.5	7.770
L1772.30-1450	30	1450	1.5	8.048
L1772.30-1500	30	1500	1.5	8.325
L1772.30-1550	30	1550	1.5	8.603
L1772.30-1600	30	1600	1.5	8.880

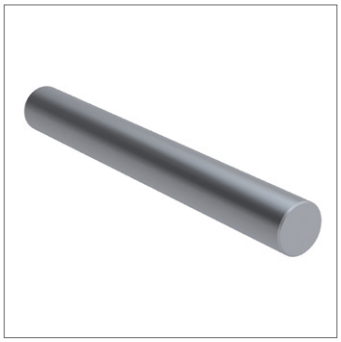
Ø30 Hardened Stainless Shafts
for linear bearings



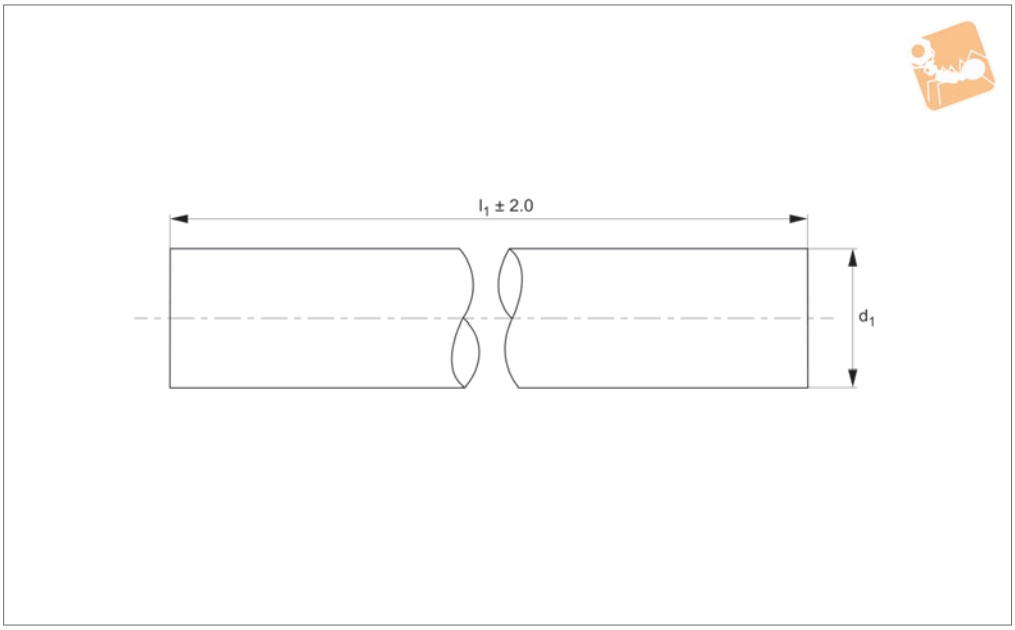
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.30-1650	30	1650	1.5	9.158
L1772.30-1700	30	1700	1.5	9.435
L1772.30-1750	30	1750	1.5	9.713
L1772.30-1800	30	1800	1.5	9.990
L1772.30-1850	30	1850	1.5	10.268
L1772.30-1900	30	1900	1.5	10.545
L1772.30-1950	30	1950	1.5	10.823
L1772.30-2000	30	2000	1.5	11.100
L1772.30-2050	30	2050	1.5	11.378
L1772.30-2100	30	2100	1.5	11.655
L1772.30-2150	30	2150	1.5	11.933
L1772.30-2200	30	2200	1.5	12.210
L1772.30-2250	30	2250	1.5	12.488
L1772.30-2300	30	2300	1.5	12.765
L1772.30-2350	30	2350	1.5	13.043
L1772.30-2400	30	2400	1.5	13.320
L1772.30-2450	30	2450	1.5	13.598
L1772.30-2500	30	2500	1.5	13.875
L1772.30-2550	30	2550	1.5	14.153
L1772.30-2600	30	2600	1.5	14.430
L1772.30-2650	30	2650	1.5	14.708
L1772.30-2700	30	2700	1.5	14.985
L1772.30-2750	30	2750	1.5	15.263
L1772.30-2800	30	2800	1.5	15.540
L1772.30-2850	30	2850	1.5	15.818
L1772.30-2900	30	2900	1.5	16.095
L1772.30-2950	30	2950	1.5	16.373
L1772.30-3000	30	3000	1.5	16.650
L1772.30-3050	30	3050	1.5	16.928
L1772.30-3100	30	3100	1.5	17.205
L1772.30-3150	30	3150	1.5	17.483
L1772.30-3200	30	3200	1.5	17.760
L1772.30-3250	30	3250	1.5	18.038
L1772.30-3300	30	3300	1.5	18.315
L1772.30-3350	30	3350	1.5	18.593
L1772.30-3400	30	3400	1.5	18.870
L1772.30-3450	30	3450	1.5	19.148
L1772.30-3500	30	3500	1.5	19.425
L1772.30-3550	30	3550	1.5	19.703
L1772.30-3600	30	3600	1.5	19.980
L1772.30-3650	30	3650	1.5	20.258
L1772.30-3700	30	3700	1.5	20.535
L1772.30-3750	30	3750	1.5	20.813
L1772.30-3800	30	3800	1.5	21.090
L1772.30-3850	30	3850	1.5	21.368
L1772.30-3900	30	3900	1.5	21.645
L1772.30-3950	30	3950	1.5	21.923
L1772.30-4000	30	4000	1.5	22.200
L1772.30-4050	30	4050	1.5	22.478
L1772.30-4100	30	4100	1.5	22.755
L1772.30-4150	30	4150	1.5	23.033
L1772.30-4200	30	4200	1.5	23.310
L1772.30-4250	30	4250	1.5	23.588
L1772.30-4300	30	4300	1.5	23.865
L1772.30-4350	30	4350	1.5	24.143
L1772.30-4400	30	4400	1.5	24.420
L1772.30-4450	30	4450	1.5	24.698
L1772.30-4500	30	4500	1.5	24.975
L1772.30-4550	30	4550	1.5	25.253
L1772.30-4600	30	4600	1.5	25.530
L1772.30-4650	30	4650	1.5	25.808
L1772.30-4700	30	4700	1.5	26.085
L1772.30-4750	30	4750	1.5	26.363
L1772.30-4800	30	4800	1.5	26.640
L1772.30-4850	30	4850	1.5	26.918
L1772.30-4900	30	4900	1.5	27.195
L1772.30-4950	30	4950	1.5	27.473
L1772.30-5000	30	5000	1.5	27.750

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.30-5050	30	5050	1.5	28.028
L1772.30-5100	30	5100	1.5	28.305
L1772.30-5150	30	5150	1.5	28.583
L1772.30-5200	30	5200	1.5	28.860
L1772.30-5250	30	5250	1.5	29.138
L1772.30-5300	30	5300	1.5	29.415
L1772.30-5350	30	5350	1.5	29.693
L1772.30-5400	30	5400	1.5	29.970
L1772.30-5450	30	5450	1.5	30.248
L1772.30-5500	30	5500	1.5	30.525
L1772.30-5550	30	5550	1.5	30.803
L1772.30-5600	30	5600	1.5	31.080
L1772.30-5650	30	5650	1.5	31.358
L1772.30-5700	30	5700	1.5	31.635
L1772.30-5750	30	5750	1.5	31.913
L1772.30-5800	30	5800	1.5	32.190
L1772.30-5850	30	5850	1.5	32.468
L1772.30-5900	30	5900	1.5	32.745
L1772.30-5950	30	5950	1.5	33.023
L1772.30-6000	30	6000	1.5	33.300

Ø40 Hardened Stainless Shafts
for linear bearings



L1772.40



Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

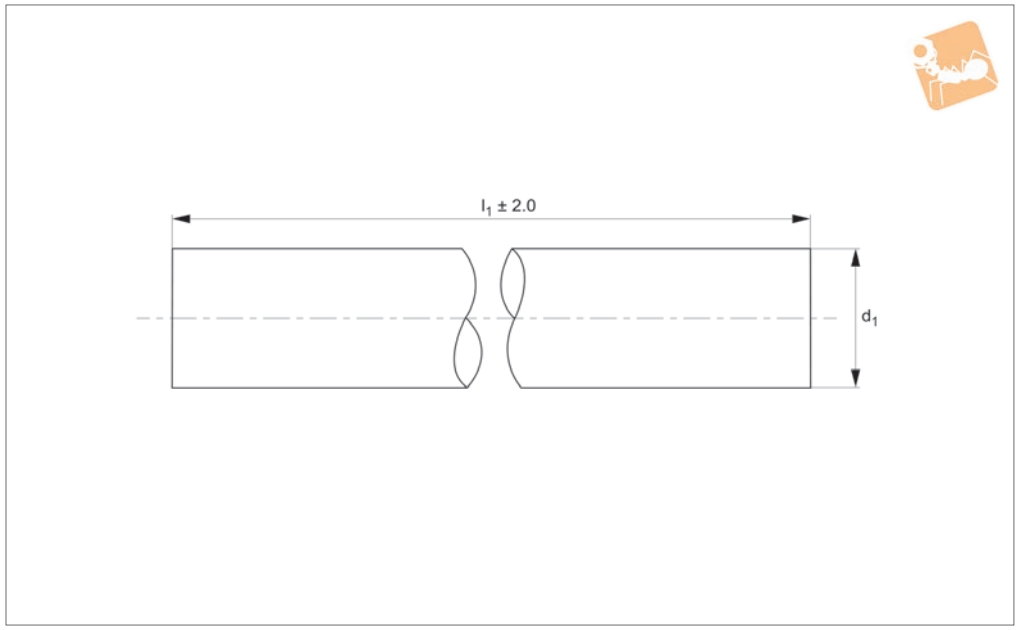
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.40-0100	40	100	1.5	0.987
L1772.40-0150	40	150	1.5	1.481
L1772.40-0200	40	200	1.5	1.974
L1772.40-0250	40	250	1.5	2.468
L1772.40-0300	40	300	1.5	2.961
L1772.40-0350	40	350	1.5	3.455
L1772.40-0400	40	400	1.5	3.948
L1772.40-0450	40	450	1.5	4.442
L1772.40-0500	40	500	1.5	4.935
L1772.40-0550	40	550	1.5	5.429
L1772.40-0600	40	600	1.5	5.922
L1772.40-0650	40	650	1.5	6.416
L1772.40-0700	40	700	1.5	6.909
L1772.40-0750	40	750	1.5	7.403
L1772.40-0800	40	800	1.5	7.896
L1772.40-0850	40	850	1.5	8.390
L1772.40-0900	40	900	1.5	8.883
L1772.40-0950	40	950	1.5	9.377
L1772.40-1000	40	1000	1.5	9.870
L1772.40-1050	40	1050	1.5	10.364
L1772.40-1100	40	1100	1.5	10.857
L1772.40-1150	40	1150	1.5	11.351
L1772.40-1200	40	1200	1.5	11.844
L1772.40-1250	40	1250	1.5	12.338
L1772.40-1300	40	1300	1.5	12.831
L1772.40-1350	40	1350	1.5	13.325
L1772.40-1400	40	1400	1.5	13.818
L1772.40-1450	40	1450	1.5	14.312
L1772.40-1500	40	1500	1.5	14.805
L1772.40-1550	40	1550	1.5	15.299
L1772.40-1600	40	1600	1.5	15.792

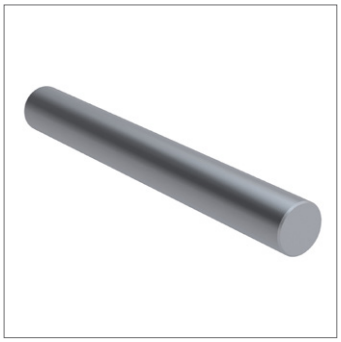
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.40-1650	40	1650	1.5	16.286
L1772.40-1700	40	1700	1.5	16.779
L1772.40-1750	40	1750	1.5	17.273
L1772.40-1800	40	1800	1.5	17.766
L1772.40-1850	40	1850	1.5	18.260
L1772.40-1900	40	1900	1.5	18.753
L1772.40-1950	40	1950	1.5	19.247
L1772.40-2000	40	2000	1.5	19.740
L1772.40-2050	40	2050	1.5	20.234
L1772.40-2100	40	2100	1.5	20.727
L1772.40-2150	40	2150	1.5	21.221
L1772.40-2200	40	2200	1.5	21.714
L1772.40-2250	40	2250	1.5	22.208
L1772.40-2300	40	2300	1.5	22.701
L1772.40-2350	40	2350	1.5	23.195
L1772.40-2400	40	2400	1.5	23.688
L1772.40-2450	40	2450	1.5	24.182
L1772.40-2500	40	2500	1.5	24.675
L1772.40-2550	40	2550	1.5	25.169
L1772.40-2600	40	2600	1.5	25.662
L1772.40-2650	40	2650	1.5	26.156
L1772.40-2700	40	2700	1.5	26.649
L1772.40-2750	40	2750	1.5	27.143
L1772.40-2800	40	2800	1.5	27.636
L1772.40-2850	40	2850	1.5	28.130
L1772.40-2900	40	2900	1.5	28.623
L1772.40-2950	40	2950	1.5	29.117
L1772.40-3000	40	3000	1.5	29.610
L1772.40-3050	40	3050	1.5	30.104
L1772.40-3100	40	3100	1.5	30.597
L1772.40-3150	40	3150	1.5	31.091
L1772.40-3200	40	3200	1.5	31.584
L1772.40-3250	40	3250	1.5	32.078
L1772.40-3300	40	3300	1.5	32.571
L1772.40-3350	40	3350	1.5	33.065
L1772.40-3400	40	3400	1.5	33.558
L1772.40-3450	40	3450	1.5	34.052
L1772.40-3500	40	3500	1.5	34.545
L1772.40-3550	40	3550	1.5	35.039
L1772.40-3600	40	3600	1.5	35.532
L1772.40-3650	40	3650	1.5	36.026
L1772.40-3700	40	3700	1.5	36.519
L1772.40-3750	40	3750	1.5	37.013
L1772.40-3800	40	3800	1.5	37.506
L1772.40-3850	40	3850	1.5	38.000
L1772.40-3900	40	3900	1.5	38.493
L1772.40-3950	40	3950	1.5	38.987
L1772.40-4000	40	4000	1.5	39.480
L1772.40-4050	40	4050	1.5	39.974
L1772.40-4100	40	4100	1.5	40.467
L1772.40-4150	40	4150	1.5	40.961
L1772.40-4200	40	4200	1.5	41.454
L1772.40-4250	40	4250	1.5	41.948
L1772.40-4300	40	4300	1.5	42.441
L1772.40-4350	40	4350	1.5	42.935
L1772.40-4400	40	4400	1.5	43.428
L1772.40-4450	40	4450	1.5	43.922
L1772.40-4500	40	4500	1.5	44.415
L1772.40-4550	40	4550	1.5	44.909
L1772.40-4600	40	4600	1.5	45.402
L1772.40-4650	40	4650	1.5	45.896
L1772.40-4700	40	4700	1.5	46.389
L1772.40-4750	40	4750	1.5	46.883
L1772.40-4800	40	4800	1.5	47.376
L1772.40-4850	40	4850	1.5	47.870
L1772.40-4900	40	4900	1.5	48.363
L1772.40-4950	40	4950	1.5	48.857
L1772.40-5000	40	5000	1.5	49.350

Ø40 Hardened Stainless Shafts
for linear bearings



Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.40-5050	40	5050	1.5	49.844
L1772.40-5100	40	5100	1.5	50.337
L1772.40-5150	40	5150	1.5	50.831
L1772.40-5200	40	5200	1.5	51.324
L1772.40-5250	40	5250	1.5	51.818
L1772.40-5300	40	5300	1.5	52.311
L1772.40-5350	40	5350	1.5	52.805
L1772.40-5400	40	5400	1.5	53.298
L1772.40-5450	40	5450	1.5	53.792
L1772.40-5500	40	5500	1.5	54.285
L1772.40-5550	40	5550	1.5	54.779
L1772.40-5600	40	5600	1.5	55.272
L1772.40-5650	40	5650	1.5	55.766
L1772.40-5700	40	5700	1.5	56.259
L1772.40-5750	40	5750	1.5	56.753
L1772.40-5800	40	5800	1.5	57.246
L1772.40-5850	40	5850	1.5	57.740
L1772.40-5900	40	5900	1.5	58.233
L1772.40-5950	40	5950	1.5	58.727
L1772.40-6000	40	6000	1.5	59.220





L1772.50

Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.50-0100	50	100	1.5	1.540
L1772.50-0150	50	150	1.5	2.310
L1772.50-0200	50	200	1.5	3.080
L1772.50-0250	50	250	1.5	3.850
L1772.50-0300	50	300	1.5	4.620
L1772.50-0350	50	350	1.5	5.390
L1772.50-0400	50	400	1.5	6.160
L1772.50-0450	50	450	1.5	6.930
L1772.50-0500	50	500	1.5	7.700
L1772.50-0550	50	550	1.5	8.470
L1772.50-0600	50	600	1.5	9.240
L1772.50-0650	50	650	1.5	10.010
L1772.50-0700	50	700	1.5	10.780
L1772.50-0750	50	750	1.5	11.550
L1772.50-0800	50	800	1.5	12.320
L1772.50-0850	50	850	1.5	13.090
L1772.50-0900	50	900	1.5	13.860
L1772.50-1000	50	1000	1.5	15.400
L1772.50-1050	50	1050	1.5	16.170
L1772.50-1100	50	1100	1.5	16.940
L1772.50-1150	50	1150	1.5	17.710
L1772.50-1200	50	1200	1.5	18.480
L1772.50-1250	50	1250	1.5	19.250
L1772.50-1300	50	1300	1.5	20.020
L1772.50-1350	50	1350	1.5	20.790
L1772.50-1400	50	1400	1.5	21.560
L1772.50-1450	50	1450	1.5	22.330
L1772.50-1500	50	1500	1.5	23.100
L1772.50-1550	50	1550	1.5	23.870
L1772.50-1600	50	1600	1.5	24.640
L1772.50-1650	50	1650	1.5	25.410

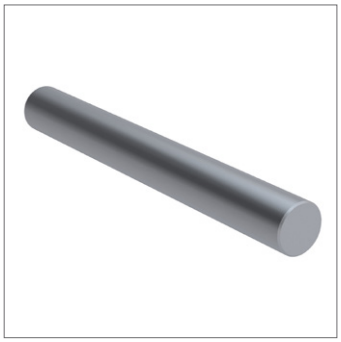
Ø50 Hardened Stainless Shafts
for linear bearings



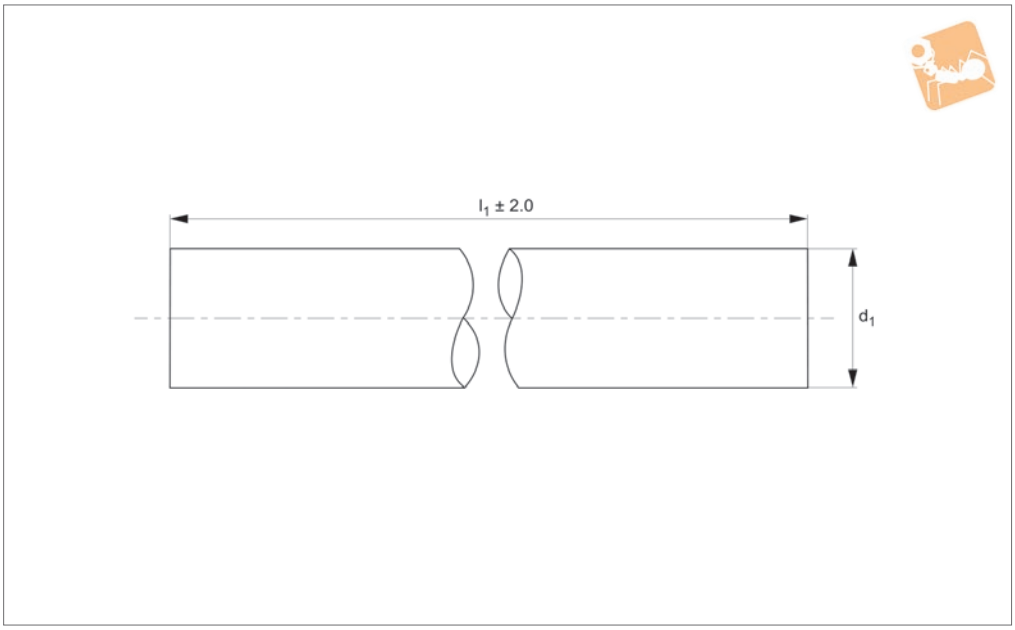
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.50-1700	50	1700	1.5	26.180
L1772.50-1750	50	1750	1.5	26.950
L1772.50-1800	50	1800	1.5	27.720
L1772.50-1850	50	1850	1.5	28.490
L1772.50-1900	50	1900	1.5	29.260
L1772.50-1950	50	1950	1.5	30.030
L1772.50-2000	50	2000	1.5	30.800
L1772.50-2050	50	2050	1.5	31.570
L1772.50-2100	50	2100	1.5	32.340
L1772.50-2150	50	2150	1.5	33.110
L1772.50-2200	50	2200	1.5	33.880
L1772.50-2250	50	2250	1.5	34.650
L1772.50-2300	50	2300	1.5	35.420
L1772.50-2350	50	2350	1.5	36.190
L1772.50-2400	50	2400	1.5	36.960
L1772.50-2450	50	2450	1.5	37.730
L1772.50-2500	50	2500	1.5	38.500
L1772.50-2550	50	2550	1.5	39.270
L1772.50-2600	50	2600	1.5	40.040
L1772.50-2650	50	2650	1.5	40.810
L1772.50-2700	50	2700	1.5	41.580
L1772.50-2750	50	2750	1.5	42.350
L1772.50-2800	50	2800	1.5	43.120
L1772.50-2850	50	2850	1.5	43.890
L1772.50-2900	50	2900	1.5	44.660
L1772.50-2950	50	2950	1.5	45.430
L1772.50-3000	50	3000	1.5	46.200
L1772.50-3050	50	3050	1.5	46.970
L1772.50-3100	50	3100	1.5	47.740
L1772.50-3150	50	3150	1.5	48.510
L1772.50-3200	50	3200	1.5	49.280
L1772.50-3250	50	3250	1.5	50.050
L1772.50-3300	50	3300	1.5	50.820
L1772.50-3350	50	3350	1.5	51.590
L1772.50-3400	50	3400	1.5	52.360
L1772.50-3450	50	3450	1.5	53.130
L1772.50-3500	50	3500	1.5	53.900
L1772.50-3550	50	3550	1.5	54.670
L1772.50-3600	50	3600	1.5	55.440
L1772.50-3650	50	3650	1.5	56.210
L1772.50-3700	50	3700	1.5	56.980
L1772.50-3750	50	3750	1.5	57.750
L1772.50-3800	50	3800	1.5	58.520
L1772.50-3850	50	3850	1.5	59.290
L1772.50-3900	50	3900	1.5	60.060
L1772.50-3950	50	3950	1.5	60.830
L1772.50-4000	50	4000	1.5	61.600
L1772.50-4050	50	4050	1.5	62.370
L1772.50-4100	50	4100	1.5	63.140
L1772.50-4150	50	4150	1.5	63.910
L1772.50-4200	50	4200	1.5	64.680
L1772.50-4250	50	4250	1.5	65.450
L1772.50-4300	50	4300	1.5	66.220
L1772.50-4350	50	4350	1.5	66.990
L1772.50-4400	50	4400	1.5	67.760
L1772.50-4450	50	4450	1.5	68.530
L1772.50-4500	50	4500	1.5	69.300
L1772.50-4550	50	4550	1.5	70.070
L1772.50-4600	50	4600	1.5	70.840
L1772.50-4650	50	4650	1.5	71.610
L1772.50-4700	50	4700	1.5	72.380
L1772.50-4750	50	4750	1.5	73.150
L1772.50-4800	50	4800	1.5	73.920
L1772.50-4850	50	4850	1.5	74.690
L1772.50-4900	50	4900	1.5	75.460
L1772.50-4950	50	4950	1.5	76.230
L1772.50-5000	50	5000	1.5	77.000
L1772.50-5050	50	5050	1.5	77.770

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.50-5100	50	5100	1.5	78.540
L1772.50-5150	50	5150	1.5	79.310
L1772.50-5200	50	5200	1.5	80.080
L1772.50-5250	50	5250	1.5	80.850
L1772.50-5300	50	5300	1.5	81.620
L1772.50-5350	50	5350	1.5	82.390
L1772.50-5400	50	5400	1.5	83.160
L1772.50-5450	50	5450	1.5	83.930
L1772.50-5500	50	5500	1.5	84.700
L1772.50-5550	50	5550	1.5	85.470
L1772.50-5600	50	5600	1.5	86.240
L1772.50-5650	50	5650	1.5	87.010
L1772.50-5700	50	5700	1.5	87.780
L1772.50-5750	50	5750	1.5	88.550
L1772.50-5800	50	5800	1.5	89.320
L1772.50-5850	50	5850	1.5	90.090
L1772.50-5900	50	5900	1.5	90.860
L1772.50-5950	50	5950	1.5	91.630
L1772.50-6000	50	6000	1.5	92.400

Ø60 Hardened Stainless Shafts
for linear bearings



L1772.60



Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

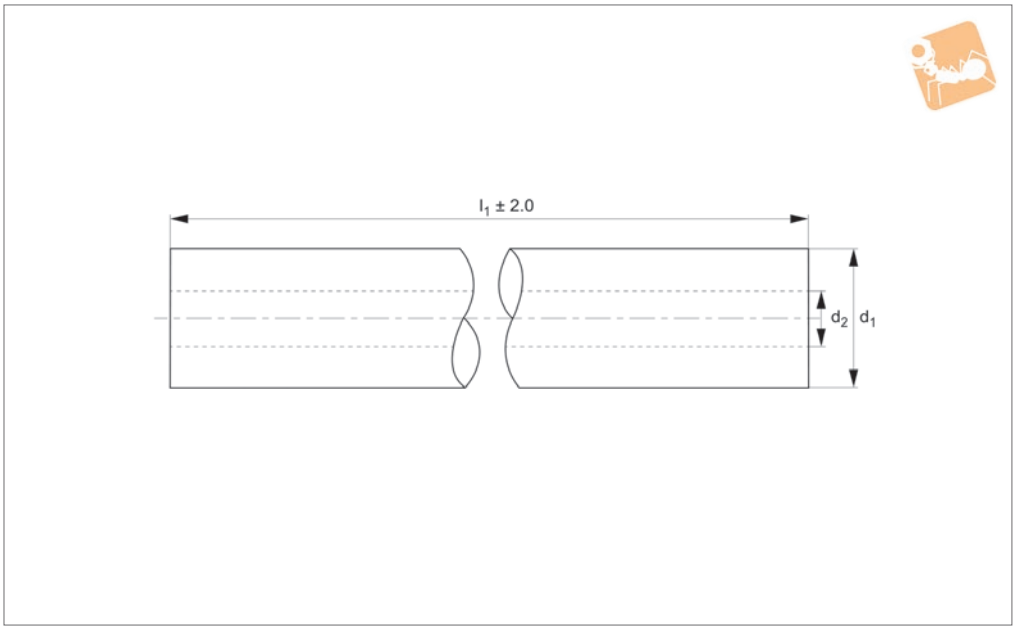
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.60-0100	60	100	1.5	2.220
L1772.60-0150	60	150	1.5	3.330
L1772.60-0200	60	200	1.5	4.440
L1772.60-0250	60	250	1.5	5.550
L1772.60-0300	60	300	1.5	6.660
L1772.60-0350	60	350	1.5	7.770
L1772.60-0400	60	400	1.5	8.880
L1772.60-0450	60	450	1.5	9.990
L1772.60-0500	60	500	1.5	11.100
L1772.60-0550	60	550	1.5	12.210
L1772.60-0600	60	600	1.5	13.320
L1772.60-0650	60	650	1.5	14.430
L1772.60-0700	60	700	1.5	15.540
L1772.60-0750	60	750	1.5	16.650
L1772.60-0800	60	800	1.5	17.760
L1772.60-0850	60	850	1.5	18.870
L1772.60-0900	60	900	1.5	19.980
L1772.60-0950	60	950	1.5	21.090
L1772.60-1000	60	1000	1.5	22.200
L1772.60-1050	60	1050	1.5	23.310
L1772.60-1100	60	1100	1.5	24.420
L1772.60-1150	60	1150	1.5	25.530
L1772.60-1200	60	1200	1.5	26.640
L1772.60-1250	60	1250	1.5	27.750
L1772.60-1300	60	1300	1.5	28.860
L1772.60-1350	60	1350	1.5	29.970
L1772.60-1400	60	1400	1.5	31.080
L1772.60-1450	60	1450	1.5	32.190
L1772.60-1500	60	1500	1.5	33.300
L1772.60-1550	60	1550	1.5	34.410
L1772.60-1600	60	1600	1.5	35.520

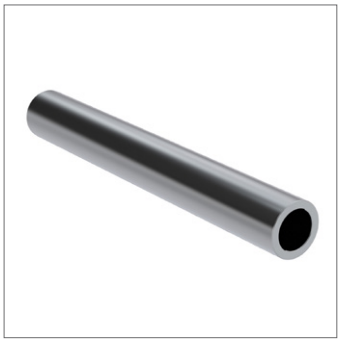
Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.60-1650	60	1650	1.5	36.630
L1772.60-1700	60	1700	1.5	37.740
L1772.60-1750	60	1750	1.5	38.850
L1772.60-1800	60	1800	1.5	39.960
L1772.60-1850	60	1850	1.5	41.070
L1772.60-1900	60	1900	1.5	42.180
L1772.60-1950	60	1950	1.5	43.290
L1772.60-2000	60	2000	1.5	44.400
L1772.60-2050	60	2050	1.5	45.510
L1772.60-2100	60	2100	1.5	46.620
L1772.60-2150	60	2150	1.5	47.730
L1772.60-2200	60	2200	1.5	48.840
L1772.60-2250	60	2250	1.5	49.950
L1772.60-2300	60	2300	1.5	51.060
L1772.60-2350	60	2350	1.5	52.170
L1772.60-2400	60	2400	1.5	53.280
L1772.60-2450	60	2450	1.5	54.390
L1772.60-2500	60	2500	1.5	55.500
L1772.60-2550	60	2550	1.5	56.610
L1772.60-2600	60	2600	1.5	57.720
L1772.60-2650	60	2650	1.5	58.830
L1772.60-2700	60	2700	1.5	59.940
L1772.60-2750	60	2750	1.5	61.050
L1772.60-2800	60	2800	1.5	62.160
L1772.60-2850	60	2850	1.5	63.270
L1772.60-2900	60	2900	1.5	64.380
L1772.60-2950	60	2950	1.5	65.490
L1772.60-3000	60	3000	1.5	66.600
L1772.60-3050	60	3050	1.5	67.710
L1772.60-3100	60	3100	1.5	68.820
L1772.60-3150	60	3150	1.5	69.930
L1772.60-3200	60	3200	1.5	71.040
L1772.60-3250	60	3250	1.5	72.150
L1772.60-3300	60	3300	1.5	73.260
L1772.60-3350	60	3350	1.5	74.370
L1772.60-3400	60	3400	1.5	75.480
L1772.60-3450	60	3450	1.5	76.590
L1772.60-3500	60	3500	1.5	77.700
L1772.60-3550	60	3550	1.5	78.810
L1772.60-3600	60	3600	1.5	79.920
L1772.60-3650	60	3650	1.5	81.030
L1772.60-3700	60	3700	1.5	82.140
L1772.60-3750	60	3750	1.5	83.250
L1772.60-3800	60	3800	1.5	84.360
L1772.60-3850	60	3850	1.5	85.470
L1772.60-3900	60	3900	1.5	86.580
L1772.60-3950	60	3950	1.5	87.690
L1772.60-4000	60	4000	1.5	88.800
L1772.60-4050	60	4050	1.5	89.910
L1772.60-4100	60	4100	1.5	91.020
L1772.60-4150	60	4150	1.5	92.130
L1772.60-4200	60	4200	1.5	93.240
L1772.60-4250	60	4250	1.5	94.350
L1772.60-4300	60	4300	1.5	95.460
L1772.60-4350	60	4350	1.5	96.570
L1772.60-4400	60	4400	1.5	97.680
L1772.60-4450	60	4450	1.5	98.790
L1772.60-4500	60	4500	1.5	99.900
L1772.60-4550	60	4550	1.5	101.010
L1772.60-4600	60	4600	1.5	102.120
L1772.60-4650	60	4650	1.5	103.230
L1772.60-4700	60	4700	1.5	104.340
L1772.60-4750	60	4750	1.5	105.450
L1772.60-4800	60	4800	1.5	106.560
L1772.60-4850	60	4850	1.5	107.670
L1772.60-4900	60	4900	1.5	108.780
L1772.60-4950	60	4950	1.5	109.890
L1772.60-5000	60	5000	1.5	111.000

Ø60 Hardened Stainless Shafts
for linear bearings



Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.60-5050	60	5050	1.5	112.110
L1772.60-5100	60	5100	1.5	113.220
L1772.60-5150	60	5150	1.5	114.330
L1772.60-5200	60	5200	1.5	115.440
L1772.60-5250	60	5250	1.5	116.550
L1772.60-5300	60	5300	1.5	117.660
L1772.60-5350	60	5350	1.5	118.770
L1772.60-5400	60	5400	1.5	119.880
L1772.60-5450	60	5450	1.5	120.990
L1772.60-5500	60	5500	1.5	122.100
L1772.60-5550	60	5550	1.5	123.210
L1772.60-5600	60	5600	1.5	124.320
L1772.60-5650	60	5650	1.5	125.430
L1772.60-5700	60	5700	1.5	126.540
L1772.60-5750	60	5750	1.5	127.650
L1772.60-5800	60	5800	1.5	128.760
L1772.60-5850	60	5850	1.5	129.870
L1772.60-5900	60	5900	1.5	130.980
L1772.60-5950	60	5950	1.5	132.090
L1772.60-6000	60	6000	1.5	133.200





L1771.12

Material
Carbon steel (C60), surface hardness 60-65 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.

Technical Notes
Used in linear bearing and guideway systems where weight reduction is important.
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	d_2	Depth of hardness min.
L1771.12-0100	12	100	4	0.4
L1771.12-0150	12	150	4	0.4
L1771.12-0200	12	200	4	0.4
L1771.12-0250	12	250	4	0.4
L1771.12-0300	12	300	4	0.4
L1771.12-0350	12	350	4	0.4
L1771.12-0400	12	400	4	0.4
L1771.12-0450	12	450	4	0.4
L1771.12-0500	12	500	4	0.4
L1771.12-0550	12	550	4	0.4
L1771.12-0600	12	600	4	0.4
L1771.12-0650	12	650	4	0.4
L1771.12-0700	12	700	4	0.4
L1771.12-0750	12	750	4	0.4
L1771.12-0800	12	800	4	0.4
L1771.12-0850	12	850	4	0.4
L1771.12-0900	12	900	4	0.4
L1771.12-0950	12	950	4	0.4
L1771.12-1000	12	1000	4	0.4
L1771.12-1050	12	1050	4	0.4
L1771.12-1100	12	1100	4	0.4
L1771.12-1150	12	1150	4	0.4
L1771.12-1200	12	1200	4	0.4
L1771.12-1250	12	1250	4	0.4
L1771.12-1300	12	1300	4	0.4
L1771.12-1350	12	1350	4	0.4
L1771.12-1400	12	1400	4	0.4
L1771.12-1450	12	1450	4	0.4
L1771.12-1500	12	1500	4	0.4
L1771.12-1550	12	1550	4	0.4
L1771.12-1600	12	1600	4	0.4

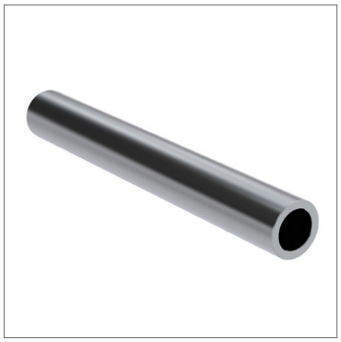
12Ø Hardened Hollow Shafts
for linear bearings



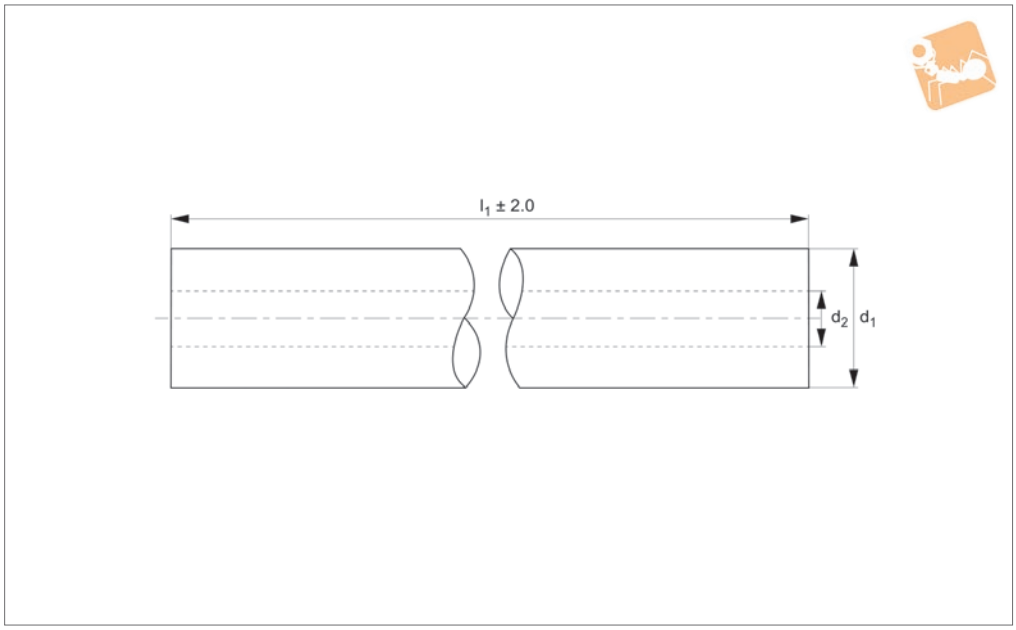
Order No.	d_1 tol. h6	l_1	d_2	Depth of hardness min.
L1771.12-1650	12	1650	4	0.4
L1771.12-1700	12	1700	4	0.4
L1771.12-1750	12	1750	4	0.4
L1771.12-1800	12	1800	4	0.4
L1771.12-1850	12	1850	4	0.4
L1771.12-1900	12	1900	4	0.4
L1771.12-1950	12	1950	4	0.4
L1771.12-2000	12	2000	4	0.4
L1771.12-2050	12	2050	4	0.4
L1771.12-2100	12	2100	4	0.4
L1771.12-2150	12	2150	4	0.4
L1771.12-2200	12	2200	4	0.4
L1771.12-2250	12	2250	4	0.4
L1771.12-2300	12	2300	4	0.4
L1771.12-2350	12	2350	4	0.4
L1771.12-2400	12	2400	4	0.4
L1771.12-2450	12	2450	4	0.4
L1771.12-2500	12	2500	4	0.4
L1771.12-2550	12	2550	4	0.4
L1771.12-2600	12	2600	4	0.4
L1771.12-2650	12	2650	4	0.4
L1771.12-2700	12	2700	4	0.4
L1771.12-2750	12	2750	4	0.4
L1771.12-2800	12	2800	4	0.4
L1771.12-2850	12	2850	4	0.4
L1771.12-2900	12	2900	4	0.4
L1771.12-2950	12	2950	4	0.4
L1771.12-3000	12	3000	4	0.4
L1771.12-3050	12	3050	4	0.4
L1771.12-3100	12	3100	4	0.4
L1771.12-3150	12	3150	4	0.4
L1771.12-3200	12	3200	4	0.4
L1771.12-3250	12	3250	4	0.4
L1771.12-3300	12	3300	4	0.4
L1771.12-3350	12	3350	4	0.4
L1771.12-3400	12	3400	4	0.4
L1771.12-3450	12	3450	4	0.4
L1771.12-3500	12	3500	4	0.4
L1771.12-3550	12	3550	4	0.4
L1771.12-3600	12	3600	4	0.4
L1771.12-3650	12	3650	4	0.4
L1771.12-3700	12	3700	4	0.4
L1771.12-3750	12	3750	4	0.4
L1771.12-3800	12	3800	4	0.4
L1771.12-3850	12	3850	4	0.4
L1771.12-3900	12	3900	4	0.4
L1771.12-3950	12	3950	4	0.4
L1771.12-4000	12	4000	4	0.4
L1771.12-4050	12	4050	4	0.4
L1771.12-4100	12	4100	4	0.4
L1771.12-4150	12	4150	4	0.4
L1771.12-4200	12	4200	4	0.4
L1771.12-4250	12	4250	4	0.4
L1771.12-4300	12	4300	4	0.4
L1771.12-4350	12	4350	4	0.4
L1771.12-4400	12	4400	4	0.4
L1771.12-4450	12	4450	4	0.4
L1771.12-4500	12	4500	4	0.4
L1771.12-4550	12	4550	4	0.4
L1771.12-4600	12	4600	4	0.4
L1771.12-4650	12	4650	4	0.4
L1771.12-4700	12	4700	4	0.4
L1771.12-4750	12	4750	4	0.4
L1771.12-4800	12	4800	4	0.4
L1771.12-4850	12	4850	4	0.4
L1771.12-4900	12	4900	4	0.4
L1771.12-4950	12	4950	4	0.4
L1771.12-5000	12	5000	4	0.4

Order No.	d_1 tol. h6	l_1	d_2	Depth of hardness min.
L1771.12-5050	12	5050	4	0.4
L1771.12-5100	12	5100	4	0.4
L1771.12-5150	12	5150	4	0.4
L1771.12-5200	12	5200	4	0.4
L1771.12-5250	12	5250	4	0.4
L1771.12-5300	12	5300	4	0.4
L1771.12-5350	12	5350	4	0.4
L1771.12-5400	12	5400	4	0.4
L1771.12-5450	12	5450	4	0.4
L1771.12-5500	12	5500	4	0.4
L1771.12-5550	12	5550	4	0.4
L1771.12-5600	12	5600	4	0.4
L1771.12-5650	12	5650	4	0.4
L1771.12-5700	12	5700	4	0.4
L1771.12-5750	12	5750	4	0.4
L1771.12-5800	12	5800	4	0.4
L1771.12-5850	12	5850	4	0.4
L1771.12-5900	12	5900	4	0.4
L1771.12-5950	12	5950	4	0.4
L1771.12-6000	12	6000	4	0.4

16Ø Hardened Hollow Shafts
for linear bearings



L1771.16



Material
Carbon steel (C60), surface hardness 60-65 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.

Technical Notes
Used in linear bearing and guideway systems where weight reduction is important.
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

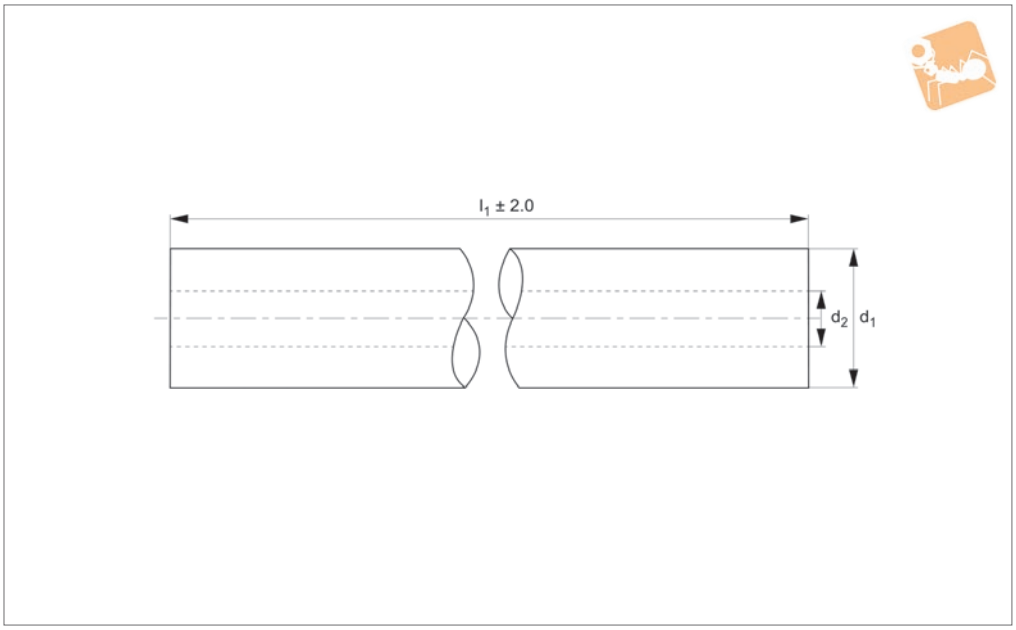
Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.16-0100	16	100	7	0.4
L1771.16-0150	16	150	7	0.4
L1771.16-0200	16	200	7	0.4
L1771.16-0250	16	250	7	0.4
L1771.16-0300	16	300	7	0.4
L1771.16-0350	16	350	7	0.4
L1771.16-0400	16	400	7	0.4
L1771.16-0450	16	450	7	0.4
L1771.16-0500	16	500	7	0.4
L1771.16-0550	16	550	7	0.4
L1771.16-0600	16	600	7	0.4
L1771.16-0650	16	650	7	0.4
L1771.16-0700	16	700	7	0.4
L1771.16-0750	16	750	7	0.4
L1771.16-0800	16	800	7	0.4
L1771.16-0850	16	850	7	0.4
L1771.16-0900	16	900	7	0.4
L1771.16-1000	16	1000	7	0.4
L1771.16-1050	16	1050	7	0.4
L1771.16-1100	16	1100	7	0.4
L1771.16-1150	16	1150	7	0.4
L1771.16-1200	16	1200	7	0.4
L1771.16-1250	16	1250	7	0.4
L1771.16-1300	16	1300	7	0.4
L1771.16-1350	16	1350	7	0.4
L1771.16-1400	16	1400	7	0.4
L1771.16-1450	16	1450	7	0.4
L1771.16-1500	16	1500	7	0.4
L1771.16-1550	16	1550	7	0.4
L1771.16-1600	16	1600	7	0.4
L1771.16-1650	16	1650	7	0.4

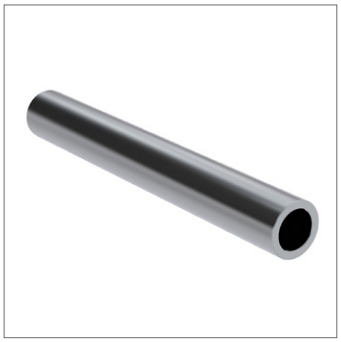
Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.16-1700	16	1700	7	0.4
L1771.16-1750	16	1750	7	0.4
L1771.16-1800	16	1800	7	0.4
L1771.16-1850	16	1850	7	0.4
L1771.16-1900	16	1900	7	0.4
L1771.16-1950	16	1950	7	0.4
L1771.16-2000	16	2000	7	0.4
L1771.16-2050	16	2050	7	0.4
L1771.16-2100	16	2100	7	0.4
L1771.16-2150	16	2150	7	0.4
L1771.16-2200	16	2200	7	0.4
L1771.16-2250	16	2250	7	0.4
L1771.16-2300	16	2300	7	0.4
L1771.16-2350	16	2350	7	0.4
L1771.16-2400	16	2400	7	0.4
L1771.16-2450	16	2450	7	0.4
L1771.16-2500	16	2500	7	0.4
L1771.16-2550	16	2550	7	0.4
L1771.16-2600	16	2600	7	0.4
L1771.16-2650	16	2650	7	0.4
L1771.16-2700	16	2700	7	0.4
L1771.16-2750	16	2750	7	0.4
L1771.16-2800	16	2800	7	0.4
L1771.16-2850	16	2850	7	0.4
L1771.16-2900	16	2900	7	0.4
L1771.16-2950	16	2950	7	0.4
L1771.16-3000	16	3000	7	0.4
L1771.16-3050	16	3050	7	0.4
L1771.16-3100	16	3100	7	0.4
L1771.16-3150	16	3150	7	0.4
L1771.16-3200	16	3200	7	0.4
L1771.16-3250	16	3250	7	0.4
L1771.16-3300	16	3300	7	0.4
L1771.16-3350	16	3350	7	0.4
L1771.16-3400	16	3400	7	0.4
L1771.16-3450	16	3450	7	0.4
L1771.16-3500	16	3500	7	0.4
L1771.16-3550	16	3550	7	0.4
L1771.16-3600	16	3600	7	0.4
L1771.16-3650	16	3650	7	0.4
L1771.16-3700	16	3700	7	0.4
L1771.16-3750	16	3750	7	0.4
L1771.16-3800	16	3800	7	0.4
L1771.16-3850	16	3850	7	0.4
L1771.16-3900	16	3900	7	0.4
L1771.16-3950	16	3950	7	0.4
L1771.16-4000	16	4000	7	0.4
L1771.16-4050	16	4050	7	0.4
L1771.16-4100	16	4100	7	0.4
L1771.16-4150	16	4150	7	0.4
L1771.16-4200	16	4200	7	0.4
L1771.16-4250	16	4250	7	0.4
L1771.16-4300	16	4300	7	0.4
L1771.16-4350	16	4350	7	0.4
L1771.16-4400	16	4400	7	0.4
L1771.16-4450	16	4450	7	0.4
L1771.16-4500	16	4500	7	0.4
L1771.16-4550	16	4550	7	0.4
L1771.16-4600	16	4600	7	0.4
L1771.16-4650	16	4650	7	0.4
L1771.16-4700	16	4700	7	0.4
L1771.16-4750	16	4750	7	0.4
L1771.16-4800	16	4800	7	0.4
L1771.16-4850	16	4850	7	0.4
L1771.16-4900	16	4900	7	0.4
L1771.16-4950	16	4950	7	0.4
L1771.16-5000	16	5000	7	0.4
L1771.16-5050	16	5050	7	0.4

16Ø Hardened Hollow Shafts
for linear bearings



Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.16-5100	16	5100	7	0.4
L1771.16-5150	16	5150	7	0.4
L1771.16-5200	16	5200	7	0.4
L1771.16-5250	16	5250	7	0.4
L1771.16-5300	16	5300	7	0.4
L1771.16-5350	16	5350	7	0.4
L1771.16-5400	16	5400	7	0.4
L1771.16-5450	16	5450	7	0.4
L1771.16-5500	16	5500	7	0.4
L1771.16-5550	16	5550	7	0.4
L1771.16-5600	16	5600	7	0.4
L1771.16-5650	16	5650	7	0.4
L1771.16-5700	16	5700	7	0.4
L1771.16-5750	16	5750	7	0.4
L1771.16-5800	16	5800	7	0.4
L1771.16-5850	16	5850	7	0.4
L1771.16-5900	16	5900	7	0.4
L1771.16-5950	16	5950	7	0.4
L1771.16-6000	16	6000	7	0.4





L1771.20

Material
Carbon steel (C60), surface hardness 60-65 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.

Technical Notes
Used in linear bearing and guideway systems where weight reduction is important.
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.20-0100	20	100	14	0.4
L1771.20-0150	20	150	14	0.4
L1771.20-0200	20	200	14	0.4
L1771.20-0250	20	250	14	0.4
L1771.20-0300	20	300	14	0.4
L1771.20-0350	20	350	14	0.4
L1771.20-0400	20	400	14	0.4
L1771.20-0450	20	450	14	0.4
L1771.20-0500	20	500	14	0.4
L1771.20-0550	20	550	14	0.4
L1771.20-0600	20	600	14	0.4
L1771.20-0650	20	650	14	0.4
L1771.20-0700	20	700	14	0.4
L1771.20-0750	20	750	14	0.4
L1771.20-0800	20	800	14	0.4
L1771.20-0850	20	850	14	0.4
L1771.20-0900	20	900	14	0.4
L1771.20-0950	20	950	14	0.4
L1771.20-1000	20	1000	14	0.4
L1771.20-1050	20	1050	14	0.4
L1771.20-1100	20	1100	14	0.4
L1771.20-1150	20	1150	14	0.4
L1771.20-1200	20	1200	14	0.4
L1771.20-1250	20	1250	14	0.4
L1771.20-1300	20	1300	14	0.4
L1771.20-1350	20	1350	14	0.4
L1771.20-1400	20	1400	14	0.4
L1771.20-1450	20	1450	14	0.4
L1771.20-1500	20	1500	14	0.4
L1771.20-1550	20	1550	14	0.4
L1771.20-1600	20	1600	14	0.4

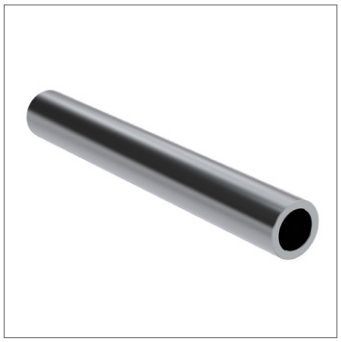
20Ø Hardened Hollow Shafts
for linear bearings



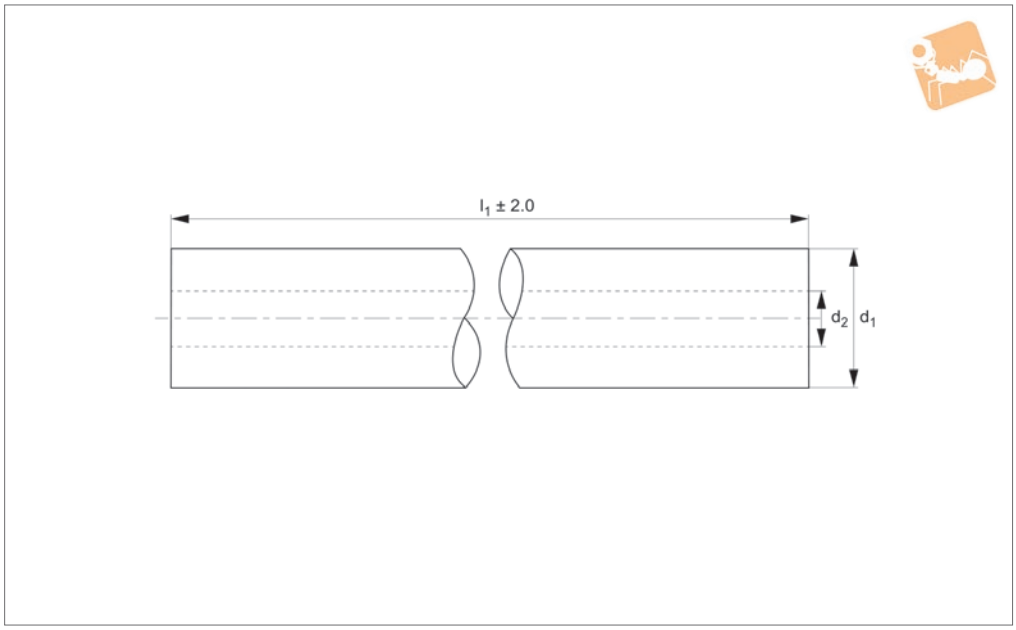
Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.20-1650	20	1650	14	0.4
L1771.20-1700	20	1700	14	0.4
L1771.20-1750	20	1750	14	0.4
L1771.20-1800	20	1800	14	0.4
L1771.20-1850	20	1850	14	0.4
L1771.20-1900	20	1900	14	0.4
L1771.20-1950	20	1950	14	0.4
L1771.20-2000	20	2000	14	0.4
L1771.20-2050	20	2050	14	0.4
L1771.20-2100	20	2100	14	0.4
L1771.20-2150	20	2150	14	0.4
L1771.20-2200	20	2200	14	0.4
L1771.20-2250	20	2250	14	0.4
L1771.20-2300	20	2300	14	0.4
L1771.20-2350	20	2350	14	0.4
L1771.20-2400	20	2400	14	0.4
L1771.20-2450	20	2450	14	0.4
L1771.20-2500	20	2500	14	0.4
L1771.20-2550	20	2550	14	0.4
L1771.20-2600	20	2600	14	0.4
L1771.20-2650	20	2650	14	0.4
L1771.20-2700	20	2700	14	0.4
L1771.20-2750	20	2750	14	0.4
L1771.20-2800	20	2800	14	0.4
L1771.20-2850	20	2850	14	0.4
L1771.20-2900	20	2900	14	0.4
L1771.20-2950	20	2950	14	0.4
L1771.20-3000	20	3000	14	0.4
L1771.20-3050	20	3050	14	0.4
L1771.20-3100	20	3100	14	0.4
L1771.20-3150	20	3150	14	0.4
L1771.20-3200	20	3200	14	0.4
L1771.20-3250	20	3250	14	0.4
L1771.20-3300	20	3300	14	0.4
L1771.20-3350	20	3350	14	0.4
L1771.20-3400	20	3400	14	0.4
L1771.20-3450	20	3450	14	0.4
L1771.20-3500	20	3500	14	0.4
L1771.20-3550	20	3550	14	0.4
L1771.20-3600	20	3600	14	0.4
L1771.20-3650	20	3650	14	0.4
L1771.20-3700	20	3700	14	0.4
L1771.20-3750	20	3750	14	0.4
L1771.20-3800	20	3800	14	0.4
L1771.20-3850	20	3850	14	0.4
L1771.20-3900	20	3900	14	0.4
L1771.20-3950	20	3950	14	0.4
L1771.20-4000	20	4000	14	0.4
L1771.20-4050	20	4050	14	0.4
L1771.20-4100	20	4100	14	0.4
L1771.20-4150	20	4150	14	0.4
L1771.20-4200	20	4200	14	0.4
L1771.20-4250	20	4250	14	0.4
L1771.20-4300	20	4300	14	0.4
L1771.20-4350	20	4350	14	0.4
L1771.20-4400	20	4400	14	0.4
L1771.20-4450	20	4450	14	0.4
L1771.20-4500	20	4500	14	0.4
L1771.20-4550	20	4550	14	0.4
L1771.20-4600	20	4600	14	0.4
L1771.20-4650	20	4650	14	0.4
L1771.20-4700	20	4700	14	0.4
L1771.20-4750	20	4750	14	0.4
L1771.20-4800	20	4800	14	0.4
L1771.20-4850	20	4850	14	0.4
L1771.20-4900	20	4900	14	0.4
L1771.20-4950	20	4950	14	0.4
L1771.20-5000	20	5000	14	0.4

Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.20-5050	20	5050	14	0.4
L1771.20-5100	20	5100	14	0.4
L1771.20-5150	20	5150	14	0.4
L1771.20-5200	20	5200	14	0.4
L1771.20-5250	20	5250	14	0.4
L1771.20-5300	20	5300	14	0.4
L1771.20-5350	20	5350	14	0.4
L1771.20-5400	20	5400	14	0.4
L1771.20-5450	20	5450	14	0.4
L1771.20-5500	20	5500	14	0.4
L1771.20-5550	20	5550	14	0.4
L1771.20-5600	20	5600	14	0.4
L1771.20-5650	20	5650	14	0.4
L1771.20-5700	20	5700	14	0.4
L1771.20-5750	20	5750	14	0.4
L1771.20-5800	20	5800	14	0.4
L1771.20-5850	20	5850	14	0.4
L1771.20-5900	20	5900	14	0.4
L1771.20-5950	20	5950	14	0.4
L1771.20-6000	20	6000	14	0.4

25Ø Hardened Hollow Shafts
for linear bearings



L1771.25



Material
Carbon steel (C60), surface hardness 60-65 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.

Technical Notes
Used in linear bearing and guideway systems where weight reduction is important.
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

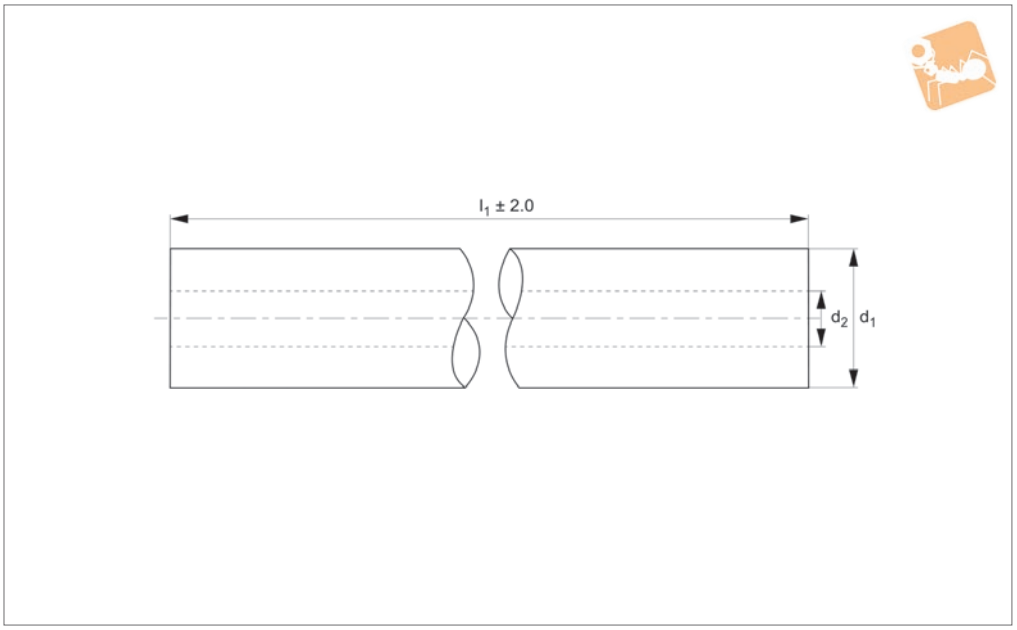
Order No.	d_1 tol. h6	l_1	d_2	Depth of hardness min.
L1771.25-0100	25	100	15	0.4
L1771.25-0150	25	150	15	0.4
L1771.25-0200	25	200	15	0.4
L1771.25-0250	25	250	15	0.4
L1771.25-0300	25	300	15	0.4
L1771.25-0350	25	350	15	0.4
L1771.25-0400	25	400	15	0.4
L1771.25-0450	25	450	15	0.4
L1771.25-0500	25	500	15	0.4
L1771.25-0550	25	550	15	0.4
L1771.25-0600	25	600	15	0.4
L1771.25-0650	25	650	15	0.4
L1771.25-0700	25	700	15	0.4
L1771.25-0750	25	750	15	0.4
L1771.25-0800	25	800	15	0.4
L1771.25-0850	25	850	15	0.4
L1771.25-0900	25	900	15	0.4
L1771.25-0950	25	950	15	0.4
L1771.25-1000	25	1000	15	0.4
L1771.25-1050	25	1050	15	0.4
L1771.25-1100	25	1100	15	0.4
L1771.25-1150	25	1150	15	0.4
L1771.25-1200	25	1200	15	0.4
L1771.25-1250	25	1250	15	0.4
L1771.25-1300	25	1300	15	0.4
L1771.25-1350	25	1350	15	0.4
L1771.25-1400	25	1400	15	0.4
L1771.25-1450	25	1450	15	0.4
L1771.25-1500	25	1500	15	0.4
L1771.25-1550	25	1550	15	0.4
L1771.25-1600	25	1600	15	0.4

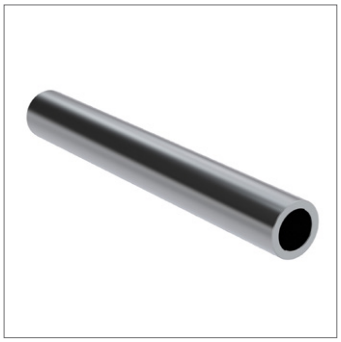
Order No.	d_1 tol. h6	l_1	d_2	Depth of hardness min.
L1771.25-1650	25	1650	15	0.4
L1771.25-1700	25	1700	15	0.4
L1771.25-1750	25	1750	15	0.4
L1771.25-1800	25	1800	15	0.4
L1771.25-1850	25	1850	15	0.4
L1771.25-1900	25	1900	15	0.4
L1771.25-1950	25	1950	15	0.4
L1771.25-2000	25	2000	15	0.4
L1771.25-2050	25	2050	15	0.4
L1771.25-2100	25	2100	15	0.4
L1771.25-2150	25	2150	15	0.4
L1771.25-2200	25	2200	15	0.4
L1771.25-2250	25	2250	15	0.4
L1771.25-2300	25	2300	15	0.4
L1771.25-2350	25	2350	15	0.4
L1771.25-2400	25	2400	15	0.4
L1771.25-2450	25	2450	15	0.4
L1771.25-2500	25	2500	15	0.4
L1771.25-2550	25	2550	15	0.4
L1771.25-2600	25	2600	15	0.4
L1771.25-2650	25	2650	15	0.4
L1771.25-2700	25	2700	15	0.4
L1771.25-2750	25	2750	15	0.4
L1771.25-2800	25	2800	15	0.4
L1771.25-2850	25	2850	15	0.4
L1771.25-2900	25	2900	15	0.4
L1771.25-2950	25	2950	15	0.4
L1771.25-3000	25	3000	15	0.4
L1771.25-3050	25	3050	15	0.4
L1771.25-3100	25	3100	15	0.4
L1771.25-3150	25	3150	15	0.4
L1771.25-3200	25	3200	15	0.4
L1771.25-3250	25	3250	15	0.4
L1771.25-3300	25	3300	15	0.4
L1771.25-3350	25	3350	15	0.4
L1771.25-3400	25	3400	15	0.4
L1771.25-3450	25	3450	15	0.4
L1771.25-3500	25	3500	15	0.4
L1771.25-3550	25	3550	15	0.4
L1771.25-3600	25	3600	15	0.4
L1771.25-3650	25	3650	15	0.4
L1771.25-3700	25	3700	15	0.4
L1771.25-3750	25	3750	15	0.4
L1771.25-3800	25	3800	15	0.4
L1771.25-3850	25	3850	15	0.4
L1771.25-3900	25	3900	15	0.4
L1771.25-3950	25	3950	15	0.4
L1771.25-4000	25	4000	15	0.4
L1771.25-4050	25	4050	15	0.4
L1771.25-4100	25	4100	15	0.4
L1771.25-4150	25	4150	15	0.4
L1771.25-4200	25	4200	15	0.4
L1771.25-4250	25	4250	15	0.4
L1771.25-4300	25	4300	15	0.4
L1771.25-4350	25	4350	15	0.4
L1771.25-4400	25	4400	15	0.4
L1771.25-4450	25	4450	15	0.4
L1771.25-4500	25	4500	15	0.4
L1771.25-4550	25	4550	15	0.4
L1771.25-4600	25	4600	15	0.4
L1771.25-4650	25	4650	15	0.4
L1771.25-4700	25	4700	15	0.4
L1771.25-4750	25	4750	15	0.4
L1771.25-4800	25	4800	15	0.4
L1771.25-4850	25	4850	15	0.4
L1771.25-4900	25	4900	15	0.4
L1771.25-4950	25	4950	15	0.4
L1771.25-5000	25	5000	15	0.4

25Ø Hardened Hollow Shafts
for linear bearings



Order No.	d_1 tol. h6	l_1	d_2	Depth of hardness min.
L1771.25-5050	25	5050	15	0.4
L1771.25-5100	25	5100	15	0.4
L1771.25-5150	25	5150	15	0.4
L1771.25-5200	25	5200	15	0.4
L1771.25-5250	25	5250	15	0.4
L1771.25-5300	25	5300	15	0.4
L1771.25-5350	25	5350	15	0.4
L1771.25-5400	25	5400	15	0.4
L1771.25-5450	25	5450	15	0.4
L1771.25-5500	25	5500	15	0.4
L1771.25-5550	25	5550	15	0.4
L1771.25-5600	25	5600	15	0.4
L1771.25-5650	25	5650	15	0.4
L1771.25-5700	25	5700	15	0.4
L1771.25-5750	25	5750	15	0.4
L1771.25-5800	25	5800	15	0.4
L1771.25-5850	25	5850	15	0.4
L1771.25-5900	25	5900	15	0.4
L1771.25-5950	25	5950	15	0.4
L1771.25-6000	25	6000	15	0.4





L1771.30

Material
Carbon steel (C60), surface hardness 60-65 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.

Technical Notes
Used in linear bearing and guideway systems where weight reduction is important.
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.30-0100	30	100	18	0.6
L1771.30-0150	30	150	18	0.6
L1771.30-0200	30	200	18	0.6
L1771.30-0250	30	250	18	0.6
L1771.30-0300	30	300	18	0.6
L1771.30-0350	30	350	18	0.6
L1771.30-0400	30	400	18	0.6
L1771.30-0450	30	450	18	0.6
L1771.30-0500	30	500	18	0.6
L1771.30-0550	30	550	18	0.6
L1771.30-0600	30	600	18	0.6
L1771.30-0650	30	650	18	0.6
L1771.30-0700	30	700	18	0.6
L1771.30-0750	30	750	18	0.6
L1771.30-0800	30	800	18	0.6
L1771.30-0850	30	850	18	0.6
L1771.30-0900	30	900	18	0.6
L1771.30-0950	30	950	18	0.6
L1771.30-1000	30	1000	18	0.6
L1771.30-1050	30	1050	18	0.6
L1771.30-1100	30	1100	18	0.6
L1771.30-1150	30	1150	18	0.6
L1771.30-1200	30	1200	18	0.6
L1771.30-1250	30	1250	18	0.6
L1771.30-1300	30	1300	18	0.6
L1771.30-1350	30	1350	18	0.6
L1771.30-1400	30	1400	18	0.6
L1771.30-1450	30	1450	18	0.6
L1771.30-1500	30	1500	18	0.6
L1771.30-1550	30	1550	18	0.6
L1771.30-1600	30	1600	18	0.6

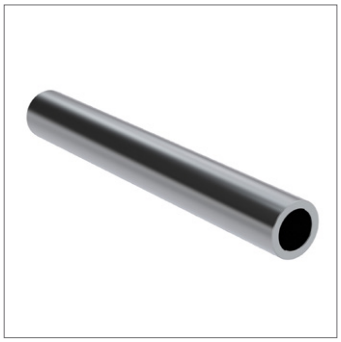
30Ø Hardened Hollow Shafts
for linear bearings



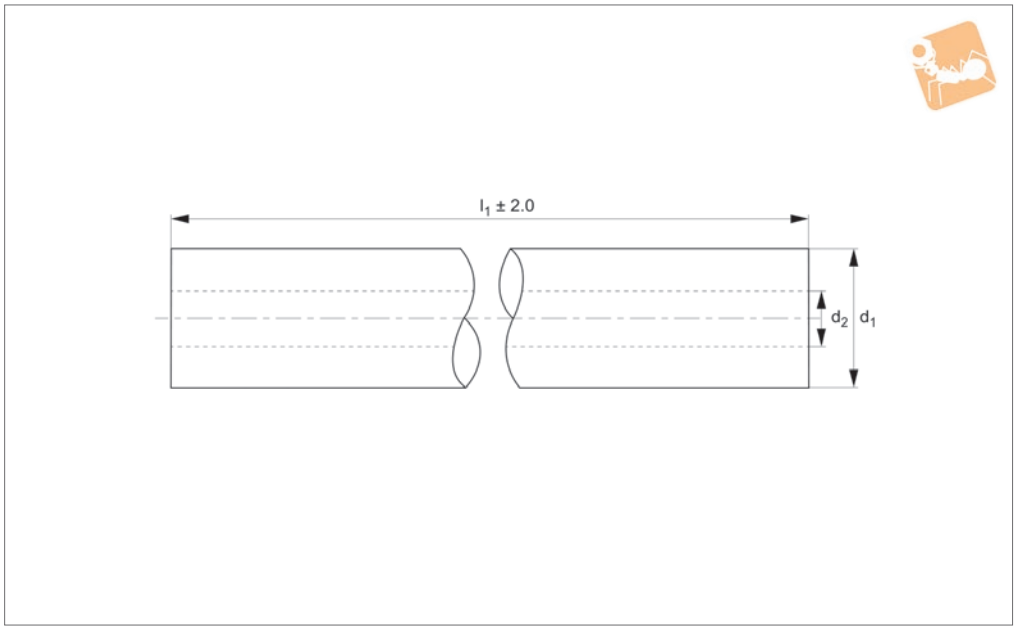
Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.30-1650	30	1650	18	0.6
L1771.30-1700	30	1700	18	0.6
L1771.30-1750	30	1750	18	0.6
L1771.30-1800	30	1800	18	0.6
L1771.30-1850	30	1850	18	0.6
L1771.30-1900	30	1900	18	0.6
L1771.30-1950	30	1950	18	0.6
L1771.30-2000	30	2000	18	0.6
L1771.30-2050	30	2050	18	0.6
L1771.30-2100	30	2100	18	0.6
L1771.30-2150	30	2150	18	0.6
L1771.30-2200	30	2200	18	0.6
L1771.30-2250	30	2250	18	0.6
L1771.30-2300	30	2300	18	0.6
L1771.30-2350	30	2350	18	0.6
L1771.30-2400	30	2400	18	0.6
L1771.30-2450	30	2450	18	0.6
L1771.30-2500	30	2500	18	0.6
L1771.30-2550	30	2550	18	0.6
L1771.30-2600	30	2600	18	0.6
L1771.30-2650	30	2650	18	0.6
L1771.30-2700	30	2700	18	0.6
L1771.30-2750	30	2750	18	0.6
L1771.30-2800	30	2800	18	0.6
L1771.30-2850	30	2850	18	0.6
L1771.30-2900	30	2900	18	0.6
L1771.30-2950	30	2950	18	0.6
L1771.30-3000	30	3000	18	0.6
L1771.30-3050	30	3050	18	0.6
L1771.30-3100	30	3100	18	0.6
L1771.30-3150	30	3150	18	0.6
L1771.30-3200	30	3200	18	0.6
L1771.30-3250	30	3250	18	0.6
L1771.30-3300	30	3300	18	0.6
L1771.30-3350	30	3350	18	0.6
L1771.30-3400	30	3400	18	0.6
L1771.30-3450	30	3450	18	0.6
L1771.30-3500	30	3500	18	0.6
L1771.30-3550	30	3550	18	0.6
L1771.30-3600	30	3600	18	0.6
L1771.30-3650	30	3650	18	0.6
L1771.30-3700	30	3700	18	0.6
L1771.30-3750	30	3750	18	0.6
L1771.30-3800	30	3800	18	0.6
L1771.30-3850	30	3850	18	0.6
L1771.30-3900	30	3900	18	0.6
L1771.30-3950	30	3950	18	0.6
L1771.30-4000	30	4000	18	0.6
L1771.30-4050	30	4050	18	0.6
L1771.30-4100	30	4100	18	0.6
L1771.30-4150	30	4150	18	0.6
L1771.30-4200	30	4200	18	0.6
L1771.30-4250	30	4250	18	0.6
L1771.30-4300	30	4300	18	0.6
L1771.30-4350	30	4350	18	0.6
L1771.30-4400	30	4400	18	0.6
L1771.30-4450	30	4450	18	0.6
L1771.30-4500	30	4500	18	0.6
L1771.30-4550	30	4550	18	0.6
L1771.30-4600	30	4600	18	0.6
L1771.30-4650	30	4650	18	0.6
L1771.30-4700	30	4700	18	0.6
L1771.30-4750	30	4750	18	0.6
L1771.30-4800	30	4800	18	0.6
L1771.30-4850	30	4850	18	0.6
L1771.30-4900	30	4900	18	0.6
L1771.30-4950	30	4950	18	0.6
L1771.30-5000	30	5000	18	0.6

Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.30-5050	30	5050	18	0.6
L1771.30-5100	30	5100	18	0.6
L1771.30-5150	30	5150	18	0.6
L1771.30-5200	30	5200	18	0.6
L1771.30-5250	30	5250	18	0.6
L1771.30-5300	30	5300	18	0.6
L1771.30-5350	30	5350	18	0.6
L1771.30-5400	30	5400	18	0.6
L1771.30-5450	30	5450	18	0.6
L1771.30-5500	30	5500	18	0.6
L1771.30-5550	30	5550	18	0.6
L1771.30-5600	30	5600	18	0.6
L1771.30-5650	30	5650	18	0.6
L1771.30-5700	30	5700	18	0.6
L1771.30-5750	30	5750	18	0.6
L1771.30-5800	30	5800	18	0.6
L1771.30-5850	30	5850	18	0.6
L1771.30-5900	30	5900	18	0.6
L1771.30-5950	30	5950	18	0.6
L1771.30-6000	30	6000	18	0.6

40Ø Hardened Hollow Shafts
for linear bearings



L1771.40



Material
Carbon steel (C60), surface hardness 60-65 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.

Technical Notes
Used in linear bearing and guideway systems where weight reduction is important.
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.40-0100	40	100	28	0.6
L1771.40-0150	40	150	28	0.6
L1771.40-0200	40	200	28	0.6
L1771.40-0250	40	250	28	0.6
L1771.40-0300	40	300	28	0.6
L1771.40-0350	40	350	28	0.6
L1771.40-0400	40	400	28	0.6
L1771.40-0450	40	450	28	0.6
L1771.40-0500	40	500	28	0.6
L1771.40-0550	40	550	28	0.6
L1771.40-0600	40	600	28	0.6
L1771.40-0650	40	650	28	0.6
L1771.40-0700	40	700	28	0.6
L1771.40-0750	40	750	28	0.6
L1771.40-0800	40	800	28	0.6
L1771.40-0850	40	850	28	0.6
L1771.40-0900	40	900	28	0.6
L1771.40-0950	40	950	28	0.6
L1771.40-1000	40	1000	28	0.6
L1771.40-1050	40	1050	28	0.6
L1771.40-1100	40	1100	28	0.6
L1771.40-1150	40	1150	28	0.6
L1771.40-1200	40	1200	28	0.6
L1771.40-1250	40	1250	28	0.6
L1771.40-1300	40	1300	28	0.6
L1771.40-1350	40	1350	28	0.6
L1771.40-1400	40	1400	28	0.6
L1771.40-1450	40	1450	28	0.6
L1771.40-1500	40	1500	28	0.6
L1771.40-1550	40	1550	28	0.6
L1771.40-1600	40	1600	28	0.6

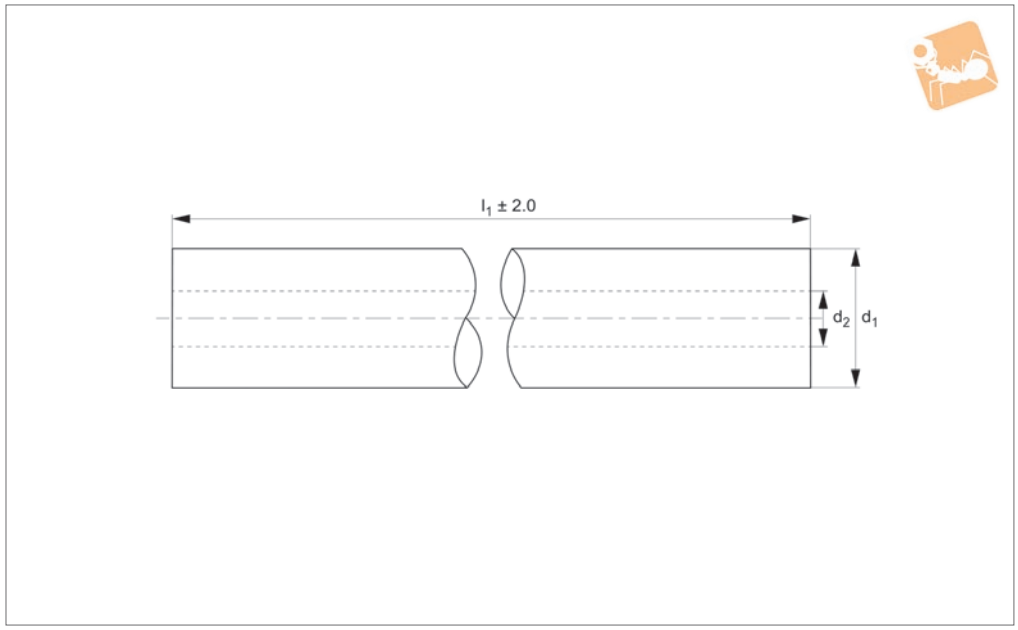
Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.40-1650	40	1650	28	0.6
L1771.40-1700	40	1700	28	0.6
L1771.40-1750	40	1750	28	0.6
L1771.40-1800	40	1800	28	0.6
L1771.40-1850	40	1850	28	0.6
L1771.40-1900	40	1900	28	0.6
L1771.40-1950	40	1950	28	0.6
L1771.40-2000	40	2000	28	0.6
L1771.40-2050	40	2050	28	0.6
L1771.40-2100	40	2100	28	0.6
L1771.40-2150	40	2150	28	0.6
L1771.40-2200	40	2200	28	0.6
L1771.40-2250	40	2250	28	0.6
L1771.40-2300	40	2300	28	0.6
L1771.40-2350	40	2350	28	0.6
L1771.40-2400	40	2400	28	0.6
L1771.40-2450	40	2450	28	0.6
L1771.40-2500	40	2500	28	0.6
L1771.40-2550	40	2550	28	0.6
L1771.40-2600	40	2600	28	0.6
L1771.40-2650	40	2650	28	0.6
L1771.40-2700	40	2700	28	0.6
L1771.40-2750	40	2750	28	0.6
L1771.40-2800	40	2800	28	0.6
L1771.40-2850	40	2850	28	0.6
L1771.40-2900	40	2900	28	0.6
L1771.40-2950	40	2950	28	0.6
L1771.40-3000	40	3000	28	0.6
L1771.40-3050	40	3050	28	0.6
L1771.40-3100	40	3100	28	0.6
L1771.40-3150	40	3150	28	0.6
L1771.40-3200	40	3200	28	0.6
L1771.40-3250	40	3250	28	0.6
L1771.40-3300	40	3300	28	0.6
L1771.40-3350	40	3350	28	0.6
L1771.40-3400	40	3400	28	0.6
L1771.40-3450	40	3450	28	0.6
L1771.40-3500	40	3500	28	0.6
L1771.40-3550	40	3550	28	0.6
L1771.40-3600	40	3600	28	0.6
L1771.40-3650	40	3650	28	0.6
L1771.40-3700	40	3700	28	0.6
L1771.40-3750	40	3750	28	0.6
L1771.40-3800	40	3800	28	0.6
L1771.40-3850	40	3850	28	0.6
L1771.40-3900	40	3900	28	0.6
L1771.40-3950	40	3950	28	0.6
L1771.40-4000	40	4000	28	0.6
L1771.40-4050	40	4050	28	0.6
L1771.40-4100	40	4100	28	0.6
L1771.40-4150	40	4150	28	0.6
L1771.40-4200	40	4200	28	0.6
L1771.40-4250	40	4250	28	0.6
L1771.40-4300	40	4300	28	0.6
L1771.40-4350	40	4350	28	0.6
L1771.40-4400	40	4400	28	0.6
L1771.40-4450	40	4450	28	0.6
L1771.40-4500	40	4500	28	0.6
L1771.40-4550	40	4550	28	0.6
L1771.40-4600	40	4600	28	0.6
L1771.40-4650	40	4650	28	0.6
L1771.40-4700	40	4700	28	0.6
L1771.40-4750	40	4750	28	0.6
L1771.40-4800	40	4800	28	0.6
L1771.40-4850	40	4850	28	0.6
L1771.40-4900	40	4900	28	0.6
L1771.40-4950	40	4950	28	0.6
L1771.40-5000	40	5000	28	0.6

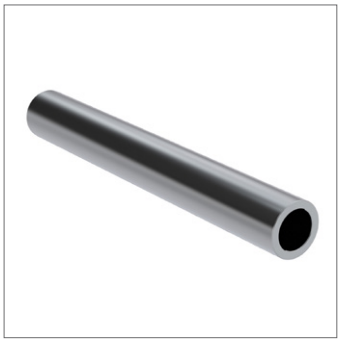
40Ø Hardened Hollow Shafts

for linear bearings



Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.40-5050	40	5050	28	0.6
L1771.40-5100	40	5100	28	0.6
L1771.40-5150	40	5150	28	0.6
L1771.40-5200	40	5200	28	0.6
L1771.40-5250	40	5250	28	0.6
L1771.40-5300	40	5300	28	0.6
L1771.40-5350	40	5350	28	0.6
L1771.40-5400	40	5400	28	0.6
L1771.40-5450	40	5450	28	0.6
L1771.40-5500	40	5500	28	0.6
L1771.40-5550	40	5550	28	0.6
L1771.40-5600	40	5600	28	0.6
L1771.40-5650	40	5650	28	0.6
L1771.40-5700	40	5700	28	0.6
L1771.40-5750	40	5750	28	0.6
L1771.40-5800	40	5800	28	0.6
L1771.40-5850	40	5850	28	0.6
L1771.40-5900	40	5900	28	0.6
L1771.40-5950	40	5950	28	0.6
L1771.40-6000	40	6000	28	0.6





L1771.50

Material
Carbon steel (C60), surface hardness 60-65 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.

Technical Notes
Used in linear bearing and guideway systems where weight reduction is important.
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.50-0100	50	100	28	0.6
L1771.50-0150	50	150	28	0.6
L1771.50-0200	50	200	28	0.6
L1771.50-0250	50	250	28	0.6
L1771.50-0300	50	300	28	0.6
L1771.50-0350	50	350	28	0.6
L1771.50-0400	50	400	28	0.6
L1771.50-0450	50	450	28	0.6
L1771.50-0500	50	500	28	0.6
L1771.50-0550	50	550	28	0.6
L1771.50-0600	50	600	28	0.6
L1771.50-0650	50	650	28	0.6
L1771.50-0700	50	700	28	0.6
L1771.50-0750	50	750	28	0.6
L1771.50-0800	50	800	28	0.6
L1771.50-0850	50	850	28	0.6
L1771.50-0900	50	900	28	0.6
L1771.50-0950	50	950	28	0.6
L1771.50-1000	50	1000	28	0.6
L1771.50-1050	50	1050	28	0.6
L1771.50-1100	50	1100	28	0.6
L1771.50-1150	50	1150	28	0.6
L1771.50-1200	50	1200	28	0.6
L1771.50-1250	50	1250	28	0.6
L1771.50-1300	50	1300	28	0.6
L1771.50-1350	50	1350	28	0.6
L1771.50-1400	50	1400	28	0.6
L1771.50-1450	50	1450	28	0.6
L1771.50-1500	50	1500	28	0.6
L1771.50-1550	50	1550	28	0.6
L1771.50-1600	50	1600	28	0.6

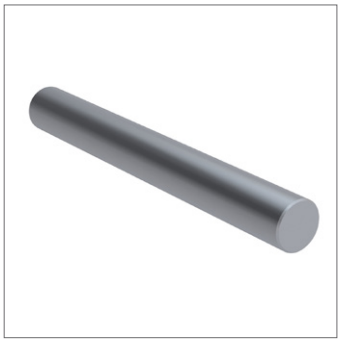
50Ø Hardened Hollow Shafts
for linear bearings



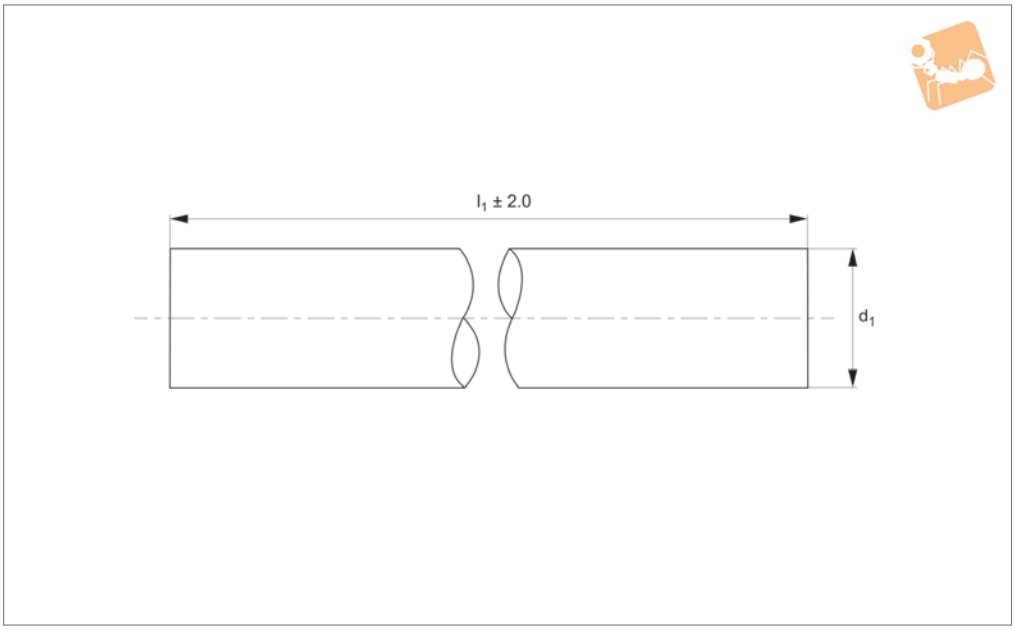
Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.50-1650	50	1650	28	0.6
L1771.50-1700	50	1700	28	0.6
L1771.50-1750	50	1750	28	0.6
L1771.50-1800	50	1800	28	0.6
L1771.50-1850	50	1850	28	0.6
L1771.50-1900	50	1900	28	0.6
L1771.50-1950	50	1950	28	0.6
L1771.50-2000	50	2000	28	0.6
L1771.50-2050	50	2050	28	0.6
L1771.50-2100	50	2100	28	0.6
L1771.50-2150	50	2150	28	0.6
L1771.50-2200	50	2200	28	0.6
L1771.50-2250	50	2250	28	0.6
L1771.50-2300	50	2300	28	0.6
L1771.50-2350	50	2350	28	0.6
L1771.50-2400	50	2400	28	0.6
L1771.50-2450	50	2450	28	0.6
L1771.50-2500	50	2500	28	0.6
L1771.50-2550	50	2550	28	0.6
L1771.50-2600	50	2600	28	0.6
L1771.50-2650	50	2650	28	0.6
L1771.50-2700	50	2700	28	0.6
L1771.50-2750	50	2750	28	0.6
L1771.50-2800	50	2800	28	0.6
L1771.50-2850	50	2850	28	0.6
L1771.50-2900	50	2900	28	0.6
L1771.50-2950	50	2950	28	0.6
L1771.50-3000	50	3000	28	0.6
L1771.50-3050	50	3050	28	0.6
L1771.50-3100	50	3100	28	0.6
L1771.50-3150	50	3150	28	0.6
L1771.50-3200	50	3200	28	0.6
L1771.50-3250	50	3250	28	0.6
L1771.50-3300	50	3300	28	0.6
L1771.50-3350	50	3350	28	0.6
L1771.50-3400	50	3400	28	0.6
L1771.50-3450	50	3450	28	0.6
L1771.50-3500	50	3500	28	0.6
L1771.50-3550	50	3550	28	0.6
L1771.50-3600	50	3600	28	0.6
L1771.50-3650	50	3650	28	0.6
L1771.50-3700	50	3700	28	0.6
L1771.50-3750	50	3750	28	0.6
L1771.50-3800	50	3800	28	0.6
L1771.50-3850	50	3850	28	0.6
L1771.50-3900	50	3900	28	0.6
L1771.50-3950	50	3950	28	0.6
L1771.50-4000	50	4000	28	0.6
L1771.50-4050	50	4050	28	0.6
L1771.50-4100	50	4100	28	0.6
L1771.50-4150	50	4150	28	0.6
L1771.50-4200	50	4200	28	0.6
L1771.50-4250	50	4250	28	0.6
L1771.50-4300	50	4300	28	0.6
L1771.50-4350	50	4350	28	0.6
L1771.50-4400	50	4400	28	0.6
L1771.50-4450	50	4450	28	0.6
L1771.50-4500	50	4500	28	0.6
L1771.50-4550	50	4550	28	0.6
L1771.50-4600	50	4600	28	0.6
L1771.50-4650	50	4650	28	0.6
L1771.50-4700	50	4700	28	0.6
L1771.50-4750	50	4750	28	0.6
L1771.50-4800	50	4800	28	0.6
L1771.50-4850	50	4850	28	0.6
L1771.50-4900	50	4900	28	0.6
L1771.50-4950	50	4950	28	0.6
L1771.50-5000	50	5000	28	0.6

Order No.	d_1 tol. h6	l_1	d_2 tol. h6	Depth of hardness min.
L1771.50-5050	50	5050	28	0.6
L1771.50-5100	50	5100	28	0.6
L1771.50-5150	50	5150	28	0.6
L1771.50-5200	50	5200	28	0.6
L1771.50-5250	50	5250	28	0.6
L1771.50-5300	50	5300	28	0.6
L1771.50-5350	50	5350	28	0.6
L1771.50-5400	50	5400	28	0.6
L1771.50-5450	50	5450	28	0.6
L1771.50-5500	50	5500	28	0.6
L1771.50-5550	50	5550	28	0.6
L1771.50-5600	50	5600	28	0.6
L1771.50-5650	50	5650	28	0.6
L1771.50-5700	50	5700	28	0.6
L1771.50-5750	50	5750	28	0.6
L1771.50-5800	50	5800	28	0.6
L1771.50-5850	50	5850	28	0.6
L1771.50-5900	50	5900	28	0.6
L1771.50-5950	50	5950	28	0.6
L1771.50-6000	50	6000	28	0.6

6Ø Stainless AISI 303 Shafts
soft



L1773.06



Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >510 N/mm², tensile strength: >720 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,3mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

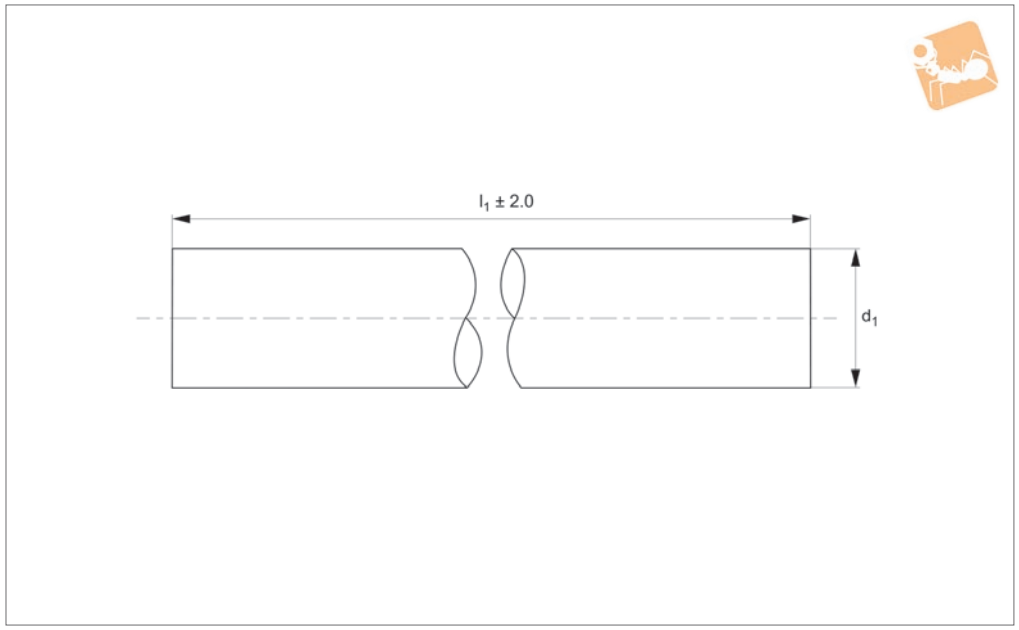
Order No.	d_1	l_1	Tolerance µ tol. h6
L1773.06-0100	6	100	+0,-8
L1773.06-0150	6	150	+0,-8
L1773.06-0200	6	200	+0,-8
L1773.06-0250	6	250	+0,-8
L1773.06-0300	6	300	+0,-8
L1773.06-0350	6	350	+0,-8
L1773.06-0400	6	400	+0,-8
L1773.06-0450	6	450	+0,-8
L1773.06-0500	6	500	+0,-8
L1773.06-0550	6	550	+0,-8
L1773.06-0600	6	600	+0,-8
L1773.06-0650	6	650	+0,-8
L1773.06-0700	6	700	+0,-8
L1773.06-0750	6	750	+0,-8
L1773.06-0800	6	800	+0,-8
L1773.06-0850	6	850	+0,-8
L1773.06-0900	6	900	+0,-8
L1773.06-0950	6	950	+0,-8
L1773.06-1000	6	1000	+0,-8
L1773.06-1050	6	1050	+0,-8
L1773.06-1100	6	1100	+0,-8
L1773.06-1150	6	1150	+0,-8
L1773.06-1200	6	1200	+0,-8
L1773.06-1250	6	1250	+0,-8
L1773.06-1300	6	1300	+0,-8
L1773.06-1350	6	1350	+0,-8
L1773.06-1400	6	1400	+0,-8
L1773.06-1450	6	1450	+0,-8
L1773.06-1500	6	1500	+0,-8

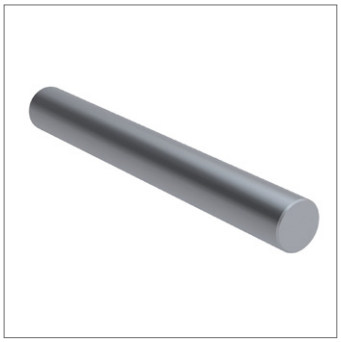
Order No.	d_1	l_1	Tolerance μ tol. h6
L1773.06-1550	6	1550	+0,-8
L1773.06-1600	6	1600	+0,-8
L1773.06-1650	6	1650	+0,-8
L1773.06-1700	6	1700	+0,-8
L1773.06-1750	6	1750	+0,-8
L1773.06-1800	6	1800	+0,-8
L1773.06-1850	6	1850	+0,-8
L1773.06-1900	6	1900	+0,-8
L1773.06-1950	6	1950	+0,-8
L1773.06-2000	6	2000	+0,-8
L1773.06-2050	6	2050	+0,-8
L1773.06-2100	6	2100	+0,-8
L1773.06-2150	6	2150	+0,-8
L1773.06-2200	6	2200	+0,-8
L1773.06-2250	6	2250	+0,-8
L1773.06-2300	6	2300	+0,-8
L1773.06-2350	6	2350	+0,-8
L1773.06-2400	6	2400	+0,-8
L1773.06-2450	6	2450	+0,-8
L1773.06-2500	6	2500	+0,-8
L1773.06-2550	6	2550	+0,-8
L1773.06-2600	6	2600	+0,-8
L1773.06-2650	6	2650	+0,-8
L1773.06-2700	6	2700	+0,-8
L1773.06-2750	6	2750	+0,-8
L1773.06-2800	6	2800	+0,-8
L1773.06-2850	6	2850	+0,-8
L1773.06-2900	6	2900	+0,-8
L1773.06-2950	6	2950	+0,-8
L1773.06-3000	6	3000	+0,-8
L1773.06-3050	6	3050	+0,-8
L1773.06-3100	6	3100	+0,-8
L1773.06-3150	6	3150	+0,-8
L1773.06-3200	6	3200	+0,-8
L1773.06-3250	6	3250	+0,-8
L1773.06-3300	6	3300	+0,-8
L1773.06-3350	6	3350	+0,-8
L1773.06-3400	6	3400	+0,-8
L1773.06-3450	6	3450	+0,-8
L1773.06-3500	6	3500	+0,-8
L1773.06-3550	6	3550	+0,-8
L1773.06-3600	6	3600	+0,-8
L1773.06-3650	6	3650	+0,-8
L1773.06-3700	6	3700	+0,-8
L1773.06-3750	6	3750	+0,-8
L1773.06-3800	6	3800	+0,-8
L1773.06-3850	6	3850	+0,-8
L1773.06-3900	6	3900	+0,-8
L1773.06-3950	6	3950	+0,-8
L1773.06-4000	6	4000	+0,-8
L1773.06-4050	6	4050	+0,-8
L1773.06-4100	6	4100	+0,-8
L1773.06-4150	6	4150	+0,-8
L1773.06-4200	6	4200	+0,-8
L1773.06-4250	6	4250	+0,-8
L1773.06-4300	6	4300	+0,-8
L1773.06-4350	6	4350	+0,-8
L1773.06-4400	6	4400	+0,-8
L1773.06-4450	6	4450	+0,-8
L1773.06-4500	6	4500	+0,-8
L1773.06-4550	6	4550	+0,-8
L1773.06-4600	6	4600	+0,-8
L1773.06-4650	6	4650	+0,-8
L1773.06-4700	6	4700	+0,-8
L1773.06-4750	6	4750	+0,-8
L1773.06-4800	6	4800	+0,-8
L1773.06-4850	6	4850	+0,-8
L1773.06-4900	6	4900	+0,-8

6Ø Stainless AISI 303 Shafts
soft



Order No.	d_1	l_1	Tolerance µ tol. h6
L1773.06-4950	6	4950	+0,-8
L1773.06-5000	6	5000	+0,-8
L1773.06-5050	6	5050	+0,-8
L1773.06-5100	6	5100	+0,-8
L1773.06-5150	6	5150	+0,-8
L1773.06-5200	6	5200	+0,-8
L1773.06-5250	6	5250	+0,-8
L1773.06-5300	6	5300	+0,-8
L1773.06-5350	6	5350	+0,-8
L1773.06-5400	6	5400	+0,-8
L1773.06-5450	6	5450	+0,-8
L1773.06-5500	6	5500	+0,-8
L1773.06-5550	6	5550	+0,-8
L1773.06-5600	6	5600	+0,-8
L1773.06-5650	6	5650	+0,-8
L1773.06-5700	6	5700	+0,-8
L1773.06-5750	6	5750	+0,-8
L1773.06-5800	6	5800	+0,-8
L1773.06-5850	6	5850	+0,-8
L1773.06-5900	6	5900	+0,-8
L1773.06-5950	6	5950	+0,-8
L1773.06-6000	6	6000	+0,-8





L1773.08

Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla. Yield stress: >510 N/mm^2, tensile strength: >720 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,3mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1773.08-0100	8	100	+0,-9
L1773.08-0150	8	150	+0,-9
L1773.08-0200	8	200	+0,-9
L1773.08-0250	8	250	+0,-9
L1773.08-0300	8	300	+0,-9
L1773.08-0350	8	350	+0,-9
L1773.08-0400	8	400	+0,-9
L1773.08-0450	8	450	+0,-9
L1773.08-0500	8	500	+0,-9
L1773.08-0550	8	550	+0,-9
L1773.08-0600	8	600	+0,-9
L1773.08-0650	8	650	+0,-9
L1773.08-0700	8	700	+0,-9
L1773.08-0750	8	750	+0,-9
L1773.08-0800	8	800	+0,-9
L1773.08-0850	8	850	+0,-9
L1773.08-0900	8	900	+0,-9
L1773.08-0950	8	950	+0,-9
L1773.08-1000	8	1000	+0,-9
L1773.08-1050	8	1050	+0,-9
L1773.08-1100	8	1100	+0,-9
L1773.08-1150	8	1150	+0,-9
L1773.08-1200	8	1200	+0,-9
L1773.08-1250	8	1250	+0,-9
L1773.08-1300	8	1300	+0,-9
L1773.08-1350	8	1350	+0,-9
L1773.08-1400	8	1400	+0,-9
L1773.08-1450	8	1450	+0,-9
L1773.08-1500	8	1500	+0,-9

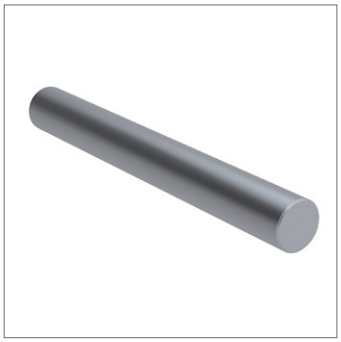
8Ø Stainless AISI 303 Shafts
soft



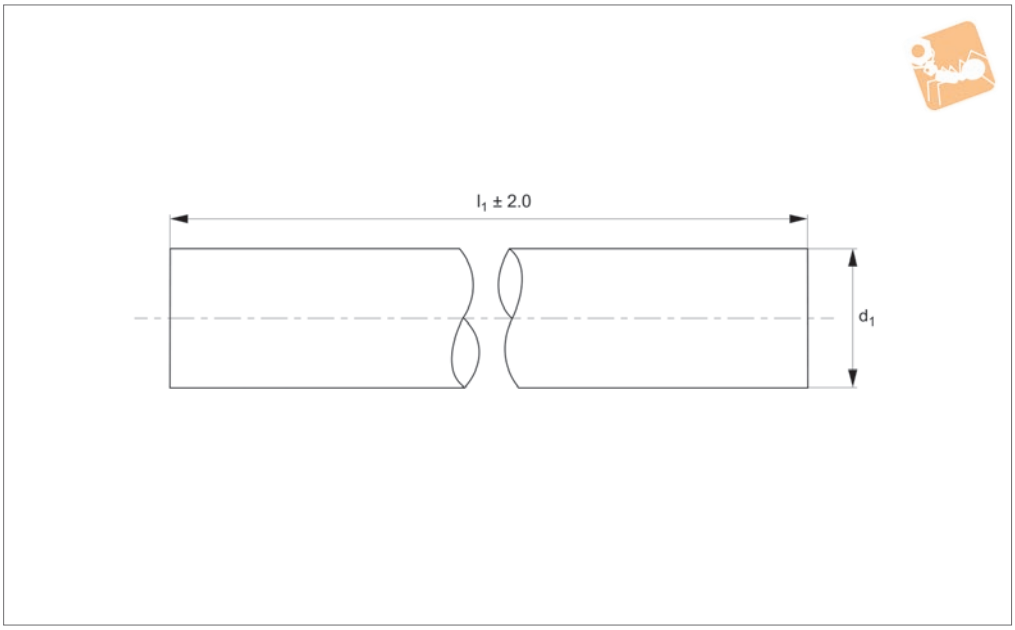
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.08-1550	8	1550	+0,-9
L1773.08-1600	8	1600	+0,-9
L1773.08-1650	8	1650	+0,-9
L1773.08-1700	8	1700	+0,-9
L1773.08-1750	8	1750	+0,-9
L1773.08-1800	8	1800	+0,-9
L1773.08-1850	8	1850	+0,-9
L1773.08-1900	8	1900	+0,-9
L1773.08-1950	8	1950	+0,-9
L1773.08-2000	8	2000	+0,-9
L1773.08-2050	8	2050	+0,-9
L1773.08-2100	8	2100	+0,-9
L1773.08-2150	8	2150	+0,-9
L1773.08-2200	8	2200	+0,-9
L1773.08-2250	8	2250	+0,-9
L1773.08-2300	8	2300	+0,-9
L1773.08-2350	8	2350	+0,-9
L1773.08-2400	8	2400	+0,-9
L1773.08-2450	8	2450	+0,-9
L1773.08-2500	8	2500	+0,-9
L1773.08-2550	8	2550	+0,-9
L1773.08-2600	8	2600	+0,-9
L1773.08-2650	8	2650	+0,-9
L1773.08-2700	8	2700	+0,-9
L1773.08-2750	8	2750	+0,-9
L1773.08-2800	8	2800	+0,-9
L1773.08-2850	8	2850	+0,-9
L1773.08-2900	8	2900	+0,-9
L1773.08-2950	8	2950	+0,-9
L1773.08-3000	8	3000	+0,-9
L1773.08-3050	8	3050	+0,-9
L1773.08-3100	8	3100	+0,-9
L1773.08-3150	8	3150	+0,-9
L1773.08-3200	8	3200	+0,-9
L1773.08-3250	8	3250	+0,-9
L1773.08-3300	8	3300	+0,-9
L1773.08-3350	8	3350	+0,-9
L1773.08-3400	8	3400	+0,-9
L1773.08-3450	8	3450	+0,-9
L1773.08-3500	8	3500	+0,-9
L1773.08-3550	8	3550	+0,-9
L1773.08-3600	8	3600	+0,-9
L1773.08-3650	8	3650	+0,-9
L1773.08-3700	8	3700	+0,-9
L1773.08-3750	8	3750	+0,-9
L1773.08-3800	8	3800	+0,-9
L1773.08-3850	8	3850	+0,-9
L1773.08-3900	8	3900	+0,-9
L1773.08-3950	8	3950	+0,-9
L1773.08-4000	8	4000	+0,-9
L1773.08-4050	8	4050	+0,-9
L1773.08-4100	8	4100	+0,-9
L1773.08-4150	8	4150	+0,-9
L1773.08-4200	8	4200	+0,-9
L1773.08-4250	8	4250	+0,-9
L1773.08-4300	8	4300	+0,-9
L1773.08-4350	8	4350	+0,-9
L1773.08-4400	8	4400	+0,-9
L1773.08-4450	8	4450	+0,-9
L1773.08-4500	8	4500	+0,-9
L1773.08-4550	8	4550	+0,-9
L1773.08-4600	8	4600	+0,-9
L1773.08-4650	8	4650	+0,-9
L1773.08-4700	8	4700	+0,-9
L1773.08-4750	8	4750	+0,-9
L1773.08-4800	8	4800	+0,-9
L1773.08-4850	8	4850	+0,-9
L1773.08-4900	8	4900	+0,-9

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.08-4950	8	4950	+0,-9
L1773.08-5000	8	5000	+0,-9
L1773.08-5050	8	-	+0,-9
L1773.08-5100	8	5100	+0,-9
L1773.08-5150	8	5150	+0,-9
L1773.08-5200	8	5200	+0,-9
L1773.08-5250	8	5250	+0,-9
L1773.08-5300	8	5300	+0,-9
L1773.08-5350	8	5350	+0,-9
L1773.08-5400	8	5400	+0,-9
L1773.08-5450	8	5450	+0,-9
L1773.08-5500	8	5500	+0,-9
L1773.08-5550	8	5550	+0,-9
L1773.08-5600	8	5600	+0,-9
L1773.08-5650	8	5650	+0,-9
L1773.08-5700	8	5700	+0,-9
L1773.08-5750	8	5750	+0,-9
L1773.08-5800	8	5800	+0,-9
L1773.08-5850	8	5850	+0,-9
L1773.08-5900	8	5900	+0,-9
L1773.08-5950	8	5950	+0,-9
L1773.08-6000	8	6000	+0,-9

10Ø Stainless AISI 303 Shafts
soft



L1773.10



Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >510 N/mm², tensile strength: >720 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1773.10-0100	10	100	+0,-10
L1773.10-0150	10	150	+0,-10
L1773.10-0200	10	200	+0,-10
L1773.10-0250	10	250	+0,-10
L1773.10-0300	10	300	+0,-10
L1773.10-0350	10	350	+0,-10
L1773.10-0400	10	400	+0,-10
L1773.10-0450	10	450	+0,-10
L1773.10-0500	10	500	+0,-10
L1773.10-0550	10	550	+0,-10
L1773.10-0600	10	600	+0,-10
L1773.10-0650	10	650	+0,-10
L1773.10-0700	10	700	+0,-10
L1773.10-0750	10	750	+0,-10
L1773.10-0800	10	800	+0,-10
L1773.10-0850	10	852	+0,-10
L1773.10-0900	10	900	+0,-10
L1773.10-0950	10	950	+0,-10
L1773.10-1000	10	1000	+0,-10
L1773.10-1050	10	1050	+0,-10
L1773.10-1100	10	1100	+0,-10
L1773.10-1150	10	1150	+0,-10
L1773.10-1200	10	1200	+0,-10
L1773.10-1250	10	1250	+0,-10
L1773.10-1300	10	1300	+0,-10
L1773.10-1350	10	1350	+0,-10
L1773.10-1400	10	1400	+0,-10
L1773.10-1450	10	1450	+0,-10
L1773.10-1500	10	1500	+0,-10

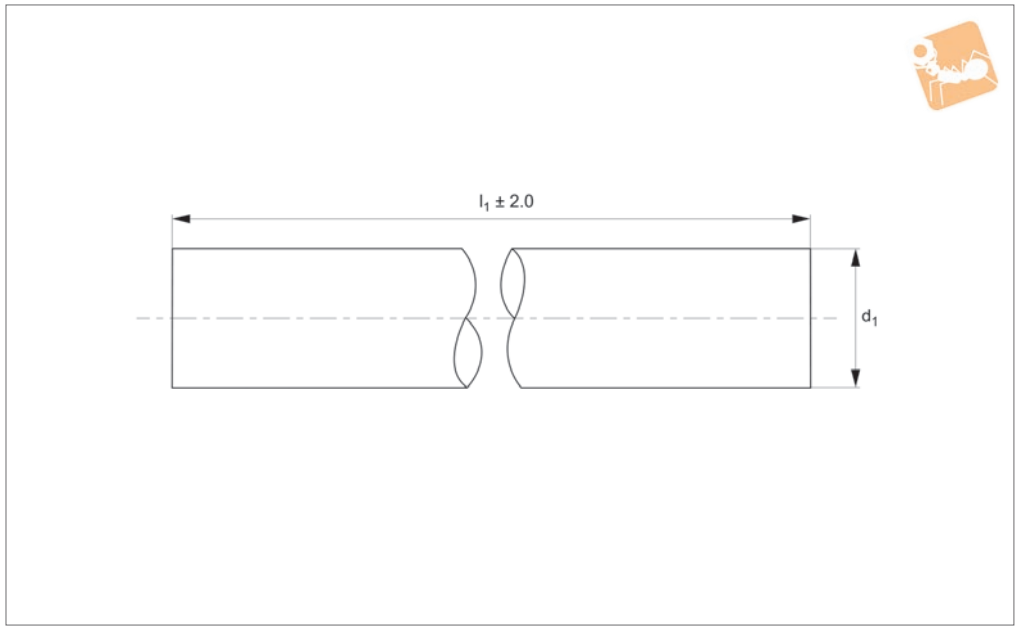
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.10-1550	10	1550	+0,-10
L1773.10-1600	10	1600	+0,-10
L1773.10-1650	10	1650	+0,-10
L1773.10-1700	10	1700	+0,-10
L1773.10-1750	10	1750	+0,-10
L1773.10-1800	10	1800	+0,-10
L1773.10-1850	10	1850	+0,-10
L1773.10-1900	10	1900	+0,-10
L1773.10-1950	10	1950	+0,-10
L1773.10-2000	10	2000	+0,-10
L1773.10-2050	10	2050	+0,-10
L1773.10-2100	10	2100	+0,-10
L1773.10-2150	10	2150	+0,-10
L1773.10-2200	10	2200	+0,-10
L1773.10-2250	10	2250	+0,-10
L1773.10-2300	10	2300	+0,-10
L1773.10-2350	10	2350	+0,-10
L1773.10-2400	10	2400	+0,-10
L1773.10-2450	10	2450	+0,-10
L1773.10-2500	10	2500	+0,-10
L1773.10-2550	10	2550	+0,-10
L1773.10-2600	10	2600	+0,-10
L1773.10-2650	10	2650	+0,-10
L1773.10-2700	10	2700	+0,-10
L1773.10-2750	10	2750	+0,-10
L1773.10-2800	10	2800	+0,-10
L1773.10-2850	10	2850	+0,-10
L1773.10-2900	10	2900	+0,-10
L1773.10-2950	10	2950	+0,-10
L1773.10-3000	10	3000	+0,-10
L1773.10-3050	10	3050	+0,-10
L1773.10-3100	10	3100	+0,-10
L1773.10-3150	10	3150	+0,-10
L1773.10-3200	10	3200	+0,-10
L1773.10-3250	10	3250	+0,-10
L1773.10-3300	10	3300	+0,-10
L1773.10-3350	10	3350	+0,-10
L1773.10-3400	10	3400	+0,-10
L1773.10-3450	10	3450	+0,-10
L1773.10-3500	10	3500	+0,-10
L1773.10-3550	10	3550	+0,-10
L1773.10-3600	10	3600	+0,-10
L1773.10-3650	10	3650	+0,-10
L1773.10-3700	10	3700	+0,-10
L1773.10-3750	10	3750	+0,-10
L1773.10-3800	10	3800	+0,-10
L1773.10-3850	10	3850	+0,-10
L1773.10-3900	10	3900	+0,-10
L1773.10-3950	10	3950	+0,-10
L1773.10-4000	10	4000	+0,-10
L1773.10-4050	10	4050	+0,-10
L1773.10-4100	10	4100	+0,-10
L1773.10-4150	10	4150	+0,-10
L1773.10-4200	10	4200	+0,-10
L1773.10-4250	10	4250	+0,-10
L1773.10-4300	10	4300	+0,-10
L1773.10-4350	10	4350	+0,-10
L1773.10-4400	10	4400	+0,-10
L1773.10-4450	10	4450	+0,-10
L1773.10-4500	10	4500	+0,-10
L1773.10-4550	10	4550	+0,-10
L1773.10-4600	10	4600	+0,-10
L1773.10-4650	10	4650	+0,-10
L1773.10-4700	10	4700	+0,-10
L1773.10-4750	10	4750	+0,-10
L1773.10-4800	10	4800	+0,-10
L1773.10-4850	10	4850	+0,-10
L1773.10-4900	10	4900	+0,-10

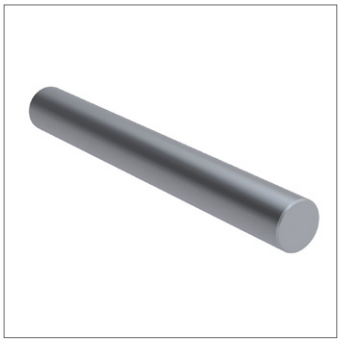
10Ø Stainless AISI 303 Shafts

soft



Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.10-4950	10	4950	+0,-10
L1773.10-5000	10	5000	+0,-10
L1773.10-5050	10	5050	+0,-10
L1773.10-5100	10	5100	+0,-10
L1773.10-5150	10	5150	+0,-10
L1773.10-5200	10	5200	+0,-10
L1773.10-5250	10	5250	+0,-10
L1773.10-5300	10	5300	+0,-10
L1773.10-5350	10	5350	+0,-10
L1773.10-5400	10	5400	+0,-10
L1773.10-5450	10	5450	+0,-10
L1773.10-5500	10	5500	+0,-10
L1773.10-5550	10	5550	+0,-10
L1773.10-5600	10	5600	+0,-10
L1773.10-5650	10	5650	+0,-10
L1773.10-5700	10	5700	+0,-10
L1773.10-5750	10	5750	+0,-10
L1773.10-5800	10	5800	+0,-10
L1773.10-5850	10	5850	+0,-10
L1773.10-5900	10	5900	+0,-10
L1773.10-5950	10	5950	+0,-10
L1773.10-6000	10	6000	+0,-10





L1773.12

Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >510 N/mm^2, tensile strength: >720 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1773.12-0100	12	100	0.6
L1773.12-0150	12	150	0.6
L1773.12-0200	12	200	0.6
L1773.12-0250	12	250	0.6
L1773.12-0300	12	300	0.6
L1773.12-0350	12	350	0.6
L1773.12-0400	12	400	0.6
L1773.12-0450	12	450	0.6
L1773.12-0500	12	500	0.6
L1773.12-0550	12	550	0.6
L1773.12-0600	12	600	0.6
L1773.12-0650	12	650	0.6
L1773.12-0700	12	700	0.6
L1773.12-0750	12	750	0.6
L1773.12-0800	12	800	0.6
L1773.12-0850	12	850	0.6
L1773.12-0900	12	900	0.6
L1773.12-0950	12	950	0.6
L1773.12-1000	12	1000	0.6
L1773.12-1050	12	1050	0.6
L1773.12-1100	12	1100	0.6
L1773.12-1150	12	1150	0.6
L1773.12-1200	12	1200	0.6
L1773.12-1250	12	1250	0.6
L1773.12-1300	12	1300	0.6
L1773.12-1350	12	1350	0.6
L1773.12-1400	12	1400	0.6
L1773.12-1450	12	1450	0.6
L1773.12-1500	12	1500	0.6

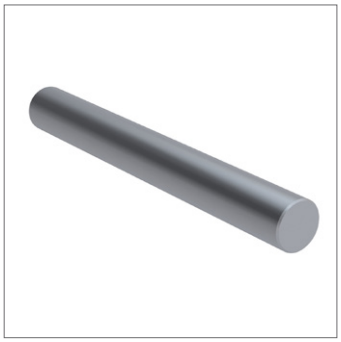
Ø12 Stainless AISI 303 Shafts
soft



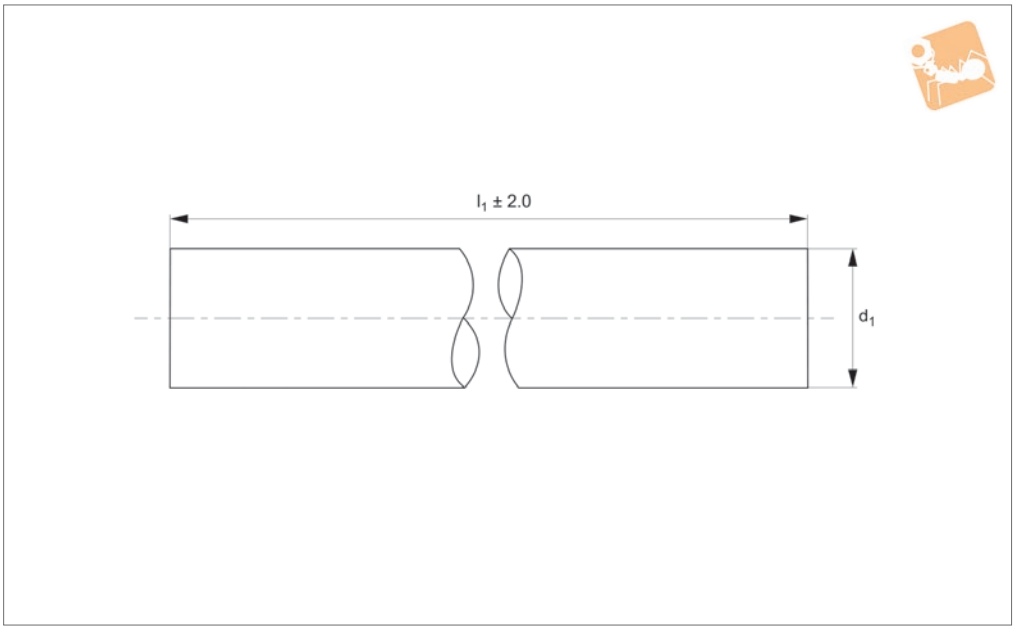
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.12-1550	12	1550	0.6
L1773.12-1600	12	1600	0.6
L1773.12-1650	12	1650	0.6
L1773.12-1700	12	1700	0.6
L1773.12-1750	12	1750	0.6
L1773.12-1800	12	1800	0.6
L1773.12-1850	12	1850	0.6
L1773.12-1900	12	1900	0.6
L1773.12-1950	12	1950	0.6
L1773.12-2000	12	2000	0.6
L1773.12-2050	12	2050	0.6
L1773.12-2100	12	2100	0.6
L1773.12-2150	12	2150	0.6
L1773.12-2200	12	2200	0.6
L1773.12-2250	12	2250	0.6
L1773.12-2300	12	2300	0.6
L1773.12-2350	12	2350	0.6
L1773.12-2400	12	2400	0.6
L1773.12-2450	12	2450	0.6
L1773.12-2500	12	2500	0.6
L1773.12-2550	12	2550	0.6
L1773.12-2600	12	2600	0.6
L1773.12-2650	12	2650	0.6
L1773.12-2700	12	2700	0.6
L1773.12-2750	12	2750	0.6
L1773.12-2800	12	2800	0.6
L1773.12-2850	12	2850	0.6
L1773.12-2900	12	2900	0.6
L1773.12-2950	12	2950	0.6
L1773.12-3000	12	3000	0.6
L1773.12-3050	12	3050	0.6
L1773.12-3100	12	3100	0.6
L1773.12-3150	12	3150	0.6
L1773.12-3200	12	3200	0.6
L1773.12-3250	12	3250	0.6
L1773.12-3300	12	3300	0.6
L1773.12-3350	12	3350	0.6
L1773.12-3400	12	3400	0.6
L1773.12-3450	12	3450	0.6
L1773.12-3500	12	3500	0.6
L1773.12-3550	12	3550	0.6
L1773.12-3600	12	3600	0.6
L1773.12-3650	12	3650	0.6
L1773.12-3700	12	3700	0.6
L1773.12-3750	12	3750	0.6
L1773.12-3800	12	3800	0.6
L1773.12-3850	12	3850	0.6
L1773.12-3900	12	3900	0.6
L1773.12-3950	12	3950	0.6
L1773.12-4000	12	4000	0.6
L1773.12-4050	12	4050	0.6
L1773.12-4100	12	4100	0.6
L1773.12-4150	12	4150	0.6
L1773.12-4200	12	4200	0.6
L1773.12-4250	12	4250	0.6
L1773.12-4300	12	4300	0.6
L1773.12-4350	12	4350	0.6
L1773.12-4400	12	4400	0.6
L1773.12-4450	12	4450	0.6
L1773.12-4500	12	4500	0.6
L1773.12-4550	12	4550	0.6
L1773.12-4600	12	4600	0.6
L1773.12-4650	12	4650	0.6
L1773.12-4700	12	4700	0.6
L1773.12-4750	12	4750	0.6
L1773.12-4800	12	4800	0.6
L1773.12-4850	12	4850	0.6
L1773.12-4900	12	4900	0.6

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.12-4950	12	4950	0.6
L1773.12-5000	12	5000	0.6
L1773.12-5050	12	5050	0.6
L1773.12-5100	12	5100	0.6
L1773.12-5150	12	5150	0.6
L1773.12-5200	12	5200	0.6
L1773.12-5250	12	5250	0.6
L1773.12-5300	12	5300	0.6
L1773.12-5350	12	5350	0.6
L1773.12-5400	12	5400	0.6
L1773.12-5450	12	5450	0.6
L1773.12-5500	12	5500	0.6
L1773.12-5550	12	5550	0.6
L1773.12-5600	12	5600	0.6
L1773.12-5650	12	5650	0.6
L1773.12-5700	12	5700	0.6
L1773.12-5750	12	5750	0.6
L1773.12-5800	12	5800	0.6
L1773.12-5850	12	5850	0.6
L1773.12-5900	12	5900	0.6
L1773.12-5950	12	5950	0.6
L1773.12-6000	12	6000	0.6

Ø16 Stainless AISI 303 Shafts
soft



L1773.16



Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >510 N/mm², tensile strength: >720 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

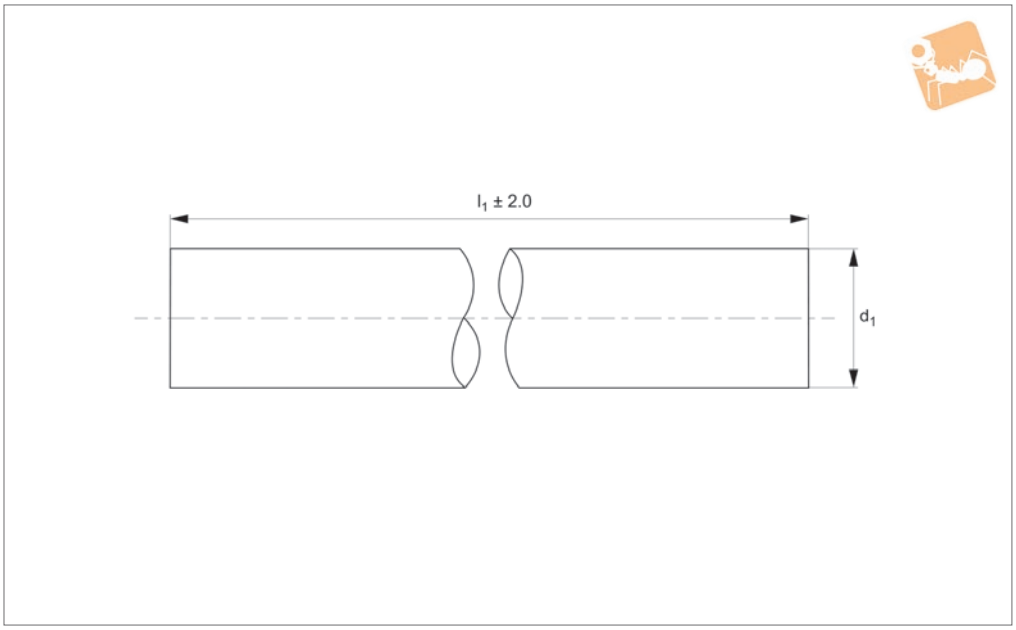
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1773.16-0100	16	100	0.6
L1773.16-0150	16	150	0.6
L1773.16-0200	16	200	0.6
L1773.16-0250	16	250	0.6
L1773.16-0300	16	300	0.6
L1773.16-0350	16	350	0.6
L1773.16-0400	16	400	0.6
L1773.16-0450	16	450	0.6
L1773.16-0500	16	500	0.6
L1773.16-0550	16	550	0.6
L1773.16-0600	16	600	0.6
L1773.16-0650	16	650	0.6
L1773.16-0700	16	700	0.6
L1773.16-0750	16	750	0.6
L1773.16-0800	16	800	0.6
L1773.16-0850	16	850	0.6
L1773.16-0900	16	900	0.6
L1773.16-0950	16	950	0.6
L1773.16-1000	16	1000	0.6
L1773.16-1050	16	1050	0.6
L1773.16-1100	16	1100	0.6
L1773.16-1150	16	1150	0.6
L1773.16-1200	16	1200	0.6
L1773.16-1250	16	1250	0.6
L1773.16-1300	16	1300	0.6
L1773.16-1350	16	1350	0.6
L1773.16-1400	16	1400	0.6
L1773.16-1450	16	1450	0.6
L1773.16-1500	16	1500	0.6

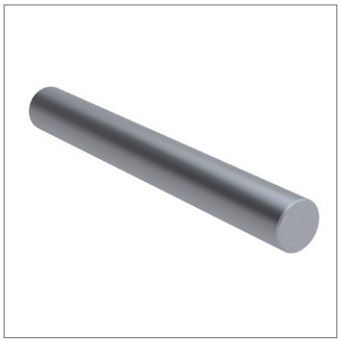
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.16-1550	16	1550	0.6
L1773.16-1600	16	1600	0.6
L1773.16-1650	16	1650	0.6
L1773.16-1700	16	1700	0.6
L1773.16-1750	16	1750	0.6
L1773.16-1800	16	1800	0.6
L1773.16-1850	16	1850	0.6
L1773.16-1900	16	1900	0.6
L1773.16-1950	16	1950	0.6
L1773.16-2000	16	2000	0.6
L1773.16-2050	16	2050	0.6
L1773.16-2100	16	2100	0.6
L1773.16-2150	16	2150	0.6
L1773.16-2200	16	2200	0.6
L1773.16-2250	16	2250	0.6
L1773.16-2300	16	2300	0.6
L1773.16-2350	16	2350	0.6
L1773.16-2400	16	2400	0.6
L1773.16-2450	16	2450	0.6
L1773.16-2500	16	2500	0.6
L1773.16-2550	16	2550	0.6
L1773.16-2600	16	2600	0.6
L1773.16-2650	16	2650	0.6
L1773.16-2700	16	2700	0.6
L1773.16-2750	16	2750	0.6
L1773.16-2800	16	2800	0.6
L1773.16-2850	16	2850	0.6
L1773.16-2900	16	2900	0.6
L1773.16-2950	16	2950	0.6
L1773.16-3000	16	3000	0.6
L1773.16-3050	16	3050	0.6
L1773.16-3100	16	3100	0.6
L1773.16-3150	16	3150	0.6
L1773.16-3200	16	3200	0.6
L1773.16-3250	16	3250	0.6
L1773.16-3300	16	3300	0.6
L1773.16-3350	16	3350	0.6
L1773.16-3400	16	3400	0.6
L1773.16-3450	16	3450	0.6
L1773.16-3500	16	3500	0.6
L1773.16-3550	16	3550	0.6
L1773.16-3600	16	3600	0.6
L1773.16-3650	16	3650	0.6
L1773.16-3700	16	3700	0.6
L1773.16-3750	16	3750	0.6
L1773.16-3800	16	3800	0.6
L1773.16-3850	16	3850	0.6
L1773.16-3900	16	3900	0.6
L1773.16-3950	16	3950	0.6
L1773.16-4000	16	4000	0.6
L1773.16-4050	16	4050	0.6
L1773.16-4100	16	4100	0.6
L1773.16-4150	16	4150	0.6
L1773.16-4200	16	4200	0.6
L1773.16-4250	16	4250	0.6
L1773.16-4300	16	4300	0.6
L1773.16-4350	16	4350	0.6
L1773.16-4400	16	4400	0.6
L1773.16-4450	16	4450	0.6
L1773.16-4500	16	4500	0.6
L1773.16-4550	16	4550	0.6
L1773.16-4600	16	4600	0.6
L1773.16-4650	16	4650	0.6
L1773.16-4700	16	4700	0.6
L1773.16-4750	16	4750	0.6
L1773.16-4800	16	4800	0.6
L1773.16-4850	16	4850	0.6
L1773.16-4900	16	4900	0.6

Ø16 Stainless AISI 303 Shafts
soft



Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.16-4950	16	4950	0.6
L1773.16-5000	16	5000	0.6
L1773.16-5050	16	5050	0.6
L1773.16-5100	16	5100	0.6
L1773.16-5150	16	5150	0.6
L1773.16-5200	16	5200	0.6
L1773.16-5250	16	5250	0.6
L1773.16-5300	16	5300	0.6
L1773.16-5350	16	5350	0.6
L1773.16-5400	16	5400	0.6
L1773.16-5450	16	5450	0.6
L1773.16-5500	16	5500	0.6
L1773.16-5550	16	5550	0.6
L1773.16-5600	16	5600	0.6
L1773.16-5650	16	5650	0.6
L1773.16-5700	16	5700	0.6
L1773.16-5750	16	5750	0.6
L1773.16-5800	16	5800	0.6
L1773.16-5850	16	5850	0.6
L1773.16-5900	16	5900	0.6
L1773.16-5950	16	5950	0.6
L1773.16-6000	16	6000	0.6





L1773.20

Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla. Yield stress: >510 N/mm^2, tensile strength: >720 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1773.20-0100	20	100	+0,-13
L1773.20-0150	20	150	+0,-13
L1773.20-0200	20	200	+0,-13
L1773.20-0250	20	250	+0,-13
L1773.20-0300	20	300	+0,-13
L1773.20-0350	20	350	+0,-13
L1773.20-0400	20	400	+0,-13
L1773.20-0450	20	450	+0,-13
L1773.20-0500	20	500	+0,-13
L1773.20-0550	20	550	+0,-13
L1773.20-0600	20	600	+0,-13
L1773.20-0650	20	650	+0,-13
L1773.20-0700	20	700	+0,-13
L1773.20-0750	20	750	+0,-13
L1773.20-0800	20	800	+0,-13
L1773.20-0850	20	850	+0,-13
L1773.20-0900	20	900	+0,-13
L1773.20-0950	20	950	+0,-13
L1773.20-1000	20	1000	+0,-13
L1773.20-1050	20	1050	+0,-13
L1773.20-1100	20	1100	+0,-13
L1773.20-1150	20	1150	+0,-13
L1773.20-1200	20	1200	+0,-13
L1773.20-1250	20	1250	+0,-13
L1773.20-1300	20	1300	+0,-13
L1773.20-1350	20	1350	+0,-13
L1773.20-1400	20	1400	+0,-13
L1773.20-1450	20	1450	+0,-13
L1773.20-1500	20	1500	+0,-13

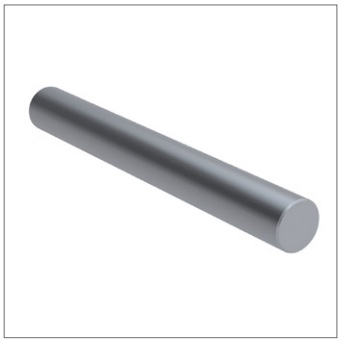
Ø20 Stainless AISI 303 Shafts
soft



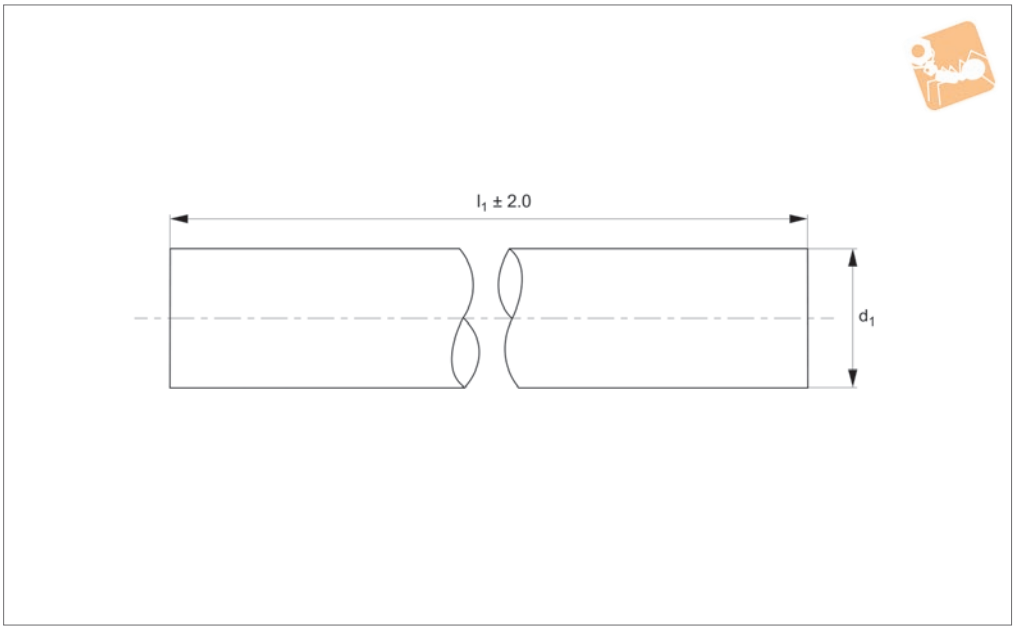
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.20-1550	20	1550	+0,-13
L1773.20-1600	20	1600	+0,-13
L1773.20-1650	20	1650	+0,-13
L1773.20-1700	20	1700	+0,-13
L1773.20-1750	20	1750	+0,-13
L1773.20-1800	20	1800	+0,-13
L1773.20-1850	20	1850	+0,-13
L1773.20-1900	20	1900	+0,-13
L1773.20-1950	20	1950	+0,-13
L1773.20-2000	20	2000	+0,-13
L1773.20-2050	20	2050	+0,-13
L1773.20-2100	20	2100	+0,-13
L1773.20-2150	20	2150	+0,-13
L1773.20-2200	20	2200	+0,-13
L1773.20-2250	20	2250	+0,-13
L1773.20-2300	20	2300	+0,-13
L1773.20-2350	20	2350	+0,-13
L1773.20-2400	20	2400	+0,-13
L1773.20-2450	20	2450	+0,-13
L1773.20-2500	20	2500	+0,-13
L1773.20-2550	20	2550	+0,-13
L1773.20-2600	20	2600	+0,-13
L1773.20-2650	20	2650	+0,-13
L1773.20-2700	20	2700	+0,-13
L1773.20-2750	20	2750	+0,-13
L1773.20-2800	20	2800	+0,-13
L1773.20-2850	20	2850	+0,-13
L1773.20-2900	20	2900	+0,-13
L1773.20-2950	20	2950	+0,-13
L1773.20-3000	20	3000	+0,-13
L1773.20-3050	20	3050	+0,-13
L1773.20-3100	20	3100	+0,-13
L1773.20-3150	20	3150	+0,-13
L1773.20-3200	20	3200	+0,-13
L1773.20-3250	20	3250	+0,-13
L1773.20-3300	20	3300	+0,-13
L1773.20-3350	20	3350	+0,-13
L1773.20-3400	20	3400	+0,-13
L1773.20-3450	20	3450	+0,-13
L1773.20-3500	20	3500	+0,-13
L1773.20-3550	20	3550	+0,-13
L1773.20-3600	20	3600	+0,-13
L1773.20-3650	20	3650	+0,-13
L1773.20-3700	20	3700	+0,-13
L1773.20-3750	20	3750	+0,-13
L1773.20-3800	20	3800	+0,-13
L1773.20-3850	20	3850	+0,-13
L1773.20-3900	20	3900	+0,-13
L1773.20-3950	20	3950	+0,-13
L1773.20-4000	20	4000	+0,-13
L1773.20-4050	20	4050	+0,-13
L1773.20-4100	20	4100	+0,-13
L1773.20-4150	20	4150	+0,-13
L1773.20-4200	20	4200	+0,-13
L1773.20-4250	20	4250	+0,-13
L1773.20-4300	20	4300	+0,-13
L1773.20-4350	20	4350	+0,-13
L1773.20-4400	20	4400	+0,-13
L1773.20-4450	20	4450	+0,-13
L1773.20-4500	20	4500	+0,-13
L1773.20-4550	20	4550	+0,-13
L1773.20-4600	20	4600	+0,-13
L1773.20-4650	20	4650	+0,-13
L1773.20-4700	20	4700	+0,-13
L1773.20-4750	20	4750	+0,-13
L1773.20-4800	20	4800	+0,-13
L1773.20-4850	20	4850	+0,-13
L1773.20-4900	20	4900	+0,-13

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.20-4950	20	4950	+0,-13
L1773.20-5000	20	5000	+0,-13
L1773.20-5050	20	5050	+0,-13
L1773.20-5100	20	5100	+0,-13
L1773.20-5150	20	5150	+0,-13
L1773.20-5200	20	5200	+0,-13
L1773.20-5250	20	5250	+0,-13
L1773.20-5300	20	5300	+0,-13
L1773.20-5350	20	5350	+0,-13
L1773.20-5400	20	5400	+0,-13
L1773.20-5450	20	5450	+0,-13
L1773.20-5500	20	5500	+0,-13
L1773.20-5550	20	5550	+0,-13
L1773.20-5600	20	5600	+0,-13
L1773.20-5650	20	5650	+0,-13
L1773.20-5700	20	5700	+0,-13
L1773.20-5750	20	5750	+0,-13
L1773.20-5800	20	5800	+0,-13
L1773.20-5850	20	5850	+0,-13
L1773.20-5900	20	5900	+0,-13
L1773.20-5950	20	5950	+0,-13
L1773.20-6000	20	6000	+0,-13

25Ø Stainless AISI 303 Shafts
soft



L1773.25



Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla. Yield stress: >510 N/mm², tensile strength: >720 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

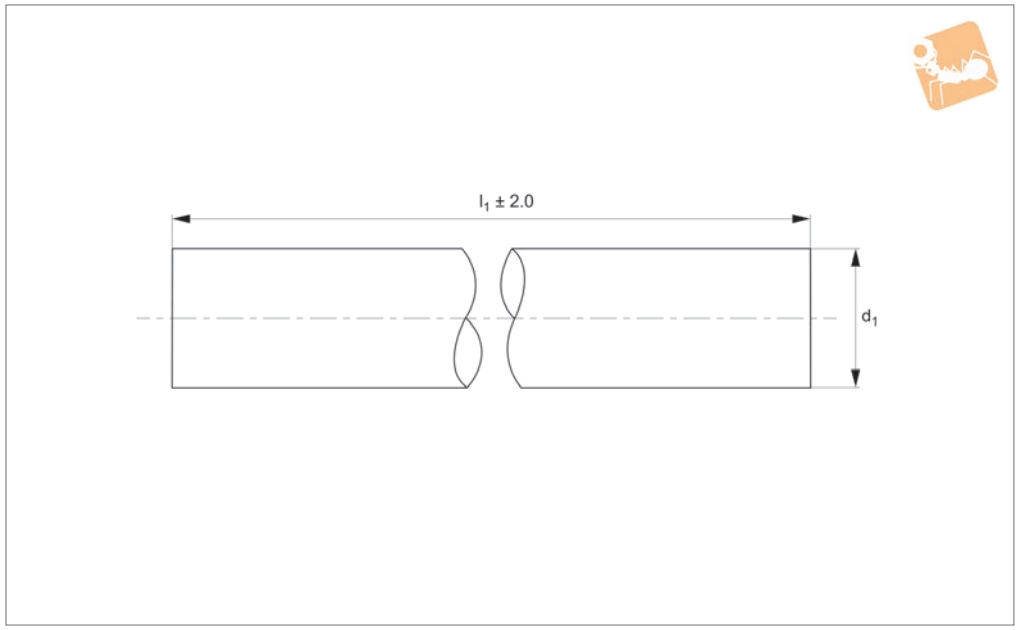
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1773.25-0100	25	100	+0,-13
L1773.25-0150	25	150	+0,-13
L1773.25-0200	25	200	+0,-13
L1773.25-0250	25	250	+0,-13
L1773.25-0300	25	300	+0,-13
L1773.25-0350	25	350	+0,-13
L1773.25-0400	25	400	+0,-13
L1773.25-0450	25	450	+0,-13
L1773.25-0500	25	500	+0,-13
L1773.25-0550	25	550	+0,-13
L1773.25-0600	25	600	+0,-13
L1773.25-0650	25	650	+0,-13
L1773.25-0700	25	700	+0,-13
L1773.25-0750	25	750	+0,-13
L1773.25-0800	25	800	+0,-13
L1773.25-0850	25	850	+0,-13
L1773.25-0900	25	900	+0,-13
L1773.25-0950	25	950	+0,-13
L1773.25-1000	25	1000	+0,-13
L1773.25-1050	25	1050	+0,-13
L1773.25-1100	25	1100	+0,-13
L1773.25-1150	25	1150	+0,-13
L1773.25-1200	25	1200	+0,-13
L1773.25-1250	25	1250	+0,-13
L1773.25-1300	25	1300	+0,-13
L1773.25-1350	25	1350	+0,-13
L1773.25-1400	25	1400	+0,-13
L1773.25-1450	25	1450	+0,-13
L1773.25-1500	25	1500	+0,-13

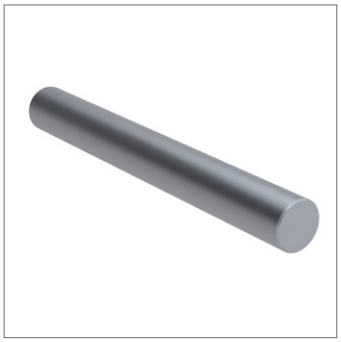
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.25-1550	25	1550	+0,-13
L1773.25-1600	25	1600	+0,-13
L1773.25-1650	25	1650	+0,-13
L1773.25-1700	25	1700	+0,-13
L1773.25-1750	25	1750	+0,-13
L1773.25-1800	25	1800	+0,-13
L1773.25-1850	25	1850	+0,-13
L1773.25-1900	25	1900	+0,-13
L1773.25-1950	25	1950	+0,-13
L1773.25-2000	25	2000	+0,-13
L1773.25-2050	25	2050	+0,-13
L1773.25-2100	25	2100	+0,-13
L1773.25-2150	25	2150	+0,-13
L1773.25-2200	25	2200	+0,-13
L1773.25-2250	25	2250	+0,-13
L1773.25-2300	25	2300	+0,-13
L1773.25-2350	25	2350	+0,-13
L1773.25-2400	25	2400	+0,-13
L1773.25-2450	25	2450	+0,-13
L1773.25-2500	25	2500	+0,-13
L1773.25-2550	25	2550	+0,-13
L1773.25-2600	25	2600	+0,-13
L1773.25-2650	25	2650	+0,-13
L1773.25-2700	25	2700	+0,-13
L1773.25-2750	25	2750	+0,-13
L1773.25-2800	25	2800	+0,-13
L1773.25-2850	25	2850	+0,-13
L1773.25-2900	25	2900	+0,-13
L1773.25-2950	25	2950	+0,-13
L1773.25-3000	25	3000	+0,-13
L1773.25-3050	25	3050	+0,-13
L1773.25-3100	25	3100	+0,-13
L1773.25-3150	25	3150	+0,-13
L1773.25-3200	25	3200	+0,-13
L1773.25-3250	25	3250	+0,-13
L1773.25-3300	25	3300	+0,-13
L1773.25-3350	25	3350	+0,-13
L1773.25-3400	25	3400	+0,-13
L1773.25-3450	25	3450	+0,-13
L1773.25-3500	25	3500	+0,-13
L1773.25-3550	25	3550	+0,-13
L1773.25-3600	25	3600	+0,-13
L1773.25-3650	25	3650	+0,-13
L1773.25-3700	25	3700	+0,-13
L1773.25-3750	25	3750	+0,-13
L1773.25-3800	25	3800	+0,-13
L1773.25-3850	25	3850	+0,-13
L1773.25-3900	25	3900	+0,-13
L1773.25-3950	25	3950	+0,-13
L1773.25-4000	25	4000	+0,-13
L1773.25-4050	25	4050	+0,-13
L1773.25-4100	25	4100	+0,-13
L1773.25-4150	25	4150	+0,-13
L1773.25-4200	25	4200	+0,-13
L1773.25-4250	25	4250	+0,-13
L1773.25-4300	25	4300	+0,-13
L1773.25-4350	25	4350	+0,-13
L1773.25-4400	25	4400	+0,-13
L1773.25-4450	25	4450	+0,-13
L1773.25-4500	25	4500	+0,-13
L1773.25-4550	25	4550	+0,-13
L1773.25-4600	25	4600	+0,-13
L1773.25-4650	25	4650	+0,-13
L1773.25-4700	25	4700	+0,-13
L1773.25-4750	25	4750	+0,-13
L1773.25-4800	25	4800	+0,-13
L1773.25-4850	25	4850	+0,-13
L1773.25-4900	25	4900	+0,-13

25Ø Stainless AISI 303 Shafts
soft



Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.25-4950	25	4950	+0,-13
L1773.25-5000	25	5000	+0,-13
L1773.25-5050	25	5050	+0,-13
L1773.25-5100	25	5100	+0,-13
L1773.25-5150	25	5150	+0,-13
L1773.25-5200	25	5200	+0,-13
L1773.25-5250	25	5250	+0,-13
L1773.25-5300	25	5300	+0,-13
L1773.25-5350	25	5350	+0,-13
L1773.25-5400	25	5400	+0,-13
L1773.25-5450	25	5450	+0,-13
L1773.25-5500	25	5500	+0,-13
L1773.25-5550	25	5550	+0,-13
L1773.25-5600	25	5600	+0,-13
L1773.25-5650	25	5650	+0,-13
L1773.25-5700	25	5700	+0,-13
L1773.25-5750	25	5750	+0,-13
L1773.25-5800	25	5800	+0,-13
L1773.25-5850	25	5850	+0,-13
L1773.25-5900	25	5900	+0,-13
L1773.25-5950	25	5950	+0,-13
L1773.25-6000	25	6000	+0,-13





L1773.30

Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla. Yield stress: >510 N/mm^2, tensile strength: >720 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1	l_1	Tolerance µ tol. h6
L1773.30-0100	30	100	+0,-13
L1773.30-0150	30	150	+0,-13
L1773.30-0200	30	200	+0,-13
L1773.30-0250	30	250	+0,-13
L1773.30-0300	30	300	+0,-13
L1773.30-0350	30	350	+0,-13
L1773.30-0400	30	400	+0,-13
L1773.30-0450	30	450	+0,-13
L1773.30-0500	30	500	+0,-13
L1773.30-0550	30	550	+0,-13
L1773.30-0600	30	600	+0,-13
L1773.30-0650	30	650	+0,-13
L1773.30-0700	30	700	+0,-13
L1773.30-0750	30	750	+0,-13
L1773.30-0800	30	800	+0,-13
L1773.30-0850	30	850	+0,-13
L1773.30-0900	30	900	+0,-13
L1773.30-0950	30	950	+0,-13
L1773.30-1000	30	1000	+0,-13
L1773.30-1050	30	1050	+0,-13
L1773.30-1100	30	1100	+0,-13
L1773.30-1150	30	1150	+0,-13
L1773.30-1200	30	1200	+0,-13
L1773.30-1250	30	1250	+0,-13
L1773.30-1300	30	1300	+0,-13
L1773.30-1350	30	1350	+0,-13
L1773.30-1400	30	1400	+0,-13
L1773.30-1450	30	1450	+0,-13
L1773.30-1500	30	1500	+0,-13

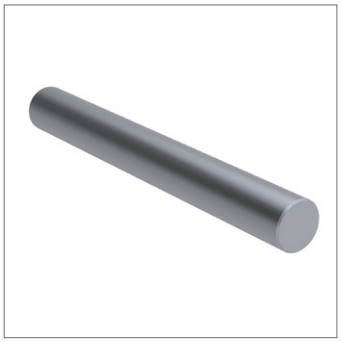
30Ø Stainless AISI 303 Shafts
soft



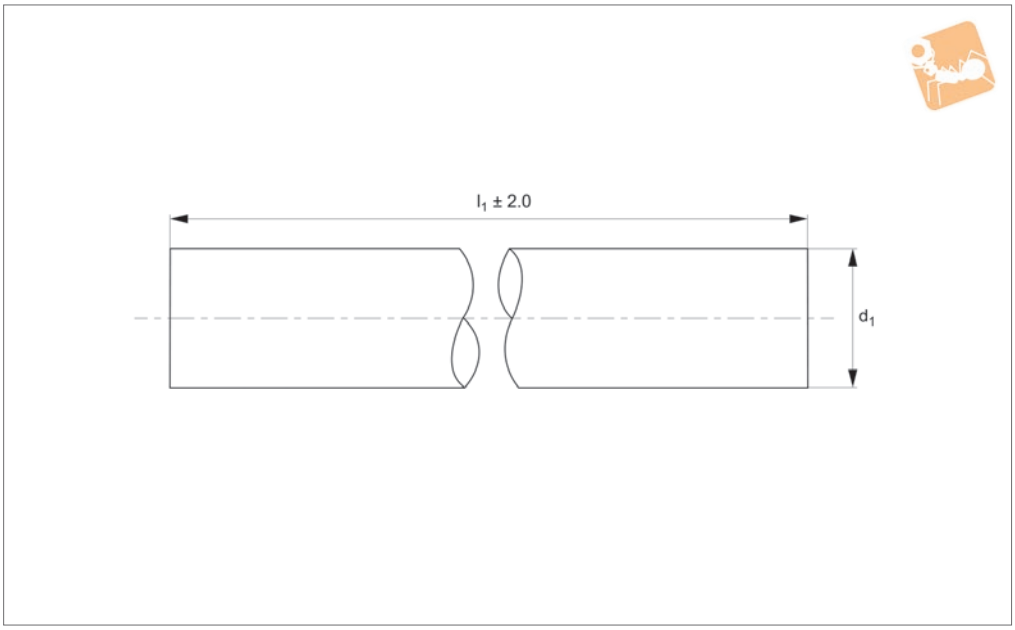
Order No.	d_1	l_1	Tolerance µ tol. h6
L1773.30-1550	30	1550	+0,-13
L1773.30-1600	30	1600	+0,-13
L1773.30-1650	30	1650	+0,-13
L1773.30-1700	30	1700	+0,-13
L1773.30-1750	30	1750	+0,-13
L1773.30-1800	30	1800	+0,-13
L1773.30-1850	30	1850	+0,-13
L1773.30-1900	30	1900	+0,-13
L1773.30-1950	30	1950	+0,-13
L1773.30-2000	30	2000	+0,-13
L1773.30-2050	30	2050	+0,-13
L1773.30-2100	30	2100	+0,-13
L1773.30-2150	30	2150	+0,-13
L1773.30-2200	30	2200	+0,-13
L1773.30-2250	30	2250	+0,-13
L1773.30-2300	30	2300	+0,-13
L1773.30-2350	30	2350	+0,-13
L1773.30-2400	30	2400	+0,-13
L1773.30-2450	30	2450	+0,-13
L1773.30-2500	30	2500	+0,-13
L1773.30-2550	30	2550	+0,-13
L1773.30-2600	30	2600	+0,-13
L1773.30-2650	30	2650	+0,-13
L1773.30-2700	30	2700	+0,-13
L1773.30-2750	30	2750	+0,-13
L1773.30-2800	30	2800	+0,-13
L1773.30-2850	30	2850	+0,-13
L1773.30-2900	30	2900	+0,-13
L1773.30-2950	30	2950	+0,-13
L1773.30-3000	30	3000	+0,-13
L1773.30-3050	30	3050	+0,-13
L1773.30-3100	30	3100	+0,-13
L1773.30-3150	30	3150	+0,-13
L1773.30-3200	30	3200	+0,-13
L1773.30-3250	30	3250	+0,-13
L1773.30-3300	30	3300	+0,-13
L1773.30-3350	30	3350	+0,-13
L1773.30-3400	30	3400	+0,-13
L1773.30-3450	30	3450	+0,-13
L1773.30-3500	30	3500	+0,-13
L1773.30-3550	30	3550	+0,-13
L1773.30-3600	30	3600	+0,-13
L1773.30-3650	30	3650	+0,-13
L1773.30-3700	30	3700	+0,-13
L1773.30-3750	30	3750	+0,-13
L1773.30-3800	30	3800	+0,-13
L1773.30-3850	30	3850	+0,-13
L1773.30-3900	30	3900	+0,-13
L1773.30-3950	30	3950	+0,-13
L1773.30-4000	30	4000	+0,-13
L1773.30-4050	30	4050	+0,-13
L1773.30-4100	30	4100	+0,-13
L1773.30-4150	30	4150	+0,-13
L1773.30-4200	30	4200	+0,-13
L1773.30-4250	30	4250	+0,-13
L1773.30-4300	30	4300	+0,-13
L1773.30-4350	30	4350	+0,-13
L1773.30-4400	30	4400	+0,-13
L1773.30-4450	30	4450	+0,-13
L1773.30-4500	30	4500	+0,-13
L1773.30-4550	30	4550	+0,-13
L1773.30-4600	30	4600	+0,-13
L1773.30-4650	30	4650	+0,-13
L1773.30-4700	30	4700	+0,-13
L1773.30-4750	30	4750	+0,-13
L1773.30-4800	30	4800	+0,-13
L1773.30-4850	30	4850	+0,-13
L1773.30-4900	30	4900	+0,-13

Order No.	d_1	l_1	Tolerance μ tol. h6
L1773.30-4950	30	4950	+0,-13
L1773.30-5000	30	5000	+0,-13
L1773.30-5050	30	5050	+0,-13
L1773.30-5100	30	5100	+0,-13
L1773.30-5150	30	5150	+0,-13
L1773.30-5200	30	5200	+0,-13
L1773.30-5250	30	5250	+0,-13
L1773.30-5300	30	5300	+0,-13
L1773.30-5350	30	5350	+0,-13
L1773.30-5400	30	5400	+0,-13
L1773.30-5450	30	5450	+0,-13
L1773.30-5500	30	5500	+0,-13
L1773.30-5550	30	5550	+0,-13
L1773.30-5600	30	5600	+0,-13
L1773.30-5650	30	5650	+0,-13
L1773.30-5700	30	5700	+0,-13
L1773.30-5750	30	5750	+0,-13
L1773.30-5800	30	5800	+0,-13
L1773.30-5850	30	5850	+0,-13
L1773.30-5900	30	5900	+0,-13
L1773.30-5950	30	5950	+0,-13
L1773.30-6000	30	6000	+0,-13

40Ø Stainless AISI 303 Shafts
soft



L1773.40



Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >510 N/mm², tensile strength: >720 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1773.40-0100	40	100	+0,-16
L1773.40-0150	40	150	+0,-16
L1773.40-0200	40	200	+0,-16
L1773.40-0250	40	250	+0,-16
L1773.40-0300	40	300	+0,-16
L1773.40-0350	40	350	+0,-16
L1773.40-0400	40	400	+0,-16
L1773.40-0450	40	450	+0,-16
L1773.40-0500	40	500	+0,-16
L1773.40-0550	40	550	+0,-16
L1773.40-0600	40	600	+0,-16
L1773.40-0650	40	650	+0,-16
L1773.40-0700	40	700	+0,-16
L1773.40-0750	40	750	+0,-16
L1773.40-0800	40	800	+0,-16
L1773.40-0850	40	850	+0,-16
L1773.40-0900	40	900	+0,-16
L1773.40-0950	40	950	+0,-16
L1773.40-1000	40	1000	+0,-16
L1773.40-1050	40	1050	+0,-16
L1773.40-1100	40	1100	+0,-16
L1773.40-1150	40	1150	+0,-16
L1773.40-1200	40	1200	+0,-16
L1773.40-1250	40	1250	+0,-16
L1773.40-1300	40	1300	+0,-16
L1773.40-1350	40	1350	+0,-16
L1773.40-1400	40	1400	+0,-16
L1773.40-1450	40	1450	+0,-16
L1773.40-1500	40	1500	+0,-16

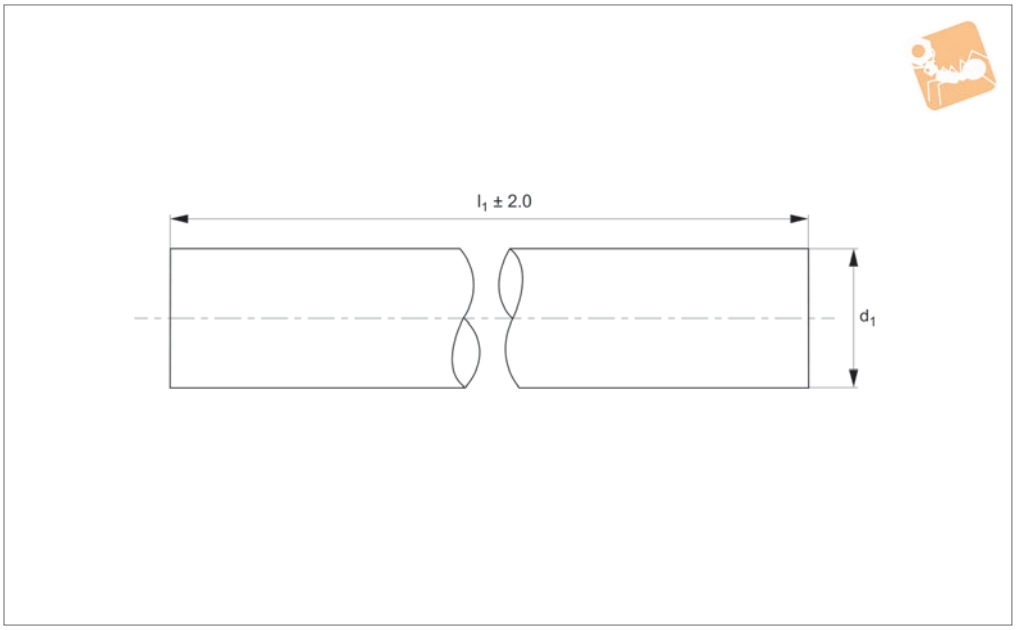
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.40-1550	40	1550	+0,-16
L1773.40-1600	40	1600	+0,-16
L1773.40-1650	40	1650	+0,-16
L1773.40-1700	40	1700	+0,-16
L1773.40-1750	40	1750	+0,-16
L1773.40-1800	40	1800	+0,-16
L1773.40-1850	40	1850	+0,-16
L1773.40-1900	40	1900	+0,-16
L1773.40-1950	40	1950	+0,-16
L1773.40-2000	40	2000	+0,-16
L1773.40-2050	40	2050	+0,-16
L1773.40-2100	40	2100	+0,-16
L1773.40-2150	40	2150	+0,-16
L1773.40-2200	40	2200	+0,-16
L1773.40-2250	40	2250	+0,-16
L1773.40-2300	40	2300	+0,-16
L1773.40-2350	40	2350	+0,-16
L1773.40-2400	40	2400	+0,-16
L1773.40-2450	40	2450	+0,-16
L1773.40-2500	40	2500	+0,-16
L1773.40-2550	40	2550	+0,-16
L1773.40-2600	40	2600	+0,-16
L1773.40-2650	40	2650	+0,-16
L1773.40-2700	40	2700	+0,-16
L1773.40-2750	40	2750	+0,-16
L1773.40-2800	40	2800	+0,-16
L1773.40-2850	40	2850	+0,-16
L1773.40-2900	40	2900	+0,-16
L1773.40-2950	40	2950	+0,-16
L1773.40-3000	40	3000	+0,-16
L1773.40-3050	40	3050	+0,-16
L1773.40-3100	40	3100	+0,-16
L1773.40-3150	40	3150	+0,-16
L1773.40-3200	40	3200	+0,-16
L1773.40-3250	40	3250	+0,-16
L1773.40-3300	40	3300	+0,-16
L1773.40-3350	40	3350	+0,-16
L1773.40-3400	40	3400	+0,-16
L1773.40-3450	40	3450	+0,-16
L1773.40-3500	40	3500	+0,-16
L1773.40-3550	40	3550	+0,-16
L1773.40-3600	40	3600	+0,-16
L1773.40-3650	40	3650	+0,-16
L1773.40-3700	40	3700	+0,-16
L1773.40-3750	40	3750	+0,-16
L1773.40-3800	40	3800	+0,-16
L1773.40-3850	40	3850	+0,-16
L1773.40-3900	40	3900	+0,-16
L1773.40-3950	40	3950	+0,-16
L1773.40-4000	40	4000	+0,-16
L1773.40-4050	40	4050	+0,-16
L1773.40-4100	40	4100	+0,-16
L1773.40-4150	40	4150	+0,-16
L1773.40-4200	40	4200	+0,-16
L1773.40-4250	40	4250	+0,-16
L1773.40-4300	40	4300	+0,-16
L1773.40-4350	40	4350	+0,-16
L1773.40-4400	40	4400	+0,-16
L1773.40-4450	40	4450	+0,-16
L1773.40-4500	40	4500	+0,-16
L1773.40-4550	40	4550	+0,-16
L1773.40-4600	40	4600	+0,-16
L1773.40-4650	40	4650	+0,-16
L1773.40-4700	40	4700	+0,-16
L1773.40-4750	40	4750	+0,-16
L1773.40-4800	40	4800	+0,-16
L1773.40-4850	40	4850	+0,-16
L1773.40-4900	40	4900	+0,-16

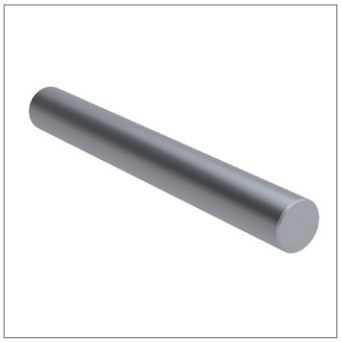
40Ø Stainless AISI 303 Shafts

soft



Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.40-4950	40	4950	+0,-16
L1773.40-5000	40	5000	+0,-16
L1773.40-5050	40	5050	+0,-16
L1773.40-5100	40	5100	+0,-16
L1773.40-5150	40	5150	+0,-16
L1773.40-5200	40	5200	+0,-16
L1773.40-5250	40	5250	+0,-16
L1773.40-5300	40	5300	+0,-16
L1773.40-5350	40	5350	+0,-16
L1773.40-5400	40	5400	+0,-16
L1773.40-5450	40	5450	+0,-16
L1773.40-5500	40	5500	+0,-16
L1773.40-5550	40	5550	+0,-16
L1773.40-5600	40	5600	+0,-16
L1773.40-5650	40	5650	+0,-16
L1773.40-5700	40	5700	+0,-16
L1773.40-5750	40	5750	+0,-16
L1773.40-5800	40	5800	+0,-16
L1773.40-5850	40	5850	+0,-16
L1773.40-5900	40	5900	+0,-16
L1773.40-5950	40	5950	+0,-16
L1773.40-6000	40	6000	+0,-16





L1773.50

Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >510 N/mm^2, tensile strength: >720 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1773.50-0100	50	100	+0,-16
L1773.50-0150	50	150	+0,-16
L1773.50-0200	50	200	+0,-16
L1773.50-0250	50	250	+0,-16
L1773.50-0300	50	300	+0,-16
L1773.50-0350	50	350	+0,-16
L1773.50-0400	50	400	+0,-16
L1773.50-0450	50	450	+0,-16
L1773.50-0500	50	500	+0,-16
L1773.50-0550	50	550	+0,-16
L1773.50-0600	50	600	+0,-16
L1773.50-0650	50	650	+0,-16
L1773.50-0700	50	700	+0,-16
L1773.50-0750	50	750	+0,-16
L1773.50-0800	50	800	+0,-16
L1773.50-0850	50	850	+0,-16
L1773.50-0900	50	900	+0,-16
L1773.50-1000	50	1000	+0,-16
L1773.50-1050	50	1050	+0,-16
L1773.50-1100	50	1100	+0,-16
L1773.50-1150	50	1150	+0,-16
L1773.50-1200	50	1200	+0,-16
L1773.50-1250	50	1250	+0,-16
L1773.50-1300	50	1300	+0,-16
L1773.50-1350	50	1350	+0,-16
L1773.50-1400	50	1400	+0,-16
L1773.50-1450	50	1450	+0,-16
L1773.50-1500	50	1500	+0,-16
L1773.50-1550	50	1550	+0,-16

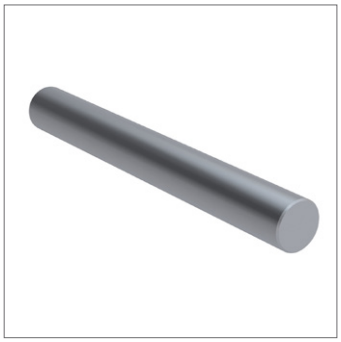
50Ø Stainless AISI 303 Shafts
soft



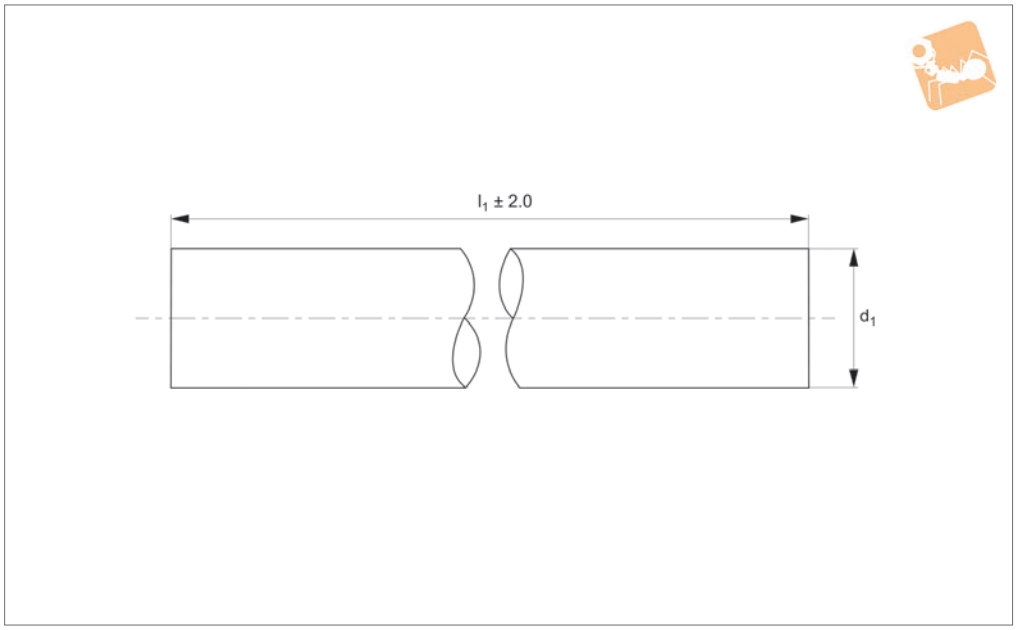
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.50-1600	50	1600	+0,-16
L1773.50-1650	50	1650	+0,-16
L1773.50-1700	50	1700	+0,-16
L1773.50-1750	50	1750	+0,-16
L1773.50-1800	50	1800	+0,-16
L1773.50-1850	50	1850	+0,-16
L1773.50-1900	50	1900	+0,-16
L1773.50-1950	50	1950	+0,-16
L1773.50-2000	50	2000	+0,-16
L1773.50-2050	50	2050	+0,-16
L1773.50-2100	50	2100	+0,-16
L1773.50-2150	50	2150	+0,-16
L1773.50-2200	50	2200	+0,-16
L1773.50-2250	50	2250	+0,-16
L1773.50-2300	50	2300	+0,-16
L1773.50-2350	50	2350	+0,-16
L1773.50-2400	50	2400	+0,-16
L1773.50-2450	50	2450	+0,-16
L1773.50-2500	50	2500	+0,-16
L1773.50-2550	50	2550	+0,-16
L1773.50-2600	50	2600	+0,-16
L1773.50-2650	50	2650	+0,-16
L1773.50-2700	50	2700	+0,-16
L1773.50-2750	50	2750	+0,-16
L1773.50-2800	50	2800	+0,-16
L1773.50-2850	50	2850	+0,-16
L1773.50-2900	50	2900	+0,-16
L1773.50-2950	50	2950	+0,-16
L1773.50-3000	50	3000	+0,-16
L1773.50-3050	50	3050	+0,-16
L1773.50-3100	50	3100	+0,-16
L1773.50-3150	50	3150	+0,-16
L1773.50-3200	50	3200	+0,-16
L1773.50-3250	50	3250	+0,-16
L1773.50-3300	50	3300	+0,-16
L1773.50-3350	50	3350	+0,-16
L1773.50-3400	50	3400	+0,-16
L1773.50-3450	50	3450	+0,-16
L1773.50-3500	50	3500	+0,-16
L1773.50-3550	50	3550	+0,-16
L1773.50-3600	50	3600	+0,-16
L1773.50-3650	50	3650	+0,-16
L1773.50-3700	50	3700	+0,-16
L1773.50-3750	50	3750	+0,-16
L1773.50-3800	50	3800	+0,-16
L1773.50-3850	50	3850	+0,-16
L1773.50-3900	50	3900	+0,-16
L1773.50-3950	50	3950	+0,-16
L1773.50-4000	50	4000	+0,-16
L1773.50-4050	50	4050	+0,-16
L1773.50-4100	50	4100	+0,-16
L1773.50-4150	50	4150	+0,-16
L1773.50-4200	50	4200	+0,-16
L1773.50-4250	50	4250	+0,-16
L1773.50-4300	50	4300	+0,-16
L1773.50-4350	50	4350	+0,-16
L1773.50-4400	50	4400	+0,-16
L1773.50-4450	50	4450	+0,-16
L1773.50-4500	50	4500	+0,-16
L1773.50-4550	50	4550	+0,-16
L1773.50-4600	50	4600	+0,-16
L1773.50-4650	50	4650	+0,-16
L1773.50-4700	50	4700	+0,-16
L1773.50-4750	50	4750	+0,-16
L1773.50-4800	50	4800	+0,-16
L1773.50-4850	50	4850	+0,-16
L1773.50-4900	50	4900	+0,-16
L1773.50-4950	50	4950	+0,-16

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.50-5000	50	5000	+0,-16
L1773.50-5050	50	5050	+0,-16
L1773.50-5100	50	5100	+0,-16
L1773.50-5150	50	5150	+0,-16
L1773.50-5200	50	5200	+0,-16
L1773.50-5250	50	5250	+0,-16
L1773.50-5300	50	5300	+0,-16
L1773.50-5350	50	5350	+0,-16
L1773.50-5400	50	5400	+0,-16
L1773.50-5450	50	5450	+0,-16
L1773.50-5500	50	5500	+0,-16
L1773.50-5550	50	5550	+0,-16
L1773.50-5600	50	5600	+0,-16
L1773.50-5650	50	5650	+0,-16
L1773.50-5700	50	5700	+0,-16
L1773.50-5750	50	5750	+0,-16
L1773.50-5800	50	5800	+0,-16
L1773.50-5850	50	5850	+0,-16
L1773.50-5900	50	5900	+0,-16
L1773.50-5950	50	5950	+0,-16
L1773.50-6000	50	6000	+0,-16

60Ø Stainless AISI 303 Shafts
soft



L1773.60



Material
Stainless steel AISI 303 (1.4305, X10CrNiS18-19), surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >510 N/mm², tensile strength: >720 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1773.60-0100	60	100	+0,-19
L1773.60-0150	60	150	+0,-19
L1773.60-0200	60	200	+0,-19
L1773.60-0250	60	250	+0,-19
L1773.60-0300	60	300	+0,-19
L1773.60-0350	60	350	+0,-19
L1773.60-0400	60	400	+0,-19
L1773.60-0450	60	450	+0,-19
L1773.60-0500	60	500	+0,-19
L1773.60-0550	60	550	+0,-19
L1773.60-0600	60	600	+0,-19
L1773.60-0650	60	650	+0,-19
L1773.60-0700	60	700	+0,-19
L1773.60-0750	60	750	+0,-19
L1773.60-0800	60	800	+0,-19
L1773.60-0850	60	850	+0,-19
L1773.60-0900	60	900	+0,-19
L1773.60-0950	60	950	+0,-19
L1773.60-1000	60	1000	+0,-19
L1773.60-1050	60	1050	+0,-19
L1773.60-1100	60	1100	+0,-19
L1773.60-1150	60	1150	+0,-19
L1773.60-1200	60	1200	+0,-19
L1773.60-1250	60	1250	+0,-19
L1773.60-1300	60	1300	+0,-19
L1773.60-1350	60	1350	+0,-19
L1773.60-1400	60	1400	+0,-19
L1773.60-1450	60	1450	+0,-19
L1773.60-1500	60	1500	+0,-19

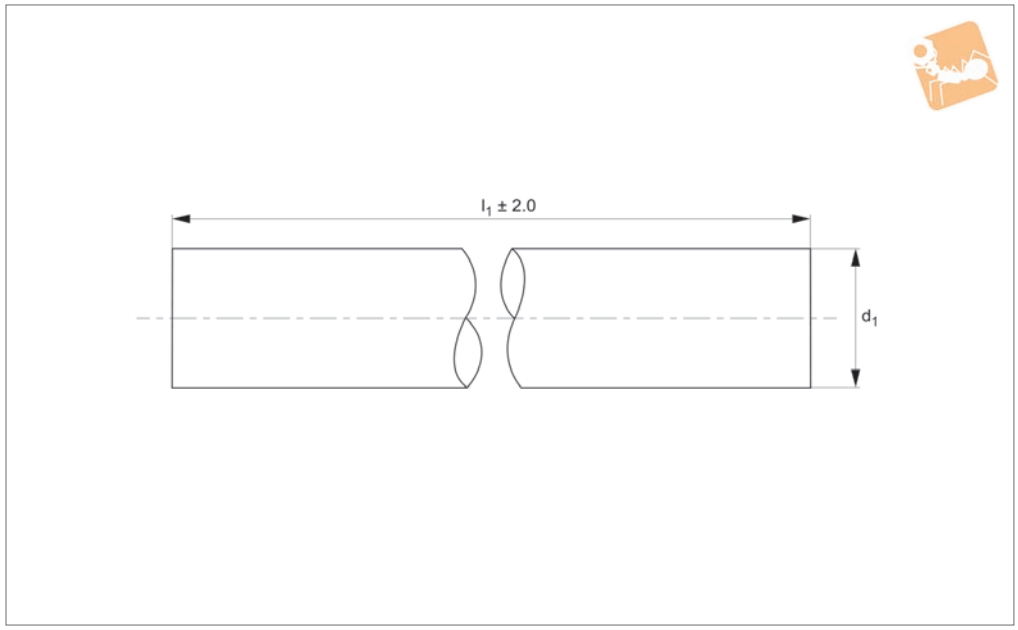
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.60-1550	60	1550	+0,-19
L1773.60-1600	60	1600	+0,-19
L1773.60-1650	60	1650	+0,-19
L1773.60-1700	60	1700	+0,-19
L1773.60-1750	60	1750	+0,-19
L1773.60-1800	60	1800	+0,-19
L1773.60-1850	60	1850	+0,-19
L1773.60-1900	60	1900	+0,-19
L1773.60-1950	60	1950	+0,-19
L1773.60-2000	60	2000	+0,-19
L1773.60-2050	60	2050	+0,-19
L1773.60-2100	60	2100	+0,-19
L1773.60-2150	60	2150	+0,-19
L1773.60-2200	60	2200	+0,-19
L1773.60-2250	60	2250	+0,-19
L1773.60-2300	60	2300	+0,-19
L1773.60-2350	60	2350	+0,-19
L1773.60-2400	60	2400	+0,-19
L1773.60-2450	60	2450	+0,-19
L1773.60-2500	60	2500	+0,-19
L1773.60-2550	60	2550	+0,-19
L1773.60-2600	60	2600	+0,-19
L1773.60-2650	60	2650	+0,-19
L1773.60-2700	60	2700	+0,-19
L1773.60-2750	60	2750	+0,-19
L1773.60-2800	60	2800	+0,-19
L1773.60-2850	60	2850	+0,-19
L1773.60-2900	60	2900	+0,-19
L1773.60-2950	60	2950	+0,-19
L1773.60-3000	60	3000	+0,-19
L1773.60-3050	60	3050	+0,-19
L1773.60-3100	60	3100	+0,-19
L1773.60-3150	60	3150	+0,-19
L1773.60-3200	60	3200	+0,-19
L1773.60-3250	60	3250	+0,-19
L1773.60-3300	60	3300	+0,-19
L1773.60-3350	60	3350	+0,-19
L1773.60-3400	60	3400	+0,-19
L1773.60-3450	60	3450	+0,-19
L1773.60-3500	60	3500	+0,-19
L1773.60-3550	60	3550	+0,-19
L1773.60-3600	60	3600	+0,-19
L1773.60-3650	60	3650	+0,-19
L1773.60-3700	60	3700	+0,-19
L1773.60-3750	60	3750	+0,-19
L1773.60-3800	60	3800	+0,-19
L1773.60-3850	60	3850	+0,-19
L1773.60-3900	60	3900	+0,-19
L1773.60-3950	60	3950	+0,-19
L1773.60-4000	60	4000	+0,-19
L1773.60-4050	60	4050	+0,-19
L1773.60-4100	60	4100	+0,-19
L1773.60-4150	60	4150	+0,-19
L1773.60-4200	60	4200	+0,-19
L1773.60-4250	60	4250	+0,-19
L1773.60-4300	60	4300	+0,-19
L1773.60-4350	60	4350	+0,-19
L1773.60-4400	60	4400	+0,-19
L1773.60-4450	60	4450	+0,-19
L1773.60-4500	60	4500	+0,-19
L1773.60-4550	60	4550	+0,-19
L1773.60-4600	60	4600	+0,-19
L1773.60-4650	60	4650	+0,-19
L1773.60-4700	60	4700	+0,-19
L1773.60-4750	60	4750	+0,-19
L1773.60-4800	60	4800	+0,-19
L1773.60-4850	60	4850	+0,-19
L1773.60-4900	60	4900	+0,-19

60Ø Stainless AISI 303 Shafts

soft



Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1773.60-4950	60	4950	+0,-19
L1773.60-5000	60	5000	+0,-19
L1773.60-5050	60	5050	+0,-19
L1773.60-5100	60	5100	+0,-19
L1773.60-5150	60	5150	+0,-19
L1773.60-5200	60	5200	+0,-19
L1773.60-5250	60	5250	+0,-19
L1773.60-5300	60	5300	+0,-19
L1773.60-5350	60	5350	+0,-19
L1773.60-5400	60	5400	+0,-19
L1773.60-5450	60	5450	+0,-19
L1773.60-5500	60	5500	+0,-19
L1773.60-5550	60	5550	+0,-19
L1773.60-5600	60	5600	+0,-19
L1773.60-5650	60	5650	+0,-19
L1773.60-5700	60	5700	+0,-19
L1773.60-5750	60	5750	+0,-19
L1773.60-5800	60	5800	+0,-19
L1773.60-5850	60	5850	+0,-19
L1773.60-5900	60	5900	+0,-19
L1773.60-5950	60	5950	+0,-19
L1773.60-6000	60	6000	+0,-19





L1774.06

Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm^2, tensile strength: >515 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness
L1774.06-0100	6	100	+0,-8	1.0
L1774.06-0150	6	150	+0,-8	1.0
L1774.06-0200	6	200	+0,-8	1.0
L1774.06-0250	6	250	+0,-8	1.0
L1774.06-0300	6	300	+0,-8	1.0
L1774.06-0350	6	350	+0,-8	1.0
L1774.06-0400	6	400	+0,-8	1.0
L1774.06-0450	6	450	+0,-8	1.0
L1774.06-0500	6	500	+0,-8	1.0
L1774.06-0550	6	550	+0,-8	1.0
L1774.06-0600	6	600	+0,-8	1.0
L1774.06-0650	6	650	+0,-8	1.0
L1774.06-0700	6	700	+0,-8	1.0
L1774.06-0750	6	750	+0,-8	1.0
L1774.06-0800	6	800	+0,-8	1.0
L1774.06-0850	6	850	+0,-8	1.0
L1774.06-0900	6	900	+0,-8	1.0
L1774.06-0950	6	950	+0,-8	1.0
L1774.06-1000	6	1000	+0,-8	1.0
L1774.06-1050	6	1050	+0,-8	1.0
L1774.06-1100	6	1100	+0,-8	1.0
L1774.06-1150	6	1150	+0,-8	1.0
L1774.06-1200	6	1200	+0,-8	1.0
L1774.06-1250	6	1250	+0,-8	1.0
L1774.06-1300	6	1300	+0,-8	1.0
L1774.06-1350	6	1350	+0,-8	1.0
L1774.06-1400	6	1400	+0,-8	1.0
L1774.06-1450	6	1450	+0,-8	1.0
L1774.06-1500	6	1500	+0,-8	1.0

6Ø Stainless AISI 316 Shafts
soft



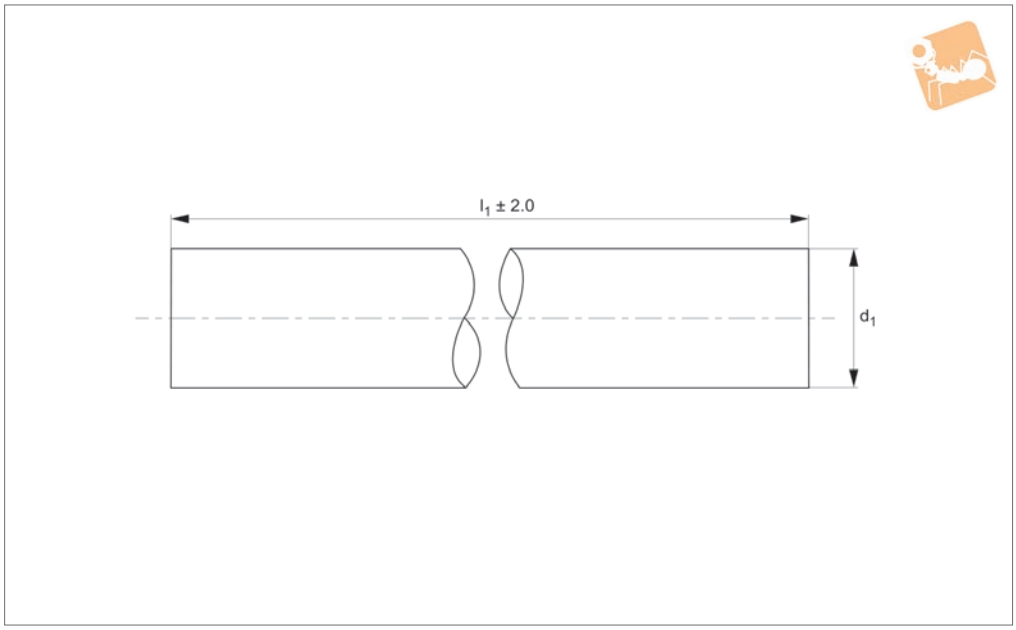
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.06-1550	6	1550	+0,-8	1.0
L1774.06-1600	6	1600	+0,-8	1.0
L1774.06-1650	6	1650	+0,-8	1.0
L1774.06-1700	6	1700	+0,-8	1.0
L1774.06-1750	6	1750	+0,-8	1.0
L1774.06-1800	6	1800	+0,-8	1.0
L1774.06-1850	6	1850	+0,-8	1.0
L1774.06-1900	6	1900	+0,-8	1.0
L1774.06-1950	6	1950	+0,-8	1.0
L1774.06-2000	6	2000	+0,-8	1.0
L1774.06-2050	6	2050	+0,-8	1.0
L1774.06-2100	6	2100	+0,-8	1.0
L1774.06-2150	6	2150	+0,-8	1.0
L1774.06-2200	6	2200	+0,-8	1.0
L1774.06-2250	6	2250	+0,-8	1.0
L1774.06-2300	6	2300	+0,-8	1.0
L1774.06-2350	6	2350	+0,-8	1.0
L1774.06-2400	6	2400	+0,-8	1.0
L1774.06-2450	6	2450	+0,-8	1.0
L1774.06-2500	6	2500	+0,-8	1.0
L1774.06-2550	6	2550	+0,-8	1.0
L1774.06-2600	6	2600	+0,-8	1.0
L1774.06-2650	6	2650	+0,-8	1.0
L1774.06-2700	6	2700	+0,-8	1.0
L1774.06-2750	6	2750	+0,-8	1.0
L1774.06-2800	6	2800	+0,-8	1.0
L1774.06-2850	6	2850	+0,-8	1.0
L1774.06-2900	6	2900	+0,-8	1.0
L1774.06-2950	6	2950	+0,-8	1.0
L1774.06-3000	6	3000	+0,-8	1.0
L1774.06-3050	6	3050	+0,-8	1.0
L1774.06-3100	6	3100	+0,-8	1.0
L1774.06-3150	6	3150	+0,-8	1.0
L1774.06-3200	6	3200	+0,-8	1.0
L1774.06-3250	6	3250	+0,-8	1.0
L1774.06-3300	6	3300	+0,-8	1.0
L1774.06-3350	6	3350	+0,-8	1.0
L1774.06-3400	6	3400	+0,-8	1.0
L1774.06-3450	6	3450	+0,-8	1.0
L1774.06-3500	6	3500	+0,-8	1.0
L1774.06-3550	6	3550	+0,-8	1.0
L1774.06-3600	6	3600	+0,-8	1.0
L1774.06-3650	6	3650	+0,-8	1.0
L1774.06-3700	6	3700	+0,-8	1.0
L1774.06-3750	6	3750	+0,-8	1.0
L1774.06-3800	6	3800	+0,-8	1.0
L1774.06-3850	6	3850	+0,-8	1.0
L1774.06-3900	6	3900	+0,-8	1.0
L1774.06-3950	6	3950	+0,-8	1.0
L1774.06-4000	6	4000	+0,-8	1.0
L1774.06-4050	6	4050	+0,-8	1.0
L1774.06-4100	6	4100	+0,-8	1.0
L1774.06-4150	6	4150	+0,-8	1.0
L1774.06-4200	6	4200	+0,-8	1.0
L1774.06-4250	6	4250	+0,-8	1.0
L1774.06-4300	6	4300	+0,-8	1.0
L1774.06-4350	6	4350	+0,-8	1.0
L1774.06-4400	6	4400	+0,-8	1.0
L1774.06-4450	6	4450	+0,-8	1.0
L1774.06-4500	6	4500	+0,-8	1.0
L1774.06-4550	6	4550	+0,-8	1.0
L1774.06-4600	6	4600	+0,-8	1.0
L1774.06-4650	6	4650	+0,-8	1.0
L1774.06-4700	6	4700	+0,-8	1.0
L1774.06-4750	6	4750	+0,-8	1.0
L1774.06-4800	6	4800	+0,-8	1.0
L1774.06-4850	6	4850	+0,-8	1.0
L1774.06-4900	6	4900	+0,-8	1.0

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.06-4950	6	4950	+0,-8	1.0
L1774.06-5000	6	5000	+0,-8	1.0
L1774.06-5050	6	5050	+0,-8	1.0
L1774.06-5100	6	5100	+0,-8	1.0
L1774.06-5150	6	5150	+0,-8	1.0
L1774.06-5200	6	5200	+0,-8	1.0
L1774.06-5250	6	5250	+0,-8	1.0
L1774.06-5300	6	5300	+0,-8	1.0
L1774.06-5350	6	5350	+0,-8	1.0
L1774.06-5400	6	5400	+0,-8	1.0
L1774.06-5450	6	5450	+0,-8	1.0
L1774.06-5500	6	5500	+0,-8	1.0
L1774.06-5550	6	5550	+0,-8	1.0
L1774.06-5600	6	5600	+0,-8	1.0
L1774.06-5650	6	5650	+0,-8	1.0
L1774.06-5700	6	5700	+0,-8	1.0
L1774.06-5750	6	5750	+0,-8	1.0
L1774.06-5800	6	5800	+0,-8	1.0
L1774.06-5850	6	5850	+0,-8	1.0
L1774.06-5900	6	5900	+0,-8	1.0
L1774.06-5950	6	5950	+0,-8	1.0
L1774.06-6000	6	6000	+0,-8	1.0

8Ø Stainless AISI 316 Shafts
soft



L1774.08



Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm², tensile strength: >515 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

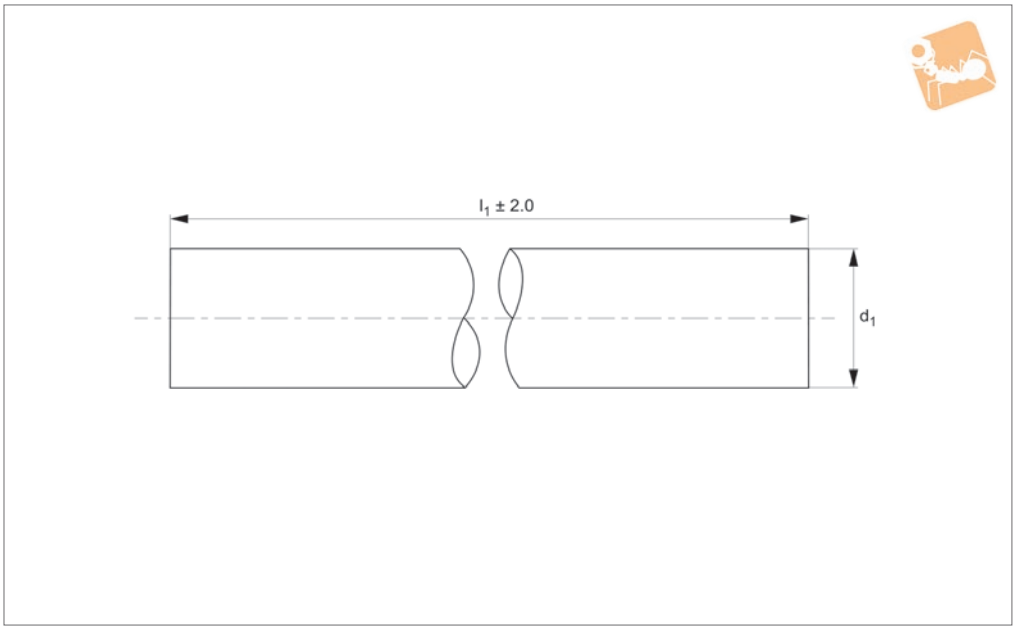
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness
L1774.08-0100	8	100	+0,-9	1.0
L1774.08-0150	8	150	+0,-9	1.0
L1774.08-0200	8	200	+0,-9	1.0
L1774.08-0250	8	250	+0,-9	1.0
L1774.08-0300	8	300	+0,-9	1.0
L1774.08-0350	8	350	+0,-9	1.0
L1774.08-0400	8	400	+0,-9	1.0
L1774.08-0450	8	450	+0,-9	1.0
L1774.08-0500	8	500	+0,-9	1.0
L1774.08-0550	8	550	+0,-9	1.0
L1774.08-0600	8	600	+0,-9	1.0
L1774.08-0650	8	650	+0,-9	1.0
L1774.08-0700	8	700	+0,-9	1.0
L1774.08-0750	8	750	+0,-9	1.0
L1774.08-0800	8	800	+0,-9	1.0
L1774.08-0850	8	850	+0,-9	1.0
L1774.08-0900	8	900	+0,-9	1.0
L1774.08-0950	8	950	+0,-9	1.0
L1774.08-1000	8	1000	+0,-9	1.0
L1774.08-1050	8	1050	+0,-9	1.0
L1774.08-1100	8	1100	+0,-9	1.0
L1774.08-1150	8	1150	+0,-9	1.0
L1774.08-1200	8	1200	+0,-9	1.0
L1774.08-1250	8	1250	+0,-9	1.0
L1774.08-1300	8	1300	+0,-9	1.0
L1774.08-1350	8	1350	+0,-9	1.0
L1774.08-1400	8	1400	+0,-9	1.0
L1774.08-1450	8	1450	+0,-9	1.0
L1774.08-1500	8	1500	+0,-9	1.0

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.08-1550	8	1550	+0,-9	1.0
L1774.08-1600	8	1600	+0,-9	1.0
L1774.08-1650	8	1650	+0,-9	1.0
L1774.08-1700	8	1700	+0,-9	1.0
L1774.08-1750	8	1750	+0,-9	1.0
L1774.08-1800	8	1800	+0,-9	1.0
L1774.08-1850	8	1850	+0,-9	1.0
L1774.08-1900	8	1900	+0,-9	1.0
L1774.08-1950	8	1950	+0,-9	1.0
L1774.08-2000	8	2000	+0,-9	1.0
L1774.08-2050	8	2050	+0,-9	1.0
L1774.08-2100	8	2100	+0,-9	1.0
L1774.08-2150	8	2150	+0,-9	1.0
L1774.08-2200	8	2200	+0,-9	1.0
L1774.08-2250	8	2250	+0,-9	1.0
L1774.08-2300	8	2300	+0,-9	1.0
L1774.08-2350	8	2350	+0,-9	1.0
L1774.08-2400	8	2400	+0,-9	1.0
L1774.08-2450	8	2450	+0,-9	1.0
L1774.08-2500	8	2500	+0,-9	1.0
L1774.08-2550	8	2550	+0,-9	1.0
L1774.08-2600	8	2600	+0,-9	1.0
L1774.08-2650	8	2650	+0,-9	1.0
L1774.08-2700	8	2700	+0,-9	1.0
L1774.08-2750	8	2750	+0,-9	1.0
L1774.08-2800	8	2800	+0,-9	1.0
L1774.08-2850	8	2850	+0,-9	1.0
L1774.08-2900	8	2900	+0,-9	1.0
L1774.08-2950	8	2950	+0,-9	1.0
L1774.08-3000	8	3000	+0,-9	1.0
L1774.08-3050	8	3050	+0,-9	1.0
L1774.08-3100	8	3100	+0,-9	1.0
L1774.08-3150	8	3150	+0,-9	1.0
L1774.08-3200	8	3200	+0,-9	1.0
L1774.08-3250	8	3250	+0,-9	1.0
L1774.08-3300	8	3300	+0,-9	1.0
L1774.08-3350	8	3350	+0,-9	1.0
L1774.08-3400	8	3400	+0,-9	1.0
L1774.08-3450	8	3450	+0,-9	1.0
L1774.08-3500	8	3500	+0,-9	1.0
L1774.08-3550	8	3550	+0,-9	1.0
L1774.08-3600	8	3600	+0,-9	1.0
L1774.08-3650	8	3650	+0,-9	1.0
L1774.08-3700	8	3700	+0,-9	1.0
L1774.08-3750	8	3750	+0,-9	1.0
L1774.08-3800	8	3800	+0,-9	1.0
L1774.08-3850	8	3850	+0,-9	1.0
L1774.08-3900	8	3900	+0,-9	1.0
L1774.08-3950	8	3950	+0,-9	1.0
L1774.08-4000	8	4000	+0,-9	1.0
L1774.08-4050	8	4050	+0,-9	1.0
L1774.08-4100	8	4100	+0,-9	1.0
L1774.08-4150	8	4150	+0,-9	1.0
L1774.08-4200	8	4200	+0,-9	1.0
L1774.08-4250	8	4250	+0,-9	1.0
L1774.08-4300	8	4300	+0,-9	1.0
L1774.08-4350	8	4350	+0,-9	1.0
L1774.08-4400	8	4400	+0,-9	1.0
L1774.08-4450	8	4450	+0,-9	1.0
L1774.08-4500	8	4500	+0,-9	1.0
L1774.08-4550	8	4550	+0,-9	1.0
L1774.08-4600	8	4600	+0,-9	1.0
L1774.08-4650	8	4650	+0,-9	1.0
L1774.08-4700	8	4700	+0,-9	1.0
L1774.08-4750	8	4750	+0,-9	1.0
L1774.08-4800	8	4800	+0,-9	1.0
L1774.08-4850	8	4850	+0,-9	1.0
L1774.08-4900	8	4900	+0,-9	1.0

8Ø Stainless AISI 316 Shafts
soft



Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.08-4950	8	4950	+0,-9	1.0
L1774.08-5000	8	5000	+0,-9	1.0
L1774.08-5050	8	5050	+0,-9	1.0
L1774.08-5100	8	5100	+0,-9	1.0
L1774.08-5150	8	5150	+0,-9	1.0
L1774.08-5200	8	5200	+0,-9	1.0
L1774.08-5250	8	5250	+0,-9	1.0
L1774.08-5300	8	5300	+0,-9	1.0
L1774.08-5350	8	5350	+0,-9	1.0
L1774.08-5400	8	5400	+0,-9	1.0
L1774.08-5450	8	5450	+0,-9	1.0
L1774.08-5500	8	5500	+0,-9	1.0
L1774.08-5550	8	5550	+0,-9	1.0
L1774.08-5600	8	5600	+0,-9	1.0
L1774.08-5650	8	5650	+0,-9	1.0
L1774.08-5700	8	5700	+0,-9	1.0
L1774.08-5750	8	5750	+0,-9	1.0
L1774.08-5800	8	5800	+0,-9	1.0
L1774.08-5850	8	5850	+0,-9	1.0
L1774.08-5900	8	5900	+0,-9	1.0
L1774.08-5950	8	5950	+0,-9	1.0
L1774.08-6000	8	6000	+0,-9	1.0





L1774.10

Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm^2, tensile strength: >515 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness
L1774.10-0100	10	100	+0,-10	1.0
L1774.10-0150	10	150	+0,-10	1.0
L1774.10-0200	10	200	+0,-10	1.0
L1774.10-0250	10	250	+0,-10	1.0
L1774.10-0300	10	300	+0,-10	1.0
L1774.10-0350	10	350	+0,-10	1.0
L1774.10-0400	10	400	+0,-10	1.0
L1774.10-0450	10	450	+0,-10	1.0
L1774.10-0500	10	500	+0,-10	1.0
L1774.10-0550	10	550	+0,-10	1.0
L1774.10-0600	10	600	+0,-10	1.0
L1774.10-0650	10	650	+0,-10	1.0
L1774.10-0700	10	700	+0,-10	1.0
L1774.10-0750	10	750	+0,-10	1.0
L1774.10-0800	10	800	+0,-10	1.0
L1774.10-0850	10	850	+0,-10	1.0
L1774.10-0900	10	900	+0,-10	1.0
L1774.10-0950	10	950	+0,-10	1.0
L1774.10-1000	10	1000	+0,-10	1.0
L1774.10-1050	10	1050	+0,-10	1.0
L1774.10-1100	10	1100	+0,-10	1.0
L1774.10-1150	10	1150	+0,-10	1.0
L1774.10-1200	10	1200	+0,-10	1.0
L1774.10-1250	10	1250	+0,-10	1.0
L1774.10-1300	10	1300	+0,-10	1.0
L1774.10-1350	10	1350	+0,-10	1.0
L1774.10-1400	10	1400	+0,-10	1.0
L1774.10-1450	10	1450	+0,-10	1.0
L1774.10-1500	10	1500	+0,-10	1.0

10Ø Stainless AISI 316 Shafts
soft



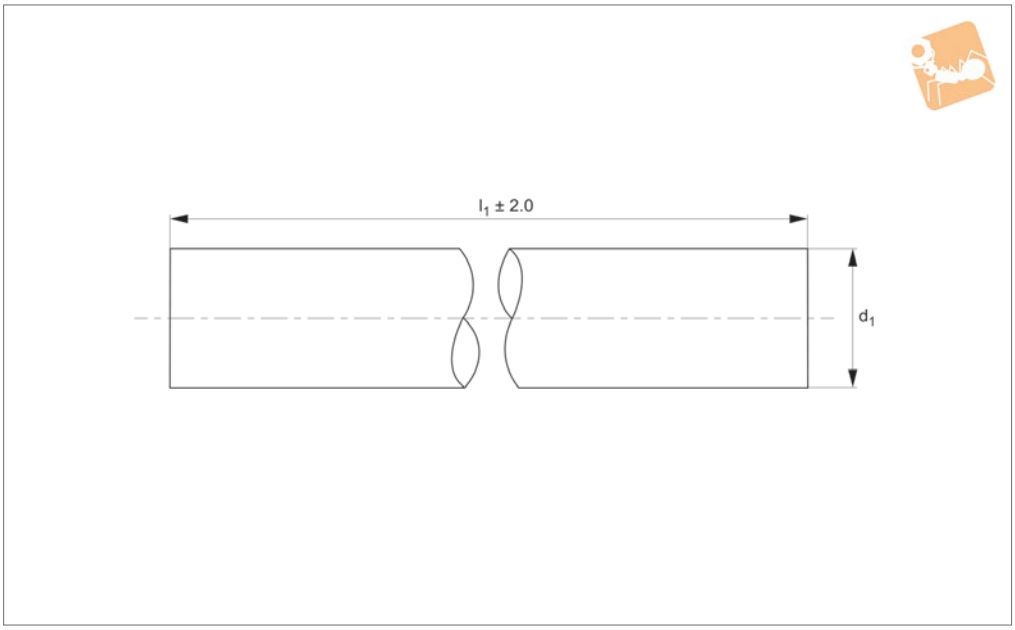
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.10-1550	10	1550	+0,-10	1.0
L1774.10-1600	10	1600	+0,-10	1.0
L1774.10-1650	10	1650	+0,-10	1.0
L1774.10-1700	10	1700	+0,-10	1.0
L1774.10-1750	10	1750	+0,-10	1.0
L1774.10-1800	10	1800	+0,-10	1.0
L1774.10-1850	10	1850	+0,-10	1.0
L1774.10-1900	10	1900	+0,-10	1.0
L1774.10-1950	10	1950	+0,-10	1.0
L1774.10-2000	10	2000	+0,-10	1.0
L1774.10-2050	10	2050	+0,-10	1.0
L1774.10-2100	10	2100	+0,-10	1.0
L1774.10-2150	10	2150	+0,-10	1.0
L1774.10-2200	10	2200	+0,-10	1.0
L1774.10-2250	10	2250	+0,-10	1.0
L1774.10-2300	10	2300	+0,-10	1.0
L1774.10-2350	10	2350	+0,-10	1.0
L1774.10-2400	10	2400	+0,-10	1.0
L1774.10-2450	10	2450	+0,-10	1.0
L1774.10-2500	10	2500	+0,-10	1.0
L1774.10-2550	10	2550	+0,-10	1.0
L1774.10-2600	10	2600	+0,-10	1.0
L1774.10-2650	10	2650	+0,-10	1.0
L1774.10-2700	10	2700	+0,-10	1.0
L1774.10-2750	10	2750	+0,-10	1.0
L1774.10-2800	10	2800	+0,-10	1.0
L1774.10-2850	10	2850	+0,-10	1.0
L1774.10-2900	10	2900	+0,-10	1.0
L1774.10-2950	10	2950	+0,-10	1.0
L1774.10-3000	10	3000	+0,-10	1.0
L1774.10-3050	10	3050	+0,-10	1.0
L1774.10-3100	10	3100	+0,-10	1.0
L1774.10-3150	10	3150	+0,-10	1.0
L1774.10-3200	10	3200	+0,-10	1.0
L1774.10-3250	10	3250	+0,-10	1.0
L1774.10-3300	10	3300	+0,-10	1.0
L1774.10-3350	10	3350	+0,-10	1.0
L1774.10-3400	10	3400	+0,-10	1.0
L1774.10-3450	10	3450	+0,-10	1.0
L1774.10-3500	10	3500	+0,-10	1.0
L1774.10-3550	10	3550	+0,-10	1.0
L1774.10-3600	10	3600	+0,-10	1.0
L1774.10-3650	10	3650	+0,-10	1.0
L1774.10-3700	10	3700	+0,-10	1.0
L1774.10-3750	10	3750	+0,-10	1.0
L1774.10-3800	10	3800	+0,-10	1.0
L1774.10-3850	10	3850	+0,-10	1.0
L1774.10-3900	10	3900	+0,-10	1.0
L1774.10-3950	10	3950	+0,-10	1.0
L1774.10-4000	10	4000	+0,-10	1.0
L1774.10-4050	10	4050	+0,-10	1.0
L1774.10-4100	10	4100	+0,-10	1.0
L1774.10-4150	10	4150	+0,-10	1.0
L1774.10-4200	10	4200	+0,-10	1.0
L1774.10-4250	10	4250	+0,-10	1.0
L1774.10-4300	10	4300	+0,-10	1.0
L1774.10-4350	10	4350	+0,-10	1.0
L1774.10-4400	10	4400	+0,-10	1.0
L1774.10-4450	10	4450	+0,-10	1.0
L1774.10-4500	10	4500	+0,-10	1.0
L1774.10-4550	10	4550	+0,-10	1.0
L1774.10-4600	10	4600	+0,-10	1.0
L1774.10-4650	10	4650	+0,-10	1.0
L1774.10-4700	10	4700	+0,-10	1.0
L1774.10-4750	10	4750	+0,-10	1.0
L1774.10-4800	10	4800	+0,-10	1.0
L1774.10-4850	10	4850	+0,-10	1.0
L1774.10-4900	10	4900	+0,-10	1.0

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.10-4950	10	4950	+0,-10	1.0
L1774.10-5000	10	5000	+0,-10	1.0
L1774.10-5050	10	5050	+0,-10	1.0
L1774.10-5100	10	5100	+0,-10	1.0
L1774.10-5150	10	5150	+0,-10	1.0
L1774.10-5200	10	5200	+0,-10	1.0
L1774.10-5250	10	5250	+0,-10	1.0
L1774.10-5300	10	5300	+0,-10	1.0
L1774.10-5350	10	5350	+0,-10	1.0
L1774.10-5400	10	5400	+0,-10	1.0
L1774.10-5450	10	5450	+0,-10	1.0
L1774.10-5500	10	5500	+0,-10	1.0
L1774.10-5550	10	5500	+0,-10	1.0
L1774.10-5600	10	5600	+0,-10	1.0
L1774.10-5650	10	5650	+0,-10	1.0
L1774.10-5700	10	5700	+0,-10	1.0
L1774.10-5750	10	5750	+0,-10	1.0
L1774.10-5800	10	5800	+0,-10	1.0
L1774.10-5850	10	5850	+0,-10	1.0
L1774.10-5900	10	5900	+0,-10	1.0
L1774.10-5950	10	5950	+0,-10	1.0
L1774.10-6000	10	6000	+0,-10	1.0

12Ø Stainless AISI 316 Shafts
soft



L1774.12



Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm², tensile strength: >515 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness mm
L1774.12-0100	12	100	+0,-11	1.6
L1774.12-0150	12	150	+0,-11	1.6
L1774.12-0200	12	200	+0,-11	1.6
L1774.12-0250	12	250	+0,-11	1.6
L1774.12-0300	12	300	+0,-11	1.6
L1774.12-0350	12	350	+0,-11	1.6
L1774.12-0400	12	400	+0,-11	1.6
L1774.12-0450	12	450	+0,-11	1.6
L1774.12-0500	12	500	+0,-11	1.6
L1774.12-0550	12	550	+0,-11	1.6
L1774.12-0600	12	600	+0,-11	1.6
L1774.12-0650	12	650	+0,-11	1.6
L1774.12-0700	12	700	+0,-11	1.6
L1774.12-0750	12	750	+0,-11	1.6
L1774.12-0800	12	800	+0,-11	1.6
L1774.12-0850	12	850	+0,-11	1.6
L1774.12-0900	12	900	+0,-11	1.6
L1774.12-0950	12	950	+0,-11	1.6
L1774.12-1000	12	1000	+0,-11	1.6
L1774.12-1050	12	1050	+0,-11	1.6
L1774.12-1100	12	1100	+0,-11	1.6
L1774.12-1150	12	1150	+0,-11	1.6
L1774.12-1200	12	1200	+0,-11	1.6
L1774.12-1250	12	1250	+0,-11	1.6
L1774.12-1300	12	1300	+0,-11	1.6
L1774.12-1350	12	1350	+0,-11	1.6
L1774.12-1400	12	1400	+0,-11	1.6
L1774.12-1450	12	1450	+0,-11	1.6
L1774.12-1500	12	1500	+0,-11	1.6

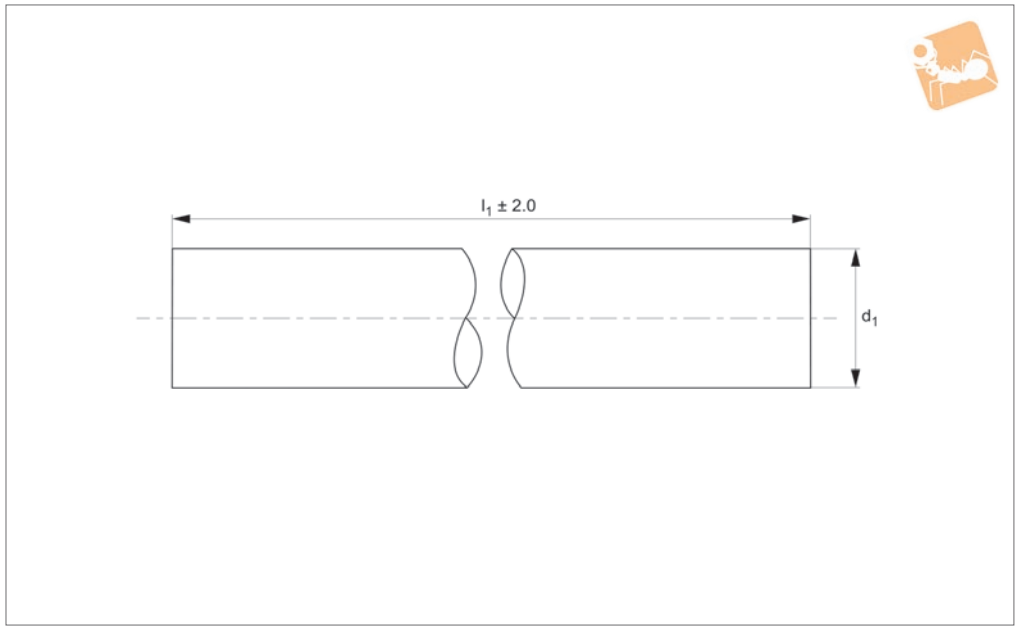
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness mm
L1774.12-1550	12	1550	+0,-11	1.6
L1774.12-1600	12	1600	+0,-11	1.6
L1774.12-1650	12	1650	+0,-11	1.6
L1774.12-1700	12	1700	+0,-11	1.6
L1774.12-1750	12	1750	+0,-11	1.6
L1774.12-1800	12	1800	+0,-11	1.6
L1774.12-1850	12	1850	+0,-11	1.6
L1774.12-1900	12	1900	+0,-11	1.6
L1774.12-1950	12	1950	+0,-11	1.6
L1774.12-2000	12	2000	+0,-11	1.6
L1774.12-2050	12	2050	+0,-11	1.6
L1774.12-2100	12	2100	+0,-11	1.6
L1774.12-2150	12	2150	+0,-11	1.6
L1774.12-2200	12	2200	+0,-11	1.6
L1774.12-2250	12	2250	+0,-11	1.6
L1774.12-2300	12	2300	+0,-11	1.6
L1774.12-2350	12	2350	+0,-11	1.6
L1774.12-2400	12	2400	+0,-11	1.6
L1774.12-2450	12	2450	+0,-11	1.6
L1774.12-2500	12	2500	+0,-11	1.6
L1774.12-2550	12	2550	+0,-11	1.6
L1774.12-2600	12	2600	+0,-11	1.6
L1774.12-2650	12	2650	+0,-11	1.6
L1774.12-2700	12	2700	+0,-11	1.6
L1774.12-2750	12	2750	+0,-11	1.6
L1774.12-2800	12	2800	+0,-11	1.6
L1774.12-2850	12	2850	+0,-11	1.6
L1774.12-2900	12	2900	+0,-11	1.6
L1774.12-2950	12	2950	+0,-11	1.6
L1774.12-3000	12	3000	+0,-11	1.6
L1774.12-3050	12	3050	+0,-11	1.6
L1774.12-3100	12	3100	+0,-11	1.6
L1774.12-3150	12	3150	+0,-11	1.6
L1774.12-3200	12	3200	+0,-11	1.6
L1774.12-3250	12	3250	+0,-11	1.6
L1774.12-3300	12	3300	+0,-11	1.6
L1774.12-3350	12	3350	+0,-11	1.6
L1774.12-3400	12	3400	+0,-11	1.6
L1774.12-3450	12	3450	+0,-11	1.6
L1774.12-3500	12	3500	+0,-11	1.6
L1774.12-3550	12	3550	+0,-11	1.6
L1774.12-3600	12	3600	+0,-11	1.6
L1774.12-3650	12	3650	+0,-11	1.6
L1774.12-3700	12	3700	+0,-11	1.6
L1774.12-3750	12	3750	+0,-11	1.6
L1774.12-3800	12	3800	+0,-11	1.6
L1774.12-3850	12	3850	+0,-11	1.6
L1774.12-3900	12	3900	+0,-11	1.6
L1774.12-3950	12	3950	+0,-11	1.6
L1774.12-4000	12	4000	+0,-11	1.6
L1774.12-4050	12	4050	+0,-11	1.6
L1774.12-4100	12	4100	+0,-11	1.6
L1774.12-4150	12	4150	+0,-11	1.6
L1774.12-4200	12	4200	+0,-11	1.6
L1774.12-4250	12	4250	+0,-11	1.6
L1774.12-4300	12	4300	+0,-11	1.6
L1774.12-4350	12	4350	+0,-11	1.6
L1774.12-4400	12	4400	+0,-11	1.6
L1774.12-4450	12	4450	+0,-11	1.6
L1774.12-4500	12	4500	+0,-11	1.6
L1774.12-4550	12	4550	+0,-11	1.6
L1774.12-4600	12	4600	+0,-11	1.6
L1774.12-4650	12	4650	+0,-11	1.6
L1774.12-4700	12	4700	+0,-11	1.6
L1774.12-4750	12	4750	+0,-11	1.6
L1774.12-4800	12	4800	+0,-11	1.6
L1774.12-4850	12	4850	+0,-11	1.6
L1774.12-4900	12	4900	+0,-11	1.6

12Ø Stainless AISI 316 Shafts
soft



Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness mm
L1774.12-4950	12	4950	+0,-11	1.6
L1774.12-5000	12	5000	+0,-11	1.6
L1774.12-5050	12	5050	+0,-11	1.6
L1774.12-5100	12	5100	+0,-11	1.6
L1774.12-5150	12	5150	+0,-11	1.6
L1774.12-5200	12	5200	+0,-11	1.6
L1774.12-5250	12	5250	+0,-11	1.6
L1774.12-5300	12	5300	+0,-11	1.6
L1774.12-5350	12	5350	+0,-11	1.6
L1774.12-5400	12	5400	+0,-11	1.6
L1774.12-5450	12	5450	+0,-11	1.6
L1774.12-5500	12	5500	+0,-11	1.6
L1774.12-5550	12	5550	+0,-11	1.6
L1774.12-5600	12	5600	+0,-11	1.6
L1774.12-5650	12	5650	+0,-11	1.6
L1774.12-5700	12	5700	+0,-11	1.6
L1774.12-5750	12	5700	+0,-11	1.6
L1774.12-5800	12	5800	+0,-11	1.6
L1774.12-5850	12	5850	+0,-11	1.6
L1774.12-5900	12	5900	+0,-11	1.6
L1774.12-5950	12	5950	+0,-11	1.6
L1774.12-6000	12	6000	+0,-11	1.6

16Ø Stainless AISI 316 Shafts
soft





L1774.16

Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm^2, tensile strength: >515 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness
L1774.16-0100	16	100	+0,-11	1.6
L1774.16-0150	16	150	+0,-11	1.6
L1774.16-0200	16	200	+0,-11	1.6
L1774.16-0250	16	250	+0,-11	1.6
L1774.16-0300	16	300	+0,-11	1.6
L1774.16-0350	16	350	+0,-11	1.6
L1774.16-0400	16	400	+0,-11	1.6
L1774.16-0450	16	450	+0,-11	1.6
L1774.16-0500	16	500	+0,-11	1.6
L1774.16-0550	16	550	+0,-11	1.6
L1774.16-0600	16	600	+0,-11	1.6
L1774.16-0650	16	650	+0,-11	1.6
L1774.16-0700	16	700	+0,-11	1.6
L1774.16-0750	16	750	+0,-11	1.6
L1774.16-0800	16	800	+0,-11	1.6
L1774.16-0850	16	850	+0,-11	1.6
L1774.16-0900	16	900	+0,-11	1.6
L1774.16-0950	16	950	+0,-11	1.6
L1774.16-1000	16	1000	+0,-11	1.6
L1774.16-1050	16	1050	+0,-11	1.6
L1774.16-1100	16	1100	+0,-11	1.6
L1774.16-1150	16	1150	+0,-11	1.6
L1774.16-1200	16	1200	+0,-11	1.6
L1774.16-1250	16	1250	+0,-11	1.6
L1774.16-1300	16	1300	+0,-11	1.6
L1774.16-1350	16	1350	+0,-11	1.6
L1774.16-1400	16	1400	+0,-11	1.6
L1774.16-1450	16	1450	+0,-11	1.6
L1774.16-1500	16	1500	+0,-11	1.6

16Ø Stainless AISI 316 Shafts

soft



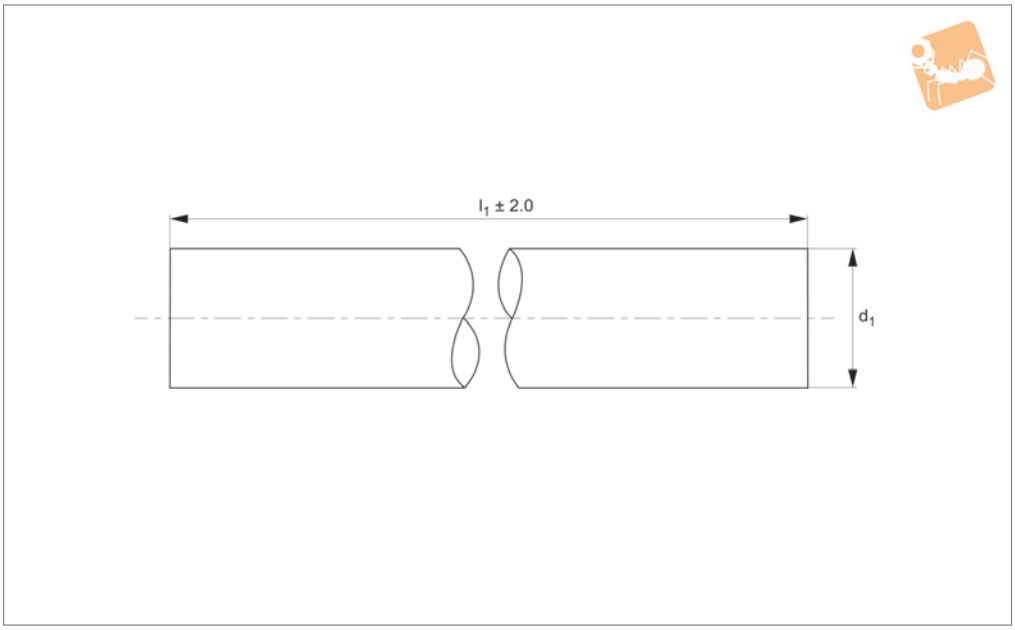
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.16-1550	16	1550	+0,-11	1.6
L1774.16-1600	16	1600	+0,-11	1.6
L1774.16-1650	16	1650	+0,-11	1.6
L1774.16-1700	16	1700	+0,-11	1.6
L1774.16-1750	16	1750	+0,-11	1.6
L1774.16-1800	16	1800	+0,-11	1.6
L1774.16-1850	16	1850	+0,-11	1.6
L1774.16-1900	16	1900	+0,-11	1.6
L1774.16-1950	16	1950	+0,-11	1.6
L1774.16-2000	16	2000	+0,-11	1.6
L1774.16-2050	16	2050	+0,-11	1.6
L1774.16-2100	16	2100	+0,-11	1.6
L1774.16-2150	16	2150	+0,-11	1.6
L1774.16-2200	16	2200	+0,-11	1.6
L1774.16-2250	16	2250	+0,-11	1.6
L1774.16-2300	16	2300	+0,-11	1.6
L1774.16-2350	16	2350	+0,-11	1.6
L1774.16-2400	16	2400	+0,-11	1.6
L1774.16-2450	16	2450	+0,-11	1.6
L1774.16-2500	16	2500	+0,-11	1.6
L1774.16-2550	16	2550	+0,-11	1.6
L1774.16-2600	16	2600	+0,-11	1.6
L1774.16-2650	16	2650	+0,-11	1.6
L1774.16-2700	16	2700	+0,-11	1.6
L1774.16-2750	16	2750	+0,-11	1.6
L1774.16-2800	16	2800	+0,-11	1.6
L1774.16-2850	16	2850	+0,-11	1.6
L1774.16-2900	16	2900	+0,-11	1.6
L1774.16-2950	16	2950	+0,-11	1.6
L1774.16-3000	16	3000	+0,-11	1.6
L1774.16-3050	16	3050	+0,-11	1.6
L1774.16-3100	16	3100	+0,-11	1.6
L1774.16-3150	16	3150	+0,-11	1.6
L1774.16-3200	16	3200	+0,-11	1.6
L1774.16-3250	16	3250	+0,-11	1.6
L1774.16-3300	16	3300	+0,-11	1.6
L1774.16-3350	16	3350	+0,-11	1.6
L1774.16-3400	16	3400	+0,-11	1.6
L1774.16-3450	16	3450	+0,-11	1.6
L1774.16-3500	16	3500	+0,-11	1.6
L1774.16-3550	16	3550	+0,-11	1.6
L1774.16-3600	16	3600	+0,-11	1.6
L1774.16-3650	16	3650	+0,-11	1.6
L1774.16-3700	16	3700	+0,-11	1.6
L1774.16-3750	16	3750	+0,-11	1.6
L1774.16-3800	16	3800	+0,-11	1.6
L1774.16-3850	16	3850	+0,-11	1.6
L1774.16-3900	16	3900	+0,-11	1.6
L1774.16-3950	16	3950	+0,-11	1.6
L1774.16-4000	16	4000	+0,-11	1.6
L1774.16-4050	16	4050	+0,-11	1.6
L1774.16-4100	16	4100	+0,-11	1.6
L1774.16-4150	16	4150	+0,-11	1.6
L1774.16-4200	16	4200	+0,-11	1.6
L1774.16-4250	16	4250	+0,-11	1.6
L1774.16-4300	16	4300	+0,-11	1.6
L1774.16-4350	16	4350	+0,-11	1.6
L1774.16-4400	16	4400	+0,-11	1.6
L1774.16-4450	16	4450	+0,-11	1.6
L1774.16-4500	16	4500	+0,-11	1.6
L1774.16-4550	16	4550	+0,-11	1.6
L1774.16-4600	16	4600	+0,-11	1.6
L1774.16-4650	16	4650	+0,-11	1.6
L1774.16-4700	16	4700	+0,-11	1.6
L1774.16-4750	16	4750	+0,-11	1.6
L1774.16-4800	16	4800	+0,-11	1.6
L1774.16-4850	16	4850	+0,-11	1.6
L1774.16-4900	16	4900	+0,-11	1.6

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.16-4950	16	4950	+0,-11	1.6
L1774.16-5000	16	5000	+0,-11	1.6
L1774.16-5050	16	5050	+0,-11	1.6
L1774.16-5100	16	5100	+0,-11	1.6
L1774.16-5150	16	5150	+0,-11	1.6
L1774.16-5200	16	5200	+0,-11	1.6
L1774.16-5250	16	5250	+0,-11	1.6
L1774.16-5300	16	5300	+0,-11	1.6
L1774.16-5350	16	5350	+0,-11	1.6
L1774.16-5400	16	5400	+0,-11	1.6
L1774.16-5450	16	5450	+0,-11	1.6
L1774.16-5500	16	5500	+0,-11	1.6
L1774.16-5550	16	5550	+0,-11	1.6
L1774.16-5600	16	5600	+0,-11	1.6
L1774.16-5650	16	5650	+0,-11	1.6
L1774.16-5700	16	5700	+0,-11	1.6
L1774.16-5750	16	5750	+0,-11	1.6
L1774.16-5800	16	5800	+0,-11	1.6
L1774.16-5850	16	5850	+0,-11	1.6
L1774.16-5900	16	5900	+0,-11	1.6
L1774.16-5950	16	5950	+0,-11	1.6
L1774.16-6000	16	6000	+0,-11	1.6

20Ø Stainless AISI 316 Shafts
soft



L1774.20



Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm², tensile strength: >515 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,2mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

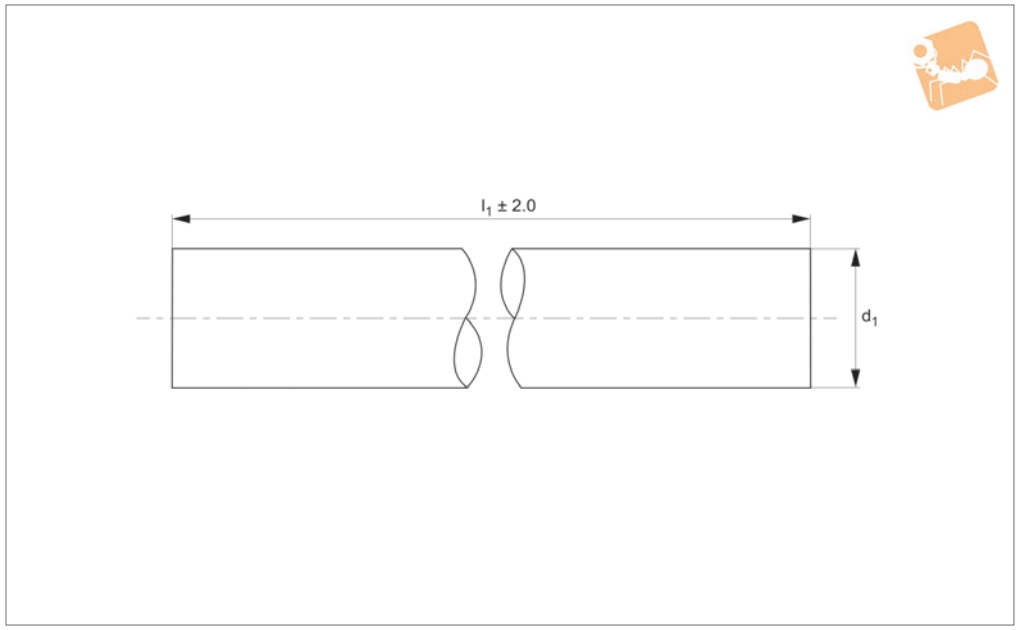
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness
L1774.20-0100	20	100	+0,-13	2.2
L1774.20-0150	20	150	+0,-13	2.2
L1774.20-0200	20	200	+0,-13	2.2
L1774.20-0250	20	250	+0,-13	2.2
L1774.20-0300	20	300	+0,-13	2.2
L1774.20-0350	20	350	+0,-13	2.2
L1774.20-0400	20	400	+0,-13	2.2
L1774.20-0450	20	450	+0,-13	2.2
L1774.20-0500	20	500	+0,-13	2.2
L1774.20-0550	20	550	+0,-13	2.2
L1774.20-0600	20	600	+0,-13	2.2
L1774.20-0650	20	650	+0,-13	2.2
L1774.20-0700	20	700	+0,-13	2.2
L1774.20-0750	20	750	+0,-13	2.2
L1774.20-0800	20	800	+0,-13	2.2
L1774.20-0850	20	850	+0,-13	2.2
L1774.20-0900	20	900	+0,-13	2.2
L1774.20-0950	20	950	+0,-13	2.2
L1774.20-1000	20	1000	+0,-13	2.2
L1774.20-1050	20	1050	+0,-13	2.2
L1774.20-1100	20	1100	+0,-13	2.2
L1774.20-1150	20	1150	+0,-13	2.2
L1774.20-1200	20	1200	+0,-13	2.2
L1774.20-1250	20	1250	+0,-13	2.2
L1774.20-1300	20	1300	+0,-13	2.2
L1774.20-1350	20	1350	+0,-13	2.2
L1774.20-1400	20	1400	+0,-13	2.2
L1774.20-1450	20	1450	+0,-13	2.2
L1774.20-1500	20	1500	+0,-13	2.2

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.20-1550	20	1550	+0,-13	2.2
L1774.20-1600	20	1600	+0,-13	2.2
L1774.20-1650	20	1650	+0,-13	2.2
L1774.20-1700	20	1700	+0,-13	2.2
L1774.20-1750	20	1750	+0,-13	2.2
L1774.20-1800	20	1800	+0,-13	2.2
L1774.20-1850	20	1850	+0,-13	2.2
L1774.20-1900	20	1900	+0,-13	2.2
L1774.20-1950	20	1950	+0,-13	2.2
L1774.20-2000	20	2000	+0,-13	2.2
L1774.20-2050	20	2050	+0,-13	2.2
L1774.20-2100	20	2100	+0,-13	2.2
L1774.20-2150	20	2150	+0,-13	2.2
L1774.20-2200	20	2200	+0,-13	2.2
L1774.20-2250	20	2250	+0,-13	2.2
L1774.20-2300	20	2300	+0,-13	2.2
L1774.20-2350	20	2350	+0,-13	2.2
L1774.20-2400	20	2400	+0,-13	2.2
L1774.20-2450	20	2450	+0,-13	2.2
L1774.20-2500	20	2500	+0,-13	2.2
L1774.20-2550	20	2550	+0,-13	2.2
L1774.20-2600	20	2600	+0,-13	2.2
L1774.20-2650	20	2650	+0,-13	2.2
L1774.20-2700	20	2700	+0,-13	2.2
L1774.20-2750	20	2752	+0,-13	2.2
L1774.20-2800	20	2800	+0,-13	2.2
L1774.20-2850	20	2850	+0,-13	2.2
L1774.20-2900	20	2900	+0,-13	2.2
L1774.20-2950	20	2950	+0,-13	2.2
L1774.20-3000	20	3000	+0,-13	2.2
L1774.20-3050	20	3050	+0,-13	2.2
L1774.20-3100	20	3100	+0,-13	2.2
L1774.20-3150	20	3150	+0,-13	2.2
L1774.20-3200	20	3200	+0,-13	2.2
L1774.20-3250	20	3250	+0,-13	2.2
L1774.20-3300	20	3300	+0,-13	2.2
L1774.20-3350	20	3350	+0,-13	2.2
L1774.20-3400	20	3400	+0,-13	2.2
L1774.20-3450	20	3450	+0,-13	2.2
L1774.20-3500	20	3500	+0,-13	2.2
L1774.20-3550	20	3550	+0,-13	2.2
L1774.20-3600	20	3600	+0,-13	2.2
L1774.20-3650	20	3650	+0,-13	2.2
L1774.20-3700	20	3700	+0,-13	2.2
L1774.20-3750	20	3750	+0,-13	2.2
L1774.20-3800	20	3800	+0,-13	2.2
L1774.20-3850	20	3850	+0,-13	2.2
L1774.20-3900	20	3900	+0,-13	2.2
L1774.20-3950	20	3950	+0,-13	2.2
L1774.20-4000	20	4000	+0,-13	2.2
L1774.20-4050	20	4050	+0,-13	2.2
L1774.20-4100	20	4100	+0,-13	2.2
L1774.20-4150	20	4150	+0,-13	2.2
L1774.20-4200	20	4200	+0,-13	2.2
L1774.20-4250	20	4250	+0,-13	2.2
L1774.20-4300	20	4300	+0,-13	2.2
L1774.20-4350	20	4350	+0,-13	2.2
L1774.20-4400	20	4400	+0,-13	2.2
L1774.20-4450	20	4450	+0,-13	2.2
L1774.20-4500	20	4500	+0,-13	2.2
L1774.20-4550	20	4550	+0,-13	2.2
L1774.20-4600	20	4600	+0,-13	2.2
L1774.20-4650	20	4650	+0,-13	2.2
L1774.20-4700	20	4700	+0,-13	2.2
L1774.20-4750	20	4750	+0,-13	2.2
L1774.20-4800	20	4800	+0,-13	2.2
L1774.20-4850	20	4850	+0,-13	2.2
L1774.20-4900	20	4900	+0,-13	2.2

20Ø Stainless AISI 316 Shafts
soft



Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.20-4950	20	4950	+0,-13	2.2
L1774.20-5000	20	5000	+0,-13	2.2
L1774.20-5050	20	5050	+0,-13	2.2
L1774.20-5100	20	5100	+0,-13	2.2
L1774.20-5150	20	5150	+0,-13	2.2
L1774.20-5200	20	5200	+0,-13	2.2
L1774.20-5250	20	5250	+0,-13	2.2
L1774.20-5300	20	5300	+0,-13	2.2
L1774.20-5350	20	5350	+0,-13	2.2
L1774.20-5400	20	5400	+0,-13	2.2
L1774.20-5450	20	5450	+0,-13	2.2
L1774.20-5500	20	5500	+0,-13	2.2
L1774.20-5550	20	5550	+0,-13	2.2
L1774.20-5600	20	5600	+0,-13	2.2
L1774.20-5650	20	5650	+0,-13	2.2
L1774.20-5700	20	5700	+0,-13	2.2
L1774.20-5750	20	5750	+0,-13	2.2
L1774.20-5800	20	5800	+0,-13	2.2
L1774.20-5850	20	5850	+0,-13	2.2
L1774.20-5900	20	5900	+0,-13	2.2
L1774.20-5950	20	5950	+0,-13	2.2
L1774.20-6000	20	6000	+0,-13	2.2





L1774.25

Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm^2, tensile strength: >515 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness
L1774.25-0100	25	100	+0,-13	2.2
L1774.25-0150	25	150	+0,-13	2.2
L1774.25-0200	25	200	+0,-13	2.2
L1774.25-0250	25	250	+0,-13	2.2
L1774.25-0300	25	300	+0,-13	2.2
L1774.25-0350	25	350	+0,-13	2.2
L1774.25-0400	25	400	+0,-13	2.2
L1774.25-0450	25	450	+0,-13	2.2
L1774.25-0500	25	500	+0,-13	2.2
L1774.25-0550	25	550	+0,-13	2.2
L1774.25-0600	25	600	+0,-13	2.2
L1774.25-0650	25	650	+0,-13	2.2
L1774.25-0700	25	700	+0,-13	2.2
L1774.25-0750	25	750	+0,-13	2.2
L1774.25-0800	25	800	+0,-13	2.2
L1774.25-0850	25	852	+0,-13	2.2
L1774.25-0900	25	900	+0,-13	2.2
L1774.25-0950	25	950	+0,-13	2.2
L1774.25-1000	25	1000	+0,-13	2.2
L1774.25-1050	25	1050	+0,-13	2.2
L1774.25-1100	25	1100	+0,-13	2.2
L1774.25-1150	25	1150	+0,-13	2.2
L1774.25-1200	25	1200	+0,-13	2.2
L1774.25-1250	25	1250	+0,-13	2.2
L1774.25-1300	25	1300	+0,-13	2.2
L1774.25-1350	25	1350	+0,-13	2.2
L1774.25-1400	25	1400	+0,-13	2.2
L1774.25-1450	25	1450	+0,-13	2.2
L1774.25-1500	25	1500	+0,-13	2.2

25Ø Stainless AISI 316 Shafts
soft



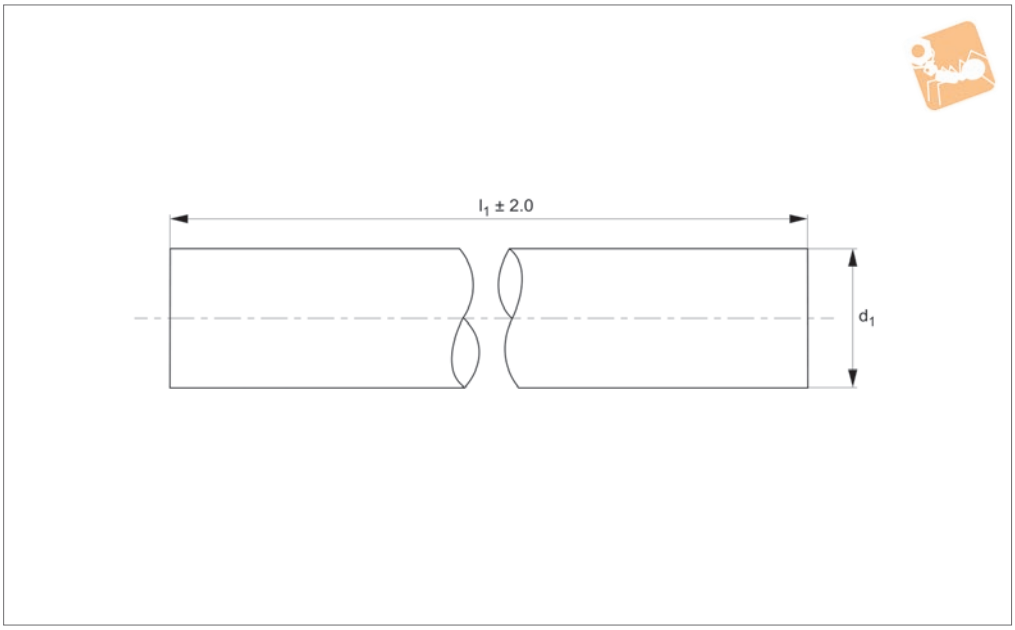
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.25-1550	25	1550	+0,-13	2.2
L1774.25-1600	25	1600	+0,-13	2.2
L1774.25-1650	25	1650	+0,-13	2.2
L1774.25-1700	25	1700	+0,-13	2.2
L1774.25-1750	25	1750	+0,-13	2.2
L1774.25-1800	25	1800	+0,-13	2.2
L1774.25-1850	25	1850	+0,-13	2.2
L1774.25-1900	25	1900	+0,-13	2.2
L1774.25-1950	25	1950	+0,-13	2.2
L1774.25-2000	25	2000	+0,-13	2.2
L1774.25-2050	25	2050	+0,-13	2.2
L1774.25-2100	25	2100	+0,-13	2.2
L1774.25-2150	25	2150	+0,-13	2.2
L1774.25-2200	25	2200	+0,-13	2.2
L1774.25-2250	25	2250	+0,-13	2.2
L1774.25-2300	25	2300	+0,-13	2.2
L1774.25-2350	25	2350	+0,-13	2.2
L1774.25-2400	25	2400	+0,-13	2.2
L1774.25-2450	25	2450	+0,-13	2.2
L1774.25-2500	25	2500	+0,-13	2.2
L1774.25-2550	25	2550	+0,-13	2.2
L1774.25-2600	25	2600	+0,-13	2.2
L1774.25-2650	25	2650	+0,-13	2.2
L1774.25-2700	25	2700	+0,-13	2.2
L1774.25-2750	25	2750	+0,-13	2.2
L1774.25-2800	25	2800	+0,-13	2.2
L1774.25-2850	25	2850	+0,-13	2.2
L1774.25-2900	25	2900	+0,-13	2.2
L1774.25-2950	25	2950	+0,-13	2.2
L1774.25-3000	25	3000	+0,-13	2.2
L1774.25-3050	25	3050	+0,-13	2.2
L1774.25-3100	25	3100	+0,-13	2.2
L1774.25-3150	25	3150	+0,-13	2.2
L1774.25-3200	25	3200	+0,-13	2.2
L1774.25-3250	25	3250	+0,-13	2.2
L1774.25-3300	25	3300	+0,-13	2.2
L1774.25-3350	25	3350	+0,-13	2.2
L1774.25-3400	25	3400	+0,-13	2.2
L1774.25-3450	25	3450	+0,-13	2.2
L1774.25-3500	25	3500	+0,-13	2.2
L1774.25-3550	25	3550	+0,-13	2.2
L1774.25-3600	25	3600	+0,-13	2.2
L1774.25-3650	25	3650	+0,-13	2.2
L1774.25-3700	25	3700	+0,-13	2.2
L1774.25-3750	25	3750	+0,-13	2.2
L1774.25-3800	25	3800	+0,-13	2.2
L1774.25-3850	25	3850	+0,-13	2.2
L1774.25-3900	25	3900	+0,-13	2.2
L1774.25-3950	25	3950	+0,-13	2.2
L1774.25-4000	25	4000	+0,-13	2.2
L1774.25-4050	25	4050	+0,-13	2.2
L1774.25-4100	25	4100	+0,-13	2.2
L1774.25-4150	25	4150	+0,-13	2.2
L1774.25-4200	25	4200	+0,-13	2.2
L1774.25-4250	25	4250	+0,-13	2.2
L1774.25-4300	25	4300	+0,-13	2.2
L1774.25-4350	25	4350	+0,-13	2.2
L1774.25-4400	25	4400	+0,-13	2.2
L1774.25-4450	25	4450	+0,-13	2.2
L1774.25-4500	25	4500	+0,-13	2.2
L1774.25-4550	25	4550	+0,-13	2.2
L1774.25-4600	25	4600	+0,-13	2.2
L1774.25-4650	25	4650	+0,-13	2.2
L1774.25-4700	25	4700	+0,-13	2.2
L1774.25-4750	25	4750	+0,-13	2.2
L1774.25-4800	25	4800	+0,-13	2.2
L1774.25-4850	25	4850	+0,-13	2.2
L1774.25-4900	25	4900	+0,-13	2.2

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.25-4950	25	4950	+0,-13	2.2
L1774.25-5000	25	5000	+0,-13	2.2
L1774.25-5050	25	5050	+0,-13	2.2
L1774.25-5100	25	5100	+0,-13	2.2
L1774.25-5150	25	5150	+0,-13	2.2
L1774.25-5200	25	5200	+0,-13	2.2
L1774.25-5250	25	5250	+0,-13	2.2
L1774.25-5300	25	5300	+0,-13	2.2
L1774.25-5350	25	5350	+0,-13	2.2
L1774.25-5400	25	5400	+0,-13	2.2
L1774.25-5450	25	5450	+0,-13	2.2
L1774.25-5500	25	5500	+0,-13	2.2
L1774.25-5550	25	5550	+0,-13	2.2
L1774.25-5600	25	5600	+0,-13	2.2
L1774.25-5650	25	5650	+0,-13	2.2
L1774.25-5700	25	5700	+0,-13	2.2
L1774.25-5750	25	5750	+0,-13	2.2
L1774.25-5800	25	5800	+0,-13	2.2
L1774.25-5850	25	5850	+0,-13	2.2
L1774.25-5900	25	5900	+0,-13	2.2
L1774.25-5950	25	5950	+0,-13	2.2
L1774.25-6000	25	6000	+0,-13	2.2

30Ø Stainless AISI 316 Shafts
soft



L1774.30



Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm², tensile strength: >515 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

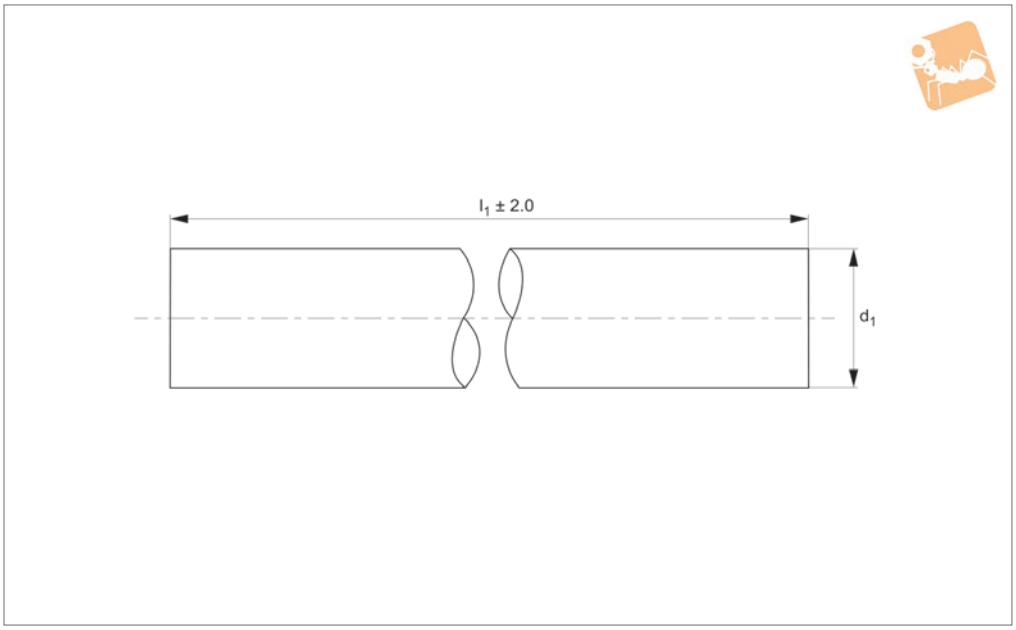
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness
L1774.30-0100	30	100	+0,-13	2.2
L1774.30-0150	30	150	+0,-13	2.2
L1774.30-0200	30	200	+0,-13	2.2
L1774.30-0250	30	250	+0,-13	2.2
L1774.30-0300	30	300	+0,-13	2.2
L1774.30-0350	30	350	+0,-13	2.2
L1774.30-0400	30	400	+0,-13	2.2
L1774.30-0450	30	450	+0,-13	2.2
L1774.30-0500	30	500	+0,-13	2.2
L1774.30-0550	30	550	+0,-13	2.2
L1774.30-0600	30	600	+0,-13	2.2
L1774.30-0650	30	650	+0,-13	2.2
L1774.30-0700	30	700	+0,-13	2.2
L1774.30-0750	30	750	+0,-13	2.2
L1774.30-0800	30	800	+0,-13	2.2
L1774.30-0850	30	850	+0,-13	2.2
L1774.30-0900	30	900	+0,-13	2.2
L1774.30-0950	30	950	+0,-13	2.2
L1774.30-1000	30	1000	+0,-13	2.2
L1774.30-1050	30	1050	+0,-13	2.2
L1774.30-1100	30	1100	+0,-13	2.2
L1774.30-1150	30	1150	+0,-13	2.2
L1774.30-1200	30	1200	+0,-13	2.2
L1774.30-1250	30	1250	+0,-13	2.2
L1774.30-1300	30	1300	+0,-13	2.2
L1774.30-1350	30	1350	+0,-13	2.2
L1774.30-1400	30	1400	+0,-13	2.2
L1774.30-1450	30	1450	+0,-13	2.2
L1774.30-1500	30	1500	+0,-13	2.2

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.30-1550	30	1550	+0,-13	2.2
L1774.30-1600	30	1600	+0,-13	2.2
L1774.30-1650	30	1650	+0,-13	2.2
L1774.30-1700	30	1700	+0,-13	2.2
L1774.30-1750	30	1750	+0,-13	2.2
L1774.30-1800	30	1800	+0,-13	2.2
L1774.30-1850	30	1850	+0,-13	2.2
L1774.30-1900	30	1900	+0,-13	2.2
L1774.30-1950	30	1950	+0,-13	2.2
L1774.30-2000	30	2000	+0,-13	2.2
L1774.30-2050	30	2050	+0,-13	2.2
L1774.30-2100	30	2100	+0,-13	2.2
L1774.30-2150	30	2150	+0,-13	2.2
L1774.30-2200	30	2200	+0,-13	2.2
L1774.30-2250	30	2250	+0,-13	2.2
L1774.30-2300	30	2300	+0,-13	2.2
L1774.30-2350	30	2350	+0,-13	2.2
L1774.30-2400	30	2400	+0,-13	2.2
L1774.30-2450	30	2450	+0,-13	2.2
L1774.30-2500	30	2500	+0,-13	2.2
L1774.30-2550	30	2550	+0,-13	2.2
L1774.30-2600	30	2600	+0,-13	2.2
L1774.30-2650	30	2650	+0,-13	2.2
L1774.30-2700	30	2700	+0,-13	2.2
L1774.30-2750	30	2750	+0,-13	2.2
L1774.30-2800	30	2800	+0,-13	2.2
L1774.30-2850	30	2850	+0,-13	2.2
L1774.30-2900	30	2900	+0,-13	2.2
L1774.30-2950	30	2950	+0,-13	2.2
L1774.30-3000	30	3000	+0,-13	2.2
L1774.30-3050	30	3050	+0,-13	2.2
L1774.30-3100	30	3100	+0,-13	2.2
L1774.30-3150	30	3150	+0,-13	2.2
L1774.30-3200	30	3200	+0,-13	2.2
L1774.30-3250	30	3250	+0,-13	2.2
L1774.30-3300	30	3300	+0,-13	2.2
L1774.30-3350	30	3350	+0,-13	2.2
L1774.30-3400	30	3400	+0,-13	2.2
L1774.30-3450	30	3450	+0,-13	2.2
L1774.30-3500	30	3500	+0,-13	2.2
L1774.30-3550	30	3550	+0,-13	2.2
L1774.30-3600	30	3600	+0,-13	2.2
L1774.30-3650	30	3650	+0,-13	2.2
L1774.30-3700	30	3700	+0,-13	2.2
L1774.30-3750	30	3750	+0,-13	2.2
L1774.30-3800	30	3800	+0,-13	2.2
L1774.30-3850	30	3850	+0,-13	2.2
L1774.30-3900	30	3900	+0,-13	2.2
L1774.30-3950	30	3950	+0,-13	2.2
L1774.30-4000	30	4000	+0,-13	2.2
L1774.30-4050	30	4050	+0,-13	2.2
L1774.30-4100	30	4100	+0,-13	2.2
L1774.30-4150	30	4150	+0,-13	2.2
L1774.30-4200	30	4200	+0,-13	2.2
L1774.30-4250	30	4250	+0,-13	2.2
L1774.30-4300	30	4300	+0,-13	2.2
L1774.30-4350	30	4350	+0,-13	2.2
L1774.30-4400	30	4400	+0,-13	2.2
L1774.30-4450	30	4450	+0,-13	2.2
L1774.30-4500	30	4500	+0,-13	2.2
L1774.30-4550	30	4550	+0,-13	2.2
L1774.30-4600	30	4600	+0,-13	2.2
L1774.30-4650	30	4650	+0,-13	2.2
L1774.30-4700	30	4700	+0,-13	2.2
L1774.30-4750	30	4750	+0,-13	2.2
L1774.30-4800	30	4800	+0,-13	2.2
L1774.30-4850	30	4850	+0,-13	2.2
L1774.30-4900	30	4900	+0,-13	2.2

30Ø Stainless AISI 316 Shafts
soft



Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.30-4950	30	4950	+0,-13	2.2
L1774.30-5000	30	5000	+0,-13	2.2
L1774.30-5050	30	5050	+0,-13	2.2
L1774.30-5100	30	5100	+0,-13	2.2
L1774.30-5150	30	5150	+0,-13	2.2
L1774.30-5200	30	5200	+0,-13	2.2
L1774.30-5250	30	5250	+0,-13	2.2
L1774.30-5300	30	5300	+0,-13	2.2
L1774.30-5350	30	5350	+0,-13	2.2
L1774.30-5400	30	5400	+0,-13	2.2
L1774.30-5450	30	5450	+0,-13	2.2
L1774.30-5500	30	5500	+0,-13	2.2
L1774.30-5550	30	5550	+0,-13	2.2
L1774.30-5600	30	5600	+0,-13	2.2
L1774.30-5650	30	5650	+0,-13	2.2
L1774.30-5700	30	5700	+0,-13	2.2
L1774.30-5750	30	5750	+0,-13	2.2
L1774.30-5800	30	5800	+0,-13	2.2
L1774.30-5850	30	5850	+0,-13	2.2
L1774.30-5900	30	5900	+0,-13	2.2
L1774.30-5950	30	5950	+0,-13	2.2
L1774.30-6000	30	6000	+0,-13	2.2





L1774.40

Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm^2, tensile strength: >515 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness
L1774.40-0100	40	100	+0,-16	3.5
L1774.40-0150	40	150	+0,-16	3.5
L1774.40-0200	40	200	+0,-16	3.5
L1774.40-0250	40	250	+0,-16	3.5
L1774.40-0300	40	300	+0,-16	3.5
L1774.40-0350	40	350	+0,-16	3.5
L1774.40-0400	40	400	+0,-16	3.5
L1774.40-0450	40	450	+0,-16	3.5
L1774.40-0500	40	500	+0,-16	3.5
L1774.40-0550	40	550	+0,-16	3.5
L1774.40-0600	40	600	+0,-16	3.5
L1774.40-0650	40	650	+0,-16	3.5
L1774.40-0700	40	700	+0,-16	3.5
L1774.40-0750	40	750	+0,-16	3.5
L1774.40-0800	40	800	+0,-16	3.5
L1774.40-0850	40	850	+0,-16	3.5
L1774.40-0900	40	900	+0,-16	3.5
L1774.40-0950	40	950	+0,-16	3.5
L1774.40-1000	40	1000	+0,-16	3.5
L1774.40-1050	40	1050	+0,-16	3.5
L1774.40-1100	40	1100	+0,-16	3.5
L1774.40-1150	40	1150	+0,-16	3.5
L1774.40-1200	40	1200	+0,-16	3.5
L1774.40-1250	40	1250	+0,-16	3.5
L1774.40-1300	40	1300	+0,-16	3.5
L1774.40-1350	40	1350	+0,-16	3.5
L1774.40-1400	40	1400	+0,-16	3.5
L1774.40-1450	40	1450	+0,-16	3.5
L1774.40-1500	40	1500	+0,-16	3.5

40Ø Stainless AISI 316 Shafts
soft



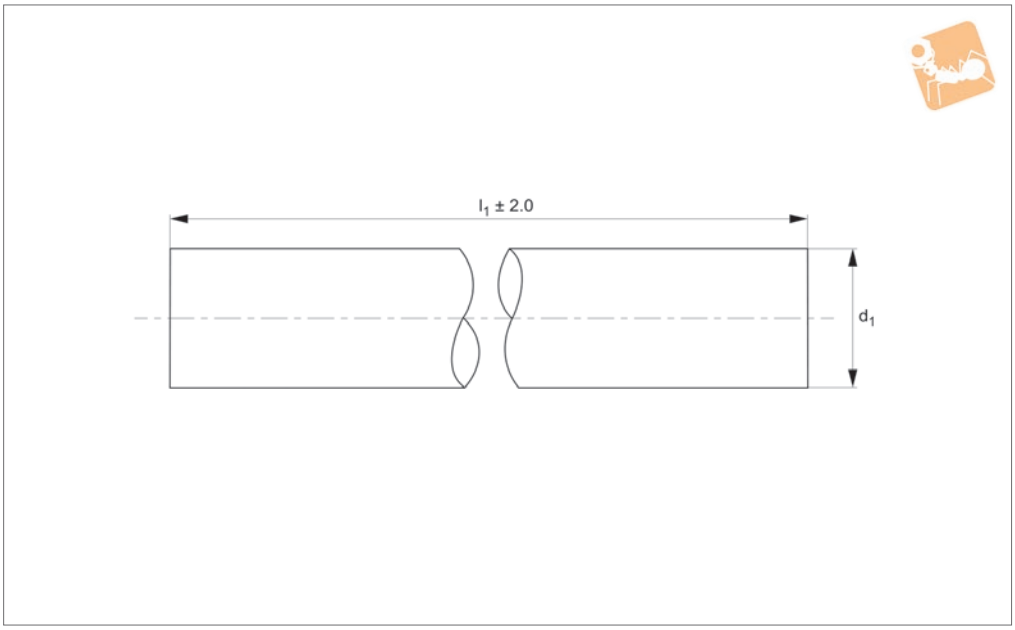
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.40-1550	40	1550	+0,-16	3.5
L1774.40-1600	40	1600	+0,-16	3.5
L1774.40-1650	40	1650	+0,-16	3.5
L1774.40-1700	40	1700	+0,-16	3.5
L1774.40-1750	40	1750	+0,-16	3.5
L1774.40-1800	40	1800	+0,-16	3.5
L1774.40-1850	40	1850	+0,-16	3.5
L1774.40-1900	40	1900	+0,-16	3.5
L1774.40-1950	40	1950	+0,-16	3.5
L1774.40-2000	40	2000	+0,-16	3.5
L1774.40-2050	40	2050	+0,-16	3.5
L1774.40-2100	40	2100	+0,-16	3.5
L1774.40-2150	40	2150	+0,-16	3.5
L1774.40-2200	40	2200	+0,-16	3.5
L1774.40-2250	40	2250	+0,-16	3.5
L1774.40-2300	40	2300	+0,-16	3.5
L1774.40-2350	40	2350	+0,-16	3.5
L1774.40-2400	40	2400	+0,-16	3.5
L1774.40-2450	40	2450	+0,-16	3.5
L1774.40-2500	40	2500	+0,-16	3.5
L1774.40-2550	40	2550	+0,-16	3.5
L1774.40-2600	40	2600	+0,-16	3.5
L1774.40-2650	40	2650	+0,-16	3.5
L1774.40-2700	40	2700	+0,-16	3.5
L1774.40-2750	40	2750	+0,-16	3.5
L1774.40-2800	40	2800	+0,-16	3.5
L1774.40-2850	40	2850	+0,-16	3.5
L1774.40-2900	40	2900	+0,-16	3.5
L1774.40-2950	40	2950	+0,-16	3.5
L1774.40-3000	40	3000	+0,-16	3.5
L1774.40-3050	40	3050	+0,-16	3.5
L1774.40-3100	40	3100	+0,-16	3.5
L1774.40-3150	40	3150	+0,-16	3.5
L1774.40-3200	40	3200	+0,-16	3.5
L1774.40-3250	40	3250	+0,-16	3.5
L1774.40-3300	40	3300	+0,-16	3.5
L1774.40-3350	40	3350	+0,-16	3.5
L1774.40-3400	40	3400	+0,-16	3.5
L1774.40-3450	40	3450	+0,-16	3.5
L1774.40-3500	40	3500	+0,-16	3.5
L1774.40-3550	40	3550	+0,-16	3.5
L1774.40-3600	40	3600	+0,-16	3.5
L1774.40-3650	40	3650	+0,-16	3.5
L1774.40-3700	40	3700	+0,-16	3.5
L1774.40-3750	40	3750	+0,-16	3.5
L1774.40-3800	40	3800	+0,-16	3.5
L1774.40-3850	40	3850	+0,-16	3.5
L1774.40-3900	40	3900	+0,-16	3.5
L1774.40-3950	40	3950	+0,-16	3.5
L1774.40-4000	40	4000	+0,-16	3.5
L1774.40-4050	40	4050	+0,-16	3.5
L1774.40-4100	40	4100	+0,-16	3.5
L1774.40-4150	40	4150	+0,-16	3.5
L1774.40-4200	40	4200	+0,-16	3.5
L1774.40-4250	40	4250	+0,-16	3.5
L1774.40-4300	40	4300	+0,-16	3.5
L1774.40-4350	40	4350	+0,-16	3.5
L1774.40-4400	40	4400	+0,-16	3.5
L1774.40-4450	40	4450	+0,-16	3.5
L1774.40-4500	40	4500	+0,-16	3.5
L1774.40-4550	40	4550	+0,-16	3.5
L1774.40-4600	40	4600	+0,-16	3.5
L1774.40-4650	40	4650	+0,-16	3.5
L1774.40-4700	40	4700	+0,-16	3.5
L1774.40-4750	40	4750	+0,-16	3.5
L1774.40-4800	40	4800	+0,-16	3.5
L1774.40-4850	40	4850	+0,-16	3.5
L1774.40-4900	40	4900	+0,-16	3.5

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.40-4950	40	4950	+0,-16	3.5
L1774.40-5000	40	5000	+0,-16	3.5
L1774.40-5050	40	5050	+0,-16	3.5
L1774.40-5100	40	5100	+0,-16	3.5
L1774.40-5150	40	5150	+0,-16	3.5
L1774.40-5200	40	5200	+0,-16	3.5
L1774.40-5250	40	5250	+0,-16	3.5
L1774.40-5300	40	5300	+0,-16	3.5
L1774.40-5350	40	5350	+0,-16	3.5
L1774.40-5400	40	5400	+0,-16	3.5
L1774.40-5450	40	5450	+0,-16	3.5
L1774.40-5500	40	5500	+0,-16	3.5
L1774.40-5550	40	5550	+0,-16	3.5
L1774.40-5600	40	5600	+0,-16	3.5
L1774.40-5650	40	5650	+0,-16	3.5
L1774.40-5700	40	5700	+0,-16	3.5
L1774.40-5750	40	5750	+0,-16	3.5
L1774.40-5800	40	5800	+0,-16	3.5
L1774.40-5850	40	5850	+0,-16	3.5
L1774.40-5900	40	5900	+0,-16	3.5
L1774.40-5950	40	5950	+0,-16	3.5
L1774.40-6000	40	6000	+0,-16	3.5

50Ø Stainless AISI 316 Shafts
soft



L1774.50



Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm², tensile strength: >515 N/mm².

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

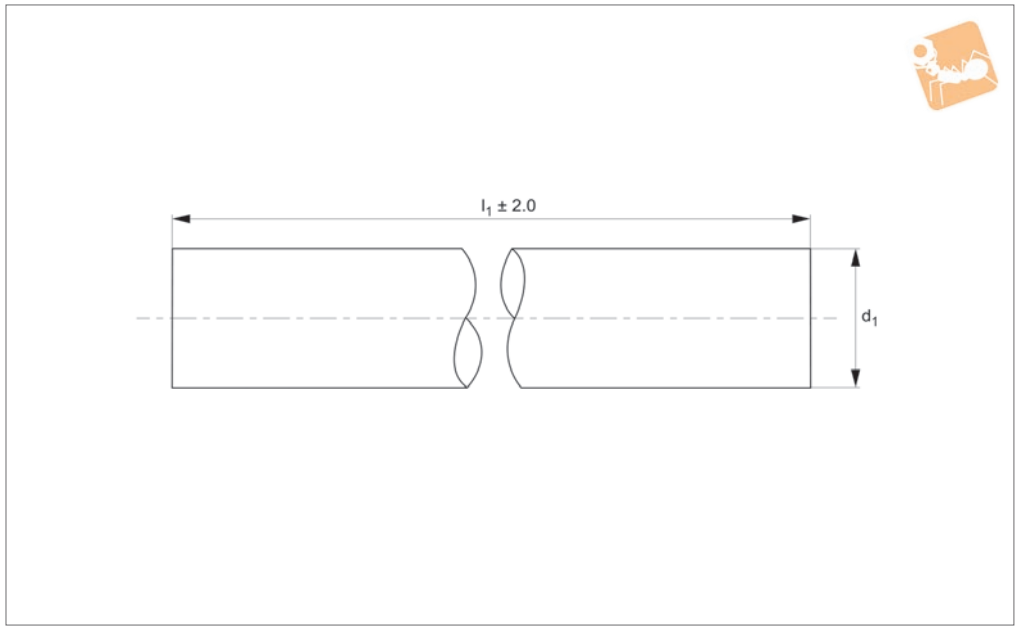
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness
L1774.50-0100	50	100	+0,-16	3.5
L1774.50-0150	50	150	+0,-16	3.5
L1774.50-0200	50	200	+0,-16	3.5
L1774.50-0250	50	250	+0,-16	3.5
L1774.50-0300	50	300	+0,-16	3.5
L1774.50-0350	50	350	+0,-16	3.5
L1774.50-0400	50	400	+0,-16	3.5
L1774.50-0450	50	450	+0,-16	3.5
L1774.50-0500	50	500	+0,-16	3.5
L1774.50-0550	50	550	+0,-16	3.5
L1774.50-0600	50	600	+0,-16	3.5
L1774.50-0650	50	650	+0,-16	3.5
L1774.50-0700	50	700	+0,-16	3.5
L1774.50-0750	50	750	+0,-16	3.5
L1774.50-0800	50	800	+0,-16	3.5
L1774.50-0850	50	850	+0,-16	3.5
L1774.50-0900	50	900	+0,-16	3.5
L1774.50-1000	50	1000	+0,-16	3.5
L1774.50-1050	50	1050	+0,-16	3.5
L1774.50-1100	50	1100	+0,-16	3.5
L1774.50-1150	50	1150	+0,-16	3.5
L1774.50-1200	50	1200	+0,-16	3.5
L1774.50-1250	50	1250	+0,-16	3.5
L1774.50-1300	50	1300	+0,-16	3.5
L1774.50-1350	50	1350	+0,-16	3.5
L1774.50-1400	50	1400	+0,-16	3.5
L1774.50-1450	50	1450	+0,-16	3.5
L1774.50-1500	50	1500	+0,-16	3.5
L1774.50-1550	50	1550	+0,-16	3.5

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.50-1600	50	1600	+0,-16	3.5
L1774.50-1650	50	1650	+0,-16	3.5
L1774.50-1700	50	1700	+0,-16	3.5
L1774.50-1750	50	1750	+0,-16	3.5
L1774.50-1800	50	1800	+0,-16	3.5
L1774.50-1850	50	1850	+0,-16	3.5
L1774.50-1900	50	1900	+0,-16	3.5
L1774.50-1950	50	1950	+0,-16	3.5
L1774.50-2000	50	2000	+0,-16	3.5
L1774.50-2050	50	2050	+0,-16	3.5
L1774.50-2100	50	2100	+0,-16	3.5
L1774.50-2150	50	2150	+0,-16	3.5
L1774.50-2200	50	2200	+0,-16	3.5
L1774.50-2250	50	2250	+0,-16	3.5
L1774.50-2300	50	2300	+0,-16	3.5
L1774.50-2350	50	2350	+0,-16	3.5
L1774.50-2400	50	2400	+0,-16	3.5
L1774.50-2450	50	2450	+0,-16	3.5
L1774.50-2500	50	2500	+0,-16	3.5
L1774.50-2550	50	2550	+0,-16	3.5
L1774.50-2600	50	2600	+0,-16	3.5
L1774.50-2650	50	2650	+0,-16	3.5
L1774.50-2700	50	2700	+0,-16	3.5
L1774.50-2750	50	2750	+0,-16	3.5
L1774.50-2800	50	2800	+0,-16	3.5
L1774.50-2850	50	2850	+0,-16	3.5
L1774.50-2900	50	2900	+0,-16	3.5
L1774.50-2950	50	2950	+0,-16	3.5
L1774.50-3000	50	3000	+0,-16	3.5
L1774.50-3050	50	3050	+0,-16	3.5
L1774.50-3100	50	3100	+0,-16	3.5
L1774.50-3150	50	3150	+0,-16	3.5
L1774.50-3200	50	3200	+0,-16	3.5
L1774.50-3250	50	3250	+0,-16	3.5
L1774.50-3300	50	3300	+0,-16	3.5
L1774.50-3350	50	3350	+0,-16	3.5
L1774.50-3400	50	3400	+0,-16	3.5
L1774.50-3450	50	3450	+0,-16	3.5
L1774.50-3500	50	3500	+0,-16	3.5
L1774.50-3550	50	3550	+0,-16	3.5
L1774.50-3600	50	3600	+0,-16	3.5
L1774.50-3650	50	3650	+0,-16	3.5
L1774.50-3700	50	3700	+0,-16	3.5
L1774.50-3750	50	3750	+0,-16	3.5
L1774.50-3800	50	3800	+0,-16	3.5
L1774.50-3850	50	3850	+0,-16	3.5
L1774.50-3900	50	3900	+0,-16	3.5
L1774.50-3950	50	3950	+0,-16	3.5
L1774.50-4000	50	4000	+0,-16	3.5
L1774.50-4050	50	4050	+0,-16	3.5
L1774.50-4100	50	4100	+0,-16	3.5
L1774.50-4150	50	4150	+0,-16	3.5
L1774.50-4200	50	4200	+0,-16	3.5
L1774.50-4250	50	4250	+0,-16	3.5
L1774.50-4300	50	4300	+0,-16	3.5
L1774.50-4350	50	4350	+0,-16	3.5
L1774.50-4400	50	4400	+0,-16	3.5
L1774.50-4450	50	4450	+0,-16	3.5
L1774.50-4500	50	4500	+0,-16	3.5
L1774.50-4550	50	4550	+0,-16	3.5
L1774.50-4600	50	4600	+0,-16	3.5
L1774.50-4650	50	4650	+0,-16	3.5
L1774.50-4700	50	4700	+0,-16	3.5
L1774.50-4750	50	4750	+0,-16	3.5
L1774.50-4800	50	4800	+0,-16	3.5
L1774.50-4850	50	4850	+0,-16	3.5
L1774.50-4900	50	4900	+0,-16	3.5
L1774.50-4950	50	4950	+0,-16	3.5

50Ø Stainless AISI 316 Shafts
soft



Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.50-5000	50	5000	+0,-16	3.5
L1774.50-5050	50	5050	+0,-16	3.5
L1774.50-5100	50	5100	+0,-16	3.5
L1774.50-5150	50	5150	+0,-16	3.5
L1774.50-5200	50	5200	+0,-16	3.5
L1774.50-5250	50	5250	+0,-16	3.5
L1774.50-5300	50	5300	+0,-16	3.5
L1774.50-5350	50	5350	+0,-16	3.5
L1774.50-5400	50	5400	+0,-16	3.5
L1774.50-5450	50	5450	+0,-16	3.5
L1774.50-5500	50	5500	+0,-16	3.5
L1774.50-5550	50	5550	+0,-16	3.5
L1774.50-5600	50	5600	+0,-16	3.5
L1774.50-5650	50	5650	+0,-16	3.5
L1774.50-5700	50	5700	+0,-16	3.5
L1774.50-5750	50	5750	+0,-16	3.5
L1774.50-5800	50	5800	+0,-16	3.5
L1774.50-5850	50	5850	+0,-16	3.5
L1774.50-5900	50	5900	+0,-16	3.5
L1774.50-5950	50	5950	+0,-16	3.5
L1774.50-6000	50	6000	+0,-16	3.5





L1774.60

Material
Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >205 N/mm^2, tensile strength: >515 N/mm^2.

Technical Notes
Tolerance, h6 standard, other tolerances on request.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.
To be used with ceramic or other bearings not containing hardened ball bearings.

Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6	Depth of hardness
L1774.60-0100	60	100	+0,-19	3.5
L1774.60-0150	60	150	+0,-19	3.5
L1774.60-0200	60	200	+0,-19	3.5
L1774.60-0250	60	250	+0,-19	3.5
L1774.60-0300	60	300	+0,-19	3.5
L1774.60-0350	60	350	+0,-19	3.5
L1774.60-0400	60	400	+0,-19	3.5
L1774.60-0450	60	450	+0,-19	3.5
L1774.60-0500	60	500	+0,-19	3.5
L1774.60-0550	60	550	+0,-19	3.5
L1774.60-0600	60	600	+0,-19	3.5
L1774.60-0650	60	650	+0,-19	3.5
L1774.60-0700	60	700	+0,-19	3.5
L1774.60-0750	60	750	+0,-19	3.5
L1774.60-0800	60	800	+0,-19	3.5
L1774.60-0850	60	850	+0,-19	3.5
L1774.60-0900	60	900	+0,-19	3.5
L1774.60-0950	60	950	+0,-19	3.5
L1774.60-1000	60	1000	+0,-19	3.5
L1774.60-1050	60	1050	+0,-19	3.5
L1774.60-1100	60	1100	+0,-19	3.5
L1774.60-1150	60	1150	+0,-19	3.5
L1774.60-1200	60	1200	+0,-19	3.5
L1774.60-1250	60	1250	+0,-19	3.5
L1774.60-1300	60	1300	+0,-19	3.5
L1774.60-1350	60	1350	+0,-19	3.5
L1774.60-1400	60	1400	+0,-19	3.5
L1774.60-1450	60	1450	+0,-19	3.5
L1774.60-1500	60	1500	+0,-19	3.5

60Ø Stainless AISI 316 Shafts
soft



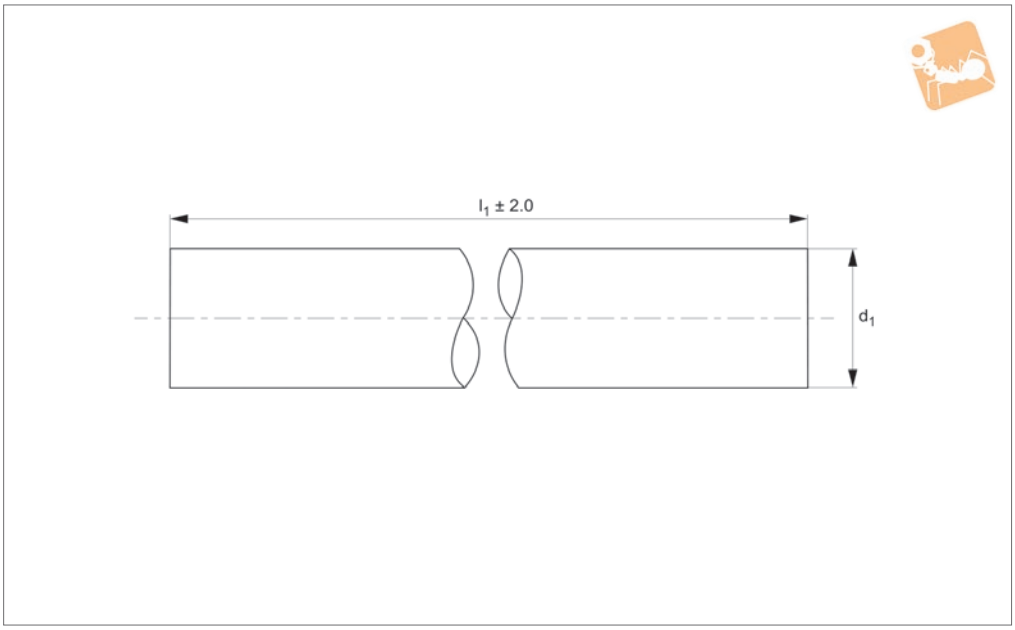
Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.60-1550	60	1550	+0,-19	3.5
L1774.60-1600	60	1600	+0,-19	3.5
L1774.60-1650	60	1650	+0,-19	3.5
L1774.60-1700	60	1700	+0,-19	3.5
L1774.60-1750	60	1750	+0,-19	3.5
L1774.60-1800	60	1800	+0,-19	3.5
L1774.60-1850	60	1850	+0,-19	3.5
L1774.60-1900	60	1900	+0,-19	3.5
L1774.60-1950	60	1950	+0,-19	3.5
L1774.60-2000	60	2000	+0,-19	3.5
L1774.60-2050	60	2050	+0,-19	3.5
L1774.60-2100	60	2100	+0,-19	3.5
L1774.60-2150	60	2150	+0,-19	3.5
L1774.60-2200	60	2200	+0,-19	3.5
L1774.60-2250	60	2250	+0,-19	3.5
L1774.60-2300	60	2300	+0,-19	3.5
L1774.60-2350	60	2350	+0,-19	3.5
L1774.60-2400	60	2400	+0,-19	3.5
L1774.60-2450	60	2450	+0,-19	3.5
L1774.60-2500	60	2500	+0,-19	3.5
L1774.60-2550	60	2550	+0,-19	3.5
L1774.60-2600	60	2600	+0,-19	3.5
L1774.60-2650	60	2650	+0,-19	3.5
L1774.60-2700	60	2700	+0,-19	3.5
L1774.60-2750	60	2750	+0,-19	3.5
L1774.60-2800	60	2800	+0,-19	3.5
L1774.60-2850	60	2850	+0,-19	3.5
L1774.60-2900	60	2900	+0,-19	3.5
L1774.60-2950	60	2950	+0,-19	3.5
L1774.60-3000	60	3000	+0,-19	3.5
L1774.60-3050	60	3050	+0,-19	3.5
L1774.60-3100	60	3100	+0,-19	3.5
L1774.60-3150	60	3150	+0,-19	3.5
L1774.60-3200	60	3200	+0,-19	3.5
L1774.60-3250	60	3250	+0,-19	3.5
L1774.60-3300	60	3300	+0,-19	3.5
L1774.60-3350	60	3350	+0,-19	3.5
L1774.60-3400	60	3400	+0,-19	3.5
L1774.60-3450	60	3450	+0,-19	3.5
L1774.60-3500	60	3500	+0,-19	3.5
L1774.60-3550	60	3550	+0,-19	3.5
L1774.60-3600	60	3600	+0,-19	3.5
L1774.60-3650	60	3650	+0,-19	3.5
L1774.60-3700	60	3700	+0,-19	3.5
L1774.60-3750	60	3750	+0,-19	3.5
L1774.60-3800	60	3800	+0,-19	3.5
L1774.60-3850	60	3850	+0,-19	3.5
L1774.60-3900	60	3900	+0,-19	3.5
L1774.60-3950	60	3950	+0,-19	3.5
L1774.60-4000	60	4000	+0,-19	3.5
L1774.60-4050	60	4050	+0,-19	3.5
L1774.60-4100	60	4100	+0,-19	3.5
L1774.60-4150	60	4150	+0,-19	3.5
L1774.60-4200	60	4200	+0,-19	3.5
L1774.60-4250	60	4250	+0,-19	3.5
L1774.60-4300	60	4300	+0,-19	3.5
L1774.60-4350	60	4350	+0,-19	3.5
L1774.60-4400	60	4400	+0,-19	3.5
L1774.60-4450	60	4450	+0,-19	3.5
L1774.60-4500	60	4500	+0,-19	3.5
L1774.60-4550	60	4550	+0,-19	3.5
L1774.60-4600	60	4600	+0,-19	3.5
L1774.60-4650	60	4650	+0,-19	3.5
L1774.60-4700	60	4700	+0,-19	3.5
L1774.60-4750	60	4750	+0,-19	3.5
L1774.60-4800	60	4800	+0,-19	3.5
L1774.60-4850	60	4850	+0,-19	3.5
L1774.60-4900	60	4900	+0,-19	3.5

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6	Depth of hardness
L1774.60-4950	60	4950	+0,-19	3.5
L1774.60-5000	60	5000	+0,-19	3.5
L1774.60-5050	60	5050	+0,-19	3.5
L1774.60-5100	60	5100	+0,-19	3.5
L1774.60-5150	60	5150	+0,-19	3.5
L1774.60-5200	60	5200	+0,-19	3.5
L1774.60-5250	60	5250	+0,-19	3.5
L1774.60-5300	60	5300	+0,-19	3.5
L1774.60-5350	60	5350	+0,-19	3.5
L1774.60-5400	60	5400	+0,-19	3.5
L1774.60-5450	60	5450	+0,-19	3.5
L1774.60-5500	60	5500	+0,-19	3.5
L1774.60-5550	60	5550	+0,-19	3.5
L1774.60-5600	60	5600	+0,-19	3.5
L1774.60-5650	60	5650	+0,-19	3.5
L1774.60-5700	60	5700	+0,-19	3.5
L1774.60-5750	60	5750	+0,-19	3.5
L1774.60-5800	60	5800	+0,-19	3.5
L1774.60-5850	60	5850	+0,-19	3.5
L1774.60-5900	60	5900	+0,-19	3.5
L1774.60-5950	60	5950	+0,-19	3.5
L1774.60-6000	60	6000	+0,-19	3.5

8Ø Aluminium Shafts



L1778.08



Material
Aluminium EN AW 6061/6060
Surface: Hard anodized
Hardness: 450-550 HV

Technical Notes
Designed to be used with self-lubricating ceramic bushings (part no.s L1764 to L1769).
Temp. range -130°C to +200°C.
Non-magnetic, contaminants do not stick to surface, coating is FDA compliant, light-weight.

Tips
Shaft ends are not coated as standard, however coated ends are available on request.
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.

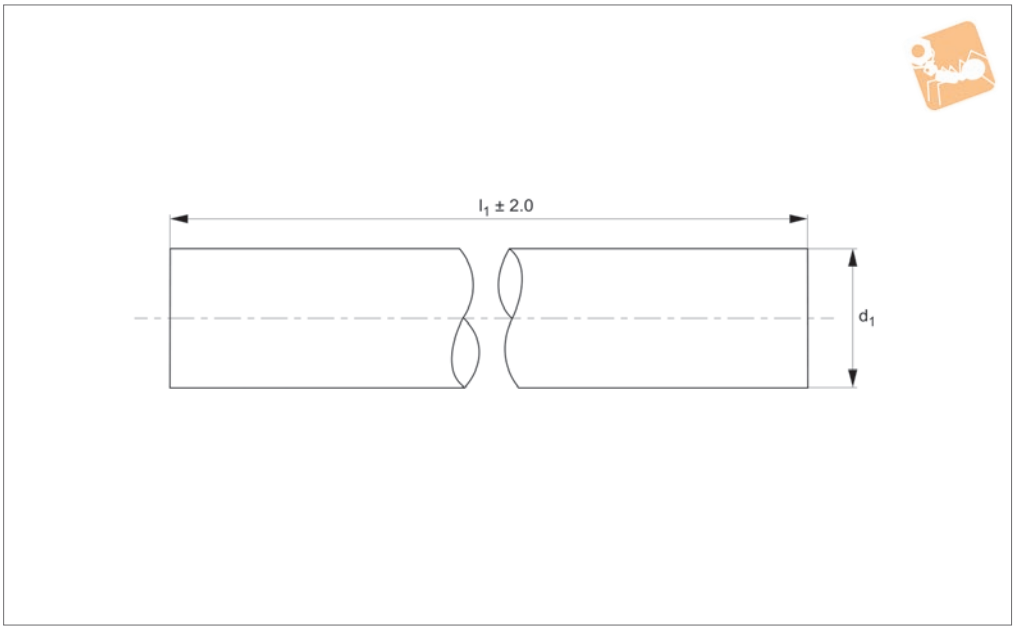
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1778.08-0100	8	100	+0,-9
L1778.08-0150	8	150	+0,-9
L1778.08-0200	8	200	+0,-9
L1778.08-0250	8	250	+0,-9
L1778.08-0300	8	300	+0,-9
L1778.08-0350	8	350	+0,-9
L1778.08-0400	8	400	+0,-9
L1778.08-0450	8	450	+0,-9
L1778.08-0500	8	500	+0,-9
L1778.08-0550	8	550	+0,-9
L1778.08-0600	8	600	+0,-9
L1778.08-0650	8	650	+0,-9
L1778.08-0700	8	700	+0,-9
L1778.08-0750	8	750	+0,-9
L1778.08-0800	8	800	+0,-9
L1778.08-0850	8	850	+0,-9
L1778.08-0900	8	900	+0,-9
L1778.08-1000	8	1000	+0,-9
L1778.08-1050	8	1050	+0,-9
L1778.08-1100	8	1100	+0,-9
L1778.08-1150	8	1150	+0,-9
L1778.08-1200	8	1200	+0,-9
L1778.08-1250	8	1250	+0,-9
L1778.08-1300	8	1300	+0,-9
L1778.08-1350	8	1350	+0,-9
L1778.08-1400	8	1400	+0,-9
L1778.08-1450	8	1450	+0,-9
L1778.08-1500	8	1500	+0,-9
L1778.08-1550	8	1550	+0,-9
L1778.08-1600	8	1600	+0,-9

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1778.08-1650	8	1650	+0,-9
L1778.08-1700	8	1700	+0,-9
L1778.08-1750	8	1750	+0,-9
L1778.08-1800	8	1800	+0,-9
L1778.08-1850	8	1850	+0,-9
L1778.08-1900	8	1900	+0,-9
L1778.08-1950	8	1950	+0,-9
L1778.08-2000	8	2000	+0,-9

10Ø Aluminium Shafts



L1778.10



Material
Aluminium EN AW 6061/6060
Surface: Hard anodized
Hardness: 450-550 HV

Technical Notes
Designed to be used with self-lubricating ceramic bushings (part no.s L1764 to L1769).
Temp. range -130°C to +200°C.
Non-magnetic, contaminants do not stick to surface, coating is FDA compliant, light-weight.

Tips
Shaft ends are not coated as standard, however coated ends are available on request.
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.

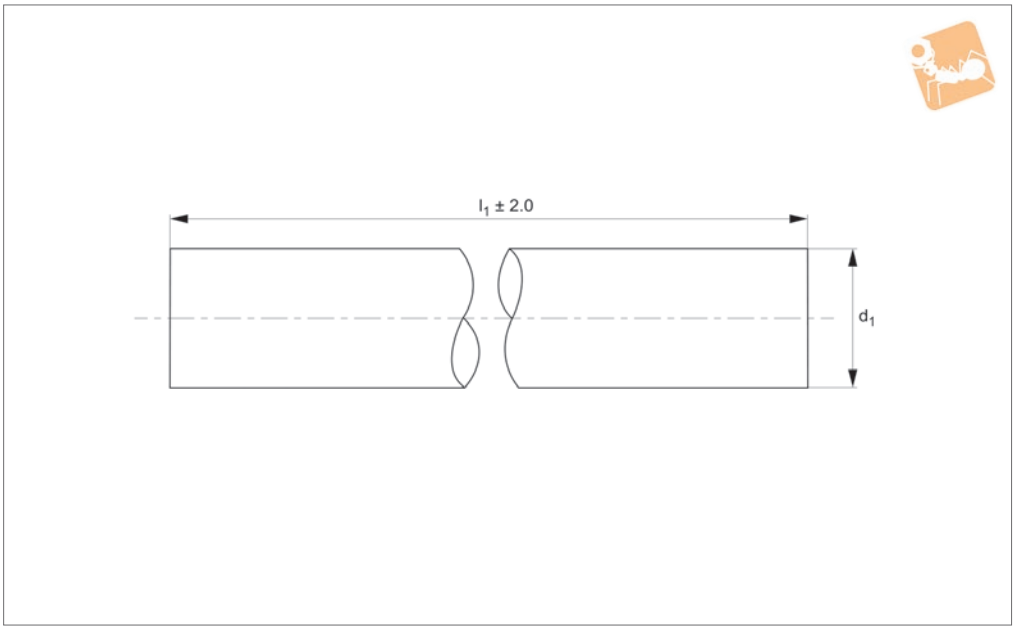
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1778.10-0100	10	100	+0,-9
L1778.10-0150	10	150	+0,-9
L1778.10-0200	10	200	+0,-9
L1778.10-0250	10	250	+0,-9
L1778.10-0300	10	300	+0,-9
L1778.10-0350	10	350	+0,-9
L1778.10-0400	10	400	+0,-9
L1778.10-0450	10	450	+0,-9
L1778.10-0500	10	500	+0,-9
L1778.10-0550	10	550	+0,-9
L1778.10-0600	10	600	+0,-9
L1778.10-0650	10	650	+0,-9
L1778.10-0700	10	700	+0,-9
L1778.10-0750	10	750	+0,-9
L1778.10-0800	10	800	+0,-9
L1778.10-0850	10	850	+0,-9
L1778.10-0900	10	900	+0,-9
L1778.10-1000	10	1000	+0,-9
L1778.10-1050	10	1050	+0,-9
L1778.10-1100	10	1100	+0,-9
L1778.10-1150	10	1150	+0,-9
L1778.10-1200	10	1200	+0,-9
L1778.10-1250	10	1250	+0,-9
L1778.10-1300	10	1300	+0,-9
L1778.10-1350	10	1350	+0,-9
L1778.10-1400	10	1400	+0,-9
L1778.10-1450	10	1450	+0,-9
L1778.10-1500	10	1500	+0,-9
L1778.10-1550	10	1550	+0,-9
L1778.10-1600	10	1600	+0,-9

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1778.10-1650	10	1650	+0,-9
L1778.10-1700	10	1700	+0,-9
L1778.10-1750	10	1750	+0,-9
L1778.10-1800	10	1800	+0,-9
L1778.10-1850	10	1850	+0,-9
L1778.10-1900	10	1900	+0,-9
L1778.10-1950	10	1950	+0,-9
L1778.10-2000	10	2000	+0,-9

12Ø Aluminium Shafts



L1778.12



Material
Aluminium EN AW 6061/6060
Surface: Hard anodized
Hardness: 450-550 HV

Technical Notes
Designed to be used with self-lubricating ceramic bushings (part no.s L1764 to L1769).
Temp. range -130°C to +200°C.
Non-magnetic, contaminants do not stick to surface, coating is FDA compliant, light-weight.

Tips
Shaft ends are not coated as standard, however coated ends are available on request.
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.

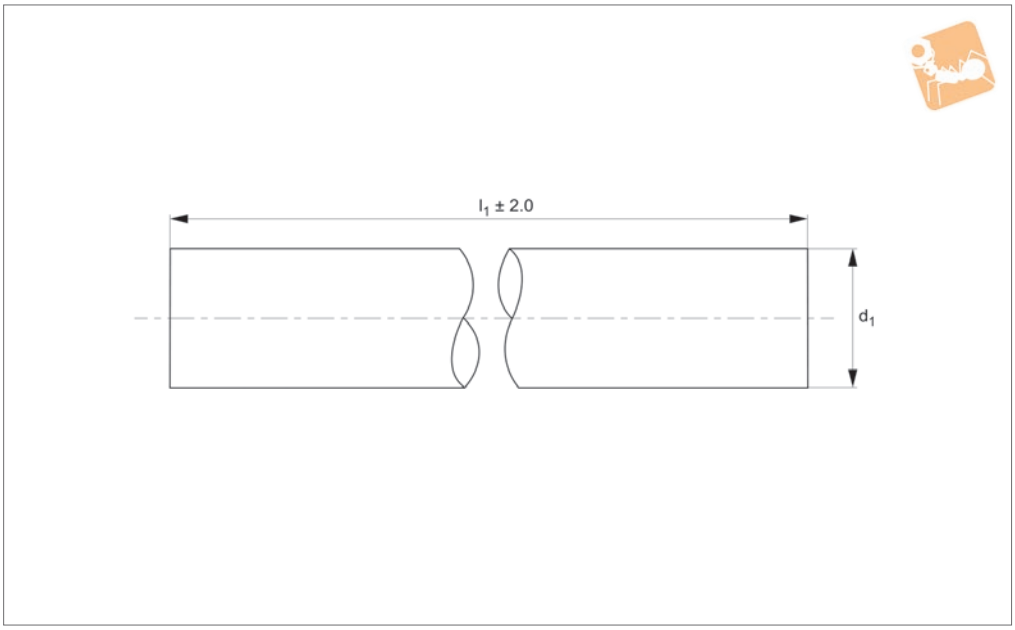
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1778.12-0100	12	100	+0,-9
L1778.12-0150	12	150	+0,-9
L1778.12-0200	12	200	+0,-9
L1778.12-0250	12	250	+0,-9
L1778.12-0300	12	300	+0,-9
L1778.12-0350	12	350	+0,-9
L1778.12-0400	12	400	+0,-9
L1778.12-0450	12	450	+0,-9
L1778.12-0500	12	500	+0,-9
L1778.12-0550	12	550	+0,-9
L1778.12-0600	12	600	+0,-9
L1778.12-0650	12	650	+0,-9
L1778.12-0700	12	700	+0,-9
L1778.12-0750	12	750	+0,-9
L1778.12-0800	12	800	+0,-9
L1778.12-0850	12	850	+0,-9
L1778.12-0900	12	900	+0,-9
L1778.12-1000	12	1000	+0,-9
L1778.12-1050	12	1050	+0,-9
L1778.12-1100	12	1100	+0,-9
L1778.12-1150	12	1150	+0,-9
L1778.12-1200	12	1200	+0,-9
L1778.12-1250	12	1250	+0,-9
L1778.12-1300	12	1300	+0,-9
L1778.12-1350	12	1350	+0,-9
L1778.12-1400	12	1400	+0,-9
L1778.12-1450	12	1450	+0,-9
L1778.12-1500	12	1500	+0,-9
L1778.12-1550	12	1550	+0,-9
L1778.12-1600	12	1600	+0,-9

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1778.12-1650	12	1650	+0,-9
L1778.12-1700	12	1700	+0,-9
L1778.12-1750	12	1750	+0,-9
L1778.12-1800	12	1800	+0,-9
L1778.12-1850	12	1850	+0,-9
L1778.12-1900	12	1900	+0,-9
L1778.12-1950	12	1950	+0,-9
L1778.12-2000	12	2000	+0,-9

16Ø Aluminium Shafts



L1778.16



Material
Aluminium EN AW 6061/6060
Surface: Hard anodized
Hardness: 450-550 HV

Technical Notes
Designed to be used with self-lubricating ceramic bushings (part no.s L1764 to L1769).
Temp. range -130°C to +200°C.
Non-magnetic, contaminants do not stick to surface, coating is FDA compliant, light-weight.

Tips
Shaft ends are not coated as standard, however coated ends are available on request.
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.

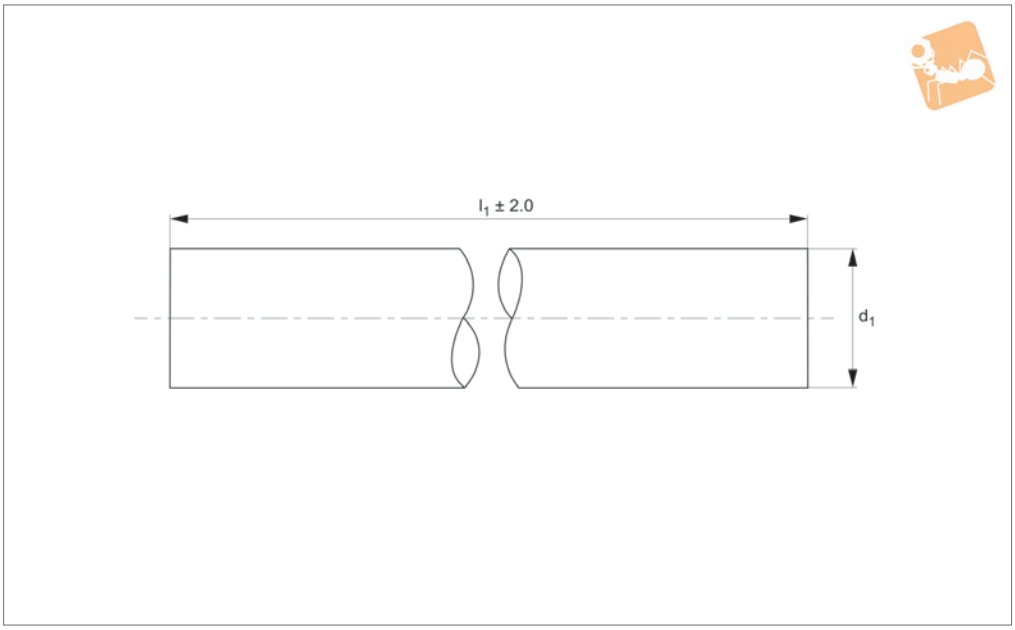
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1778.16-0100	16	100	+0,-9
L1778.16-0150	16	150	+0,-9
L1778.16-0200	16	200	+0,-9
L1778.16-0250	16	250	+0,-9
L1778.16-0300	16	300	+0,-9
L1778.16-0350	16	350	+0,-9
L1778.16-0400	16	400	+0,-9
L1778.16-0450	16	450	+0,-9
L1778.16-0500	16	500	+0,-9
L1778.16-0550	16	550	+0,-9
L1778.16-0600	16	600	+0,-9
L1778.16-0650	16	650	+0,-9
L1778.16-0700	16	700	+0,-9
L1778.16-0750	16	750	+0,-9
L1778.16-0800	16	800	+0,-9
L1778.16-0850	16	850	+0,-9
L1778.16-0900	16	900	+0,-9
L1778.16-1000	16	1000	+0,-9
L1778.16-1050	16	1050	+0,-9
L1778.16-1100	16	1100	+0,-9
L1778.16-1150	16	1150	+0,-9
L1778.16-1200	16	1200	+0,-9
L1778.16-1250	16	1250	+0,-9
L1778.16-1300	16	1300	+0,-9
L1778.16-1350	16	1350	+0,-9
L1778.16-1400	16	1400	+0,-9
L1778.16-1450	16	1450	+0,-9
L1778.16-1500	16	1500	+0,-9
L1778.16-1550	16	1550	+0,-9
L1778.16-1600	16	1600	+0,-9

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1778.16-1650	16	1650	+0,-9
L1778.16-1700	16	1700	+0,-9
L1778.16-1750	16	1750	+0,-9
L1778.16-1800	16	1800	+0,-9
L1778.16-1850	16	1850	+0,-9
L1778.16-1900	16	1900	+0,-9
L1778.16-1950	16	1950	+0,-9
L1778.16-2000	16	2000	+0,-9

20Ø Aluminium Shafts



L1778.20



Material
Aluminium EN AW 6061/6060
Surface: Hard anodized
Hardness: 450-550 HV

Technical Notes
Designed to be used with self-lubricating ceramic bushings (part no.s L1764 to L1769).
Temp. range -130°C to +200°C.
Non-magnetic, contaminants do not stick to surface, coating is FDA compliant, light-weight.

Tips
Shaft ends are not coated as standard, however coated ends are available on request.
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.

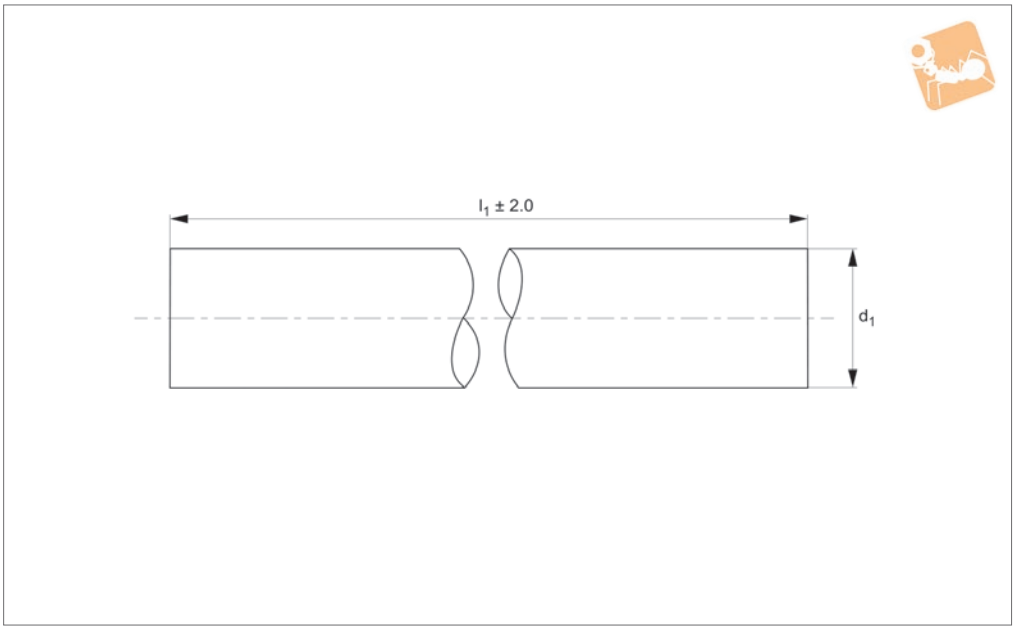
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1778.20-0100	20	100	+0,-9
L1778.20-0150	20	150	+0,-9
L1778.20-0200	20	200	+0,-9
L1778.20-0250	20	250	+0,-9
L1778.20-0300	20	300	+0,-9
L1778.20-0350	20	350	+0,-9
L1778.20-0400	20	400	+0,-9
L1778.20-0450	20	450	+0,-9
L1778.20-0500	20	500	+0,-9
L1778.20-0550	20	550	+0,-9
L1778.20-0600	20	600	+0,-9
L1778.20-0650	20	650	+0,-9
L1778.20-0700	20	700	+0,-9
L1778.20-0750	20	750	+0,-9
L1778.20-0800	20	800	+0,-9
L1778.20-0850	20	850	+0,-9
L1778.20-0900	20	900	+0,-9
L1778.20-1000	20	1000	+0,-9
L1778.20-1050	20	1050	+0,-9
L1778.20-1100	20	1100	+0,-9
L1778.20-1150	20	1150	+0,-9
L1778.20-1200	20	1200	+0,-9
L1778.20-1250	20	1250	+0,-9
L1778.20-1300	20	1300	+0,-9
L1778.20-1350	20	1350	+0,-9
L1778.20-1400	20	1400	+0,-9
L1778.20-1450	20	1450	+0,-9
L1778.20-1500	20	1500	+0,-9
L1778.20-1550	20	1550	+0,-9
L1778.20-1600	20	1600	+0,-9

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1778.20-1650	20	1650	+0,-9
L1778.20-1700	20	1700	+0,-9
L1778.20-1750	20	1750	+0,-9
L1778.20-1800	20	1800	+0,-9
L1778.20-1850	20	1850	+0,-9
L1778.20-1900	20	1900	+0,-9
L1778.20-1950	20	1950	+0,-9
L1778.20-2000	20	2000	+0,-9

25Ø Aluminium Shafts



L1778.25



Material
Aluminium EN AW 6061/6060
Surface: Hard anodized
Hardness: 450-550 HV

Technical Notes
Designed to be used with self-lubricating ceramic bushings (part no.s L1764 to L1769).
Temp. range -130°C to +200°C.
Non-magnetic, contaminants do not stick to surface, coating is FDA compliant, light-weight.

Tips
Shaft ends are not coated as standard, however coated ends are available on request.
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.

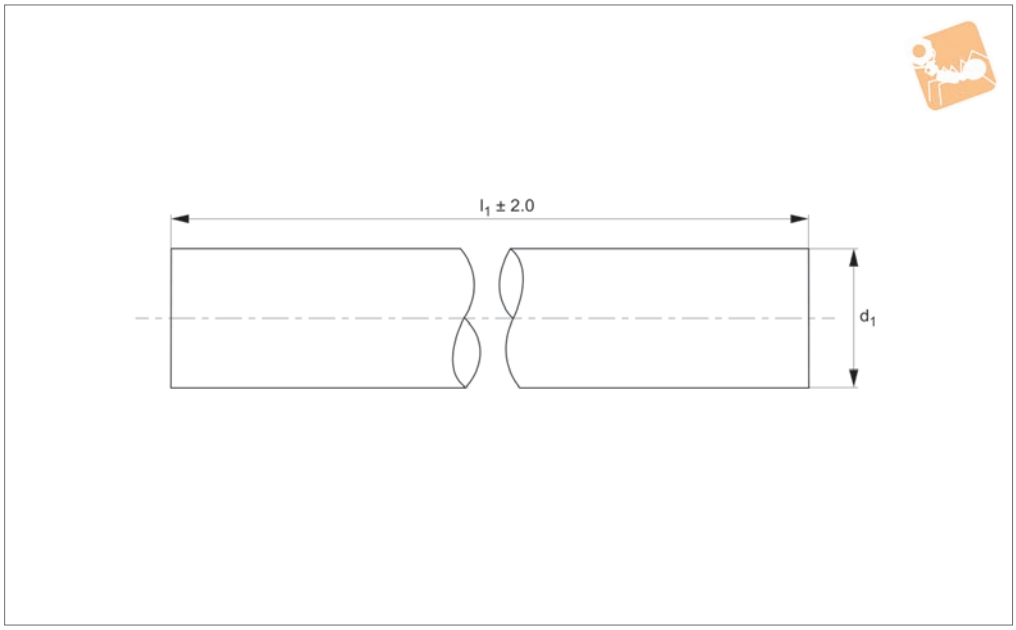
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1778.25-0100	25	100	+0,-9
L1778.25-0150	25	150	+0,-9
L1778.25-0200	25	200	+0,-9
L1778.25-0250	25	250	+0,-9
L1778.25-0300	25	300	+0,-9
L1778.25-0350	25	350	+0,-9
L1778.25-0400	25	400	+0,-9
L1778.25-0450	25	450	+0,-9
L1778.25-0500	25	500	+0,-9
L1778.25-0550	25	550	+0,-9
L1778.25-0600	25	600	+0,-9
L1778.25-0650	25	650	+0,-9
L1778.25-0700	25	700	+0,-9
L1778.25-0750	25	750	+0,-9
L1778.25-0800	25	800	+0,-9
L1778.25-0850	25	850	+0,-9
L1778.25-0900	25	900	+0,-9
L1778.25-1000	25	1000	+0,-9
L1778.25-1050	25	1050	+0,-9
L1778.25-1100	25	1100	+0,-9
L1778.25-1150	25	1150	+0,-9
L1778.25-1200	25	1200	+0,-9
L1778.25-1250	25	1250	+0,-9
L1778.25-1300	25	1300	+0,-9
L1778.25-1350	25	1350	+0,-9
L1778.25-1400	25	1400	+0,-9
L1778.25-1450	25	1450	+0,-9
L1778.25-1500	25	1500	+0,-9
L1778.25-1550	25	1550	+0,-9
L1778.25-1600	25	1600	+0,-9

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1778.25-1650	25	1650	+0,-9
L1778.25-1700	25	1700	+0,-9
L1778.25-1750	25	1750	+0,-9
L1778.25-1800	25	1800	+0,-9
L1778.25-1850	25	1850	+0,-9
L1778.25-1900	25	1900	+0,-9
L1778.25-1950	25	1950	+0,-9
L1778.25-2000	25	2000	+0,-9

30Ø Aluminium Shafts



L1778.30



Material
Aluminium EN AW 6061/6060
Surface: Hard anodized
Hardness: 450-550 HV

Technical Notes
Designed to be used with self-lubricating ceramic bushings (part no.s L1764 to L1769).
Temp. range -130°C to +200°C.
Non-magnetic, contaminants do not stick to surface, coating is FDA compliant, light-weight.

Tips
Shaft ends are not coated as standard, however coated ends are available on request.
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.

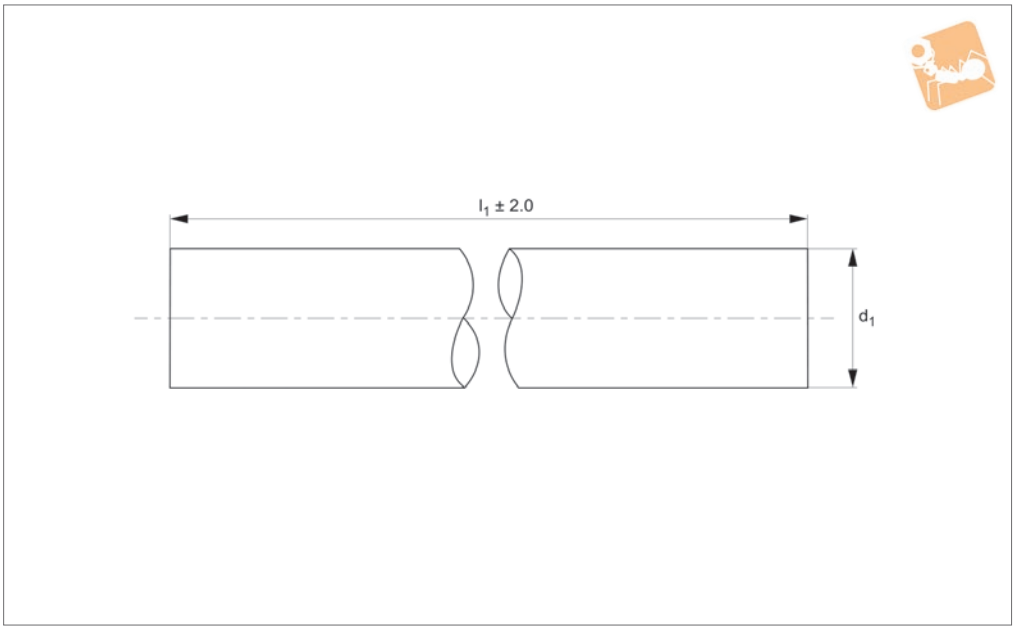
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1778.30-0100	30	100	+0,-9
L1778.30-0150	30	150	+0,-9
L1778.30-0200	30	200	+0,-9
L1778.30-0250	30	250	+0,-9
L1778.30-0300	30	300	+0,-9
L1778.30-0350	30	350	+0,-9
L1778.30-0400	30	400	+0,-9
L1778.30-0450	30	450	+0,-9
L1778.30-0500	30	500	+0,-9
L1778.30-0550	30	550	+0,-9
L1778.30-0600	30	600	+0,-9
L1778.30-0650	30	650	+0,-9
L1778.30-0700	30	700	+0,-9
L1778.30-0750	30	750	+0,-9
L1778.30-0800	30	800	+0,-9
L1778.30-0850	30	850	+0,-9
L1778.30-0900	30	900	+0,-9
L1778.30-1000	30	1000	+0,-9
L1778.30-1050	30	1050	+0,-9
L1778.30-1100	30	1100	+0,-9
L1778.30-1150	30	1150	+0,-9
L1778.30-1200	30	1200	+0,-9
L1778.30-1250	30	1250	+0,-9
L1778.30-1300	30	1300	+0,-9
L1778.30-1350	30	1350	+0,-9
L1778.30-1400	30	1400	+0,-9
L1778.30-1450	30	1450	+0,-9
L1778.30-1500	30	1500	+0,-9
L1778.30-1550	30	1550	+0,-9
L1778.30-1600	30	1600	+0,-9

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1778.30-1650	30	1650	+0,-9
L1778.30-1700	30	1700	+0,-9
L1778.30-1750	30	1750	+0,-9
L1778.30-1800	30	1800	+0,-9
L1778.30-1850	30	1850	+0,-9
L1778.30-1900	30	1900	+0,-9
L1778.30-1950	30	1950	+0,-9
L1778.30-2000	30	2000	+0,-9

40Ø Aluminium Shafts



L1778.40



Material
Aluminium EN AW 6061/6060
Surface: Hard anodized
Hardness: 450-550 HV

Technical Notes
Designed to be used with self-lubricating ceramic bushings (part no.s L1764 to L1769).
Temp. range -130°C to +200°C.
Non-magnetic, contaminants do not stick to surface, coating is FDA compliant, light-weight.

Tips
Shaft ends are not coated as standard, however coated ends are available on request.
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.

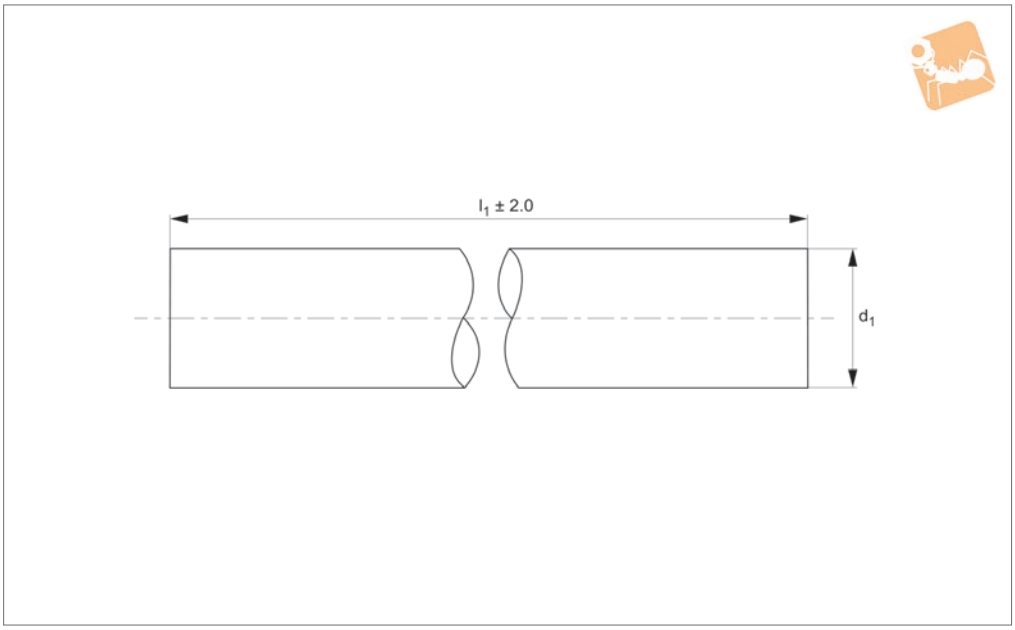
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1778.40-0100	40	100	+0,-9
L1778.40-0150	40	150	+0,-9
L1778.40-0200	40	200	+0,-9
L1778.40-0250	40	250	+0,-9
L1778.40-0300	40	300	+0,-9
L1778.40-0350	40	350	+0,-9
L1778.40-0400	40	400	+0,-9
L1778.40-0450	40	450	+0,-9
L1778.40-0500	40	500	+0,-9
L1778.40-0550	40	550	+0,-9
L1778.40-0600	40	600	+0,-9
L1778.40-0650	40	650	+0,-9
L1778.40-0700	40	700	+0,-9
L1778.40-0750	40	750	+0,-9
L1778.40-0800	40	800	+0,-9
L1778.40-0850	40	850	+0,-9
L1778.40-0900	40	900	+0,-9
L1778.40-1000	40	1000	+0,-9
L1778.40-1050	40	1050	+0,-9
L1778.40-1100	40	1100	+0,-9
L1778.40-1150	40	1150	+0,-9
L1778.40-1200	40	1200	+0,-9
L1778.40-1250	40	1250	+0,-9
L1778.40-1300	40	1300	+0,-9
L1778.40-1350	40	1350	+0,-9
L1778.40-1400	40	1400	+0,-9
L1778.40-1450	40	1450	+0,-9
L1778.40-1500	40	1500	+0,-9
L1778.40-1550	40	1550	+0,-9
L1778.40-1600	40	1600	+0,-9

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1778.40-1650	40	1650	+0,-9
L1778.40-1700	40	1700	+0,-9
L1778.40-1750	40	1750	+0,-9
L1778.40-1800	40	1800	+0,-9
L1778.40-1850	40	1850	+0,-9
L1778.40-1900	40	1900	+0,-9
L1778.40-1950	40	1950	+0,-9
L1778.40-2000	40	2000	+0,-9

50Ø Aluminium Shafts



L1778.50



Material
Aluminium EN AW 6061/6060
Surface: Hard anodized
Hardness: 450-550 HV

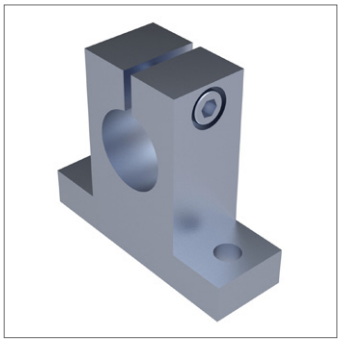
Technical Notes
Designed to be used with self-lubricating ceramic bushings (part no.s L1764 to L1769).
Temp. range -130°C to +200°C.
Non-magnetic, contaminants do not stick to surface, coating is FDA compliant, light-weight.

Tips
Shaft ends are not coated as standard, however coated ends are available on request.
Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.
Shafts lengths are cut to typically ± 2mm.

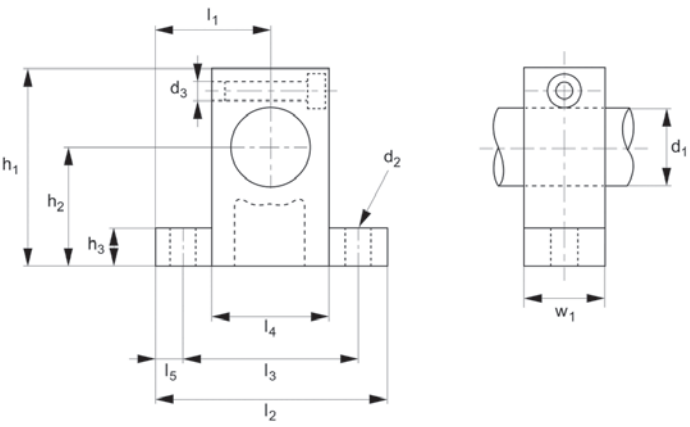
Order No.	d_1 tol. h6	l_1	Tolerance µ tol. h6
L1778.50-0100	50	100	+0,-9
L1778.50-0150	50	150	+0,-9
L1778.50-0200	50	200	+0,-9
L1778.50-0250	50	250	+0,-9
L1778.50-0300	50	300	+0,-9
L1778.50-0350	50	350	+0,-9
L1778.50-0400	50	400	+0,-9
L1778.50-0450	50	450	+0,-9
L1778.50-0500	50	500	+0,-9
L1778.50-0550	50	550	+0,-9
L1778.50-0600	50	600	+0,-9
L1778.50-0650	50	650	+0,-9
L1778.50-0700	50	700	+0,-9
L1778.50-0750	50	750	+0,-9
L1778.50-0800	50	800	+0,-9
L1778.50-0850	50	850	+0,-9
L1778.50-0900	50	900	+0,-9
L1778.50-1000	50	1000	+0,-9
L1778.50-1050	50	1050	+0,-9
L1778.50-1100	50	1100	+0,-9
L1778.50-1150	50	1150	+0,-9
L1778.50-1200	50	1200	+0,-9
L1778.50-1250	50	1250	+0,-9
L1778.50-1300	50	1300	+0,-9
L1778.50-1350	50	1350	+0,-9
L1778.50-1400	50	1400	+0,-9
L1778.50-1450	50	1450	+0,-9
L1778.50-1500	50	1500	+0,-9
L1778.50-1550	50	1550	+0,-9
L1778.50-1600	50	1600	+0,-9

Order No.	d_1 tol. h6	l_1	Tolerance μ tol. h6
L1778.50-1650	50	1650	+0,-9
L1778.50-1700	50	1700	+0,-9
L1778.50-1750	50	1750	+0,-9
L1778.50-1800	50	1800	+0,-9
L1778.50-1850	50	1850	+0,-9
L1778.50-1900	50	1900	+0,-9
L1778.50-1950	50	1950	+0,-9
L1778.50-2000	50	2000	+0,-9

Shaft End Supports
Aluminium



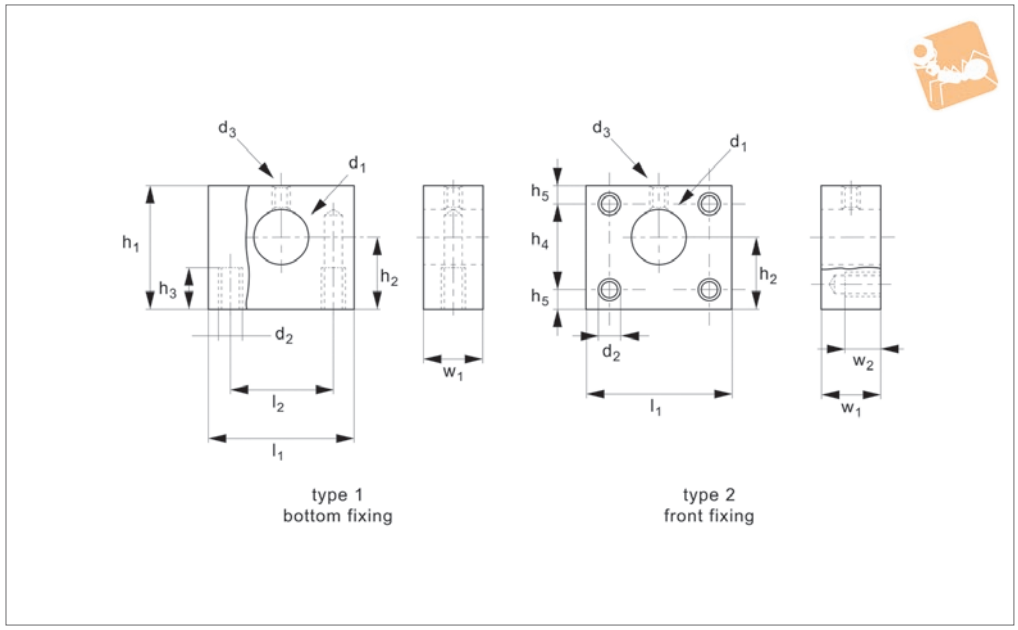
L1779.AL



Material
Aluminium (P40,6060)

Technical Notes
For mounting of standard shaft diameters.

Order No.	d_1	d_2	d_3	h_1	h_2 ±0.02	h_3	l_1 ±0.05	l_2	l_3	l_4	l_5	w_1	Weight g
L1779.008-AL	8	5.5	M4	32.8	20	6	21	42	32	18	5.0	14	24
L1779.010-AL	10	5.5	M4	32.8	20	6	21	42	32	18	5.0	14	24
L1779.012-AL	12	5.5	M4	38.0	23	6	21	42	32	20	5.0	14	30
L1779.013-AL	13	5.5	M4	38.0	23	6	21	42	32	20	5.0	14	30
L1779.016-AL	16	5.5	M4	44.0	27	8	24	48	38	25	5.0	16	40
L1779.020-AL	20	6.6	M5	51.0	31	10	30	60	45	30	7.5	20	70
L1779.025-AL	25	6.6	M6	60.0	35	12	35	70	56	38	7.0	24	130
L1779.030-AL	30	9.0	M6	70.0	42	12	42	84	64	44	10.0	28	180
L1779.035-AL	35	11.0	M8	85.0	50	15	49	98	74	50	12.0	32	270
L1779.040-AL	40	11.0	M8	96.0	60	15	57	114	90	60	12.0	36	420





L1779.A4

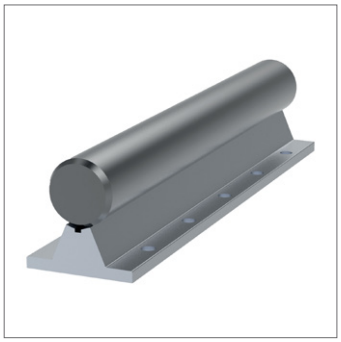
Material
Stainless steel (AISI 316, 1.440).

Technical Notes
For mounting of standard shaft diameters, tolerance h6.

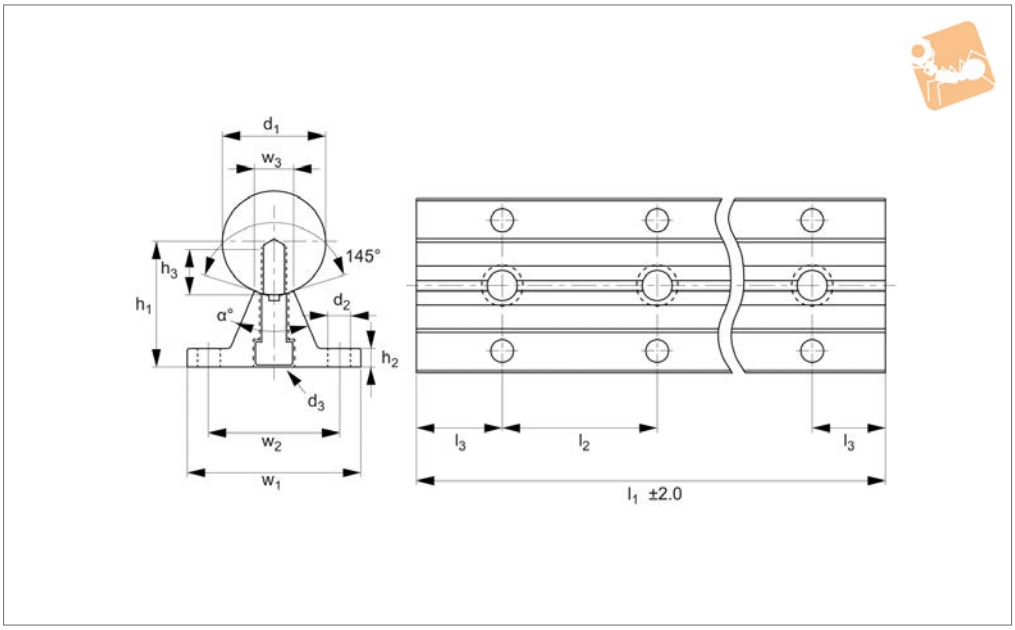
Order No.	Type	d_1 tol. G7	d_2	d_3	h_1	h_2	h_3	h_4	h_5	l_1	l_2	w_1	w_2
L1779.01-120-A4	1	12	M 6	M 3	34	19	12	-	-	40	27	18	-
L1779.01-160-A4	1	16	M 6	M 3	38	22	13	-	-	45	32	20	-
L1779.01-200-A4	1	20	M 8	M 4	46	26	15	-	-	46	39	24	-
L1779.01-250-A4	1	25	M10	M 4	54	31	18	-	-	54	44	28	-
L1779.01-300-A4	1	30	M10	M 4	62	36	22	-	-	67	49	30	-
L1779.01-400-A4	1	40	M12	M 5	80	46	22	-	-	87	66	40	-
L1779.02-120-A4	2	12	M 6	M 3	34	19	-	22	6	40	-	18	12
L1779.02-160-A4	2	16	M 6	M 3	38	22	-	26	6	45	-	20	13
L1779.02-200-A4	2	20	M 8	M 4	46	26	-	30	8	46	-	24	15
L1779.02-250-A4	2	25	M10	M 4	54	31	-	38	8	54	-	28	18
L1779.02-300-A4	2	30	M10	M 4	62	36	-	42	10	67	-	30	22
L1779.02-400-A4	2	40	M12	M 5	80	46	-	60	10	87	-	40	22

12Ø Shaft Support Rails

complete shaft and rail



L1780.12



Material

Hardened and ground carbon steel shaft (070M55, Cf53 - DIN 1.1213), aluminium alloy support rail.
Surface hardness of steel shaft 60-65 HRC.

Technical Notes

For open linear bushings, ensures a very rigid and stiff system.

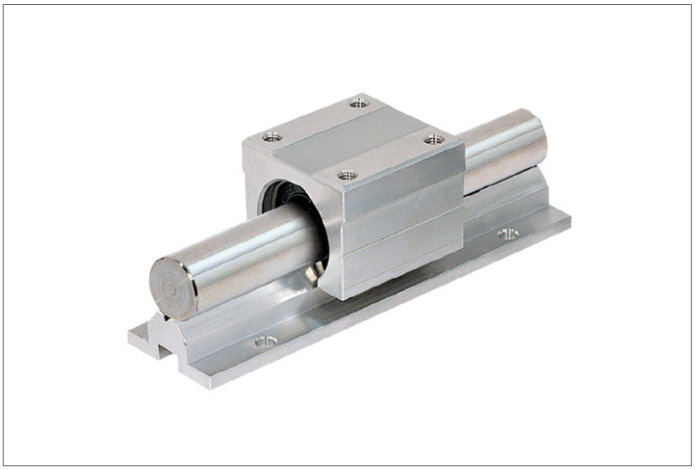
The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).
On request a stainless steel (usually 440C) shaft can be mounted on the support rail.

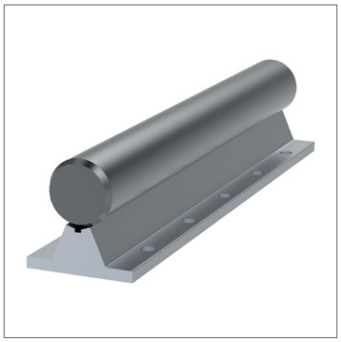
Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.01	h_2	h_3	α °
L1780.12-0240	12	4.5	M4x20	240	120	60	40	29	5.8	22	5	8	50
L1780.12-0360	12	4.5	M4x20	360	120	60	40	29	5.8	22	5	8	50
L1780.12-0480	12	4.5	M4x20	480	120	60	40	29	5.8	22	5	8	50
L1780.12-0600	12	4.5	M4x20	600	120	60	40	29	5.8	22	5	8	50
L1780.12-0720	12	4.5	M4x20	720	120	60	40	29	5.8	22	5	8	50
L1780.12-0840	12	4.5	M4x20	840	120	60	40	29	5.8	22	5	8	50
L1780.12-0960	12	4.5	M4x20	960	120	60	40	29	5.8	22	5	8	50
L1780.12-1080	12	4.5	M4x20	1080	120	60	40	29	5.8	22	5	8	50
L1780.12-1200	12	4.5	M4x20	1200	120	60	40	29	5.8	22	5	8	50
L1780.12-1320	12	4.5	M4x20	1320	120	60	40	29	5.8	22	5	8	50
L1780.12-1440	12	4.5	M4x20	1440	120	60	40	29	5.8	22	5	8	50
L1780.12-1560	12	4.5	M4x20	1560	120	60	40	29	5.8	22	5	8	50
L1780.12-1680	12	4.5	M4x20	1680	120	60	40	29	5.8	22	5	8	50
L1780.12-1800	12	4.5	M4x20	1800	120	60	40	29	5.8	22	5	8	50
L1780.12-1920	12	4.5	M4x20	1920	120	60	40	29	5.8	22	5	8	50
L1780.12-2040	12	4.5	M4x20	2040	120	60	40	29	5.8	22	5	8	50
L1780.12-2160	12	4.5	M4x20	2160	120	60	40	29	5.8	22	5	8	50
L1780.12-2280	12	4.5	M4x20	2280	120	60	40	29	5.8	22	5	8	50
L1780.12-2400	12	4.5	M4x20	2400	120	60	40	29	5.8	22	5	8	50
L1780.12-2520	12	4.5	M4x20	2520	120	60	40	29	5.8	22	5	8	50
L1780.12-2640	12	4.5	M4x20	2640	120	60	40	29	5.8	22	5	8	50
L1780.12-2760	12	4.5	M4x20	2760	120	60	40	29	5.8	22	5	8	50
L1780.12-2880	12	4.5	M4x20	2880	120	60	40	29	5.8	22	5	8	50
L1780.12-3000	12	4.5	M4x20	3000	120	60	40	29	5.8	22	5	8	50
L1780.12-3120	12	4.5	M4x20	3120	120	60	40	29	5.8	22	5	8	50
L1780.12-3240	12	4.5	M4x20	3240	120	60	40	29	5.8	22	5	8	50
L1780.12-3360	12	4.5	M4x20	3360	120	60	40	29	5.8	22	5	8	50
L1780.12-3480	12	4.5	M4x20	3480	120	60	40	29	5.8	22	5	8	50
L1780.12-3600	12	4.5	M4x20	3600	120	60	40	29	5.8	22	5	8	50

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.01	h_2	h_3	α °
L1780.12-3720	12	4.5	M4x20	3720	120	60	40	29	5.8	22	5	8	50
L1780.12-3840	12	4.5	M4x20	3840	120	60	40	29	5.8	22	5	8	50
L1780.12-3960	12	4.5	M4x20	3960	120	60	40	29	5.8	22	5	8	50
L1780.12-4080	12	4.5	M4x20	4080	120	60	40	29	5.8	22	5	8	50
L1780.12-4200	12	4.5	M4x20	4200	120	60	40	29	5.8	22	5	8	50
L1780.12-4320	12	4.5	M4x20	4320	120	60	40	29	5.8	22	5	8	50
L1780.12-4440	12	4.5	M4x20	4440	120	60	40	29	5.8	22	5	8	50
L1780.12-4560	12	4.5	M4x20	4560	120	60	40	29	5.8	22	5	8	50
L1780.12-4680	12	4.5	M4x20	4680	120	60	40	29	5.8	22	5	8	50
L1780.12-4800	12	4.5	M4x20	4800	120	60	40	29	5.8	22	5	8	50
L1780.12-4920	12	4.5	M4x20	4920	120	60	40	29	5.8	22	5	8	50
L1780.12-5040	12	4.5	M4x20	5040	120	60	40	29	5.8	22	5	8	50
L1780.12-5160	12	4.5	M4x20	5150	120	60	40	29	5.8	22	5	8	50
L1780.12-5280	12	4.5	M4x20	5280	120	60	40	29	5.8	22	5	8	50
L1780.12-5400	12	4.5	M4x20	5400	120	60	40	29	5.8	22	5	8	50
L1780.12-5520	12	4.5	M4x20	5520	120	60	40	29	5.8	22	5	8	50
L1780.12-5640	12	4.5	M4x20	5640	120	60	40	29	5.8	22	5	8	50
L1780.12-5760	12	4.5	M4x20	5760	120	60	40	29	5.8	22	5	8	50
L1780.12-5880	12	4.5	M4x20	5880	120	60	40	29	5.8	22	5	8	50
L1780.12-6000	12	4.5	M4x20	6000	120	60	40	29	5.8	22	5	8	50

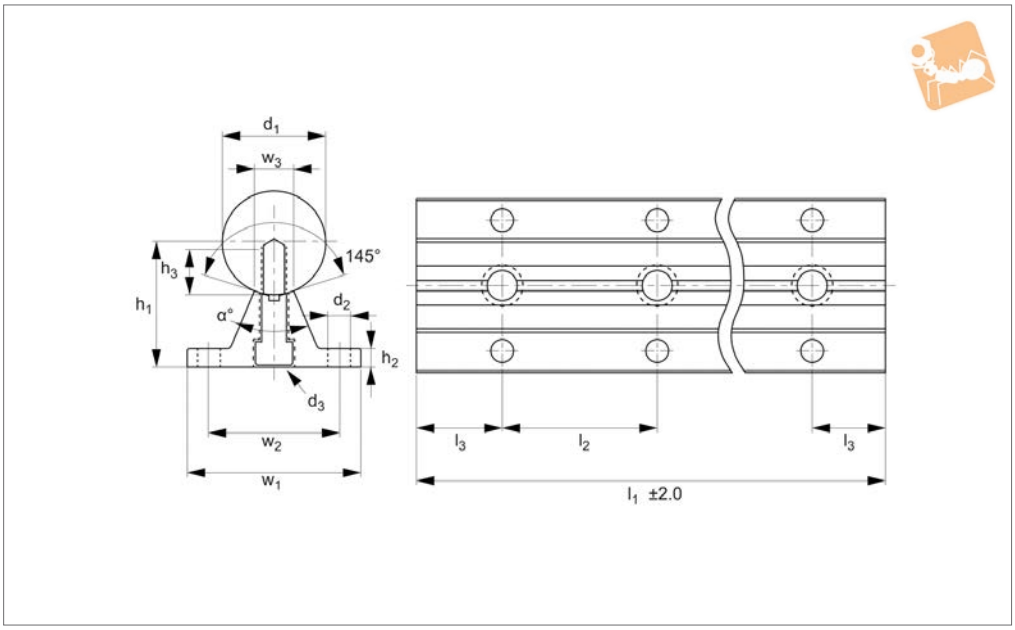


16Ø Shaft Support Rails

complete shaft and rail



L1780.16



Material

Hardened and ground carbon steel shaft (070M55, Cf53 - DIN 1.1213), aluminium alloy support rail.
Surface hardness of steel shaft 60-65 HRC.

Technical Notes

For open linear bushings, ensures a very rigid and stiff system.

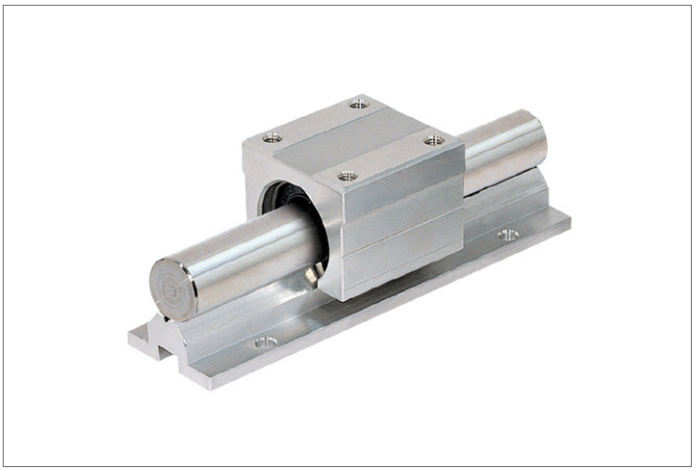
The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).
On request a stainless steel (usually 440C) shaft can be mounted on the support rail.

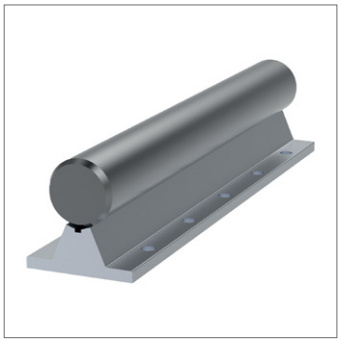
Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.01	h_2	h_3	α °
L1780.16-0300	16	5.5	M5x20	300	150	75	45	33	7	26	5	9	50
L1780.16-0450	16	5.5	M5x20	450	150	75	45	33	7	26	5	9	50
L1780.16-0600	16	5.5	M5x20	600	150	75	45	33	7	26	5	9	50
L1780.16-0750	16	5.5	M5x20	750	150	75	45	33	7	26	5	9	50
L1780.16-0900	16	5.5	M5x20	900	150	75	45	33	7	26	5	9	50
L1780.16-1050	16	5.5	M5x20	1050	150	75	45	33	7	26	5	9	50
L1780.16-1200	16	5.5	M5x20	1200	150	75	45	33	7	26	5	9	50
L1780.16-1350	16	5.5	M5x20	1350	150	75	45	33	7	26	5	9	50
L1780.16-1500	16	5.5	M5x20	1500	150	75	45	33	7	26	5	9	50
L1780.16-1650	16	5.5	M5x20	1650	150	75	45	33	7	26	5	9	50
L1780.16-1800	16	5.5	M5x20	1800	150	75	45	33	7	26	5	9	50
L1780.16-1950	16	5.5	M5x20	1950	150	75	45	33	7	26	5	9	50
L1780.16-2100	16	5.5	M5x20	2100	150	75	45	33	7	26	5	9	50
L1780.16-2250	16	5.5	M5x20	2250	150	75	45	33	7	26	5	9	50
L1780.16-2400	16	5.5	M5x20	2400	150	75	45	33	7	26	5	9	50
L1780.16-2550	16	5.5	M5x20	2550	150	75	45	33	7	26	5	9	50
L1780.16-2700	16	5.5	M5x20	2700	150	75	45	33	7	26	5	9	50
L1780.16-2850	16	5.5	M5x20	2850	150	75	45	33	7	26	5	9	50
L1780.16-3000	16	5.5	M5x20	3000	150	75	45	33	7	26	5	9	50
L1780.16-3150	16	5.5	M5x20	3150	150	75	45	33	7	26	5	9	50
L1780.16-3300	16	5.5	M5x20	3300	150	75	45	33	7	26	5	9	50
L1780.16-3450	16	5.5	M5x20	3450	150	75	45	33	7	26	5	9	50
L1780.16-3600	16	5.5	M5x20	3600	150	75	45	33	7	26	5	9	50
L1780.16-3750	16	5.5	M5x20	3750	150	75	45	33	7	26	5	9	50
L1780.16-3900	16	5.5	M5x20	3900	150	75	45	33	7	26	5	9	50
L1780.16-4050	16	5.5	M5x20	4050	150	75	45	33	7	26	5	9	50
L1780.16-4200	16	5.5	M5x20	4200	150	75	45	33	7	26	5	9	50
L1780.16-4350	16	5.5	M5x20	4350	150	75	45	33	7	26	5	9	50
L1780.16-4500	16	5.5	M5x20	4500	150	75	45	33	7	26	5	9	50

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.01	h_2	h_3	α °
L1780.16-4650	16	5.5	M5x20	4650	150	75	45	33	7	26	5	9	50
L1780.16-4800	16	5.5	M5x20	4800	150	75	45	33	7	26	5	9	50
L1780.16-4950	16	5.5	M5x20	4950	150	75	45	33	7	26	5	9	50
L1780.16-5100	16	5.5	M5x20	5100	150	75	45	33	7	26	5	9	50
L1780.16-5250	16	5.5	M5x20	5250	150	75	45	33	7	26	5	9	50
L1780.16-5400	16	5.5	M5x20	5400	150	75	45	33	7	26	5	9	50
L1780.16-5550	16	5.5	M5x20	5550	150	75	45	33	7	26	5	9	50
L1780.16-5700	16	5.5	M5x20	5700	150	75	45	33	7	26	5	9	50
L1780.16-5850	16	5.5	M5x20	5850	150	75	45	33	7	26	5	9	50
L1780.16-6000	16	5.5	M5x20	6000	150	75	45	33	7	26	5	9	50

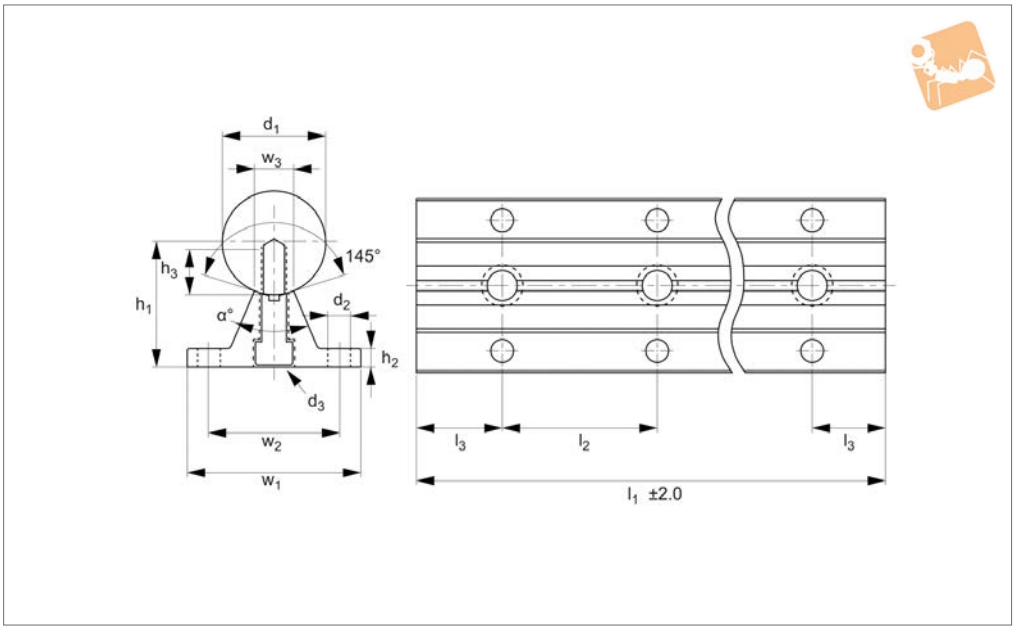


20Ø Shaft Support Rails

complete steel shaft and aluminium support



L1780.20



Material

Hardened and ground carbon steel shaft (070M55, Cf53 - DIN 1.1213), aluminium alloy support rail.
Surface hardness of steel shaft 60-65 HRC.

Technical Notes

For open linear bushings, ensures a very rigid and stiff system.

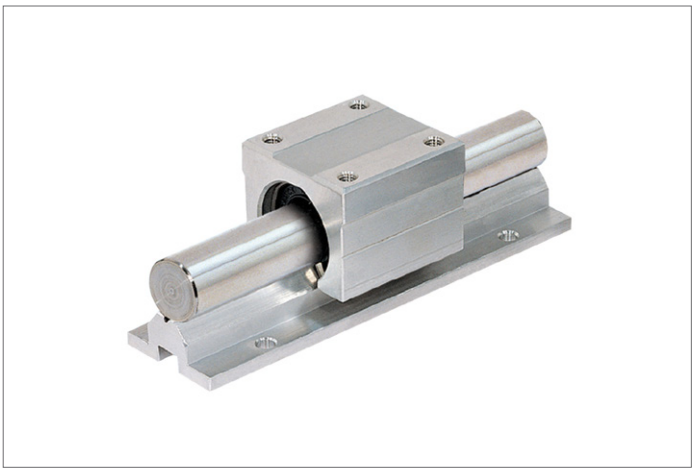
The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).
On request a stainless steel (usually 440C) shaft can be mounted on the support rail.

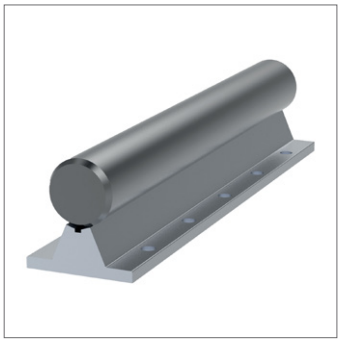
Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.01	h_2	h_3	α °
L1780.20-0300	20	6.6	M6x25	300	150	75	52	37	8.3	32	6	11	50
L1780.20-0450	20	6.6	M6x25	450	150	75	52	37	8.3	32	6	11	50
L1780.20-0600	20	6.6	M6x25	600	150	75	52	37	8.3	32	6	11	50
L1780.20-0750	20	6.6	M6x25	750	150	75	52	37	8.3	32	6	11	50
L1780.20-0900	20	6.6	M6x25	900	150	75	52	37	8.3	32	6	11	50
L1780.20-1050	20	6.6	M6x25	1050	150	75	52	37	8.3	32	6	11	50
L1780.20-1200	20	6.6	M6x25	1200	150	75	52	37	8.3	32	6	11	50
L1780.20-1350	20	6.6	M6x25	1350	150	75	52	37	8.3	32	6	11	50
L1780.20-1500	20	6.6	M6x25	1500	150	75	52	37	8.3	32	6	11	50
L1780.20-1650	20	6.6	M6x25	1650	150	75	52	37	8.3	32	6	11	50
L1780.20-1800	20	6.6	M6x25	1800	150	75	52	37	8.3	32	6	11	50
L1780.20-1950	20	6.6	M6x25	1950	150	75	52	37	8.3	32	6	11	50
L1780.20-2100	20	6.6	M6x25	2100	150	75	52	37	8.3	32	6	11	50
L1780.20-2250	20	6.6	M6x25	2250	150	75	52	37	8.3	32	6	11	50
L1780.20-2400	20	6.6	M6x25	2400	150	75	52	37	8.3	32	6	11	50
L1780.20-2550	20	6.6	M6x25	2550	150	75	52	37	8.3	32	6	11	50
L1780.20-2700	20	6.6	M6x25	2700	150	75	52	37	8.3	32	6	11	50
L1780.20-2850	20	6.6	M6x25	2850	150	75	52	37	8.3	32	6	11	50
L1780.20-3000	20	6.6	M6x25	3000	150	75	52	37	8.3	32	6	11	50
L1780.20-3150	20	6.6	M6x25	3150	150	75	52	37	8.3	32	6	11	50
L1780.20-3300	20	6.6	M6x25	3300	150	75	52	37	8.3	32	6	11	50
L1780.20-3450	20	6.6	M6x25	3450	150	75	52	37	8.3	32	6	11	50
L1780.20-3600	20	6.6	M6x25	3600	150	75	52	37	8.3	32	6	11	50
L1780.20-3750	20	6.6	M6x25	3750	150	75	52	37	8.3	32	6	11	50
L1780.20-3900	20	6.6	M6x25	3900	150	75	52	37	8.3	32	6	11	50
L1780.20-4000	20	6.6	M6x25	4000	150	75	52	37	8.3	32	6	11	50
L1780.20-4050	20	6.6	M6x25	4050	150	75	52	37	8.3	32	6	11	50
L1780.20-4200	20	6.6	M6x25	4200	150	75	52	37	8.3	32	6	11	50
L1780.20-4350	20	6.6	M6x25	4350	150	75	52	37	8.3	32	6	11	50

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.01	h_2	h_3	α °
L1780.20-4500	20	6.6	M6x25	4500	150	75	52	37	8.3	32	6	11	50
L1780.20-4650	20	6.6	M6x25	4650	150	75	52	37	8.3	32	6	11	50
L1780.20-4800	20	6.6	M6x25	4800	150	75	52	37	8.3	32	6	11	50
L1780.20-4950	20	6.6	M6x25	4940	150	75	52	37	8.3	32	6	11	50
L1780.20-5100	20	6.6	M6x25	5100	150	75	52	37	8.3	32	6	11	50
L1780.20-5250	20	6.6	M6x25	5250	150	75	52	37	8.3	32	6	11	50
L1780.20-5400	20	6.6	M6x25	5400	150	75	52	37	8.3	32	6	11	50
L1780.20-5550	20	6.6	M6x25	5550	150	75	52	37	8.3	32	6	11	50
L1780.20-5700	20	6.6	M6x25	5700	150	75	52	37	8.3	32	6	11	50
L1780.20-5850	20	6.6	M6x25	5850	150	75	52	37	8.3	32	6	11	50
L1780.20-6000	20	6.6	M6x25	6000	150	75	52	37	8.3	32	6	11	50

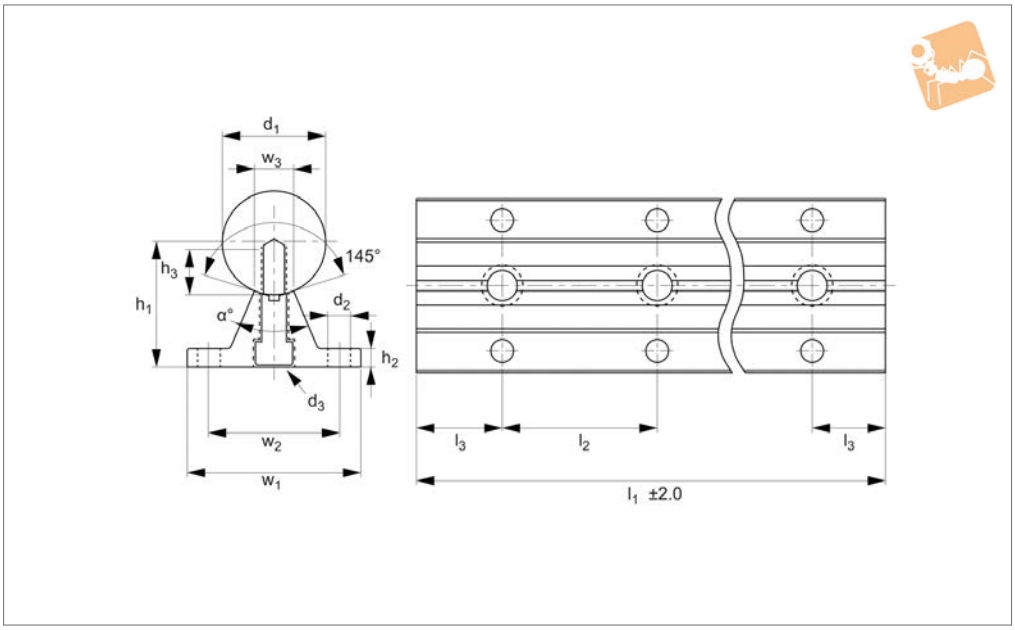


25Ø Shaft Support Rails

complete steel shaft and aluminium support



L1780.25



Material

Hardened and ground carbon steel shaft (070M55, Cf53 - DIN 1.1213), aluminium alloy support rail.
Surface hardness of steel shaft 60-65 HRC.

Technical Notes

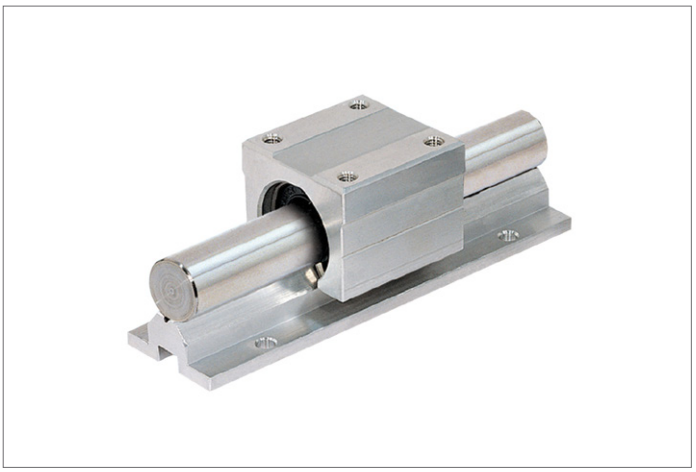
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

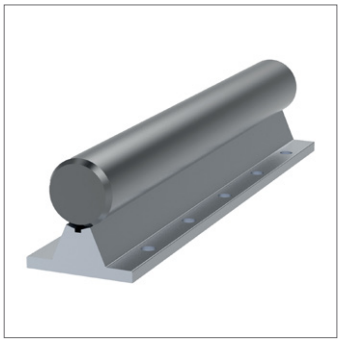
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).
On request a stainless steel (usually 440C) shaft can be mounted on the support rail.

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.01	h_2	h_3	α °
L1780.25-0400	25	6.6	M8x30	400	200	100	57	42	10.8	36	6	15	50
L1780.25-0600	25	6.6	M8x30	600	200	100	57	42	10.8	36	6	15	50
L1780.25-0800	25	6.6	M8x30	800	200	100	57	42	10.8	36	6	15	50
L1780.25-1000	25	6.6	M8x30	1000	200	100	57	42	10.8	36	6	15	50
L1780.25-1200	25	6.6	M8x30	1200	200	100	57	42	10.8	36	6	15	50
L1780.25-1400	25	6.6	M8x30	1400	200	100	57	42	10.8	36	6	15	50
L1780.25-1600	25	6.6	M8x30	1600	200	100	57	42	10.8	36	6	15	50
L1780.25-1800	25	6.6	M8x30	1800	200	100	57	42	10.8	36	6	15	50
L1780.25-2000	25	6.6	M8x30	2000	200	100	57	42	10.8	36	6	15	50
L1780.25-2200	25	6.6	M8x30	2200	200	100	57	42	10.8	36	6	15	50
L1780.25-2400	25	6.6	M8x30	2400	200	100	57	42	10.8	36	6	15	50
L1780.25-2600	25	6.6	M8x30	2600	200	100	57	42	10.8	36	6	15	50
L1780.25-2800	25	6.6	M8x30	2800	200	100	57	42	10.8	36	6	15	50
L1780.25-3000	25	6.6	M8x30	3000	200	100	57	42	10.8	36	6	15	50
L1780.25-3200	25	6.6	M8x30	3200	200	100	57	42	10.8	36	6	15	50
L1780.25-3400	25	6.6	M8x30	3400	200	100	57	42	10.8	36	6	15	50
L1780.25-3600	25	6.6	M8x30	3600	200	100	57	42	10.8	36	6	15	50
L1780.25-3800	25	6.6	M8x30	3800	200	100	57	42	10.8	36	6	15	50
L1780.25-4000	25	6.6	M8x30	4000	200	100	57	42	10.8	36	6	15	50
L1780.25-4200	25	6.6	M8x30	4200	200	100	57	42	10.8	36	6	15	50
L1780.25-4400	25	6.6	M8x30	4400	200	100	57	42	10.8	36	6	15	50
L1780.25-4600	25	6.6	M8x30	4600	200	100	57	42	10.8	36	6	15	50
L1780.25-4800	25	6.6	M8x30	4800	200	100	57	42	10.8	36	6	15	50
L1780.25-5000	25	6.6	M8x30	5000	200	100	57	42	10.8	36	6	15	50
L1780.25-5200	25	6.6	M8x30	5200	200	100	57	42	10.8	36	6	15	50
L1780.25-5400	25	6.6	M8x30	5400	200	100	57	42	10.8	36	6	15	50
L1780.25-5600	25	6.6	M8x30	5600	200	100	57	42	10.8	36	6	15	50
L1780.25-5800	25	6.6	M8x30	5800	200	100	57	42	10.8	36	6	15	50
L1780.25-6000	25	6.6	M8x30	6000	200	100	57	42	10.8	36	6	15	50

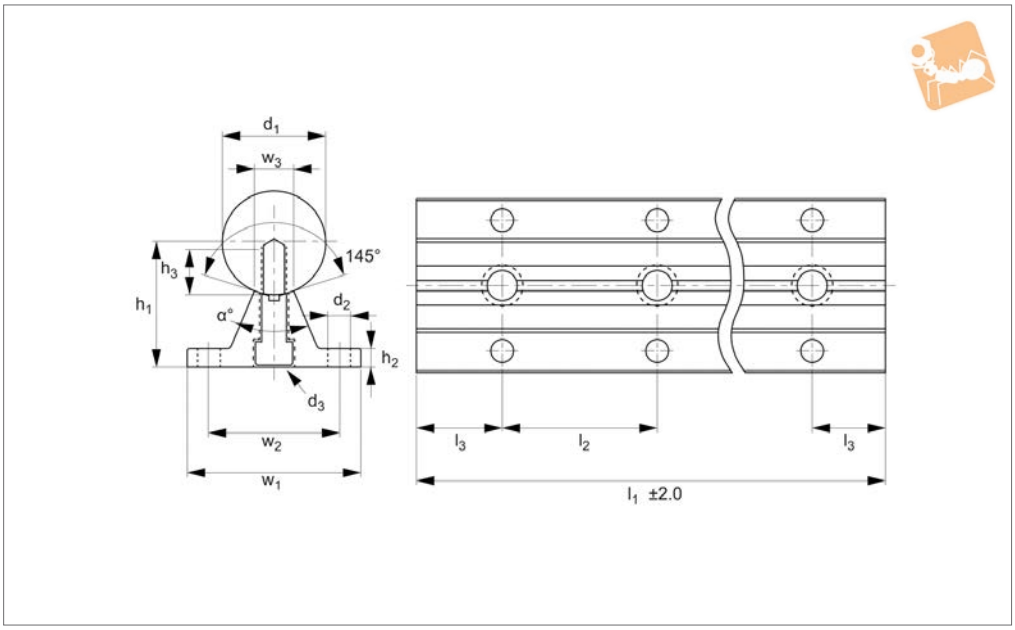


30Ø Shaft Support Rails

complete steel shaft and aluminium support



L1780.30



Material

Hardened and ground carbon steel shaft (070M55, Cf53 - DIN 1.1213), aluminium alloy support rail.
Surface hardness of steel shaft 60-65 HRC.

Technical Notes

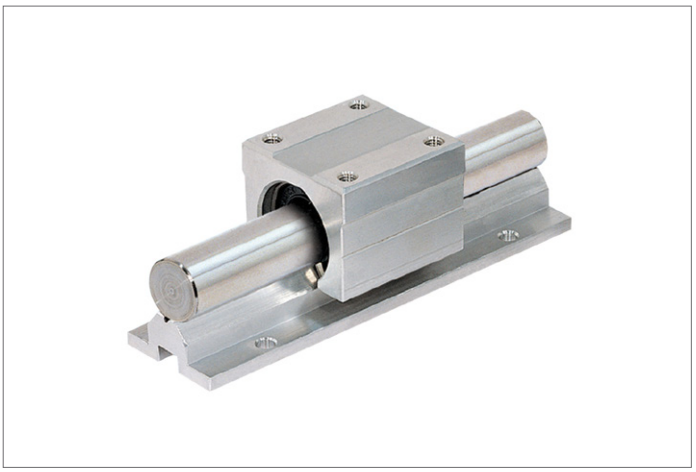
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

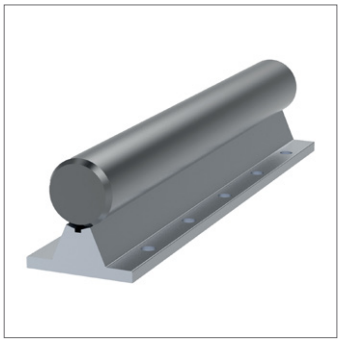
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).
On request a stainless steel (usually 440C) shaft can be mounted on the support rail.

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1780.30-0400	30	9	M10x35	400	200	100	69	51	11	42	7	17	50
L1780.30-0600	30	9	M10x35	600	200	100	69	51	11	42	7	17	50
L1780.30-0800	30	9	M10x35	800	200	100	69	51	11	42	7	17	50
L1780.30-1000	30	9	M10x35	1000	200	100	69	51	11	42	7	17	50
L1780.30-1200	30	9	M10x35	1200	200	100	69	51	11	42	7	17	50
L1780.30-1400	30	9	M10x35	1400	200	100	69	51	11	42	7	17	50
L1780.30-1600	30	9	M10x35	1600	200	100	69	51	11	42	7	17	50
L1780.30-1800	30	9	M10x35	1800	200	100	69	51	11	42	7	17	50
L1780.30-2000	30	9	M10x35	2000	200	100	69	51	11	42	7	17	50
L1780.30-2200	30	9	M10x35	2200	200	100	69	51	11	42	7	17	50
L1780.30-2400	30	9	M10x35	2400	200	100	69	51	11	42	7	17	50
L1780.30-2600	30	9	M10x35	2600	200	100	69	51	11	42	7	17	50
L1780.30-2800	30	9	M10x35	2800	200	100	69	51	11	42	7	17	50
L1780.30-3000	30	9	M10x35	3000	200	100	69	51	11	42	7	17	50
L1780.30-3200	30	9	M10x35	3200	200	100	69	51	11	42	7	17	50
L1780.30-3400	30	9	M10x35	3400	200	100	69	51	11	42	7	17	50
L1780.30-3600	30	9	M10x35	3600	200	100	69	51	11	42	7	17	50
L1780.30-3800	30	9	M10x35	3800	200	100	69	51	11	42	7	17	50
L1780.30-4000	30	9	M10x35	4000	200	100	69	51	11	42	7	17	50
L1780.30-4200	30	9	M10x35	4200	200	100	69	51	11	42	7	17	50
L1780.30-4400	30	9	M10x35	4400	200	100	69	51	11	42	7	17	50
L1780.30-4600	30	9	M10x35	4600	200	100	69	51	11	42	7	17	50
L1780.30-4800	30	9	M10x35	4800	200	100	69	51	11	42	7	17	50
L1780.30-5000	30	9	M10x35	5000	200	100	69	51	11	42	7	17	50
L1780.30-5200	30	9	M10x35	5200	200	100	69	51	11	42	7	17	50
L1780.30-5400	30	9	M10x35	5400	200	100	69	51	11	42	7	17	50
L1780.30-5600	30	9	M10x35	5600	200	100	69	51	11	42	7	17	50
L1780.30-5800	30	9	M10x35	5800	200	100	69	51	11	42	7	17	50
L1780.30-6000	30	9	M10x35	6000	200	100	69	51	11	42	7	17	50

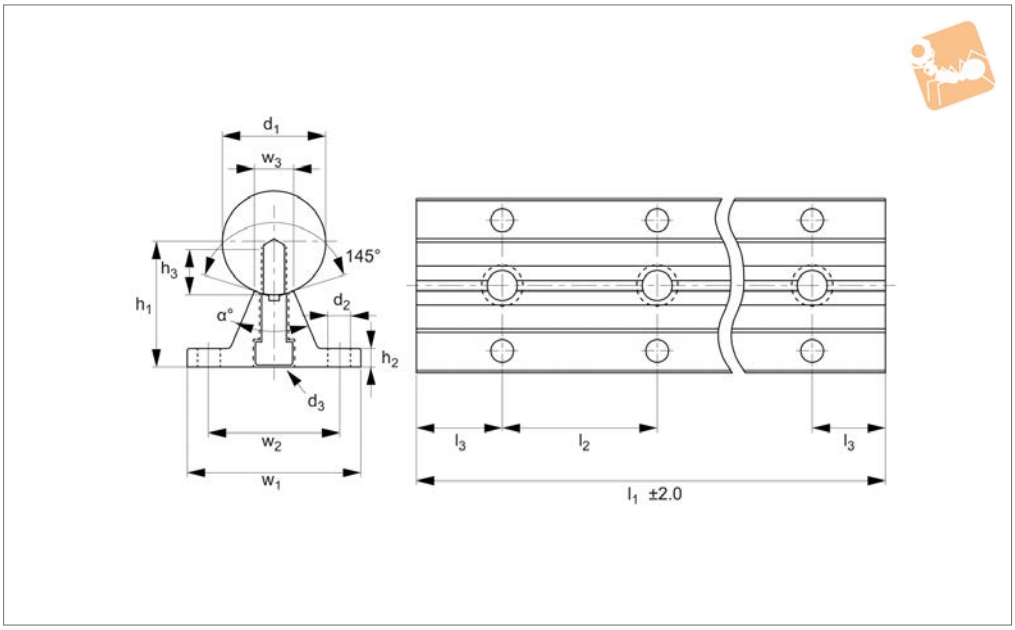


40Ø Shaft Support Rails

complete steel shaft and aluminium support



L1780.40



Material

Hardened and ground carbon steel shaft (070M55, Cf53 - DIN 1.1213), aluminium alloy support rail.
Surface hardness of steel shaft 60-65 HRC.

Technical Notes

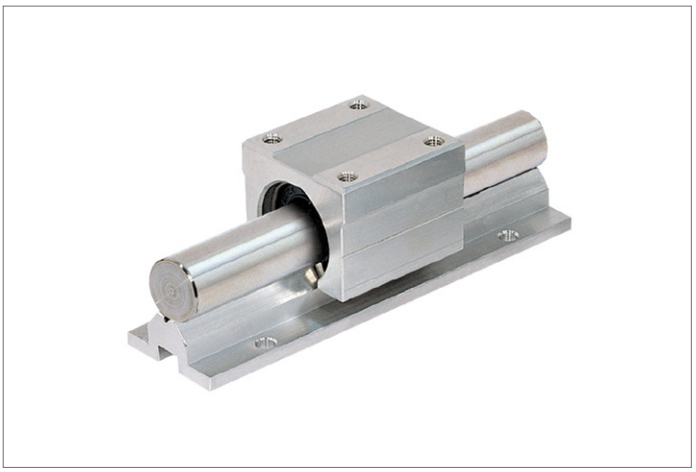
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

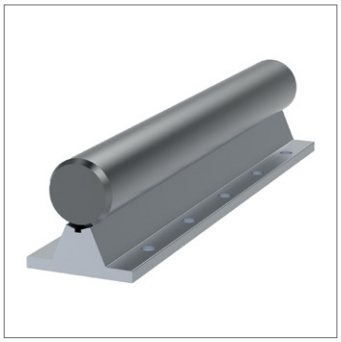
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).
On request a stainless steel (usually 440C) shaft can be mounted on the support rail.

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1780.40-0600	40	9	M10x40	600	300	150	73	55	15	50	8	19	50
L1780.40-0900	40	9	M10x40	900	300	150	73	55	15	50	8	19	50
L1780.40-1200	40	9	M10x40	1200	300	150	73	55	15	50	8	19	50
L1780.40-1500	40	9	M10x40	1500	300	150	73	55	15	50	8	19	50
L1780.40-1800	40	9	M10x40	1800	300	150	73	55	15	50	8	19	50
L1780.40-2100	40	9	M10x40	2100	300	150	73	55	15	50	8	19	50
L1780.40-2400	40	9	M10x40	2400	300	150	73	55	15	50	8	19	50
L1780.40-2700	40	9	M10x40	2700	300	150	73	55	15	50	8	19	50
L1780.40-3000	40	9	M10x40	3000	300	150	73	55	15	50	8	19	50
L1780.40-3300	40	9	M10x40	3300	300	150	73	55	15	50	8	19	50
L1780.40-3600	40	9	M10x40	3600	300	150	73	55	15	50	8	19	50
L1780.40-3900	40	9	M10x40	3900	300	150	73	55	15	50	8	19	50
L1780.40-4200	40	9	M10x40	4200	300	150	73	55	15	50	8	19	50
L1780.40-4500	40	9	M10x40	4500	300	150	73	55	15	50	8	19	50
L1780.40-4800	40	9	M10x40	4800	300	150	73	55	15	50	8	19	50
L1780.40-5100	40	9	M10x40	5100	300	150	73	55	15	50	8	19	50
L1780.40-5400	40	9	M10x40	5400	300	150	73	55	15	50	8	19	50
L1780.40-5700	40	9	M10x40	5700	300	150	73	55	15	50	8	19	50
L1780.40-6000	40	9	M10x40	6000	300	150	73	55	15	50	8	19	50

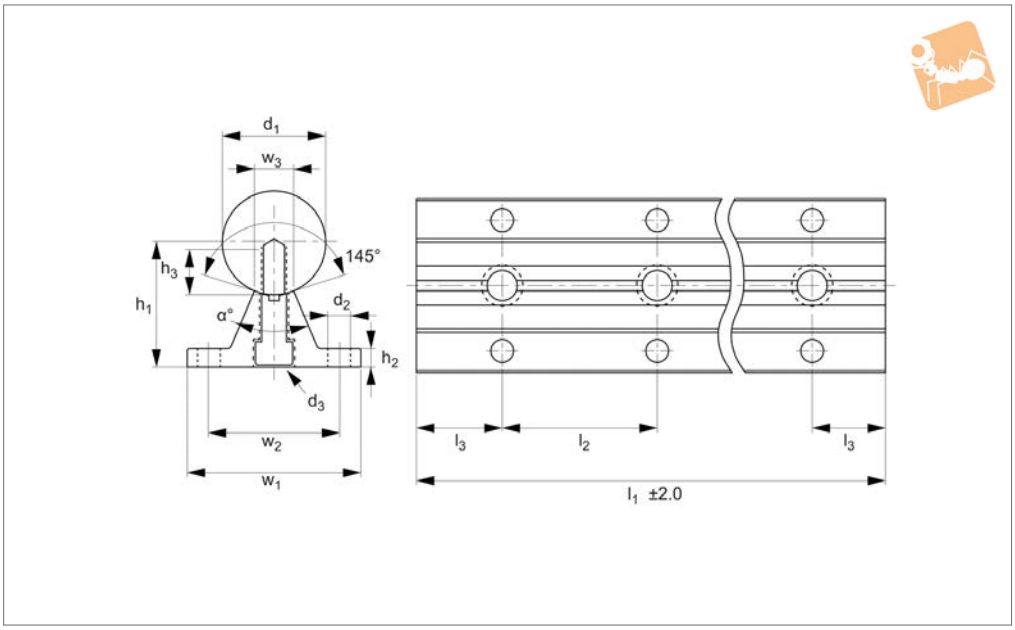


50Ø Shaft Support Rails

complete steel shaft and aluminium support



L1780.50



Material

Hardened and ground carbon steel shaft (070M55, Cf53 - DIN 1.1213), aluminium alloy support rail.
Surface hardness of steel shaft 60-65 HRC.

Technical Notes

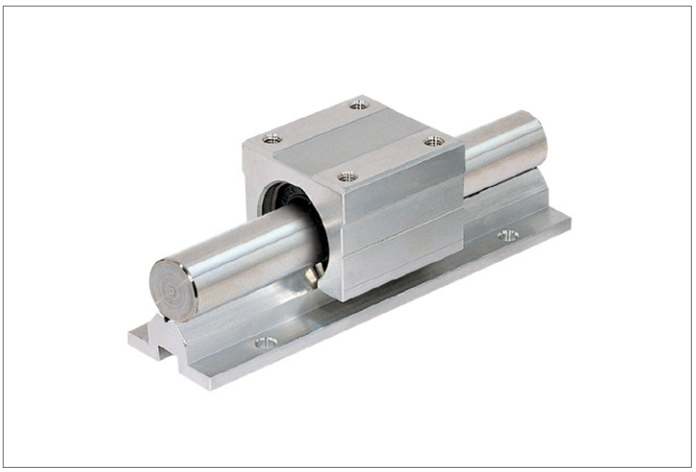
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

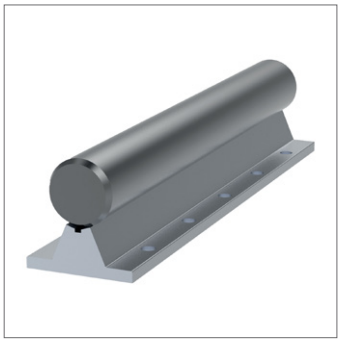
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).
On request a stainless steel (usually 440C) shaft can be mounted on the support rail.

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1780.50-0600	50	11	M12x45	600	300	150	84	63	19	60	9	21	46
L1780.50-0900	50	11	M12x45	900	300	150	84	63	19	60	9	21	46
L1780.50-1200	50	11	M12x45	1200	300	150	84	63	19	60	9	21	46
L1780.50-1500	50	11	M12x45	1500	300	150	84	63	19	60	9	21	46
L1780.50-1800	50	11	M12x45	1800	300	150	84	63	19	60	9	21	46
L1780.50-2100	50	11	M12x45	2100	300	150	84	63	19	60	9	21	46
L1780.50-2400	50	11	M12x45	2400	300	150	84	63	19	60	9	21	46
L1780.50-2700	50	11	M12x45	2700	300	150	84	63	19	60	9	21	46
L1780.50-3000	50	11	M12x45	3000	300	150	84	63	19	60	9	21	46
L1780.50-3300	50	11	M12x45	3300	300	150	84	63	19	60	9	21	46
L1780.50-3600	50	11	M12x45	3600	300	150	84	63	19	60	9	21	46
L1780.50-3900	50	11	M12x45	3900	300	150	84	63	19	60	9	21	46
L1780.50-4200	50	11	M12x45	4200	300	150	84	63	19	60	9	21	46
L1780.50-4500	50	11	M12x45	4500	300	150	84	63	19	60	9	21	46
L1780.50-4800	50	11	M12x45	4800	300	150	84	63	19	60	9	21	46
L1780.50-5100	50	11	M12x45	5100	300	150	84	63	19	60	9	21	46
L1780.50-5400	50	11	M12x45	5400	300	150	84	63	19	60	9	21	46
L1780.50-5700	50	11	M12x45	5700	300	150	84	63	19	60	9	21	46
L1780.50-6000	50	11	M12x45	6000	300	150	84	63	19	60	9	21	46

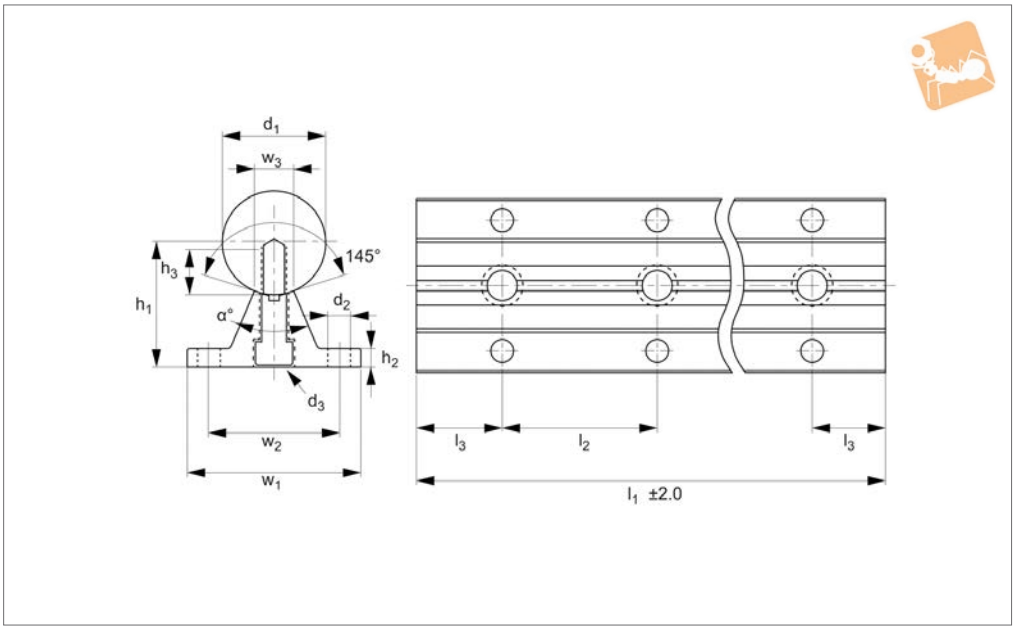


60Ø Shaft Support Rails

complete steel shaft and aluminium support



L1780.60



Material

Hardened and ground carbon steel shaft (070M55, Cf53 - DIN 1.1213), aluminium alloy support rail.
Surface hardness of steel shaft 60-65 HRC.

Technical Notes

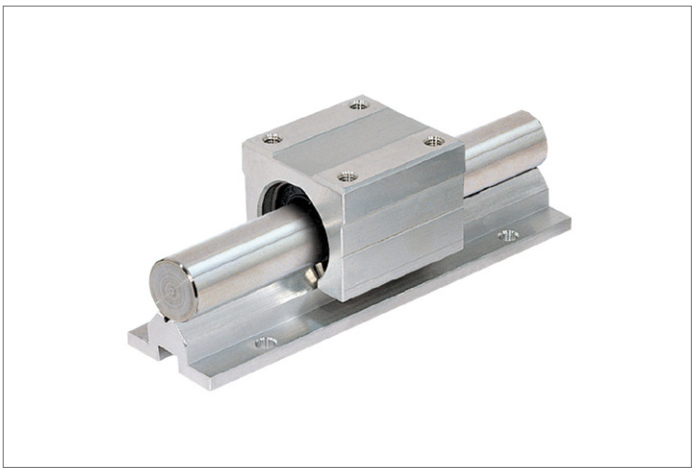
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

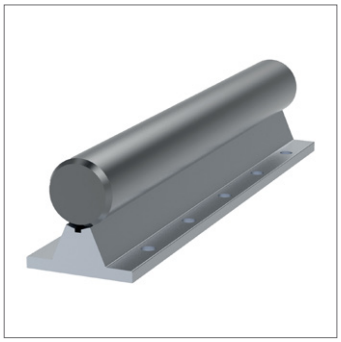
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).
On request a stainless steel (usually 440C) shaft can be mounted on the support rail.

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1780.60-0600	60	11	M14x50	600	300	150	94	72	25	68	10	25	46
L1780.60-0900	60	11	M14x50	900	300	150	94	72	25	68	10	25	46
L1780.60-1200	60	11	M14x50	1200	300	150	94	72	25	68	10	25	46
L1780.60-1500	60	11	M14x50	1500	300	150	94	72	25	68	10	25	46
L1780.60-1800	60	11	M14x50	1800	300	150	94	72	25	68	10	25	46
L1780.60-2100	60	11	M14x50	2100	300	150	94	72	25	68	10	25	46
L1780.60-2400	60	11	M14x50	2400	300	150	94	72	25	68	10	25	46
L1780.60-2700	60	11	M14x50	2700	300	150	94	72	25	68	10	25	46
L1780.60-3000	60	11	M14x50	3000	300	150	94	72	25	68	10	25	46
L1780.60-3300	60	11	M14x50	3300	300	150	94	72	25	68	10	25	46
L1780.60-3600	60	11	M14x50	3600	300	150	94	72	25	68	10	25	46
L1780.60-3900	60	11	M14x50	3900	300	150	94	72	25	68	10	25	46
L1780.60-4200	60	11	M14x50	4200	300	150	94	72	25	68	10	25	46
L1780.60-4500	60	11	M14x50	4500	300	150	94	72	25	68	10	25	46
L1780.60-4800	60	11	M14x50	4800	300	150	94	72	25	68	10	25	46
L1780.60-5100	60	11	M14x50	5100	300	150	94	72	25	68	10	25	46
L1780.60-5400	60	11	M14x50	5400	300	150	94	72	25	68	10	25	46
L1780.60-5700	60	11	M14x50	5700	300	150	94	72	25	68	10	25	46
L1780.60-6000	60	11	M14x50	6000	300	150	94	72	25	68	10	25	46

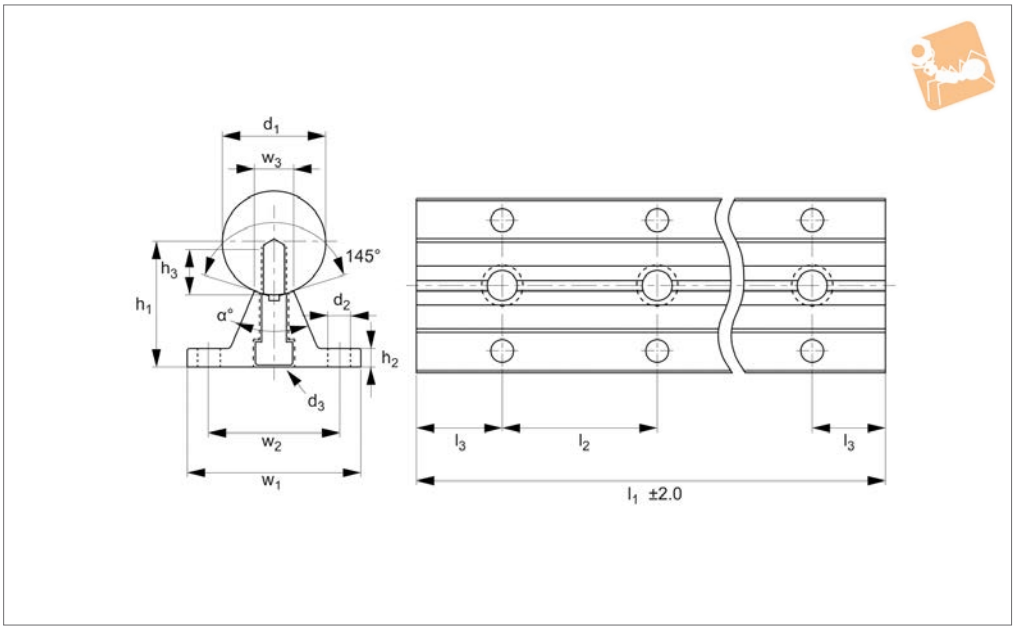


80Ø Shaft Support Rails

complete steel shaft and aluminium support



L1780.80



Material

Hardened and ground carbon steel shaft (070M55, Cf53 - DIN 1.1213), aluminium alloy support rail.
Surface hardness of steel shaft 60-65 HRC.

Technical Notes

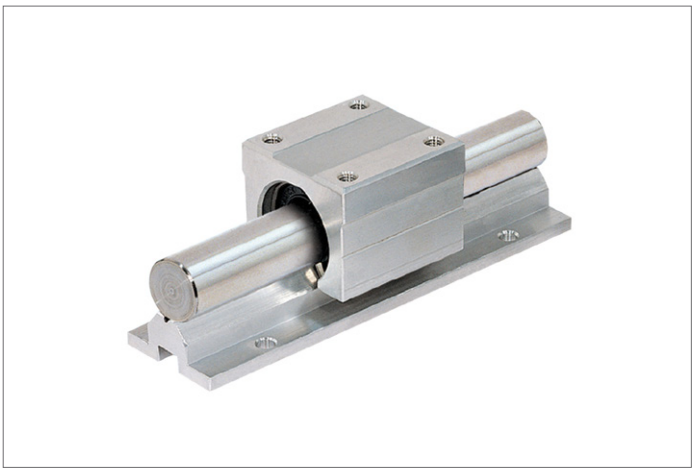
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

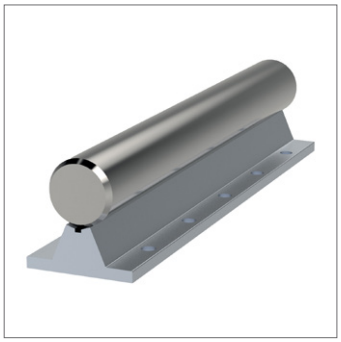
Tips

For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).
On request a stainless steel (usually 440C) shaft can be mounted on the support rail.

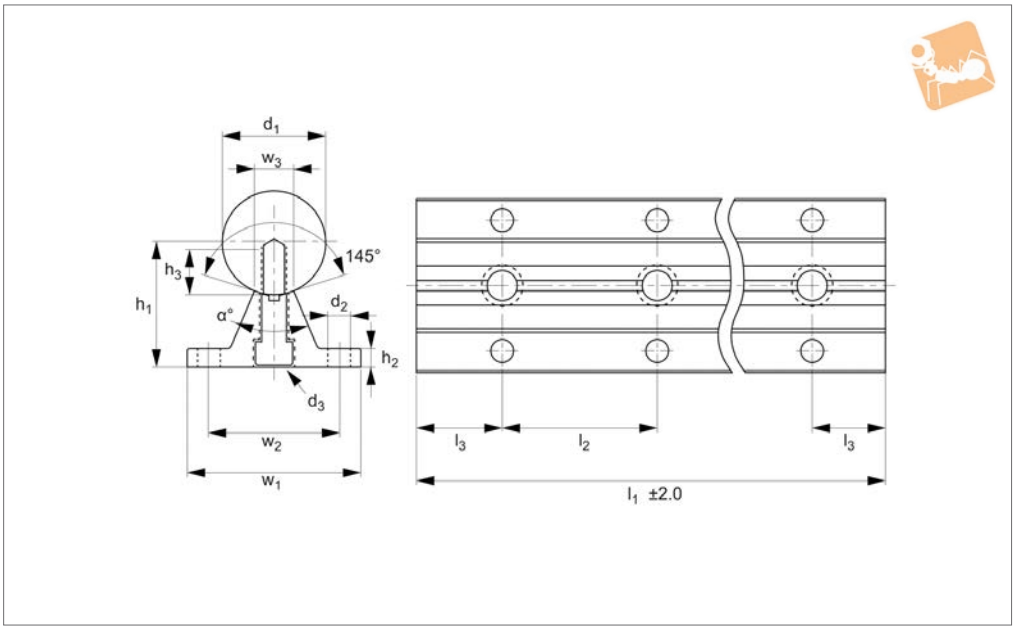
Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1780.80-0600	80	13.5	M16x60	600	300	150	116	92	34	86	12	28	46
L1780.80-0900	80	13.5	M16x60	900	300	150	116	92	34	86	12	28	46
L1780.80-1200	80	13.5	M16x60	1200	300	150	116	92	34	86	12	28	46
L1780.80-1500	80	13.5	M16x60	1500	300	150	116	92	34	86	12	28	46
L1780.80-1800	80	13.5	M16x60	1800	300	150	116	92	34	86	12	28	46
L1780.80-2100	80	13.5	M16x60	2100	300	150	116	92	34	86	12	28	46
L1780.80-2400	80	13.5	M16x60	2400	300	150	116	92	34	86	12	28	46
L1780.80-2700	80	13.5	M16x60	2700	300	150	116	92	34	86	12	28	46
L1780.80-3000	80	13.5	M16x60	3000	300	150	116	92	34	86	12	28	46
L1780.80-3300	80	13.5	M16x60	3300	300	150	116	92	34	86	12	28	46
L1780.80-3600	80	13.5	M16x60	3600	300	150	116	92	34	86	12	28	46
L1780.80-3900	80	13.5	M16x60	3900	300	150	116	92	34	86	12	28	46
L1780.80-4200	80	13.5	M16x60	4200	300	150	116	92	34	86	12	28	46
L1780.80-4500	80	13.5	M16x60	4500	300	150	116	92	34	86	12	28	46
L1780.80-4800	80	13.5	M16x60	4800	300	150	116	92	34	86	12	28	46
L1780.80-5100	80	13.5	M16x60	5100	300	150	116	92	34	86	12	28	46
L1780.80-5400	80	13.5	M16x60	5400	300	150	116	92	34	86	12	28	46
L1780.80-5700	80	13.5	M16x60	5700	300	150	116	92	34	86	12	28	46
L1780.80-6000	80	13.5	M16x60	6000	300	150	116	92	34	86	12	28	46



12Ø Shaft Support Rails
complete shaft and rail



L1781.12



Material
Hardened and ground stainless steel shaft (440C), aluminium alloy support rail.
Surface hardness of shaft 60-65 HRC.

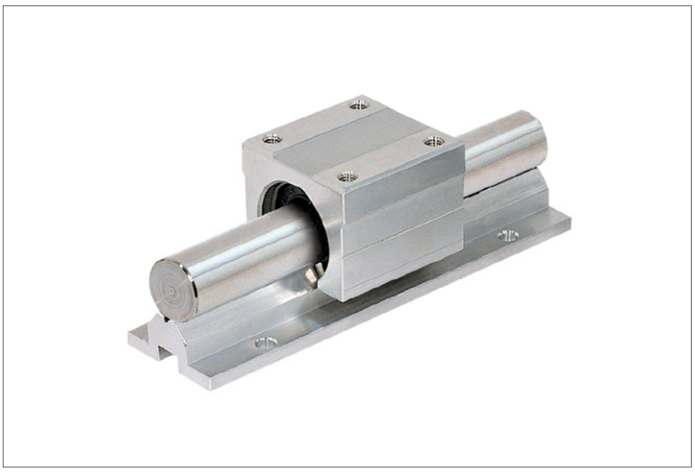
Technical Notes
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).

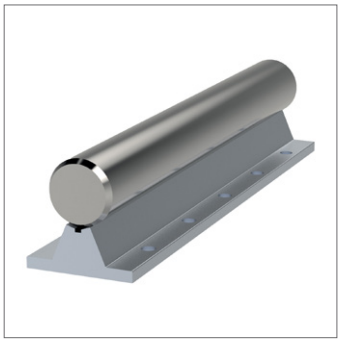
Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.12-0240	12	4.5	M4x20	240	120	60	40	29	5.8	22	5	8	50
L1781.12-0360	12	4.5	M4x20	360	120	60	40	29	5.8	22	5	8	50
L1781.12-0480	12	4.5	M4x20	480	120	60	40	29	5.8	22	5	8	50
L1781.12-0600	12	4.5	M4x20	600	120	60	40	29	5.8	22	5	8	50
L1781.12-0720	12	4.5	M4x20	720	120	60	40	29	5.8	22	5	8	50
L1781.12-0840	12	4.5	M4x20	840	120	60	40	29	5.8	22	5	8	50
L1781.12-0960	12	4.5	M4x20	960	120	60	40	29	5.8	22	5	8	50
L1781.12-1080	12	4.5	M4x20	1080	120	60	40	29	5.8	22	5	8	50
L1781.12-1200	12	4.5	M4x20	1200	120	60	40	29	5.8	22	5	8	50
L1781.12-1320	12	4.5	M4x20	1320	120	60	40	29	5.8	22	5	8	50
L1781.12-1440	12	4.5	M4x20	1440	120	60	40	29	5.8	22	5	8	50
L1781.12-1560	12	4.5	M4x20	1560	120	60	40	29	5.8	22	5	8	50
L1781.12-1680	12	4.5	M4x20	1680	120	60	40	29	5.8	22	5	8	50
L1781.12-1800	12	4.5	M4x20	1800	120	60	40	29	5.8	22	5	8	50
L1781.12-1920	12	4.5	M4x20	1920	120	60	40	29	5.8	22	5	8	50
L1781.12-2040	12	4.5	M4x20	2040	120	60	40	29	5.8	22	5	8	50
L1781.12-2160	12	4.5	M4x20	2160	120	60	40	29	5.8	22	5	8	50
L1781.12-2280	12	4.5	M4x20	2280	120	60	40	29	5.8	22	5	8	50
L1781.12-2400	12	4.5	M4x20	2400	120	60	40	29	5.8	22	5	8	50
L1781.12-2520	12	4.5	M4x20	2520	120	60	40	29	5.8	22	5	8	50
L1781.12-2640	12	4.5	M4x20	2640	120	60	40	29	5.8	22	5	8	50
L1781.12-2760	12	4.5	M4x20	2760	120	60	40	29	5.8	22	5	8	50
L1781.12-2880	12	4.5	M4x20	2880	120	60	40	29	5.8	22	5	8	50
L1781.12-3000	12	4.5	M4x20	3000	120	60	40	29	5.8	22	5	8	50
L1781.12-3120	12	4.5	M4x20	3120	120	60	40	29	5.8	22	5	8	50
L1781.12-3240	12	4.5	M4x20	3240	120	60	40	29	5.8	22	5	8	50
L1781.12-3360	12	4.5	M4x20	3360	120	60	40	29	5.8	22	5	8	50
L1781.12-3480	12	4.5	M4x20	3480	120	60	40	29	5.8	22	5	8	50
L1781.12-3600	12	4.5	M4x20	3600	120	60	40	29	5.8	22	5	8	50
L1781.12-3720	12	4.5	M4x20	3720	120	60	40	29	5.8	22	5	8	50

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.12-3840	12	4.5	M4x20	3840	120	60	40	29	5.8	22	5	8	50
L1781.12-3960	12	4.5	M4x20	3960	120	60	40	29	5.8	22	5	8	50
L1781.12-4080	12	4.5	M4x20	4080	120	60	40	29	5.8	22	5	8	50
L1781.12-4200	12	4.5	M4x20	4200	120	60	40	29	5.8	22	5	8	50
L1781.12-4320	12	4.5	M4x20	4320	120	60	40	29	5.8	22	5	8	50
L1781.12-4440	12	4.5	M4x20	4440	120	60	40	29	5.8	22	5	8	50
L1781.12-4560	12	4.5	M4x20	4560	120	60	40	29	5.8	22	5	8	50
L1781.12-4680	12	4.5	M4x20	4680	120	60	40	29	5.8	22	5	8	50
L1781.12-4800	12	4.5	M4x20	4800	120	60	40	29	5.8	22	5	8	50
L1781.12-4920	12	4.5	M4x20	4920	120	60	40	29	5.8	22	5	8	50
L1781.12-5040	12	4.5	M4x20	5040	120	60	40	29	5.8	22	5	8	50
L1781.12-5160	12	4.5	M4x20	5150	120	60	40	29	5.8	22	5	8	50
L1781.12-5280	12	4.5	M4x20	5280	120	60	40	29	5.8	22	5	8	50
L1781.12-5400	12	4.5	M4x20	5400	120	60	40	29	5.8	22	5	8	50
L1781.12-5520	12	4.5	M4x20	5520	120	60	40	29	5.8	22	5	8	50
L1781.12-5640	12	4.5	M4x20	5640	120	60	40	29	5.8	22	5	8	50
L1781.12-5760	12	4.5	M4x20	5760	120	60	40	29	5.8	22	5	8	50
L1781.12-5880	12	4.5	M4x20	5880	120	60	40	29	5.8	22	5	8	50
L1781.12-6000	12	4.5	M4x20	6000	120	60	40	29	5.8	22	5	8	50

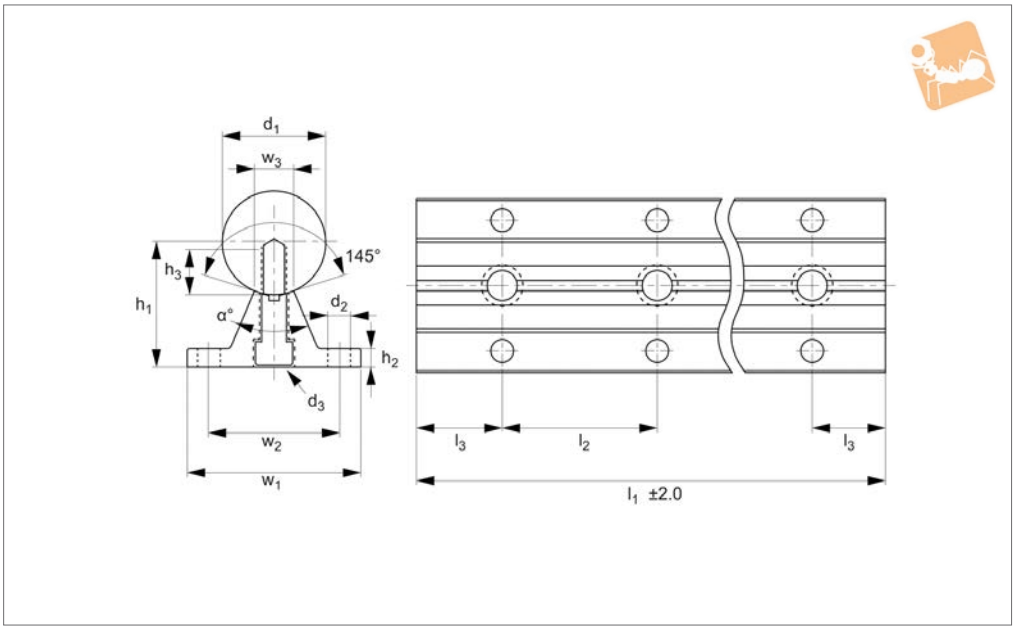


16Ø Shaft Support Rails

complete steel shaft and aluminium support



L1781.16



Material

Hardened and ground stainless steel shaft (440C), aluminium alloy support rail.
Surface hardness of shaft 60-65 HRC.

Technical Notes

For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

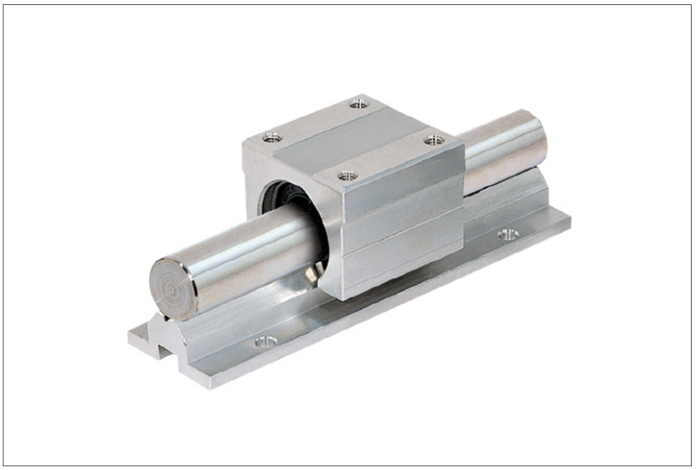
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.16-0300	16	5.5	M5x20	300	150	75	45	33	7	26	5	9	50
L1781.16-0450	16	5.5	M5x20	450	150	75	45	33	7	26	5	9	50
L1781.16-0600	16	5.5	M5x20	600	150	75	45	33	7	26	5	9	50
L1781.16-0750	16	5.5	M5x20	750	150	75	45	33	7	26	5	9	50
L1781.16-0900	16	5.5	M5x20	900	150	75	45	33	7	26	5	9	50
L1781.16-1050	16	5.5	M5x20	1050	150	75	45	33	7	26	5	9	50
L1781.16-1200	16	5.5	M5x20	1200	150	75	45	33	7	26	5	9	50
L1781.16-1350	16	5.5	M5x20	1350	150	75	45	33	7	26	5	9	50
L1781.16-1500	16	5.5	M5x20	1500	150	75	45	33	7	26	5	9	50
L1781.16-1650	16	5.5	M5x20	1650	150	75	45	33	7	26	5	9	50
L1781.16-1800	16	5.5	M5x20	1800	150	75	45	33	7	26	5	9	50
L1781.16-1950	16	5.5	M5x20	1950	150	75	45	33	7	26	5	9	50
L1781.16-2100	16	5.5	M5x20	2100	150	75	45	33	7	26	5	9	50
L1781.16-2250	16	5.5	M5x20	2250	150	75	45	33	7	26	5	9	50
L1781.16-2400	16	5.5	M5x20	2400	150	75	45	33	7	26	5	9	50
L1781.16-2550	16	5.5	M5x20	2550	150	75	45	33	7	26	5	9	50
L1781.16-2700	16	5.5	M5x20	2700	150	75	45	33	7	26	5	9	50
L1781.16-2850	16	5.5	M5x20	2850	150	75	45	33	7	26	5	9	50
L1781.16-3000	16	5.5	M5x20	3000	150	75	45	33	7	26	5	9	50
L1781.16-3150	16	5.5	M5x20	3150	150	75	45	33	7	26	5	9	50
L1781.16-3300	16	5.5	M5x20	3300	150	75	45	33	7	26	5	9	50
L1781.16-3450	16	5.5	M5x20	3450	150	75	45	33	7	26	5	9	50
L1781.16-3600	16	5.5	M5x20	3600	150	75	45	33	7	26	5	9	50
L1781.16-3750	16	5.5	M5x20	3750	150	75	45	33	7	26	5	9	50
L1781.16-3900	16	5.5	M5x20	3900	150	75	45	33	7	26	5	9	50
L1781.16-4050	16	5.5	M5x20	4050	150	75	45	33	7	26	5	9	50
L1781.16-4200	16	5.5	M5x20	4200	150	75	45	33	7	26	5	9	50
L1781.16-4350	16	5.5	M5x20	4350	150	75	45	33	7	26	5	9	50
L1781.16-4500	16	5.5	M5x20	4500	150	75	45	33	7	26	5	9	50
L1781.16-4650	16	5.5	M5x20	4650	150	75	45	33	7	26	5	9	50

16Ø Shaft Support Rails

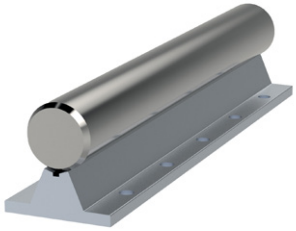
complete steel shaft and aluminium support

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.16-4800	16	5.5	M5x20	4800	150	75	45	33	7	26	5	9	50
L1781.16-4950	16	5.5	M5x20	4950	150	75	45	33	7	26	5	9	50
L1781.16-5100	16	5.5	M5x20	5100	150	75	45	33	7	26	5	9	50
L1781.16-5250	16	5.5	M5x20	5250	150	75	45	33	7	26	5	9	50
L1781.16-5400	16	5.5	M5x20	5400	150	75	45	33	7	26	5	9	50
L1781.16-5550	16	5.5	M5x20	5550	150	75	45	33	7	26	5	9	50
L1781.16-5700	16	5.5	M5x20	5700	150	75	45	33	7	26	5	9	50
L1781.16-5850	16	5.5	M5x20	5850	150	75	45	33	7	26	5	9	50
L1781.16-6000	16	5.5	M5x20	6000	150	75	45	33	7	26	5	9	50

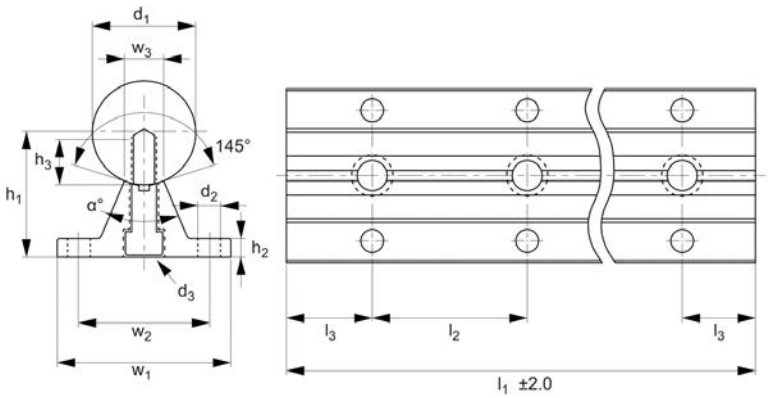


20Ø Shaft Support Rails

complete stainless and aluminium support



L1781.20



Material

Hardened and ground stainless steel shaft (440C), aluminium alloy support rail.
Surface hardness of shaft 60-65 HRC.

Technical Notes

For open linear bushings, ensures a very rigid and stiff system.

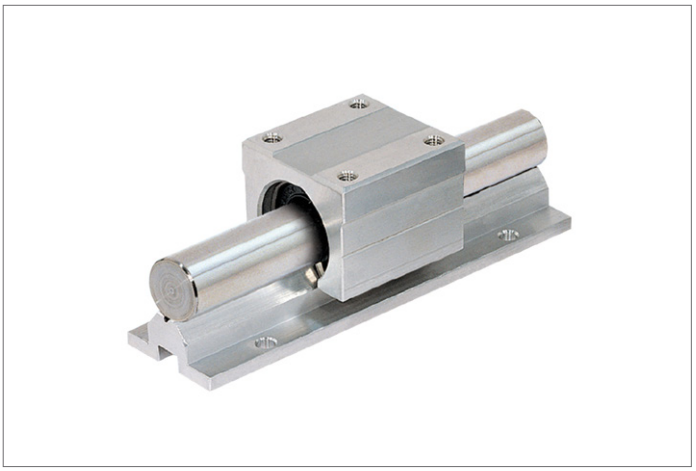
The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

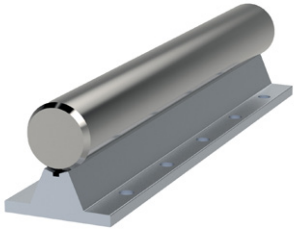
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.20-0300	20	6.6	M6x25	300	150	75	52	37	8.3	32	6	11	50
L1781.20-0450	20	6.6	M6x25	450	150	75	52	37	8.3	32	6	11	50
L1781.20-0600	20	6.6	M6x25	600	150	75	52	37	8.3	32	6	11	50
L1781.20-0750	20	6.6	M6x25	750	150	75	52	37	8.3	32	6	11	50
L1781.20-0900	20	6.6	M6x25	900	150	75	52	37	8.3	32	6	11	50
L1781.20-1050	20	6.6	M6x25	1050	150	75	52	37	8.3	32	6	11	50
L1781.20-1200	20	6.6	M6x25	1200	150	75	52	37	8.3	32	6	11	50
L1781.20-1350	20	6.6	M6x25	1350	150	75	52	37	8.3	32	6	11	50
L1781.20-1500	20	6.6	M6x25	1500	150	75	52	37	8.3	32	6	11	50
L1781.20-1650	20	6.6	M6x25	1650	150	75	52	37	8.3	32	6	11	50
L1781.20-1800	20	6.6	M6x25	1800	150	75	52	37	8.3	32	6	11	50
L1781.20-1950	20	6.6	M6x25	1950	150	75	52	37	8.3	32	6	11	50
L1781.20-2100	20	6.6	M6x25	2100	150	75	52	37	8.3	32	6	11	50
L1781.20-2250	20	6.6	M6x25	2250	150	75	52	37	8.3	32	6	11	50
L1781.20-2400	20	6.6	M6x25	2400	150	75	52	37	8.3	32	6	11	50
L1781.20-2550	20	6.6	M6x25	2550	150	75	52	37	8.3	32	6	11	50
L1781.20-2700	20	6.6	M6x25	2700	150	75	52	37	8.3	32	6	11	50
L1781.20-2850	20	6.6	M6x25	2850	150	75	52	37	8.3	32	6	11	50
L1781.20-3000	20	6.6	M6x25	3000	150	75	52	37	8.3	32	6	11	50
L1781.20-3150	20	6.6	M6x25	3150	150	75	52	37	8.3	32	6	11	50
L1781.20-3300	20	6.6	M6x25	3300	150	75	52	37	8.3	32	6	11	50
L1781.20-3450	20	6.6	M6x25	3450	150	75	52	37	8.3	32	6	11	50
L1781.20-3600	20	6.6	M6x25	3600	150	75	52	37	8.3	32	6	11	50
L1781.20-3750	20	6.6	M6x25	3750	150	75	52	37	8.3	32	6	11	50
L1781.20-3900	20	6.6	M6x25	3900	150	75	52	37	8.3	32	6	11	50
L1781.20-4000	20	6.6	M6x25	4000	150	75	52	37	8.3	32	6	11	50
L1781.20-4050	20	6.6	M6x25	4050	150	75	52	37	8.3	32	6	11	50
L1781.20-4200	20	6.6	M6x25	4200	150	75	52	37	8.3	32	6	11	50
L1781.20-4350	20	6.6	M6x25	4350	150	75	52	37	8.3	32	6	11	50
L1781.20-4500	20	6.6	M6x25	4500	150	75	52	37	8.3	32	6	11	50

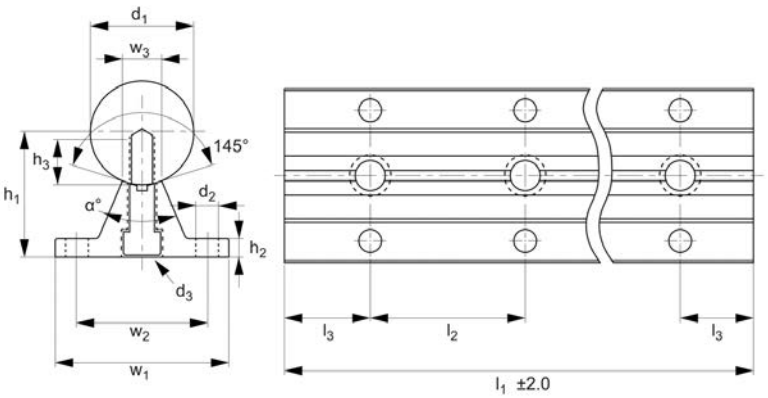
Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.20-4650	20	6.6	M6x25	4650	150	75	52	37	8.3	32	6	11	50
L1781.20-4800	20	6.6	M6x25	4800	150	75	52	37	8.3	32	6	11	50
L1781.20-4950	20	6.6	M6x25	4940	150	75	52	37	8.3	32	6	11	50
L1781.20-5100	20	6.6	M6x25	5100	150	75	52	37	8.3	32	6	11	50
L1781.20-5250	20	6.6	M6x25	5250	150	75	52	37	8.3	32	6	11	50
L1781.20-5400	20	6.6	M6x25	5400	150	75	52	37	8.3	32	6	11	50
L1781.20-5550	20	6.6	M6x25	5550	150	75	52	37	8.3	32	6	11	50
L1781.20-5700	20	6.6	M6x25	5700	150	75	52	37	8.3	32	6	11	50
L1781.20-5850	20	6.6	M6x25	5850	150	75	52	37	8.3	32	6	11	50
L1781.20-6000	20	6.6	M6x25	6000	150	75	52	37	8.3	32	6	11	50



25Ø Shaft Support Rails
complete stainless and aluminium support



L1781.25



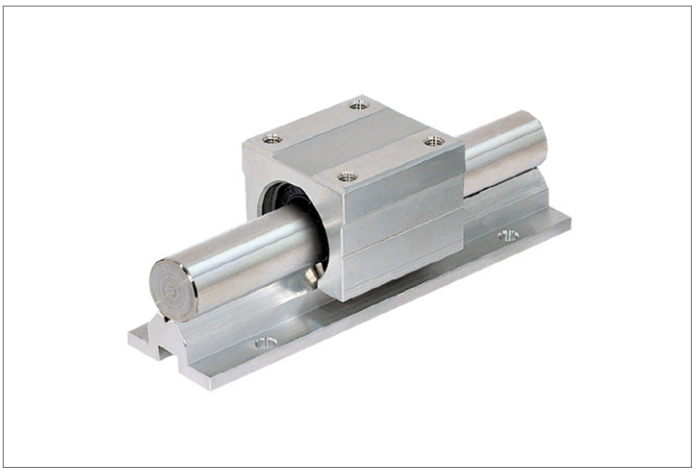
Material
Hardened and ground stainless steel shaft (440C), aluminium alloy support rail.
Surface hardness of shaft 60-65 HRC.

Technical Notes
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

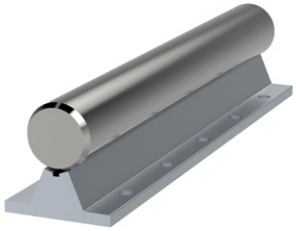
Tips
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.25-0400	25	6.6	M8x30	400	200	100	57	42	10.8	36	6	15	50
L1781.25-0600	25	6.6	M8x30	600	200	100	57	42	10.8	36	6	15	50
L1781.25-0800	25	6.6	M8x30	800	200	100	57	42	10.8	36	6	15	50
L1781.25-1000	25	6.6	M8x30	1000	200	100	57	42	10.8	36	6	15	50
L1781.25-1200	25	6.6	M8x30	1200	200	100	57	42	10.8	36	6	15	50
L1781.25-1400	25	6.6	M8x30	1400	200	100	57	42	10.8	36	6	15	50
L1781.25-1600	25	6.6	M8x30	1600	200	100	57	42	10.8	36	6	15	50
L1781.25-1800	25	6.6	M8x30	1800	200	100	57	42	10.8	36	6	15	50
L1781.25-2000	25	6.6	M8x30	2000	200	100	57	42	10.8	36	6	15	50
L1781.25-2200	25	6.6	M8x30	2200	200	100	57	42	10.8	36	6	15	50
L1781.25-2400	25	6.6	M8x30	2400	200	100	57	42	10.8	36	6	15	50
L1781.25-2600	25	6.6	M8x30	2600	200	100	57	42	10.8	36	6	15	50
L1781.25-2800	25	6.6	M8x30	2800	200	100	57	42	10.8	36	6	15	50
L1781.25-3000	25	6.6	M8x30	3000	200	100	57	42	10.8	36	6	15	50
L1781.25-3200	25	6.6	M8x30	3200	200	100	57	42	10.8	36	6	15	50
L1781.25-3400	25	6.6	M8x30	3400	200	100	57	42	10.8	36	6	15	50
L1781.25-3600	25	6.6	M8x30	3600	200	100	57	42	10.8	36	6	15	50
L1781.25-3800	25	6.6	M8x30	3800	200	100	57	42	10.8	36	6	15	50
L1781.25-4000	25	6.6	M8x30	4000	200	100	57	42	10.8	36	6	15	50
L1781.25-4200	25	6.6	M8x30	4200	200	100	57	42	10.8	36	6	15	50
L1781.25-4400	25	6.6	M8x30	4400	200	100	57	42	10.8	36	6	15	50
L1781.25-4600	25	6.6	M8x30	4600	200	100	57	42	10.8	36	6	15	50
L1781.25-4800	25	6.6	M8x30	4800	200	100	57	42	10.8	36	6	15	50
L1781.25-5000	25	6.6	M8x30	5000	200	100	57	42	10.8	36	6	15	50
L1781.25-5200	25	6.6	M8x30	5200	200	100	57	42	10.8	36	6	15	50
L1781.25-5400	25	6.6	M8x30	5400	200	100	57	42	10.8	36	6	15	50
L1781.25-5600	25	6.6	M8x30	5600	200	100	57	42	10.8	36	6	15	50
L1781.25-5800	25	6.6	M8x30	5800	200	100	57	42	10.8	36	6	15	50
L1781.25-6000	25	6.6	M8x30	6000	200	100	57	42	10.8	36	6	15	50

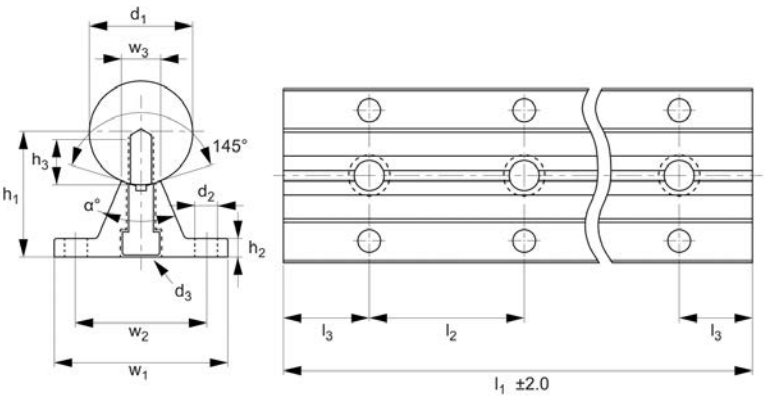


30Ø Shaft Support Rails

complete stainless and aluminium support



L1781.30



Material

Hardened and ground stainless steel shaft (440C), aluminium alloy support rail.
Surface hardness of shaft 60-65 HRC.

Technical Notes

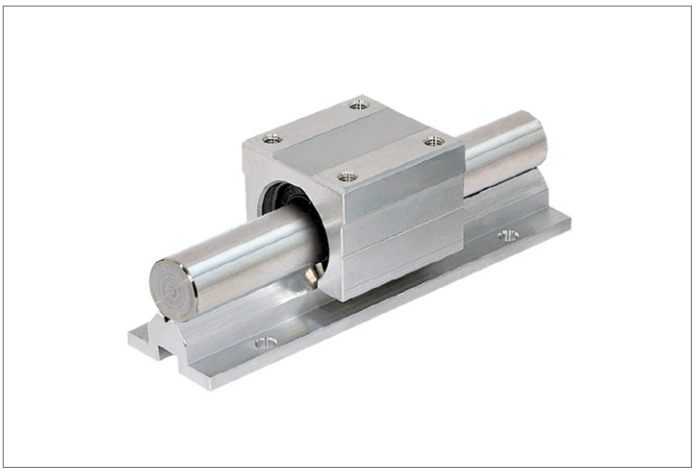
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

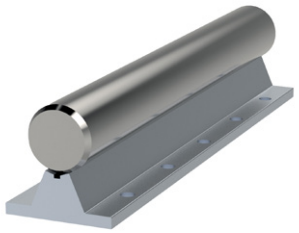
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.30-0400	30	9	M10x35	400	200	100	69	51	11	42	7	17	50
L1781.30-0600	30	9	M10x35	600	200	100	69	51	11	42	7	17	50
L1781.30-0800	30	9	M10x35	800	200	100	69	51	11	42	7	17	50
L1781.30-1000	30	9	M10x35	1000	200	100	69	51	11	42	7	17	50
L1781.30-1200	30	9	M10x35	1200	200	100	69	51	11	42	7	17	50
L1781.30-1400	30	9	M10x35	1400	200	100	69	51	11	42	7	17	50
L1781.30-1600	30	9	M10x35	1600	200	100	69	51	11	42	7	17	50
L1781.30-1800	30	9	M10x35	1800	200	100	69	51	11	42	7	17	50
L1781.30-2000	30	9	M10x35	2000	200	100	69	51	11	42	7	17	50
L1781.30-2200	30	9	M10x35	2200	200	100	69	51	11	42	7	17	50
L1781.30-2400	30	9	M10x35	2400	200	100	69	51	11	42	7	17	50
L1781.30-2600	30	9	M10x35	2600	200	100	69	51	11	42	7	17	50
L1781.30-2800	30	9	M10x35	2800	200	100	69	51	11	42	7	17	50
L1781.30-3000	30	9	M10x35	3000	200	100	69	51	11	42	7	17	50
L1781.30-3200	30	9	M10x35	3200	200	100	69	51	11	42	7	17	50
L1781.30-3400	30	9	M10x35	3400	200	100	69	51	11	42	7	17	50
L1781.30-3600	30	9	M10x35	3600	200	100	69	51	11	42	7	17	50
L1781.30-3800	30	9	M10x35	3800	200	100	69	51	11	42	7	17	50
L1781.30-4000	30	9	M10x35	4000	200	100	69	51	11	42	7	17	50
L1781.30-4200	30	9	M10x35	4200	200	100	69	51	11	42	7	17	50
L1781.30-4400	30	9	M10x35	4400	200	100	69	51	11	42	7	17	50
L1781.30-4600	30	9	M10x35	4600	200	100	69	51	11	42	7	17	50
L1781.30-4800	30	9	M10x35	4800	200	100	69	51	11	42	7	17	50
L1781.30-5000	30	9	M10x35	5000	200	100	69	51	11	42	7	17	50
L1781.30-5200	30	9	M10x35	5200	200	100	69	51	11	42	7	17	50
L1781.30-5400	30	9	M10x35	5400	200	100	69	51	11	42	7	17	50
L1781.30-5600	30	9	M10x35	5600	200	100	69	51	11	42	7	17	50
L1781.30-5800	30	9	M10x35	5800	200	100	69	51	11	42	7	17	50
L1781.30-6000	30	9	M10x35	6000	200	100	69	51	11	42	7	17	50

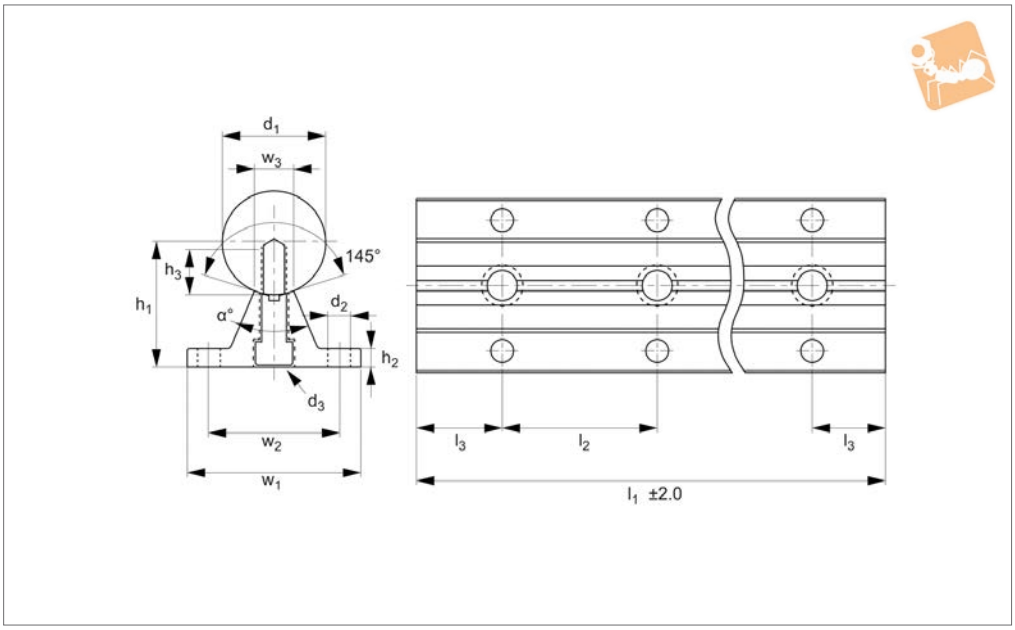


40Ø Shaft Support Rails

complete stainless and aluminium support



L1781.40



Material

Hardened and ground stainless steel shaft (440C), aluminium alloy support rail.
Surface hardness of shaft 60-65 HRC.

Technical Notes

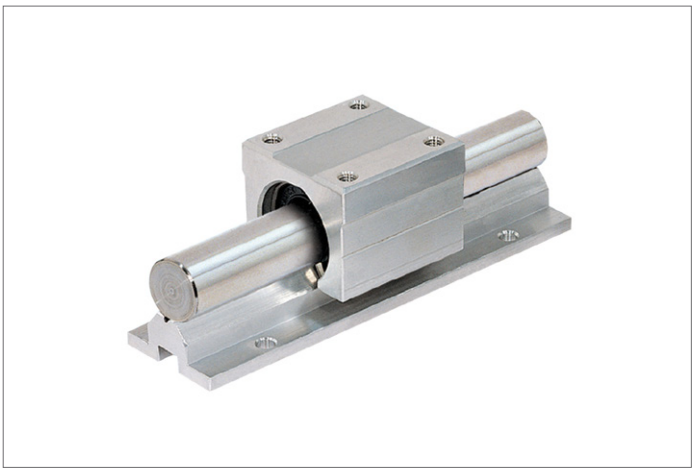
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

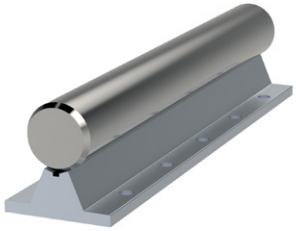
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.40-0600	40	9	M10x40	600	300	150	73	55	15	50	8	19	50
L1781.40-0900	40	9	M10x40	900	300	150	73	55	15	50	8	19	50
L1781.40-1200	40	9	M10x40	1200	300	150	73	55	15	50	8	19	50
L1781.40-1500	40	9	M10x40	1500	300	150	73	55	15	50	8	19	50
L1781.40-1800	40	9	M10x40	1800	300	150	73	55	15	50	8	19	50
L1781.40-2100	40	9	M10x40	2100	300	150	73	55	15	50	8	19	50
L1781.40-2400	40	9	M10x40	2400	300	150	73	55	15	50	8	19	50
L1781.40-2700	40	9	M10x40	2700	300	150	73	55	15	50	8	19	50
L1781.40-3000	40	9	M10x40	3000	300	150	73	55	15	50	8	19	50
L1781.40-3300	40	9	M10x40	3300	300	150	73	55	15	50	8	19	50
L1781.40-3600	40	9	M10x40	3600	300	150	73	55	15	50	8	19	50
L1781.40-3900	40	9	M10x40	3900	300	150	73	55	15	50	8	19	50
L1781.40-4200	40	9	M10x40	4200	300	150	73	55	15	50	8	19	50
L1781.40-4500	40	9	M10x40	4500	300	150	73	55	15	50	8	19	50
L1781.40-4800	40	9	M10x40	4800	300	150	73	55	15	50	8	19	50
L1781.40-5100	40	9	M10x40	5100	300	150	73	55	15	50	8	19	50
L1781.40-5400	40	9	M10x40	5400	300	150	73	55	15	50	8	19	50
L1781.40-5700	40	9	M10x40	5700	300	150	73	55	15	50	8	19	50
L1781.40-6000	40	9	M10x40	6000	300	150	73	55	15	50	8	19	50

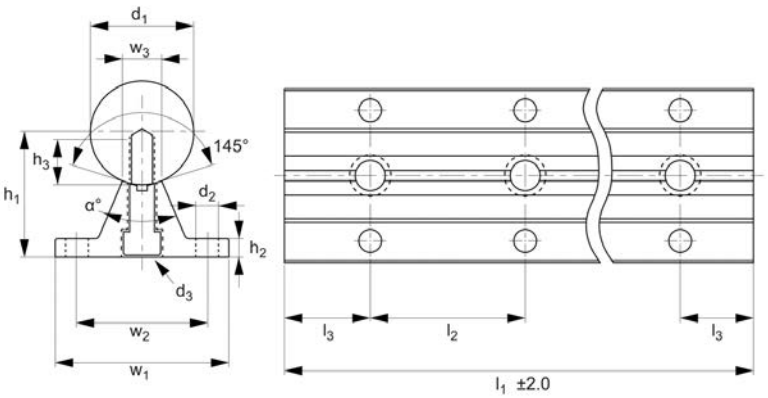


50Ø Shaft Support Rails

complete stainless and aluminium support



L1781.50



Material

Hardened and ground stainless steel shaft (440C), aluminium alloy support rail.
Surface hardness of shaft 60-65 HRC.

Technical Notes

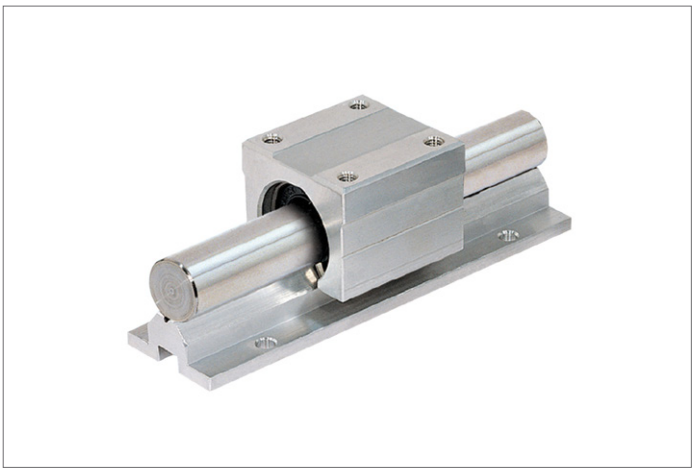
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

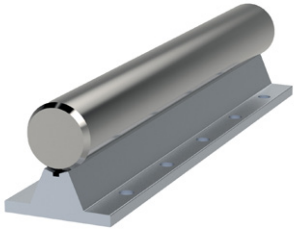
For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.50-0600	50	11	M12x45	600	300	150	84	63	19	60	9	21	46
L1781.50-0900	50	11	M12x45	900	300	150	84	63	19	60	9	21	46
L1781.50-1200	50	11	M12x45	1200	300	150	84	63	19	60	9	21	46
L1781.50-1500	50	11	M12x45	1500	300	150	84	63	19	60	9	21	46
L1781.50-1800	50	11	M12x45	1800	300	150	84	63	19	60	9	21	46
L1781.50-2100	50	11	M12x45	2100	300	150	84	63	19	60	9	21	46
L1781.50-2400	50	11	M12x45	2400	300	150	84	63	19	60	9	21	46
L1781.50-2700	50	11	M12x45	2700	300	150	84	63	19	60	9	21	46
L1781.50-3000	50	11	M12x45	3000	300	150	84	63	19	60	9	21	46
L1781.50-3300	50	11	M12x45	3300	300	150	84	63	19	60	9	21	46
L1781.50-3600	50	11	M12x45	3600	300	150	84	63	19	60	9	21	46
L1781.50-3900	50	11	M12x45	3900	300	150	84	63	19	60	9	21	46
L1781.50-4200	50	11	M12x45	4200	300	150	84	63	19	60	9	21	46
L1781.50-4500	50	11	M12x45	4500	300	150	84	63	19	60	9	21	46
L1781.50-4800	50	11	M12x45	4800	300	150	84	63	19	60	9	21	46
L1781.50-5100	50	11	M12x45	5100	300	150	84	63	19	60	9	21	46
L1781.50-5400	50	11	M12x45	5400	300	150	84	63	19	60	9	21	46
L1781.50-5700	50	11	M12x45	5700	300	150	84	63	19	60	9	21	46
L1781.50-6000	50	11	M12x45	6000	300	150	84	63	19	60	9	21	46

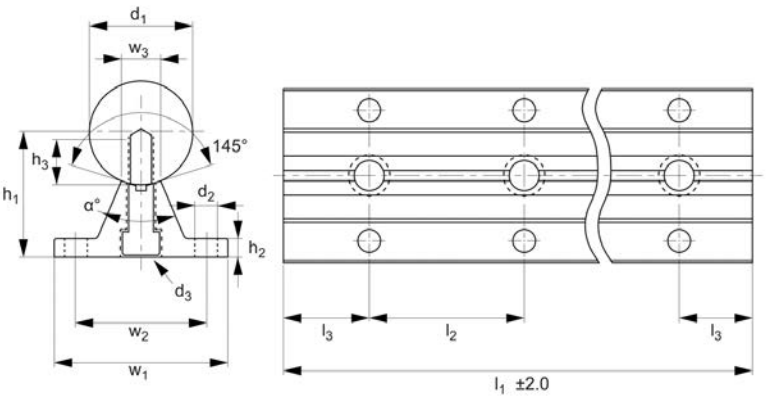


60Ø Shaft Support Rails

complete stainless and aluminium support



L1781.60



Material

Hardened and ground stainless steel shaft (440C), aluminium alloy support rail.
Surface hardness of shaft 60-65 HRC.

Technical Notes

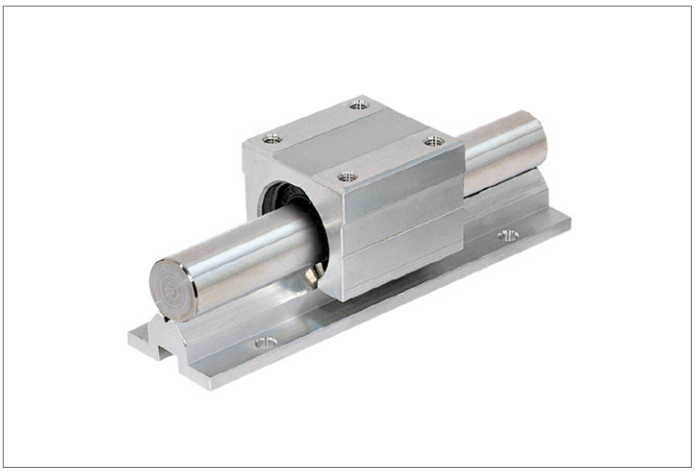
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.60-0600	60	11	M14x50	600	300	150	94	72	25	68	10	25	46
L1781.60-0900	60	11	M14x50	900	300	150	94	72	25	68	10	25	46
L1781.60-1200	60	11	M14x50	1200	300	150	94	72	25	68	10	25	46
L1781.60-1500	60	11	M14x50	1500	300	150	94	72	25	68	10	25	46
L1781.60-1800	60	11	M14x50	1800	300	150	94	72	25	68	10	25	46
L1781.60-2100	60	11	M14x50	2100	300	150	94	72	25	68	10	25	46
L1781.60-2400	60	11	M14x50	2400	300	150	94	72	25	68	10	25	46
L1781.60-2700	60	11	M14x50	2700	300	150	94	72	25	68	10	25	46
L1781.60-3000	60	11	M14x50	3000	300	150	94	72	25	68	10	25	46
L1781.60-3300	60	11	M14x50	3300	300	150	94	72	25	68	10	25	46
L1781.60-3600	60	11	M14x50	3600	300	150	94	72	25	68	10	25	46
L1781.60-3900	60	11	M14x50	3900	300	150	94	72	25	68	10	25	46
L1781.60-4200	60	11	M14x50	4200	300	150	94	72	25	68	10	25	46
L1781.60-4500	60	11	M14x50	4500	300	150	94	72	25	68	10	25	46
L1781.60-4800	60	11	M14x50	4800	300	150	94	72	25	68	10	25	46
L1781.60-5100	60	11	M14x50	5100	300	150	94	72	25	68	10	25	46
L1781.60-5400	60	11	M14x50	5400	300	150	94	72	25	68	10	25	46
L1781.60-5700	60	11	M14x50	5700	300	150	94	72	25	68	10	25	46
L1781.60-6000	60	11	M14x50	6000	300	150	94	72	25	68	10	25	46

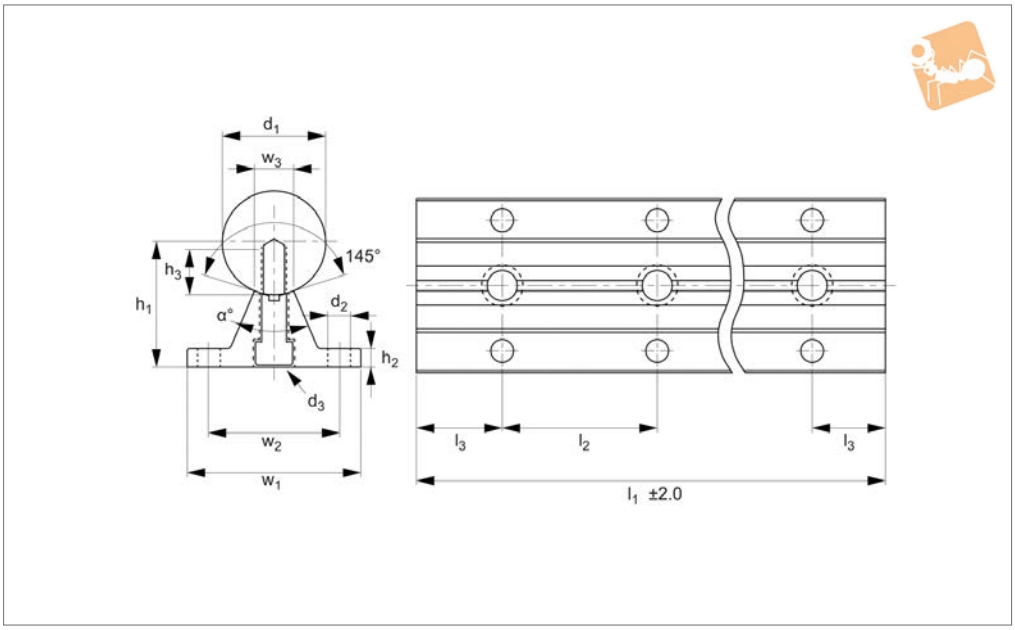


80Ø Shaft Support Rails

complete stainless and aluminium support



L1781.80



Material

Hardened and ground stainless steel shaft (440C), aluminium alloy support rail.
Surface hardness of shaft 60-65 HRC.

Technical Notes

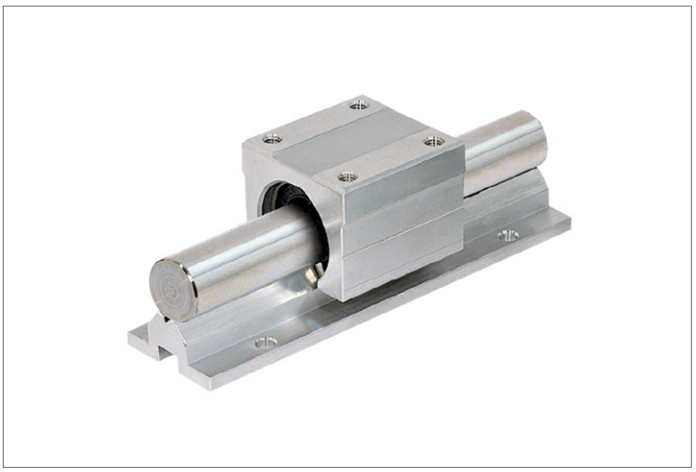
For open linear bushings, ensures a very rigid and stiff system.

The shaft is pre-mounted to the shaft support rail.
Standard lengths are shown which allow the distance to the first and last hole to be equal (ie $l_2/2$). Different holes pitches available on request.
Straightness: ±0.1mm/metre.

Tips

For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).

Order No.	d_1 tol. h6	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.02	h_2	h_3	α °
L1781.80-0600	80	13.5	M16x60	600	300	150	116	92	34	86	12	28	46
L1781.80-0900	80	13.5	M16x60	900	300	150	116	92	34	86	12	28	46
L1781.80-1200	80	13.5	M16x60	1200	300	150	116	92	34	86	12	28	46
L1781.80-1500	80	13.5	M16x60	1500	300	150	116	92	34	86	12	28	46
L1781.80-1800	80	13.5	M16x60	1800	300	150	116	92	34	86	12	28	46
L1781.80-2100	80	13.5	M16x60	2100	300	150	116	92	34	86	12	28	46
L1781.80-2400	80	13.5	M16x60	2400	300	150	116	92	34	86	12	28	46
L1781.80-2700	80	13.5	M16x60	2700	300	150	116	92	34	86	12	28	46
L1781.80-3000	80	13.5	M16x60	3000	300	150	116	92	34	86	12	28	46
L1781.80-3300	80	13.5	M16x60	3300	300	150	116	92	34	86	12	28	46
L1781.80-3600	80	13.5	M16x60	3600	300	150	116	92	34	86	12	28	46
L1781.80-3900	80	13.5	M16x60	3900	300	150	116	92	34	86	12	28	46
L1781.80-4200	80	13.5	M16x60	4200	300	150	116	92	34	86	12	28	46
L1781.80-4500	80	13.5	M16x60	4500	300	150	116	92	34	86	12	28	46
L1781.80-4800	80	13.5	M16x60	4800	300	150	116	92	34	86	12	28	46
L1781.80-5100	80	13.5	M16x60	5100	300	150	116	92	34	86	12	28	46
L1781.80-5400	80	13.5	M16x60	5400	300	150	116	92	34	86	12	28	46
L1781.80-5700	80	13.5	M16x60	5700	300	150	116	92	34	86	12	28	46
L1781.80-6000	80	13.5	M16x60	6000	300	150	116	92	34	86	12	28	46

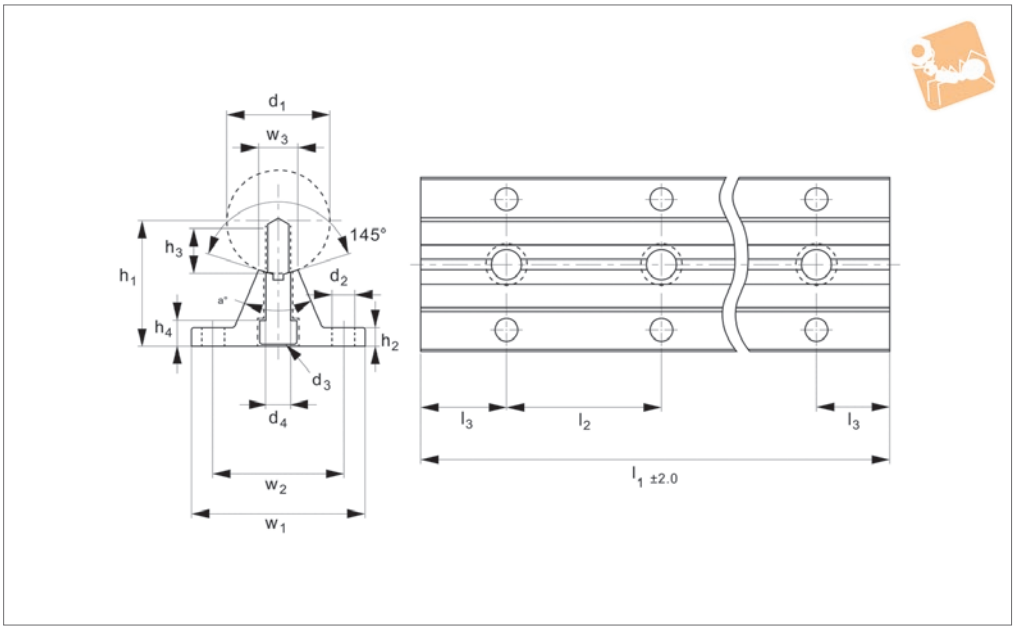


Shaft Support Rail

support rail



L1783

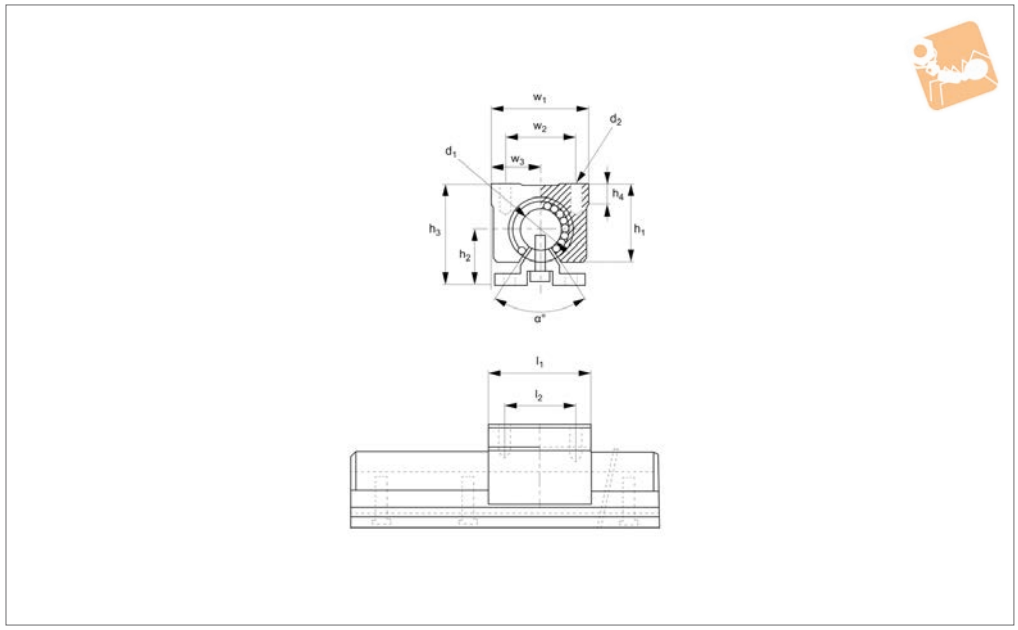


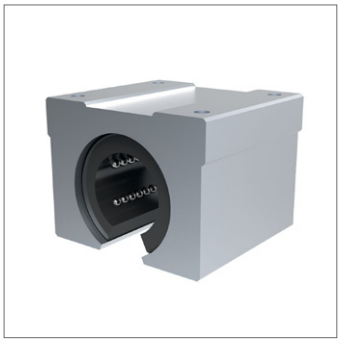
Material
Aluminium alloy support rail.

Technical Notes
For open linear bushings, ensures a very rigid and stiff system.
Standard lengths are shown which allow the distance to the first and last hole to be equal holes. For use with shaftsL1770 to L1774.

For linear carriages see part no. L1755 (flanged) or L1752 (unflanged).
Stainless steel carriages also available, see part no. L1756 (flanged) or L1753 (unflanged).

Order No.	a °	d_1	d_2	d_3	l_1	l_2	l_3	w_1	w_2	w_3	h_1 ±0.15	h_2	h_3	Weight
L1783.12-600-T1	50	12	4.5	8.0	600	75	37.5	40	29	5.8	22	5	5.0	0.45
L1783.16-600-T1	50	16	5.5	9.5	600	100	50	45	33	7.0	26	5	6.0	0.55
L1783.20-600-T1	50	20	6.6	11.0	600	100	50	52	37	8.3	32	6	6.5	0.80
L1783.25-600-T1	50	25	6.6	14.0	600	120	60	57	42	10.8	36	6	8.5	0.91
L1783.30-600-T1	50	30	9.0	17.0	600	150	75	69	51	11.0	42	7	10.5	1.15
L1783.40-600-T1	50	40	9.0	17.0	600	200	100	73	55	15.0	50	8	10.5	1.58
L1783.50-600-T1	46	50	11.0	19.0	600	200	100	84	63	19.0	60	9	12.5	2.13
L1783.12-600-T2	50	12	4.5	8.0	600	120	60	40	29	5.8	22	5	5.0	0.45
L1783.16-600-T2	50	16	5.5	9.5	600	150	75	45	33	7.0	26	5	6.0	0.55
L1783.20-600-T2	50	20	6.6	11.0	600	150	75	52	37	8.3	32	6	6.5	0.80
L1783.25-600-T2	50	25	6.6	14.0	600	200	100	57	42	10.8	36	6	8.5	0.91
L1783.30-600-T2	50	30	9.0	17.0	600	200	100	69	51	11.0	42	7	10.5	1.15
L1783.40-600-T2	50	40	9.0	17.0	600	300	150	73	55	15.0	50	8	10.5	1.58
L1783.50-600-T2	46	50	11.0	19.0	600	300	150	84	63	19.0	60	9	12.5	2.13





L1752

Material
Aluminium body, with L1707 (steel shell) linear bearing installed. Bearing has a resin retainer (POM).
Supplied with nitrile rubber (NBR) end seals -UU as standard.

Technical Notes
For use with hardened shafts only - see part no.s L1770 - L1772.
Temperature range: -20°C to +80°C.

Tips
Use with shaft support rail L1780.
Particularly effective for high loads and long stroke applications.

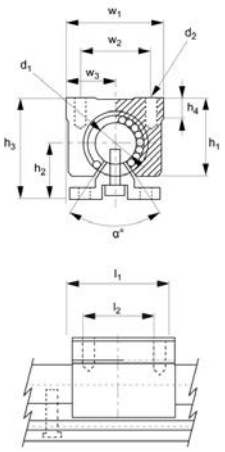
Important Notes
If using the carriage inverted, ie hanging loads, then the load rating is reduced by 50%.

Order No.	d_1 tol. h6	l_1	d_2	h_1	h_2	h_3 ±0.05	h_4	l_2 ±0.2	w_1	w_2 ±0.2	w_3	α °	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1752.016	16	45	M 5x12	33	26	46	9	30	45	32	22.5	80°	770	1170	150
L1752.020	20	50	M 6x12	39	32	55	11	35	48	35	24.0	60°	860	1370	200
L1752.025	25	65	M 6x12	47	36	62	14	40	60	40	30.0	50°	980	1560	450
L1752.030	30	70	M 8x18	56	42	75	15	50	70	50	35.0	50°	1560	2740	630
L1752.040	40	90	M10x20	72	50	92	20	65	90	65	45.0	50°	2150	4010	1330
L1752.050	50	110	M10x20	91	60	113	25	80	120	94	60.0	50°	3820	7930	3000

Stainless Unflanged Carriages
open



L1753



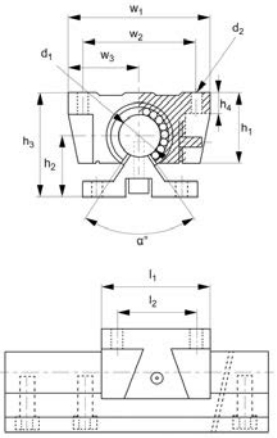
Material
Aluminium carriage housing with L1710 stainless steel (440C) linear bushing installed. Bushing has a resin -RS (POM) or stainless steel -SS (316) retainer and nitrile rubber (NBR) end seals -UU. Stainless steel balls 440C.

Technical Notes
For use with shaft support rails (see part number L1781 with hardened corrosive resistent shaft).
Temperature range: -20°C to +120°C.

Tips
Particularly effective for high loads and long stroke applications.

Important Notes
If using the carriage inverted, ie hanging loads, then the load rating is reduced by 50%.

Order No.	d_1 tol. H6	l_1	d_2	h_1	h_2	h_3 ±0.05	h_4	l_2 ±0.2	w_1	w_2 ±0.2	w_3	α °	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1753.016-RS	16	45	M5x12	33	26	46	9	30	45	32	22.5	80°	770	1170	150
L1753.020-RS	20	50	M6x12	39	32	55	11	35	48	35	24.0	60°	860	1370	200
L1753.025-RS	25	65	M6x12	47	36	63	14	40	60	40	30.0	50°	980	1560	450
L1753.016-SS	16	45	M5x12	33	26	46	9	30	45	32	22.5	80°	770	1170	150
L1753.020-SS	20	50	M6x12	39	32	55	11	35	48	35	24.0	60°	860	1370	200
L1753.025-SS	25	65	M6x12	47	36	63	14	40	60	40	30.0	50°	980	1560	450





L1755

Material
Aluminium body, with L1707 (steel shell) linear bearing installed. Bearing has a resin retainer (POM).
Supplied with nitrile rubber (NBR) end seals -UU as standard.

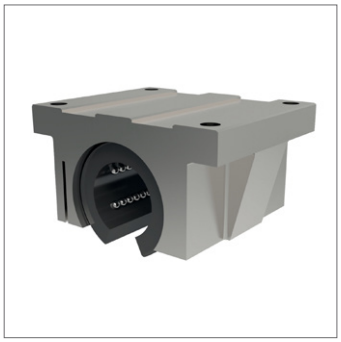
Technical Notes
For use with shaft support rails (see part number L1781 with hardened corrosive resistant shaft).
Temperature range: -20°C to +80°C.
Steel ball retainers can be supplied for higher temperature applications (up to +120°C - with no end seals. Please advise at time of ordering if this is required.

Tips
Particularly effective for high loads and long stroke applications.

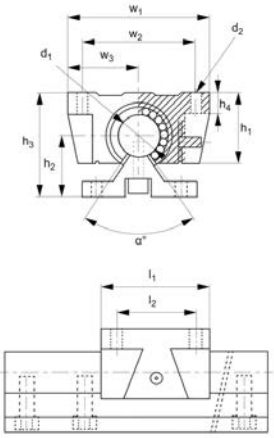
Important Notes
If using the carriage inverted, ie hanging loads, then the load rating is reduced by 50%.

Order No.	d_1 tol. H6	l_1	d_2	h_1	h_2	h_3 ±0.05	h_4	l_2 ±0.2	w_1	w_2 ±0.2	w_3	α °	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1755.016	16	42	M5	26	26	44	8	30	62	50	31.0	80°	392	490	180
L1755.020	20	51	M6	31	32	53	10	37	68	54	34.0	60°	784	1176	300
L1755.025	25	65	M8	41	36	64	12	50	82	65	41.0	50°	1568	2352	600
L1755.030	30	75	M8	48	42	76	12	60	91	75	45.5	50°	1764	2940	900

Stainless Flanged Carriages
open



L1756



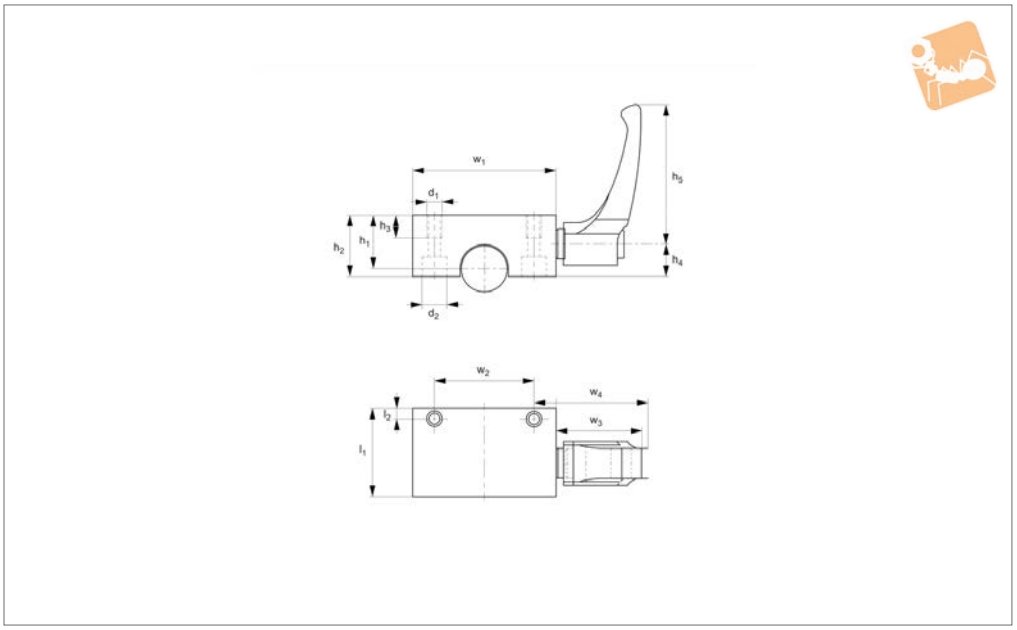
Material
Aluminium carriage housing with L1710 stainless steel (440C) linear bushing installed.
Bushing has a resin -RS (POM) retainer and nitrile rubber (NBR) end seals -UU.
Stainless steel balls 440C.

Technical Notes
For use with shaft support rails (see part number L1781 with hardened corrosive resistant shaft).
Temperature range: -20°C to +120°C.

Tips
Particularly effective for high loads and long stroke applications.

Important Notes
If using the carriage inverted, ie hanging loads, then the load rating is reduced by 50%.

Order No.	d_1 tol. H6	l_1	d_2	h_1	h_2	h_3 ±0.05	h_4	l_2 ±0.2	w_1	w_2 ±0.2	w_3	α °	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1756.016-RS	16	42	M5	26	26	44	8	30	62	50	31	80°	392	490	180
L1756.020-RS	20	51	M6	31	32	53	10	37	68	54	34	60°	784	1176	300
L1756.025-RS	25	65	M8	41	36	64	12	50	82	65	41	50°	1568	2352	600





L1784

Material
Aluminium body, with hardened steel contact faces.

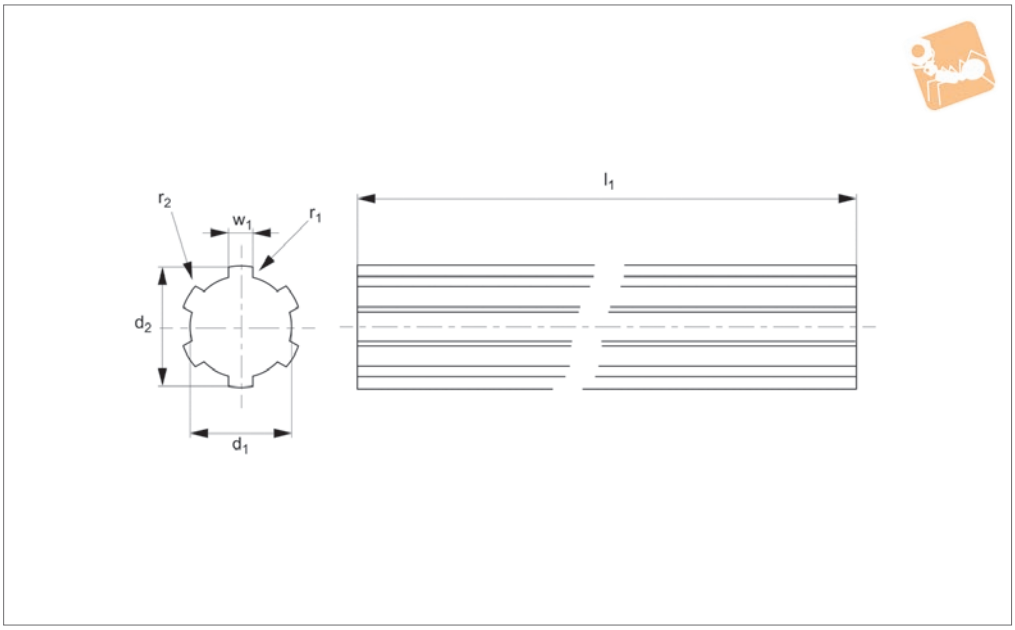
Technical Notes
Activating the clamping lever presses the contact faces into contact with the shaft bar to clamp it in place.
For clamping from above use d_1, for clamping from below use d_2.

Tips
Use with shaft support rail L1780.
Pneumatic shaft clamps also available.

Order No.	Shaft dia.	h_1	l_1	w_1	w_2	w_3	w_4	h_2	h_3	h_4	h_5	l_2	d_1	d_2 for	Torque to Nm	Holding force N
L1784.012	12	18	32	43	32	30.5	33.5	24	10	16.0	44	4.5	M 5	M 4	5	1200
L1784.016	16	22	38	53	40	30.5	33.5	29	12	19.0	44	5.5	M 6	M 5	5	1200
L1784.020	20	25	44	60	45	38.5	41.5	32	14	21.5	63	6.5	M 8	M 6	7	1200
L1784.025	25	30	52	78	60	38.5	41.5	38	16	25.0	63	9.0	M10	M 8	7	1200
L1784.030	30	35	58	87	68	46.5	50.5	43	16	28.5	78	10.0	M10	M 8	12	2000
L1784.040	40	45	68	108	86	56.5	61.5	53	20	34.5	95	11.0	M12	M10	17	2000
L1784.050	50	50	76	132	108	56.5	61.5	58	22	40.5	95	12.0	M16	M14	17	2000



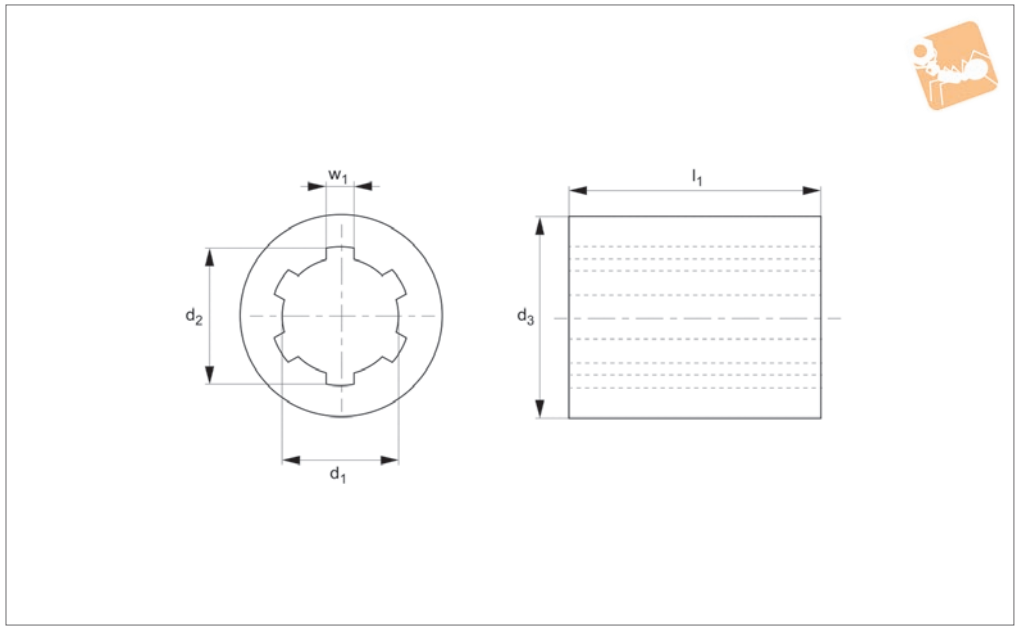
L1790

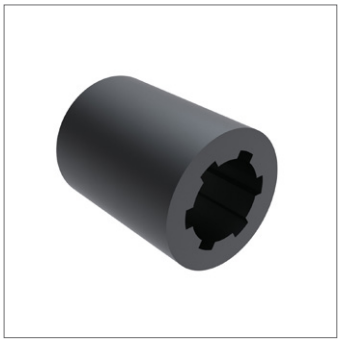


Material
Steel (C40).

Technical Notes
For use with splined bushings part no. L1791.
Torque figures stated are approximate, and dependent on the application. In important cases please consult our Technical department.

Order No.	No. of splines	d_1 +0.00|-0.08	d_2 +0.07|-0.27	l_1	r_1 45°	r_2	w_1 +0.00|-0.08	Section mm²	Approx. torque Nm	Weight g
L1790.011-1.0	6	11	14	1000	0.2	0.2	3	121.9	38	0.9
L1790.013-1.0	6	13	16	1000	0.2	0.2	3.5	164.1	45	1.3
L1790.016-1.0	6	16	20	1000	0.2	0.2	5	243.4	101	1.9
L1790.018-1.0	6	18	22	1000	0.2	0.2	5	312.4	117	2.5
L1790.021-1.0	6	21	25	1000	0.2	0.2	5	399.8	130	3.1
L1790.023-1.0	6	23	28	1000	0.3	0.3	6	505.2	225	3.9
L1790.026-1.0	6	26	32	1000	0.3	0.3	6	638.6	310	5.0
L1790.032-1.0	8	32	38	1000	0.3	0.3	8	947.8	598	7.4
L1790.036-1.0	8	36	42	1000	0.3	0.3	7	1185.3	649	9.3
L1790.042-1.0	8	42	48	1000	0.3	0.3	8	1576.7	732	12.4
L1790.046-1.0	8	46	54	1000	0.5	0.3	9	1949.0	1095	15.3





L1791

Material
Steel (9 SMnPb 36).

Technical Notes
For use with splined shafts no. L1790.

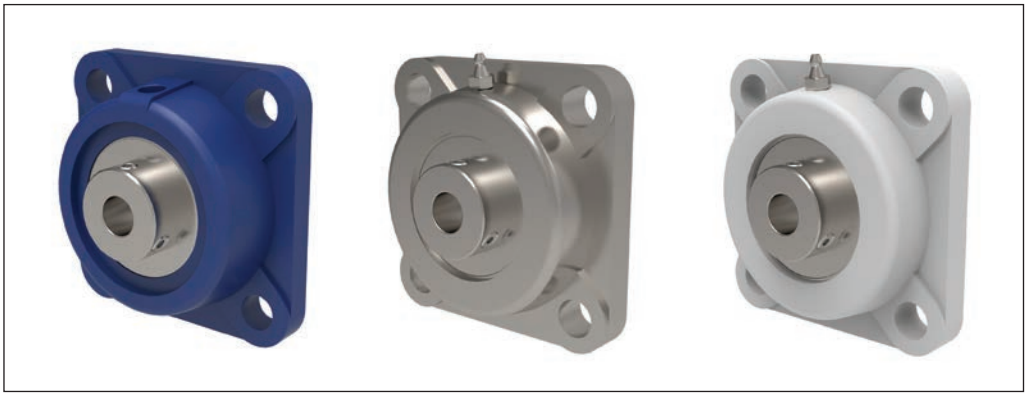
Order No.	No. of splines	d_1	d_2	d_3 tol. h8	l_1	w_1	Weight kg
L1791.011-14	6	11	14	18.75	30	3	0.03
L1791.013-16	6	13	16	21.75	40	3.5	0.06
L1791.013-25	6	13	16	24.75	40	3.5	0.09
L1791.016-20	6	16	20	27.75	40	4	0.11
L1791.018-22	6	18	22	31.75	40	5	0.15
L1791.021-25	6	21	25	35.75	45	5	0.21
L1791.023-28	6	23	28	39.70	45	6	0.25
L1791.026-32	6	26	32	44.70	45	6	0.32
L1791.032-38	8	32	38	49.70	50	6	0.38
L1791.036-42	8	36	42	59.70	70	7	0.89
L1791.042-48	8	42	48	69.70	80	8	1.38
L1791.046-54	8	46	54	81.70	90	9	2.33

Self-Aligning Bearing Units

Overview

Bearing Supports from Automotion Components

Housing material options

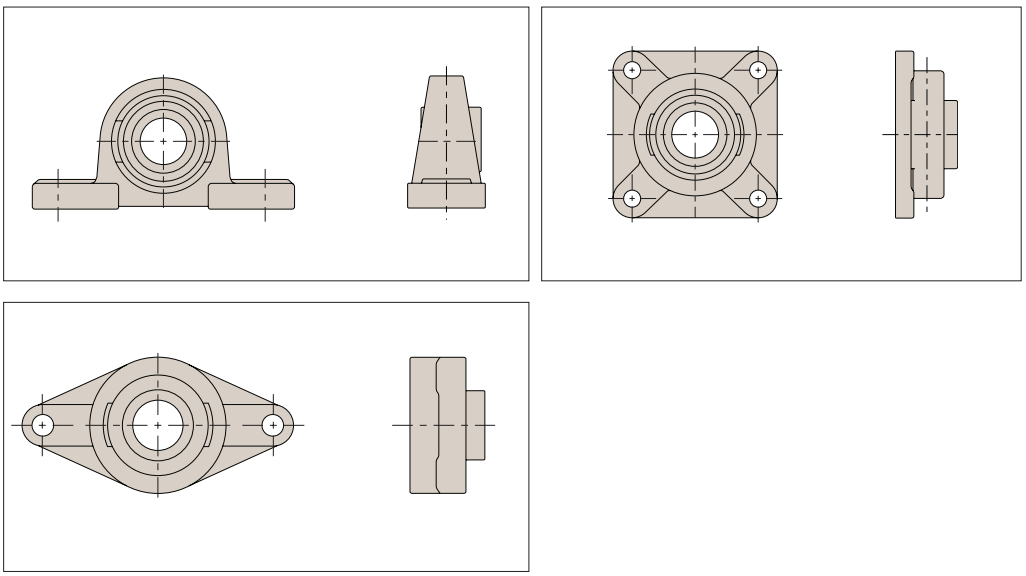


Cast iron housing
Standard version, passivated and painted Ø12-120mm.

Stainless steel housing
Stainless AISI 304, Ø12-60mm.

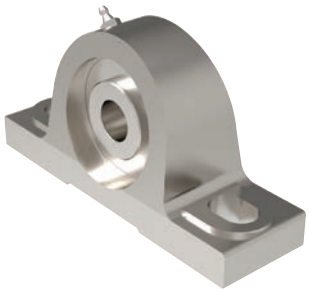
Thermoplastic housing
Food grade applications, smooth PBT resin material, Ø20-40mm.

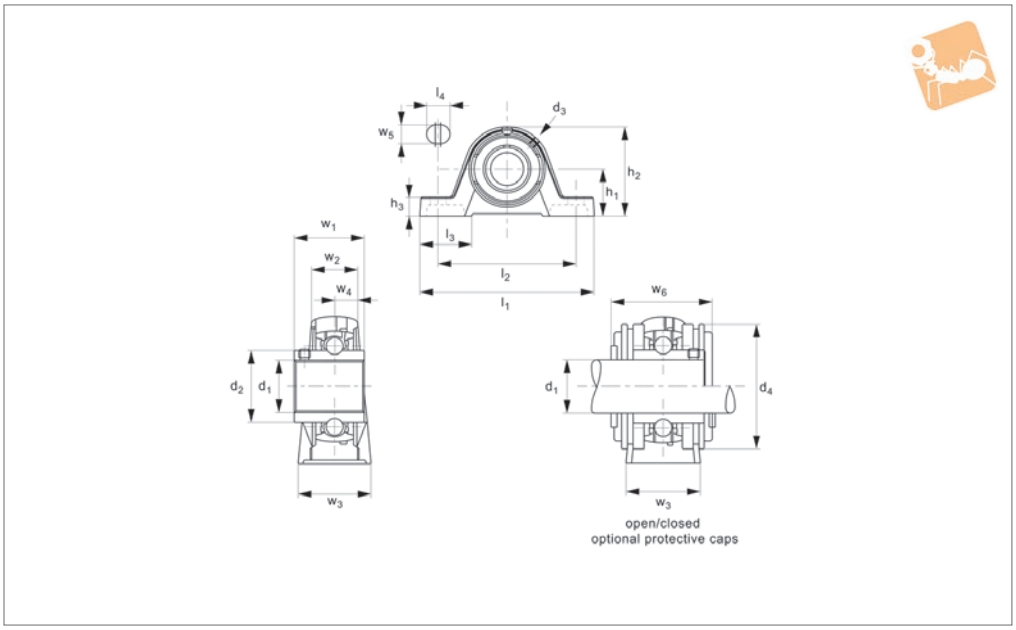
Pillow Bearings

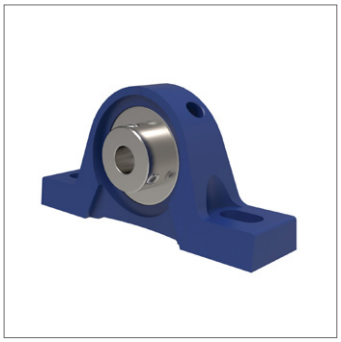


Use with Automotion linear shafts L1770-L1774

Options

Pillow block	Four point flange	Two point flange
		





L1860

Material
Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010). Steel, self-aligning bearing units with double seals, lubricated for life.

Technical Notes
Self-aligning bearings, relubricatable.
Temperature range: -20°C to +120°C.

The max. axial load is 0.5 x radial static load.
The housings are rated to take the maximum bearing loads.
For optional shaft end caps add suffixes:
-CO for two open protective caps (with seals) for through shafts.
-CC for one open and one closed protective caps for shaft ends.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).

Order No.	d_1 for h6	l_1	h_1 ±0.2	l_2 ±1.0	d_2	d_3	d_4	h_2	h_3	Weight kg
L1860.012	12	130	33.3	97	29.0	R1/8“	54	64.0	14.5	0.5
L1860.015	15	130	33.3	97	29.0	R1/8“	54	64.0	14.5	0.5
L1860.017	17	130	33.3	97	29.0	R1/8“	54	64.0	14.5	0.5
L1860.020	20	130	33.3	97	29.0	R1/8“	54	64.0	14.5	0.5
L1860.025	25	130	36.5	103	34.0	R1/8“	60	70.0	14.5	0.7
L1860.030	30	158	42.9	118	40.3	R1/8“	70	82.0	17.0	1.1
L1860.035	35	163	47.6	126	48.0	R1/8“	80	93.0	19.0	1.5
L1860.040	40	179	49.2	138	53.0	R1/8“	88	99.0	19.0	1.8
L1860.045	45	192	54.0	150	57.2	R1/8“	95	107.0	21.5	2.2
L1860.050	50	200	57.2	158	61.8	R1/8“	100	115.0	21.5	2.7
L1860.055	55	222	63.5	176	69.0	R1/8“	110	124.5	22.5	3.4
L1860.060	60	240	69.9	190	74.9	R1/8“	120	140.0	25.0	4.8
L1860.065	65	260	79.4	203	82.0	R1/8“	132	140.0	27.5	6.1
L1860.070	70	260	79.4	203	86.5	R1/8“	-	156.0	27.5	6.1
L1860.075	75	265	82.5	210	91.5	R1/8“	-	156.0	27.5	6.9
L1860.080	80	290	89.0	232	98.0	R1/8“	-	175.0	30.0	9.0

Order No.	l_3	l_4	w_1	w_2	w_3	w_4	w_5	w_6	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1860.012	40.0	19	31.0	19	32	12.7	11	44.6	12.80	6.65	6500
L1860.015	40.0	19	31.0	19	32	12.7	11	44.6	12.80	6.65	6500
L1860.017	40.0	19	31.0	19	32	12.7	11	44.6	12.80	6.65	6500
L1860.020	40.0	19	31.0	19	32	12.7	11	44.6	12.80	6.65	6500
L1860.025	39.0	19	34.0	21	36	14.3	11	47.8	14.00	7.88	6500
L1860.030	47.0	22	38.1	25	40	15.9	14	52.8	19.50	11.20	4500
L1860.035	49.0	21	42.9	27	45	17.5	14	57.4	25.70	15.20	4500
L1860.040	53.0	26	49.2	30	48	19.0	14	66.8	26.90	18.20	3500
L1860.045	54.5	29	49.2	32	48	19.0	14	67.8	31.85	20.80	3500

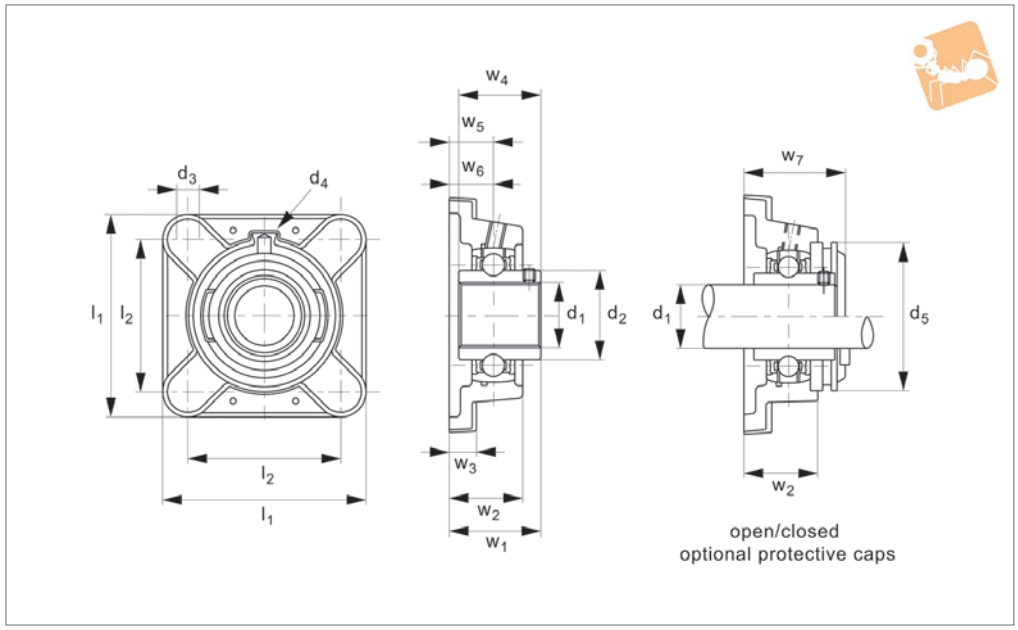


Pillow Block Bearing Units

cast iron



Order No.	l_3	l_4	w_1	w_2	w_3	w_4	w_5	w_6	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1860.050	61.0	23	51.6	34	54	19.0	18	74.6	35.10	23.20	3000
L1860.055	68.0	30	55.6	35	60	22.2	18	75.2	43.55	29.20	3000
L1860.060	71.0	28	65.1	42	60	25.4	18	87.8	52.50	32.80	2500
L1860.065	77.0	28	65.1	44	65	25.4	22	88.8	57.20	40.00	2500
L1860.070	77.0	28	74.6	44	65	30.2	22	-	62.00	45.00	2500
L1860.075	78.0	30	77.8	48	66	33.3	22	-	66.00	49.50	2500
L1860.080	90.0	34	82.6	55	78	33.3	26	-	72.50	54.20	2500





L1862

Material
Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010). Steel, self-aligning bearing units with double seals, lubricated for life.

Technical Notes
Self-aligning bearings, relubricatable.
Temperature range: -20°C to +120°C.
The max. axial load is 0.5 x radial static load.
The housings are rated to take the maximum bearing loads.
For optional shaft end caps add suffixes:
-CO for one open protective cap (with seal) for through shafts
-CC for closed protective cap for shaft ends.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).

Important Notes
For precise positioning of the flanged units they are provided with a rear centring bore and dowel pin location - please see technical pages for these dimensions.

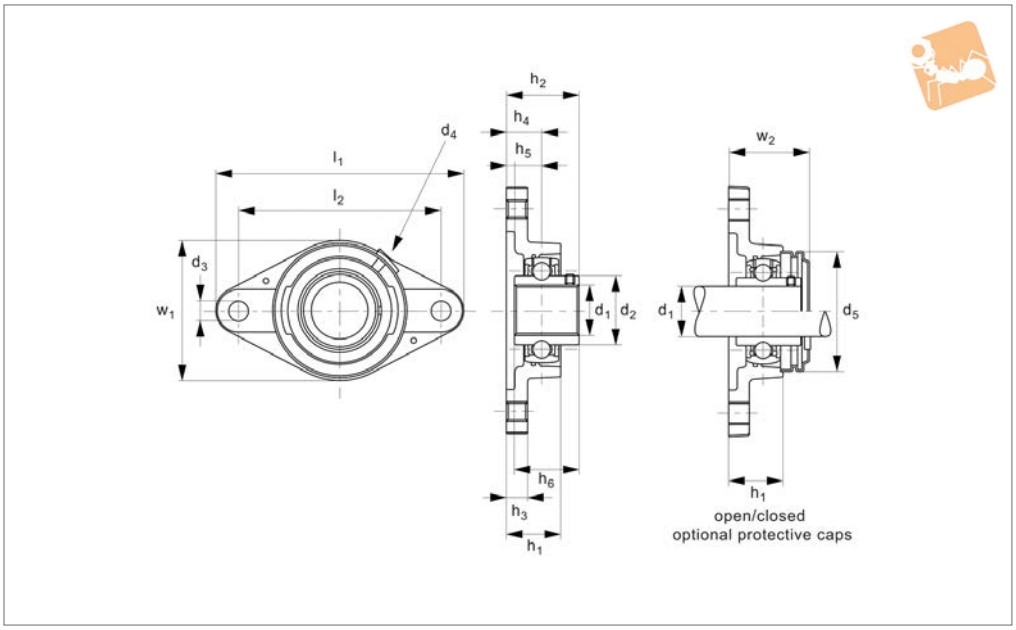
Order No.	d_1 for h6	l_1	l_2 ±0.7	d_2	d_3	d_4	d_5	w_1	w_2	Weight kg
L1862.012	12	86	63.5	29.0	11.5	R1/8“	54	37.3	29.5	0.7
L1862.015	15	86	63.5	29.0	11.5	R1/8“	54	37.3	29.5	0.7
L1862.017	17	86	63.5	29.0	11.5	R1/8“	54	37.3	29.5	0.5
L1862.020	20	86	63.5	29.0	11.5	R1/8“	54	37.3	29.5	0.7
L1862.025	25	95	70.0	34.0	11.5	R1/8“	60	38.7	30.0	0.8
L1862.030	30	108	82.5	40.3	11.5	R1/8“	70	42.2	33.5	1.2
L1862.035	35	118	92.0	48.0	14.0	R1/8“	80	46.4	36.0	1.6
L1862.040	40	130	101.5	53.0	14.0	R1/8“	88	54.2	39.5	2.1
L1862.045	45	137	105.0	57.2	14.0	R1/8“	95	54.2	40.0	2.2
L1862.050	50	143	111.0	61.8	18.0	R1/8“	100	60.6	44.0	2.6
L1862.055	55	162	130.0	69.0	18.0	R1/8“	110	64.4	48.5	3.7
L1862.060	60	175	143.0	74.9	18.0	R1/8“	120	73.7	53.5	4.9
L1862.065	65	188	150.0	82.0	18.0	R1/8“	132	77.7	56.0	6.0
L1862.070	70	188	150.0	86.5	18.0	R1/8“	-	82.4	56.0	6.2
L1862.075	75	197	153.0	91.5	23.0	R1/8“	-	85.8	59.0	6.3
L1862.080	80	197	153.0	98.0	23.0	R1/8“	-	90.6	61.0	7.1
L1862.090	90	235	187.0	111.0	23.0	R1/8“	-	80.1	45.0	10.4

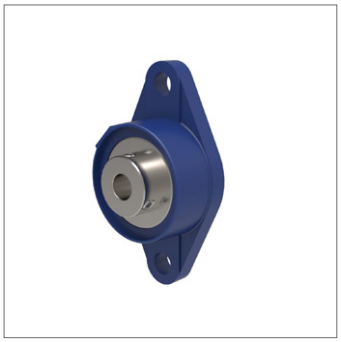
Order No.	w_3	w_4	w_5 ±0.5	w_6	w_7	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1862.012	10.0	31.0	19.0	12.7	42.8	12.80	6.65	6500
L1862.015	10.0	31.0	19.0	12.7	42.8	12.80	6.65	6500
L1862.017	10.0	31.0	19.0	12.7	42.8	12.80	6.65	6500
L1862.020	10.0	31.0	19.0	12.7	42.8	12.80	6.65	6500
L1862.025	11.0	32.0	19.0	14.3	42.9	14.00	7.88	6500
L1862.030	12.0	38.1	20.0	15.9	46.9	19.50	11.20	4500



Square Flanged Bearing Units
cast iron

Order No.	w_3	w_4	w_5 ±0.5	w_6	w_7	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1862.035	12.5	42.9	21.0	17.5	50.2	25.70	15.20	4500
L1862.040	13.0	49.2	24.0	19.0	57.9	29.60	18.20	3500
L1862.045	13.0	49.2	24.0	19.0	58.4	31.85	20.80	3500
L1862.050	13.0	51.6	28.0	19.0	65.8	35.10	23.20	3000
L1862.055	15.0	55.6	31.0	22.2	69.1	43.55	29.20	3000
L1862.060	16.0	65.1	34.0	25.4	78.4	52.50	32.80	2500
L1862.065	18.0	95.1	38.0	25.4	77.4	57.20	40.00	2500
L1862.070	18.0	74.6	38.0	30.2	-	62.00	45.00	2500
L1862.075	20.0	77.8	41.3	33.3	-	66.00	49.50	2500
L1862.080	20.0	82.6	41.3	33.3	-	72.50	54.20	2500
L1862.090	22.0	96.0	23.8	39.7	-	96.00	71.50	2500





L1864

Material
Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010). Steel, self-aligning bearing units with double seals, lubricated for life.

Technical Notes
Self-aligning bearings, relubricatable.
Temperature range: -20°C to +120°C.
The max. axial load is 0.5 x radial static load.
The housings are rated to take the maximum bearing loads.
For optional shaft end caps add suffixes:
-CO for one open protective cap (with seal) for through shafts
-CC for closed protective cap for shaft ends.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).

Important Notes
For precise positioning of the flanged units they are provided with a rear centring bore and dowel pin location - please see technical pages fro these dimensions.

Order No.	d_1 for h6	l_1 ±0.7	h_1	l_2	d_2	d_3	d_4	d_5	h_2	h_3	Weight kg
L1864.012	12	112	30.3	90.0	29.0	11.5	R1/8“	54	37.3	10.0	0.5
L1864.015	15	112	30.3	90.0	29.0	11.5	R1/8“	54	37.3	10.0	0.5
L1864.017	17	112	30.3	90.0	29.0	11.5	R1/8“	54	37.3	10.0	0.5
L1864.020	20	112	30.3	90.0	29.0	11.5	R1/8“	54	37.3	10.0	0.5
L1864.025	25	124	29.3	99.0	34.0	11.5	R1/8“	60	38.7	11.0	0.6
L1864.030	30	142	32.1	116.5	40.3	11.5	R1/8“	70	42.2	12.0	0.8
L1864.035	35	155	33.7	130.0	48.0	14.0	R1/8“	80	46.4	12.5	1.1
L1864.040	40	172	37.5	143.5	53.0	14.0	R1/8“	88	54.2	13.0	1.6
L1864.045	45	180	37.5	148.5	57.2	14.0	R1/8“	95	54.2	13.0	1.8
L1864.050	50	190	41.6	157.0	61.8	18.0	R1/8“	100	60.6	13.0	2.1
L1864.055	55	222	45.8	184.0	69.0	18.0	R1/8“	110	64.4	15.0	3.4
L1864.060	60	238	50.4	202.0	74.9	18.0	R1/8“	120	73.7	16.0	3.7
L1864.065	65	258	57.0	216.0	82.0	21.0	R1/8“	132	77.7	18.0	4.0
L1864.070	70	258	57.0	216.0	86.5	21.0	R1/8“	-	82.4	18.0	5.4
L1864.075	75	258	57.0	216.0	91.5	21.0	R1/8“	-	82.5	18.0	5.2

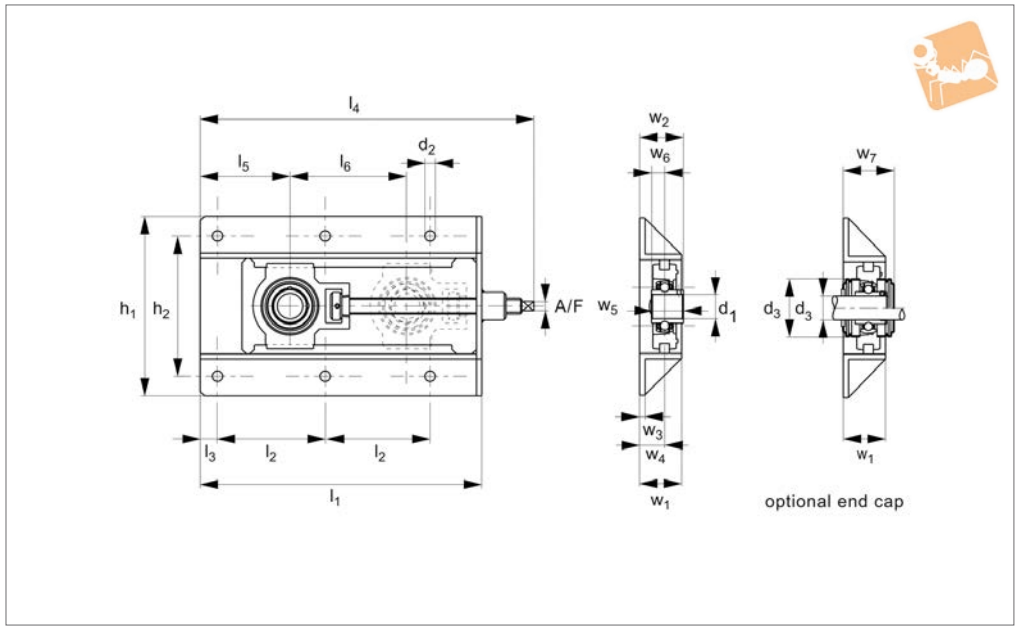
Order No.	h_4	h_5 ±0.5	h_6	w_1	w_2	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1864.012	19	12.7	31.0	61	41.8	12.80	6.65	6500
L1864.015	19	12.7	31.0	61	41.8	12.80	6.65	6500
L1864.017	19	12.7	31.0	61	41.8	12.80	6.65	6500
L1864.020	19	12.7	31.0	61	41.8	12.80	6.65	6500
L1864.025	19	14.3	34.0	70	43.9	14.00	7.88	6500
L1864.030	20	15.9	38.1	80	46.9	19.50	11.20	4500
L1864.035	21	17.5	42.9	92	50.2	25.70	15.20	4500
L1864.040	24	19.0	49.2	105	57.9	29.60	18.20	3500

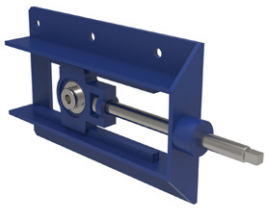


Oval Flanged Bearing Unit

cast iron

Order No.	h_4	h_5 ±0.5	h_6	w_1	w_2	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1864.045	24	19.0	49.2	111	58.4	31.85	20.80	3500
L1864.050	28	19.0	51.6	116	65.8	35.10	23.20	3000
L1864.055	31	22.2	55.6	134	69.1	43.55	29.20	3000
L1864.060	34	25.4	65.1	138	82.4	52.50	32.80	2500
L1864.065	38	25.4	65.1	160	82.9	57.20	40.00	2500
L1864.070	38	30.2	74.6	160	-	62.00	45.00	2500
L1864.075	38	33.3	77.8	160	-	66.00	49.50	2500





L1865

Material
Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010). Steel stretcher frame.

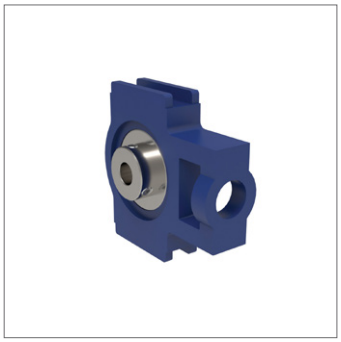
Technical Notes
Shaft retention with set screw.

Used with h6 tolerance shafts (see our part no.s L1770-L1776.
For optional shaft end caps add suffixes:
-CO for two open protective caps (with seala) for through shafts.
-CC for one open and one closed protective caps for shaft ends.
Stretcher frame allows easy access and adjustment.

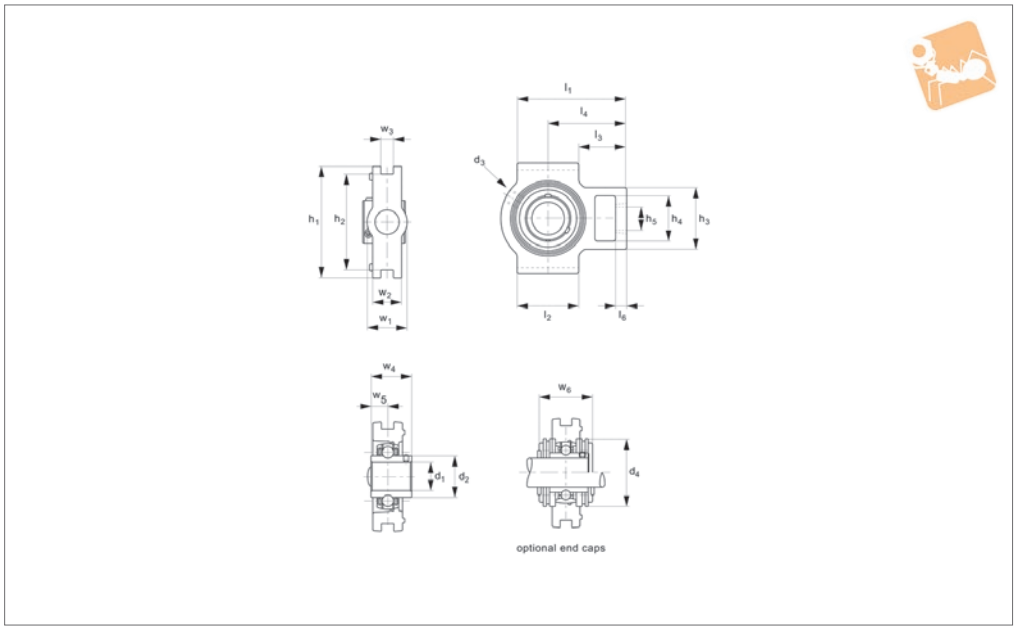
Order No.	d_1 for h6	l_1	h_1	l_2	d_2	d_3	h_2	l_3	l_4	l_5	Weight kg
L1865.012	12	317	199	117	12	54	154	19	367	83	5.2
L1865.015	15	317	199	117	12	54	154	19	367	83	5.2
L1865.017	17	317	199	117	12	54	154	19	367	83	5.2
L1865.020	20	317	199	117	12	54	154	19	367	83	5.2
L1865.025	25	317	199	117	12	60	154	19	368	83	5.2
L1865.030	30	337	212	127	12	70	166	19	396	95	6.2
L1865.035	35	429	212	173	12	80	166	19	490	99	8.4
L1865.040	40	520	233	219	15	88	192	22	591	108	11.7
L1865.045	45	520	233	219	15	95	192	22	590	108	11.8
L1865.050	50	520	233	219	15	100	192	22	593	108	12.0
L1865.055	55	542	301	230	15	110	240	22	631	114	18.4
L1865.060	60	568	301	243	15	120	240	22	651	127	20.2
L1865.065	65	606	322	260	15	132	260	22	699	144	25.3

Order No.	l_6	w_1	w_2	w_3	w_4	w_5	w_6	w_7	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.	A/F
L1865.012	150	50	47.3	6	29	31.0	12.7	43.7	12.8	6.6	6500	11
L1865.015	150	50	47.3	6	29	31.0	12.7	43.7	12.8	6.6	6500	11
L1865.017	150	50	47.3	6	29	31.0	12.7	43.7	12.8	6.6	6500	11
L1865.020	150	50	47.3	6	29	31.0	12.7	43.7	12.8	6.6	6500	11
L1865.025	150	50	48.7	6	29	34.0	14.3	47.5	14.0	7.8	6500	11
L1865.030	150	50	52.2	6	30	38.1	15.9	52.5	19.5	11.2	4500	11
L1865.035	230	50	55.4	6	30	42.9	17.5	59.1	25.7	15.2	4500	11
L1865.040	300	50	60.2	6	30	49.2	19.0	68.6	29.6	18.2	3500	15
L1865.045	300	50	60.2	6	30	49.2	19.0	68.6	31.8	20.8	3500	15
L1865.050	300	50	631	6	30	51.6	19.0	74.1	35.1	23.2	3000	15
L1865.055	300	65	71.4	6	38	55.6	22.2	75.3	43.5	29.2	3000	19
L1865.060	300	65	77.7	6	38	65.1	25.4	88.6	52.5	32.8	2500	19
L1865.065	300	65	77.7	6	38	65.1	25.4	88.6	57.2	40.0	2500	24

Take-up Units
set screw type



L1866



Material
Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010).

Technical Notes
Shaft retention with set screw.

Used with h6 tolerance shafts (see our part no.s L1770-L1776.
For optional shaft end caps add suffixes:
-CO for two open protective caps (with seal) for through shafts.

-CC for one open and one closed protective caps for shaft ends.

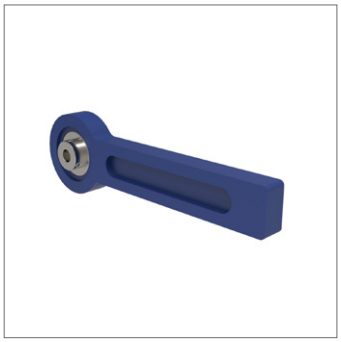
Order No.	d_1 for h6	l_1	h_1	l_2	d_2	d_3	d_4	h_2 +0|-0.8	h_3	h_4	Weight kg
L1866.012	12	94	89	51	29.0	M 6x1	54	76	51	32	0.8
L1866.015	15	94	89	51	29.0	M 6x1	54	76	51	32	0.8
L1866.017	17	94	89	51	29.0	M 6x1	54	76	51	32	0.7
L1866.020	20	94	89	51	29.0	M 6x1	54	76	51	32	0.7
L1866.025	25	97	89	51	34.0	M 6x1	60	76	51	32	0.8
L1866.030	30	113	102	57	40.3	M 6x1	70	89	56	37	1.2
L1866.035	35	129	102	64	48.0	M 6x1	80	89	64	37	1.6
L1866.040	40	144	114	83	53.0	M 6x1	88	102	83	49	2.3
L1866.045	45	144	117	83	57.2	M 6x1	95	102	83	49	2.3
L1866.050	50	149	117	86	61.8	M 6x1	100	102	83	49	2.5
L1866.055	55	171	146	95	69.0	M 6x1	110	130	102	64	3.9
L1866.060	60	194	146	102	74.9	M 6x1	120	130	102	64	4.7
L1866.065	65	224	167	121	82.0	M 6x1	132	151	111	70	6.8
L1866.070	70	224	167	121	86.5	M10x1	-	151	111	70	6.9
L1866.075	75	232	167	121	91.5	M10x1	-	151	111	70	7.2
L1866.080	80	235	184	121	98.0	M10x1	-	165	111	70	8.2
L1866.085	85	260	198	157	105.1	M10x1	-	173	124	73	10.8

Order No.	h_5	l_3	l_4	l_5	w_1	w_2	w_3 +0.3|-0	w_4	w_5	w_6	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1866.012	19	35.5	61	10	32	21	12	31.0	12.7	43.7	12.80	6.65	6500
L1866.015	19	35.5	61	10	32	21	12	31.0	12.7	43.7	12.80	6.65	6500
L1866.017	19	35.5	61	10	32	21	12	31.0	12.7	43.7	12.80	6.65	6500
L1866.020	19	35.5	61	10	32	21	12	31.0	12.7	43.7	12.80	6.65	6500
L1866.025	19	36.5	62	10	32	24	12	34.0	14.3	47.5	14.00	7.88	6500
L1866.030	22	41.5	70	10	37	28	12	38.1	15.9	52.5	19.50	11.20	4500
L1866.035	22	46.0	78	13	37	30	12	42.9	17.5	59.1	25.70	15.20	4500
L1866.040	29	46.5	88	16	49	33	16	49.2	19.0	68.6	29.60	18.20	3500
L1866.045	29	45.5	87	16	49	35	16	49.2	19.0	68.6	31.85	20.80	3500
L1866.050	29	47.0	90	16	49	37	16	51.6	19.0	74.1	35.10	23.20	3000
L1866.055	35	58.5	106	19	64	38	22	55.6	22.2	75.3	43.55	29.20	3000

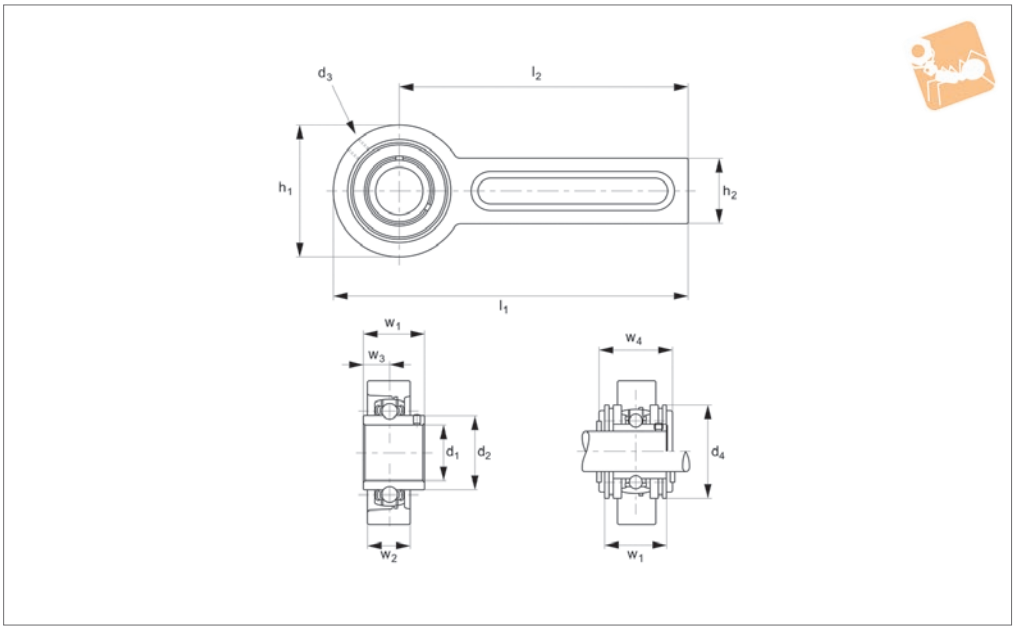


Order No.	h_5	l_3	l_4	l_5	w_1	w_2	w_3 +0.3 | -0	w_4	w_5	w_6	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1866.060	35	68.0	119	19	64	42	22	65.1	25.4	88.6	52.50	32.80	2500
L1866.065	41	76.5	137	21	70	44	26	65.1	25.4	88.6	57.20	40.00	2500
L1866.070	41	76.5	137	21	70	46	26	74.6	30.2	-	62.00	45.00	2500
L1866.075	41	79.5	140	21	70	48	26	77.8	33.3	-	66.00	49.50	2500
L1866.080	41	79.5	140	21	70	51	26	82.6	33.3	-	72.50	54.20	2500
L1866.085	48	83.5	162	29	73	54	30	85.7	34.1	-	83.20	63.80	2500

Conveyor Belt Tensioners
cast iron



L1867

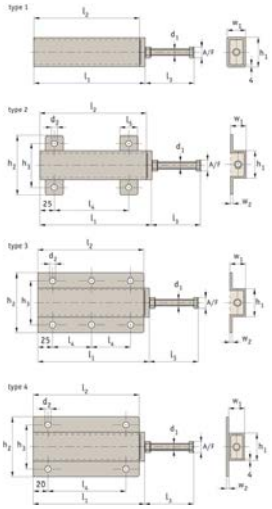


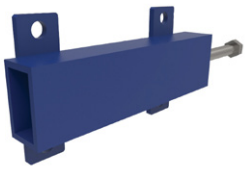
Material
Housings made from cold rolled sheet steel with zinc-plated surfaces.

Technical Notes
Re-lubricatable. For use with stretcher frame (see our part L1868).
For optional shaft end caps add suffixes:
-CO for two open protective caps (with seal) for through shafts.
-CC for one open and one closed protective caps for shaft ends.

Order No.	d_1 for h6	l_1	h_1	l_2	d_2	d_3	d_4	h_2	w_1	Weight kg
L1867.012	12	264	78	225	29.0	R1/8“	60	41	31.0	1.7
L1867.015	15	264	78	225	29.0	R1/8“	60	41	31.0	1.7
L1867.017	17	264	78	225	29.0	R1/8“	60	41	31.0	1.7
L1867.020	20	264	78	225	29.0	R1/8“	60	41	31.0	1.7
L1867.025	25	264	78	225	34.0	R1/8“	60	41	34.0	1.7
L1867.030	30	264	78	225	40.3	R1/8“	80	41	38.1	1.9
L1867.035	35	264	78	225	48.0	R1/8“	80	41	42.9	2.1
L1867.040	40	274	98	225	53.0	R1/8“	100	41	49.2	4.2
L1867.045	45	274	98	225	57.2	R1/8“	100	41	49.2	4.2
L1867.050	50	274	98	225	61.8	R1/8“	100	41	51.6	4.2

Order No.	w_2	w_3	w_4	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1867.012	21	12.7	48.8	12.8	6.6	6500
L1867.015	21	12.7	48.8	12.8	6.6	6500
L1867.017	21	12.7	48.8	12.8	6.6	6500
L1867.020	21	12.7	48.8	12.8	6.6	6500
L1867.025	21	14.3	48.8	14.0	7.8	6500
L1867.030	21	15.9	58.4	19.5	11.2	4500
L1867.035	21	17.5	58.4	25.7	15.2	4500
L1867.040	21	19.0	75.6	29.6	18.2	3500
L1867.045	21	19.0	45.6	31.8	20.8	3500
L1867.050	21	19.0	75.6	35.1	23.2	3000





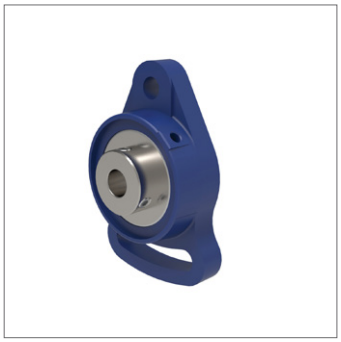
L1868

Material
Quality grey cast iron (FG20 or FG25), passivated and painted (RAL 5010).

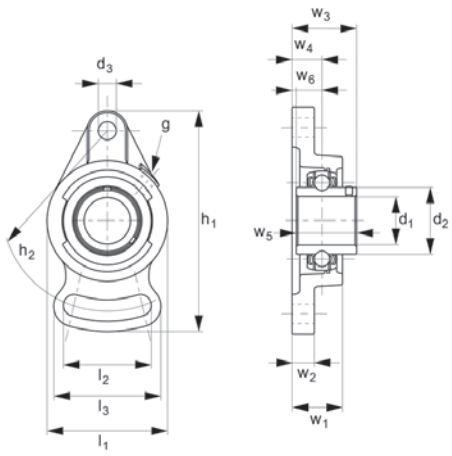
Technical Notes
Stretcher frame for use with conveyor belt tensioner, part L1867.

Order No.	For shaft dia.	Type	d_1	l_1	h_1	l_2	d_2	h_2	h_3	l_3	l_4	l_5	w_1	w_2	A/F
L1868.010	12-35	1	M12x 90	190	50	180	-	-	-	85	-	-	30	4	18
L1868.020	40-50	1	M16x110	225	70	210	-	-	-	105	-	-	40	4	24
L1868.011	12-35	2	M12x 90	190	50	180	11.0	100	80	85	130	30	30	5	18
L1868.021	40-50	2	M16x110	225	70	210	14.0	140	100	105	160	40	40	6	24
L1868.012	12-35	3	M12x 90	190	48	180	10.0	100	75	85	65	-	25	3	18
L1868.022	40-50	3	M16x110	225	68	210	12.0	130	100	105	80	-	35	3	24
L1868.014	12-35	4	M12x100	190	48	180	11.5	103	80	97	140	-	25	3	18
L1868.024	40-50	4	M16x120	235	68	220	14.0	130	100	111	180	-	35	3	24

Take-up Units
cast iron



L1869



Material
Quality grey cast iron (FG20 or FG25), passivated and painted (RAL 5010).

Technical Notes
Self-aligning bearings, relubricatable.
Temperature range: -20°C to +120°C.

The max. axial load is 0.5 x radial static load.
The housings are rated to take the maximum bearing loads.
For optional shaft end caps add suffixes:
-CO for one open protective cap (with seal) for through shafts
-CC for closed protective cap for shaft ends.

Tips
Shaft retention with set screw.
Used with h6 tolerance shafts (see our part no.s L1770-L1776.

Order No.	d_1 for h6	l_1	h_1	l_2	d_2	d_3	d_4	d_5	h_2	l_3	Weight kg
L1869.012	12	60	102	40	29.0	10	M6x1	54	78	54	0.5
L1869.015	15	60	102	40	29.0	10	M6x1	54	78	54	0.5
L1869.017	17	60	102	40	29.0	10	M6x1	54	78	54	0.5
L1869.020	20	60	102	40	29.0	10	M6x1	54	78	54	0.5
L1869.025	25	68	125	51	34.0	12	M6x1	60	98	65	0.7
L1869.030	30	80	144	58	40.3	12	M6x1	70	117	72	1.2
L1869.035	35	90	161	66	48.0	15	M6x1	80	130	82	1.6
L1869.040	40	100	175	71	53.0	15	M6x1	88	144	87	2.0
L1869.045	45	108	181	72	57.2	15	M6x1	95	148	90	2.3
L1869.050	50	115	190	76	61.8	15	M6x1	100	157	94	2.7
L1869.055	55	130	219	86	69.0	16	M6x1	110	184	104	3.5
L1869.060	60	140	250	92	74.9	23	M6x1	120	202	118	4.2

Order No.	w_1	w_2	w_3	w_4	w_5	w_6	w_7	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1869.012	25.5	12	33.3	15	31.0	12.7	36.5	12.8	6.6	6500
L1869.015	25.5	12	33.3	15	31.0	12.7	36.5	12.8	6.6	6500
L1869.017	25.5	12	33.3	15	31.0	12.7	33.0	12.8	6.6	6500
L1869.020	25.5	12	33.3	15	31.0	12.7	36.5	12.8	6.6	6500
L1869.025	27.0	14	35.7	16	34.0	14.3	39.1	14.0	7.8	6500
L1869.030	31.0	14	40.2	18	38.1	15.9	44.1	19.5	11.2	4500
L1869.035	34.0	16	44.4	19	42.9	17.5	48.3	25.7	15.2	4500
L1869.040	36.0	16	51.2	21	49.2	19.0	55.1	29.6	18.2	3500
L1869.045	38.0	18	52.2	22	49.2	19.0	56.3	31.8	20.8	3500
L1869.050	40.0	18	54.6	22	51.6	19.0	59.3	35.1	23.2	3000
L1869.055	43.0	20	58.4	25	55.6	22.2	62.8	43.5	29.2	3000
L1869.060	48.0	20	68.7	29	65.1	25.4	73.3	52.5	32.8	2500

For cast iron housings

- Single row radial contact self-aligning bearings (steel 100Cr6).
- Re-lubricatable.
- Fixing to shaft via set screw.
- Operating temperature range -20° to +100°.

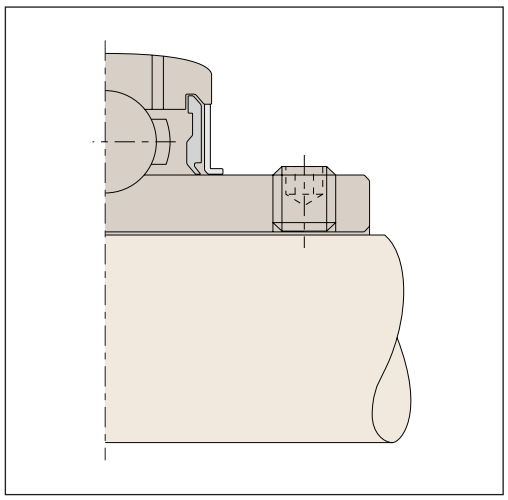
For stainless & thermoplastic housings

- Single row radial contact self-aligning bearings (stainless steel AISI 440C), stainless steel cage.
- Lubricated with food grade grease.
- Fixing to shaft via set screw.

Shaft fixing set screw

2 set screws at 120° with hexagon socket and knurled cup point, recommended shaft tolerance h6/h7.

Set screw	Max. tightening torque (Nm)	Hexagon socket A/F
M5 x 0,8	3,5	2,5
M6 x 1	5,5	3,0
M8 x 1	11,5	4,0
M10 x 1,25	22,0	5,0
M12 x 1,25	33,0	6,0
M14 x 1,5	42,0	7,0
M16 x 1,5	64,0	8,0
M18 x 1,5	75,0	9,0
M20 x 1,5	120,0	10,0

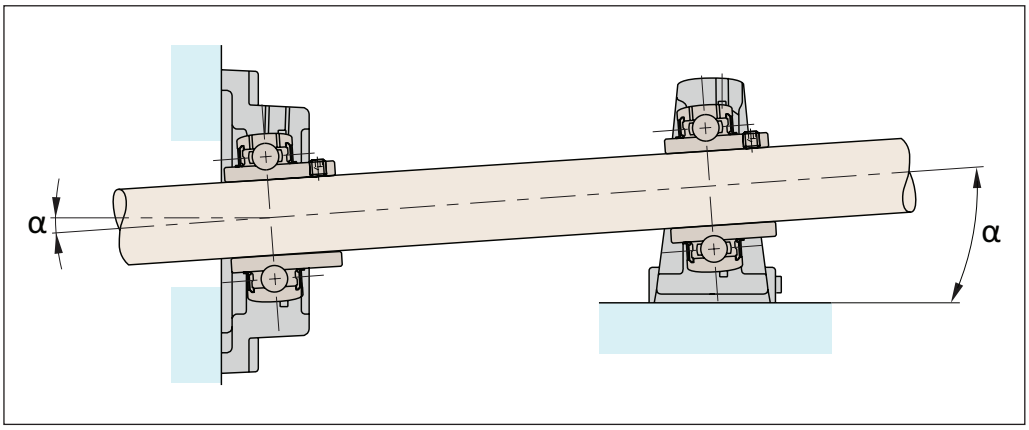


Lubrication

Our units are lubricated for life. If re-lubrication is necessary (because of severe operating conditions), use a lithium soap base with a viscosity of 100mm²/s at 40°C.

Installation

Shaft misalignment is compensated to a certain degree by the shaft-aligning bearings.



If re-lubrication required

α = ± 2°

If no re-lubrication

α = ± 5°

When using protective end caps

α = ± 5°

Bearing Supports from Automotion Components



Cast Iron Bearing Units

Equivalent load ratings



The radial loads of the cast iron bearing supports are limited by the bearings themselves – the housings can withstand the maximum loads.

Please see the part numbers for dynamic and static radial loads. The maximum axial loads are 50% of the maximum static radial loads. The standard bearing have a C3 clearance.

Bore nominal size (mm)		Radial bearing clearance (µ) C3	
Above	Up to	Min.	Max.
10	18	11	25
18	24	13	28
24	30	13	28
30	40	15	33
40	50	18	36
50	65	23	43
65	80	25	51
80	100	30	58
100	120	36	66
120	140	41	81

When choosing a suitable bearing size – this depends on the load and speed required.

If the load acts mainly whilst the bearing rotates, then it is a dynamic load, if it acts mainly during no movement or low speeds, then it is a static load.

The maximum for both of these, for each bearing, is shown in the part tables.

Dynamic equivalent loads:

For some situations the bearing will have to withstand both radial and axial loads and we then need to calculate an equivalent dynamic load using the following equation:

$$L = X \bullet F_r + Y \bullet F_a \ (kN)$$

P = Dynamic equivalent load (kN)
F_r = Actual radial load (kN)
F_a = Actual axial load (kN)
X = Radial factor
Y = Axial factor

Load ratio table 1:

$\frac{F_a}{C_{0r}}$	e	$\frac{F_a}{F_r} \le e$		$\frac{F_a}{F_r} > e$	
		X	Y	X	Y
0,014	0,19				2,30
0,028	0,22				1,99
0,056	0,26				1,71
0,084	0,28				1,55
0,110	0,30	1	0	0,56	1,45
0,170	0,34				1,31
0,280	0,38				1,15
0,420	0,42				1,04
0,560	0,44				1,00

e = Limiting value
C_{0r} = Radial static load rating (see dimension tables for ball bearing units)

ov-bearing-support-units-load-ratings-lnh-Updated-01-03-2023



Static equivalent loads

For situations where there are radial and axial loads on the static or slow moving bearings:

$$P_0 = X_0 \bullet F_r + Y_0 \bullet F_a \ (kN)$$

$$P_0 = F_r \quad \text{if} \quad \frac{F_a}{F_r} \leq 0.8$$

P_0 = Static equivalent load (kN)
X_0 = Static radial factor
Y_0 = Static axial factor

For all bearing inserts the following applies:
X_0 = 0.6
Y_0 = 0.5

Using the ratio ***fs,*** it can be checked if sufficient static dimensioning for the insert has been ensured:

$$fs = \frac{C_{0r}}{p_0}$$

Some standard values are:

fs = 0.7 Minimal demands for running smoothness and rotating movement
fs = 1.0 occasional rotating bearing, normal demands for running
fs = 2.0 smoothness, high demands for running smoothness

It should be noted that this ratio does not provide any assurance against a break or similar, but instead it is assurance against excessive local deformation in the rolling contact (ball/raceway).

Calculating bearing life

When calculating bearing life for bearing units, the following applies:

$$L_{10} = \left(\frac{C_r}{p}\right)^3 \qquad (10^6 \text{ revolutions})$$

If the bearing life should be specified in hours, the following applies:

$$L_{10h} = \left(\frac{C_r}{p}\right)^3 \bullet \frac{10^6}{60n} \quad (h)$$

n = speed (min^{-1})

Bearing Supports from Automotion Components



Bearing life calculation

The bearing life of a UCP210 ball bearing unit under the following conditions:

Radial load:	F_r	=	2 kN
Axial load:	F_a	=	1.7 kN
Normal operating condition speed:	n	=	1800 min^{-1}
UCP210 ball bearing unit data:	C_r	=	35.1 kN
	C_{0r}	=	23.2 kN

Dynamic equivalent bearing load:

$$P = X \bullet F_r + Y \bullet F_a \quad (kN)$$

$$\frac{F_a}{C_{0r}} = \frac{1.7\ kN}{23.2\ kN} = 0.073 \text{ and } \frac{F_a}{F_r} = \frac{1.7\ kN}{2\ kN} = 0.85$$

From load ratio table 1:

with $F_a/C_{0r} = 0.073$, e is determined to be ≈ 0.28

with $F_a/F_r = 0.85 > e = 0.28$

X = 0.56 Y = 1.55

$$P = 0.56 \bullet 2\ kN + 1.7\ kN = 3.76\ kN$$

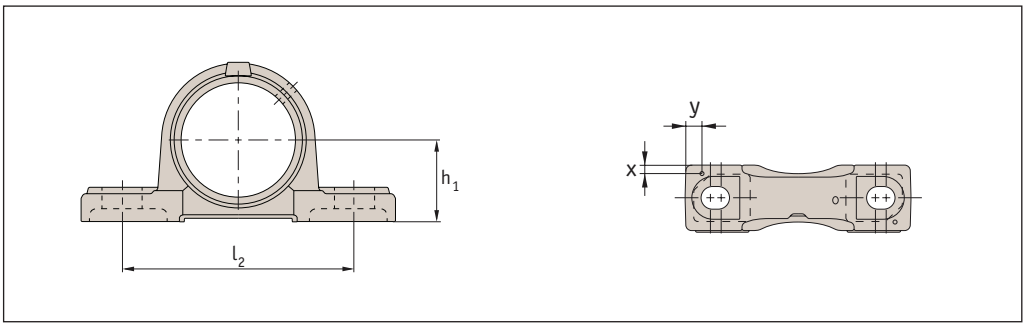
$$L_{10h} = \left(\frac{C_r}{p}\right)^3 \bullet \frac{10^6}{60n} \quad (h)$$

$$L_{10h} = \left(\frac{35.1}{3.76}\right)^3 \bullet \left(\frac{10^6}{60 \times 1800}\right) = 7532\ h$$

The theoretical bearing life of the bearing unit, under normal operating conditions, is 7532 hours.

ov-bearing-support-units-life-calculations-lnh-Updated-01-03-2023

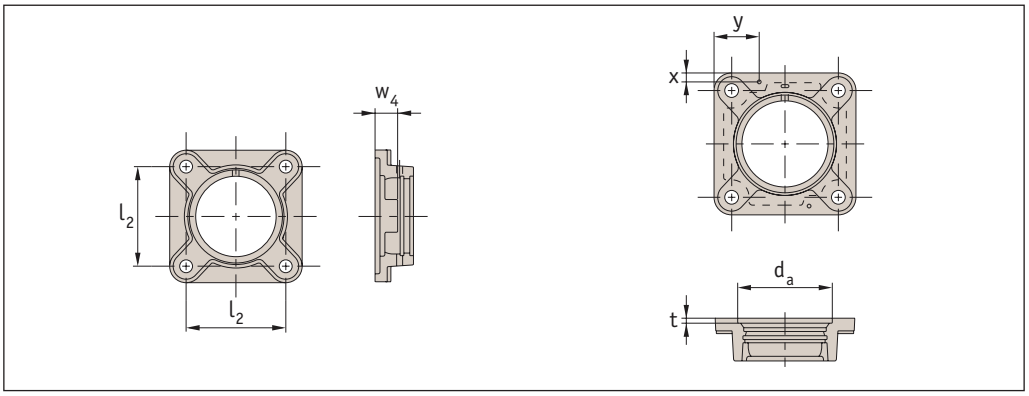
L1860 Pillow block housing



For shaft i/d d_1	h_1 ±	l_2 ±
12-20	±0,15	±0,70
25		
30		
35		
40		
45		
50		
55	±0,20	±1,00
60		
65		
70		
75		
80		
90	±0,30	

x	y	Dowel Ø
10,0	59,0	3
12,0	59,0	
13,0	72,0	
14,5	73,0	4
16,0	81,5	
16,0	88,0	5
18,0	91,0	
20,0	101,0	6
20,0	110,0	
-	-	-
21,5	119,0	6
22,0	121,5	
26,0	132,0	8
28,5	151,0	10

L1862 Square flanged bearing housing

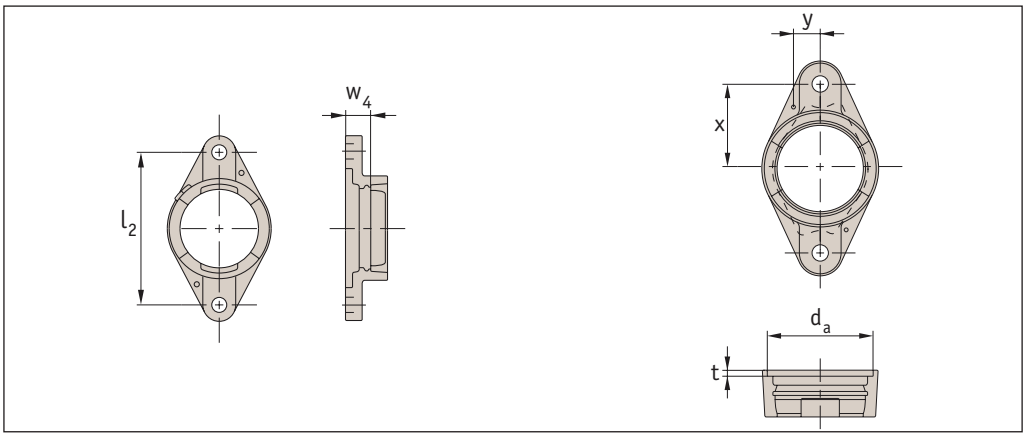


For shaft i/d d_1	l_2 ±	w_4 ±	Radial runout
12-20	±0,70	±0,50	0,20
25			
30			
35			
40			
45			
50			
55	±1,00	±0,80	0,30
60			
65			
70			
75			
80			
90			

x	y	Dowel Ø	d_a	t
36,0	13,0	3	50,80	3,2
40,5	15,0		63,50	
46,0	17,0		76,20	4,0
51,0	18,0	4	88,90	
57,0	20,0		88,90	
60,5	21,0	5	98,42	
63,5	22,0		101,60	
71,0	25,0	6	107,95	
77,5	27,0		125,40	
85,0	29,0		161,92	
85,0	29,0		161,92	
88,5	30,0		161,92	
88,5	30,0		161,92	
103,5	36,0		179,37	

Bearing Supports from Automotion Components

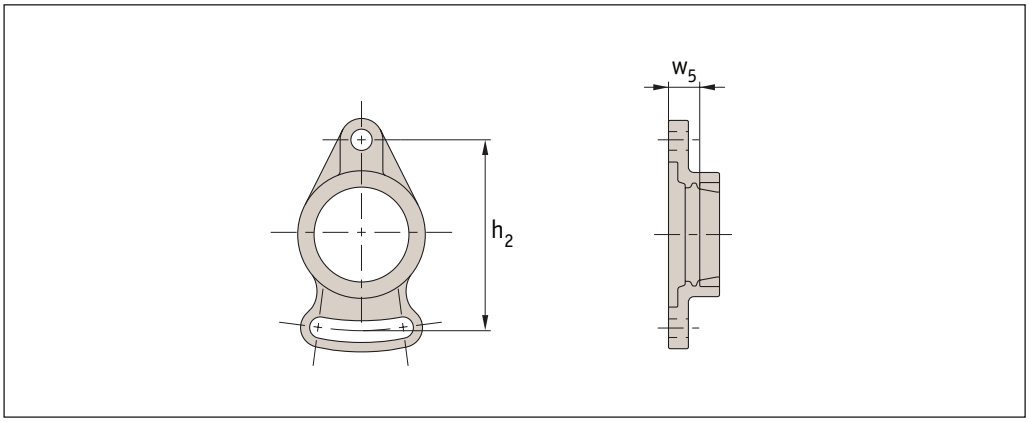
L1864 Oval flanged bearing housing



For shaft i/d d_1	l_2 ±	w_4 ±	Radial runout
12-20	±0,70	±0,50	0,20
25			
30			
35			
40			
45			
50			
55	±1,00	±0,80	0,30
60			
65			
70			
75			

x	y	Dowel Ø	d_a	t
31,0	14,5	3	50,80	3,2
35,0	16,0		63,50	
42,5	17,0		73,00	4,0
50,0	17,0	4	82,50	
55,0	19,0		88,90	
58,0	21,0	5	98,42	
60,0	22,5		101,60	
70,0	26,0	6	107,95	
75,0	26,0		125,40	
85,0	28,0		142,00	
85,0	28,0		142,00	
85,0	30,0		142,00	

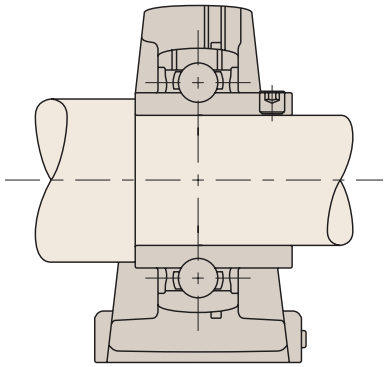
L1869 Take up unit housing



For shaft i/d	h_2 ±	w_5 ±
12-20	±0,70	±0,50
25		
30		
35		
40		
45		
50		
55	±1,00	±0,80
60		

ov-bearing-support-units-tolerances-b-lnh-Updated-01-03-2023

Axial load capacity



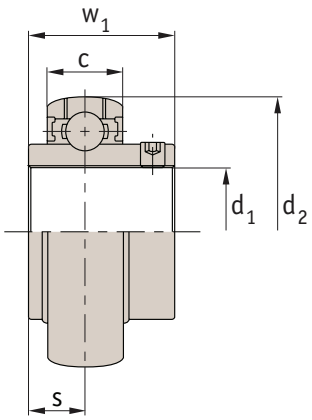
shaft shoulder recommended
for axial loads

The axial load capacity of the inserts depends largely on the type of fixing on the shaft. The inner design of the raceways and balls is of little importance in most cases. A further factor is the shaft tolerance used.

In order to attain the largest possible axial load capacity for the respective type of fixing, it is necessary that the fixing element (e.g. set screw, adapter sleeve) is secured at the specified tightening torque.

For applications with strong vibrations or shock loads, it is recommended to set the inner ring against a shaft shoulder and to secure with a groove nut and lock washer as necessary. In this case, the axial load carrying capacity of the inserts can be fully utilised. The axial load rating can be up to 0.5 times the radial static load rating C_{0r}.

Bearing tolerances

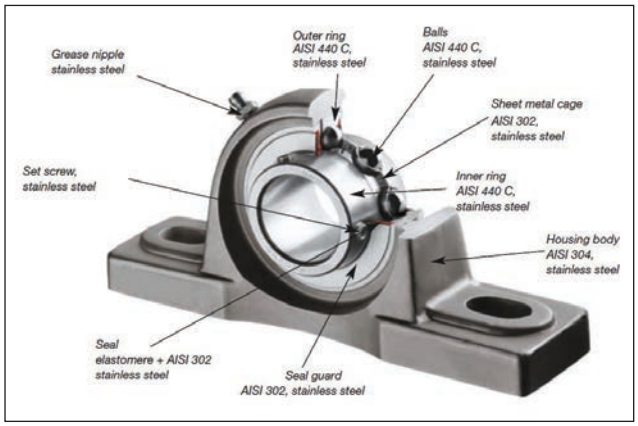


For shaft i/d	w_1	d_2 µ
12-20	±0,020	+0,0 -11
25		
30		
35		
40		
45		
50	±0,025	+0,0 -11
55		
60		
65		
70		
75		
80	±0,035	+0,0 -15
90		

Stainless Pillow Blocks

Overview

Technical specification - materials



Suitable for:

- Wet environments.
- Chemical environments.
- Frequent wash downs.

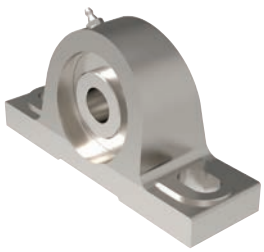
e.g. food, pharmaceuticals, bottling, outdoor application etc.

Protective end caps made of stainless steel, SCC and SCO models



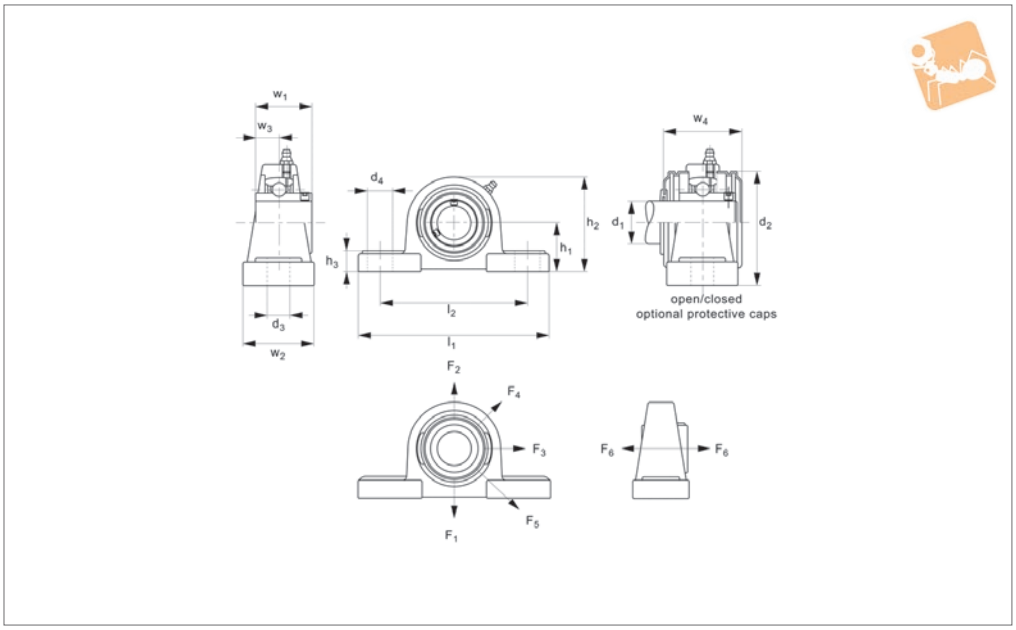
- Open protective end cap for through shafts with double-lip seal made of flourine elastomer.
- Closed protective end cap for shaft ends.
- Stainless steel AISI 304.
- Shafts Ø 12 - 60mm.
- Standard sizes available from stock.

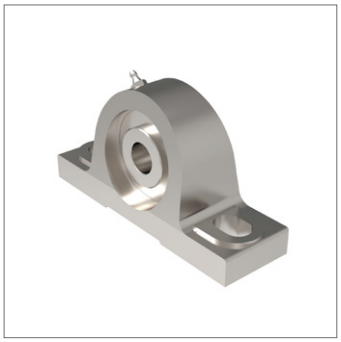
- Stainless steel self-aligning units. Stainless steel (AISI 304 body) with AISI 440C stainless bearing unit.
- For shafts Ø 12-60mm.
- Lubricated with food grade grease (USDA H1 approved), Mobil FM102.
- Temperature range -20°C to +120°C.

Pillow block	Four point flange	Two point flange
		

- Generally used in food, pharmaceutical and chemical industries, or where washdown is needed/ outdoor applications.
- Use with h6 tolerance shafts.

ov-bearing-support-units-stainless-pillow-blocks-overview-lnh-Updated-02-03-2023





L1870

Material
Stainless steel (AISI 304), with smooth surfaces. Bearing stainless steel (440C) with 2RS seals, lubricated with food grade grease (USDA approved).

Technical Notes
Self-aligning bearing units.
Temperature range for bearings: -15°C to +120°C.
Resistant to a moisture and a wide range of aggressive chemicals.
For optional shaft end caps add suffixes:
-CO for two open protective caps (with seals) for through shafts.
-CC for one open and one closed protective caps for shaft ends.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
Maximum housing loads measured @ 20°C.

Order No.	d_1 for h6	l_1	d_2	d_3	d_4	h_1	h_2 +0|-0.8	h_3	l_2	w_1	w_2	w_3	w_4	Weight kg
L1870.012	12	126	54	13	19	33.3	65	15	95	31.0	38	12.7	45.6	0.83
L1870.015	15	126	54	13	19	33.3	63	15	95	31.0	38	12.7	45.6	0.80
L1870.017	17	126	54	13	19	33.3	65	15	95	31.0	38	12.7	45.6	0.84
L1870.020	20	126	54	13	19	33.3	65	15	95	31.0	38	12.7	45.6	0.82
L1870.025	25	140	60	13	19	36.5	70	16	105	34.1	38	14.3	47.8	0.95
L1870.030	30	165	70	17	21	42.9	83	18	121	38.1	48	15.9	52.8	1.58
L1870.035	35	167	80	17	21	47.6	94	19	127	42.9	48	17.5	57.4	1.95
L1870.040	40	184	88	17	23	49.2	100	19	136	49.2	54	19.0	66.8	2.39
L1870.045	45	190	95	17	23	54.0	109	20	146	49.2	54	19.0	67.8	2.72
L1870.050	50	206	100	20	25	57.2	114	22	159	51.6	60	19.0	75.6	3.28
L1870.055	55	219	110	20	25	63.5	126	23	171	55.6	60	22.2	75.2	4.12
L1870.060	60	241	120	20	25	69.8	138	25	184	65.1	70	25.4	87.8	5.71

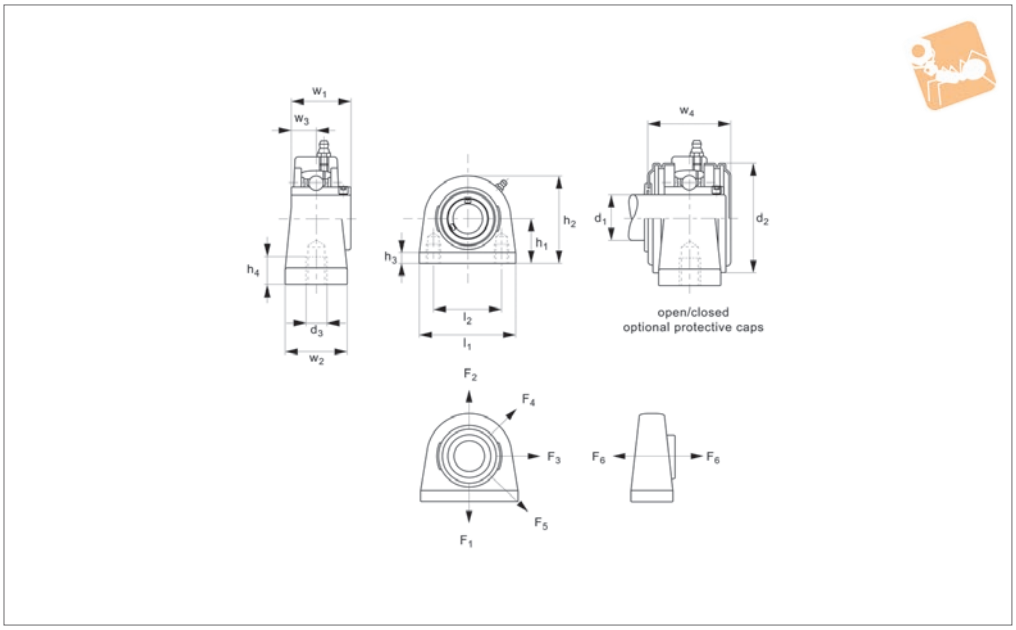
Order No.	Speed rpm max.	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_6 kN max.	Housing load F_2 kN max.	Housing load F_3 kN max.	Torque screw to Nm	Housing load F_4 kN max.	Housing load F_5 kN max.	Set screw size
L1870.012	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1870.015	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1870.017	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1870.020	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1870.025	4000	11.0	8.0	180	36	74	120	8.5	56	180	M 6x1
L1870.030	3400	15.3	11.5	240	44	100	180	8.5	70	240	M 6x1

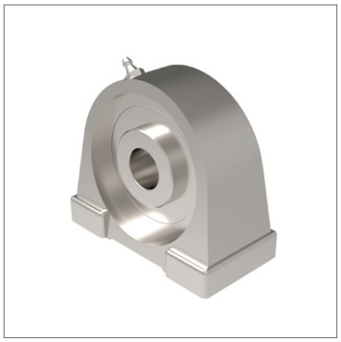


Stainless Pillow Block Bearing Units



Order No.	Speed rpm max.	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_6 kN max.	Housing load F_2 kN max.	Housing load F_3 kN max.	Torque screw to Nm	Housing load F_4 kN max.	Housing load F_5 kN max.	Set screw size
L1870.035	3000	20.1	15.6	320	48	120	200	20	88	320	M 8x1
L1870.040	2600	22.8	18.2	360	50	130	220	20	90	360	M 8x1
L1870.045	2400	25.7	20.8	380	52	140	240	40	98	380	M 10x1,25
L1870.050	2200	27.5	23.7	380	64	150	280	40	110	380	M 10x1,25
L1870.055	1800	34.0	25.5	475	80	191	350	40	262	475	M 10x1,25
L1870.060	1600	41.0	31.5	587	99	236	433	40	324	587	M 10x1,25





L1871

Material
Stainless steel (AISI 304), with smooth surfaces. Bearing stainless steel (440C) with 2RS seals, lubricated with food grade grease (USDA approved).

Technical Notes
Self-aligning bearing units.
Temperature range for bearings: -15°C to +120°C.
Resistant to a moisture and a wide range of aggressive chemicals.
For shaft end caps add suffixes:
-CO for open (with seal)
-CC for closed.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
Maximum housing loads measured @ 20°C.

Order No.	d_1 for h6	l_1	d_2	d_3	h_1	h_2 +0|-0.8	h_3	h_4	l_2	w_1	w_2	w_3	w_4	Weight kg
L1871.012	12	73	M 8	50.8	54	11	13	31.0	65	38	12.7	45.6	0.73	33.3
L1871.015	15	73	M 8	50.8	54	11	13	31.0	65	38	12.7	45.6	0.71	33.3
L1871.017	17	73	M 8	50.8	54	11	13	31.0	65	38	12.7	45.6	0.70	33.3
L1871.020	20	73	M 8	50.8	54	11	13	31.0	65	38	12.7	45.6	0.68	33.3
L1871.025	25	76	M10	50.8	60	11	13	34.1	71	38	14.3	47.8	0.78	36.5
L1871.030	30	102	M10	76.2	70	12	16	38.1	86	38	15.9	52.8	1.30	42.9
L1871.035	35	108	M10	82.6	80	12	19	42.9	95	48	17.5	57.4	1.72	47.6
L1871.040	40	117	M12	89.0	88	13	19	42.9	100	48	19.0	66.8	1.91	49.2
L1871.045	45	127	M12	95.3	95	13	19	49.2	108	51	19.0	67.8	2.33	54.0
L1871.050	50	140	M16	101.6	100	13	19	51.6	117	51	19.0	75.6	2.83	57.2

Order No.	Speed rpm	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_6 kN max.	Housing load F_2 kN max.	Housing load F_3 kN max.	Torque screw to Nm	Housing load F_4 kN max.	Housing load F_5 kN max.	Set screw size
L1871.012	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1871.015	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1871.017	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1871.020	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1871.025	4000	11.0	8.0	180	36	74	120	20	56	180	M 8x1
L1871.030	3400	15.3	11.5	240	44	100	180	20	70	240	M 8x1
L1871.035	3000	20.1	15.6	320	48	120	200	40	88	320	M 10x1,25

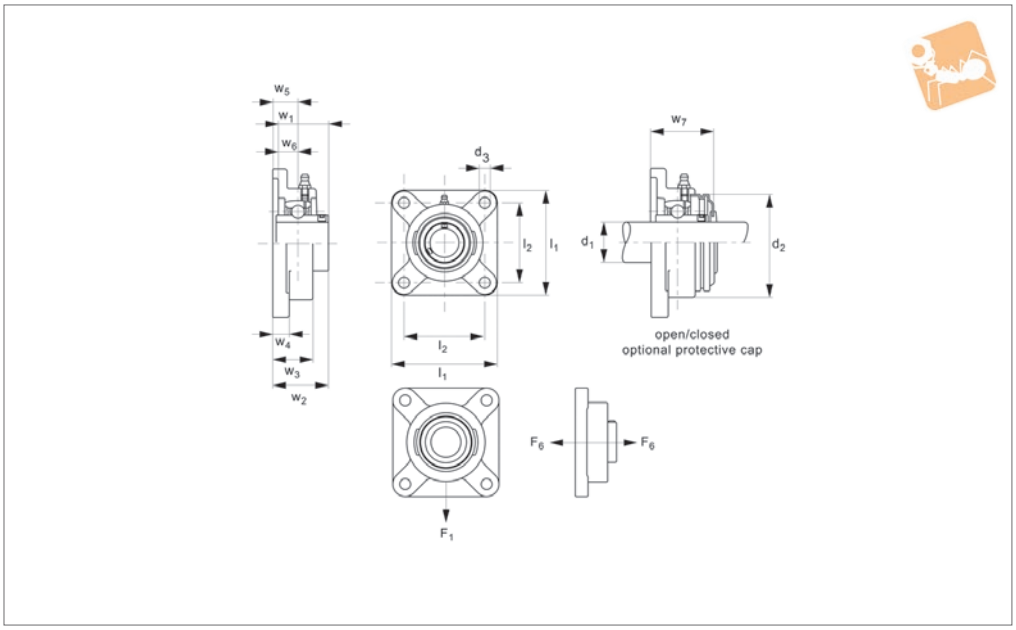


Stainless Pillow Block Bearing Units

blind holes



Order No.	Speed rpm	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_6 kN max.	Housing load F_2 kN max.	Housing load F_3 kN max.	Torque screw to Nm	Housing load F_4 kN max.	Housing load F_5 kN max.	Set screw size
L1871.040	2600	22.8	18.2	360	50	130	220	40	90	360	M 10x1,25
L1871.045	2400	25.7	20.8	380	52	140	240	40	98	380	M 10x1,25
L1871.050	2200	27.5	23.7	380	64	150	280	40	110	380	M 10x1,25





L1872

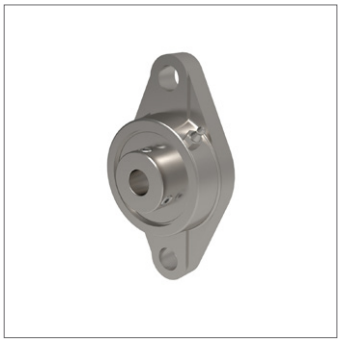
Material
Stainless steel (AISI 304), with smooth surfaces. Bearing stainless steel (440C) with 2RS seals, lubricated with food grade grease (USDA approved).

Technical Notes
Self-aligning bearing units.
Temperature range for bearings: -15°C to +120°C.
Resistant to a moisture and a wide range of aggressive chemicals.
For optional shaft end caps add suffixes:
-CO for one open protective cap (with seal) for through shafts
-CC for closed protective cap for shaft ends.

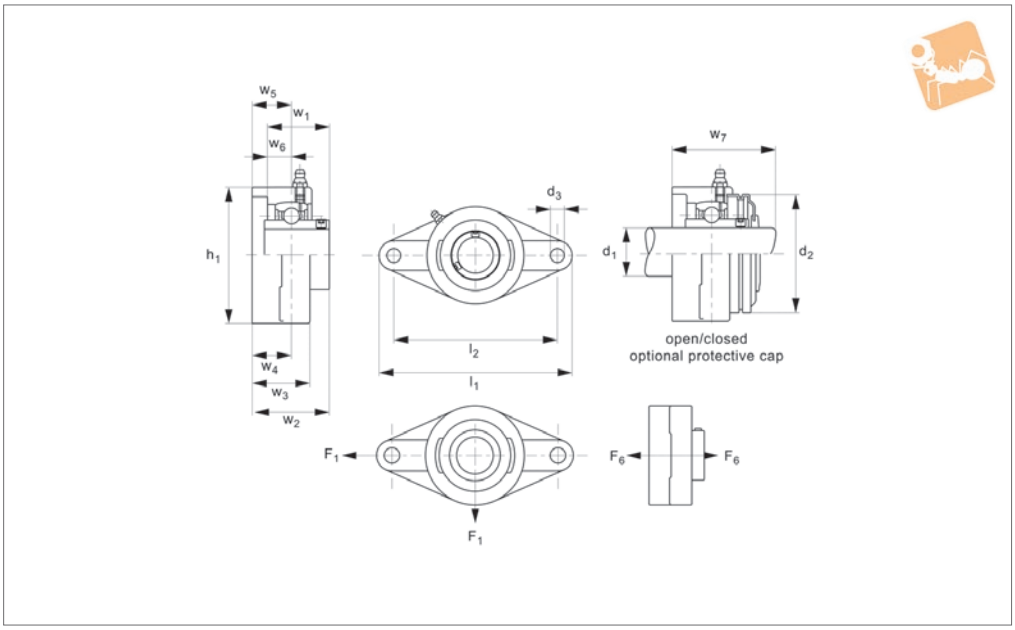
Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
Maximum housing loads measured @ 20°C.

Order No.	d_1 for h6	l_1	d_2	d_3	l_2	w_1	w_2 +0.3|-0	w_3	w_4	w_5	Weight kg
L1872.012	12	86	12	64	31.0	33.3	25.5	12.0	15	0.66	54
L1872.015	15	86	12	64	31.0	33.3	25.5	12.0	15	0.64	54
L1872.017	17	86	12	64	31.0	33.3	25.5	12.0	15	0.63	54
L1872.020	20	86	12	64	31.0	33.3	25.5	12.0	15	0.61	0.71
L1872.025	25	95	12	70	34.1	35.8	27.0	14.0	16	0.82	60
L1872.030	30	108	12	83	38.1	40.2	30.5	14.0	18	1.31	70
L1872.035	35	116	14	92	42.9	44.4	33.5	14.5	19	1.41	80
L1872.040	40	130	16	102	49.2	51.2	36.0	14.5	21	1.89	88
L1872.045	45	137	16	105	49.2	52.2	38.0	15.5	22	2.32	95
L1872.050	50	143	16	111	51.6	54.6	40.0	15.0	22	2.65	100
L1872.055	55	162	19	130	55.6	58.4	44.0	20.0	25	4.06	110
L1872.060	60	175	19	143	65.1	68.7	48.0	20.0	29	5.48	120

Order No.	w_6	w_7	Speed rpm	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_6 kN max.	Torque screw to Nm	Set screw size
L1872.012	12.7	37.8	4800	10.1	6.8	86	36	8.5	M 6x1
L1872.015	12.7	37.8	4800	10.1	6.8	86	36	8.5	M 6x1
L1872.017	12.7	37.8	4800	10.1	6.8	86	36	8.5	M 6x1
L1872.020	12.7	37.8	4800	10.1	6.8	86	36	8.5	M 6x1
L1872.025	14.3	39.9	4000	11.0	8.0	130	50	8.5	M 6x1
L1872.030	15.9	44.4	3400	15.3	11.5	130	60	8.5	M 6x1
L1872.035	17.5	48.2	3000	20.1	15.6	130	70	20	M 8x1
L1872.040	19.0	54.4	2600	22.8	18.2	140	78	20	M 8x1
L1872.045	19.0	55.9	2400	25.7	20.8	200	90	40	M 10x1,25
L1872.050	19.0	59.8	2200	27.5	23.7	200	100	40	M 10x1,25
L1872.055	22.2	62.6	1800	34.0	25.5	255	125	40	M 10x1,25
L1872.060	25.4	72.9	1600	41.0	31.5	315	155	40	M 10x1,25



L1873



Material
Stainless steel (AISI 304), with smooth surfaces. Bearing stainless steel (440C) with 2RS seals, lubricated with food grade grease (USDA approved).

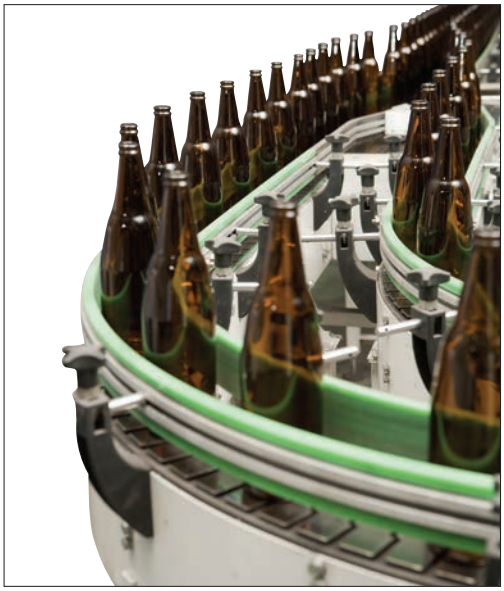
Technical Notes
Self-aligning bearing units.
Temperature range for bearings: -15°C to +120°C.
Resistant to a moisture and a wide range of aggressive chemicals.
For optional shaft end caps add suffixes:
-CO for one open protective cap (with seal) for through shafts
-CC for closed protective cap for shaft ends.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
Maximum housing loads measured @ 20°C.

Order No.	d_1 for h6	l_1	d_2	d_3	h_1	l_2	w_1	w_2 +0.3 -0	w_3	w_4	Weight kg
L1873.012	12	112	12	90	46	31.0	33.3	25.5	12	0.52	60
L1873.015	15	112	12	90	46	31.0	33.3	25.5	12	0.51	60
L1873.017	17	112	12	90	46	31.0	33.3	25.5	12	0.49	60
L1873.020	20	112	12	90	54	31.0	33.3	25.5	12	0.47	60
L1873.025	25	125	16	99	60	34.1	35.8	27.0	13	0.60	68
L1873.030	30	141	16	117	70	38.1	40.2	31.0	13	0.89	80
L1873.035	35	156	16	130	80	42.9	44.4	33.0	15	1.18	90
L1873.040	40	172	19	144	88	49.2	51.2	36.0	15	1.53	100
L1873.045	45	180	19	148	95	49.2	52.2	38.0	15	1.81	108
L1873.050	50	190	19	157	100	51.6	54.6	39.0	16	2.17	115

Order No.	w_5	w_6	w_7	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Torque screw to Nm	Set screw size	Axial load F_6 kN max.
L1873.012	15	12.7	37.8	10.1	6.8	48	8.5	M 6x1	24
L1873.015	15	12.7	37.8	10.1	6.8	48	8.5	M 6x1	24
L1873.017	15	12.7	37.8	10.1	6.8	48	8.5	M 6x1	24
L1873.020	15	12.7	37.8	10.1	6.8	48	8.5	M 6x1	24
L1873.025	16	14.3	39.9	11.0	8.0	76	20	M 8x1	32
L1873.030	18	15.9	44.4	15.3	11.5	76	20	M 8x1	40
L1873.035	19	17.5	47.7	20.1	15.6	80	40	M 10x1,25	46
L1873.040	21	19.0	54.4	22.8	18.2	82	40	M 10x1,25	54
L1873.045	22	19.0	55.9	25.7	20.8	120	40	M 10x1,25	64
L1873.050	22	19.0	59.8	27.5	23.7	124	40	M 10x1,25	78



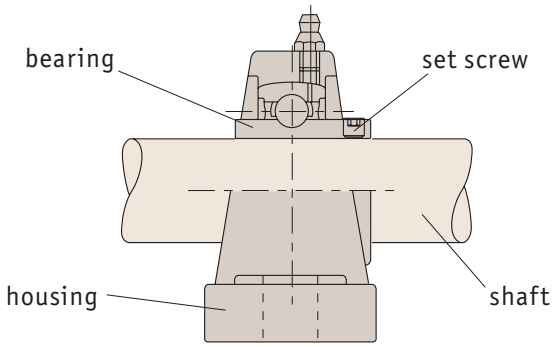


Ball bearing units made of stainless steel are used in areas where corrosion resistance is a must. In these areas, where high atmospheric humidity or the requirement for periodic washdown of the equipment is necessary to prevent bacteria growth, conventional ball bearing units made of cast iron do not suit.

We offer a comprehensive standard range of ball bearing units made of stainless steel. To satisfy the requirements of the pharmaceutical and food industries all our ball bearing units made of stainless steel are filled with grease meeting the USDA H1 food grade specification.

Bearing i/d Ø	Max. rpm	Max. dynamic bearing load kN	Max. static bearing load kN
12	4800	10,1	6,8
15	4800	10,1	6,8
17	4800	10,1	6,8
20	4800	10,1	6,8
25	4000	11,0	8,0
30	3400	15,3	11,5
35	3000	20,1	15,6
40	2600	22,8	18,2
45	2400	25,7	20,8
50	2200	27,5	23,7
55	1800	34,0	25,5
60	1600	41,0	31,5

Tightening torques



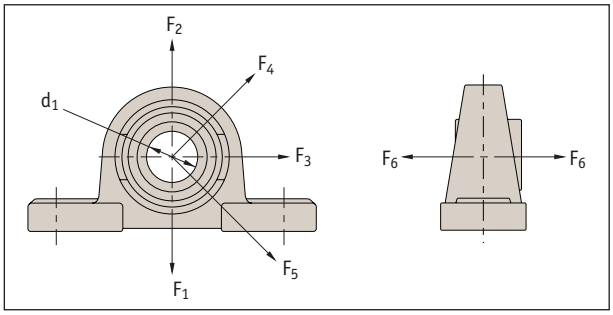
Ø	Set screw	Torque to Nm
12-30	M6 x 1	8,5
35-40	M8 x 1	20
45-60	M 10 x 1,5	40

Bearing Supports from Automotion Components

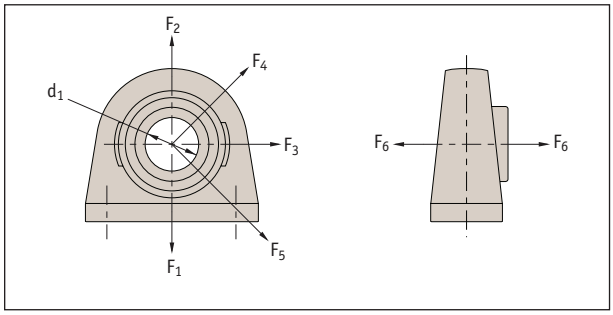
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Stainless Pillow Blocks

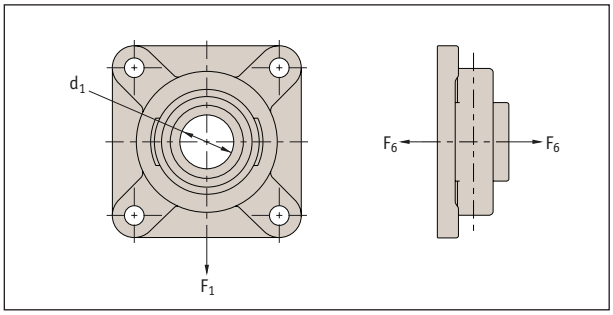
Maximum housing loads



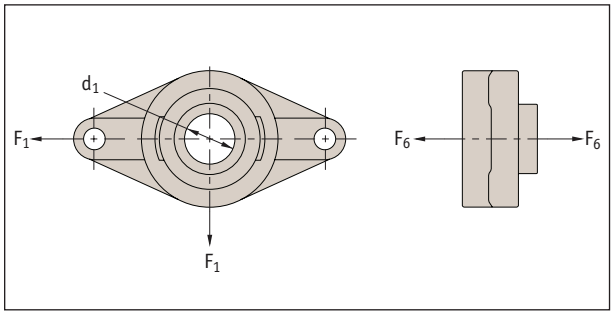
Order no.	Static load carrying capacity (kN) Load direction						Ød1
	F1	F2	F3	F4	F5	F6	
L1870.012-020	160	66	110	50	160	34	12-20
L1870.012-025	180	74	120	56	180	36	25
L1870.012-030	240	100	180	70	240	44	30
L1870.012-035	320	120	200	88	320	48	35
L1870.012-040	360	130	220	90	360	50	40
L1870.012-045	380	140	240	98	380	52	45
L1870.012-050	380	150	280	110	380	64	50
L1870.012-055	475	191	350	262	475	80	55
L1870.012-060	587	236	433	324	587	99	60



Order no.	Static load carrying capacity (kN) Load direction						Ød1
	F1	F2	F3	F4	F5	F6	
L1871.012-020	160	66	110	50	160	34	12-20
L1871.012-025	180	74	120	56	180	36	25
L1871.012-030	240	100	180	70	240	44	30
L1871.012-035	320	120	200	88	320	48	35
L1871.012-040	360	130	220	90	360	50	40
L1871.012-045	380	140	240	98	380	52	45
L1871.012-050	380	150	280	110	380	64	50



Order no.	Static load carrying capacity (kN) Load direction						Ød1
	F1	F2	F3	F4	F5	F6	
L1872.012-020	86	-	-	-	-	36	12-20
L1872.012-025	130	-	-	-	-	50	25
L1872.012-030	130	-	-	-	-	60	30
L1872.012-035	130	-	-	-	-	70	35
L1872.012-040	140	-	-	-	-	78	40
L1872.012-045	200	-	-	-	-	90	45
L1872.012-050	200	-	-	-	-	100	50
L1872.012-055	255	-	-	-	-	125	55
L1872.012-060	315	-	-	-	-	155	60



Order no.	Static load carrying capacity (kN) Load direction						Ød1
	F1	F2	F3	F4	F5	F6	
L1873.012-020	48	-	-	-	-	24	12-20
L1873.012-025	76	-	-	-	-	32	25
L1873.012-030	76	-	-	-	-	40	30
L1873.012-035	80	-	-	-	-	46	35
L1873.012-040	82	-	-	-	-	54	40
L1873.012-045	120	-	-	-	-	64	45
L1873.012-050	124	-	-	-	-	78	50

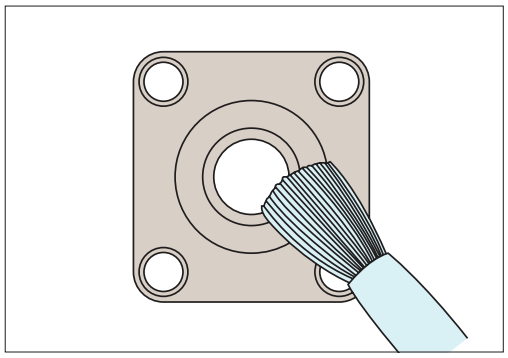
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Description of the installation steps

Self-aligning bearing units must be installed under conditions that ensure maximum bearing life. We recommend that you refer to the following chapters and follow the reference procedures for this type of bearing unit.

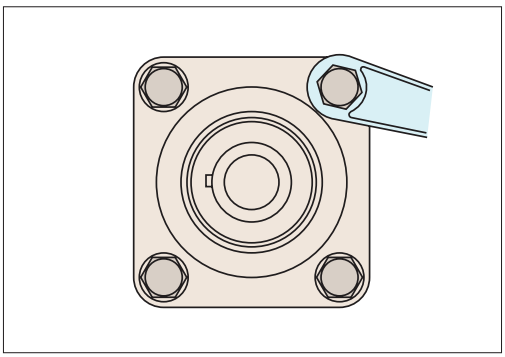
When installing sealed bearings, grease the seals to avoid dry operation when the shaft first starts to rotate.

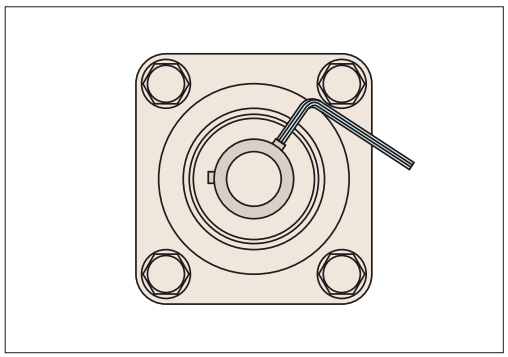
Make sure that the seating surfaces are perfectly clean and flat before starting any installation operations.



Install the shaft by mounting the bearing unit housings on the supporting frame. Tighten the inner ring retaining screw to the required torque indicated in the torque value table.

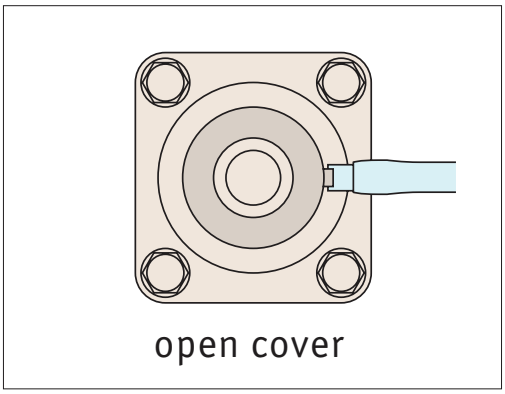
In all cases the shaft is installed first by attaching the bearing unit housings to the supporting frame. Tighten the screws in alternate diagonals.

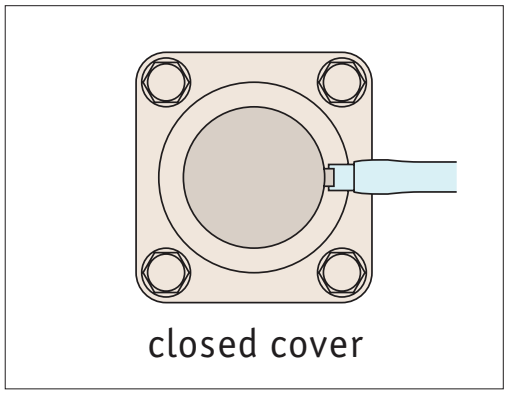




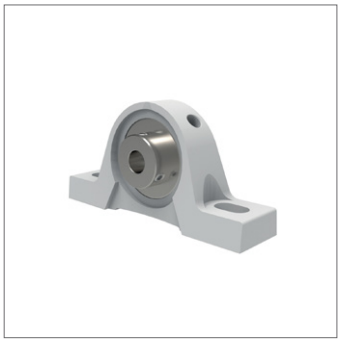
Installation / removal of protective covers

The covers (if required) are installed by snap-fitting, which can be done with a light blow of a mallet. They are removed by inserting the tip of a screwdriver into the cavity and applying light pressure to release them.

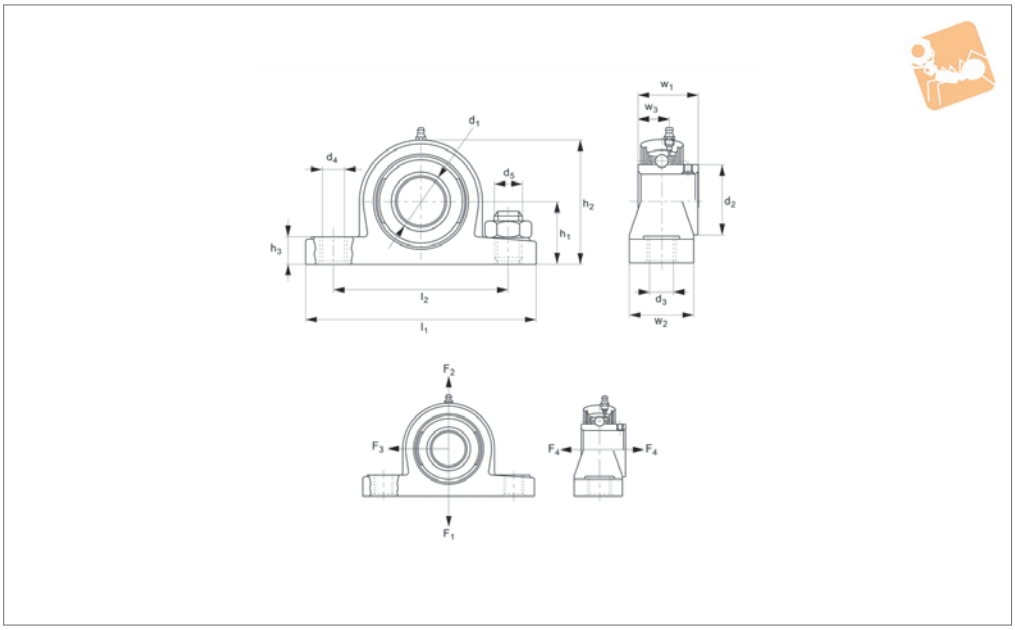




Thermoplastic Pillow Block Unit



L1876



Material
Thermoplastic (PBT) housing, with smooth surfaces. Stainless steel bearings (440C) with 2RS seals and sleeves for fixing bolts. Bearing lubricated with food grade grease.

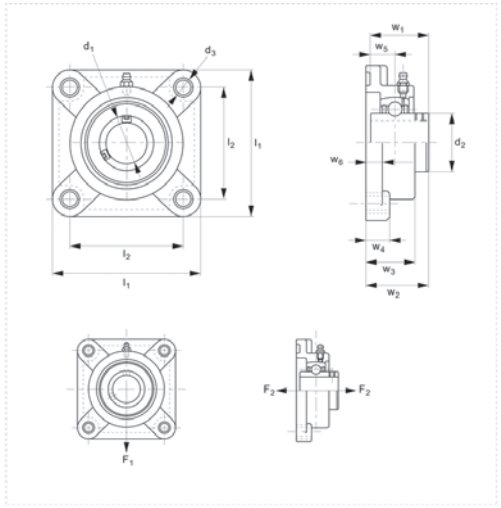
Technical Notes
Self-aligning bearing units.

Temperature range for bearings: -15°C to +120°C.
Resistant to a wide range of chemicals.
Provide good protection against bacterial contamination.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
For protective end caps see L1879.

Order No.	d_1 for h6	l_1	w_1	w_2	w_3	d_2	d_3	d_4	d_5	h_1	h_2 +0|-0.8	h_3	l_2	Weight kg
L1876.020	20	127.0	31.0	38.0	12.7	29.0	11.0	14.0	M10	33.3	65.0	14.2	95.0	0.30
L1876.025	25	140.0	34.0	38.0	14.3	34.0	11.0	14.0	M10	36.5	71.0	14.5	105.0	0.35
L1876.030	30	162.0	38.1	46.0	15.9	40.5	14.0	18.0	M12	42.9	83.0	17.8	119.0	0.55
L1876.035	35	167.0	42.9	48.0	17.5	48.0	14.0	18.0	M12	47.6	94.0	18.0	127.0	0.78
L1876.040	40	184.0	49.2	54.0	19.0	53.0	14.0	18.0	M12	49.2	98.0	19.5	137.0	0.98

Order No.	Speed rpm max.	Static radial bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_2 kN max.	Housing load F_3 kN max.	Axial load F_4 kN max.	Set screw size	Torque screw to Nm
L1876.020	7400	5.3	1.7	1.4	1.3	0.7	M6x1	3.9
L1876.025	6200	6.3	2.0	1.5	1.3	0.9	M6x1	3.9
L1876.030	5300	9.0	2.5	1.8	2.0	1.3	M6x1	3.9
L1876.035	4500	12.3	3.0	2.1	2.1	1.6	M8x1	8.3
L1876.040	4000	14.3	3.0	2.1	2.1	1.6	M8x1	8.3





L1877

Material
Thermoplastic (PBT) housing, with smooth surfaces. Stainless steel bearings (440C) with 2RS seals and sleeves for fixing bolts. Bearing lubricated with food grade grease.

Technical Notes
Self-aligning bearing units.

Temperature range for bearings: -15°C to +120°C.
Resistant to a wide range of chemicals.
Provide good protection against bacterial contamination.
Open and closed protection caps available (see our part L1869).

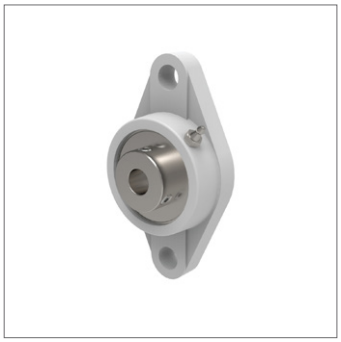
Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
For protective end caps see L1879.

Order No.	d_1 for h6	l_1	w_1	w_2	w_3	w_4	w_5	w_6	d_2	Weight kg
L1877.020	20	86	31.0	36.3	27.8	13.4	12.7	18.0	29.0	0.30
L1877.025	25	95	34.0	36.7	28.0	14.3	14.3	17.0	34.0	0.36
L1877.030	30	107	38.1	41.4	31.5	14.3	15.9	19.2	40.5	0.51
L1877.035	35	118	42.9	46.9	34.8	15.5	17.5	21.5	48.0	0.75
L1877.040	40	130	49.2	53.2	37.5	17.0	19.0	23.0	53.0	0.98

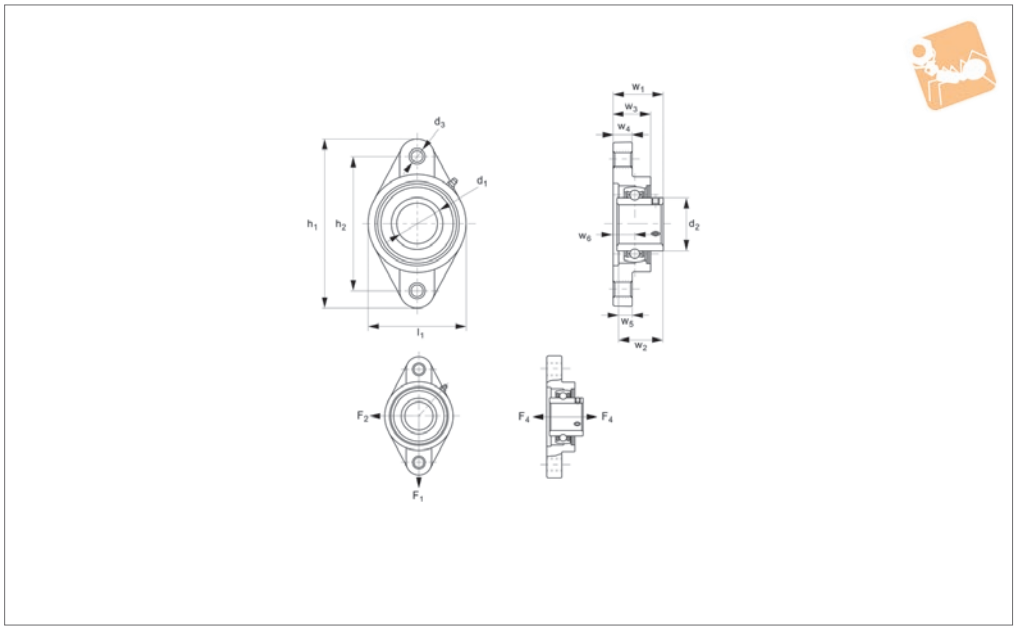
Order No.	d_3	l_2	Speed rpm	Static radial bearing load C_0 kN max.	Housing load F_1 kN max.	Axial load F_2 kN max.
L1877.020	11	63.5	7400	5.3	1.6	0.7
L1877.025	11	70.0	6200	6.3	1.7	0.7
L1877.030	11	83.0	5300	9.0	2.3	1.1
L1877.035	13	92.0	4500	12.3	3.1	1.3
L1877.040	14	102.0	4000	14.3	3.1	1.5

Thermoplastic Oval Flanged Unit

two point flange



L1878



Material

Thermoplastic (PBT) housing, with smooth surfaces. Stainless steel bearings (440C) with 2RS seals and sleeves for fixing bolts. Bearing lubricated with food grade grease.

Technical Notes

Self-aligning bearing units.

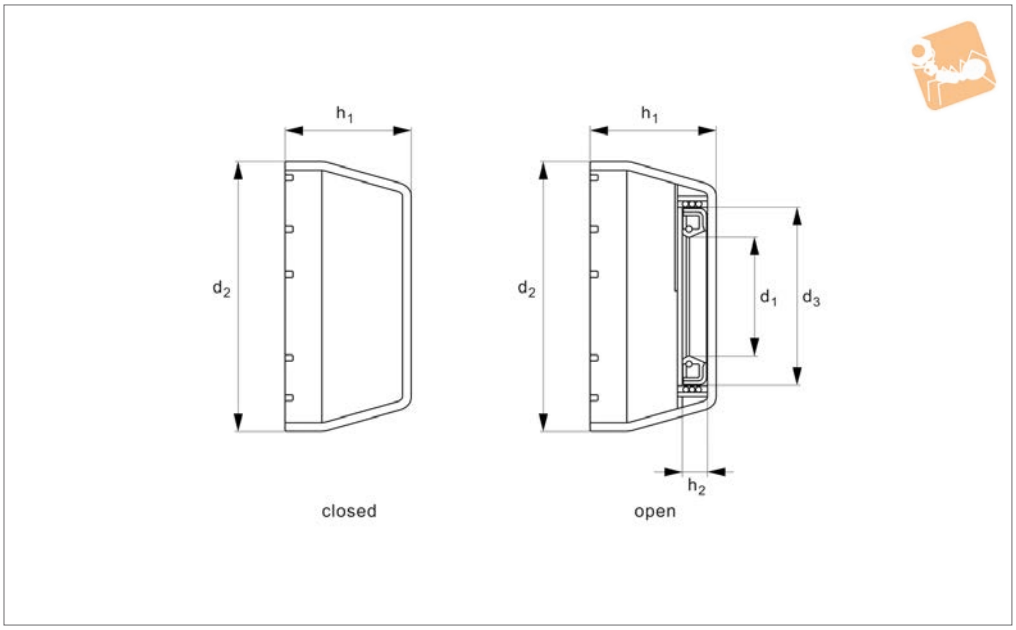
Temperature range for bearings: -15°C to +120°C.
Resistant to a wide range of chemicals.
Provide good protection against bacterial contamination.
Open and closed protection caps available (see our part L1869).

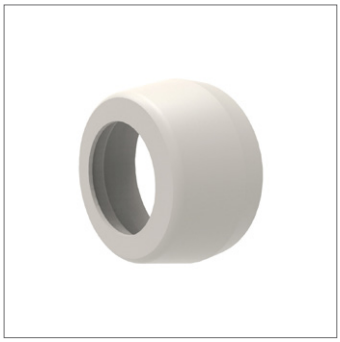
Tips

Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
For protective end caps see L1879.

Order No.	d_1 for h6	l_1	w_1	w_2	w_3	w_4	w_5	w_6	d_2	d_3	Weight kg
L1878.020	20	65	33.7	31.0	26.5	11.4	12.7	15.4	29.0	11	0.25
L1878.025	25	70	36.7	34.0	29.7	13.5	14.3	17.0	34.0	11	0.30
L1878.030	30	80	41.2	38.1	30.5	13.3	15.9	19.0	40.5	11	0.45
L1878.035	35	90	43.4	42.9	32.8	16.1	17.5	18.0	48.0	13	0.67
L1878.040	40	100	51.7	49.2	37.5	20.0	19.0	21.5	53.0	14	0.88

Order No.	h_1	h_2 +0|-0.8	Speed rpm max.	Static radial bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_2 kN max.	Axial load F_3 kN max.	Set screw size	Torque screw to Nm
L1878.020	130	90	7400	5.3	0.9	2.2	0.7	M6x1	3.9
L1878.025	130	99	6200	6.3	1.5	2.2	0.7	M6x1	3.9
L1878.030	148	117	5300	9.0	1.6	2.9	1.0	M6x1	3.9
L1878.035	163	130	4500	12.3	2.0	3.2	1.4	M8x1	8.3
L1878.040	175	144	4000	14.3	2.0	3.2	1.4	M8x1	8.3





L1879

Material
White SR50 polypropene, with smooth surfaces.

Technical Notes
Temperature range: -15°C to +110°C.
Resistant to a wide range of chemicals.

Provide good protection against bacterial contamination.

Order No.	Type	d_1	d_2	d_3	h_1	h_2
L1879.200-CC	Closed	20	50.1	-	23	7
L1879.250-CC	Closed	25	55.0	-	25	7
L1879.300-CC	Closed	30	64.0	-	30	7
L1879.350-CC	Closed	35	74.5	-	32	7
L1879.400-CC	Closed	40	84.0	-	37	7
L1879.200-CO	Open	20	50.1	32	23	7
L1879.250-CO	Open	25	55.0	37	25	7
L1879.300-CO	Open	30	64.0	42	30	7
L1879.350-CO	Open	35	74.5	47	32	7
L1879.400-CO	Open	40	84.0	52	37	7

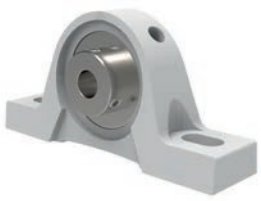
Thermoplastic Pillow Blocks

Overview

Bearing Supports from Automotion Components

- Thermoplastic self-aligning unit, with stainless steel insert
- For diameters of shaft 20-40mm
- White PBT resin (prevents retention of dust, mould and bacteria)
- Lubricated with food grade grease (USDA H1 approved)
- Temperature range -15°C to +90°C
- Excellent chemical resistance (acids, bases, organic solvents, salts etc.)

Pillow block



Four point flange



Two point flange



- Can be used in wet or chemical environments such as bottling lines, food or pharmaceutical production lines, outdoor applications etc.
- Use with h6 tolerance shafts

Installation

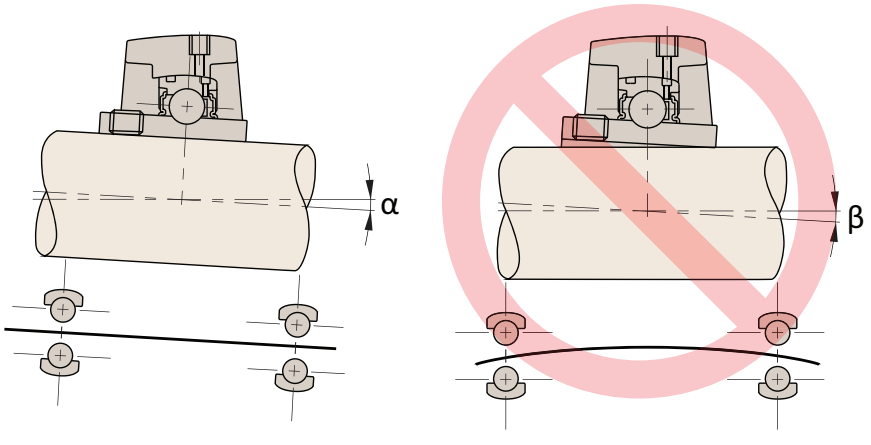
- Check clean and flat surface
- Tighten retaining screws, diagonal method
- Check shaft can be rotated by hand
- Check no distortion

Tightening of stainless steel fitting screws

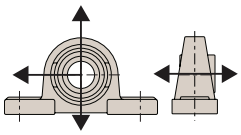
M6 thread, torque to 3.9 Nm
M8 thread, torque to 8.3 Nm

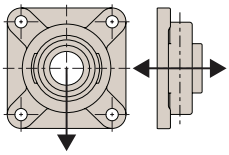
Permissible misalignment

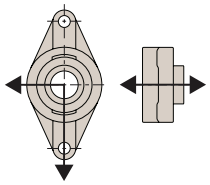
- With provision for re-lubrication, the bearing can swivel inside the housing up to an angle **α** of about 5° (the groove is aligned with the lubricator hole) and 8° without provision for re-lubrication
- Pay attention to the swivelling of the bearing in the bearing unit. Permanent swivelling induced by rotational deflection of the shaft would cause wear of the housing and is therefore not allowable (angle ß)
- The maximum allowable values are those for deep-groove ball bearings corresponding to the same shaft diameter (maximum angle ß < 0.5)



ov-bearing-support-units-thermoplastic-pillow-blocks-overview-lnh-Updated-02-03-2023

Part no.	Max. rpm (h_6 shaft)	Loads	Max. static bearing radial load C_o kN	Max. housing load capacity at 20°C* kN ↓	↑	←	Max. axial load kN ↔	Screw size
L1876.020	7,400		5,3	1,7	1,4	1,3	0,7	M10
L1876.025	6,200		6,3	2,0	1,5	1,3	0,9	M10
L1876.030	5,300		9,0	2,5	1,8	2,0	1,3	M10
L1876.035	4,500		12,3	3,0	2,1	2,1	1,6	M12
L1876.040	4,000		14,3	3,0	2,1	2,1	1,6	M12

Part no.	Max. rpm (h_6 shaft)	Loads	Max. static bearing radial load C_o kN	Max. housing load capacity at 20°C* kN ↓	Max. axial load kN ↔	Screw size
L1877.020	7,400		5,3	1,6	0,7	M10
L1877.025	6,200		6,3	1,7	0,7	M10
L1877.030	5,300		9,0	2,3	1,1	M10
L1877.035	4,500		12,3	3,1	1,3	M12
L1877.040	4,000		14,3	3,1	1,5	M12

Part no.	Max. rpm (h_6 shaft)	Loads	Max. static bearing radial load C_o kN	Max. housing load capacity at 20°C* kN ←	↓	Max. axial load kN ↔	Screw size
L1877.020	7,400		5,3	2,2	0,9	0,7	M10
L1877.025	6,200		6,3	2,0	1,5	0,7	M10
L1877.030	5,300		9,0	2,9	1,6	1,0	M10
L1877.035	4,500		12,3	3,2	2,0	1,4	M12
L1877.040	4,000		14,3	3,2	2,0	1,4	M12

*at 20° continuous load

Characteristics of thermoplastic PBT

Properties	Unit	
Tensile strength at yield	N/mm²	115
Elongation at yield	%	3
Tensile modulus	N/mm²	8,000
Flexural yield strength	N/mm²	170
Flexural modulus	N/mm²	7,000
Notched impact strength Charpy	k/m²	12
Notched impact strength IZOD	J/m	100
Hardness H358/10	N/mm²	104
Hardness H358/60	N/mm²	101
Hardness Rockwell	-	L102

Thermal	Unit	
Oxygen index	%	19
Flame retardancy (1/6mm thickness)	-	94HB
Heat resistance: Vicat, method B	°C	210-215
Thermal conductivity	W/m²C	0,19
Mould shrinkage flow	%	0,4-0,6
Cross flow direction	%	0,6-0,8

Physical	Unit	
Water absorption: Saturation for 24h at 23°C	%	0,06

ov-bearing-support-units-thermoplastic-pillow-blocks-technical-housing-rnh-Updated-02-03-2023

Chemical Resistance of PBT

Thermoplastic bearing units

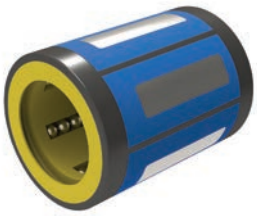
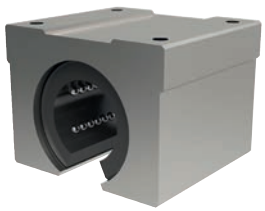


For units L1876 - L1878

All data expressed in terms of % retention of tensile strength.

Chemical environment	°C	Immulsion days	% retention of strength
Acids			
10% Hydrochloric	23	30	89
	23	90	85
	23	180	82
10% Sulphuric	23	30	97
	23	90	94
	23	180	90
36% Sulphuric (battery)	23	30	97
	23	180	96
	66	30	84
	66	180	35
10% Acetic	23	30	89
	23	180	88
Bases			
5% Potassium hydroxide	23	30	83
	23	90	10
10% Sodium hydroxide	23	30	2
	23	180	-
10% Ammonium hydroxide	23	30	90
	23	90	87
	23	180	58
Salts			
10% Zinc chloride	25	30	97
	25	90	94
10% Sodium hydroxide	25	30	98
	25	90	98
10% Sodium chloride	25	30	97
	25	90	97
Organic solvents			
Ethyl alcohol	23	30	99
	23	180	94
Methyl alcohol	23	30	91
	23	180	76
Isopropyl-alcohol	23	30	100
	23	180	100
Isopropyl-alcohol & water (50/50)	23	30	93
	23	180	96
Turpentine	23	30	66
	23	180	92
Acetone	23	30	90
	23	180	63

ov-bearing-support-units-chemical-resistance-pbt-lnh-Updated-02-03-2023

L1706  Closed, open + adjustable	**L1712**  Double compliment versions	**L1715**  Compact versions
L1718  Front flanged standard	**L1723**  Front flanged double compliment	**L1731**  Centre flanged double compliment
L1740  Superball bushings	**L1750**  Closed linear carriage	**L1753**  Open linear carriage

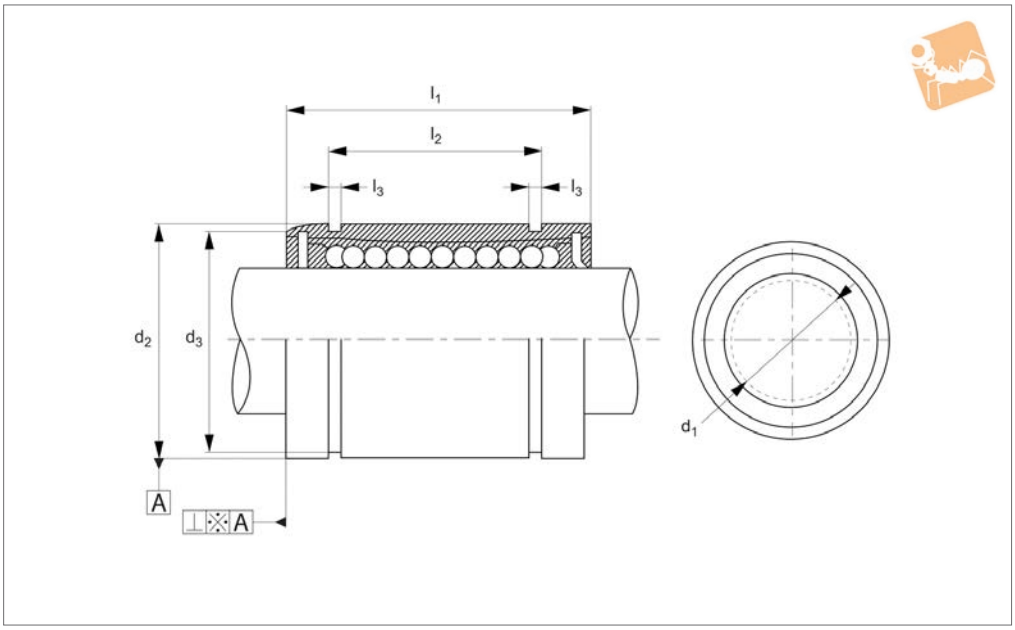
For full technical information, see end of product section.

Linear Ball Bushings from Automotion Components

Closed Linear Ball Bushings



L1706



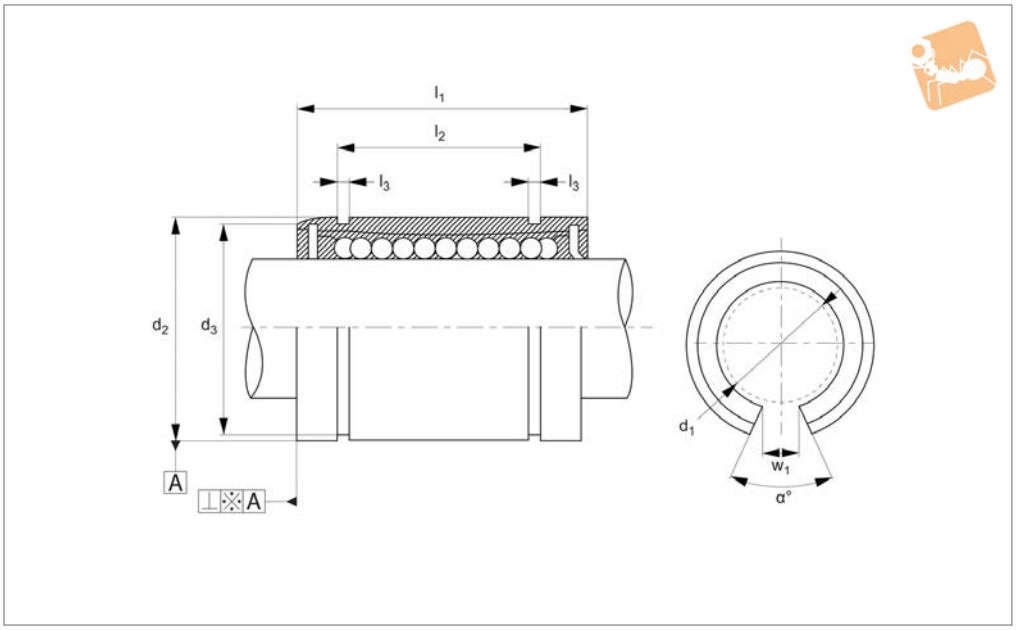
Material
Hardened and ground body from bearing steel. Single body resin retainer (POM). Supplied with nitrile rubber (NBR) end-seals -UU as standard.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.

Perpendicularity .A is better than 15µ.
For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range: -20°C to +80°C.
Steel ball retainers can be supplied for higher temperature applications up to 120°C - with no end seals. Please advise at time of ordering if this is required.

Tips
Superball linear bearings are also available (3 x load rating of standard bushings and 27 x travel life see part nos. L1740 and L1742.)
Nickel plated version with stainless steel balls (for corrosion resistance) on request - or stainless steel version no. L1709.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1 +0|-0.3	d_3	l_2 +0|-0.3	l_3	No. of ball circuits	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1706.005	5	12	22	11.5	14.5	1.10	4	200	260	12
L1706.006-1	6	12	19	11.5	13.5	1.10	4	200	260	8
L1706.008	8	16	25	15.2	16.5	1.10	4	260	400	20
L1706.010-1	10	19	29	18.0	22.0	1.30	4	370	540	30
L1706.012	12	22	32	21.0	22.9	1.30	4	410	590	41
L1706.016	16	26	36	24.9	24.9	1.30	5	770	1170	57
L1706.020	20	32	45	30.3	31.5	1.60	5	860	1370	91
L1706.025	25	40	58	37.5	44.1	1.85	6	980	1560	215
L1706.030	30	47	68	44.5	52.1	1.85	6	1560	2740	325
L1706.040	40	62	80	59.0	60.6	2.15	6	2150	4010	705
L1706.050	50	75	100	72.0	77.6	2.65	6	3820	7930	1130
L1706.060	60	90	125	86.5	101.7	3.15	6	4700	9990	2220





L1707

Material
Hardened and ground body from bearing steel. Single body resin retainer (POM). Supplied with nitrile rubber (NBR) end-seals -UU as standard.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6. Perpendicularity . A is better than 15µ. Temperature range: -20°C to +80°C. Steel ball retainers can be supplied for higher temperature applications up to +120°C - with no end seals. Please advise at time of ordering if this is required.

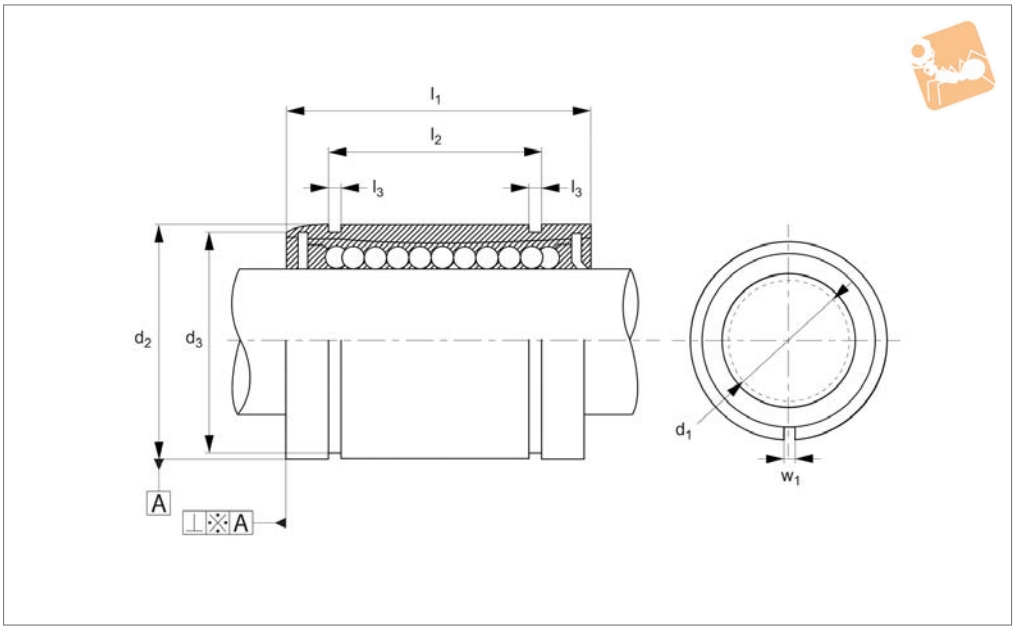
Tips
d_2 is the dimension before the bush has been slotted. Superball linear bearings are also available (3 x load rating of standard bushings and 27 x travel life see part nos. L1740 and L1742.)

Order No.	d_1 tol. h6	d_2 tol. h6	l_1 +0|-0.3	d_3	l_2 +0|-0.3	l_3	w_1	α °	No. of ball circuits	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1707.012	12	22	32	21.0	22.9	1.30	7.3	78°	3	410	590	41
L1707.016	16	26	36	24.9	24.9	1.30	10.0	78°	4	770	1170	57
L1707.020	20	32	45	30.3	31.5	1.60	10.0	60°	5	860	1370	91
L1707.025	25	40	58	37.5	44.1	1.85	12.5	60°	6	980	1560	215
L1707.030	30	47	68	44.5	52.1	1.85	12.5	50°	6	1560	2740	325
L1707.040	40	62	80	59.0	60.6	2.15	16.8	50°	6	2150	4010	705
L1707.050	50	75	100	72.0	77.6	2.65	21.0	50°	6	3820	7930	1130
L1707.060	60	90	125	86.5	101.7	3.15	27.2	54°	6	4700	9990	2220

Adjustable Linear Ball Bushings



L1708



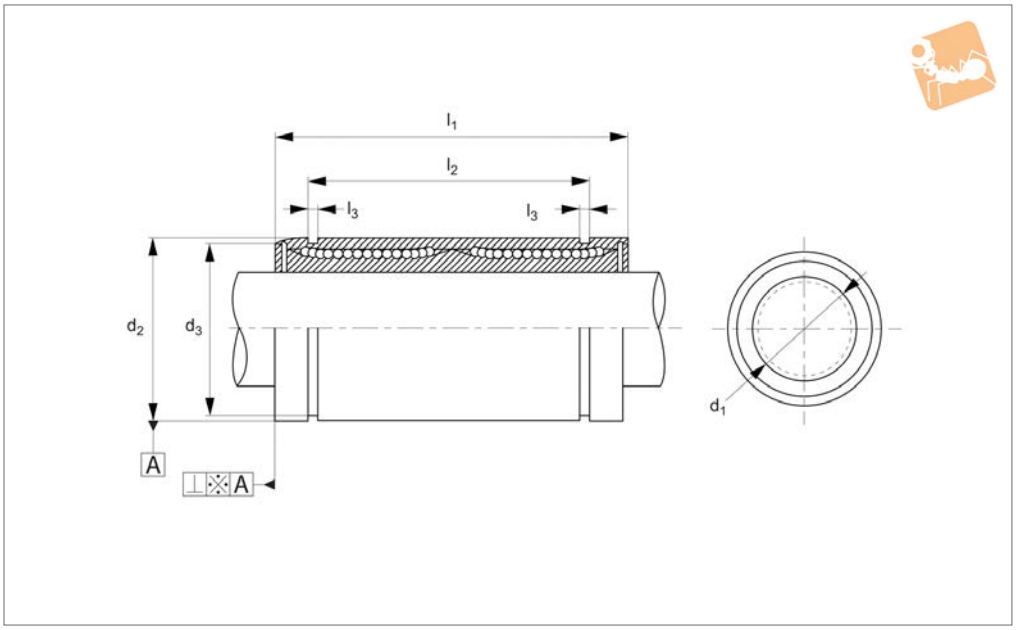
Material
Hardened and ground body from bearing steel. Single body resin retainer (POM). Supplied with nitrile rubber (NBR) end-seals -UU as standard.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6. Perpendicularity TA is better than 15µ.

For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range: -20°C to +80°C.
Steel ball retainers can be supplied for higher temperatures applications up to 120°C - with no end seals. Please advise at time of ordering if this is required.

Tips
d_2 is the dimension before the bush has been slotted. Superball linear bearings are also available (3 x load rating of standard bushings and 27 x travel life see part nos. L1740 and L1742.)
Nickel plated version with stainless steel balls (for corrosion resistance) on request - or stainless steel version no. L1711.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1	d_3	l_2	l_3	w_1	No. of ball circuits	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1708.005	5	12	22	11.5	14.5	1.10	1.0	4	200	260	12
L1708.006-1	6	12	19	11.5	13.5	1.10	1.0	4	200	260	8
L1708.008	8	16	25	15.2	16.5	1.10	1.0	4	260	400	20
L1708.010-1	10	19	29	18.0	22.0	1.30	1.0	4	370	540	30
L1708.012	12	22	32	21.0	22.9	1.30	1.5	4	410	590	41
L1708.016	16	26	36	24.9	24.9	1.30	1.5	5	770	1170	57
L1708.020	20	32	45	30.3	31.5	1.60	2.0	5	860	1370	91
L1708.025	25	40	58	37.5	44.1	1.85	2.0	6	980	1560	215
L1708.030	30	47	68	44.5	52.1	1.85	2.0	6	1560	2740	325
L1708.040	40	62	80	59.0	60.6	2.15	3.0	6	2150	4010	705
L1708.050	50	75	100	72.0	77.6	2.65	3.0	6	3820	7930	1130
L1708.060	60	90	125	86.0	101.7	3.15	3.0	6	4700	9990	2220





L1712

Material
Hardened and ground body from bearing steel.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end-seals -UU as standard.

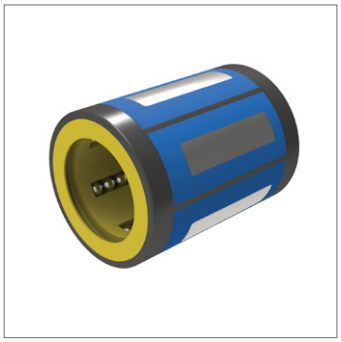
Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.
Perpendicularity A is better than 15µ.
Temperature range: -20°C to +80°C.
Steel ball retainers can be supplied for higher temperature applications up to +120°C - with no end seals. Please advise at time of ordering if this is required.

Tips
Nickel plated version with stainless steel balls (for corrosion resistance) on request - or stainless steel version no. L1713.

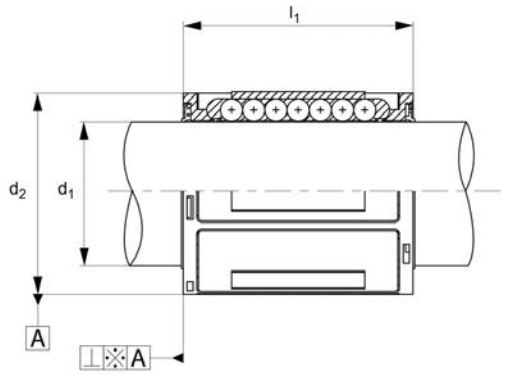
Order No.	d_1 tol. h6	d_2 tol. h6	l_1	d_3	l_2	l_3	No. of ball circuits	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1712.008	8	16	45	15.2	33.0	1.10	4	430	780	31
L1712.012	12	22	57	21.0	45.8	1.30	4	650	1200	80
L1712.012-1	12	22	61	21.0	45.8	1.30	4	830	1600	80
L1712.016	16	26	70	24.9	49.8	1.30	5	1230	2350	145
L1712.020	20	32	80	30.3	61.0	1.60	5	1400	2750	180
L1712.025	25	40	112	38.0	82.0	1.85	6	1560	3140	440
L1712.030	30	47	123	44.5	104.2	1.85	6	2490	5490	580
L1712.040	40	62	154	59.0	121.2	2.15	6	3430	8040	1170
L1712.050	50	75	192	72.0	155.2	2.65	6	6080	15900	3100
L1712.060	60	90	211	86.5	170.0	3.15	6	7650	20000	3500

Compact Linear Ball Bushings

Compact size



L1715



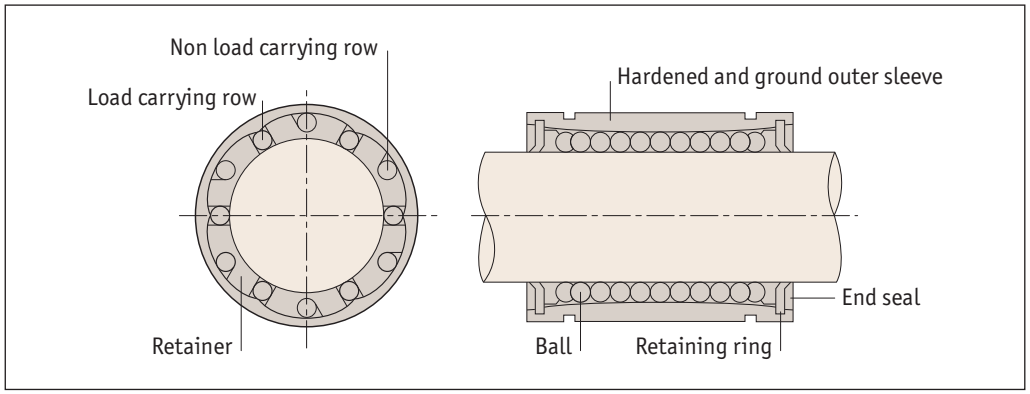
Material
Durable plastic body with corrosion resistant hardened steel raceway segments.

Technical Notes
Advantages - Low cost, compact construction, press fit, oil resistant seal, corrosion resistant housing.
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.
Perpendicularity A is better than 15µ.
Temperature range: -20°C to +80°C.

Tips
Easy assembly by press fitting, no additional retention is required when fitted into a bore with a tolerance of J6 or J7.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1 ±0.2	No. of ball circuits	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1715.008	8	15	24	4	350	260	6.9
L1715.010	10	17	26	4	416	320	8.4
L1715.012	12	19	28	4	480	385	11.3
L1715.014	14	21	28	5	640	440	13.3
L1715.016	16	24	30	5	925	625	18.3
L1715.020	20	28	30	6	1165	790	22.1
L1715.025	25	35	40	6	2100	1370	51.2
L1715.030	30	40	50	6	2870	2100	70.6
L1715.040	40	52	60	7	5200	4100	90.2
L1715.050	50	62	70	8	6620	5600	110.2

Linear ball bushings



Applications

- Computers and peripheral equipment.
- Recording equipment.
- Linear motion systems.
- Multi-axis drilling machine.
- Printing machines.
- Food packaging machines.
- Punching presses.
- Tool grinders.
- Assembly systems.
- Card selectors.

Interchangeability

Our linear bushing systems are designed to have full interchangeability, with other manufacturers' parts. **For shafting see part numbers L1770 to L1785.**

High precision retainer

The single body retainer guides 4-6 ball circuits. It precisely guides the balls with a smooth motion.

Tolerance of housing bore

Normal fit is standard, pressed fit is for without clearance.

Type	Case	
Part no.	Normal fit	Pressed fit
L1706 to L1733	H7	K6, J6
L1706...$^{-1}$ to L1733...$^{-1}$	H7	J7

Rigid outer sleeve

The hardened and precisely ground outer sleeve is made of bearing steel.

L1750 bushing carriages

Consists of light aluminium case and L1706 type linear bushing, so the installation can be finished simply by bolting. Longer life can be obtained by adjusting the orientation of the ball circuits in the linear carriage element against the direction of load.

Tolerance of shaft

Type	Shaft	
Part no.	Normal fit	Tight fit
L1706 to L1733	h6	k6
L1706...$^{-1}$ to L1733...$^{-1}$	f6, g6	h6

Technical Information

Load rating important information



Basic dynamic load rating C

The basic dynamic load rating is defined as the constant load both in direction and magnitude under which a group of identical linear bushings are individually operated. 90% of the units can travel 50Km without failing due to rolling contact fatigue.

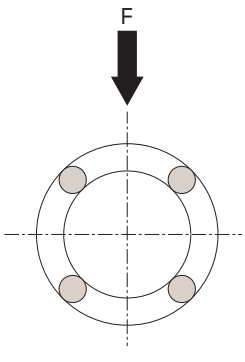
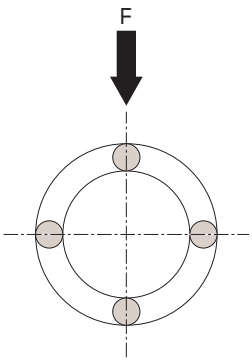
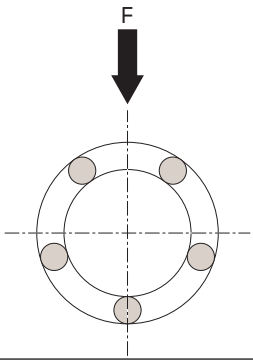
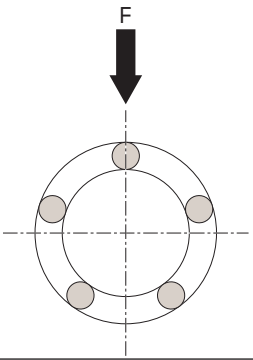
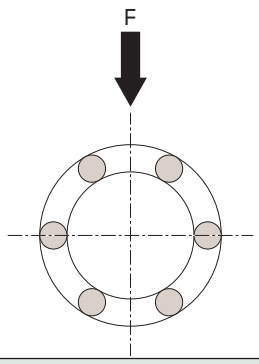
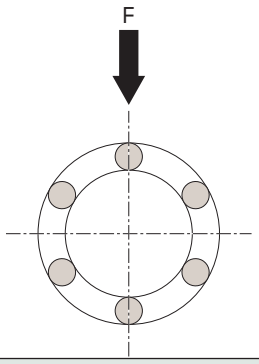
Basic static load rating C_0

If a linear bushing is subject to an excessive load or impact, a permanent deformation occurs between the raceway and the rolling element. The basic static load rating is defined as the static load that gives a prescribed constant contact stress at the centre of the contact area between the rolling element and raceway receiving the maximum load.

Relationships between load ratings and the position of ball circuits

Load ratings of linear bushing are affected by the position of the ball circuits as shown below.

Load ratings and orientation of balls.

No of ball rows	Orientation of balls	
	Maximum load rating	Minimum load rating
4		
	F = 1.41 x C	F = C
5		
	F = 1.46 x C	F = C
6		
	F = 1.26 x C	F = C

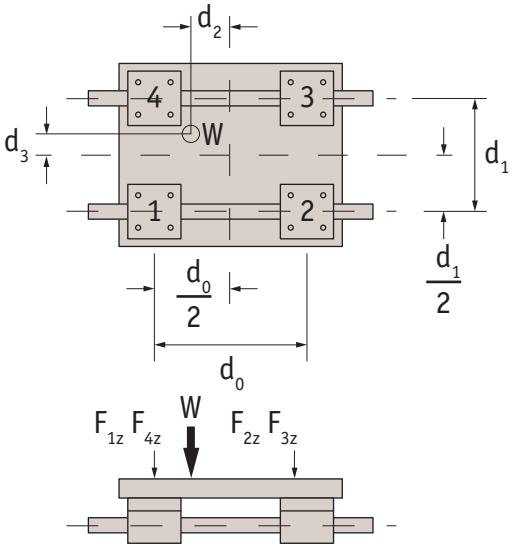
When designing a linear motion system it is necessary to consider how the application will affect performance. The following examples demonstrate how the position of the load and the centre of gravity can influence product selection. When evaluating your application, review each of the forces acting on your system and determine the product that best suits your needs.

$$F_{1z} = \frac{W}{4} + \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right) - \left(\frac{W}{2} \cdot \frac{d_3}{d_1}\right)$$

$$F_{2z} = \frac{W}{4} - \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right) - \left(\frac{W}{2} \cdot \frac{d_3}{d_1}\right)$$

$$F_{3z} = \frac{W}{4} - \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right) + \left(\frac{W}{2} \cdot \frac{d_3}{d_1}\right)$$

$$F_{4z} = \frac{W}{4} + \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right) + \left(\frac{W}{2} \cdot \frac{d_3}{d_1}\right)$$



Horizontal application

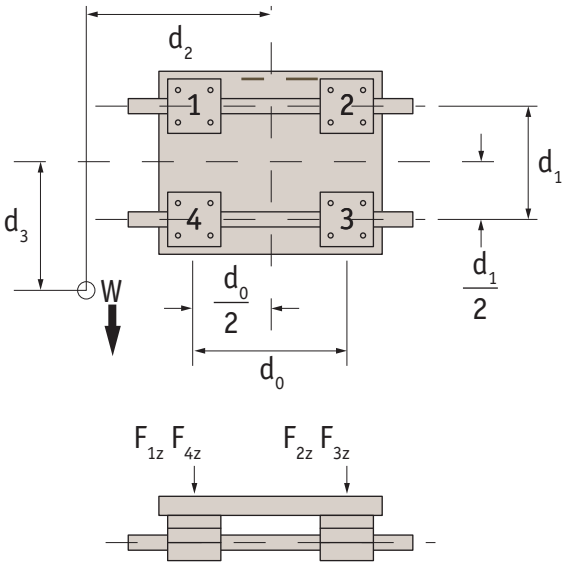
For uniform speed or when stopped.

$$F_{1z} = \frac{W}{4} + \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right) - \left(\frac{W}{2} \cdot \frac{d_3}{d_1}\right)$$

$$F_{2z} = \frac{W}{4} - \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right) - \left(\frac{W}{2} \cdot \frac{d_3}{d_1}\right)$$

$$F_{3z} = \frac{W}{4} - \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right) + \left(\frac{W}{2} \cdot \frac{d_3}{d_1}\right)$$

$$F_{4z} = \frac{W}{4} + \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right) + \left(\frac{W}{2} \cdot \frac{d_3}{d_1}\right)$$



Horizontal application

For uniform speed or when stopped.

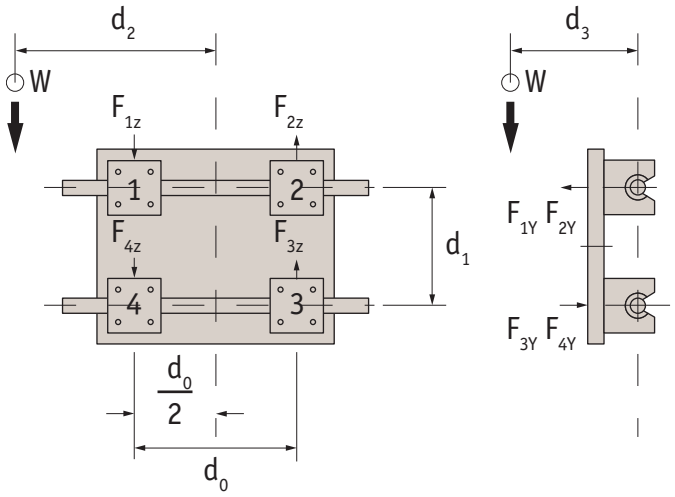
ov-linear-ball-bushings-load-rating-b-rnh - Updated - 22-02-2023

Side mounted application

For uniform speed or when stopped.

$$F_{1Y} \sim F_{4Y} = \left(\frac{W}{2} \cdot \frac{d_3}{d_0}\right) \qquad F_{1Z} = F_{4Z} = \frac{W}{4} + \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right)$$

$$F_{2Z} = F_{3Z} = \frac{W}{4} + \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right)$$



Vertical application

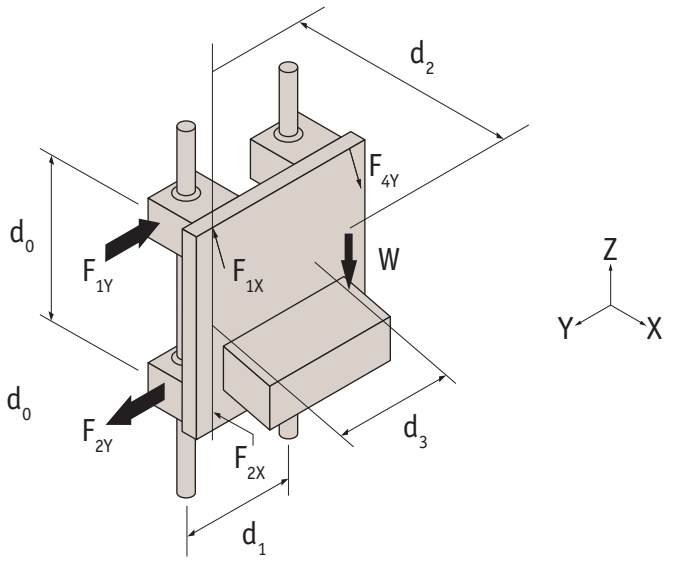
For uniform speed or when stopped. On start up/stop the load varies due to inertia in the system.

$$F_{1X} \sim F_{4X} = \left(\frac{W}{2} \cdot \frac{d_2}{d_0}\right)$$

$$F_{1Y} \sim F_{4Y} = \left(\frac{W}{2} \cdot \frac{d_3}{d_0}\right)$$

$$F_{1X} + F_{4X} \sim F_{2X} + F_{3X}$$

$$F_{1Y} + F_{4Y} \sim F_{2Y} + F_{3Y}$$



ov-linear-ball-bushings-load-rating-c-lmh - Updated - 22-02-2023

Friction

The coefficient of friction (μ) of Automotion Components ball bushings without seals is very low at approximately 0.001 to 0.003. When seals are used to retain lubricant or to prevent entry of foreign particles, friction resistance must be taken into account for determining total frictional drag. This protection measure adds to the frictional drag of the bearing system. There is a fine line between minimizing frictional drag and maximizing containment protection which is controlled by the addition or removal of seals, wipers or scrapers.

Linear bushings are used with grease or oil lubrication but in some cases can be used without any lubrication.

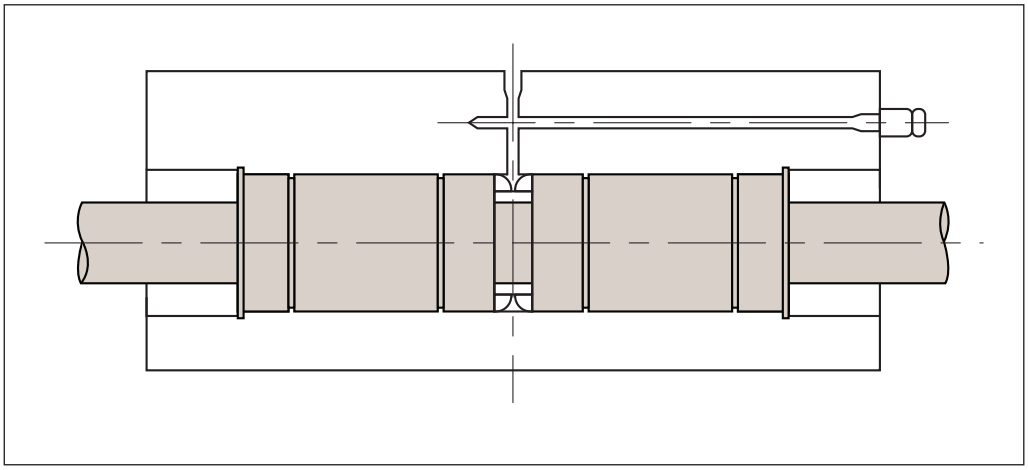
Grease lubrication

Before applying the grease, the anti-corrosive oil must be removed with kerosene or an organic solvent. The grease must be applied when the bushing is dry. Grease must be applied directly on the balls for linear bushing with seals. Lithium soap of viscosity mark (JIS No.2) is recommended for use.

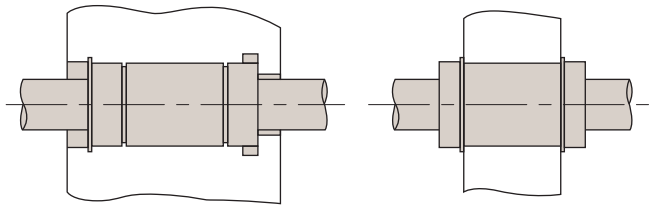
Oil lubrication

There is no need to to remove the anti-corrosive oil when oil is used for lubrication. ISO viscosity grade VG15~100 oil is usually used according to the temperature ranges below. Drop the oil onto the shaft for lubrication, or supply it through an oil hole provided on the housing (see illustration below). However, dropping lubrication cannot be used on linear bushings with seals as the seals remove the oil.

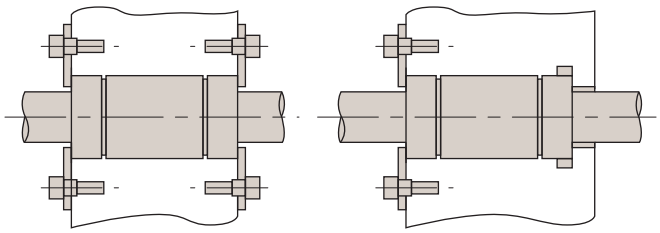
Operating temperature	Viscosity
-30°C to +50°C	VG 15 to 46
+50°C to +80°C	VG 46 to 100



Standard type



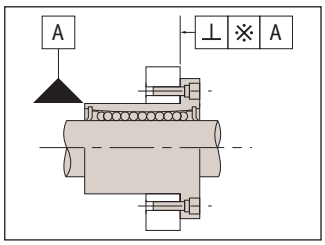
Mounted with circlips

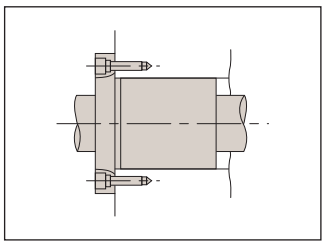


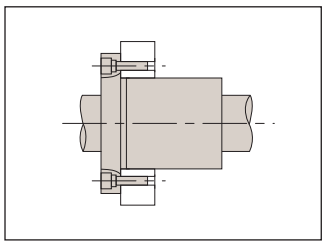
Mounted with adapter plates

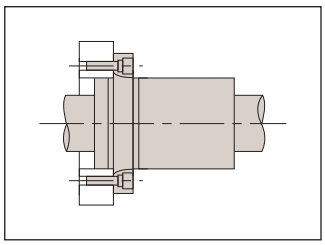
For shaft Ø	Circlip	
	External (for Shaft)	Internal (for Bore)
5	P0380.012-A2	P0381.012-A2
6	P0380.012-A2	P0381.012-A2
8	P0380.016-A2	P0381.016-A2
10	P0380.019-A2	P0381.019-A2
12	P0380.022-A2	P0381.022-A2
16	P0380.026-A2	P0381.026-A2
20	P0380.032-A2	P0381.032-A2
25	P0380.040-A2	P0381.040-A2
30	P0380.048-A2	P0381.047-A2
40	P0380.065-A2	P0381.062-A2
50	P0380.075-A2	P0381.075-A2
60	P0380.090-A2	P0381.090-A2

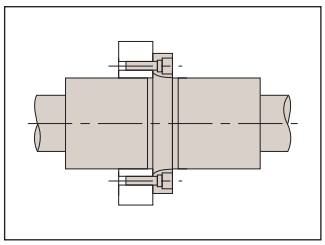
Flanged type









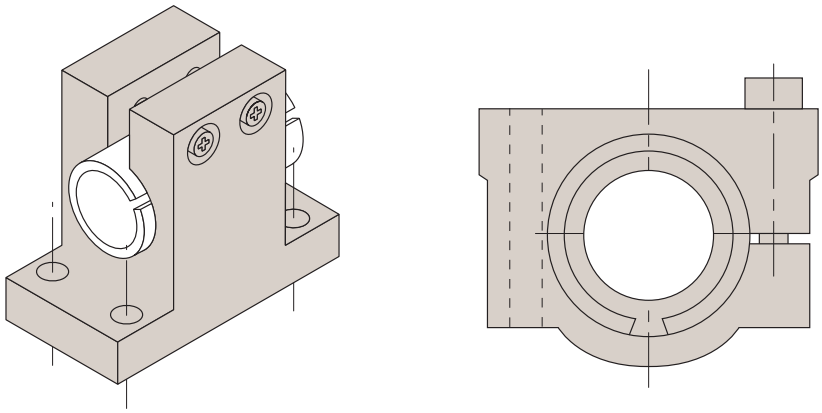


See part tolerances for perpendicularity accuracy ⊥ when outer sleeve is used as datum for installation.

Adjustable type bearings

Adjustment of clearance (for adjustable type bearings and shafts), is achieved with an adjustable housing assembly (as shown below). In this case, the slotted side of linear bushing should be located at 90° to the open side of housing for equal radial deformation.

Mounting of adjustable type bearing



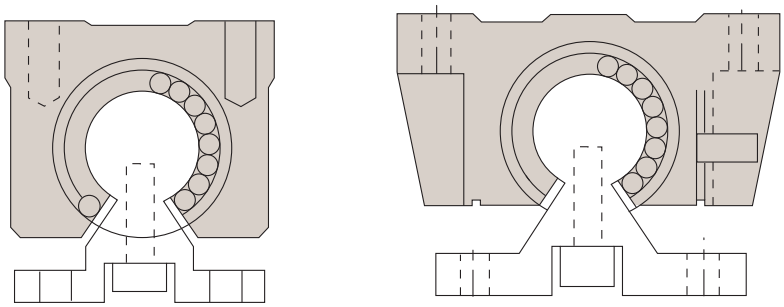
When moment load applies

External loads should be distributed uniformly on a linear bushing. When moment loads are applied, two or more linear bushings should be used on one shaft, and the distance between the two linear bushings should have adequate spacing. Calculate the equivalent load when the moment loads are applied and choose the correct linear bushing.

Open type bearings

Open type bearings can be used with a clearance adjustable housing as shown below. Light preload is applied for normal use, heavy preload should be avoided.

Mounting of open type bearing

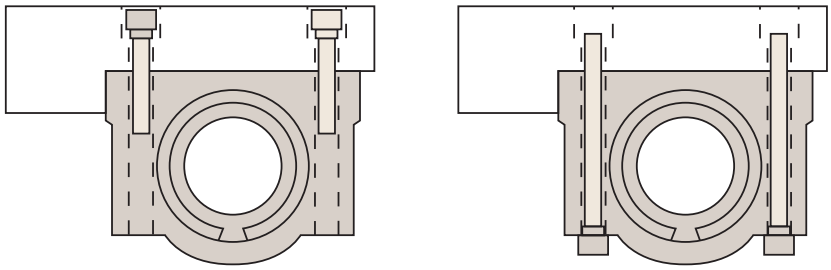


Unflanged Flanged

L1750 Bushing carriages

L1750 carriages can be mounted from both the top or the bottom, minimising assembly time.

Mounting of case unit



Fixing holes

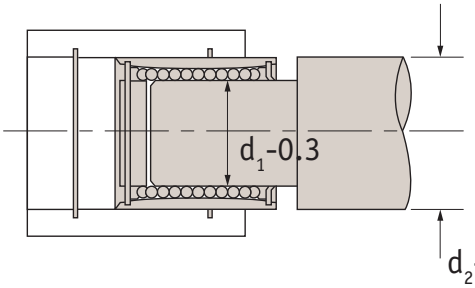
Carriage fixing holes are threaded from the top a certain distance down. Fixing holes from the bottom are through holes so the screw size when mounting from below needs to be smaller than the thread size if you weremounting from the top.



Application tips

For mounting a standard type linear bushing into a housing, a jig should be used to avoid directly striking the outer sleeve or seal during installation.

Mounting into housing

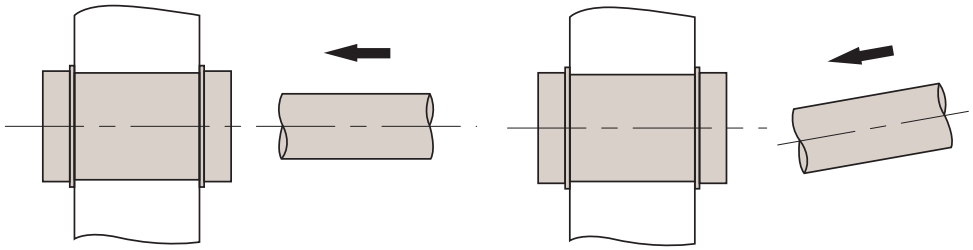


d_1: Shaft diameter
d_2: Housing bore diameter

Insertion of shaft

Care must be taken when inserting a shaft into a linear bushing. If the shaft is inserted incorrectly, the ball retaining cage may be damaged and the balls loosened from position.

Insertion of shaft into linear bushing

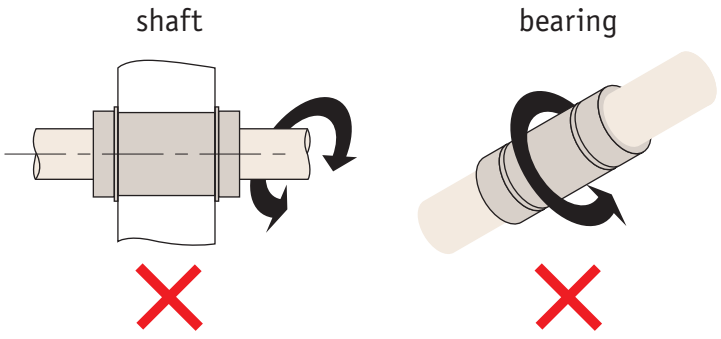


Correct

Incorrect

Rotational motion prohibited

Linear bushing are not suitable for rotational motion. If the linear bushing is exposed to rotational motion it may lead to unexpected accidents.



ov-linear-ball-bushings-installation-data-c-lmh - Updated - 22-02-2023

Static safety factor f_s

A linear motion system may receive an unpredictable external force due to vibration or impact while it is at rest or in motion, or inertia as a result of starting and stopping. It is, therefore, necessary to consider the static safety factor against operating loads. The static safety factor (f_s) indicates the ratio of a linear motion system load carrying capacity (basic static load rating, C_0) to the load exerted thereon.

$$f_s = \frac{C_0}{P} \quad \text{or} \quad f_s = \frac{M_0}{M}$$

f_s = Static safety factor
C_0 = Basic static load rating (N)
M_0 = Static permissible moment (Nmm)
P = Calculated load (N)
M = Calculated moment (Nmm)

To calculate a load exerted on the linear motion system, the mean load for calculating the service life and the maximum load for calculating the static safety factor must be obtained in advance. A system can receive unexpected excessive load when it is subject to frequent starts and stops, placed under machining loads, or when a severe moment is applied by overhanging loads. When selecting the correct type of a linear motion system for your application, be sure that the type you are considering can bear the maximum possible load when stopped and in operation. Both tables below specify the standard values for the static safety factors.

Machine used	Loading conditions	f_s Lower limit
Ordinary industrial machine	No vibration or impact	1,0 ~ 1,3
	Vibration and/or impact	2,0 ~ 3,0
Machine tool	No vibration or impact	1,0 ~ 1,5
	Vibration and/or impact	2,5 ~ 7,0

For large radial loads

$$\frac{f_h \cdot f_t \cdot f_c \cdot C_0}{P} \geqslant f_s$$

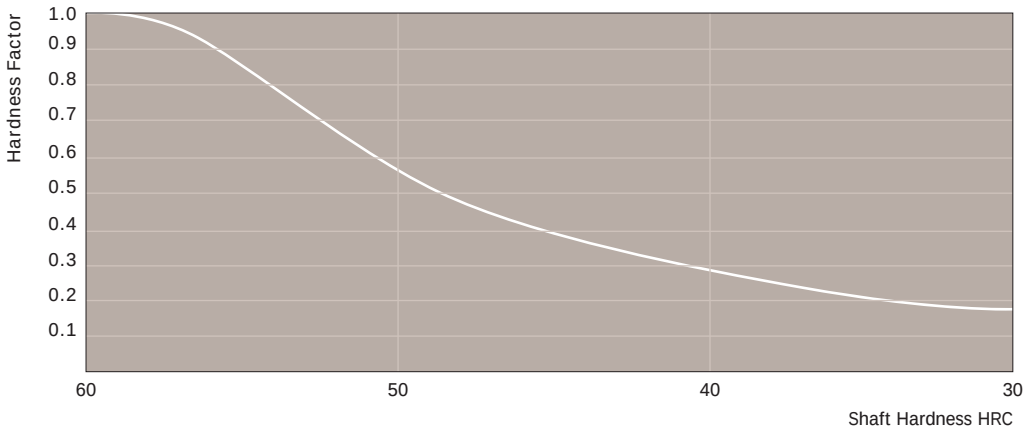
C_0 = Basic static load rating (N)
f_h = Hardness factor
f_c = Contact factor
P = Calculated load (N)
f_t = Temperature factor

Linear Ball Bushings from Automotion Components



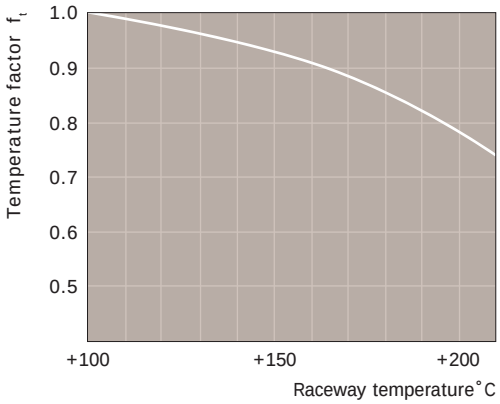
Hardness factor f_h

To achieve the optimum load rating of the linear ball bushings, the shaft hardness must be 58 to 64 HRC. At a hardness below this range, the basic dynamic and static load ratings decrease. The ratings must therefore be multiplied by the respective hardness factors (f_h).



Temperature factor f_t

For linear bushings used at ambient temperatures of over 100˚C, a temperature factor must be taken into consideration.
For higher than 80˚C applications, the seals, end plates, and retainer must be changed for high temperature specifications. (Temperature range: -20˚C - +80˚C). Please note that the selected linear bushing in this case must be a model with high temperature specifications.



Contact factor f_c

When multiple linear bushings are used moments and mounting surface precision will affect operation, making it difficult to achieve uniform load distribution. In this case, multiply the basic load rating (C or C_0) by a contact factor selected from the table.

Number of linear bushing on a shaft	Contact factor f_c
2	0.81
3	0.72
4	0.66
5	0.61
Over 6	0.60
In normal use	1.00

Operating conditions f_w

Some machines may cause vibration. It is particularly difficult to determine the magnitude of vibration that develops during high-speed operation, as well as that of impact during repeated starting and stopping and stopping in normal use. Therefore, where the effects of speed and vibration are estimated to be significant, divide the basic dynamic load rating (C) by a load factor selected from the table.

Operating conditions		Load factor f_w
Load conditions	Speed	
No impact and vibration	Under 15m/min	1.0~1.5
Slight impact and vibration	Under 60m/min	1.5~2.0
Considerable impact and vibration	Over 60m/min	2.0~4.0

ov-linear-ball-bushings-factors-that-affect-travel-life-lmh - Updated - 22-02-2023

Linear bushings load ratings and travel life are influenced by load direction, ball circuit orientation, and hardness of the shaft.

Basic dynamic load rating (C) and travel life

The travel life of a linear bushing is determined largely by the quality of the shaft. The basic dynamic load rating is the maximum continuous load that can be applied to the linear bushing with 90% of reliability and achieving over 50km of operation under normal conditions. When calculating the nominal life for 100km, please divide the dynamic load rating C in the data tables by 1.26.

The nominal travel life can be calculated by the following equation.

$$L = \left(\frac{C}{P}\right)^3 \times 50 \qquad L_{100} = \left(\frac{C_{100}}{P}\right)^3 \times 100$$

L = Nominal life in km (standard 50)
L_{100} = Nominal life in km (100)
C = Basic dynamic load rating (at 50km) in Newtons
C_{100} = Dynamic load rating (at 100km) in Newtons $\left(= \frac{C}{1.26}\right)$
P = Applied load (Newtons)

Other factors will affect the life as follows.

$$L = \left(\frac{f_h \times f_t \times f_c}{f_w} \times \frac{C}{P}\right)^3 \times 50 \qquad L_{100} = \left(\frac{f_h \times f_t \times f_c}{f_w} \times \frac{C_{100}}{P}\right)^3 \times 100$$

f_h = Hardness factor
f_t = Temperature factor
f_w = Load factor
f_c = Contact factor

From the above equations, when the stroke and frequency are constant, the travel life can be calculated by the following equation.

Travel life

$$L_n = \frac{L \times 10^6}{2 \times L_S \times n_o \times 60}$$

L_S = Stroke (km)
n_o = Number of strokes per minute
L_n = Travel life
L = Nominal life (km)



Calculation example

The maximum applied load and the travel life are the most important factors for choosing the correct size of linear ball bushings. Below are sample calculations for expected travel life and selection of the correctly sized linear ball bushing.

Working conditions

Applied load (P):	250N
Stroke (L_s):	0,25 m
Number of strokes per minute (n_o):	60
Shaft hardness:	HRC 60 (f_h = 1,0)
Operating speed (V):	$2 \times L_s \times n_o$
	$2 \times 0,25 \times 60$
	30,000 mm/min (f_w = 1,6)

other factors (f_c, f_t) are considered as 1,0

Calculation of expected travel life

Assuming the basic dynamic load rating is based on travel life of 50km and all other factors are 1,0, you choose the linear bushing size for the life required.

Let's try Superball bushing L1740.020 with the above working conditions.

$$L = \left(\frac{1,0 \times 1,0 \times 1,0}{1,6} \times \frac{2,580}{250} \right)^3 \times 50$$

$$= 13,417 \text{ km}$$

$$L_n = \frac{13,417 \times 10^6}{2 \times 0,25 \times 60 \times 60}$$

$$= 7,454 \text{ hours}$$

Choosing the correct linear ball bushing

Let's assume our design travel life is 15,000 hours.

$$L = 15,000 \times 2 \times 0,250 \times 10^{-6} \times 60 \times 60$$

$$= 27,000 \text{ km; and therefore}$$

$$C = \frac{250 \times 1,6}{1,0 \times 1,0 \times 1,0} \times \sqrt[3]{\frac{27,000}{50}}$$

$$= 3,257N$$

Choosing type L1740 and referring to the table, the correct Superball bushing for the above condition is L1740.025 which has 3,800N as the basic dynamic load rating.

ov-linear-ball-bushings-travel-life-b-lnh - Updated - 22-02-2023

Superball linear ball bushings

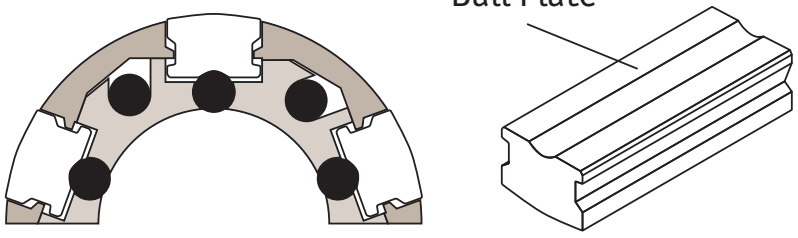
- 3 x the load rating and 27 x the travel life of conventional linear bushings
- Self-aligning feature



Features

Higher load ratings

The uniquely designed ball plate (in the outside diameter of the bushing), is made of hardened steel. The precision ground groove is slightly larger than the ball size, which provides greater contact area between the balls and the ball plate, and as a result, provides 3 x higher load ratings of conventional linear bushings.



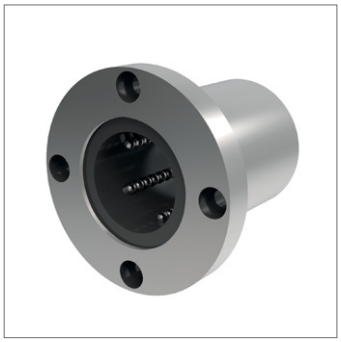
Self-alignment

The ball plate has a convex shape to provide a pivot point at the centre which allows self-alignment up to ±0.5°. This self-alignment capability eliminates any possibility of edge pressure caused by inaccurate machining, errors on mounting, or shaft deflection.

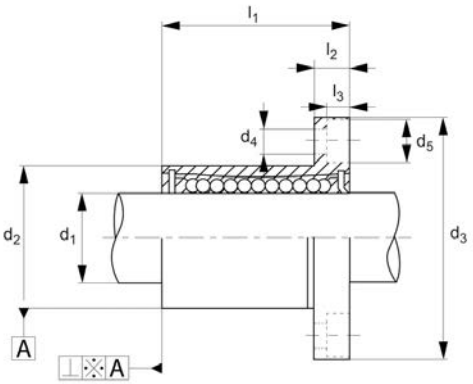
Tolerance of shaft and housing bore

Part no.	Shaft		Housing	
	Shaft Ø d_1	Tol. h6 µ	Housing bore Ø d_2	Tol. H7 µ
L1740.010	10	+0 to - 9	19	+21 to -0
L1740.012	12	+0 to - 11	22	
L1740.016	16		26	
L1740.020	20	+0 to - 13	32	+25 to -0
L1740.025	25		40	
L1740.030	30		47	
L1740.040	40	+0 to - 16	62	+30 to -0
L1740.050	50		75	

Flanged Linear Ball Bushings
circular flange



L1718

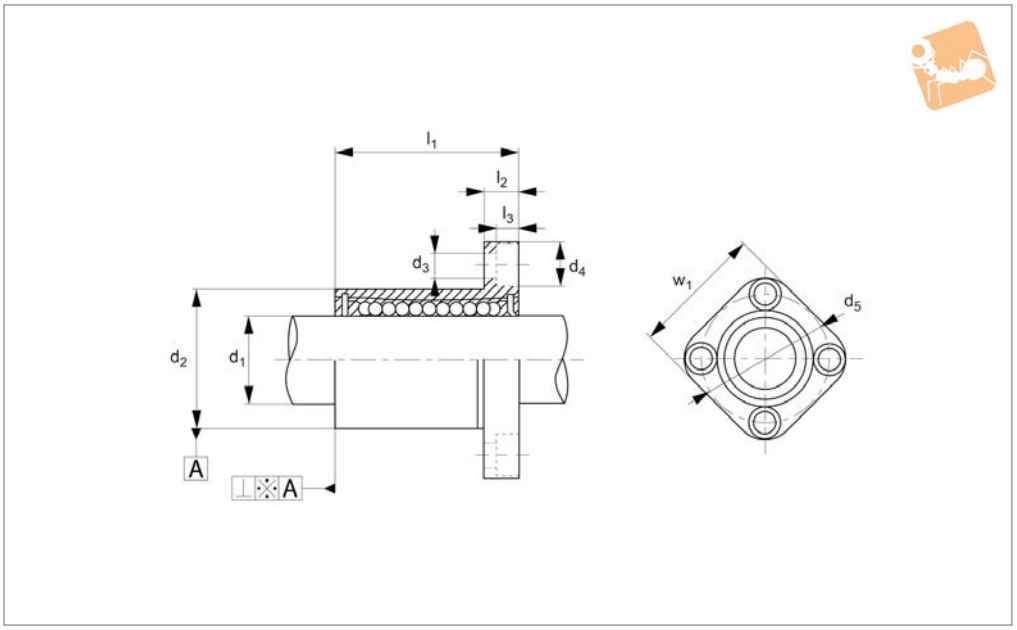


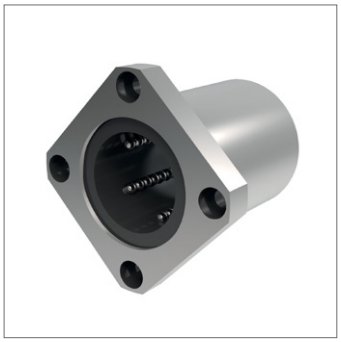
Material
Hardened and ground body from bearing steel.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end-seals -UU as standard.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.
For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range : -20°C to +80°C.
Steel ball retainers can be supplied for higher temperature applications (up to +120°C - with no end seals. Please advise at time of ordering if this is required.

Tips
Nickel plated version with stainless steel balls (for corrosion resistance) on request - or stainless steel version no. L1720.

Order No.	d_1	d_2	l_1	d_3	d_4	d_5	d_6	l_2	l_3	No. of ball circuits	Squareness A µm	Dyn. load C N	Static load C_0 N	Weight g
L1718.006-1	6	12	19	28	3.4	6.5	20	5	3.3	4	12	200	260	26.5
L1718.008	8	16	25	32	3.4	6.5	24	5	3.3	4	12	260	400	44.0
L1718.010-1	10	19	29	40	4.5	8.0	29	6	4.4	4	12	370	540	78.0
L1718.012	12	22	32	42	4.5	8.0	32	6	4.4	4	12	410	590	86.0
L1718.016	16	26	36	46	4.5	8.0	36	6	4.4	5	12	770	1170	120.0
L1718.020	20	32	45	54	5.5	9.5	43	8	5.4	5	15	860	1370	184.0
L1718.025	25	40	58	62	5.5	9.5	51	8	5.4	6	15	980	1560	335.0
L1718.030	30	47	68	76	6.6	11.0	62	10	6.5	6	15	1560	2740	545.0
L1718.040	40	62	80	98	9.0	14.0	80	13	8.6	6	20	2150	4010	1185.0
L1718.050	50	75	100	112	9.0	14.0	94	13	8.6	6	20	3820	7930	1730.0
L1718.060	60	90	125	134	11.0	17.5	112	18	10.8	6	25	4700	9990	3180.0





L1719

Material
Hardened and ground body from bearing steel.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end-seals -UU as standard.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.
For part numbers with^{-1} shaft tolerance required is g6. Temperature range : -20°C to +80°C.
Steel ball retainers can be supplied for higher temperature applications (up to +120°C) - with no end seals. Please advise at time of ordering if this is required.

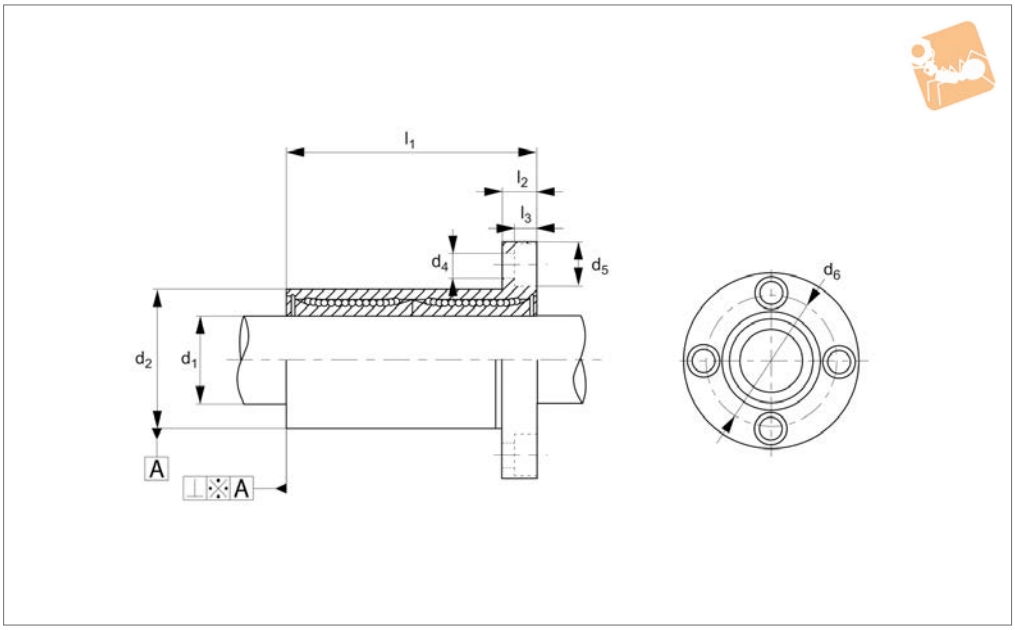
Tips
Nickel plated version with stainless steel balls (for corrosion resistance) on request - or stainless steel version no. L1721.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1	d_3	d_4	d_5	l_2	l_3	No. of ball circuits	w_1	Squareness A µm	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1719.006-1	6	12	19	3,4	6,5	20	5	3,3	4	22	12	200	260	26,5
L1719.008	8	16	25	3,4	6,5	24	5	3,3	4	25	12	260	400	44,0
L1719.010-1	10	19	29	4,5	8,0	29	6	4,4	4	30	12	370	540	78,0
L1719.012	12	22	32	4,5	8,0	32	6	4,4	4	32	12	410	590	86,0
L1719.016	16	26	36	4,5	8,0	36	6	4,4	5	35	12	770	1170	120,0
L1719.020	20	32	45	5,5	9,5	43	8	5,4	5	42	15	860	1370	184,0
L1719.025	25	40	58	5,5	9,5	51	8	5,4	6	50	15	980	1560	335,0
L1719.030	30	47	68	6,6	11,0	62	10	6,5	6	60	15	1560	2740	545,0
L1719.040	40	62	80	9,0	14,0	80	13	8,6	6	75	20	2150	4010	1185,0
L1719.050	50	75	100	9,0	14,0	94	13	8,6	6	88	20	3820	7930	1730,0
L1719.060	60	90	125	11	17,5	112	18	10,8	6	106	25	4700	9990	3180,0

Long Flanged Linear Ball Bushings
circular flange



L1722

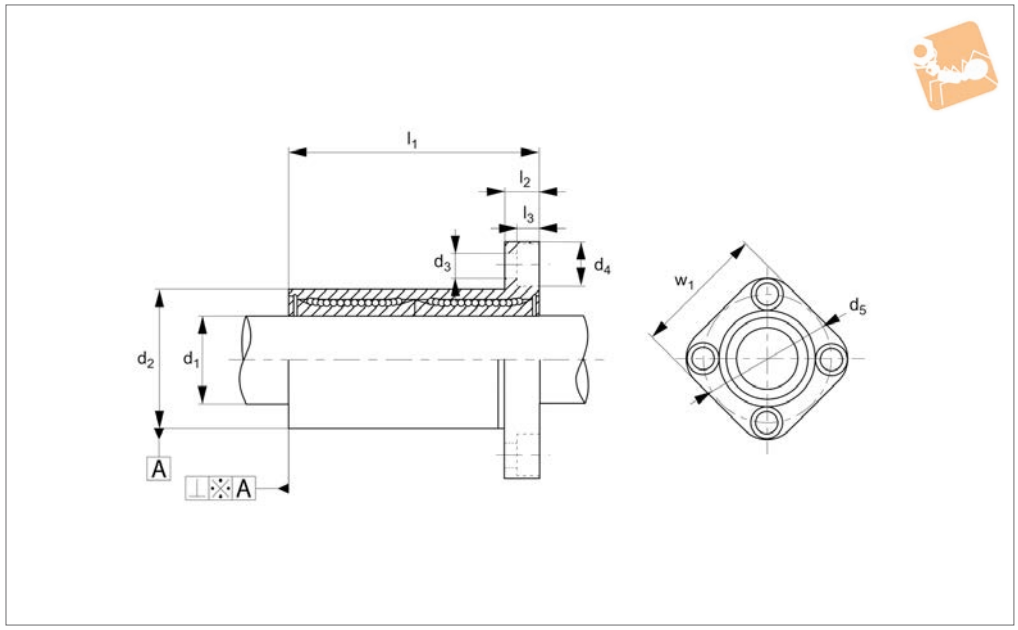


Material
Hardened and ground body from bearing steel.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end-seals -UU as standard.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6. For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range : -20°C to +80°C.
Steel ball retainers can be supplied for higher temperature applications (up to +120°C - with no end seals. Please advise at time of ordering if this is required.

Tips
Nickel plated version with stainless steel balls (for corrosion resistance) on request - or stainless steel version part no. L1724.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1	d_3 tol. h4	d_4	d_5	d_6	l_2	l_3	No. of ball circuits	Squareness A µm	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1722.006-1	6	12	35	28	3,4	6,5	20	5	3,3	4	12	320	520	31
L1722.008	8	16	45	32	3,4	6,5	24	5	3,3	4	12	430	780	53
L1722.010-1	10	19	55	40	4,5	8,0	29	6	4,4	4	12	580	1100	105
L1722.012	12	22	57	42	4,5	8,0	32	6	4,4	4	12	650	1200	100
L1722.016	16	26	70	46	4,5	8,0	36	6	4,4	5	12	1230	2350	187
L1722.020	20	32	80	54	5,5	9,5	43	8	5,4	5	15	1400	2750	260
L1722.025	25	40	112	62	5,5	9,5	51	8	5,4	6	15	1560	3140	515
L1722.030	30	47	123	76	6,6	11,0	62	10	6,5	6	15	2490	5490	655
L1722.040	40	62	154	98	9,0	14,0	80	13	8,6	6	20	3430	8040	1560
L1722.050	50	75	192	112	9,0	14,0	94	13	8,6	6	20	6080	15900	3500
L1722.060	60	90	211	134	11,0	17,5	112	18	10,8	6	25	7650	20000	4500





L1723

Material
Hardened and ground body from bearing steel.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end-seals -UU as standard.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6. For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range : -20°C to +80°C.
Steel ball retainers can be supplied for higher temperature applications (up to +120°C - with no end seals. Please advise at time of ordering if this is required.

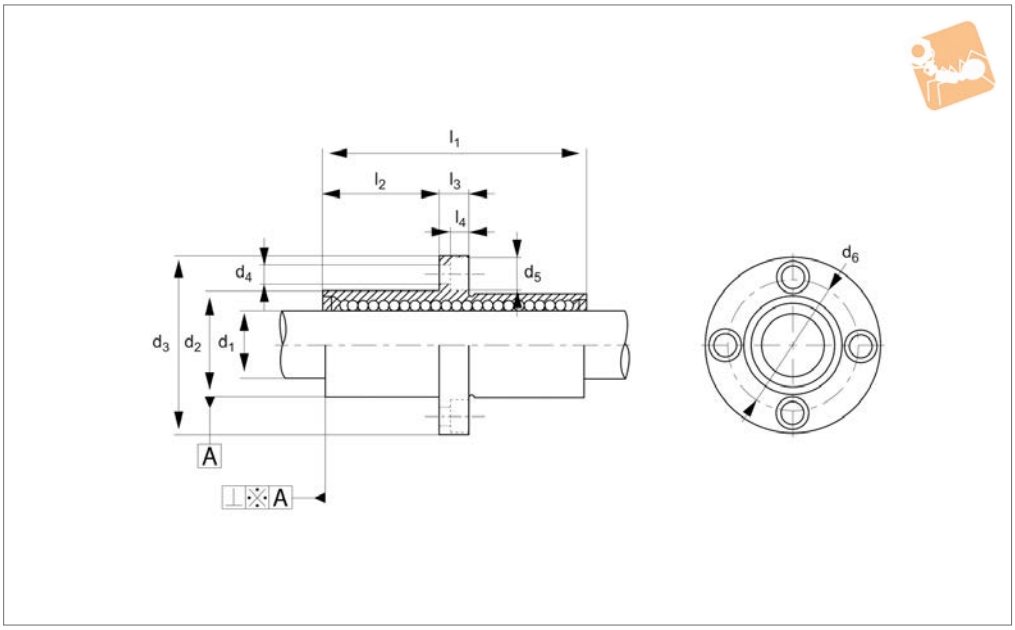
Tips
Nickel plated version with stainless steel balls (for corrosion resistance) on request - or stainless steel version no. L1725.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1	d_3	d_4	d_5	l_2	l_3	No. of ball circuits	w_1	Squareness A µm	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1723.006-1	6	12	35	3.4	6.5	20	5	3.3	4	22	15	320	520	31
L1723.008	8	16	45	3.4	6.5	24	5	3.3	4	25	15	430	780	53
L1723.010-1	10	19	55	4.5	8.0	29	6	4.4	4	30	15	580	1100	105
L1723.012	12	22	57	4.5	8.0	32	6	4.4	4	32	15	650	1200	100
L1723.016	16	26	70	4.5	8.0	36	6	4.4	5	35	15	1230	2350	187
L1723.020	20	32	80	5.5	9.5	43	8	5.4	5	42	17	1400	2750	260
L1723.025	25	40	112	5.5	9.5	51	8	5.4	6	50	17	1560	3140	515
L1723.030	30	47	123	6.6	11.0	62	10	6.5	6	60	17	2490	5490	655
L1723.040	40	62	154	9.0	14.0	80	13	8.6	6	75	20	3430	8040	1560
L1723.050	50	75	192	9.0	14.0	94	13	8.6	6	88	20	6080	15900	3500
L1723.060	60	90	211	11.0	17.5	112	18	10.8	6	106	25	7650	20000	4500

Long Centre Flange Linear Ball
circular flange



L1730

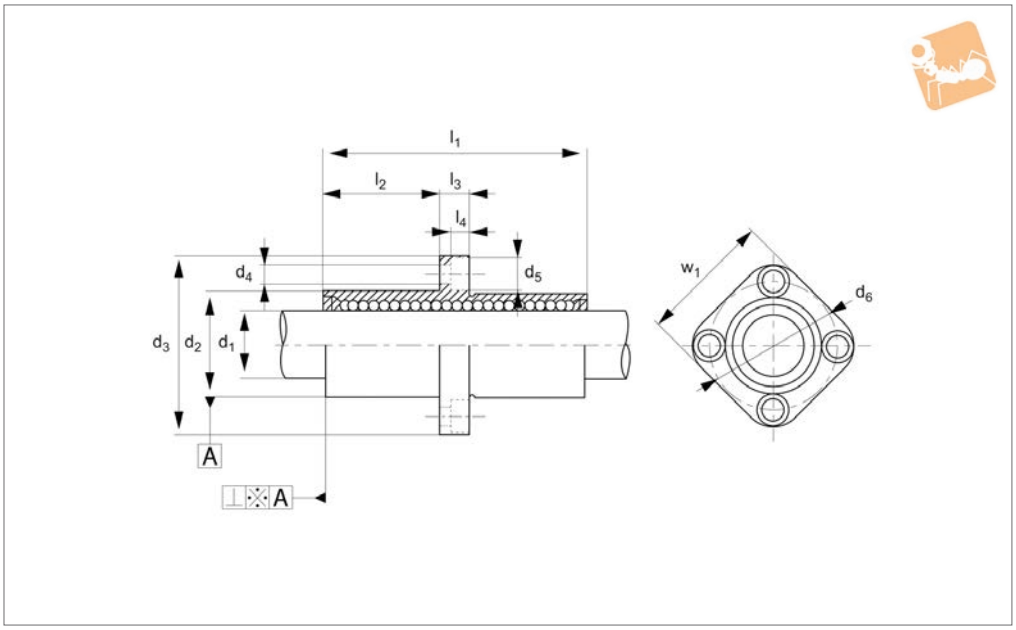


Material
Hardened and ground body from bearing steel.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end-seals -UU as standard.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.
Temperature range : -20°C to +80°C.
Steel ball retainers can be supplied for higher temperature applications (up to +120°C) - with no end seals. Please advise at time of ordering if this is required.

Tips
Nickel plated version with stainless steel balls (for corrosion resistance) on request - or stainless steel version no. L1732.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1	d_3 tol. h4	d_4	d_5	d_6	l_2	l_3	l_4	No. of ball circuits	Squareness A µm	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1730.008	8	16	45	32	3,4	6,5	24	20,0	5	3,3	4	15	430	780	53
L1730.012	12	22	57	42	4,5	8,0	32	25,5	6	4,4	4	15	650	1200	100
L1730.016	16	26	70	46	4,5	8,0	36	32,0	6	4,4	5	15	1230	2350	187
L1730.020	20	32	80	54	5,5	9,5	43	36,0	8	5,4	5	17	1400	2750	260
L1730.025	25	40	112	62	5,5	9,5	51	52,0	8	5,4	6	17	1560	3140	515
L1730.030	30	47	123	76	6,6	11,0	62	56,5	10	6,5	6	17	2940	5490	655
L1730.040	40	62	154	98	9	14,0	80	70,5	13	8,6	6	20	3430	8040	1560
L1730.050	50	75	192	112	9	14,0	94	89,5	13	8,6	6	20	6080	15900	3500
L1730.060	60	90	211	134	11	17,5	112	96,5	18	10,8	6	30	7650	20000	4500





L1731

Material
Hardened and ground body from bearing steel.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end-seals -UU as standard.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.
Temperature range: -20°C to +80°C.
For applications requiring higher temperatures we can make the bushings suitable for use up to +120°C by changing the ball retainers, end plates, and seals. Please advise at time of ordering if this is required.

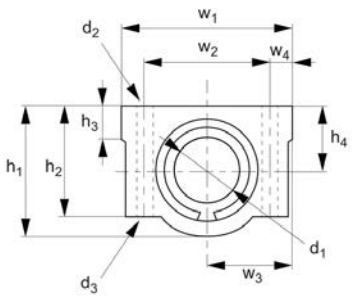
Tips
Nickel plated version with stainless steel balls (for corrosion resistance) on request - or stainless steel version no. L1733.

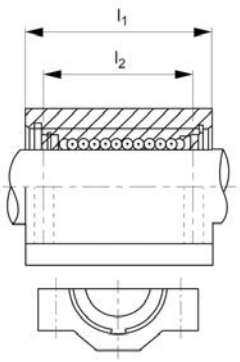
Order No.	d_1 tol. h6	d_2 tol. h6	l_1	d_3	d_4	d_5	d_6	l_2	l_3	l_4	No. of ball circuits	w_1	Squareness A µm	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1731.008	8	16	45	32	3,4	6,5	24	20,0	5	3,3	4	25	15	430	780	53
L1731.012	12	22	57	42	4,5	8,0	32	25,5	6	4,4	4	32	15	650	1200	100
L1731.016	16	26	70	46	4,5	8,0	36	32,0	6	4,4	5	35	15	1230	2350	187
L1731.020	20	32	80	54	5,5	9,5	43	36,0	8	5,4	5	42	17	1400	2750	260
L1731.025	25	40	112	62	5,5	9,5	51	52,0	8	5,4	6	50	17	1560	3140	515
L1731.030	30	47	123	76	6,6	11,0	62	56,5	10	6,5	6	60	17	2940	5490	655
L1731.040	40	62	154	98	9	14,0	80	70,5	13	8,6	6	75	20	3430	8040	1560
L1731.050	50	75	192	112	9	14,0	94	89,5	13	8,6	6	88	20	6080	15900	3500
L1731.060	60	90	211	134	11	17,5	112	96,5	18	10,8	6	106	30	7650	20000	4500

Linear Carriages
closed



L1750





size 40/50

Material
Aluminium body, with linear bearing L1706 (steel shell) installed. Bearing has a resin retainer (POM).
Supplied with nitrile rubber (NBR) end seals -UU as standard.

Long versions have L1712 linear bearing installed, short versions have L1715 Linear bearing installed.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772).
Temperature range: -20°C to +80°C.
Steel ball retainers can be supplied for higher temperature applications (up to 120°C - with no end seals. Please advise at time of ordering if this is required.

Order No.	Type	d_1 tol. h6	l_1	d_2	d_3	h_1	h_2	h_3	Weight g
L1750.008	Standard	8	30.0	M 4x8	3.4	22.0	18.0	6	60
L1750.012	Standard	12	39.0	M 5x10	4.3	30.0	24.5	8	118
L1750.016	Standard	16	44.0	M 5x12	4.3	38.5	32.5	9	180
L1750.020	Standard	20	53.0	M 6x12	5.2	41.0	35.0	11	245
L1750.025	Standard	25	67.0	M 8x18	6.8	51.5	41.0	12	550
L1750.030	Standard	30	76.0	M 8x18	6.8	59.5	49.0	15	760
L1750.040	Standard	40	90.0	M10x25	8.6	78.0	62.0	20	1700
L1750.050	Standard	50	110.0	M10x25	8.6	102.0	80.0	24	2950
L1750.008-L	Long	8	58.0	M 4X8	3.4	22.0	18.0	6	98
L1750.012-L	Long	12	77.0	M 5x10	4.3	30.0	24.5	8	232
L1750.016-L	Long	16	89.0	M 5x12	4.3	38.5	32.5	9	360
L1750.020-L	Long	20	106.0	M 6x12	5.2	41.0	35.0	11	490
L1750.025-L	Long	25	136.0	M 8x18	6.8	51.5	41.0	12	1100
L1750.030-L	Long	30	154.0	M 8x18	6.8	59.5	49.0	15	1525
L1750.040-L	Long	40	180.0	M10x25	8.6	78.0	62.0	20	3400
L1750.050-L	Long	50	230.0	M10x25	8.6	102.0	80.0	24	5920
L1750.008-S	Short	8	14.4	M 4x8	3.4	22.0	18.0	6	40
L1750.012-S	Short	12	20.3	M 5x10	4.3	30.0	24.5	8	82
L1750.016-S	Short	16	22.3	M 5x12	4.3	38.5	32.5	9	122
L1750.020-S	Short	20	28.3	M 6x12	5.2	41.0	35.0	11	176
L1750.025-S	Short	25	40.4	M 8x18	6.8	51.5	41.0	12	400
L1750.030-S	Short	30	48.4	M 8x18	6.8	59.5	49.0	15	570
L1750.040-S	Short	40	56.4	M10x25	8.6	78.0	62.0	20	1320
L1750.050-S	Short	50	72.3	M10x25	8.6	102.0	80.0	24	1900

Order No.	h_4 ±0.02	l_2 ±0.2	w_1	w_2 ±0.2	w_3 ±0.02	w_4	Dyn. load C N max.	Static load C_0 N max.	Linear ball bushing used
L1750.008	11	18	34	24	17	5.0	260	400	L1706.008
L1750.012	15	26	44	33	22	5.5	410	590	L1706.012
L1750.016	19	34	50	36	25	7.0	770	1170	L1706.016
L1750.020	21	40	54	40	27	7.0	860	1370	L1706.020

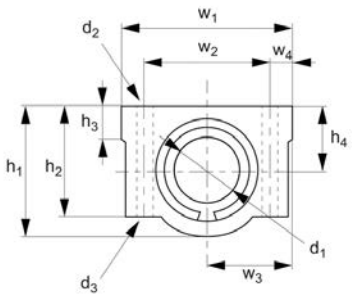


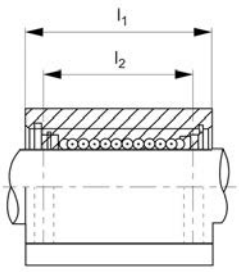
Order No.	h_4 ±0.02	l_2 ±0.2	w_1	w_2 ±0.2	w_3 ±0.02	w_4	Dyn. load C N max.	Static load C_0 N max.	Linear ball bushing used
L1750.025	26	50	76	54	38	11.0	980	1560	L1706.025
L1750.030	30	58	78	58	39	10.0	1560	2740	L1706.030
L1750.040	40	60	102	80	51	11.0	2150	4010	L1706.040
L1750.050	52	80	122	100	61	11.0	3820	7930	L1706.050
L1750.008-L	11	42	34	24	17	5.0	410	800	2 x L1706.008
L1750.012-L	15	64	44	33	22	5.5	650	1180	2 x L1706.012
L1750.016-L	19	79	50	36	25	7.0	1230	2340	2 x L1706.016
L1750.020-L	21	90	54	40	27	7.0	1370	2740	2 x L1706.020
L1750.025-L	26	119	76	54	38	11.0	1560	3120	2 x L1706.025
L1750.030-L	30	132	78	58	39	10.0	2490	5480	2 x L1706.030
L1750.040-L	40	150	102	80	51	11.0	3440	8020	2 x L1706.040
L1750.050-L	52	200	122	100	61	11.0	6110	15860	2 x L1706.050
L1750.008-S	11	-	34	24	17	5.0	260	400	L1706.008
L1750.012-S	15	-	44	33	22	5.5	410	590	L1706.012
L1750.016-S	19	-	50	36	25	7.0	770	1170	L1706.016
L1750.020-S	21	-	54	40	27	7.0	860	1370	L1706.020
L1750.025-S	26	-	76	54	38	11.0	980	1560	L1706.025
L1750.030-S	30	-	78	58	39	10.0	1560	2740	L1706.030
L1750.040-S	40	-	102	80	51	11.0	2150	4010	L1706.040
L1750.050-S	52	-	122	100	61	11.0	3820	7930	L1706.050

Stainless Linear Carriages
closed



L1751





Material
Aluminium carriage housing with L1709, stainless steel (440C) linear bushing installed.
Bushing has a resin -RS (POM) or stainless steel -SS (316) retainer and nitrile rubber (NBR) end seals -UU.
Stainless steel balls 440C.
Long versions have L1713 linear bearing installed.

Technical Notes
For use with corrosion resistant hardened shafts (see part no. L1772).
Temperature range: -20°C to +120°C.

Order No.	Type	Ball cage	d_1 tol. h6	l_1	d_2	d_3	h_1	h_2	Weight g
L1751.008-RS	Normal	Resin	8	30.0	M4x 8	3.4	22.0	18.0	60
L1751.012-RS	Normal	Resin	12	39.0	M5x10	4.3	30.0	24.5	118
L1751.016-RS	Normal	Resin	16	44.0	M5x12	4.3	38.5	32.5	180
L1751.020-RS	Normal	Resin	20	53.0	M6x12	5.2	41.0	35.0	245
L1751.025-RS	Normal	Resin	25	67.0	M8x18	6.8	51.5	41.0	550
L1751.008-SS	Normal	Stainless	8	30.0	M4x 8	3.4	22.0	18.0	60
L1751.012-SS	Normal	Stainless	12	39.0	M5x10	4.3	30.0	24.5	118
L1751.016-SS	Normal	Stainless	16	44.0	M5x12	4.3	38.5	32.5	180
L1751.020-SS	Normal	Stainless	20	53.0	M6x12	5.2	41.0	35.0	245
L1751.025-SS	Normal	Stainless	25	67.0	M8x18	6.8	51.5	41.0	550
L1751.008-L-RS	Long	Resin	8	58.0	M4x 8	3.4	22.0	18.0	98
L1751.012-L-RS	Long	Resin	12	77.0	M5x10	4.3	30.0	24.5	232
L1751.016-L-RS	Long	Resin	16	89.0	M5x12	4.3	38.5	32.5	360
L1751.020-L-RS	Long	Resin	20	106.0	M6x12	5.2	41.0	35.0	490
L1751.025-L-RS	Long	Resin	25	136.0	M8x18	6.8	51.5	41.0	1100
L1751.008-L-SS	Long	Stainless	8	58.0	M4x 8	3.4	22.0	18.0	98
L1751.012-L-SS	Long	Stainless	12	77.0	M5x10	4.3	30.0	24.5	232
L1751.016-L-SS	Long	Stainless	16	89.0	M5x12	4.3	38.5	32.5	360
L1751.020-L-SS	Long	Stainless	20	106.0	M6x12	5.2	41.0	35.0	490
L1751.025-L-SS	Long	Stainless	25	136.0	M8x18	6.8	51.5	41.0	1100
L1751.008-S-RS	Short	Resin	8	14.4	M4x 8	3.4	22.0	18.0	40
L1751.012-S-RS	Short	Resin	12	20.3	M5x10	4.3	30.0	24.5	82
L1751.016-S-RS	Short	Resin	16	22.3	M5x12	4.3	38.5	32.5	122
L1751.020-S-RS	Short	Resin	20	28.3	M6x12	5.2	41.0	35.0	176
L1751.025-S-RS	Short	Resin	25	40.4	M8x18	6.8	51.5	41.0	400
L1751.008-S-SS	Short	Stainless	8	14.4	M4x 8	3.4	22.0	18.0	40
L1751.012-S-SS	Short	Stainless	12	20.3	M5x10	4.3	30.0	24.5	82
L1751.016-S-SS	Short	Stainless	16	22.3	M5x12	4.3	38.5	32.5	122
L1751.020-S-SS	Short	Stainless	20	28.3	M6x12	5.2	41.0	35.0	176
L1751.025-S-SS	Short	Stainless	25	40.3	M8x18	6.8	51.5	41.0	400

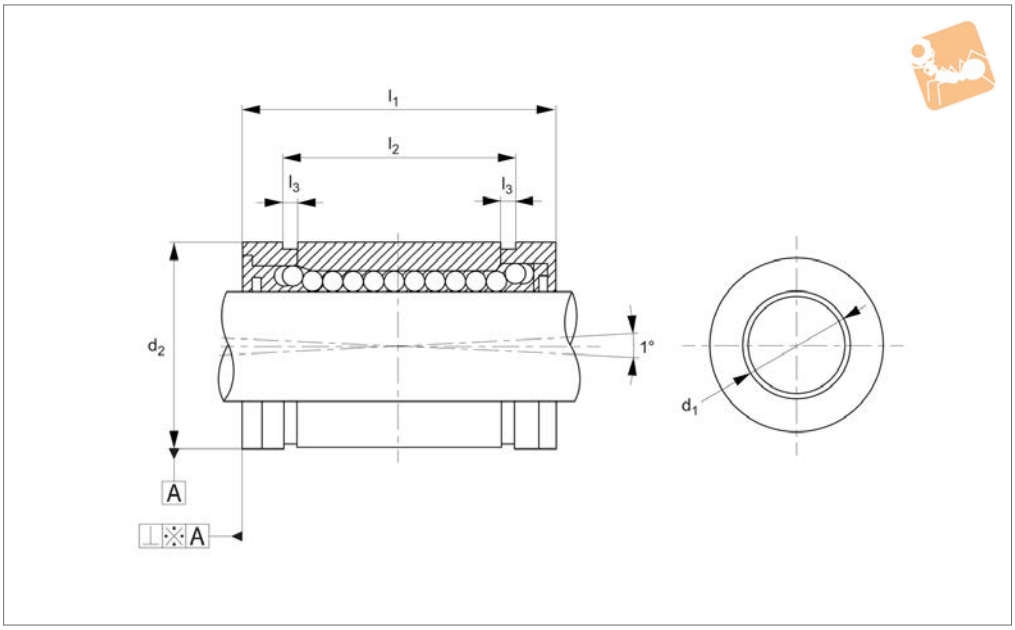


Order No.	h_3	h_4 ±0.02	l_2 ±0.2	w_1	w_2 ±0.2	w_3 ±0.02	w_4	Dyn. load C N max.	Static load C_0 N max.	Linear ball bushing used
L1751.008-RS	6	11	18	34	24	17	5.0	260	400	L1709.008
L1751.012-RS	8	15	26	44	33	22	5.5	410	590	L1709.012
L1751.016-RS	9	19	34	50	36	25	7.0	770	1170	L1709.016
L1751.020-RS	11	21	40	54	40	27	7.0	860	1370	L1709.020
L1751.025-RS	12	26	50	76	54	38	11.0	980	1560	L1709.025
L1751.008-SS	6	11	18	34	24	17	5.0	260	400	L1709.508
L1751.012-SS	8	15	26	44	33	22	5.5	410	590	L1709.512
L1751.016-SS	9	19	34	50	36	25	7.0	770	1170	L1709.516
L1751.020-SS	11	21	40	54	40	27	7.0	860	1370	L1709.520
L1751.025-SS	12	26	50	76	54	38	11.0	980	1560	L1709.525
L1751.008-L-RS	6	11	42	34	24	17	5.0	410	800	2 x L1709.008
L1751.012-L-RS	8	15	64	44	33	22	5.5	650	1180	2 x L1709.012
L1751.016-L-RS	9	19	79	50	36	25	7.0	1230	2340	2 x L1709.016
L1751.020-L-RS	11	21	90	54	40	27	7.0	1370	2740	2 x L1709.020
L1751.025-L-RS	12	26	119	76	54	38	11.0	1560	3120	2 x L1709.025
L1751.008-L-SS	6	11	42	34	24	17	5.0	410	800	2 x L1709.508
L1751.012-L-SS	8	15	64	44	33	22	5.5	650	1180	2 x L1709.512
L1751.016-L-SS	9	19	79	50	36	25	7.0	1230	2340	2 x L1709.516
L1751.020-L-SS	11	21	90	54	40	27	7.0	1370	2740	2 x L1709.520
L1751.025-L-SS	12	26	119	76	54	38	11.0	1560	3120	2 x L1709.525
L1751.008-S-RS	6	11	-	34	24	17	5.0	260	400	L1709.008
L1751.012-S-RS	8	15	-	44	33	22	5.5	410	590	L1709.012
L1751.016-S-RS	9	19	-	50	36	25	7.0	770	1170	L1709.016
L1751.020-S-RS	11	21	-	54	40	27	7.0	860	1370	L1709.020
L1751.025-S-RS	12	26	-	76	54	38	11.0	980	1560	L1709.025
L1751.008-S-SS	6	11	-	34	24	17	5.0	260	400	L1709.508
L1751.012-S-SS	8	15	-	44	33	22	5.5	410	590	L1709.512
L1751.016-S-SS	9	19	-	50	36	25	7.0	770	1170	L1709.516
L1751.020-S-SS	11	21	-	54	40	27	7.0	860	1370	L1709.520
L1751.025-S-SS	12	26	-	76	54	38	11.0	980	1560	L1709.525

Superball Closed Linear Ball Bushings



L1740



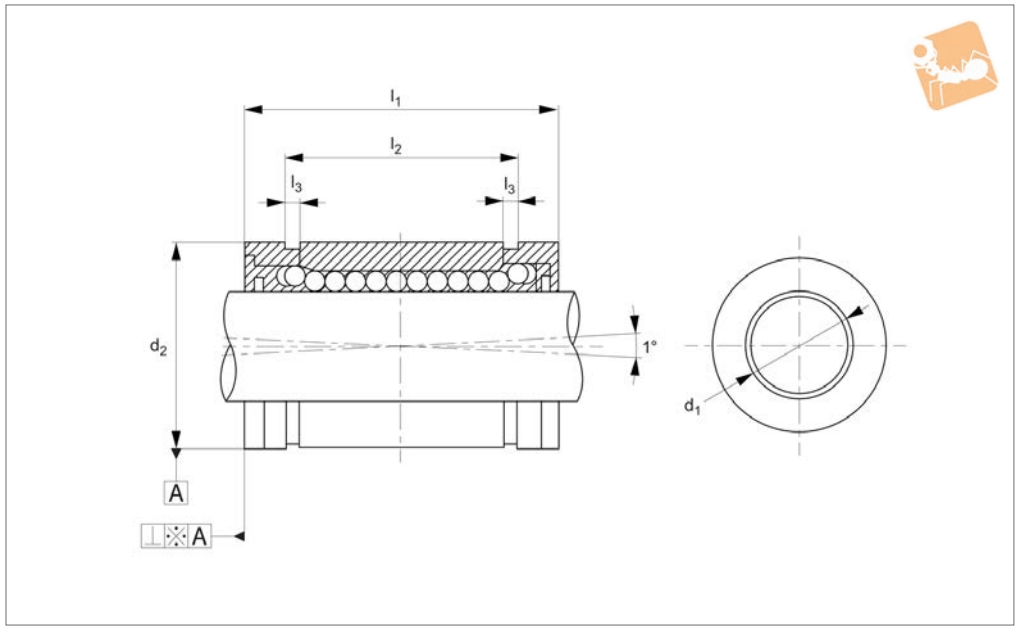
Material

Hardened and ground steel ball plate from bearing steel.
Floating plate feature offers self-alignment and clearance adjustment.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end seals -UU as standard.

Technical Notes

The superball series has 3 x the load rating and 27 x the travel life of conventional linear bushings.
They offer self-alignment - prolonging travel life by reducing the friction between shaft and balls.
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.
Perpendicularity A is better than 15µ.
Temperature range: -20°C to +80°C.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1 ±0.2	l_2 ±0.2	l_3 min.	No. of ball circuits	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1740.010	10	19	29	21.7	1.35	5	550	750	17
L1740.012	12	22	32	22.7	1.35	5	1100	1230	23
L1740.016	16	26	36	24.7	1.35	5	1250	1550	28
L1740.020	20	32	45	31.3	1.65	6	1670	2580	61
L1740.025	25	40	58	43.8	1.90	6	2750	3800	122
L1740.030	30	47	68	51.8	1.90	6	2800	4710	185
L1740.040	40	62	80	60.4	2.20	6	5720	6500	360
L1740.050	50	75	100	77.4	2.70	6	7940	11460	580





L1741

Material

Hardened and ground body from bearing steel - nickel plated.
Stainless steel balls 440C.
Floating plate feature offers self-alignment and clearance adjustment.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end seals -UU as standard.

Technical Notes

The superball series has 3 x the load rating and 27 x the travel life of conventional linear bushings.
They offer self-alignment - prolonging travel life by reducing the friction between shaft and balls.
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.
Perpendicularity A is better than 15µ.
Temperature range: -20°C to +80°C.

Tips

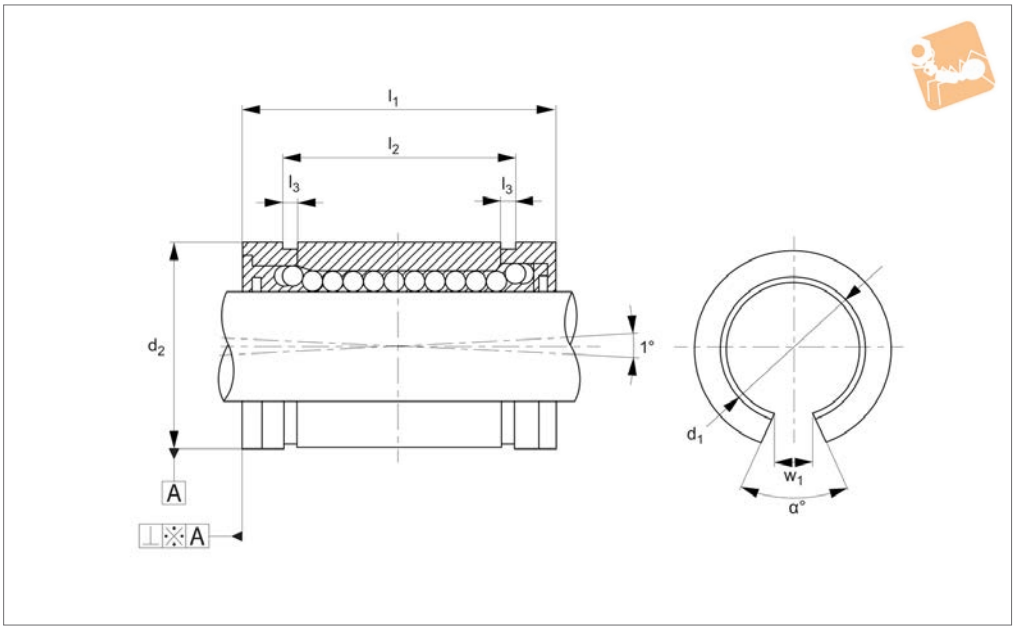
The nickel plated bearing plates and the stainless steel bearing balls provide a good degree of corrosion protection.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1 ±0.2	l_2 ±0.2	l_3 min.	No. of ball circuits	Dyn. load C N max.	Static load C_0 N max.	Weight g
L1741.010	10	19	29	21.7	1.35	5	550	750	17
L1741.012	12	22	32	22.7	1.35	5	1100	1230	23
L1741.016	16	26	36	24.7	1.35	5	1250	1550	28
L1741.020	20	32	45	31.3	1.65	6	1670	2580	61
L1741.025	25	40	58	43.8	1.90	6	2750	3800	122
L1741.030	30	47	68	51.8	1.90	6	2800	4710	185
L1741.040	40	62	80	60.4	2.20	6	5720	6500	360
L1741.050	50	75	100	77.4	2.70	6	7940	11460	580

Superball Open Linear Ball Bushings



L1742

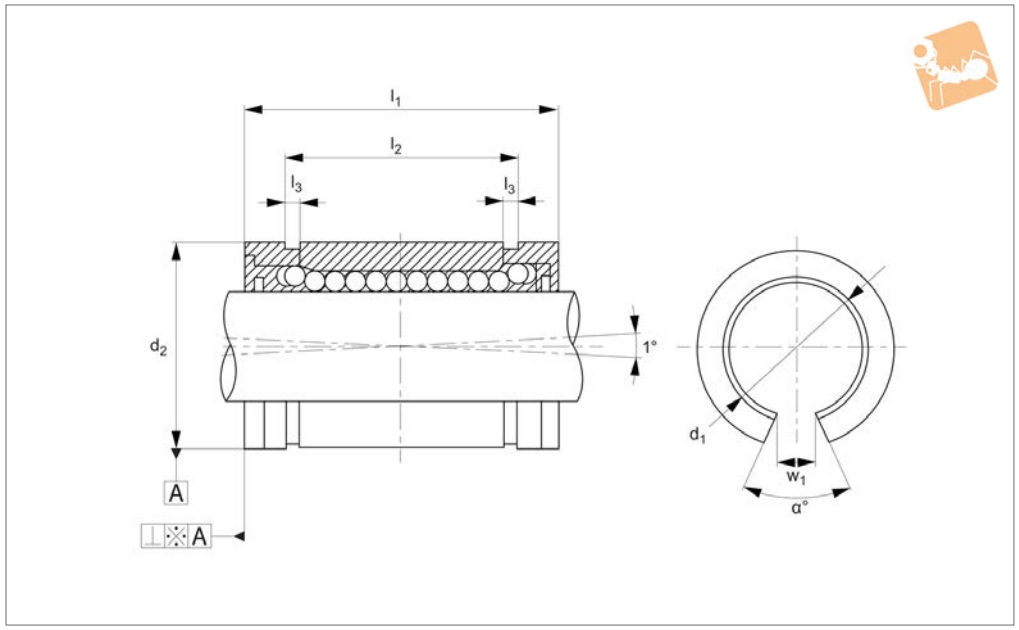


Material
Hardened and ground steel ball plate from bearing steel.
Floating plate feature offers self-alignment and clearance adjustment.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end seals -UU as standard.

Technical Notes
The superball series has 3 x the load rating and 27 x the travel life of conventional linear bushings.
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.
Perpendicularity A is better than 15µ.
Temperature range: -20°C to +80°C.

Tips
d_2 is the dimension before the bush has been slotted.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1 ±0.2	l_2 ±0.2	l_3 min.	Dyn. load C N max.	w_1	α °	Static load C_0 N max.	Weight g
L1742.012	12	22	32	22.7	1.35	1260	6.5	66	1290	18
L1742.016	16	26	36	24.7	1.35	1320	9.0	68	1640	22
L1742.020	20	32	45	31.3	1.65	1720	9.0	55	2630	51
L1742.025	25	40	58	43.8	1.90	2850	11.5	57	3910	102
L1742.030	30	47	68	81.8	1.90	2900	14.0	57	4850	155
L1742.040	40	62	80	60.4	2.20	5900	19.5	56	6700	300
L1742.050	50	75	100	77.4	2.70	8100	22.5	54	11700	480





L1743

Material

Hardened and ground body from bearing steel - nickel plated.
Stainless steel balls 440C.
Floating plate feature offers self-alignment and clearance adjustment.
Single body resin retainer (POM).
Supplied with nitrile rubber (NBR) end seals -UU as standard.

Technical Notes

The superball series has 3 x the load rating and 27 x the travel life of conventional linear bushings.
They offer self-alignment - prolonging travel life by reducing the friction between shaft and balls.
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6.
Perpendicularity A is better than 15µ.
Temperature range: -20°C to +80°C.

Tips

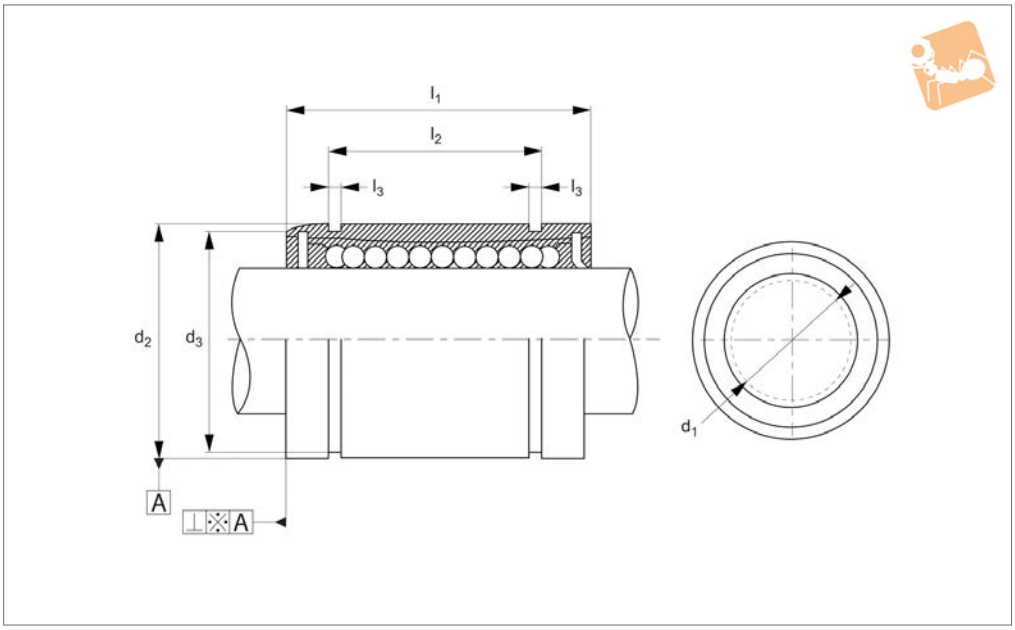
The nickel plated bearing plates and the stainless steel bearing balls provide a good degree of corrosion protection. d_2 is the dimension before the bush has been slotted.

Order No.	d_1 tol. h6	d_2 tol. h6	l_1 ±0.2	l_2 ±0.2	l_3 min.	Dyn. load C N max.	w_1	α °	Static load C_0 N max.	Weight g
L1743.012	12	22	32	22.7	1.35	1260	6.5	66	1290	18
L1743.016	16	26	36	24.7	1.35	1320	9.0	68	1640	22
L1743.020	20	32	45	31.3	1.65	1720	9.0	55	2630	51
L1743.025	25	40	58	43.8	1.90	2850	11.5	57	3910	102
L1743.030	30	47	68	81.8	1.90	2900	14.0	57	4850	155
L1743.040	40	62	80	60.4	2.20	5900	19.5	56	6700	300
L1743.050	50	75	100	77.4	2.70	8100	22.5	54	11700	480

Ball Bushings
closed



L1709

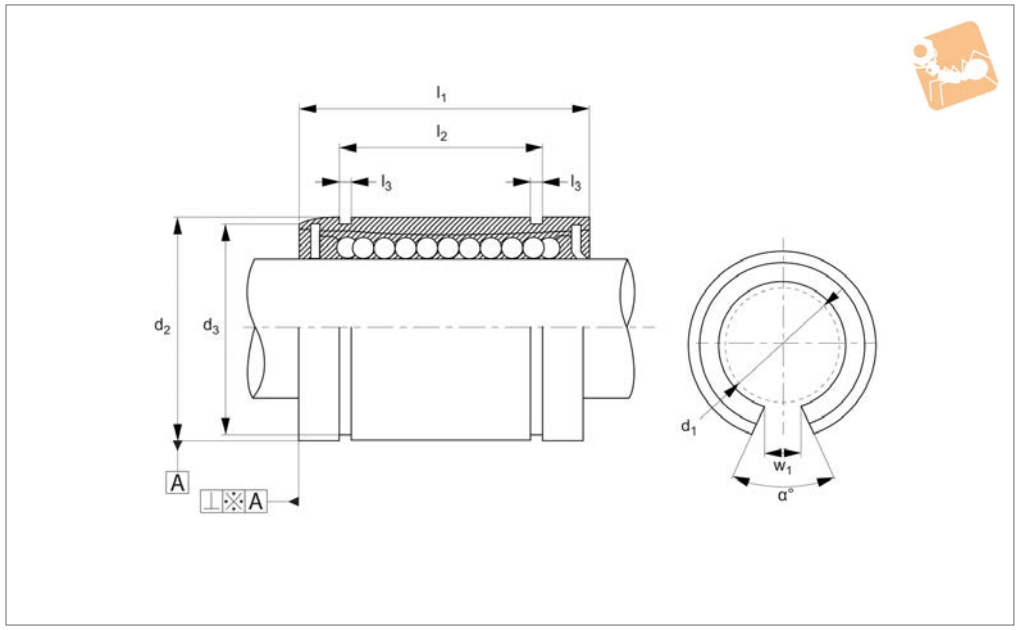


Material
Stainless steel body (440C) with a resin (POM) retainer.
Stainless steel balls (440C).
Supplied with nitrile rubber (NBR) end seals.

Technical Notes
For use with corrosion resistant hardened shafts (see part no. L1772) - tolerance h6.

Perpendicularity A is better than 15µ.
For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range: For resin ball cage -20°C to +80°C.

Order No.	Ball cage	d_1 tol. h6	d_2 tol. h6	l_1	l_2	l_3	d_3	Dyn. load C N max.	No. of ball circuits	Static load C_0 N max.	Weight g
L1709.005-RS	Resin	5	12	22	14.5	1.10	11.5	200	4	260	12
L1709.006-RS-1	Resin	6	12	19	13.5	1.10	11.5	200	4	260	8
L1709.008-RS	Resin	8	16	25	16.5	1.10	15.2	260	4	400	20
L1709.010-RS-1	Resin	10	19	29	22.0	1.30	18.0	370	4	540	30
L1709.012-RS	Resin	12	22	32	22.9	1.30	21.0	410	4	590	41
L1709.016-RS	Resin	16	26	36	24.9	1.30	24.9	770	5	1170	57
L1709.020-RS	Resin	20	32	45	31.5	1.60	30.3	860	5	1370	91
L1709.025-RS	Resin	25	40	58	44.1	1.85	37.5	980	6	1560	215
L1709.030-RS	Resin	30	47	68	52.1	1.85	44.5	1584	6	2740	360
L1709.040-RS	Resin	40	62	80	60.6	2.15	59	2357	6	4020	770
L1709.050-RS	Resin	50	75	100	77.6	2.65	72	4702	6	7940	1250
L1709.060-RS	Resin	60	90	125	101.7	3.15	86.5	6085	6	9800	2220





L1710

Material
Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer.
Stainless steel balls (440C).

Supplied with nitrile rubber (NBR) end seals.

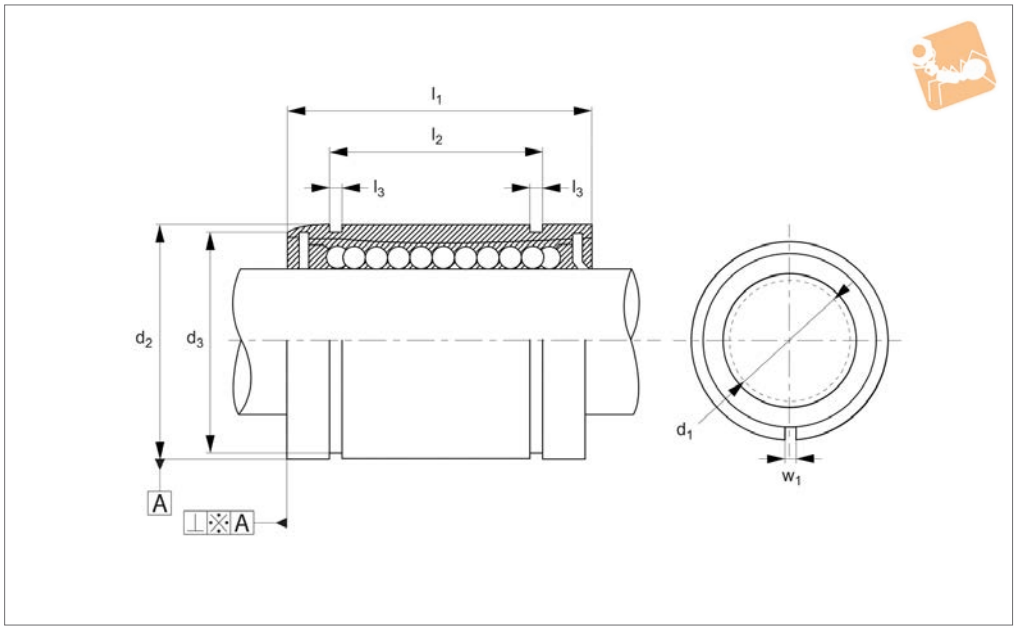
Technical Notes
For use with corrosion resistant hardened shafts (see part no. L1772) - tolerance h6.
Perpendicularity A is better than 15µ.
Temperature range: For resin ball cage -20°C to +80°C.
For stainless ball cage -20°C to +120°C.

Order No.	Ball cage	d_1 tol. h6	d_2 tol. h6	l_1	l_2	l_3	d_3	w_1	Dyn. load C N max.	α °	No. of ball circuits	Static load C_0 N max.	Weight g
L1710.012-RS	Resin	12	22	32	22.9	1.30	21.0	7.5	510	78	3	784	35
L1710.016-RS	Resin	16	26	36	24.9	1.30	24.9	10.0	578	78	3	892	48
L1710.020-RS	Resin	20	32	45	31.5	1.60	30.3	10.0	862	60	4	1370	84
L1710.025-RS	Resin	25	40	58	44.1	1.85	37.5	12.5	980	60	5	1570	195
L1710.012-SS	St. Steel	12	22	32	22.9	1.30	21.0	7.5	510	78	3	784	35
L1710.016-SS	St. Steel	16	26	36	24.9	1.30	24.9	10.0	578	78	3	892	48
L1710.020-SS	St. Steel	20	32	45	31.5	1.60	30.3	10.0	862	60	4	1370	84
L1710.025-SS	St. Steel	25	40	58	44.1	1.85	37.5	12.5	980	60	5	1570	195

Stainless Ball Bushings
adjustable



L1711

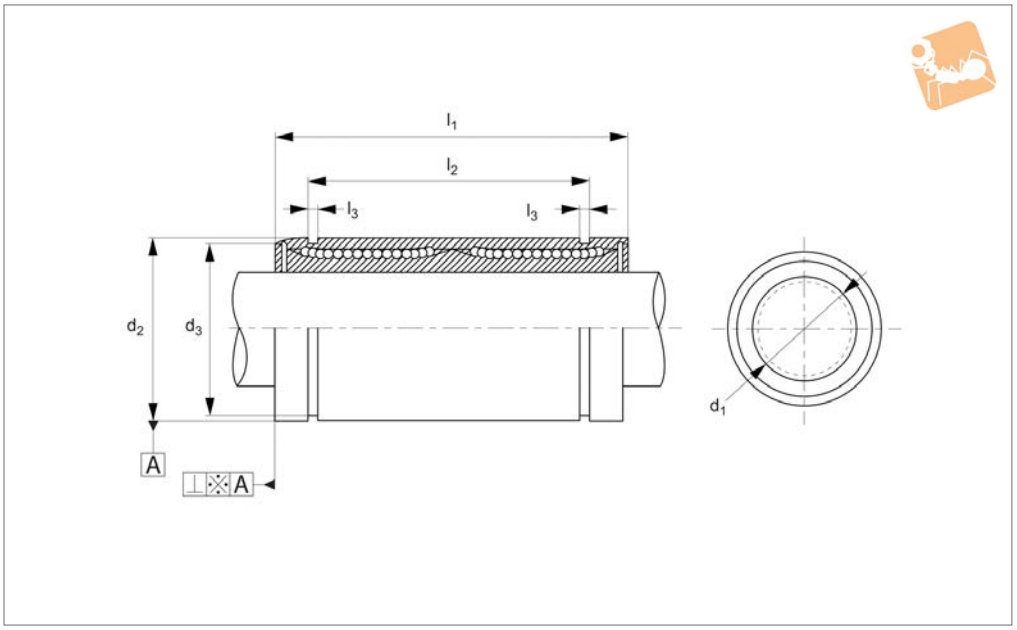


Material
Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer.
Stainless steel balls (440C).
Supplied with nitrile rubber (NBR) end seals.

Technical Notes
For use with corrosion resistant hardened shafts (see part no. L1772) - tolerance h6.
Perpendicularity A is better than 15µ.
For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range: For resin ball cage -20°C to +80°C.
For stainless ball cage -20°C to +120°C.

Tips
d_2 is the dimension before the bush has been slotted.

Order No.	Ball cage	d_1 tol. h6	d_2 tol. h6	l_1	l_2	l_3	d_3	w_1	Dyn. load C N max.	No. of ball circuits	Static load C_0 N max.	Weight g
L1711.005-RS	Resin	5	12	22	14.5	1.10	11.5	1.0	200	4	260	12
L1711.006-RS-1	Resin	6	12	19	13.5	1.10	11.5	1.0	200	4	260	8
L1711.008-RS	Resin	8	16	25	16.5	1.10	15.2	1.0	260	4	400	20
L1711.010-RS-1	Resin	10	19	29	22.0	1.30	18.0	1.0	370	4	540	30
L1711.012-RS	Resin	12	22	32	22.9	1.30	21.0	1.5	410	4	590	41
L1711.016-RS	Resin	16	26	36	24.9	1.30	24.9	1.5	770	5	1170	57
L1711.020-RS	Resin	20	32	45	31.5	1.60	30.3	2.0	860	5	1370	91
L1711.025-RS	Resin	25	40	58	44.1	1.85	37.5	2.0	980	6	1560	215
L1711.006-SS-1	Stainless	6	12	19	13.5	1.10	11.5	1.0	200	4	260	8
L1711.008-SS	Stainless	8	16	25	16.5	1.10	15.2	1.0	260	4	400	20
L1711.010-SS-1	Stainless	10	19	29	22.0	1.30	18.0	1.0	370	4	540	30
L1711.012-SS	Stainless	12	22	32	22.9	1.30	21.0	1.5	410	4	590	41
L1711.016-SS	Stainless	16	26	36	24.9	1.30	24.9	1.5	770	5	1170	57
L1711.020-SS	Stainless	20	32	45	31.5	1.60	30.3	2.0	860	5	1370	91
L1711.025-SS	Stainless	25	40	58	44.1	1.85	37.5	2.0	980	6	1560	215





L1713

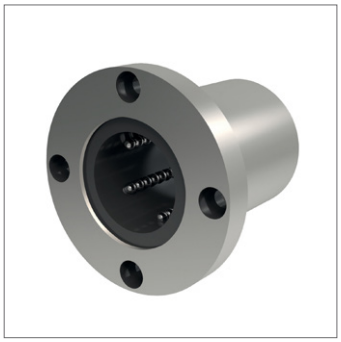
Material
Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer.
Stainless steel balls (440C).

Supplied with nitrile rubber (NBR) end seals.

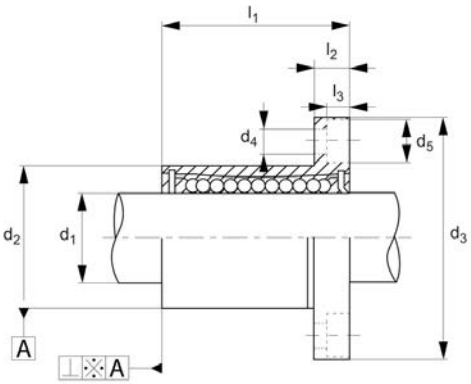
Technical Notes
For use with corrosion resistant hardened shafts (see part no. L1772) - tolerance h6.
Perpendicularity A is better than 15µ.
Temperature range: For resin ball cage -20°C to +80°C.
For stainless ball cage -20°C to +120°C.

Order No.	Ball cage	d_1 tol. h6	d_2 tol. h6	l_1	l_2	l_3	d_3	Dyn. load C N max.	No. of ball circuits	Static load C_0 N max.	Weight g
L1713.008-RS	Resin	8	16	45	33.0	1.10	15.2	430	4	780	31
L1713.012-RS	Resin	12	22	57	45.8	1.30	21.0	650	4	1200	80
L1713.016-RS	Resin	16	26	70	49.8	1.30	24.9	1230	5	2350	145
L1713.020-RS	Resin	20	32	80	61.0	1.60	30.3	1400	5	2750	180
L1713.025-RS	Resin	25	40	112	82.0	1.85	38.0	1560	6	3140	440
L1713.008-SS	Stainless	8	16	45	33.0	1.10	15.2	430	4	780	31
L1713.012-SS	Stainless	12	22	57	45.8	1.30	21.0	650	4	1200	80
L1713.016-SS	Stainless	16	26	70	49.8	1.30	24.9	1230	5	2350	145
L1713.020-SS	Stainless	20	32	80	61.0	1.60	30.3	1400	5	2750	180
L1713.025-SS	Stainless	25	40	112	82.0	1.85	38.0	1560	6	3140	440

Stainless Ball Bushings
circular flange



L1720

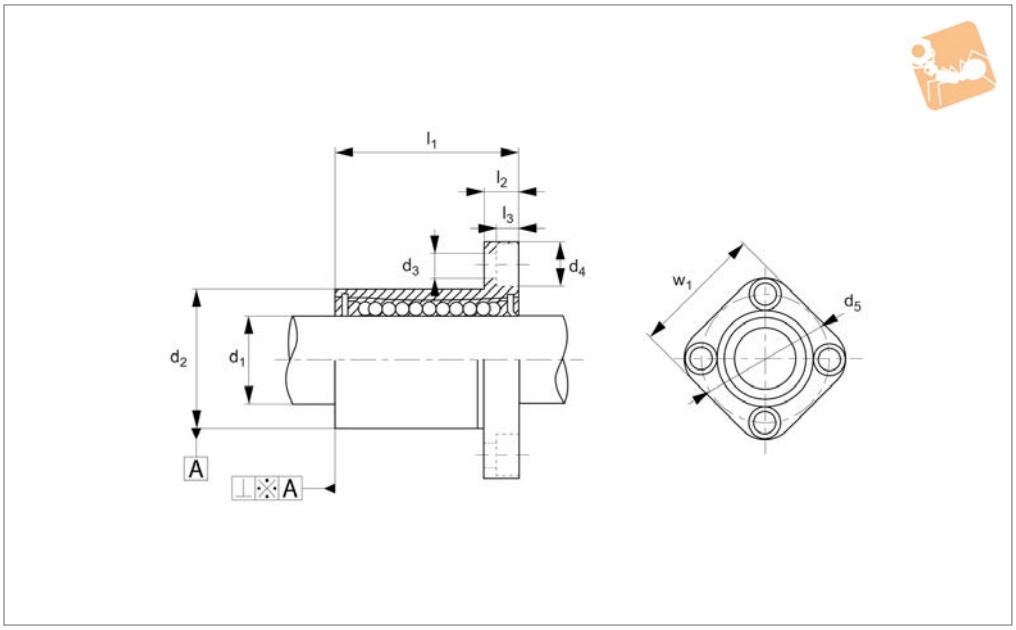


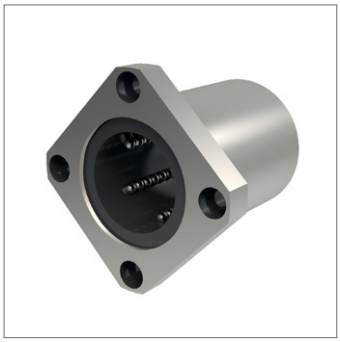
Material
Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer.
Stainless steel balls (440C).

Supplied with nitrile rubber (NBR) end seals.

Technical Notes
For use with corrosion resistant hardened shafts (see part no. L1772) - tolerance h6. For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range: For resin ball cage - 20°C to +80°C. For stainless ball cage -20°C to +120°C.

Order No.	Ball cage	d_1 tol. h6	d_2 tol. h6	l_1	l_2	l_3	d_3 tol. h4	d_4	d_5	d_6	Dyn. load C N max.	No. of ball circuits	Static load C_0 N max.	Squareness A µm	Weight g
L1720.006-RS-1	Resin	6	12	19	5	3,3	28	3,4	6,5	20	200	4	260	12	26,5
L1720.008-RS	Resin	8	16	25	5	3,3	32	3,4	6,5	24	260	4	400	12	44,0
L1720.010-RS-1	Resin	10	19	29	6	4,4	40	4,5	8,0	29	370	4	540	12	78,0
L1720.012-RS	Resin	12	22	32	6	4,4	42	4,5	8,0	32	410	4	590	12	86,0
L1720.016-RS	Resin	16	26	36	6	4,4	46	4,5	8,0	36	770	5	1170	12	120,0
L1720.020-RS	Resin	20	32	45	8	5,4	54	5,5	9,5	43	860	5	1370	15	184,0
L1720.025-RS	Resin	25	40	58	8	5,4	62	5,5	9,5	51	980	6	1560	15	335,0
L1720.006-SS-1	Stainless	6	12	19	5	3,3	28	3,4	6,5	20	200	4	260	12	26,5
L1720.008-SS	Stainless	8	16	25	5	3,3	32	3,4	6,5	24	260	4	400	12	44,0
L1720.010-SS-1	Stainless	10	19	29	6	4,4	40	4,5	8,0	29	370	4	540	12	78,0
L1720.012-SS	Stainless	12	22	32	6	4,4	42	4,5	8,0	32	410	4	590	12	86,0
L1720.016-SS	Stainless	16	26	36	6	4,4	46	4,5	8,0	36	770	5	1170	12	120,0
L1720.020-SS	Stainless	20	32	45	8	5,4	54	5,5	9,5	43	860	5	1370	15	184,0
L1720.025-SS	Stainless	25	40	58	8	5,4	62	5,5	9,5	51	980	6	1560	15	335,0





L1721

Material
Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer.
Stainless steel balls (440C).

Supplied with nitrile rubber (NBR) end seals.

Technical Notes
For use with corrosion resistant hardened shafts (see part no. L1772) - tolerance h6. For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range: For resin ball cage -20°C to +80°C.
For stainless ball cage -20°C to +120°C.

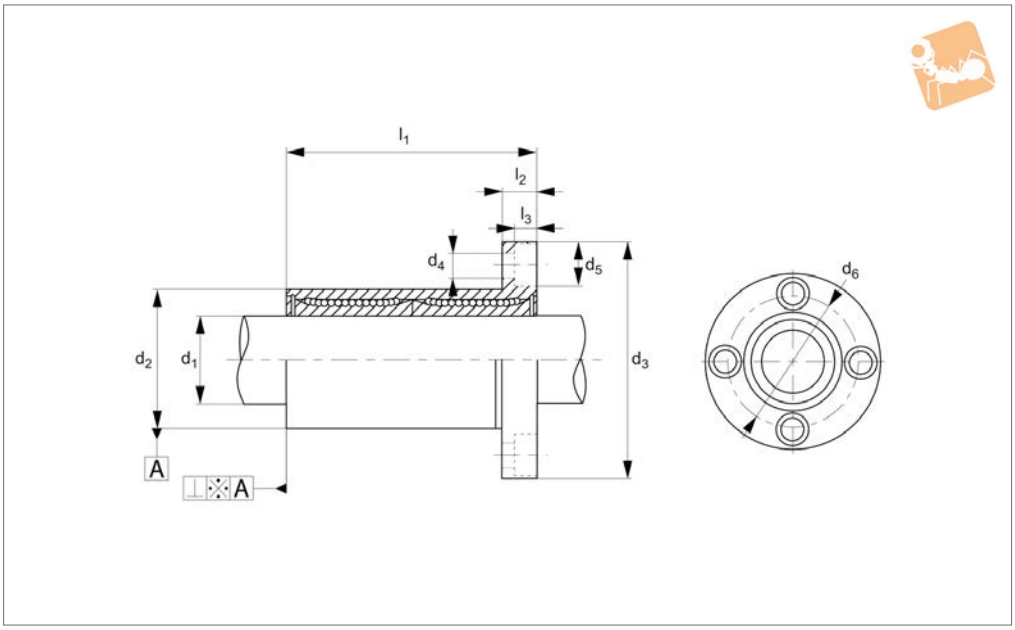
Order No.	Ball cage	d_1 tol. h6	d_2 tol. h6	l_1	l_2	l_3	d_3	d_4	d_5	w_1	Dyn. load C N max.	No. of ball circuits	Static load C_0 N max.	Squareness A µm	Weight g
L1721.006-RS-1	Resin	6	12	19	5	3,3	3,4	6,5	20	22	200	4	260	12	26,5
L1721.008-RS	Resin	8	16	25	5	3,3	3,4	6,5	24	25	260	4	400	12	44,0
L1721.010-RS-1	Resin	10	19	29	6	4,4	4,5	8,0	29	30	370	4	540	12	78,0
L1721.012-RS	Resin	12	22	32	6	4,4	4,5	8,0	32	32	410	4	590	12	86,0
L1721.016-RS	Resin	16	26	36	6	4,4	4,5	8,0	36	35	770	5	1170	12	120,0
L1721.020-RS	Resin	20	32	45	8	5,4	5,5	9,5	43	42	860	5	1370	15	184,0
L1721.025-RS	Resin	25	40	58	8	5,4	5,5	9,5	51	50	980	6	1560	15	335,0
L1721.006-SS-1	Stainless	6	12	19	5	3,3	3,4	6,5	20	22	200	4	260	12	26,5
L1721.008-SS	Stainless	8	16	25	5	3,3	3,4	6,5	24	25	260	4	400	12	44,0
L1721.010-SS-1	Stainless	10	19	29	6	4,4	4,5	8,0	29	30	370	4	540	12	78,0
L1721.012-SS	Stainless	12	22	32	6	4,4	4,5	8,0	32	32	410	4	590	12	86,0
L1721.016-SS	Stainless	16	26	36	6	4,4	4,5	8,0	36	35	770	5	1170	12	120,0
L1721.020-SS	Stainless	20	32	45	8	5,4	5,5	9,5	43	42	860	5	1370	15	184,0
L1721.025-SS	Stainless	25	40	58	8	5,4	5,5	9,5	51	50	980	6	1560	15	335,0

Stainless Ball Bushings

long version, circular flange



L1724



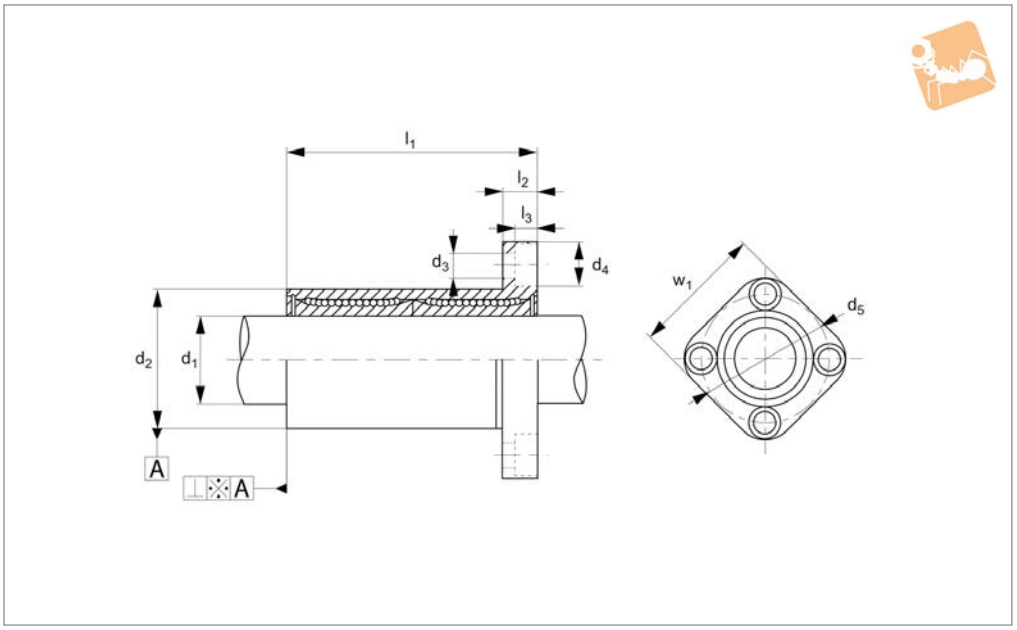
Material

Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer.
Stainless steel balls (440C).
Supplied with nitrile rubber (NBR) end seals.

Technical Notes

For use with corrosion resistant hardened shafts (see part no. L1772).
Tolerance h6. For part numbers with^{-1} shaft tolerance required for these is g6.
Temperature range: For resin ball cage -20°C to +80°C.
For stainless ball cage -20°C to +120°C.

Order No.	Ball cage	d_1 tol. h6	d_2 tol. h6	l_1	l_2	l_3	d_3 tol. h4	d_4	d_5	d_6	Dyn. load C N max.	No. of ball circuits	Static load C_0 N max.	Squareness A µm	Weight g
L1724.006-RS-1	Resin	6	12	35	5	3,3	28	3,4	6,5	20	320	4	520	15	31
L1724.008-RS	Resin	8	16	45	5	3,3	32	3,4	6,5	24	430	4	780	15	53
L1724.010-RS-1	Resin	10	19	55	6	4,4	40	4,5	8,0	29	580	4	1100	15	105
L1724.012-RS	Resin	12	22	57	6	4,4	42	4,5	8,0	32	650	4	1200	15	100
L1724.016-RS	Resin	16	26	70	6	4,4	46	4,5	8,0	36	1230	5	2350	15	187
L1724.020-RS	Resin	20	32	80	8	5,4	54	5,5	9,5	43	1400	5	2750	17	260
L1724.025-RS	Resin	25	40	112	8	5,4	62	5,5	9,5	51	1560	6	3140	17	515
L1724.006-SS-1	Stainless	6	12	35	5	3,3	28	3,4	6,5	20	320	4	520	15	31
L1724.008-SS	Stainless	8	16	45	5	3,3	32	3,4	6,5	24	430	4	780	15	53
L1724.010-SS-1	Stainless	10	19	55	6	4,4	40	4,5	8,0	29	580	4	1100	15	105
L1724.012-SS	Stainless	12	22	57	6	4,4	42	4,5	8,0	32	650	4	1200	15	100
L1724.016-SS	Stainless	16	26	70	6	4,4	46	4,5	8,0	36	1230	5	2350	15	187
L1724.020-SS	Stainless	20	32	80	8	5,4	54	5,5	9,5	43	1400	5	2750	17	260
L1724.025-SS	Stainless	25	40	112	8	5,4	62	5,5	9,5	51	1560	6	3140	17	515





L1725

Material
Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer.
Stainless steel balls (440C).

Supplied with nitrile rubber (NBR) end seals.

Technical Notes
For use with corrosion resistant hardened shafts (see part no. L1772) - tolerance h6. For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range: For resin ball cage -20°C to +80°C.
For stainless ball cage -20°C to +120°C.

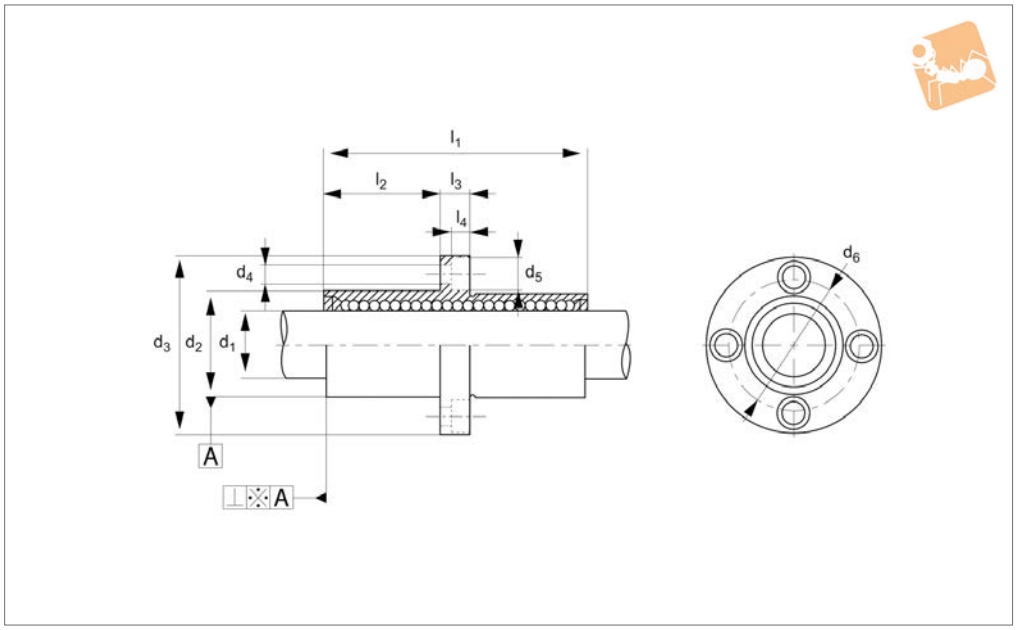
Order No.	Ball cage	d_1 tol. h6	d_2 tol. h6	l_1	l_2	l_3	d_3	d_4	d_5	w_1	Dyn. load C N max.	No. of ball circuits	Static load C_0 N max.	Squareness A µm	Weight g
L1725.006-RS-1	Resin	6	12	35	5	3,3	3,4	6,5	20	22	320	4	520	15	31
L1725.008-RS	Resin	8	16	45	5	3,3	3,4	6,5	24	25	430	4	780	15	53
L1725.010-RS-1	Resin	10	19	55	6	4,4	4,5	8,0	29	30	580	4	1100	15	105
L1725.012-RS	Resin	12	22	57	6	4,4	4,5	8,0	32	32	650	4	1200	15	100
L1725.016-RS	Resin	16	26	70	6	4,4	4,5	8,0	36	35	1230	5	2350	15	187
L1725.020-RS	Resin	20	32	80	8	5,4	5,5	9,5	43	42	1400	5	2750	17	260
L1725.025-RS	Resin	25	40	112	8	5,4	5,5	9,5	51	50	1560	6	3140	17	515
L1725.006-SS-1	Stainless	6	12	35	5	3,3	3,4	6,5	20	22	320	4	520	15	31
L1725.008-SS	Stainless	8	16	45	5	3,3	3,4	6,5	24	25	430	4	780	15	53
L1725.010-SS-1	Stainless	10	19	55	6	4,4	4,5	8,0	29	30	580	4	1100	15	105
L1725.012-SS	Stainless	12	22	57	6	4,4	4,5	8,0	32	32	650	4	1200	15	100
L1725.016-SS	Stainless	16	26	70	6	4,4	4,5	8,0	36	35	1230	5	2350	15	187
L1725.020-SS	Stainless	20	32	80	8	5,4	5,5	9,5	43	42	1400	5	2750	17	260
L1725.025-SS	Stainless	25	40	112	8	5,4	5,5	9,5	51	50	1560	6	3140	17	515

Stainless Ball Bushings

long version, circular centre flange



L1732

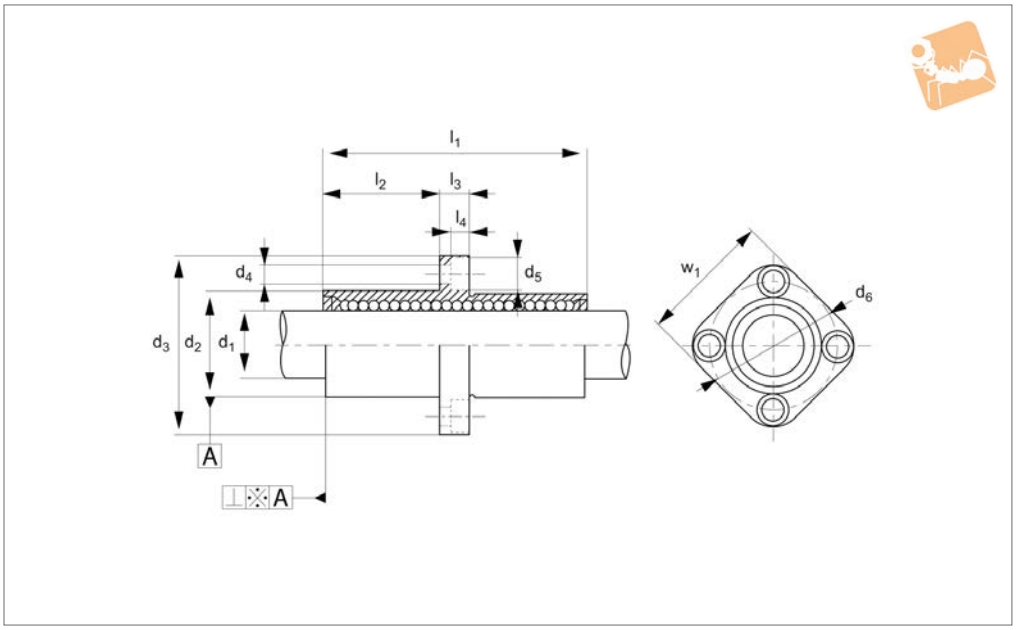


Material
Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer.
Stainless steel balls (440C).

Supplied with nitrile rubber (NBR) end seals.

Technical Notes
For use with hardened shafts only (see part nos. L1770 - L1772) - tolerance h6. For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range: For resin ball cage - 20°C to +80°C.
For stainless ball cage -20°C to +120°C.

Order No.	Ball cage	d_1 tol. h6	d_2 tol. h6	l_1	l_2	l_3	l_4	d_3 tol. h4	d_4	d_5	d_6	Dyn. load C N max.	No. of ball circuits	Static load C_0 N max.	Squareness A µm	Weight g
L1732.006-RS-1	Resin	6	12	35	15,0	5	3,3	28	3,4	6,5	20	320	4	520	15	31
L1732.008-RS	Resin	8	15	45	20,0	5	3,3	32	3,4	6,5	24	430	4	780	15	53
L1732.010-RS-1	Resin	10	19	55	24,5	6	4,4	40	4,5	8,0	29	580	4	1100	15	105
L1732.012-RS	Resin	12	21	57	25,5	6	4,4	42	4,5	8,0	32	650	4	1200	15	100
L1732.016-RS	Resin	16	26	70	32,0	6	4,4	46	4,5	8,0	36	1230	5	2350	15	187
L1732.020-RS	Resin	20	32	80	36,0	8	5,4	54	5,5	9,5	43	1400	5	2750	17	260
L1732.025-RS	Resin	25	40	112	52,0	8	5,4	62	5,5	9,5	51	1560	6	3140	17	515
L1732.006-SS-1	Stainless	6	12	35	15,0	5	3,3	28	3,4	6,5	20	320	4	520	15	31
L1732.008-SS	Stainless	8	15	45	20,0	5	3,3	32	3,4	6,5	24	430	4	780	15	53
L1732.010-SS-1	Stainless	10	19	55	24,5	6	4,4	40	4,5	8,0	29	580	4	1100	15	105
L1732.012-SS	Stainless	12	21	57	25,5	6	4,4	42	4,5	8,0	32	650	4	1200	15	100
L1732.016-SS	Stainless	16	26	70	32,0	6	4,4	46	4,5	8,0	36	1230	5	2350	15	187
L1732.020-SS	Stainless	20	32	80	36,0	8	5,4	54	5,5	9,5	43	1400	5	2750	17	260
L1732.025-SS	Stainless	25	40	112	52,0	8	5,4	62	5,5	9,5	51	3140	6	3140	17	515





L1733

Material
Stainless steel body (440C) with either a resin (POM) or stainless steel (316) retainer.
Stainless steel balls (440C).

Supplied with nitrile rubber (NBR) end seals.

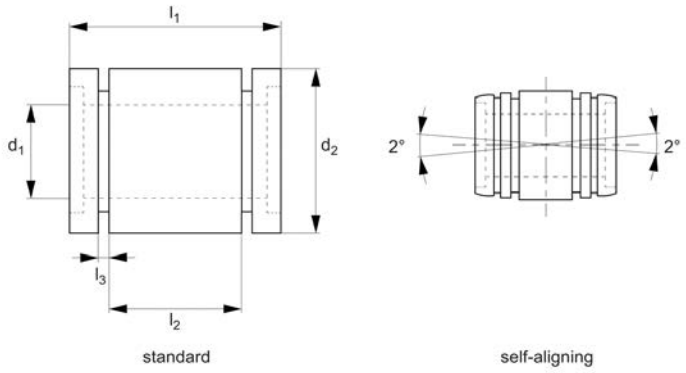
Technical Notes
For use with corrosion resistant hardened shafts (see part no. L1772) - tolerance h6. For part numbers with $^{-1}$ shaft tolerance required is g6. Temperature range: For resin ball cage -20°C to +80°C.
For stainless ball cage -20°C to +120°C.

Order No.	Ball cage	d_1 tol. h6	d_2 tol. h6	l_1	l_2	l_3	l_4	d_3	d_4	d_5	d_6	w_1	Dyn. load C N max.	No. of ball circuits	Static load C_0 N max.	Squareness A µm	Weight g
L1733.006-RS-1	Resin	6	12	35	15,0	5	3,3	20	3,4	6,5	20	22	320	4	520	15	31
L1733.008-RS	Resin	8	15	45	20,0	5	3,3	24	3,4	6,5	24	25	430	4	780	15	53
L1733.010-RS-1	Resin	10	19	55	24,5	6	4,4	29	4,5	8,0	29	30	580	4	1100	15	105
L1733.012-RS	Resin	12	21	57	25,5	6	4,4	32	4,5	8,0	32	32	650	4	1200	15	100
L1733.016-RS	Resin	16	26	70	32,0	6	4,4	36	4,5	8,0	35	35	1230	5	2350	15	187
L1733.020-RS	Resin	20	32	80	36,0	8	5,4	43	5,5	9,5	42	42	1400	5	2750	20	260
L1733.025-RS	Resin	25	40	112	52,0	8	5,4	51	5,5	9,5	50	51	1560	6	3140	20	515
L1733.006-SS-1	Stainless	6	12	35	15,0	5	3,3	20	3,4	6,5	20	22	320	4	520	15	31
L1733.008-SS	Stainless	8	15	45	20,0	5	3,3	24	3,4	6,5	24	25	430	4	780	15	53
L1733.010-SS-1	Stainless	10	19	55	24,5	6	4,4	29	4,5	8,0	29	30	580	4	1100	15	105
L1733.012-SS	Stainless	12	21	57	25,5	6	4,4	32	4,5	8,0	32	32	650	4	1200	15	100
L1733.016-SS	Stainless	16	26	70	32,0	6	4,4	36	4,5	8,0	35	35	1230	5	2350	15	187
L1733.020-SS	Stainless	20	32	80	36,0	8	5,4	43	5,5	9,5	42	42	1400	5	2750	20	260
L1733.025-SS	Stainless	25	40	112	52,0	8	5,4	51	5,5	9,5	50	51	1560	6	3140	20	515

Ceramic Closed Linear Bearings



L1764



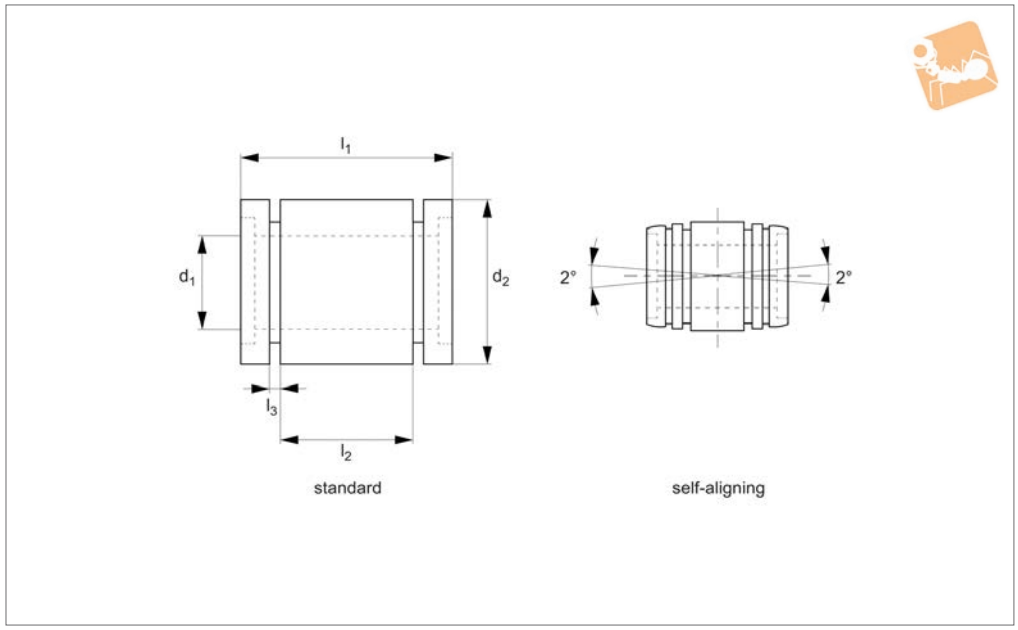
Material
Aluminium with aluminium-oxide ceramic coating (4-7µ). Hardness >80 HRC.

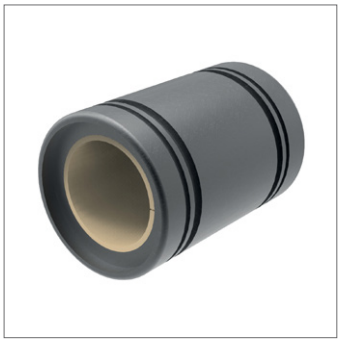
Technical Notes
Concentricity is better than 15µ.
Available with or without seals, if seals are required, please contact our sales team.
Temperature range: -130°C to +200°C.

Tips
Can be run on hardened or soft steel shafts, tolerance h6, all part no. L1770-L1776.
For dynamic load ratings, this is linked to PV (pressure velocity) - see technical pages for calculations.
Load ratings are straight compressive loads on a horizontal. They do not take into account moment loads or orientations such as inverse or vertical arrangements.

*** Bore tolerances where d_1 is:**
5-16: +0,0, -0.04 to -0.07
20-30: +0.0, 0.05 to -0.07
40-60: +0.0, 0.05 to -0.09
80: +0.0, 0.12 to -0.17

Order No.	Type	d_1*	d_2 tol. h7	l_1 tol. h14	l_2 tol. h13	l_3	Static load C_0 kN max.
L1764.005	Standard	5	12	22	12	1.10	2.4
L1764.008	Standard	8	16	25	14	1.10	4.3
L1764.012	Standard	12	22	32	20	1.30	8.2
L1764.016	Standard	16	26	36	22	1.30	12.0
L1764.020	Standard	20	32	45	28	1.60	19.0
L1764.025	Standard	25	40	58	40	1.85	35.0
L1764.030	Standard	30	47	68	48	1.85	43.0
L1764.040	Standard	40	62	80	58	2.15	68.0
L1764.050	Standard	50	75	100	72	2.65	106.0
L1764.060	Standard	60	90	125	95	3.20	159.0
L1764.080	Standard	80	120	165	125	4.20	277.0
L1764.008-SA	Self Align.	8	16	25	14	1.10	4.3
L1764.012-SA	Self Align.	12	22	32	20	1.30	8.2
L1764.016-SA	Self Align.	16	26	36	22	1.30	12.0
L1764.020-SA	Self Align.	20	32	45	28	1.60	19.0
L1764.025-SA	Self Align.	25	40	58	40	1.85	35.0
L1764.030-SA	Self Align.	30	47	68	48	1.85	43.0
L1764.040-SA	Self Align.	40	62	80	58	2.15	68.0
L1764.050-SA	Self Align.	50	75	100	72	2.65	106.0
L1764.060-SA	Self Align.	60	90	125	95	3.20	159.0
L1764.080-SA	Self Align.	80	120	165	125	4.20	277.0





L1765

Material
Aluminium with aluminium-oxide ceramic coating (4-7µ). Hardness >80 HRC.
PTFE insert.

Technical Notes
Concentricity is better than 15µ.
Available with or without seals, if seals are required, please contact our sales team.
Temperature range: -130°C to +200°C.

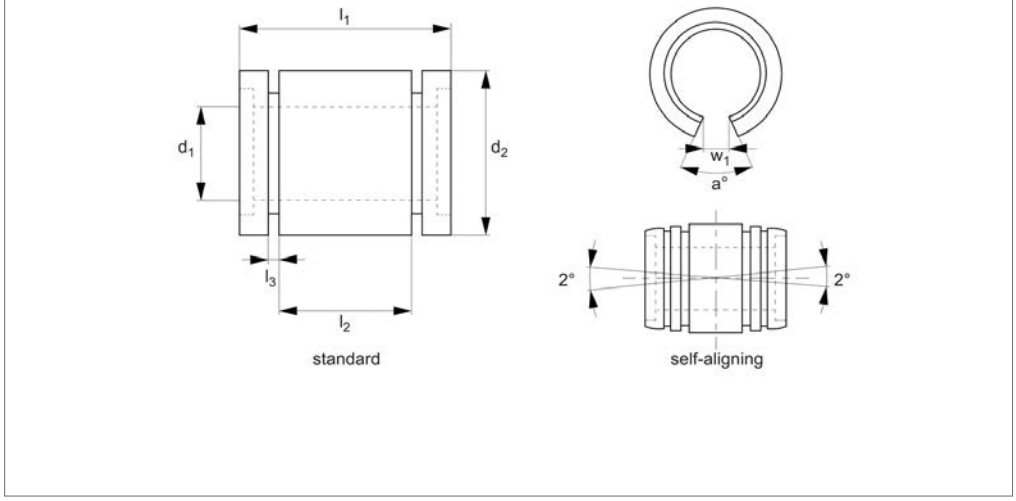
Tips
Can be run on hardened or soft steel shafts, tolerance h6, all part no. L1770-L1776.
Self lubricating versions can also be run on ceramic coated aluminium shafts (see part no. L1778.)
Load ratings are straight compressive loads on a horizontal. They do not take into account moment loads or orientations such as inverse or vertical arrangements.
*** Bore tolerances where d_1 is:**
5-16: +0,0, -0.04 to -0.07
20-30: +0.0, 0.05 to -0.07
40-60: +0.0, 0.05 to -0.09
80: +0.0, 0.12 to -0.17

Order No.	Type	d_1*	d_2 tol. h7	l_1 tol. h14	l_2 tol. h13	l_3	Static load C_0 kN max.
L1765.005	Self Lub.	5	12	22	12	1.10	2.3
L1765.008	Self Lub.	8	16	25	14	1.10	4.3
L1765.012	Self Lub.	12	22	32	20	1.30	8.3
L1765.016	Self Lub.	16	26	36	22	1.30	12.0
L1765.020	Self Lub.	20	32	45	28	1.60	18.0
L1765.025	Self Lub.	25	40	58	40	1.85	35.0
L1765.030	Self Lub.	30	47	68	48	1.85	43.0
L1765.040	Self Lub.	40	62	80	58	2.15	68.0
L1765.050	Self Lub.	50	75	100	72	2.65	106.0
L1765.060	Self Lub.	60	90	125	95	3.20	159.0
L1765.080	Self Lub.	80	120	165	125	4.20	277.0
L1765.008-SA	Self Lub/align	8	16	25	14	1.10	4.3
L1765.012-SA	Self Lub/align	12	22	32	20	1.30	8.3
L1765.016-SA	Self Lub/align	16	26	36	22	1.30	12.0
L1765.020-SA	Self Lub/align	20	32	45	28	1.60	18.0
L1765.025-SA	Self Lub/align	25	40	58	40	1.85	35.0
L1765.030-SA	Self Lub/align	30	47	68	48	1.85	43.0
L1765.040-SA	Self Lub/align	40	62	80	58	2.15	68.0
L1765.050-SA	Self Lub/align	50	75	100	72	2.65	106.0
L1765.060-SA	Self Lub/align	60	90	125	95	3.20	159.0
L1765.080-SA	Self Lub/align	80	120	165	125	4.20	277.0

Ceramic Open Linear Bearings



L1766



Material
Aluminium with aluminium-oxide ceramic coating (4-7µ). Hardness >80 HRC.

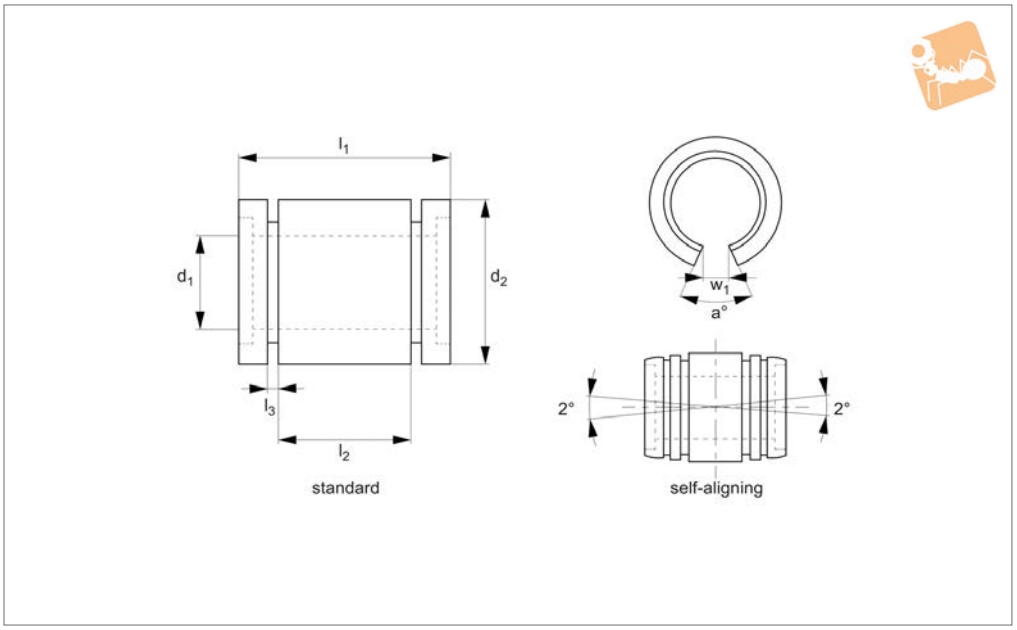
Technical Notes
Concentricity is better than 15µ.
Available with or without seals, if seals are required, please contact our sales team.

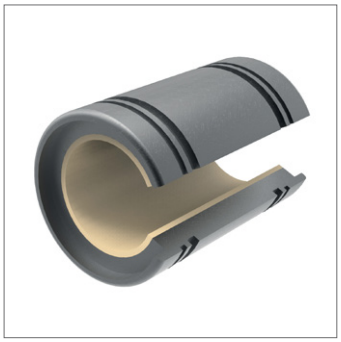
Temperature range: -130°C to +200°C.

Tips
Can be run on hardened or soft steel shafts, tolerance h6, all part no. L1770-L1776.
Inverting (hanging upside down) open style bearings is not recommended.

*** Bore tolerances where d_1 is:**
12-16: +0,0, -0.04 to -0.07
20-30: +0.0, 0.05 to -0.07
40-60: +0.0, 0.05 to -0.09
80: +0.0, 0.12 to -0.17

Order No.	Type	d_1*	d_2 tol. h7	l_1 tol. h14	l_2	l_3	w_1	α °	Static load C_0 kN max.
L1766.012	Standard	12	22	32	20	1.30	7.6	78°	8.2
L1766.016	Standard	16	26	36	22	1.30	10.8	78°	12.0
L1766.020	Standard	20	32	45	28	1.60	10.8	60°	18.0
L1766.025	Standard	25	40	58	40	1.85	13.2	60°	35.0
L1766.030	Standard	30	47	68	48	1.85	14.2	50°	43.0
L1766.040	Standard	40	62	80	58	2.15	18.7	50°	67.0
L1766.050	Standard	50	75	100	72	2.65	23.8	50°	106.0
L1766.060	Standard	60	90	125	95	3.20	29.8	54°	159.0
L1766.080	Standard	80	120	165	125	4.20	38.4	54°	227.0
L1766.012-SA	Self Align.	12	22	32	20	1.30	7.6	78°	8.2
L1766.016-SA	Self Align.	16	28	36	22	1.30	10.8	78°	12.0
L1766.020-SA	Self Align.	20	32	45	28	1.60	10.8	60°	18.0
L1766.025-SA	Self Align.	25	40	58	40	1.85	13.2	60°	35.0
L1766.030-SA	Self Align.	30	47	68	48	1.85	14.2	50°	43.0
L1766.040-SA	Self Align.	40	62	80	58	2.15	18.7	50°	67.0
L1766.050-SA	Self Align.	50	75	100	72	2.65	23.8	50°	106.0
L1766.060-SA	Self Align.	60	90	125	95	3.20	29.8	54°	159.0
L1766.080-SA	Self Align.	80	120	165	125	4.20	38.4	54°	277.0





L1767

Material
Aluminium with aluminium-oxide ceramic coating (4-7µ). Hardness >80 HRC.
PTFE insert.

Technical Notes
Concentricity is better than 15µ.
Available with or without seals, if seals are required, please contact our sales team.

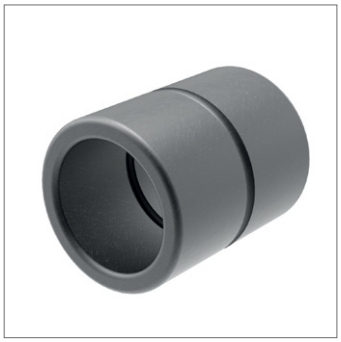
Temperature range: -130°C to +200°C.

Tips
Can be run on hardened or soft steel shafts, tolerance h6, all part no. L1770-L1776.
Self lubricating versions can also be run on ceramic coated aluminium shafts (see part no. L1778).

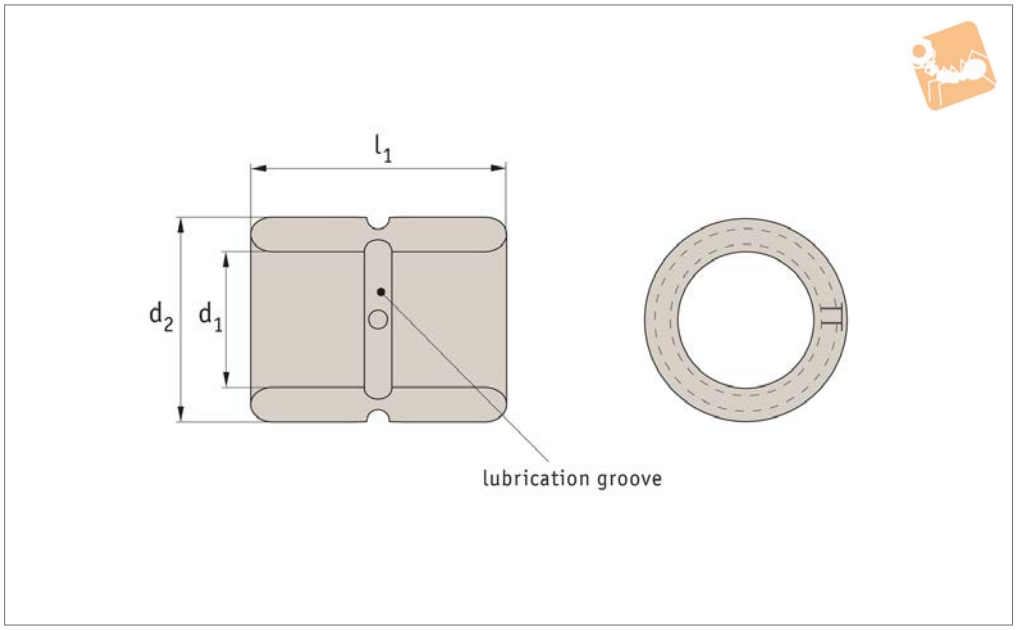
Inverting (hanging upside down) open style bearing use is not recommended.
*** Bore tolerances where d_1 is:**
12-16: +0,0, -0.04 to -0.07
20-30: +0.0, 0.05 to -0.07
40-60: +0.0, 0.05 to -0.09
80: +0.0, 0.12 to -0.17

Order No.	Type	d_1*	d_2 tol. h7	l_1 tol. h14	l_2	l_3	w_1	α °	Static load C_0 kN max.
L1767.012	Self Lub.	12	22	32	20	1.30	7.6	78°	8.2
L1767.016	Self Lub.	16	26	36	22	1.30	10.8	78°	12.0
L1767.020	Self Lub.	20	32	45	28	1.60	10.8	60°	18.0
L1767.025	Self Lub.	25	40	58	40	1.85	13.2	60°	35.0
L1767.030	Self Lub.	30	47	68	48	1.85	14.2	50°	43.0
L1767.040	Self Lub.	40	62	80	58	2.15	18.7	50°	67.0
L1767.050	Self Lub.	50	75	100	72	2.65	23.8	50°	106.0
L1767.060	Self Lub.	60	90	125	95	3.20	29.8	54°	159.0
L1767.080	Self Lub.	80	120	165	125	4.20	38.4	54°	277.0
L1767.012-SA	Self Lub/align	12	22	32	20	1.30	7.6	78°	8.2
L1767.016-SA	Self Lub/align	16	26	36	22	1.30	10.8	78°	12.0
L1767.020-SA	Self Lub/align	20	32	45	28	1.60	10.8	60°	18.0
L1767.025-SA	Self Lub/align	25	40	58	40	1.85	13.2	60°	35.0
L1767.030-SA	Self Lub/align	30	47	68	48	1.85	14.2	50°	43.0
L1767.040-SA	Self Lub/align	40	62	80	58	2.15	18.7	50°	67.0
L1767.050-SA	Self Lub/align	50	75	100	72	2.65	23.8	50°	106.0
L1767.060-SA	Self Lub/align	60	90	125	95	3.20	29.8	54°	159.0
L1767.080-SA	Self Lub/align	80	120	165	125	4.20	38.4	54°	277.0

Thin Wall Ceramic Linear Bearings



L1768



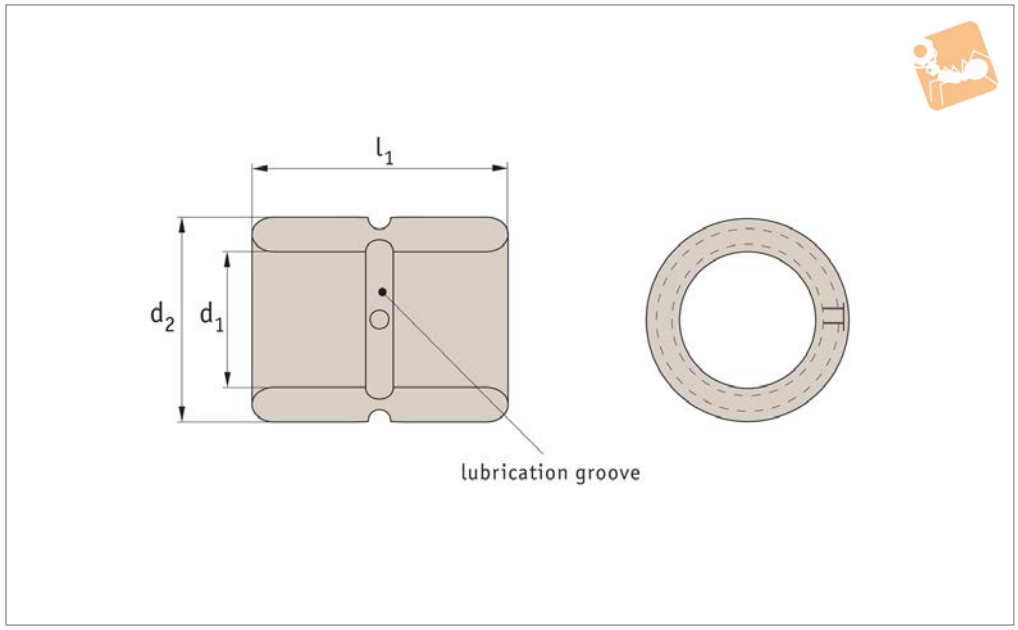
Material
Aluminium with aluminium-oxide ceramic coating (4-7µ). Hardness >80 HRC.

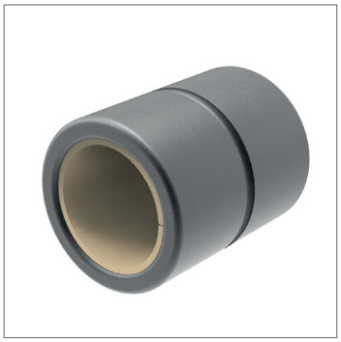
Technical Notes
Concentricity is better than 15µ.
Available with or without seals, if seals are required, please contact our sales team.
Temperature range: -130°C to +200°C.

Tips
Can be run on hardened or soft steel shafts, tolerance h6, all part no. L1770-L1776.

Bore tolerances where d_1 is:
6-16: +0,0, -0.04 to -0.07
20-30: +0.0, 0.05 to -0.07
40-50: +0.0, 0.05 to -0.09

Order No.	d_1	d_2 tol. H7	l_1 tol. h14	Dyn. load C kN max.	Static load C_0 kN max.
L1768.006	6	12	22	0.21	0.79
L1768.008	8	15	24	0.32	1.38
L1768.010	10	17	26	0.47	1.89
L1768.012	12	19	28	0.62	2.64
L1768.014	14	21	28	0.77	3.02
L1768.016	16	24	30	0.92	3.96
L1768.020	20	28	30	1.44	6.19
L1768.025	25	35	40	2.31	9.98
L1768.030	30	40	50	3.25	14.03
L1768.040	40	52	60	5.10	22.02
L1768.050	50	62	70	7.96	34.40





L1769

Material
Aluminium with aluminium-oxide ceramic coating (4-7µ). Hardness >80 HRC.
PTFE insert.

Technical Notes
Concentricity is better than 15µ.
Available with or without seals, if seals are required, please contact our sales team.
Temperature range: -130°C to +200°C.

Tips
Can be run on hardened or soft steel shafts, tolerance h6, all part no. L1770-L1776.
Self lubricating versions can also be run on ceramic coated aluminium shafts (see part no. L1788.)

Bore tolerances where d_1 is:
6-16: +0,0, -0.04 to -0.07
20-30: +0.0, 0.05 to -0.07
40-50: +0.0, 0.05 to -0.09

Order No.	d_1	d_2 tol. H7	l_1 tol. h14	Dyn. load C kN max.	Static load C_0 kN max.
L1769.006	6	12	22	0.08	0.64
L1769.008	8	15	24	0.18	1.04
L1769.010	10	17	26	0.23	1.41
L1769.012	12	19	28	0.34	2.00
L1769.014	14	21	28	0.44	2.42
L1769.016	16	24	30	0.51	3.00
L1769.020	20	28	30	0.80	4.68
L1769.025	25	35	40	1.29	7.54
L1769.030	30	40	50	1.83	10.81
L1769.040	40	52	60	2.88	16.64
L1769.050	50	62	70	4.48	26.00

Self-lubricating

These ceramic coated linear bearings are lined with a self-lubricating composite which is bonded to the aluminium shell. This composite is a combination of Teflon® and non-abrasive, polyamide fillers for both load carrying capability and dynamic coefficient of friction.

As the self-liner is non-abrasive, it runs equally well on either hardened steel or on soft steel or stainless steel shafting (303 or 316).

Ceramic coated

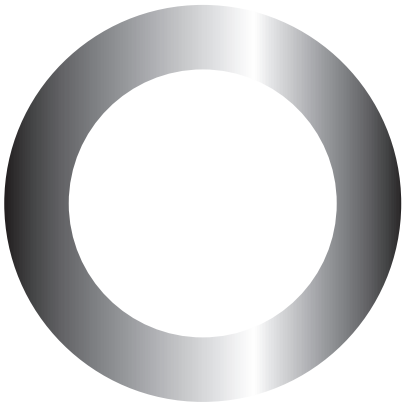
Ceramic coated linear bearings are a one piece construction, employing a file-hard ceramic coating over an aluminium shell. Our ceramic coating is not an anodised or surface coating that can fracture, flake, chip or wash-off in corrosive environments. The ceramic coating is FDA compliant.

These bearings require lubrication (grease or light oil is sufficient - no silicone based lubricants).

Ceramic bearings



Self-lubricating with teflon liner

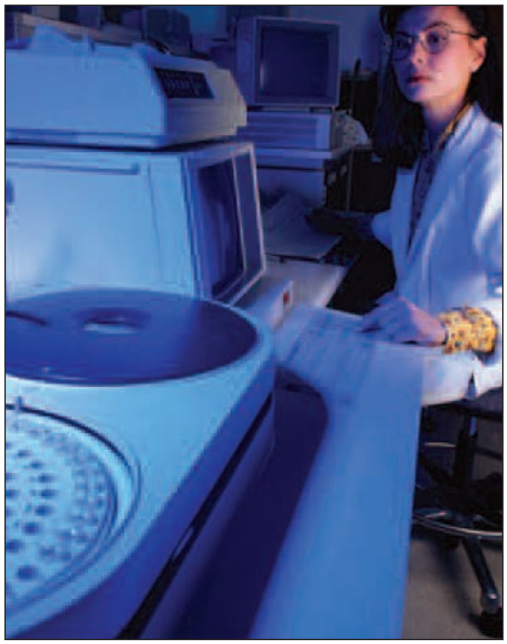


Ceramic coated

Applications

- Automated assembly.
- Packaging machines.
- Food processing equipment.
- Pharmaceutical equipment.
- Medical equipment.
- Wash-down systems.





Ceramic coated bearings

These are manufactured from a special grade of aluminium, then ceramic coated.
Surface hardness is 85HRC, which is why the bearings have extremely long wear life.
Their extreme hardness prevents particles from entering into the surface of the shafting, (this is the primary cause of bearing and shaft failure).

The ceramic series must be lubricated with a thin film of oil in order to perform correctly.

- Lasting precision alignment.
- Abrasion resistance.
- Elimination of noise.
- Interchangeable with ball bushings.
- Minimal lubrication is required.
- Design economies.
- Rotary/linear motion capabilities.
- Zero shake or play.
- Elimination of galvanic action.
- High operation speeds.
- Excellent electrical insulating abilities.
- Oscillatory motion & rapid directional change.
- Unaffected by salt water or corrosion.
- Cleanliness.
- Vacuum applications.
- No catastrophic failure.
- Low friction.
- Food machinery
  (FDA approved materials available).

Self-lubricating bearings

- Tough
- Resource free
- Quiet
- Cost-effective

These are maintenance free bearings, manufactured to the same standards as our ceramic coated series, but the inside diameter is lined with a special blended Teflon-material; eliminating the need for lubrication. It also allows the use of soft shaft materials such as unhardened steel, 300 series stainless steel or aluminium.

Parallel shafting and edge loading

Sleeve-type linear motion bearings, more so than ball bushings, require parallel shafting to be aligned as closely as possible to avoid edge loading. Edge loading can cause higher than expected friction and subsequent wear.

To combat shaft misalignment, we offer two options:

1. Self-aligning bearings: a subtle o/d radius allows the bearing to pivot on the bearing crown
2. Bearings can be supplied with self-aligning O-rings to provide for a “full float bearing”. Unlike our self-aligning bearings, floating bearings on O-rings result in changes between shaft centreline to housing tolerances due to deflection and possible mechanical sets

Breakaway force requirements - static	
Self lube PTFE dry	Ceramic coated lubricated
30% of static load	10% of static load

Example

For a linear slide employing 2 rails and 4 self lubricating PTFE pillow block assemblies and supporting a horizontal, centred load of 250N

Static self-lubricating linear bearings 30% of system load to get the system moving

250N x 0.3 = 75N

Dynamic self-lubricating linear bearings (in motion) 10% of system load

250N x 0.1 = 25N

Comparison between ceramic coated and self-lubricating bearings

Linear bearing categories	Self-lubricating bearings	Ceramic coated bearings
Max PV (continuous) N/mm² x m/s	63,05	84,06
Max. pressure N/mm²	34,47	34,47
Max. speed (no load) m/s	2	Unlimited
Shaft hardness (minimum)	25HRB	35HRB
Coefficient of friction	0,09 - 0,12	0,04 - 0,08
Temperature range - Typical limits	-240°C to +190°C	-125°C to +200°C

Pressure velocity (PV) calculations

The load factor PV has a considerable influence on determining the bearing's useful operating life. PV is determined by multiplying the specific bearing load or pressure (P) by the sliding speed (V).

Bearing materials are rated by a PV limit, with the PV limit representing the highest combination of load and speed under which the bearing material will operate. The PV unit of measure is N/mm² x m/s.

To determine P in an application: the specific bearing load (P) is found by dividing the bearing load by the pressure supporting area of the bearing. The units for P are N/mm².
The pressure supporting area depends on the the specific geometry of the bearing.
The following are formulae for the most common types of bearing geometry.

Specific bearing load P (N/mm²)

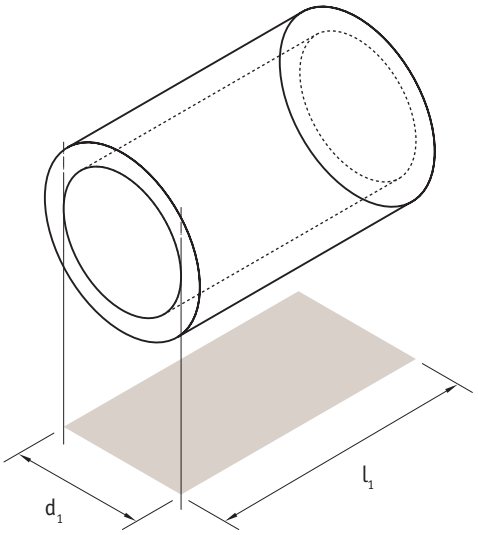
$$P = \frac{Wr}{d_1 \times l_1}$$

Sliding speed V (m/s) rotation

$$V = \frac{\pi \times d_1 \times N}{60 \times 10^3}$$

Where;

P = Specific bearing load (N/mm²)
Wr = Load on bushing (N)
d_1 = Bearing inside diameter (mm)
N = Speed of rotation (rpm)
l_1 = Bearing length



ov-ceramic-bearings-technical-info-c-lnh - Updated - 08-03-2023

Open bearing load capacity

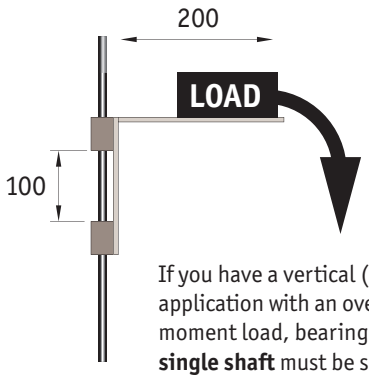
Inverting (hanging upside down) open style sleeve bearings is not an optimal design configuration. System load is forced into the bearing slot - the weakest part of the bearing. Depending on the load and possible moments, point loading on the edges of the slot can result in hot spots, liner cold flow and excessive wear. If the bearings are being used in this way the percentage of the load stated in the data table they can take is shown below.

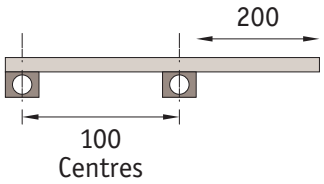
Straight downward compressive	Side mounted	Inverted (upside down)
100%	70%	30%

Cantilevered loading

When you have a cantilevered load **you must observe the 2:1 ratio rule**.
Moment loading can result in edge loading of sleeve-type linear bearings, so the correct spacing between bearings on a single shaft (vertical or Z axes) and spacing between shafting on horizontal applications (X,Y axes) must meet the 2:1 ratio rule.

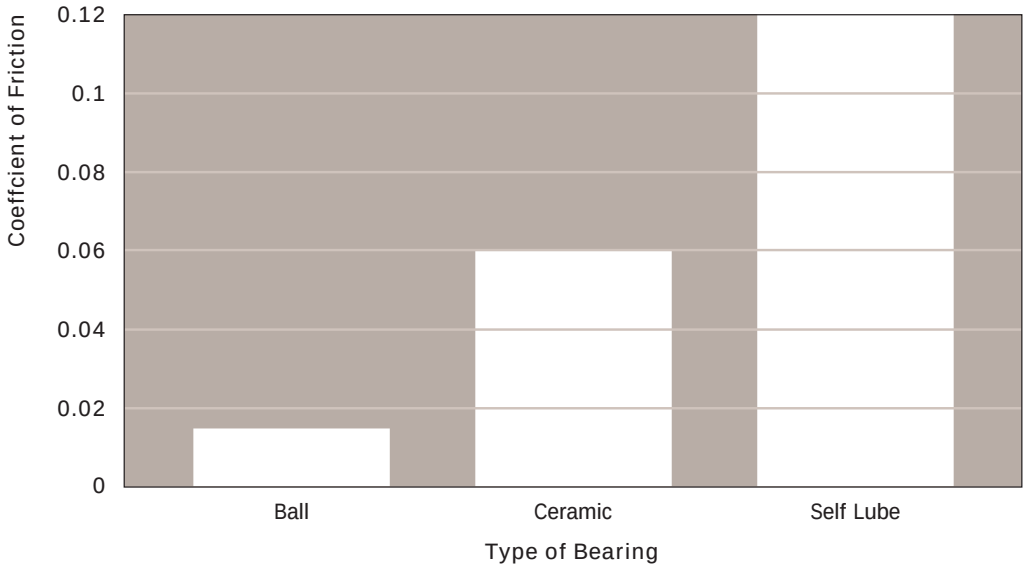
If this rule is not observed the friction will increase, the system will bind and the bearings will ultimately fail.



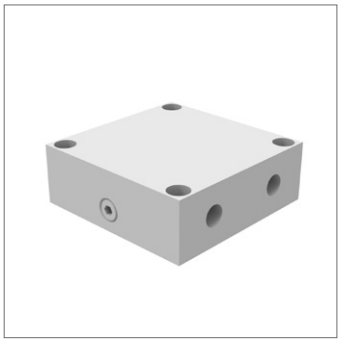


If you have a vertical (2 axis) application with an overturning moment load, bearings on a **single shaft** must be spaced (face to face) a minimum distance equalling half the length of the moment arm.

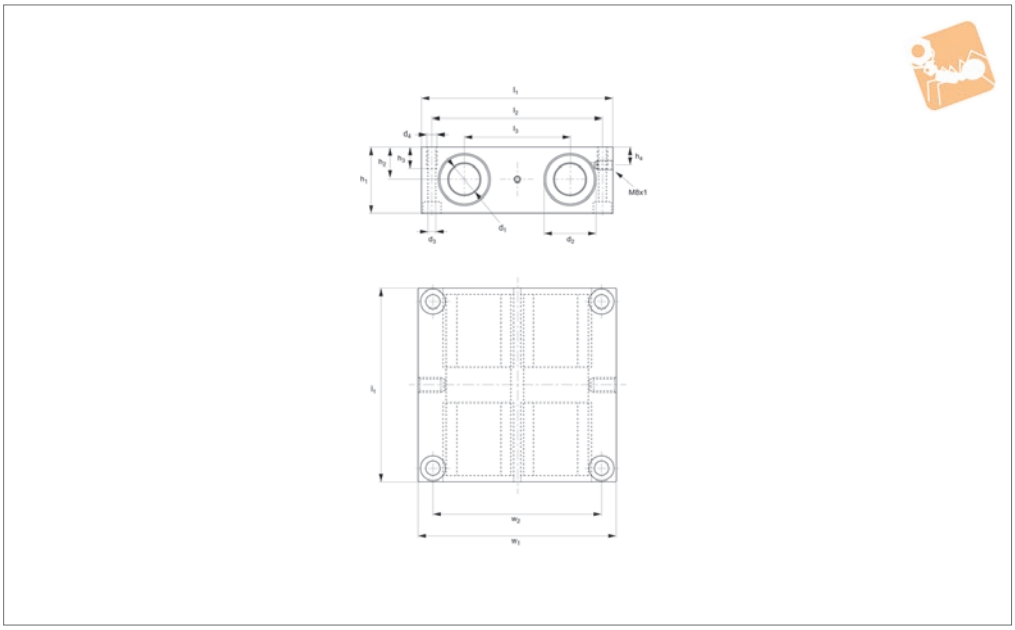
Coefficient of friction



Quadro Carriages
closed type bearings



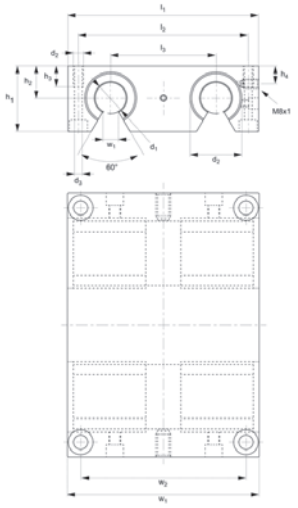
L1758

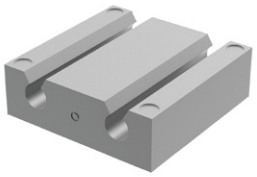


Material
Aluminium alloy body.
Steel bearings with plastic ball retainer and end seals.

Technical Notes
Quadruple, closed, self-aligning linear ball bearings with two integral seals and lubrication hole.
Bearings are fixed in the housing by retaining rings (DIN 472).
For use with hardened shafts only (see part no.s L1770 - L1772). Load ratings apply for hardened and ground shafts only.
Temperature range: -20°C to +80°C.
For applications requiring higher temperatures we can make the bushings suitable for use up to +120°C by changing the ball retainers, end plates, and seals. Please advise at time of ordering if this is required.

Order No.	d_1 for h_7	d_2 tol. h6	w_1	h_1	h_2 +0.01 | -0.02	h_3	h_4	l_1	l_2 & w_2	l_3 ±0.02	d_3	d_4	Dyn. load C kN max.	Static load C_0 kN max.	Weight kg
L1758.012	12	22	85	32	16	13	13	85	73	42	5.3	M 6	1.3	2.0	0.70
L1758.016	16	26	100	36	18	13	15	100	88	54	5.3	M 6	1.4	2.2	1.02
L1758.020	20	32	130	46	23	18	19	130	115	72	6.8	M 8	3.2	4.9	2.15
L1758.025	25	40	160	56	28	22	24	160	140	88	9.0	M10	5.5	8.5	4.07
L1758.030	30	47	180	64	32	26	27	180	158	96	10.5	M12	6.2	9.5	5.87
L1758.040	40	62	230	80	40	34	35	230	202	122	13.5	M16	10.5	14.0	11.78





L1759

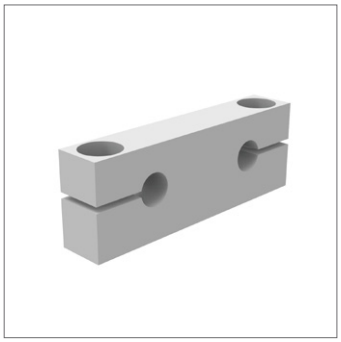
Material
Aluminium alloy body.
Steel bearings with plastic ball retainer and end seals.

Technical Notes
Quadruple, closed, self-aligning linear ball bearings with two integral seals and lubrication hole.
Bearings are fixed in the housing by retaining rings (DIN 472).
For use with hardened shafts only (see part no.s L1770 - L1772). Load ratings apply for hardened and ground shafts only.
Temperature range: -20°C to +80°C.
For applications requiring higher temperatures we can make the bushings suitable for use up to +120°C by changing the ball retainers, end plates, and seals. Please advise at time of ordering if this is required.

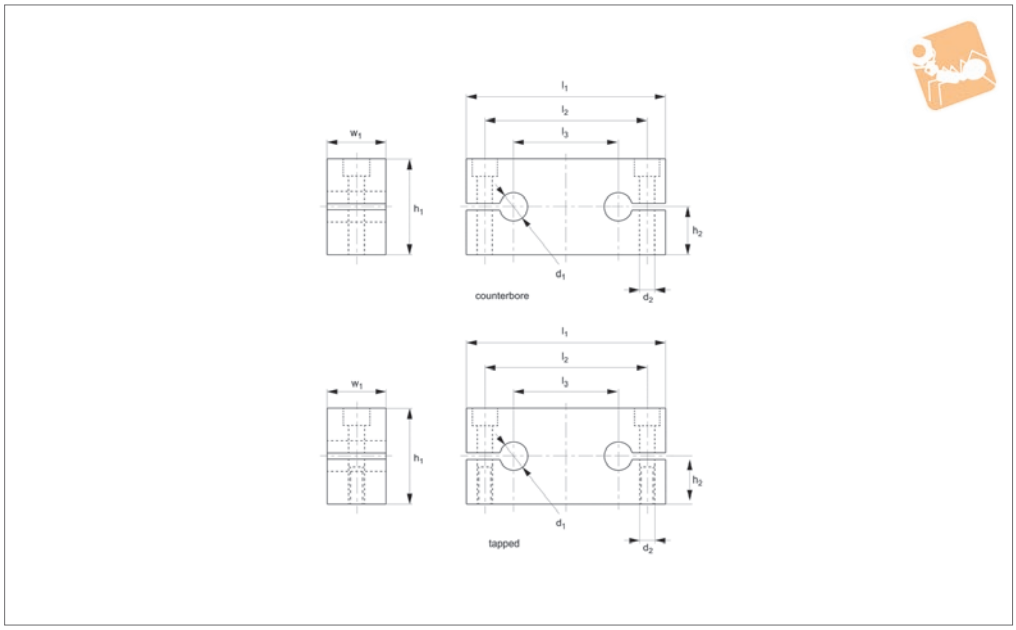
Order No.	d_1 for h_7	d_2 tol. h6	w	w_1	h_1	h_2 +0.01 | -0.02	h_3	h_4	l_1	l_2 & w_2	l_3 ±0.02	d_3	d_4	Dyn. load C kN max.	Static load C_0 kN max.	Weight kg
L1759.012	12	22	7.0	85	30	18	13	13	85	73	42	5.3	M 6	1.3	2.0	0.59
L1759.016	16	26	9.4	100	35	22	13	15	100	88	54	5.3	M 6	1.4	2.2	0.92
L1759.020	20	32	10.2	130	42	25	18	19	130	115	72	6.8	M 8	3.2	4.9	1.82
L1759.025	25	40	12.9	160	51	30	22	24	160	140	88	9.0	M10	5.5	8.5	3.46
L1759.030	30	47	13.9	180	60	35	26	27	180	158	96	10.5	M12	6.2	9.5	5.19
L1759.040	40	62	18.2	230	77	45	34	35	230	202	122	13.5	M16	10.5	14.0	10.78

End Blocks for Twin Shafts

clearance and tapped hole fixing



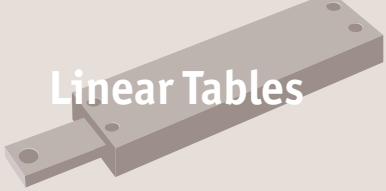
L1760



Material
Aluminium alloy.

Technical Notes
For use with parts L1758 and L1759.

Order No.	Type	d_1	d_2	w_1	h_1	h_2 ±0.015	l_1	l_2	l_3	Weight kg
L1760.008-C	Clearance	8	5.5	12	23	12.5	65	52	32	0.04
L1760.012-C	Clearance	12	6.6	14	32	18.0	85	70	42	0.07
L1760.016-C	Clearance	16	9.0	18	36	20.0	100	82	54	0.13
L1760.020-C	Clearance	20	11.0	20	46	25.0	130	108	72	0.22
L1760.025-C	Clearance	25	13.5	25	56	30.0	160	132	88	0.44
L1760.030-C	Clearance	30	13.5	25	64	35.0	180	150	96	0.56
L1760.040-C	Clearance	40	17.5	30	80	44.0	230	190	122	1.00
L1760.008-T	Tapped	8	M 5	12	22	11	65	52	32	0.04
L1760.012-T	Tapped	12	M 6	14	28	14	85	70	42	0.07
L1760.016-T	Tapped	16	M 8	18	32	16	100	82	54	0.13
L1760.020-T	Tapped	20	M10	20	42	21	130	108	72	0.22
L1760.025-T	Tapped	25	M12	25	52	26	160	132	88	0.44
L1760.030-T	Tapped	30	M12	25	58	29	180	150	96	0.56
L1760.040-T	Tapped	40	M16	30	72	36	230	190	122	1.00



Size + Weight

For light/medium loads

L1020-L1037

For heavy duty loads and motorised

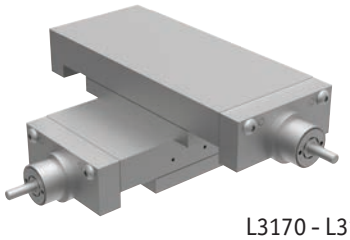
L3000-L3500

Ball roller versions

Needle roller & dovetail stage



L1024 - L1038



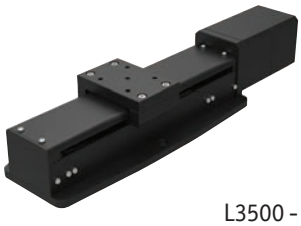
L3170 - L3194

Cross roller versions

Motorised stages



L1020 - L1026



L3500 - L3510

Stainless steel versions

Micrometer driven stages



L1022 - L1023

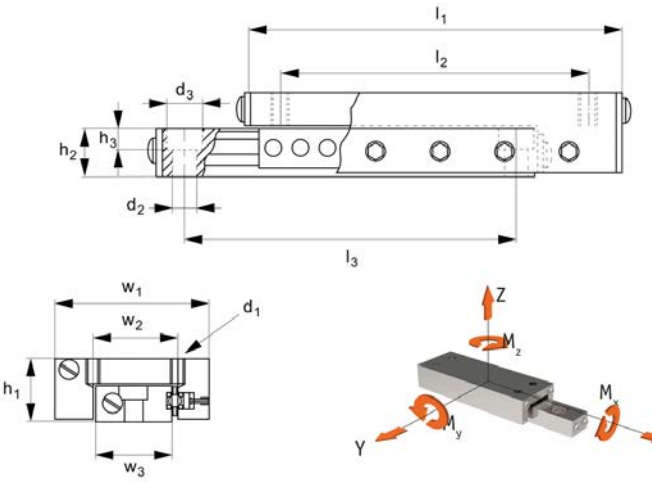


L3100 - L3123

Ball Slide Assemblies
standard precision



L1024



Material
Aluminium carriage clear anodized, base black anodized.
Hardened steel shafts and balls, mild steel end caps.

Technical Notes
Straight line accuracy: 13µ/25mm travel.
Positional repeatability: 5µ.
Coefficient of friction 0,003 typical.

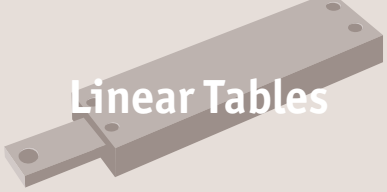
Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	w_2	h_2	w_3	l_3	Weight g
L1024.010-008	8	0.34	9.5	13.3	5.8	6.0	4.0	3.4	4.0	6.0	2
L1024.010-013	13	0.68	9.5	19.0	5.8	13.0	4.0	3.4	4.0	10.0	3
L1024.010-025	25	0.68	9.5	32.0	5.8	26.0	4.0	3.4	4.0	20.0	4
L1024.010-038	38	0.68	9.5	44.0	5.8	37.0	4.0	3.4	4.0	30.0	7
L1024.014-013	13	2	14.2	27.0	8.0	15.0	6.0	4.7	6.4	19.0	9
L1024.014-025	25	4	14.2	52.0	8.0	41.0	6.0	4.7	6.4	35.0	14
L1024.014-050	50	5	14.2	78.0	8.0	66.0	6.0	4.7	6.4	60.0	23
L1024.014-075	75	6	14.2	103.0	8.0	92.0	6.0	4.7	6.4	86.0	31
L1024.014-100	100	8	14.2	128.0	8.0	117.0	6.0	4.7	6.4	89.0	34
L1024.014-127	127	8	14.2	154.0	8.0	142.0	6.0	4.7	6.4	114.0	43
L1024.019-013	13	4	19.0	27.0	10.4	15.0	9.0	6.3	9.5	19.0	11
L1024.019-025	25	5	19.0	52.0	10.4	41.0	9.0	6.3	9.5	35.0	26
L1024.019-050	50	5	19.0	78.0	10.4	66.0	9.0	6.3	9.5	60.0	37
L1024.019-075	75	6	19.0	103.0	10.4	92.0	9.0	6.3	9.5	86.0	48
L1024.019-100	100	7	19.0	128.0	10.4	117.0	9.0	6.3	9.5	89.0	60
L1024.019-127	127	8	19.0	154.0	10.4	142.0	9.0	6.3	9.5	114.0	71
L1024.025-013	13	5	25.4	40.0	12.7	32.0	10.0	6.3	12.7	32.0	34
L1024.025-025	25	5	25.4	65.0	12.7	57.0	10.0	6.3	12.7	57.0	48
L1024.025-038	38	6	25.4	78.0	12.7	65.0	10.0	6.3	12.7	65.0	54
L1024.025-050	50	7	25.4	90.0	12.7	82.0	10.0	6.3	12.7	82.0	62
L1024.025-075	75	8	25.4	116.0	12.7	108.0	10.0	6.3	12.7	108.0	142
L1024.027-019	19	7	26.9	40.0	13.4	32.0	10.0	7.9	12.7	28.0	37
L1024.027-038	38	8	26.9	65.0	13.4	57.0	10.0	7.9	12.7	54.0	65
L1024.027-050	50	9	26.9	90.0	13.4	82.0	10.0	7.9	12.7	79.0	85
L1024.027-075	75	11	26.9	116.0	13.4	102.0	10.0	7.9	12.7	82.0	147
L1024.027-100	100	14	26.9	152.0	13.4	140.0	10.0	7.9	12.7	102.0	170
L1024.027-150	150	16	26.9	203.0	13.4	190.0	10.0	7.9	12.7	127.0	198
L1024.027-200	200	18	26.9	254.0	13.4	240.0	10.0	7.9	12.7	178.0	227
L1024.038-025	25	7	38.0	51.0	15.8	35.0	16.0	8.6	19.0	37.0	82
L1024.038-050	50	9	38.0	76.0	15.8	60.0	16.0	8.6	19.0	60.0	122
L1024.038-075	75	11	38.0	102.0	15.8	85.0	16.0	8.6	19.0	85.0	170
L1024.038-088	88	14	38.0	127.0	15.8	110.0	16.0	8.6	19.0	85.0	190



Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	w_2	h_2	w_3	l_3	Weight g
L1024.038-100	100	16	38.0	152.0	15.8	136.0	16.0	8.6	19.0	100.0	232
L1024.038-150	150	20	38.0	203.0	15.8	186.0	16.0	8.6	19.0	128.0	261
L1024.038-200	200	25	38.0	254.0	15.8	238.0	16.0	8.6	19.0	178.0	326
L1024.044-025	25	9	44.0	51.0	19.0	35.0	20.0	10.2	22.2	38.0	113
L1024.044-038	38	14	44.0	70.0	19.0	55.0	20.0	10.2	22.2	55.0	170
L1024.044-050	50	19	44.0	83.0	19.0	65.0	20.0	10.2	22.2	65.0	184
L1024.044-075	75	24	44.0	102.0	19.0	85.0	20.0	10.2	22.2	85.0	227
L1024.044-100	100	27	44.0	152.0	19.0	140.0	20.0	10.2	22.2	100.0	335
L1024.044-150	150	34	44.0	203.0	19.0	190.0	20.0	10.2	22.2	126.0	445
L1024.044-200	200	41	44.0	254.0	19.0	240.0	20.0	10.2	22.2	178.0	553
L1024.067-025	25	14	66.5	67.0	25.4	54.0	35.0	15.9	38.1	54.0	283
L1024.067-038	38	16	66.5	67.0	25.4	42.0	35.0	15.9	38.1	42.0	283
L1024.067-050	50	28	66.5	102.0	25.4	75.0	35.0	15.9	38.1	75.0	425
L1024.067-075	75	40	66.5	127.0	25.4	100.0	35.0	15.9	38.1	100.0	590
L1024.067-100	100	54	66.5	152.0	25.4	125.0	35.0	15.9	38.1	125.0	771
L1024.067-127	127	61	66.5	203.0	25.4	175.0	35.0	15.9	38.1	187.0	879
L1024.067-150	150	68	66.5	229.0	25.4	75,0 (x2)	35.0	15.9	38.1	178.0	498
L1024.067-228	228	84	66.5	305.0	25.4	75,0 (x3)	35.0	15.9	38.1	254.0	1318
L1024.067-304	304	93	66.5	381.0	25.4	75,0 (x4)	35.0	15.9	38.1	330.0	1644

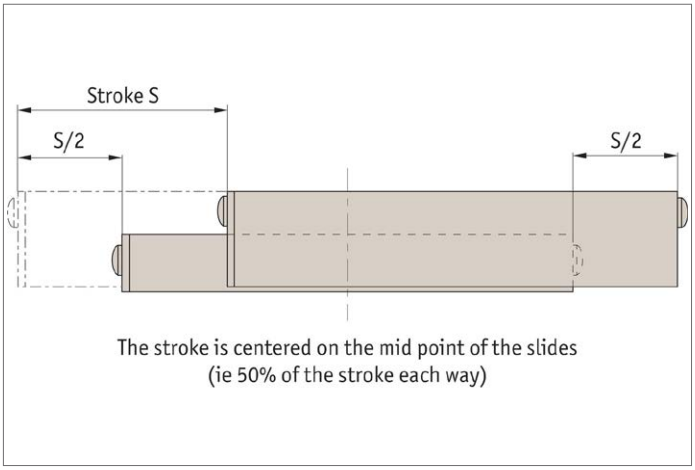
Order No.	d_1	d_2	d_3	h_3	Counterbore screw size	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1024.010-008	M2	M2	-	-	n/a	0.02	0.01	0.01
L1024.010-013	M2	M2	-	-	n/a	0.03	0.01	0.02
L1024.010-025	M2	M2	-	-	n/a	0.04	0.01	0.04
L1024.010-038	M2	M2	-	-	n/a	0.06	0.01	0.05
L1024.014-013	M2	2.2	4.0	2.2	M2	0.1	0.1	0.1
L1024.014-025	M2	2.2	4.0	2.2	M2	0.5	0.1	0.5
L1024.014-050	M2	2.2	4.0	2.2	M2	1.0	0.2	1.0
L1024.014-075	M2	2.2	4.0	2.2	M2	1.6	0.2	1.5
L1024.014-100	M2	2.2	4.0	2.2	M2	2.1	0.2	2.
L1024.014-127	M2	2.2	4.0	2.2	M2	2.7	0.3	2.6
L1024.019-013	M3	3.5	6.1	3.4	M3	0.2	0.2	0.2
L1024.019-025	M3	3.5	6.1	3.4	M3	0.6	0.2	0.5
L1024.019-050	M3	3.5	6.1	3.4	M3	1.0	0.3	1.0
L1024.019-075	M3	3.5	6.1	3.4	M3	1.6	0.3	1.5
L1024.019-100	M3	3.5	6.1	3.4	M3	2.1	0.3	2.0
L1024.019-127	M3	3.5	6.1	3.4	M3	2.7	0.4	2.6
L1024.025-013	M4	3.5	6.1	3.4	M3	2.4	0.3	0.4
L1024.025-025	M4	3.5	6.1	3.4	M3	1.0	0.3	1.0
L1024.025-038	M4	3.5	6.1	3.4	M3	1.2	0.4	1.2
L1024.025-050	M4	3.5	6.1	3.4	M3	1.6	0.4	1.5
L1024.025-075	M4	3.5	6.1	3.4	M3	2.4	0.5	2.3
L1024.027-019	M4	4.6	8.1	4.4	M4	0.5	0.4	0.5
L1024.027-038	M4	4.6	8.1	4.4	M4	1.3	0.5	1.2
L1024.027-050	M4	4.6	8.1	4.4	M4	2.1	0.6	2.0
L1024.027-075	M4	4.6	8.1	4.4	M4	3.3	0.7	3.1
L1024.027-100	M4	4.6	8.1	4.4	M4	5.3	0.4	5.1
L1024.027-150	M4	4.6	8.1	4.4	M4	7.9	1.0	7.5
L1024.027-200	M4	4.6	8.1	4.4	M4	10.9	1.2	10.3
L1024.038-025	M4	4.6	8.1	4.4	M4	0.7	0.6	0.7
L1024.038-050	M4	4.6	8.1	4.4	M4	1.4	0.8	1.4
L1024.038-075	M4	4.6	8.1	4.4	M4	2.4	1.0	2.3
L1024.038-088	M4	4.6	8.1	4.4	M4	3.9	1.2	3.7
L1024.038-100	M4	4.6	8.1	4.4	M4	5.8	1.5	5.5
L1024.038-150	M4	4.6	8.1	4.4	M4	9.6	1.9	9.1
L1024.038-200	M4	4.6	8.1	4.4	M4	14.3	2.3	13.6
L1024.044-025	M4	4.6	8.1	4.4	M4	0.9	1.0	0.9
L1024.044-038	M4	4.6	8.1	4.4	M4	2.1	1.4	2.0
L1024.044-050	M4	4.6	8.1	4.4	M4	3.5	2.0	3.3
L1024.044-075	M4	4.6	8.1	4.4	M4	4.9	2.5	4.7
L1024.044-100	M4	4.6	8.1	4.4	M4	10.0	2.9	10.0
L1024.044-150	M4	4.6	8.1	4.4	M4	16.0	3.6	15.2
L1024.044-200	M4	4.6	8.1	4.4	M4	23.4	4.3	22.3
L1024.067-025	M5	5.8	10.0	5.3	M5	2.0	2.5	1.9
L1024.067-038	M5	5.8	10.0	5.3	M5	2.0	2.9	1.9



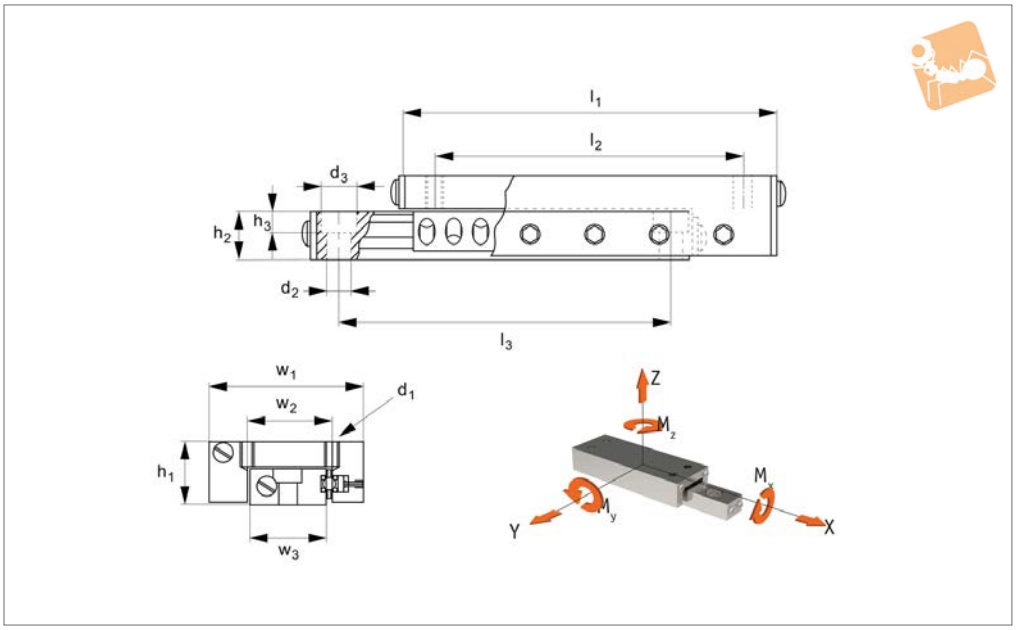
Ball Slide Assemblies
standard precision



Order No.	d_1	d_2	d_3	h_3	Counterbore screw size	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1024.067-050	M5	5.8	10.0	5.3	M5	7.2	5.11	6.9
L1024.067-075	M5	5.8	10.0	5.3	M5	13.1	7.2	12.5
L1024.067-100	M5	5.8	10.0	5.3	M5	21.5	9.7	20.5
L1024.067-127	M5	5.8	10.0	5.3	M5	33.6	11.1	32.0
L1024.067-150	M5	5.8	10.0	5.3	M5	42.3	12.3	40.3
L1024.067-228	M5	5.8	10.0	5.3	M5	64.5	15.2	61.4
L1024.067-304	M5	5.8	10.0	5.3	M5	85.1	16.8	81.0



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)





L1026

Material
Aluminium carriage and base (black anodized).
Hardened steel rods and rollers, stainless steel end caps.

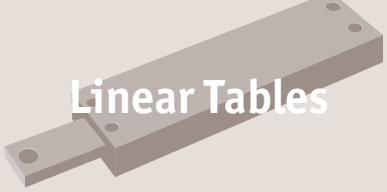
Technical Notes
Straight line accuracy: 3µ/25mm of travel.
Positional repeatability: 3µ.
Coefficient of friction: 0,003 typical.

The slides are lightly lubricated during assembly.
Additional lubrication is required for speeds above 30m/min and is advisable at lower speeds where high loads are applied in continuous duty applications.
The slides should be mounted on flat surfaces to provide full support to the base.

At rated load capacity and moderate speeds, expected life is 250km of travel. At half the rated load the expected life is 2,500km.

Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	w_2	h_2	w_3	l_3	Weight g
L1026.014-013	13	14	14.2	27.0	8.0	15.0	6.0	4.7	6.4	19.0	11
L1026.014-025	25	25	14.2	52.0	8.0	41.0	6.0	4.7	6.4	35.0	17
L1026.014-050	50	30	14.2	78.0	8.0	66.0	6.0	4.7	6.4	60.0	26
L1026.014-075	75	32	14.2	103.0	8.0	92.0	6.0	4.7	6.4	86.0	34
L1026.014-100	100	36	14.2	129.0	8.0	117.0	6.0	4.7	6.4	89.0	37
L1026.014-127	127	41	14.2	154.0	8.0	143.0	6.0	4.7	6.4	114.0	45
L1026.019-013	13	22	19.0	27.0	10.4	15.0	9.0	6.3	9.5	19.0	14
L1026.019-025	25	35	19.0	52.0	10.4	41.0	9.0	6.3	9.5	35.0	28
L1026.019-050	50	42	19.0	78.0	10.4	66.0	9.0	6.3	9.5	60.0	40
L1026.019-075	75	44	19.0	103.0	10.4	92.0	9.0	6.3	9.5	86.0	51
L1026.019-100	100	47	19.0	129.0	10.4	117.0	9.0	6.3	9.5	89.0	62
L1026.019-127	127	49	19.0	154.0	10.4	142.0	9.0	6.3	9.5	114.0	74
L1026.025-013	13	32	25.4	40.0	12.7	32.0	10.0	6.3	12.7	32.0	37
L1026.025-025	25	35	25.4	65.0	12.7	57.0	10.0	6.3	12.7	57.0	51
L1026.025-038	38	35	25.4	78.0	12.7	65.0	10.0	6.3	12.7	65.0	57
L1026.025-050	50	38	25.4	90.0	12.7	82.0	10.0	6.3	12.7	82.0	65
L1026.025-075	75	41	25.4	116.0	12.7	108.0	10.0	6.3	12.7	108.0	79
L1026.027-019	19	50	26.9	40.0	13.4	32.0	10.0	7.9	12.7	28.0	40
L1026.027-038	38	60	26.9	65.0	13.4	57.0	10.0	7.9	12.7	54.0	68
L1026.027-050	50	100	26.9	90.0	13.4	82.0	10.0	7.9	12.7	79.0	88
L1026.027-075	75	120	26.9	116.0	13.4	102.0	10.0	7.9	12.7	82.0	150
L1026.027-100	100	129	26.9	152.0	13.4	140.0	10.0	7.9	12.7	102.0	173
L1026.027-150	150	135	26.9	203.0	13.4	190.0	10.0	7.9	12.7	127.0	204
L1026.027-200	200	145	26.9	254.0	13.4	240.0	10.0	7.9	12.7	178.0	232
L1026.038-025	25	59	38.0	51.0	15.8	35.0	16.0	8.6	19.0	37.0	85
L1026.038-050	50	79	38.0	76.0	15.8	60.0	16.0	8.6	19.0	60.0	128
L1026.038-075	75	79	38.0	102.0	15.8	85.0	16.0	8.6	19.0	85.0	176



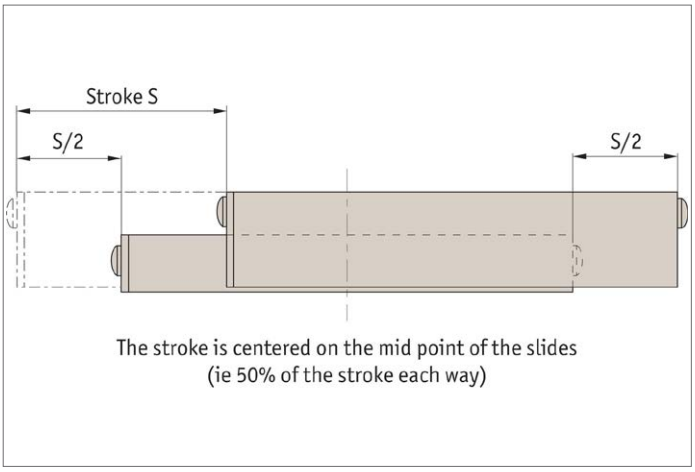
Crossed Roller Slides
standard precision



Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	w_2	h_2	w_3	l_3	Weight g
L1026.038-089	89	95	38.0	127.0	15.8	111.0	16.0	8.6	19.0	85.0	196
L1026.038-100	100	139	38.0	152.0	15.8	136.0	16.0	8.6	19.0	100.0	238
L1026.038-150	150	163	38.0	203.0	15.8	186.0	16.0	8.6	19.0	127.0	266
L1026.038-200	200	187	38.0	254.0	15.8	238.0	16.0	8.6	19.0	178.0	332
L1026.044-025	25	59	44.0	51.0	19.0	35.0	20.0	10.2	22.2	38.0	116
L1026.044-038	38	68	44.0	70.0	19.0	55.0	20.0	10.2	22.2	55.0	173
L1026.044-050	50	79	44.0	83.0	19.0	65.0	20.0	10.2	22.2	65.0	187
L1026.044-075	75	79	44.0	102.0	19.0	85.0	20.0	10.2	22.2	85.0	232
L1026.044-100	100	139	44.0	152.0	19.0	140.0	20.0	10.2	22.2	100.0	343
L1026.044-150	150	170	44.0	203.0	19.0	190.0	20.0	10.2	22.2	127.0	454
L1026.044-200	200	204	44.0	254.0	19.0	240.0	20.0	10.2	22.2	178.0	561
L1026.067-025	25	102	66.6	67.0	25.4	54.0	35.0	15.9	38.1	54.0	292
L1026.067-038	38	119	66.6	67.0	25.4	42.0	35.0	15.9	38.1	42.0	292
L1026.067-050	50	158	66.6	102.0	25.4	75.0	35.0	15.9	38.1	75.0	454
L1026.067-075	75	198	66.6	127.0	25.4	100.0	35.0	15.9	38.1	100.0	635
L1026.067-100	100	198	66.6	152.0	25.4	125.0	35.0	15.9	38.1	125.0	816
L1026.067-127	127	215	66.6	203.0	25.4	175.0	35.0	15.9	38.1	187.0	936
L1026.067-150	150	317	66.6	229.0	25.4	75.0	35.0	15.9	38.1	178.0	1089
L1026.067-228	228	336	66.6	305.0	25.4	75.0	35.0	15.9	38.1	254.0	1366
L1026.067-304	304	354	66.6	381.0	25.4	75.0	35.0	15.9	38.1	330.0	1729

Order No.	d_1	d_2	d_3	h_3	Counterbore screw size	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1026.014-013	M2	2.2	4.0	2.2	M2	0.4	0.8	0.8
L1026.014-025	M2	2.2	4.0	2.2	M2	0.7	2.7	2.8
L1026.014-050	M2	2.2	4.0	2.2	M2	0.9	4.9	5.2
L1026.014-075	M2	2.2	4.0	2.2	M2	1.0	7.6	8.0
L1026.014-100	M2	2.2	4.0	2.2	M2	1.1	10.1	10.6
L1026.014-127	M2	2.2	4.0	2.2	M2	1.3	13.0	13.6
L1026.019-013	M3	3.5	6.1	3.4	M3	1.0	1.3	1.4
L1026.019-025	M3	3.5	6.1	3.4	M3	1.5	3.8	4.0
L1026.019-050	M3	3.5	6.1	3.4	M3	2.1	7.0	7.4
L1026.019-075	M3	3.5	6.1	3.4	M3	2.1	10.6	11.1
L1026.019-100	M3	3.5	6.1	3.4	M3	2.3	13.1	13.8
L1026.019-127	M3	3.5	6.1	3.4	M3	2.37	15.6	16.4
L1026.025-013	M4	3.5	6.1	3.4	M3	2.0	2.6	2.8
L1026.025-025	M4	3.5	6.1	3.4	M3	2.2	6.3	6.7
L1026.025-038	M4	3.5	6.1	3.4	M3	2.2	7.0	7.4
L1026.025-050	M4	3.5	6.1	3.4	M3	2.3	8.2	8.6
L1026.025-075	M4	3.5	6.1	3.4	M3	2.5	11.3	11.9
L1026.027-019	M4	4.6	8.1	4.4	M4	3.2	3.7	3.5
L1026.027-038	M4	4.6	8.1	4.4	M4	3.8	8.3	8.8
L1026.027-050	M4	4.6	8.1	4.4	M4	5.7	17.3	18.2
L1026.027-075	M4	4.6	8.1	4.4	M4	7.0	27.3	28.7
L1026.027-100	M4	4.6	8.1	4.4	M4	8.3	48.3	50.7
L1026.027-150	M4	4.6	8.1	4.4	M4	8.6	63.8	67.0
L1026.027-200	M4	4.6	8.1	4.6	M4	9.3	83.1	87.3
L1026.038-025	M4	4.6	8.1	4.4	7.0	M4	5.5	6.7
L1026.038-050	M4	4.6	8.1	4.4	10.0	M4	6.3	9.5
L1026.038-075	M4	4.6	8.1	4.4	16.4	M4	7.3	15.6
L1026.038-089	M4	4.6	8.1	4.4	27.4	M4	8.8	26.1
L1026.038-100	M4	4.6	8.1	4.4	49.1	M4	12.8	46.8
L1026.038-150	M4	4.6	8.1	4.4	76.9	M4	15.0	73.2
L1026.038-200	M4	4.6	8.1	4.4	107	M4	17.2	102
L1026.044-025	M4	4.6	8.1	4.4	7.0	M4	6.3	6.7
L1026.044-038	M4	4.6	8.1	4.4	10.7	M4	7.2	10.2
L1026.044-050	M4	4.6	8.1	4.4	14.0	M4	8.5	13.4
L1026.044-075	M4	4.6	8.1	4.4	16.3	M4	8.5	15.6
L1026.044-100	M4	4.6	8.1	4.4	49.1	M4	14.8	46.8
L1026.044-150	M4	4.6	8.1	4.4	80.0	M4	18.0	76.3
L1026.044-200	M4	4.6	8.1	4.4	117	M4	21.6	111
L1026.067-025	M5	5.8	10.0	5.3	14.9	M5	18.5	14.2
L1026.067-038	M5	5.8	10.0	5.3	18.8	M5	21.5	17.9
L1026.067-050	M5	5.8	10.0	5.3	37.6	M5	28.7	35.8
L1026.067-075	M5	5.8	10.0	5.3	62.6	M5	35.9	59.7
L1026.067-100	M5	5.8	10.0	5.3	78.3	M5	35.9	74.6

Order No.	d_1	d_2	d_3	h_3	Counterbore screw size	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1026.067-127	M5	5.8	10.0	5.3	117	M5	38.9	112
L1026.067-150	M5	5.8	10.0	5.3	175	M5	57.4	167
L1026.067-228	M5	5.8	10.0	5.3	258	M5	60.9	245
L1026.067-304	M5	5.8	10.0	5.3	323	M5	64.2	308



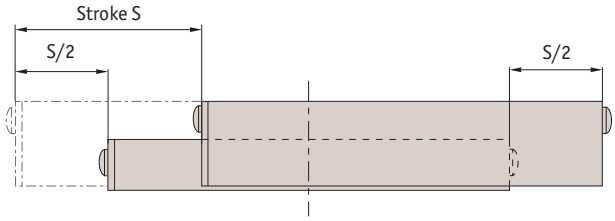
The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)

Linear Tables

Overview

Factors affecting stage selections...

- Size and weight of load
- Moment loads
- Stroke required
- Accuracy required
- Usage conditions of water, chemicals, shock loads etc.



The stroke is centred on the mid point of the slides (i.e. 50% of the stroke each way).

Generally ball slides are less expensive but cross roller slides can carry 8 to 10 times the load of ball slides.

A selection...

L1020 Crossed roller tables	L1022/23 Cross roller table	L1024 Ball slide tables
 Steel and aluminium, accuracy typically 5µ.	 Stainless Steel, accuracy typically 3µ.	 Aluminium, accuracy typically 12µ.
L1026 Crossed roller slide tables	**L1028 Precision ball slide tables**	**L1029 Precision crossed roller tables**
 Aluminium, accuracy typically 5µ.	 Aluminium, accuracy typically 3µ.	 Aluminium, accuracy typically 3µ.
L1034 Flanged ball slide tables - precision	**L1038 Anti-creep ball slide tables**	**L1039 Non-magnetic ball slide**
 With flange accuracy to 1µ.	 Special anti-creep function prevents cage misalignment.	 Non-magnetic accuracy typically 3µ.



Steel - L1020

- Standard steel / cast iron



Aluminium - L1021

- Lower weight, lower profile
- Good for high accelerations



Stainless steel - L1022 + L1023

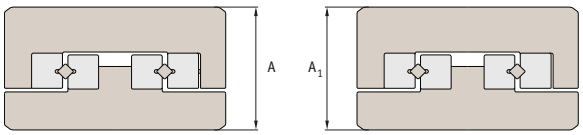
- Stainless steel (440C+Ni) corrosion resistant

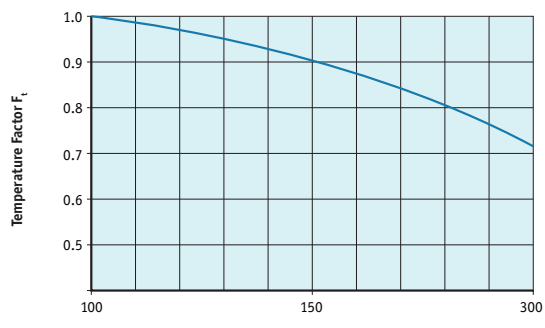


Rated life

$$L\,(Km) = \left(\frac{F_t \cdot C}{F_w P_c}\right)^{3.33} \times 100$$

F_t = temperature factor
F_w = load factor
C = basic dynamic load (kN) see tables
P_c = radial load (kN)



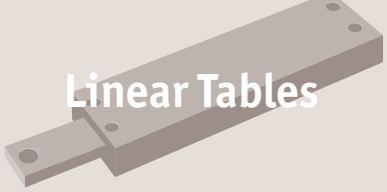


Height tolerance:

- Height ±100µ
- Motorised parts ±10µ
- Strokes from 10 to 950mm
- Loads to 48kN

Load factor F_w

Shock	Speed	F_w
None	Very slow	1.0 - 1.2
Small	Slow	1.2 - 1.5



Cross Roller Linear Tables

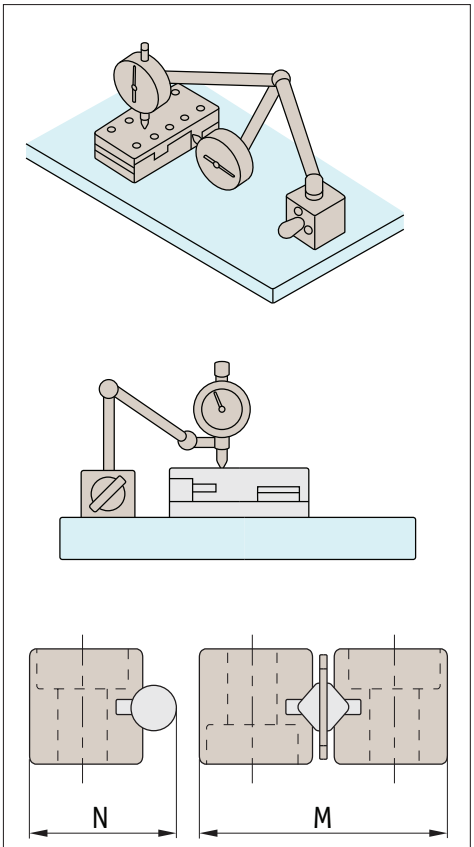
Technical

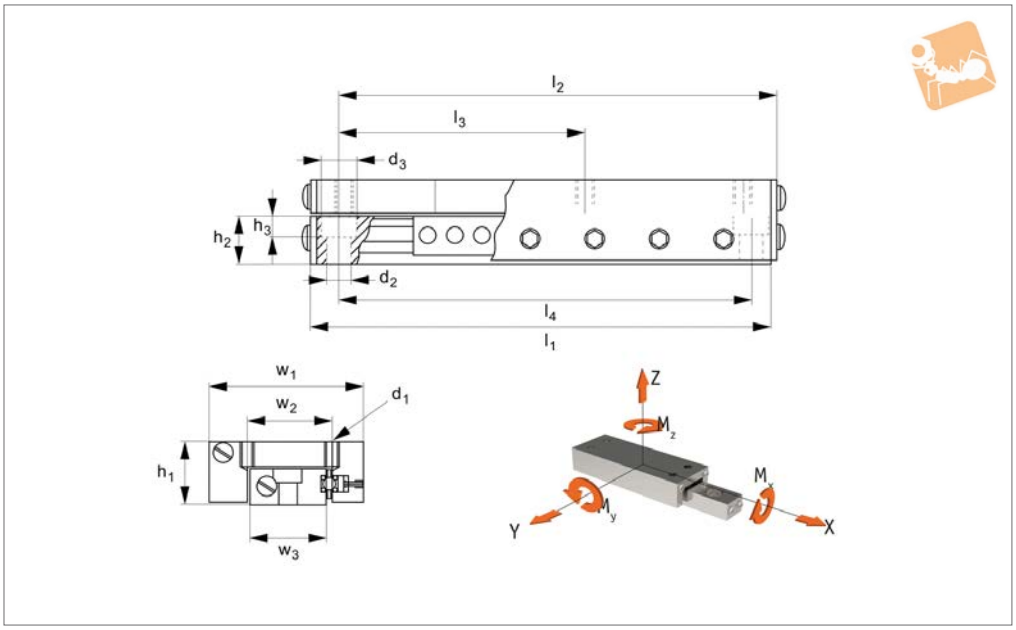


Technical accuracy measurments

- High accuracy.
- Low friction: virtually frictionless. Providing stable performance at lower high speeds.
- Rigid: incorporating cross roller linear rails to provide high load capacity as well as high moment load capacity.
- Installation: easy to install with pre-drilled holes in carriage and base. Ensure mounting surface faces are accurately machined.

Table accuracy (µ)			Rail accuracy (µ)		
Table length	Carriage top parallelism	Carriage side parallelism	N tolerance	M tolerance	Straightness
0-50	2	4			2
50-100	2	5			2
100-150	3	6			3
150-200	3	7			3
200-250	3	7			3
250-300	3	7	-15	-30	3
300-350	4	8	-35	-70	4
350-400	4	8			4
400-450	4	8			4
450-500	4	8			4
500-550	4	9			4
550-600	4	9			4







L1028

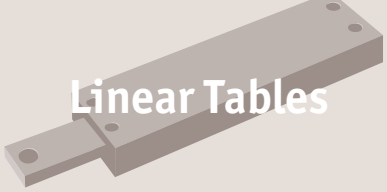
Material
Aluminium carriage and base.
Hardened stainless steel balls, shafts and preload gibs.

Technical Notes
Straight line accuracy: 3µ/25mm of travel.
Positional repeatability: 1µ.
Coefficient of friction: 0,002.

Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

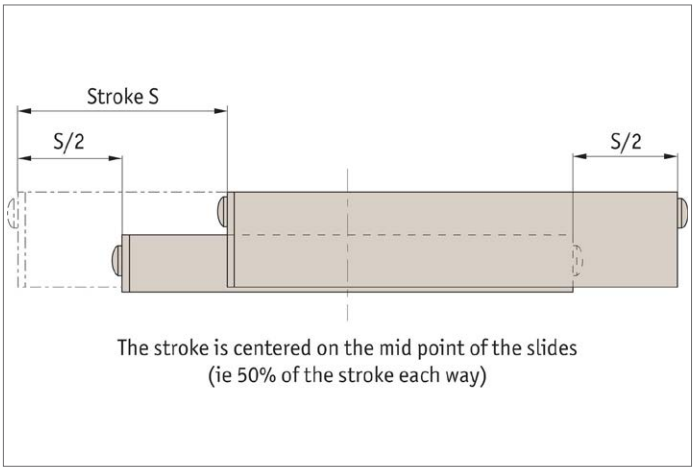
Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	l_3	l_4	w_2	h_2	w_3	Weight g
L1028.025-025	25	5.4	25.4	65.0	12.7	57	-	57	10	6.4	10.2	57
L1028.025-050	50	9.1	25.4	90.4	12.7	83	-	83	10	6.4	10.2	79
L1028.025-075	75	10.0	25.4	115.8	12.7	108	-	108	10	6.4	10.2	102
L1028.045-025	25	9.1	44.5	50.8	19.0	35	-	38	20	10.2	22.1	113
L1028.045-038	38	15.0	44.5	69.9	19.0	54	-	54	20	10.2	22.1	154
L1028.045-050	50	20.0	44.5	82.6	19.0	65	-	65	20	10.2	22.1	186
L1028.045-075	75	25.0	44.5	101.6	19.0	85	-	85	20	10.2	22.1	227
L1028.045-100	100	28.0	44.5	127.0	19.0	115	-	115	20	10.2	22.1	286
L1028.067-025	25	16.0	66.5	66.5	25.4	54	-	54	35	15.5	38.1	295
L1028.067-050	50	29.0	66.5	101.6	25.4	75	-	75	35	15.5	38.1	453
L1028.067-075	75	42.0	66.5	127.0	25.4	100	-	100	35	15.5	38.1	567
L1028.067-100	100	55.0	66.5	152.4	25.4	125	-	125	35	15.5	38.1	680
L1028.067-125	125	63.0	66.5	203.2	25.4	175	-	187	35	15.5	38.1	794
L1028.067-150	150	70.0	66.5	228.6	25.4	150	75	178	35	15.5	38.1	1021
L1028.127-075	75	42.0	127.0	127.0	25.4	100	50	100	100	15.5	98.3	1021
L1028.127-125	125	64.0	127.0	177.8	25.4	150	75	150	100	15.5	98.3	1474
L1028.127-175	175	77.0	127.0	228.6	25.4	200	100	200	100	15.5	98.3	1928

Order No.	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1028.025-025	3.4	3.5	6.1	M4	0.3	1.0	1.0
L1028.025-050	3.4	3.5	6.1	M4	0.6	2.0	2.7
L1028.025-075	3.4	3.5	6.1	M4	0.8	3.2	3.7
L1028.045-025	4.4	4.6	8.1	M4	1.0	0.9	0.9
L1028.045-038	4.4	4.6	8.1	M4	1.4	2.0	2.1
L1028.045-050	4.4	4.6	8.1	M4	2.0	3.3	3.5
L1028.045-075	4.4	4.6	8.1	M4	2.5	4.7	4.9
L1028.045-100	4.4	4.6	8.1	M4	2.9	9.5	10.0
L1028.067-025	5.3	5.8	10	M5	2.5	1.9	2.0

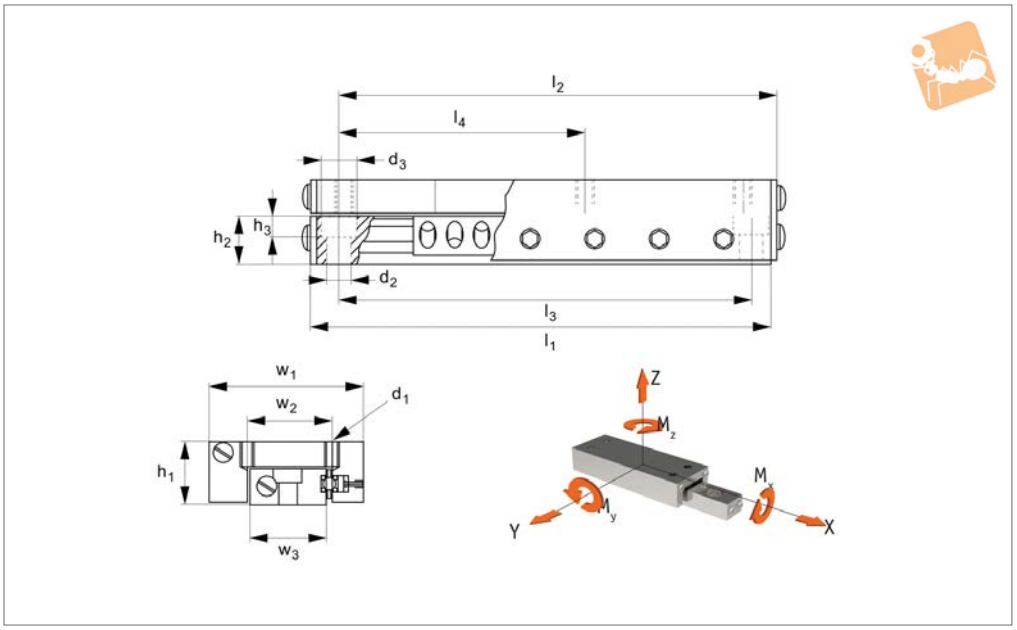


Ball Slide Assemblies
precision

Order No.	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1028.067-050	5.3	5.8	10	M5	5.1	6.9	7.2
L1028.067-075	5.3	5.8	10	M5	7.2	12.5	13.1
L1028.067-100	5.3	5.8	10	M5	9.7	20.5	21.5
L1028.067-125	5.3	5.8	10	M5	11.1	32.0	33.6
L1028.067-150	5.3	5.8	10	M5	12.3	40.3	42.3
L1028.127-075	6.2	7.1	11	M6	8.3	14.4	15.1
L1028.127-125	6.2	7.1	11	M6	16.4	61.0	61.8
L1028.127-175	6.2	7.1	11	M6	17.8	71.0	74.5



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)





L1029

Material
Aluminium carriage and base.
Hardened stainless steel rollers, shafts and preload gibs.

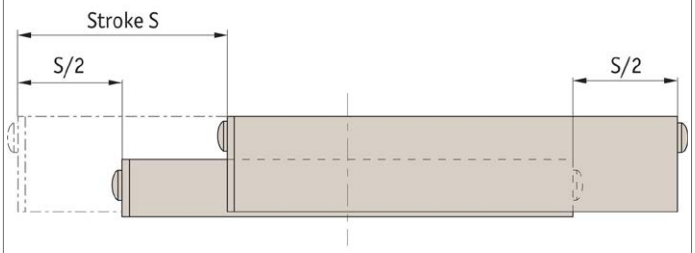
Technical Notes
Straight line accuracy: 3µ/25mm of travel.
Positional repeatability: 1µ.
Coefficient of friction: 0,002.

Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

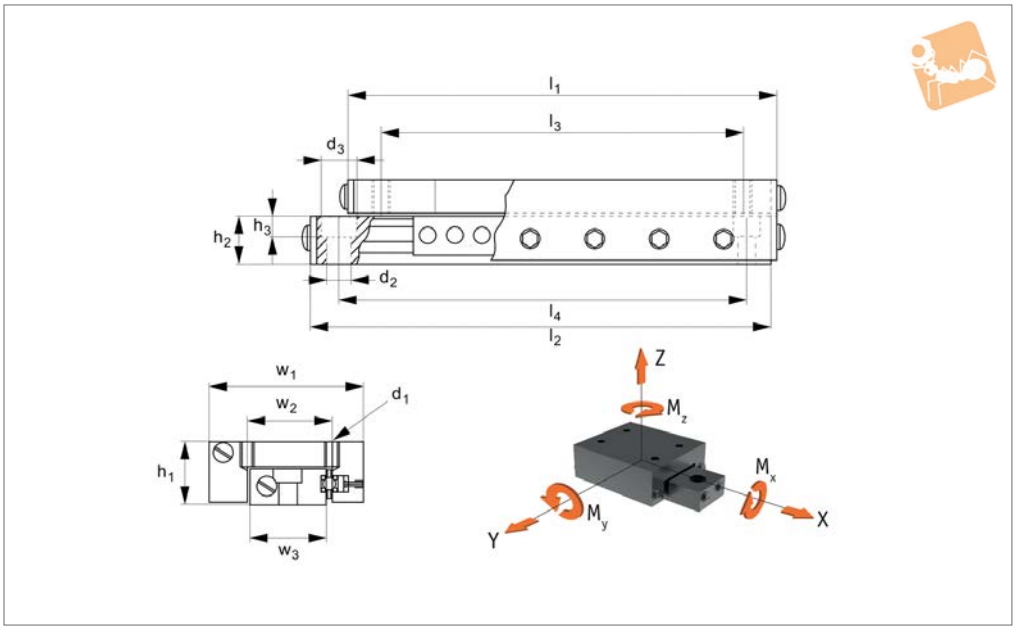
Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	l_3	l_4	w_2	h_2	w_3	Weight g
L1029.045-025	25	36	44.5	50.8	19.0	35	38	-	20	10.2	22.1	127
L1029.045-050	50	54	44.5	82.6	19.0	65	65	-	20	10.2	22.1	209
L1029.045-075	75	59	44.5	101.6	19.0	85	85	-	20	10.2	22.1	254
L1029.045-100	100	64	44.5	127.0	19.0	115	115	-	20	10.2	22.1	286
L1029.067-025	25	95	67	66.5	25.4	54	54	-	35	15.5	38.1	299
L1029.067-050	50	109	67	101.6	25.4	75	75	-	35	15.5	38.1	454
L1029.067-075	75	154	67	127.0	25.4	100	100	-	35	15.5	38.1	567
L1029.067-100	100	173	67	152.4	25.4	125	125	-	35	15.5	38.1	680
L1029.067-125	125	186	67	203.2	25.4	175	187	-	35	15.5	38.1	907
L1029.127-075	75	100	127	127.0	25.4	100	100	50	100	15.5	6.2	1021
L1029.127-125	125	109	127	177.8	25.4	150	150	75	100	15.5	6.2	1474
L1029.127-175	175	118	127	228.6	25.4	200	200	100	100	15.5	6.2	1928

Order No.	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1029.045-025	4.6	M4	4.6	8.1	4.4	4.7	4.9
L1029.045-050	4.6	M4	4.6	8.1	5.9	9.4	9.8
L1029.045-075	4.6	M4	4.6	8.1	6.9	10.9	11.4
L1029.045-100	4.6	M4	4.6	8.1	7.7	12.1	12.7
L1029.067-025	5.3	M5	5.8	10	18.1	15.0	15.8
L1029.067-050	5.3	M5	5.8	10	24.1	30.1	31.6
L1029.067-075	5.3	M5	5.8	10	30.2	50.1	52.6
L1029.067-100	5.3	M5	5.8	10	45.9	62.6	65.8
L1029.067-125	5.3	M5	5.8	10	41.3	72.0	75.6
L1029.127-075	6.2	M6	7.1	11	19.3	72.2	73.8
L1029.127-125	6.2	M6	7.1	11	21.2	79.4	81.1
L1029.127-175	6.2	M6	7.1	11	23.0	92.8	97.4

Crossed Roller Slides
precision



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)





L1030

Material
Aluminium carriage and base.
Hardened stainless steel balls, shafts and preload gibs.

Technical Notes
Straight line accuracy: 1µ/25mm of travel.
Positional repeatability: 0.5µ.
Coefficient of friction: 0,002.
Carriage surface flat to 3µ/25mm. Carriage and base ground to optical flatness.

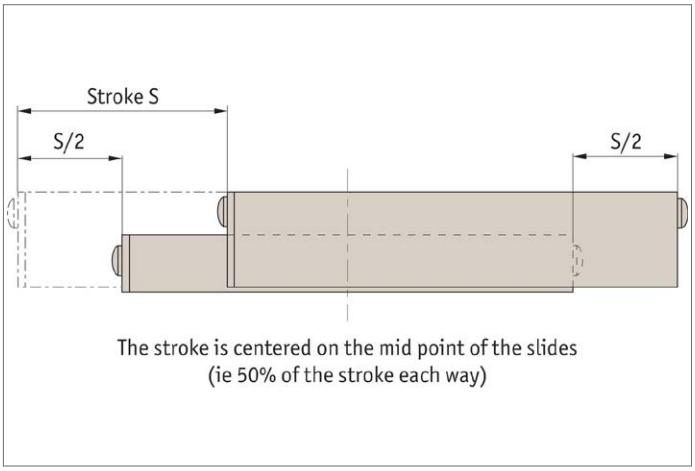
Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	l_3	l_4	w_2	h_2	w_3	Weight g
L1030.025-013	13	3.6	25.4	25.4	12.7	31.8	15	20	CL	6.1	10.2	27
L1030.025-025	25	6.8	25.4	44.5	12.7	50.8	35	40	CL	6.1	10.2	50
L1030.025-038	38	11	25.4	63.5	12.7	69.9	54	57	CL	6.1	10.2	73
L1030.025-050	50	14	25.4	82.6	12.7	88.8	70	75	CL	6.1	10.2	91
L1030.045-025	25	11	44.5	50.8	19.0	57.2	35	40	20	10.2	22.1	127
L1030.045-038	38	14	44.5	69.9	19.0	76.2	54	57	20	10.2	22.1	172
L1030.045-050	50	19	44.5	82.6	19.0	88.9	65	70	20	10.2	22.1	209
L1030.045-075	75	23	44.5	101.6	19.0	108.0	85	90	20	10.2	22.1	254
L1030.067-025	25	33	66.5	66.5	25.4	66.5	54	54	35	15.7	38.1	299
L1030.067-050	50	38	66.5	101.6	25.4	111.0	75	85	35	15.7	38.1	454
L1030.067-075	75	46	66.5	127.0	25.4	136.4	100	110	35	15.7	38.1	567
L1030.067-100	100	60	66.5	152.4	25.4	161.8	125	135	35	15.7	38.1	680
L1030.067-125	125	66	66.5	203.2	25.4	212.6	178	190	35	15.7	38.1	907
L1030.089-050	50	59	88.9	101.6	34.9	114.3	50	65	50	15.7	50.3	907
L1030.089-075	75	64	88.9	146.1	34.9	158.8	95	110	50	15.7	50.3	1306
L1030.089-125	125	73	88.9	203.2	34.9	215.9	150	175	50	15.7	50.3	1814
L1030.089-165	165	79	88.9	260.4	34.9	273.1	210	225	50	15.7	50.3	2327
L1030.089-225	225	91	88.9	355.6	34.9	368.3	305	320	50	15.7	50.3	3175
L1030.146-125	125	68	146.1	209.6	50.8	222.3	150	175	100	24.9	94.0	4536
L1030.146-175	175	82	146.1	304.8	50.8	317.5	250	275	100	24.9	94.0	6586
L1030.146-250	250	102	146.1	381.0	50.8	393.7	330	350	100	24.9	94.0	8233

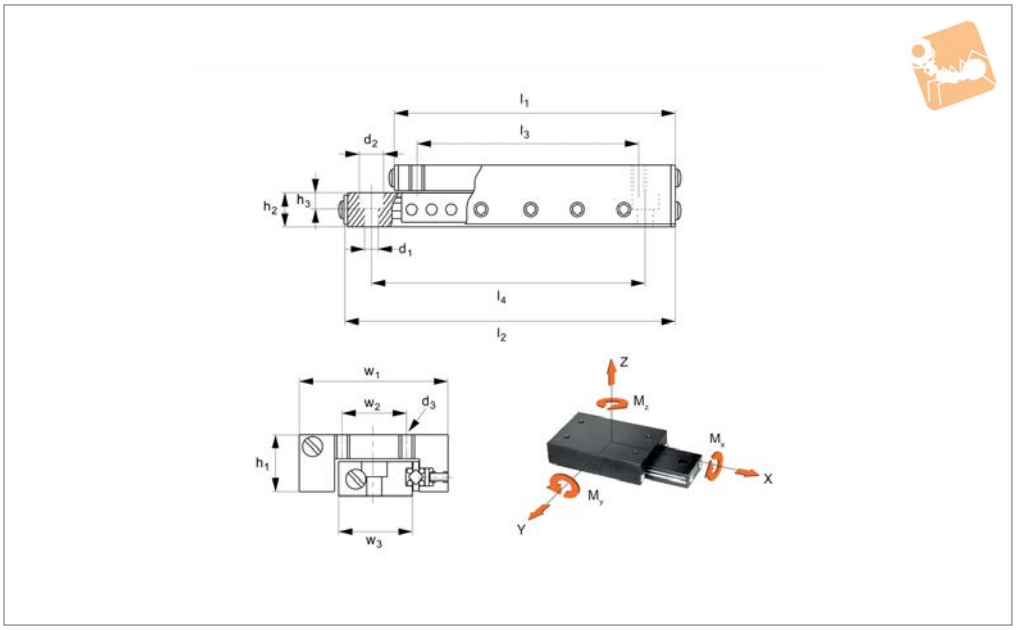
Order No.	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1030.025-013	3.4	M3	3.5	6.1	0.3	0.4	0.40
L1030.025-025	3.4	M3	3.5	6.1	0.4	1.0	1.1
L1030.025-038	3.4	M3	3.5	6.1	0.5	1.8	1.8
L1030.025-050	3.4	M3	3.5	6.1	0.7	2.6	3.7
L1030.045-025	4.6	M4	4.6	8.1	1.0	0.9	0.9

Low Profile Ball Slide Assemblies
high precision

Order No.	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1030.045-038	4.6	M4	4.6	8.1	1.4	2.0	2.1
L1030.045-050	4.6	M4	4.6	8.1	2.0	3.3	3.5
L1030.045-075	4.6	M4	4.6	8.1	2.5	4.7	4.9
L1030.067-025	5.3	M5	5.8	10.0	4.6	3.8	4.0
L1030.067-050	5.3	M5	5.8	10.0	6.9	9.3	9.8
L1030.067-075	5.3	M5	5.8	10.0	8.4	14.5	15.3
L1030.067-100	5.3	M5	5.8	10.0	10.9	23.0	24.1
L1030.067-125	5.3	M5	5.8	10.0	11.9	34.4	36.1
L1030.089-050	5.3	M5	5.8	10.0	11.1	32.0	33.6
L1030.089-075	5.3	M5	5.8	10.0	12.4	40.3	42.4
L1030.089-125	5.3	M5	5.8	10.0	14.1	52.6	53.7
L1030.089-165	5.3	M5	5.8	10.0	15.2	61.5	64.5
L1030.089-225	5.3	M5	5.8	10.0	16.9	81.1	85.1
L1030.146-125	6.2	M6	7.1	11.0	16.2	60.5	61.8
L1030.146-175	6.2	M6	7.1	11.0	17.5	70.7	74.2
L1030.146-250	6.2	M6	7.1	11.0	19.4	93.2	97.9



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)





L1032

Material
Aluminium carriage and base.
Hardened stainless steel rollers, shafts and preload gibs.

Technical Notes
Crossed roller design greatly increases load capacity.
Straight line accuracy: 1µ/25mm of travel.
Positional repeatability: 0,5µ.
Coefficient of friction: 0,002.
Carriage surface flat to 3µ/25mm.
Carriage and base ground to optical flatness.

Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

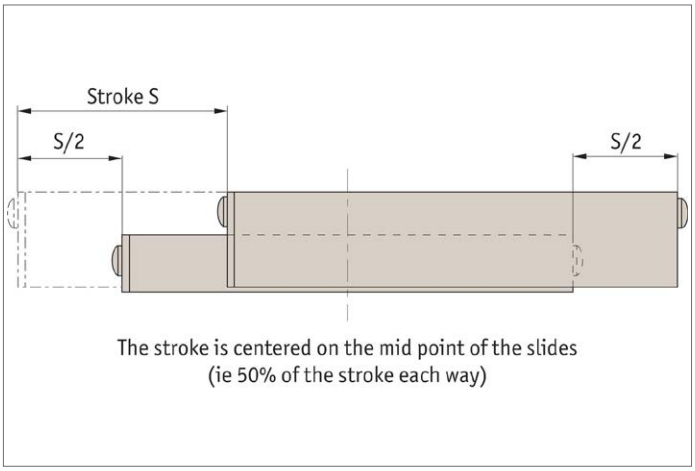
Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	l_3	l_4	w_2	h_2	Weight g
L1032.045-025	25	41	44.5	50.8	19.1	57.2	35	40	20	10.2	127
L1032.045-038	38	52	44.5	69.9	19.1	76.2	54	57	20	10.2	172
L1032.045-050	50	59	44.5	82.6	19.1	88.9	65	70	20	10.2	209
L1032.045-075	75	64	44.5	101.6	19.1	108.0	85	90	20	10.2	254
L1032.067-025	25	100	66.5	66.5	25.4	66.5	54	54	35	15.7	299
L1032.067-050	50	114	66.5	101.6	25.4	111.0	75	85	35	15.7	454
L1032.067-075	75	159	66.5	127.0	25.4	136.4	100	110	35	15.7	567
L1032.067-100	100	177	66.5	152.4	25.4	161.8	125	135	35	15.7	680
L1032.067-125	125	191	66.5	203.2	25.4	212.6	178	190	35	15.7	907
L1032.089-050	50	118	88.9	101.6	44.5	114.3	50	65	50	15.7	907
L1032.089-075	75	127	88.9	146.1	44.5	158.8	95	110	50	15.7	1306
L1032.089-125	125	145	88.9	203.2	44.5	215.9	150	175	50	15.7	1814
L1032.089-165	165	159	88.9	260.4	44.5	273.1	210	225	50	15.7	2327
L1032.089-225	225	182	88.9	355.6	44.5	368.3	305	320	50	15.7	3175
L1032.146-125	125	136	146.1	209.6	60.03	222.3	150	175	100	24.9	4536
L1032.146-175	175	163	146.1	304.8	60.03	317.5	250	275	100	24.9	6586
L1032.146-250	250	204	146.1	381.0	60.03	393.7	330	350	100	24.9	8232

Order No.	w_3	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1032.045-025	22.1	4.6	M4	4.6	8.1	5.0	5.3	5.6
L1032.045-038	22.1	4.6	M4	4.6	8.1	5.6	8.3	8.6
L1032.045-050	22.1	4.6	M4	4.6	8.1	6.7	10.6	11.1
L1032.045-075	22.1	4.6	M4	4.6	8.1	7.8	12.4	12.9
L1032.067-025	38.1	5.3	M5	5.8	10.0	17.8	14.8	15.6
L1032.067-050	38.1	5.3	M5	5.8	10.0	20.3	25.4	26.4
L1032.067-075	38.1	5.3	M5	5.8	10.0	28.3	47.1	49.4
L1032.067-100	38.1	5.3	M5	5.8	10.0	37.6	65.6	68.9
L1032.067-125	38.1	5.3	M5	5.8	10.0	43.2	75.4	79.2

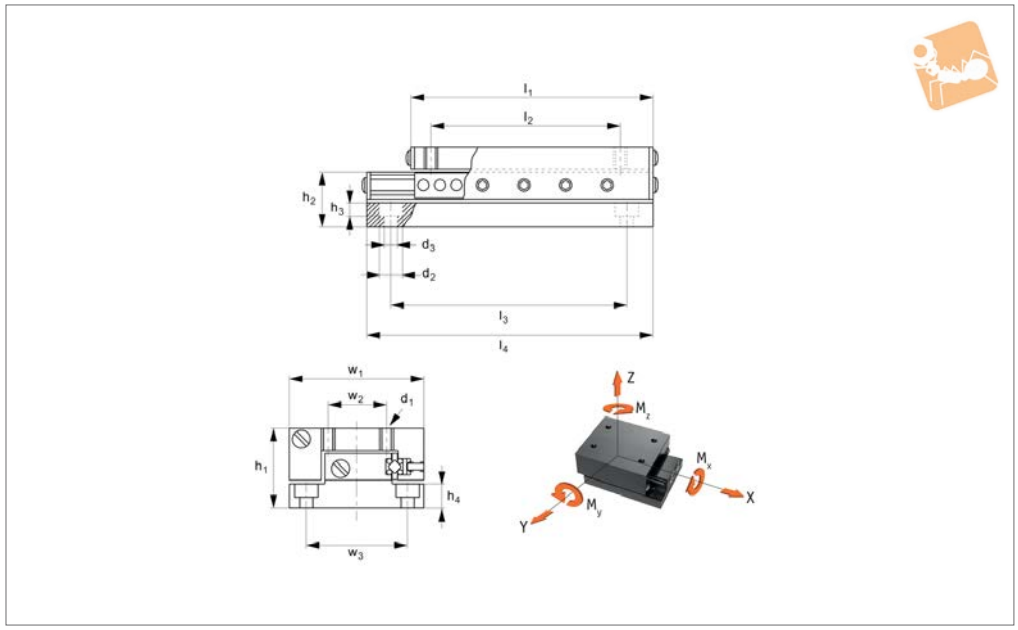
Low Profile Crossed Roller Table

high precision

Order No.	w_3	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1032.089-050	50.3	5.3	M5	5.8	10.0	19.4	56.0	5.86
L1032.089-075	50.3	5.3	M5	5.8	10.0	21.6	70.5	74.1
L1032.089-125	50.3	5.3	M5	5.8	10.0	24.5	92.0	93.9
L1032.089-165	50.3	5.3	M5	5.8	10.0	26.6	108	113
L1032.089-225	50.3	5.3	M5	5.8	10.0	29.5	142	149
L1032.146-125	94.0	6.2	M6	7.1	11.0	28.2	106	108
L1032.146-175	94.0	6.2	M6	7.1	11.0	30.6	124	130
L1032.146-250	94.0	6.2	M6	7.1	11.0	33.9	163	171



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)





L1034

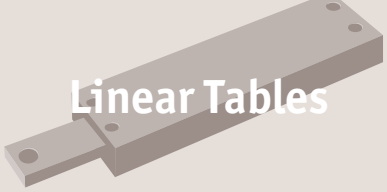
Material
Aluminium carriage and base.
Hardened stainless steel balls, shafts and preload gibs.

Technical Notes
Flange base allows easy mounting and extra stability.
Straight line accuracy: 1µ/25mm of travel.
Positional repeatability: 0,5µ.
Coefficient of friction: 0,002.
Carriage surface flat to 3µ/25mm.
Carriage and base ground to optical flatness.

Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	l_3	l_4	w_2	h_2	Weight g
L1034.025-013	13	3.6	25.4	25.4	19.1	15	20	31.8	Centre	12.7	36
L1034.025-025	25	6.8	25.4	44.5	19.1	35	40	50.8	Centre	12.7	64
L1034.025-038	38	11.0	25.4	63.5	19.1	54	57	69.9	Centre	12.7	91
L1034.025-050	50	14.0	25.4	82.6	19.1	70	75	88.9	Centre	12.7	118
L1034.045-025	25	11.0	44.5	50.8	26.2	35	40	57.2	20	17.3	172
L1034.045-038	38	14.0	44.5	69.9	26.2	54	57	76.2	20	17.3	236
L1034.045-050	50	19.0	44.5	82.6	26.2	65	70	88.9	20	17.3	277
L1034.045-075	75	23.0	44.5	101.6	26.2	85	90	108.0	20	17.3	340
L1034.067-025	25	33.0	66.5	66.5	34.9	54	54	66.5	35	25.4	413
L1034.067-050	50	38.0	66.5	101.6	34.9	75	85	111.0	35	25.4	635
L1034.067-075	75	46.0	66.5	127.0	34.9	100	110	136.4	35	25.4	794
L1034.067-100	100	60.0	66.5	152.4	34.9	125	135	161.8	35	25.4	953
L1034.067-125	125	66.0	66.5	203.2	34.9	178	190	212.6	35	25.4	1270
L1034.089-050	50	59.0	88.9	101.6	44.5	50	65	114.3	50	25.0	1134
L1034.089-075	75	64.0	88.9	146.1	44.5	95	110	158.8	50	25.0	1628
L1034.089-125	125	73.0	88.9	203.2	44.5	150	175	215.9	50	25.0	2268
L1034.089-165	165	79.0	88.9	260.4	44.5	210	225	273.1	50	25.0	2908
L1034.089-225	225	91.0	88.9	355.6	44.5	305	320	368.3	50	25.0	3969

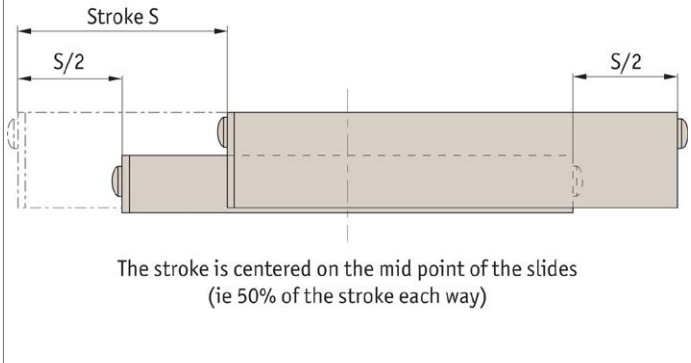
Order No.	w_3	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1034.025-013	19	3.4	M3	6.1	3.5	0.3	0.4	0.4
L1034.025-025	19	3.4	M3	6.1	3.5	0.4	1.0	1.1
L1034.025-038	19	3.4	M3	6.1	3.5	0.5	1.8	1.8
L1034.025-050	19	3.4	M3	6.1	3.5	0.7	2.6	3.7
L1034.045-025	33	4.6	M4	8.1	4.6	1.0	0.9	0.9
L1034.045-038	33	4.6	M4	8.1	4.6	1.4	2.0	2.1
L1034.045-050	33	4.6	M4	8.1	4.6	2.0	3.3	3.5
L1034.045-075	33	4.6	M4	8.1	4.6	2.5	4.7	4.9



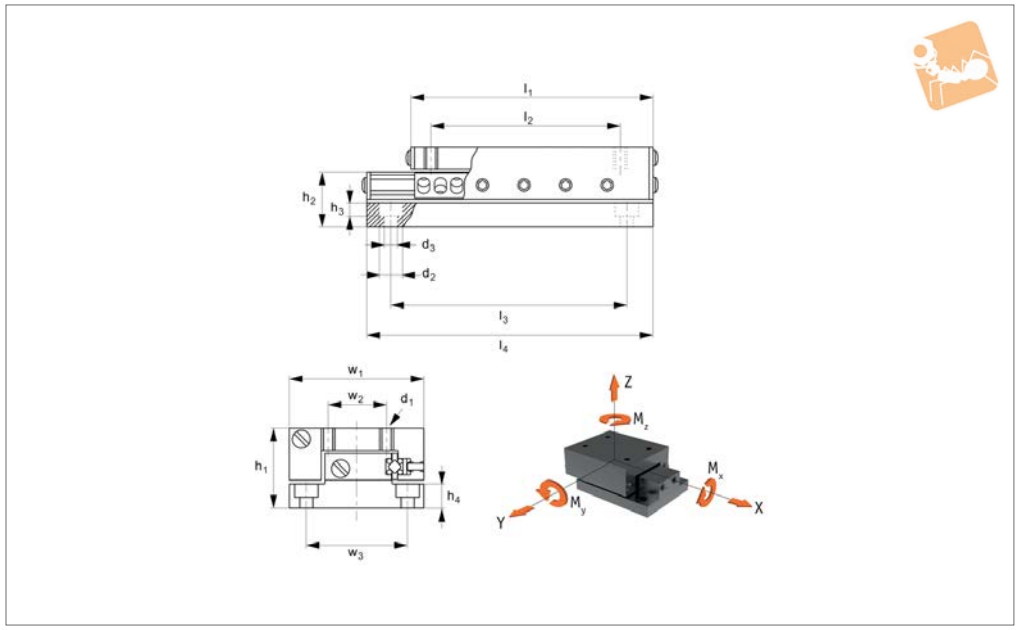
Flanged Ball Slide Assemblies
high precision



Order No.	w_3	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1034.067-025	52	5.3	M5	10.0	5.8	4.6	3.8	4.0
L1034.067-050	52	5.3	M5	10.0	5.8	6.9	9.3	9.8
L1034.067-075	52	5.3	M5	10.0	5.8	8.4	14.5	15.2
L1034.067-100	52	5.3	M5	10.0	5.8	10.8	22.9	24.1
L1034.067-125	52	5.3	M5	10.0	5.8	11.9	34.4	36.1
L1034.089-050	70	5.3	M5	10.0	5.8	11.1	32.0	33.6
L1034.089-075	70	5.3	M5	10.0	5.8	12.3	40.3	42.3
L1034.089-125	70	5.3	M5	10.0	5.8	14.0	52.5	53.7
L1034.089-165	70	5.3	M5	10.0	5.8	15.2	61.4	64.5
L1034.089-225	70	5.3	M5	10.0	5.8	16.8	81.0	85.1



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)





L1036

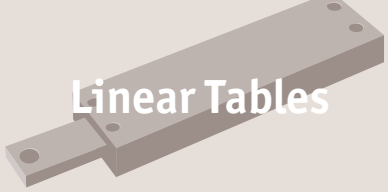
Material
Aluminium carriage and base.
Hardened stainless steel rollers, shafts and preload gibs.

Technical Notes
Flanged base with cross rollers offers the ultimate in accuracy, capacity and stability.
Straight line accuracy: 1µ/25mm of travel.
Positional repeatability: 0,5µ.
Coefficient of friction: 0,002.
Carriage surface flat to 3µ/25mm.
Carriage and base ground to optical flatness.

Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	l_3	l_4	w_2	h_2	Weight g
L1036.045-025	25	41	44.5	50.8	26.2	57.2	35	40	20	17.3	172
L1036.045-038	38	52	44.5	69.9	26.2	76.2	54	57	20	17.3	236
L1036.045-050	50	59	44.5	82.6	26.2	88.9	65	70	50	17.3	277
L1036.045-075	75	64	44.5	101.6	26.2	108.0	85	90	20	17.3	340
L1036.067-025	25	100	66.5	66.9	34.9	66.5	54	54	35	25.4	413
L1036.067-050	50	114	66.5	101.6	34.9	111.0	75	85	35	25.4	635
L1036.067-075	75	159	66.5	127.0	34.9	136.4	100	110	35	25.4	794
L1036.067-100	100	177	66.5	152.4	34.9	161.8	125	135	35	25.4	953
L1036.067-125	125	191	66.5	203.2	34.9	212.6	178	190	35	25.4	1270
L1036.089-050	50	118	88.9	101.6	44.5	114.3	50	65	50	25.0	1134
L1036.089-075	75	127	88.9	146.1	44.5	158.8	95	110	50	25.0	1628
L1036.089-125	125	145	88.9	203.2	44.5	215.9	150	175	50	25.0	2268
L1036.089-165	165	159	88.9	260.4	44.5	273.1	210	225	50	25.0	2908
L1036.089-225	225	182	88.9	355.6	44.5	368.3	305	320	50	25.0	3969
L1036.146-125	125	136	146.1	209.6	60.3	222.3	150	175	100	34.3	5443
L1036.146-175	175	163	146.1	304.8	60.3	317.5	250	275	100	34.3	7893
L1036.146-250	250	204	146.1	381.0	60.3	393.7	330	350	100	34.3	9870

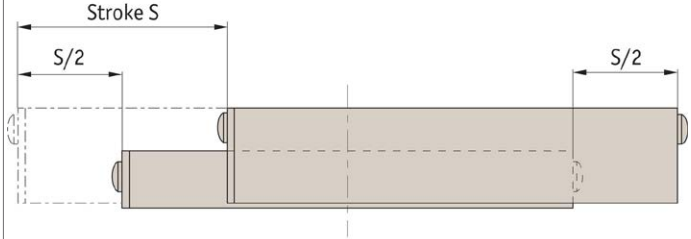
Order No.	w_3	h_3	d_1	d_2	d_3	Moment M_x Nm max.	h_4	Moment M_y Nm max.	Moment M_z Nm max.
L1036.045-025	33	7.1	M4	4.6	8.1	5.04	4.6	5.31	5.58
L1036.045-038	33	7.1	M4	4.6	8.1	5.61	4.6	8.29	8.58
L1036.045-050	33	7.1	M4	4.6	8.1	6.73	4.6	10.6	11.1
L1036.045-075	33	7.1	M4	4.6	8.1	7.85	4.6	12.4	13.0
L1036.067-025	52	9.4	M5	5.8	10.0	17.9	5.3	14.9	15.6
L1036.067-050	52	9.4	M5	5.8	10.0	20.4	5.3	25.4	26.7
L1036.067-075	52	9.4	M5	5.8	10.0	28.4	5.3	47.1	49.5
L1036.067-100	52	9.4	M5	5.8	10.0	37.7	5.3	65.6	68.9
L1036.067-125	52	9.4	M5	5.8	10.0	43.3	5.3	75.5	79.2



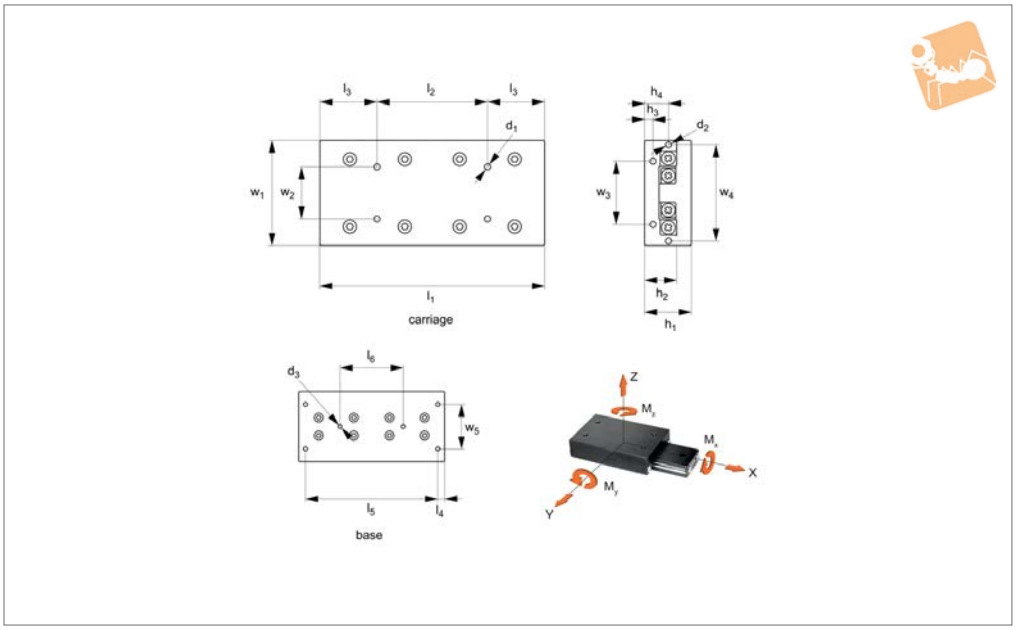
Flanged Crossed Roller Slides

wide base, high precision

Order No.	w_3	h_3	d_1	d_2	d_3	Moment M_x Nm max.	h_4	Moment M_y Nm max.	Moment M_z Nm max.
L1036.089-050	70	9.4	M5	5.8	10.0	19.5	5.3	56.1	58.9
L1036.089-075	70	9.4	M5	5.8	10.0	21.6	5.3	70.6	74.1
L1036.089-125	70	9.4	M5	5.8	10.0	24.6	5.3	92.0	94.0
L1036.089-165	70	9.4	M5	5.8	10.0	26.7	5.3	108	112
L1036.089-225	70	9.4	M5	5.8	10.0	29.6	5.3	142	158
L1036.146-125	127	9.4	M6	7.1	11.0	28.3	6.2	106	108
L1036.146-175	127	9.4	M6	7.1	11.0	30.7	6.2	124	130
L1036.146-250	127	9.4	M6	7.1	11.0	34.0	6.2	163	171



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)





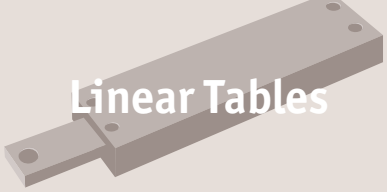
L1020

Material
Body carbon steel (S50C) nickel plated. Rail and rollers carbon steel (100Cr6), retainer stainless steel (AISI 304).

Technical Notes
Base and carriage with standard hole pattern. The top can be machined as required, taking care to disassemble first and ensure no dirt ingress. Alternatively we can machine any extra holes required (additional cost). Recommended allowable load is 1/3 of max. static load giving a safety factor of over 3.

Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Static load C_0 kN max.	Stroke	Roller	w_1 ±0.1	l_2	h_1 ±0.1	h_2	l_1	w_2	d_1	l_3	l_4	w_3	Weight kg
L1020.030-025	0.57	12	1.5	30	-	17	11	25	10	M2x4	12.5	3.5	12	0.04
L1020.030-035	0.86	18	1.5	30	10	17	11	35	10	M2x4	12.5	3.5	12	0.05
L1020.030-045	1.1	25	1.5	30	10	17	11	45	10	M2x4	12.5	3.5	12	0.07
L1020.030-055	1.4	32	1.5	30	10	17	11	55	10	M2x4	12.5	3.5	12	0.08
L1020.030-065	1.7	40	1.5	30	10	17	11	65	10	M2x4	12.5	3.5	12	0.10
L1020.030-075	2.3	45	1.5	30	10	17	11	75	10	M2x4	12.5	3.5	12	0.12
L1020.030-085	2.6	50	1.5	30	10	17	11	85	10	M2x4	12.5	3.5	12	0.13
L1020.040-035	1.1	18	2.0	40	-	21	14	35	15	M3x6	17.5	5.0	16	0.09
L1020.040-050	2.3	30	2.0	40	15	21	14	50	15	M3x6	17.5	5.0	16	0.13
L1020.040-065	2.9	40	2.0	40	15	21	14	65	15	M3x6	17.5	5.0	16	0.17
L1020.040-080	3.5	50	2.0	40	15	21	14	80	15	M3x6	17.5	5.0	16	0.21
L1020.040-095	4.0	60	2.0	40	15	21	14	95	15	M3x6	17.5	5.0	16	0.25
L1020.040-110	5.2	70	2.0	40	15	21	14	110	15	M3x6	17.5	5.0	16	0.30
L1020.040-125	5.8	80	2.0	40	15	21	14	125	15	M3x6	17.5	5.0	16	0.34
L1020.040-140	6.4	90	2.0	40	15	21	14	140	15	M3x6	17.5	5.0	16	0.38
L1020.040-155	7.0	100	2.0	40	15	21	14	155	15	M3x6	17.5	5.0	16	0.42
L1020.040-170	8.1	110	2.0	40	15	21	14	170	15	M3x6	17.5	5.0	16	0.46
L1020.040-185	8.8	120	2.0	40	15	21	14	185	15	M3x6	17.5	5.0	16	0.50
L1020.060-055	4.5	30	3.0	60	-	28	18.5	55	25	M4x8	27.5	10.0	40	0.29
L1020.060-080	7.6	45	3.0	60	25	28	18.5	80	25	M4x8	27.5	10.0	40	0.43
L1020.060-105	10.6	60	3.0	60	25	28	18.5	105	25	M4x8	27.5	10.0	40	0.57
L1020.060-130	12.1	75	3.0	60	25	28	18.5	130	25	M4x8	27.5	10.0	40	0.71
L1020.060-155	15.2	90	3.0	60	25	28	18.5	155	25	M4x8	27.5	10.0	40	0.84
L1020.060-180	18.2	105	3.0	60	25	28	18.5	180	25	M4x8	27.5	10.0	40	0.98
L1020.060-205	19.7	130	3.0	60	25	28	18.5	205	25	M4x8	27.5	10.0	40	1.12
L1020.060-230	21.3	155	3.0	60	25	28	18.5	230	25	M4x8	27.5	10.0	40	1.25
L1020.060-255	24.3	180	3.0	60	25	28	18.5	255	25	M4x8	27.5	10.0	40	1.39
L1020.060-280	25.8	205	3.0	60	25	28	18.5	280	25	M4x8	27.5	10.0	40	1.53
L1020.060-305	27.4	230	3.0	60	25	28	18.5	305	25	M4x8	27.5	10.0	40	1.66
L1020.080-085	9.3	50	4.0	80	-	35	24.0	85	40	M5x10	42.5	10.5	55	0.76



Crossed Roller Tables

steel



Order No.	Static load C_0 kN max.	Stroke	Roller	w_1 ±0.1	l_2	h_1 ±0.1	h_2	l_1	w_2	d_1	l_3	l_4	w_3	Weight kg
L1020.080-125	14.0	75	4.0	80	40	35	24.0	125	40	M5x10	42.5	10.5	55	1.12
L1020.080-165	16.3	105	4.0	80	40	35	24.0	165	40	M5x10	42.5	10.5	55	1.48
L1020.080-205	21.0	130	4.0	80	40	35	24.0	205	40	M5x10	42.5	10.5	55	1.84
L1020.080-245	25.7	155	4.0	80	40	35	24.0	245	40	M5x10	42.5	10.5	55	2.20
L1020.080-285	30.4	185	4.0	80	40	35	24.0	285	40	M5x10	42.5	10.5	55	2.56
L1020.080-325	35.0	210	4.0	80	40	35	24.0	325	40	M5x10	42.5	10.5	55	2.92
L1020.080-365	39.7	235	4.0	80	40	35	24.0	365	40	M5x10	42.5	10.5	55	3.28
L1020.080-405	44.4	265	4.0	80	40	35	24.0	405	40	M5x10	42.5	10.5	55	3.65
L1020.100-110	21.0	60	6.0	100	50	45	31.0	110	50	M6x12	55.0	10.0	60	1.60
L1020.100-160	26.3	95	6.0	100	50	45	31.0	160	50	M6x12	55.0	10.0	60	2.36
L1020.100-210	36.8	130	6.0	100	50	45	31.0	210	50	M6x12	55.0	10.0	60	3.11
L1020.100-260	47.3	165	6.0	100	50	45	31.0	260	50	M6x12	55.0	10.0	60	3.86
L1020.100-310	57.8	200	6.0	100	50	45	31.0	310	50	M6x12	55.0	10.0	60	4.62
L1020.100-360	68.4	235	6.0	100	50	45	31.0	360	50	M6x12	55.0	10.0	60	5.36
L1020.100-410	78.9	265	6.0	100	50	45	31.0	410	50	M6x12	55.0	10.0	60	6.12
L1020.100-460	84.2	300	6.0	100	50	45	31.0	460	50	M6x12	55.0	10.0	60	6.87
L1020.100-510	94.7	335	6.0	100	50	45	31.0	510	50	M6x12	55.0	10.0	60	7.62

Order No.	w_4	l_5	h_3	l_6	h_4	d_2	w_7	d_3	Dyn. load C kN max.	Allowable load kN	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1020.030-025	-	18	2.5	-	-	M2x6	22	4.5	0.38	0.19	2.6	1.2	1.4
L1020.030-035	-	28	2.5	-	-	M2x6	22	4.5	0.52	0.28	3.9	2.6	3.0
L1020.030-045	-	38	2.5	-	-	M2x6	22	4.5	0.65	0.38	5.2	4.6	5.2
L1020.030-055	-	48	2.5	-	-	M2x6	22	4.5	0.78	0.48	6.5	7.2	7.9
L1020.030-065	-	58	2.5	-	-	M2x6	22	4.5	0.90	0.57	7.8	10.4	11.2
L1020.030-075	-	68	2.5	-	-	M2x6	22	4.5	1.1	0.77	10.4	18.4	17.3
L1020.030-085	-	78	2.5	-	-	M2x6	22	4.5	1.2	0.86	11.7	23.3	22.0
L1020.040-035	-	25	3.4	-	-	M2x6	30	6.5	0.89	0.39	7.0	3.1	3.9
L1020.040-050	-	40	3.4	-	-	M2x6	30	6.5	1.5	0.78	14.0	12.5	10.9
L1020.040-065	-	55	3.4	-	-	M2x6	30	6.5	1.8	0.98	17.5	19.5	17.5
L1020.040-080	-	70	3.4	-	-	M2x6	30	6.5	2.1	1.1	21.1	28.1	30.4
L1020.040-095	-	85	3.4	-	-	M2x6	30	6.5	2.4	1.3	24.6	38.2	40.9
L1020.040-110	-	100	3.4	-	-	M2x6	30	6.5	2.9	1.7	31.6	63.2	59.6
L1020.040-125	-	115	3.4	-	-	M2x6	30	6.5	3.1	1.9	35.1	78.0	74.1
L1020.040-140	-	130	3.4	-	-	M2x6	30	6.5	3.4	2.1	38.6	94.3	98.6
L1020.040-155	-	145	3.4	-	-	M2x6	30	6.5	3.6	2.3	42.1	112	111
L1020.040-170	-	160	3.4	-	-	M2x6	30	6.5	4.1	2.7	49.1	152	147
L1020.040-185	-	175	3.4	-	-	M2x6	30	6.5	4.3	2.9	52.6	175	169
L1020.060-055	-	35	5.5	-	-	M3x6	40	8.0	2.9	1.5	42.6	22.8	26.6
L1020.060-080	-	60	5.5	-	-	M3x6	40	8.0	4.3	2.5	71.0	63.4	57.1
L1020.060-105	-	85	5.5	-	-	M3x6	40	8.0	5.6	3.5	99.5	124	115
L1020.060-130	-	110	5.5	-	-	M3x6	40	8.0	6.2	4.0	113	162	172
L1020.060-155	-	135	5.5	85	-	M3x6	40	8.0	7.4	5.0	142	253	266
L1020.060-180	-	160	5.5	110	-	M3x6	40	8.0	8.6	6.0	170	365	350
L1020.060-205	-	185	5.5	135	-	M3x6	40	8.0	9.1	6.6	184	428	445
L1020.060-230	-	210	5.5	160	-	M3x6	40	8.0	9.7	7.1	198	497	515
L1020.060-255	-	235	5.5	185	-	M3x6	40	8.0	10.7	8.1	227	649	629
L1020.060-280	-	260	5.5	210	-	M3x6	40	8.0	11.2	8.6	241	733	711
L1020.060-305	-	285	5.5	235	-	M3x6	40	8.0	11.8	9.1	255	822	844
L1020.080-085	-	65	6.5	-	-	M3x6	55	10.0	6.6	3.1	124	87.3	76.4
L1020.080-125	-	105	6.5	-	-	M3x6	55	10.0	9.0	4.6	187	196	180
L1020.080-165	-	145	6.5	-	-	M3x6	55	10.0	10.2	5.4	218	267	286
L1020.080-205	-	185	6.5	105	-	M3x6	55	10.0	12.5	7.0	280	442	466
L1020.080-245	-	225	6.5	145	-	M3x6	55	10.0	14.6	8.6	343	660	690
L1020.080-285	-	265	6.5	185	-	M3x6	55	10.0	16.6	10.1	405	922	957
L1020.080-325	-	305	6.5	225	-	M3x6	55	10.0	18.6	11.7	467	1128	1269
L1020.080-365	-	345	6.5	265	-	M3x6	55	10.0	20.5	13.2	530	1577	1623
L1020.080-405	-	385	6.5	305	-	M3x6	55	10.0	22.3	14.8	592	1970	1918
L1020.100-110	92	90	8.0	-	15	M4x8	60	11.5	13.9	7.0	315	252	221
L1020.100-160	92	140	8.0	-	15	M4x8	60	11.5	16.5	8.7	394	394	434
L1020.100-210	92	190	8.0	90	15	M4x8	60	11.5	21.6	12.2	552	773	828
L1020.100-260	92	240	8.0	140	15	M4x8	60	11.5	26.2	15.7	710	1279	1207
L1020.100-310	92	290	8.0	190	15	M4x8	60	11.5	30.7	19.3	868	1910	1823
L1020.100-360	92	340	8.0	240	15	M4x8	60	11.5	35.0	22.8	1026	2688	2565
L1020.100-410	92	390	8.0	290	15	M4x8	60	11.5	39.1	26.3	1184	3552	3434
L1020.100-460	92	440	8.0	340	15	M4x8	60	11.5	41.1	28.0	1263	4042	4168

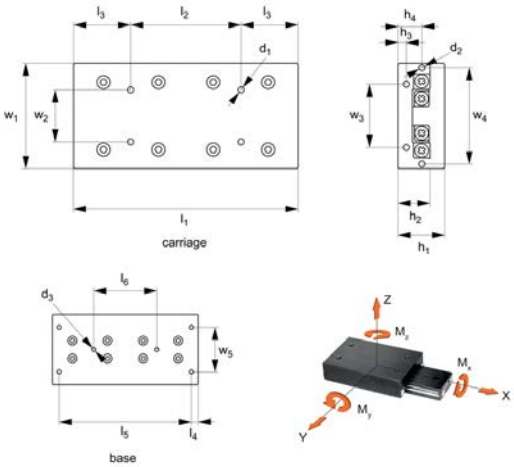


Order No.	w_4	l_5	h_3	l_6	h_4	d_2	w_7	d_3	Dyn. load C kN max.	Allowable load kN	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1020.100-510	92	490	8.0	390	15	M4x8	60	11.5	45.1	31.5	1421	5115	5257

Crossed Roller Tables
aluminium



L1021



Material
Body aluminium alloy, black anodised. Rail and rollers carbon steel (100Cr6), retainer stainless steel (AISI 304).

Technical Notes
Base and carriage with standard hole pattern. The top can be machined as required, taking care to disassemble first and ensure no dirt ingress. Alternatively we can machine any extra holes required (additional cost). Recommended allowable load is 1/3 of max. static load giving a safety factor of over 3.

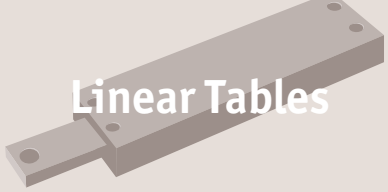
Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Static load C_0 kN max.	Stroke	Roller dia.	w_1 ±0.1	l_2	h_1 ±0.1	h_2	l_1	w_2	d_1	l_3	l_4	w_3	Weight kg
L1021.030-025	0.57	12	1.5	30	-	17	11	25	10	M2x4	12.5	3.5	12	0.09
L1021.030-035	0.86	18	1.5	30	10	17	11	35	10	M2x4	12.5	3.5	12	0.12
L1021.030-045	1.1	25	1.5	30	10	17	11	45	10	M2x4	12.5	3.5	12	0.16
L1021.030-055	1.4	32	1.5	30	10	17	11	55	10	M2x4	12.5	3.5	12	0.19
L1021.030-065	1.7	40	1.5	30	10	17	11	65	10	M2x4	12.5	3.5	12	0.23
L1021.030-075	2.3	45	1.5	30	10	17	11	75	10	M2x4	12.5	3.5	12	0.27
L1021.030-085	2.6	50	1.5	30	10	17	11	85	10	M2x4	12.5	3.5	12	0.30
L1021.040-035	1.1	18	2.0	40	-	21	14	35	15	M3x6	17.5	5.0	16	0.20
L1021.040-050	2.3	30	2.0	40	15	21	14	50	15	M3x6	17.5	5.0	16	0.29
L1021.040-065	2.9	40	2.0	40	15	21	14	65	15	M3x6	17.5	5.0	16	0.38
L1021.040-080	3.5	50	2.0	40	15	21	14	80	15	M3x6	17.5	5.0	16	0.46
L1021.040-095	4.0	60	2.0	40	15	21	14	95	15	M3x6	17.5	5.0	16	0.55
L1021.040-110	5.2	70	2.0	40	15	21	14	110	15	M3x6	17.5	5.0	16	0.64
L1021.040-125	5.8	80	2.0	40	15	21	14	125	15	M3x6	17.5	5.0	16	0.73
L1021.040-140	6.4	90	2.0	40	15	21	14	140	15	M3x6	17.5	5.0	16	0.82
L1021.040-155	7.0	100	2.0	40	15	21	14	155	15	M3x6	17.5	5.0	16	0.91
L1021.040-170	8.1	110	2.0	40	15	21	14	170	15	M3x6	17.5	5.0	16	1.00
L1021.040-185	8.7	120	2.0	40	15	21	14	185	15	M3x6	17.5	5.0	16	1.08
L1021.060-055	4.5	30	3.0	60	-	28	18.5	55	25	M4x8	27.5	10.0	40	0.66
L1021.060-080	7.6	45	3.0	60	25	28	18.5	80	25	M4x8	27.5	10.0	40	0.96
L1021.060-105	10.6	60	3.0	60	25	28	18.5	105	25	M4x8	27.5	10.0	40	1.26
L1021.060-130	12.1	75	3.0	60	25	28	18.5	130	25	M4x8	27.5	10.0	40	1.57
L1021.060-155	15.2	90	3.0	60	25	28	18.5	155	25	M4x8	27.5	10.0	40	1.87
L1021.060-180	18.2	105	3.0	60	25	28	18.5	180	25	M4x8	27.5	10.0	40	2.17
L1021.060-205	19.7	130	3.0	60	25	28	18.5	205	25	M4x8	27.5	10.0	40	2.47
L1021.060-230	21.3	155	3.0	60	25	28	18.5	230	25	M4x8	27.5	10.0	40	2.77
L1021.060-255	24.3	180	3.0	60	25	28	18.5	255	25	M4x8	27.5	10.0	40	3.07
L1021.060-280	25.8	205	3.0	60	25	28	18.5	280	25	M4x8	27.5	10.0	40	3.37
L1021.060-305	27.4	230	3.0	60	25	28	18.5	305	25	M4x8	27.5	10.0	40	3.68
L1021.080-085	9.3	50	4.0	80	-	35	24.0	85	40	M5x10	42.5	10.5	55	1.69



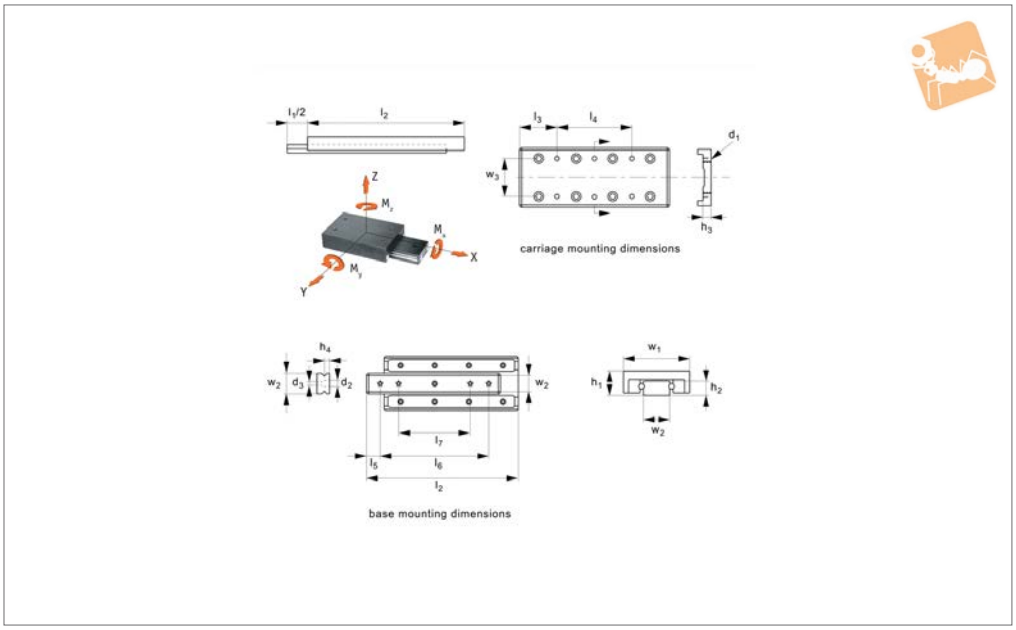
Order No.	Static load C_0 kN max.	Stroke	Roller dia.	w_1 ±0.1	l_2	h_1 ±0.1	h_2	l_1	w_2	d_1	l_3	l_4	w_3	Weight kg
L1021.080-125	14.0	75	4.0	80	40	35	24.0	125	40	M5x10	42.5	10.5	55	2.50
L1021.080-165	16.3	105	4.0	80	40	35	24.0	165	40	M5x10	42.5	10.5	55	3.31
L1021.080-205	21.0	130	4.0	80	40	35	24.0	205	40	M5x10	42.5	10.5	55	4.11
L1021.080-245	25.7	55	4.0	80	40	35	24.0	245	40	M5x10	42.5	10.5	55	4.91
L1021.080-285	30.4	185	4.0	80	40	35	24.0	285	40	M5x10	42.5	10.5	55	5.72
L1021.080-325	35.0	210	4.0	80	40	35	24.0	325	40	M5x10	42.5	10.5	55	6.51
L1021.080-365	39.7	235	4.0	80	40	35	24.0	365	40	M5x10	42.5	10.5	55	7.32
L1021.080-405	44.4	265	4.0	80	40	35	24.0	405	40	M5x10	42.5	10.5	55	8.13
L1021.100-110	21.0	60	6.0	100	50	45	31.0	110	50	M6x12	55.0	10.0	60	3.48
L1021.100-160	26.3	95	6.0	100	50	45	31.0	160	50	M6x12	55.0	10.0	60	5.10
L1021.100-210	36.8	130	6.0	100	50	45	31.0	210	50	M6x12	55.0	10.0	60	6.70
L1021.100-260	47.3	165	6.0	100	50	45	31.0	260	50	M6x12	55.0	10.0	60	8.32
L1021.100-310	57.9	200	6.0	100	50	45	31.0	310	50	M6x12	55.0	10.0	60	9.94
L1021.100-360	68.4	235	6.0	100	50	45	31.0	360	50	M6x12	55.0	10.0	60	11.53
L1021.100-410	78.9	265	6.0	100	50	45	31.0	410	50	M6x12	55.0	10.0	60	13.15
L1021.100-460	84.2	300	6.0	100	50	45	31.0	460	50	M6x12	55.0	10.0	60	14.76
L1021.100-510	94.7	335	6.0	100	50	45	31.0	510	50	M6x12	55.0	10.0	60	16.36

Order No.	w_4	l_5	h_3	l_6	h_4	d_2	w_7	d_3	Dyn. load C kN max.	Allowable load kN	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1021.030-025	-	18	2.5	-	-	M2x6	22	4.5	0.38	0.19	2.6	1.2	1.4
L1021.030-035	-	28	2.5	-	-	M2x6	22	4.5	0.52	0.28	3.9	2.6	3.0
L1021.030-045	-	38	2.5	-	-	M2x6	22	4.5	0.65	0.38	5.2	4.6	5.2
L1021.030-055	-	48	2.5	-	-	M2x6	22	4.5	0.78	0.48	6.5	7.2	7.9
L1021.030-065	-	58	2.5	-	-	M2x6	22	4.5	0.90	0.57	7.8	10.4	11.2
L1021.030-075	-	68	2.5	-	-	M2x6	22	4.5	1.1	0.77	10.4	18.4	17.3
L1021.030-085	-	78	2.5	-	-	M2x6	22	4.5	1.2	0.86	11.7	23.3	22.0
L1021.040-035	-	25	3.4	-	-	M2x6	30	6.5	0.89	0.39	7.0	3.1	3.9
L1021.040-050	-	40	3.4	-	-	M2x6	30	6.5	1.5	0.78	14.0	12.5	10.9
L1021.040-065	-	55	3.4	-	-	M2x6	30	6.5	1.8	0.97	17.5	19.5	17.5
L1021.040-080	-	70	3.4	-	-	M2x6	30	6.5	2.1	1.1	21.1	28.1	30.4
L1021.040-095	-	85	3.4	-	-	M2x6	30	6.5	2.4	1.3	24.6	38.2	40.9
L1021.040-110	-	100	3.4	-	-	M2x6	30	6.5	2.9	1.7	31.6	63.2	59.6
L1021.040-125	-	115	3.4	-	-	M2x6	30	6.5	3.1	1.9	35.1	78.0	74.1
L1021.040-140	-	130	3.4	-	-	M2x6	30	6.5	3.4	2.1	38.6	94.3	98.6
L1021.040-155	-	145	3.4	-	-	M2x6	30	6.5	3.6	2.3	42.1	112	111
L1021.040-170	-	160	3.4	-	-	M2x6	30	6.5	4.1	2.7	49.1	152	147
L1021.040-185	-	175	3.4	-	-	M2x6	30	6.5	4.3	2.9	52.6	175	169
L1021.060-055	-	35	5.5	-	-	M3x6	40	8.0	2.9	1.5	42.6	22.8	26.6
L1021.060-080	-	60	5.5	-	-	M3x6	40	8.0	4.3	2.5	71.0	63.4	57.1
L1021.060-105	-	85	5.5	-	-	M3x6	40	8.0	5.6	3.5	99.5	124	115
L1021.060-130	-	110	5.5	-	-	M3x6	40	8.0	6.2	4.0	113	162	172
L1021.060-155	-	135	5.5	85	-	M3x6	40	8.0	7.4	5.0	142	253	266
L1021.060-180	-	160	5.5	110	-	M3x6	40	8.0	8.6	6.0	170	365	350
L1021.060-205	-	185	5.5	135	-	M3x6	40	8.0	9.1	6.6	184	428	445
L1021.060-230	-	210	5.5	160	-	M3x6	40	8.0	9.7	7.1	198	497	515
L1021.060-255	-	235	5.5	185	-	M3x6	40	8.0	10.7	8.1	227	649	629
L1021.060-280	-	260	5.5	210	-	M3x6	40	8.0	11.2	8.6	241	733	711
L1021.060-305	-	285	5.5	235	-	M3x6	40	8.0	11.8	9.1	255	822	844
L1021.080-085	-	65	6.5	-	-	M3x6	55	10.0	6.6	3.1	124	87.3	76.4
L1021.080-125	-	105	6.5	-	-	M3x6	55	10.0	9.0	4.1	187	196	180
L1021.080-165	-	145	6.5	-	-	M3x6	55	10.0	10.2	5.4	218	267	286
L1021.080-205	-	185	6.5	105	-	M3x6	55	10.0	12.4	7.0	280	442	466
L1021.080-245	-	225	6.5	145	-	M3x6	55	10.0	14.6	8.5	343	660	690
L1021.080-285	-	265	6.5	185	-	M3x6	55	10.0	16.6	10.1	405	922	957
L1021.080-325	-	305	6.5	225	-	M3x6	55	10.0	18.6	11.7	467	1128	1269
L1021.080-365	-	345	6.5	265	-	M3x6	55	10.0	20.5	13.2	530	1577	1623
L1021.080-405	-	385	6.5	305	-	M3x6	55	10.0	22.3	14.8	592	1970	1918
L1021.100-110	92	90	8.0	-	15	M4x8	60	11.5	13.9	7.0	315	252	221
L1021.100-160	92	140	8.0	-	15	M4x8	60	11.5	16.6	8.7	394	394	434
L1021.100-210	92	190	8.0	90	15	M4x8	60	11.5	21.6	12.2	552	773	828
L1021.100-260	92	240	8.0	140	15	M4x8	60	11.5	26.2	15.7	710	1279	1207
L1021.100-310	92	290	8.0	190	15	M4x8	60	11.5	30.7	19.3	868	1910	1823
L1021.100-360	92	340	8.0	240	15	M4x8	60	11.5	35.0	22.8	1026	2688	2565
L1021.100-410	92	390	8.0	290	15	M4x8	60	11.5	39.1	26.3	1184	3552	3434
L1021.100-460	92	440	8.0	340	15	M4x8	60	11.5	41.1	28.0	1263	4042	4168



Crossed Roller Tables
aluminium

Order No.	w_4	l_5	h_3	l_6	h_4	d_2	w_7	d_3	Dyn. load C kN max.	Allowable load kN	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1021.100-510	92	490	8.0	390	15	M4x8	60	11.5	45.1	31.5	1421	5115	5257





L1027.AL

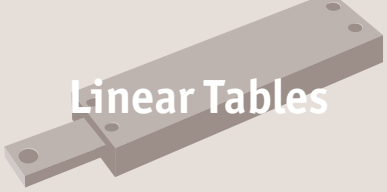
Material
Aluminium body, black anodised carriage. Hardened chrome steel crossed roller rail set.

Technical Notes
Straight line accuracy: 3µ/25mm of travel.
Positional repeatability: 3µ.
Coefficient of friction: 0,003 typical.

Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Stroke l_1	Load kg max.	w_1 ±0.1	l_2	h_1 ±0.1	h_2	w_2	d_1	No. of carr holes	l_3	l_4	w_3
L1027.020-012-AL	12	23	20	25	8	4	6.6	M2	4	3.5	1x18	14
L1027.020-018-AL	18	32	20	35	8	4	6.6	M2	4	3.5	1x28	14
L1027.020-025-AL	25	47	20	45	8	4	6.6	M2	4	12.5	1x20	14
L1027.020-032-AL	32	54	20	55	8	4	6.6	M2	4	12.5	1x30	14
L1027.020-040-AL	40	60	20	65	8	4	6.6	M2	6	12.5	2x20	14
L1027.020-045-AL	45	73	20	75	8	4	6.6	M2	4	22.5	1x30	14
L1027.020-050-AL	50	79	20	85	8	4	6.6	M2	6	12.5	2x30	14
L1027.030-018-AL	18	40	30	35	12	6	12.0	M4	4	3.5	1x28	22
L1027.030-030-AL	30	63	30	50	12	6	12.0	M4	4	3.5	1x43	22
L1027.030-040-AL	40	75	30	65	12	6	12.0	M4	4	17.5	1x30	22
L1027.030-050-AL	50	95	30	80	12	6	12.0	M4	4	17.5	1x45	22
L1027.030-060-AL	60	105	30	95	12	6	12.0	M4	6	17.5	2x30	22
L1027.030-070-AL	70	120	30	110	12	6	12.0	M4	4	32.5	1x45	22
L1027.030-080-AL	80	130	30	125	12	6	12.0	M4	6	17.5	2x45	22
L1027.040-030-AL	30	126	40	55	16	8	16.0	M5	4	7.5	1x40	30
L1027.040-045-AL	45	183	40	80	16	8	16.0	M5	4	7.5	1x65	30
L1027.040-060-AL	60	220	40	105	16	8	16.0	M5	4	27.5	1x50	30
L1027.040-075-AL	75	275	40	130	16	8	16.0	M5	4	27.5	1x75	30
L1027.040-090-AL	90	310	40	155	16	8	16.0	M5	6	27.5	2x50	30
L1027.040-105-AL	105	355	40	180	16	8	16.0	M5	4	52.5	1x75	30
L1027.040-130-AL	130	375	40	205	16	8	16.0	M5	6	27.5	2x75	30

Order No.	l_5	No. of base holes	h_3	l_6	h_4	l_7	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1027.020-012-AL	3.5	2	3.5	18	2.5	-	3.9	2.6	0.80	1.29	1.33
L1027.020-018-AL	5.0	2	3.5	25	2.5	-	3.9	2.6	1.04	2.59	2.71
L1027.020-025-AL	3.5	4	3.5	38	2.5	25	3.9	2.6	1.51	4.55	4.79
L1027.020-032-AL	3.5	4	3.5	48	2.5	29	3.9	2.6	1.74	5.36	5.63
L1027.020-040-AL	5.0	4	3.5	55	2.5	31	3.9	2.6	1.94	8.16	8.33

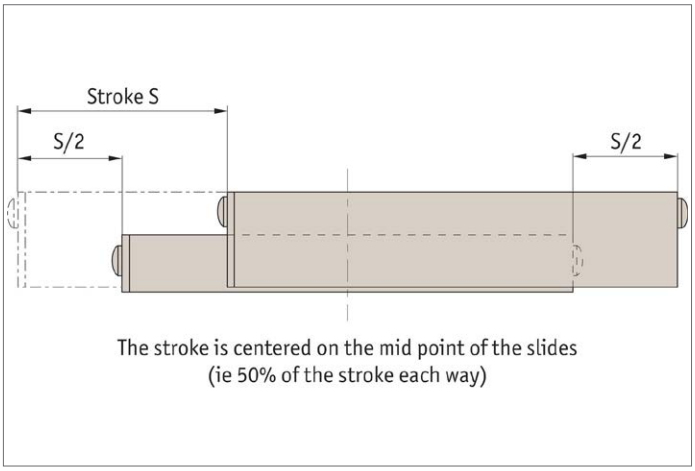


Low Profile Crossed Roller Table

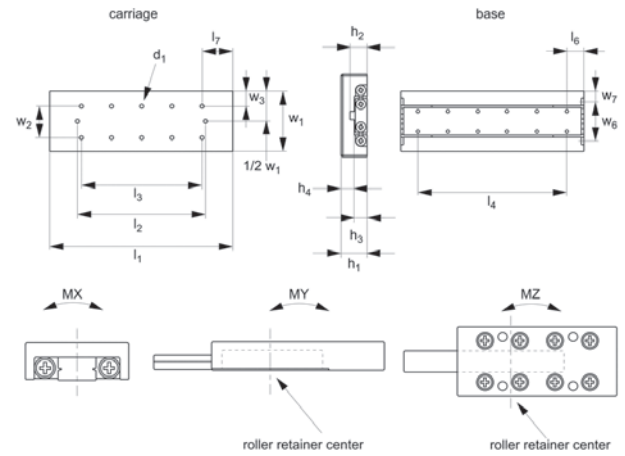
aluminium/steel



Order No.	l_5	No. of base holes	h_3	l_6	h_4	l_7	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1027.020-045-AL	5.0	4	3.5	65	2.5	35	3.9	2.6	2.27	11.5	12.1
L1027.020-050-AL	5.0	4	3.5	75	2.5	40	3.9	2.6	2.55	13.9	14.6
L1027.030-018-AL	5.0	2	5.5	25	3.8	-	6.1	4	2.35	3.06	3.21
L1027.030-030-AL	7.5	2	5.5	35	3.8	-	6.1	4	3.71	6.49	6.80
L1027.030-040-AL	5.0	4	5.5	55	3.8	33	6.1	4	4.41	9.92	10.4
L1027.030-050-AL	5.0	4	5.5	70	3.8	40	6.1	4	5.58	15.3	16.1
L1027.030-060-AL	5.0	4	5.5	85	3.8	45	6.1	4	6.17	20.0	21.0
L1027.030-070-AL	7.5	4	5.5	95	3.8	50	6.1	4	7.05	26.4	27.7
L1027.030-080-AL	7.5	4	5.5	110	3.8	55	6.1	4	7.64	32.4	34.1
L1027.040-030-AL	7.5	2	7.5	40	5.2	-	8.3	5.2	9.87	14.8	15.5
L1027.040-045-AL	6.0	4	7.5	68	5.2	43	8.3	5.2	14.4	31.0	32.6
L1027.040-060-AL	7.5	4	7.5	90	5.2	55	8.3	5.2	17.2	48.5	50.9
L1027.040-075-AL	7.5	4	7.5	115	5.2	65	8.3	5.2	21.5	74.7	78.4
L1027.040-090-AL	7.5	4	7.5	140	5.2	95	8.3	5.2	24.2	100	105
L1027.040-105-AL	7.5	4	7.5	165	5.2	85	8.3	5.2	27.8	136	142
L1027.040-130-AL	7.5	4	7.5	190	5.2	90	8.3	5.2	29.4	158	166



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)



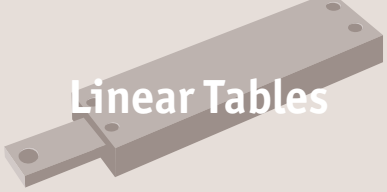


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Material
Body stainless steel (440C), nickel plated apart from rail V groove. Retainer stainless (304), rollers stainless (440C).

Technical Notes
Carriage top parallelism 3µ.
Carriage side parallelism 5µ.

Order No.	l_1	Stroke	Static load C_0 kN max.	w_1	l_2	h_1	Roller	l_3	l_4	l_5	l_6	w_2	w_3	Weight kg
L1022.030-012	25	12	0.57	30	2.5	8	1.5	-	10	20	7.5	10	10	0.09
L1022.030-018	35	18	0.86	30	4.5	8	1.5	10	10	26	7.5	10	10	0.12
L1022.030-025	45	25	1.1	30	6.0	8	1.5	10	10	33	7.5	10	10	0.16
L1022.030-032	55	32	1.4	30	7.5	8	1.5	10	10	40	7.5	10	10	0.19
L1022.030-040	65	40	1.7	30	8.5	8	1.5	10	10	48	7.5	10	10	0.23
L1022.030-045	75	45	2.3	30	11.0	8	1.5	10	10	53	7.5	10	10	0.26
L1022.030-050	85	50	2.6	30	13.5	8	1.5	10	10	58	7.5	10	10	0.30
L1022.040-018	35	18	1.1	40	3.0	15	3.0	-	15	29	10	15	12.5	0.20
L1022.040-030	50	30	4.5	40	4.5	15	3.0	15	15	41	10	15	12.5	0.29
L1022.040-040	65	40	4.5	40	7.0	15	3.0	15	15	51	17.5	15	12.5	0.36
L1022.040-050	80	50	7.6	40	9.5	15	3.0	15	15	61	10	15	12.5	0.46
L1022.040-060	95	60	6.0	40	12.0	15	3.0	15	15	71	17.5	15	12.5	0.52
L1022.040-070	110	70	9.1	40	14.5	15	3.0	15	15	81	17.5	15	12.5	0.63
L1022.040-080	125	80	9.1	40	17.0	15	3.0	15	15	91	25	15	12.5	0.69
L1022.060-030	55	30	4.5	60	5.5	18.5	3.0	-	25	44	15	25	17.5	0.65
L1022.060-045	80	45	7.6	60	10.8	18.5	3.0	25	25	59	15	25	17.5	0.95
L1022.060-060	105	60	10.6	60	15.5	18.5	3.0	25	25	74	15	25	17.5	1.25
L1022.060-075	130	75	12.1	60	20.8	18.5	3.0	25	25	89	15	25	17.5	1.55
L1022.060-090	155	90	15.2	60	25.5	18.5	3.0	25	25	104	15	25	17.5	1.85
L1022.060-105	180	105	18.2	60	30.5	18.5	3.0	25	25	119	15	25	17.5	2.15
L1022.060-130	205	130	19.7	60	30.5	18.5	3.0	25	25	144	15	25	17.5	2.45
L1022.080-050	85	50	9.3	80	10.5	24	4.0	-	40	64	22.5	40	20	1.14
L1022.080-075	125	75	14.0	80	18	24	4.0	40	40	89	22.5	40	20	1.68
L1022.080-105	165	105	16.3	80	23	24	4.0	40	40	119	22.5	40	20	2.22
L1022.080-135	205	135	21.0	80	28	24	4.0	40	40	149	22.5	40	20	2.76
L1022.080-155	245	155	25.7	80	38	24	4.0	40	40	169	22.5	40	20	3.30
L1022.080-185	285	185	30.4	80	43	24	4.0	40	40	199	22.5	40	20	3.84
L1022.080-215	325	215	35.0	80	48	24	4.0	40	40	229	22.5	40	20	4.38
L1022.100-060	110	60	21.0	100	16.5	31	6.0	-	50	77	30	50	25	2.33
L1022.100-095	160	95	26.3	100	23.5	31	6.0	50	50	113	30	50	25	3.42
L1022.100-130	210	130	36.8	100	31	31	6.0	50	50	148	30	50	25	4.51
L1022.100-165	260	165	47.3	100	38.5	31	6.0	50	50	183	30	50	25	5.57
L1022.100-200	310	200	57.9	100	46	31	6.0	50	50	218	30	50	25	6.66
L1022.100-235	360	235	68.4	100	53.5	31	6.0	50	50	253	30	50	25	7.75

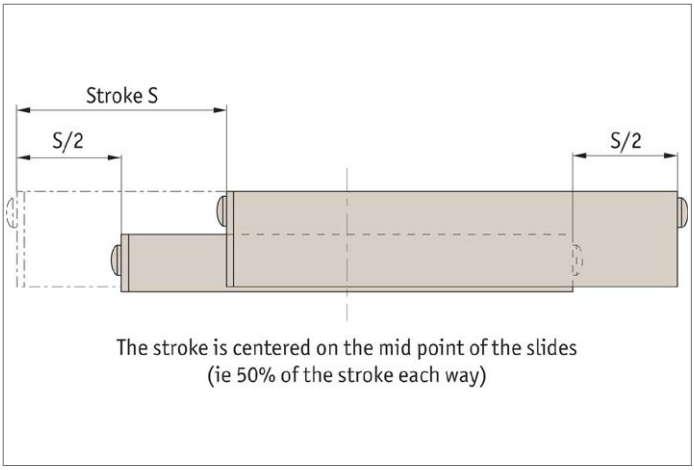


Stainless Cross Roller Slides
smaller sizes



Order No.	l_1	Stroke	Static load C_0 kN max.	w_1	l_2	h_1	Roller	l_3	l_4	l_5	l_6	w_2	w_3	Weight kg
L1022.100-265	410	265	78.9	100	63.5	31	6.0	50	50	283	30	50	25	8.84
L1022.100-340	510	340	100.0	100	81	31	6.0	50	50	348	30	50	25	11.02
L1022.145-130	210	130	72741	145	27	42.5	9.0	-	100	156	55	85	30	9.08
L1022.145-180	310	180	101838	145	52	42.5	9.0	100	100	206	55	85	30	13.46
L1022.145-350	410	350	116386	145	12	42.5	9.0	100	100	376	55	85	30	17.74
L1022.145-450	510	450	145482	145	17	42.5	9.0	100	100	476	55	85	30	22.11
L1022.145-550	610	550	160031	145	17	42.5	9.0	100	100	576	5527	85	30	26.47

Order No.	w_4	w_5	w_6	w_7	h_2	h_3	h_4	d_1	Allowable load kN max.	Dyn. load C kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1022.030-012	12.8	8.6	-	15	11	7	4	M2	0.19	0.38	2.6	1.2	1.4
L1022.030-018	12.8	8.6	-	15	11	7	4	M2	0.28	0.52	3.9	2.6	3.0
L1022.030-025	12.8	8.6	-	15	11	7	4	M2	0.38	0.65	5.2	4.6	5.2
L1022.030-032	12.8	8.6	-	15	11	7	4	M2	0.48	0.78	6.5	7.2	7.9
L1022.030-040	12.8	8.6	-	15	11	7	4	M2	0.57	0.90	7.8	10.4	11.2
L1022.030-045	12.8	8.6	-	15	11	7	4	M2	0.77	1.1	10.4	18.4	17.3
L1022.030-050	12.8	8.6	-	15	11	7	4	M2	0.86	1.2	11.7	23.3	22.0
L1022.040-018	17	11.5	-	20	14	8	6	M3	0.39	0.89	7.0	3.1	3.9
L1022.040-030	13.1	13.5	-	20	15	7	8	M3	1.5	2.9	42.6	22.8	26.6
L1022.040-040	13.1	13.5	-	20	15	7	8	M3	1.5	2.9	42.6	22.8	19.0
L1022.040-050	13.1	13.5	-	20	15	7	8	M3	2.5	4.3	71.0	63.4	57.1
L1022.040-060	13.1	13.5	-	20	15	7	8	M3	2.0	3.6	56.8	40.6	45.7
L1022.040-070	13.1	13.5	-	20	15	7	8	M3	3.0	5.0	85.2	91.3	98.9
L1022.040-080	13.1	13.5	-	20	15	7	8	M3	3.0	5.0	85.2	91.3	83.7
L1022.060-030	26.6	16.7	17	21.5	18.5	10.5	8	M4	1.5	2.9	42.6	22.8	26.6
L1022.060-045	26.6	16.7	17	21.5	18.5	10.5	8	M4	2.5	4.3	71.0	63.4	57.1
L1022.060-060	26.6	16.7	17	21.5	18.5	10.5	8	M4	3.5	5.6	99.5	124	115
L1022.060-075	26.6	16.7	17	21.5	18.5	10.5	8	M4	4.0	6.2	113	162	172
L1022.060-090	26.6	16.7	17	21.5	18.5	10.5	8	M4	5.0	7.4	142	253	266
L1022.060-105	26.6	16.7	17	21.5	18.5	10.5	8	M4	6.0	8.6	170	365	350
L1022.060-130	26.6	16.7	17	21.5	18.5	10.5	8	M4	6.5	9.1	184	428	445
L1022.080-050	38	21	27	26.5	24	13	11	M5	3.1	6.6	124	87.3	76.4
L1022.080-075	38	21	27	26.5	24	13	11	M5	4.6	9.0	187	196	180
L1022.080-105	38	21	27	26.5	24	13	11	M5	5.4	10.2	218	267	286
L1022.080-135	38	21	27	26.5	24	13	11	M5	7.0	12.5	280	442	466
L1022.080-155	38	21	27	26.5	24	13	11	M5	8.5	14.6	343	660	690
L1022.080-185	38	21	27	26.5	24	13	11	M5	10.1	16.6	405	922	957
L1022.080-215	38	21	27	26.5	24	13	11	M5	11.6	18.6	467	1228	1187
L1022.100-060	42	29	26	37	31	16	15	M6	7.0	13.9	315	252	221
L1022.100-095	42	29	26	37	31	16	15	M6	8.7	16.6	394	394	434
L1022.100-130	42	29	26	37	31	16	15	M6	12.2	21.6	552	773	828
L1022.100-165	42	29	26	37	31	16	15	M6	15.7	26.2	710	1279	1207
L1022.100-200	42	29	26	37	31	16	15	M6	19.2	30.7	868	1910	1823
L1022.100-235	42	29	26	37	31	16	15	M6	22.8	35.0	1026	2668	2565
L1022.100-265	42	29	26	37	31	16	15	M6	26.3	39.1	1184	3552	3434
L1022.100-340	42	29	26	37	31	16	15	M6	33.3	47.5	1500	5194	5044
L1022.145-130	68.4	38.3	46	49.5	43	21	21	M8	24.2	46.9	1745	1697	1527
L1022.145-180	68.4	38.3	46	49.5	43	21	21	M8	33.9	61.1	2444	3326	3564
L1022.145-350	68.4	38.3	46	49.5	43	21	21	M8	38.7	67.9	2793	4345	4073
L1022.145-450	68.4	38.3	46	49.5	43	21	21	M8	48.4	80.8	3491	6789	6449
L1022.145-550	68.4	38.3	46	49.5	43	21	21	M8	53.3	87.0	3840	8214	8588



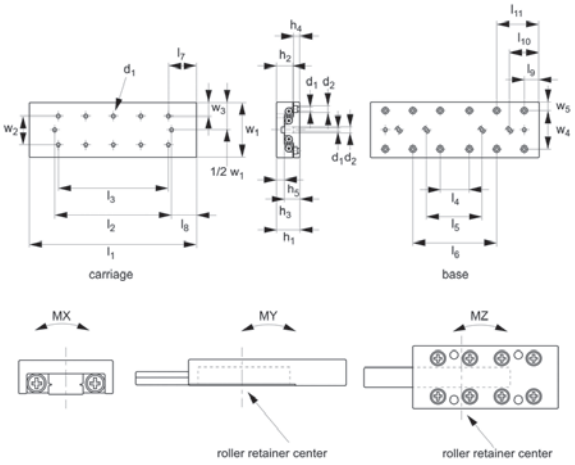
The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)

Stainless Cross Roller Slides

flanged, smaller sizes



L1023.web



Material
Body stainless steel (440C), nickel plated apart from rail V groove. Retainer stainless (304), rollers stainless (440C).

Technical Notes
Carriage top parallelism 3µ.
Carriage side parallelism 5µ.

Order No.	l_1	Stroke	Static load C_0 kN max.	w_1	l_2	h_1	Roller	l_{10}	l_{11}	l_3	l_4	l_5	l_6	Weight kg
L1023.030-012	25	12	0.57	30	20	17	1.5	-	-	-	18	-	-	0.09
L1023.030-018	35	18	0.86	30	26	17	1.5	-	-	10	28	-	-	0.12
L1023.030-025	45	25	1.1	30	33	17	1.5	-	-	10	38	-	-	0.16
L1023.030.032	55	32	1.4	30	40	17	1.5	-	13.5	10	48	-	28	0.19
L1023.030.040	65	40	1.7	30	48	17	1.5	-	13.5	10	58	-	38	0.23
L1023.030-045	75	45	2.3	30	53	17	1.5	-	13.5	10	68	-	45	0.26
L1023.030-050	85	50	2.6	30	58	17	1.5	-	13.5	10	78	-	58	0.30
L1023.040-018	35	18	1.1	40	29	21	2.0	-	-	-	25	-	-	0.20
L1023.040-030	50	30	4.5	40	41	21	3.0	-	-	15	40	-	-	0.29
L1023.040-040	65	40	4.5	40	51	21	3.0	-	-	15	55	-	-	0.36
L1023.040-050	80	50	7.6	40	61	21	3.0	-	20	15	70	-	40	0.46
L1023.040-060	95	60	6.0	40	71	21	3.0	-	20	15	85	-	55	0.52
L1023.040-070	110	70	9.1	40	81	21	3.0	-	20	15	100	-	70	0.63
L1023.040-080	125	80	9.1	40	91	21	3.0	-	20	15	115	-	85	0.69
L1023.060-030	55	30	4.5	60	44	28	3.0	-	-	-	35	-	-	0.65
L1023.060-045	80	45	7.6	60	59	28	3.0	-	-	25	60	-	-	0.95
L1023.060-060	105	60	10.6	60	74	28	3.0	-	-	25	85	-	-	1.25
L1023.060-075	130	75	12.1	60	89	28	3.0	-	-	25	110	-	-	1.55
L1023.060-090	155	90	15.2	60	104	28	3.0	35	-	25	135	85	-	1.85
L1023.060-105	180	105	18.2	60	119	28	3.0	35	-	25	160	110	-	2.15
L1023.060-130	205	130	19.7	60	144	28	3.0	35	60	25	185	135	85	2.45
L1023.080-050	85	50	9.3	80	64	35	4.0	-	-	-	40	-	-	1.70
L1023.080-075	125	75	14.0	80	89	35	4.0	-	-	40	80	-	-	2.52
L1023.080-105	165	105	16.3	80	119	35	4.0	-	-	40	120	-	-	3.34
L1023.080-135	205	135	21.0	80	149	35	4.0	-	62.5	40	160	-	80	4.14
L1023.080-155	245	155	25.7	80	169	35	4.0	-	62.5	40	200	-	120	4.95
L1023.080-185	285	185	30.4	80	199	35	4.0	-	62.5	40	240	-	160	5.77
L1023.080-215	325	215	35.0	80	229	35	4.0	-	62.5	40	280	-	200	6.57
L1023.100-060	110	60	21.0	100	77	45	6.0	-	-	-	90	-	-	3.48
L1023.100-095	160	95	26.3	100	113	45	6.0	-	-	50	140	-	-	5.10
L1023.100-130	210	130	36.8	100	148	45	6.0	-	60	50	190	-	90	6.72
L1023.100-165	260	165	47.3	100	183	45	6.0	-	60	50	240	-	140	8.31
L1023.100-200	310	200	57.8	100	218	45	6.0	-	60	50	290	-	190	9.95
L1023.100-235	360	235	68.4	100	253	45	6.0	-	60	50	340	-	240	11.53

Stainless Cross Roller Slides

flanged, smaller sizes

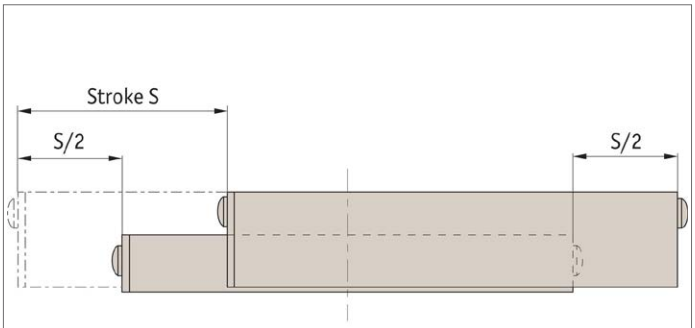


Order No.	l_1	Stroke	Static load C_0 kN max.	w_1	l_2	h_1	Roller	l_{10}	l_{11}	l_3	l_4	l_5	l_6	Weight kg
L1023.100-265	410	263	78.9	100	283	45	6.0	-	60	50	390	-	290	13.16
L1023.100-365	510	365	84.6	100	390	45	6.0	-	60	50	490	-	390	16.52
L1023.145-130	210	130	72.7	145	156	60	9.0	-	-	-	100	-	-	13.11
L1023.145-180	310	180	101.8	145	206	60	9.0	-	-	100	200	-	-	19.44
L1023.145-350	410	350	116.3	145	376	60	9.0	155	-	100	300	100	-	25.65
L1023.145-450	510	450	145.4	145	476	60	9.0	155	-	100	400	200	-	31.97
L1023.145-550	610	610	160.0	145	576	60	9.0	155	-	100	500	300	-	38.22

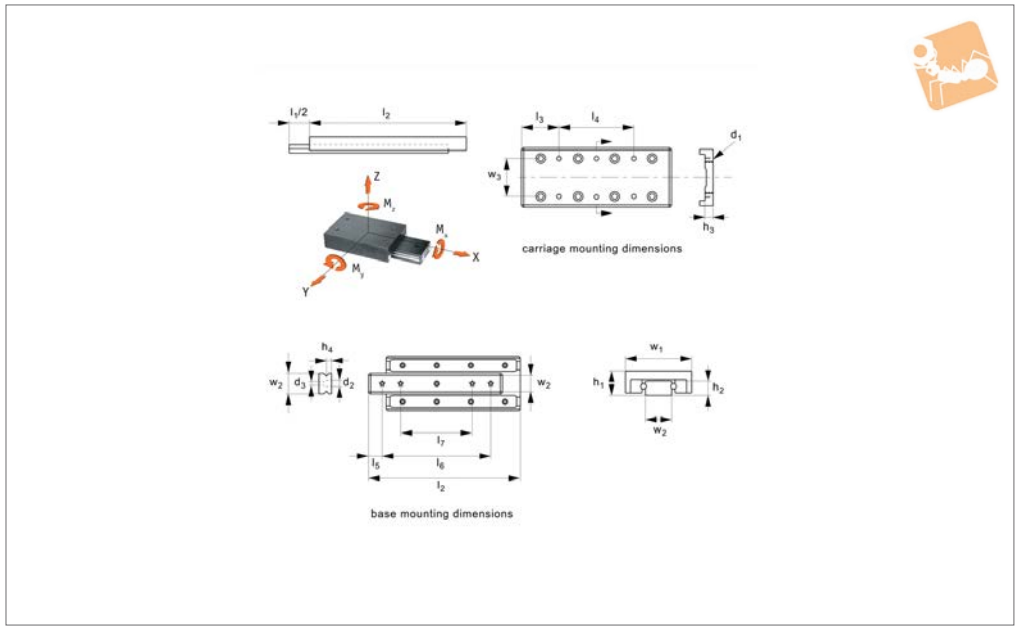
Order No.	l_7	l_8	l_9	w_2	w_3	w_4	w_5	h_2	h_3	h_4	d_1	Allowable load kN max.	Dyn. load C kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1023.030-012	12.5	2.5	3.5	10	10	22	4	11	10	5.5	2.55	0.19	0.38	2.6	1.2	1.4
L1023.030-018	12.5	4.5	3.5	10	10	22	4	11	10	5.5	2.55	0.28	0.52	3.9	2.6	3.0
L1023.030-025	12.5	6	3.5	10	10	22	4	11	10	5.5	2.55	0.38	0.65	5.2	4.6	5.2
L1023.030.032	12.5	7.5	3.5	10	10	22	4	11	10	5.5	2.55	0.48	0.78	6.5	7.2	7.9
L1023.030.040	12.5	8.5	3.5	10	10	22	4	11	10	5.5	2.55	0.57	0.90	7.8	10.4	11.2
L1023.030-045	12.5	11	3.5	10	10	22	4	11	10	5.5	2.55	0.77	1.1	10.4	18.4	17.3
L1023.030-050	12.5	13.5	3.5	10	10	22	4	11	10	5.5	2.55	0.86	1.2	11.7	23.3	22.0
L1023.040-018	17.5	3	5	15	12.5	30	5	8	13	6.5	3.5	0.39	0.89	7.0	3.1	3.9
L1023.040-030	17.5	4.5	5	15	12.5	30	5	14	14	5.5	3.5	1.5	2.9	42.6	22.8	26.6
L1023.040-040	17.5	7	5	15	12.5	30	5	14	14	5.5	3.5	1.5	2.9	42.6	22.8	19.0
L1023.040-050	17.5	9.5	5	15	12.5	30	5	14	14	5.5	3.5	2.5	4.3	71.0	63.4	57.1
L1023.040-060	17.5	12	5	15	12.5	30	5	14	14	5.5	3.5	2.0	3.6	56.8	40.6	45.7
L1023.040-070	17.5	14.5	5	15	12.5	30	5	14	14	5.5	3.5	3.0	5.0	85.2	91.3	98.9
L1023.040-080	17.5	17	5	15	12.5	30	5	14	14	5.5	3.5	3.0	5.0	85.2	91.3	83.7
L1023.060-030	27.5	5.5	10	25	17.5	40	10	18.5	17.5	9	4.5	1.5	2.9	46.6	22.8	26.6
L1023.060-045	27.5	10.8	10	25	17.5	40	10	18.5	17.5	9	4.5	2.5	4.3	71.0	63.4	57.1
L1023.060-060	27.5	15.5	10	25	17.5	40	10	18.5	17.5	9	4.5	3.5	5.6	99.5	124	115
L1023.060-075	27.5	20.8	10	25	17.5	40	10	18.5	17.5	9	4.5	4.0	6.2	113	162	172
L1023.060-090	27.5	25.5	10	25	17.5	40	10	18.5	17.5	9	4.5	5.0	7.4	142	253	266
L1023.060-105	27.5	30.5	10	25	17.5	40	10	18.5	17.5	9	4.5	6.0	8.6	170	365	350
L1023.060-130	27.5	30.5	10	25	17.5	40	10	18.5	17.5	9	4.5	6.6	9.1	184	428	445
L1023.080-050	42.5	10.5	22.5	40	20	60	10	24	22	10.5	5.5	3.1	6.6	124	87	76
L1023.080-075	42.5	18	22.5	40	20	60	10	24	22	10.5	5.5	4.6	9.0	187	196	180
L1023.080-105	42.5	23	22.5	40	20	60	10	24	22	10.5	5.5	5.4	10.2	218	267	286
L1023.080-135	42.5	28	22.5	40	20	60	10	24	22	10.5	5.5	7.0	12.4	280	442	466
L1023.080-155	42.5	38	22.5	40	20	60	10	24	22	10.5	5.5	8.5	14.6	343	660	690
L1023.080-185	42.5	43	22.5	40	20	60	10	24	22	10.5	5.5	10.1	16.6646	405	922	957
L1023.080-215	42.5	48	22.5	40	20	60	10	24	22	10.5	5.5	11.6	18.6	467	1228	1187
L1023.100-060	55	16.5	10	50	25	60	20	31	29	13	7	7.0	13.9	315	252	221
L1023.100-095	55	23.5	10	50	25	60	20	31	29	13	7	8.7	16.5	394	394	434
L1023.100-130	55	31	10	50	25	60	20	31	29	13	7	12.2	21.5	552	773	828
L1023.100-165	55	38.5	10	50	25	60	20	31	29	13	7	15.7	26.2	710	1279	1207
L1023.100-200	55	46	10	50	25	60	20	31	29	13	7	19.2	30.7	868	1910	1823
L1023.100-235	55	53.5	10	50	25	60	20	31	29	13	7	22.8	25.0	1026	2668	2565
L1023.100-265	55	63.5	10	50	25	60	20	31	29	13	7	26.3	39.1	1184	3552	3434
L1023.100-365	55	60	10	50	25	60	20	31	29	13	7	28.2	45.1	1269	4568	4441.
L1023.145-130	105	27	55	85	30	90	27.5	43	38.5	16	9	24.2	72.7	1745	1697	1527
L1023.145-180	105	52	55	85	30	90	27.5	43	38.5	16	9	33.9	101.8	2444	3326	3564
L1023.145-350	105	12	55	85	30	90	27.5	43	38.5	16	9	38.7	116.3	2793	4345	4073
L1023.145-450	105	17	55	85	30	90	27.5	43	38.5	16	9	48.4	145.4	3491	6789	6449
L1023.145-550	105	17	55	85	30	90	27.5	43	38.5	16	9	53.3	160.0	3840	8214	8588

Stainless Cross Roller Slides

flanged, smaller sizes



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)





L1027.SS

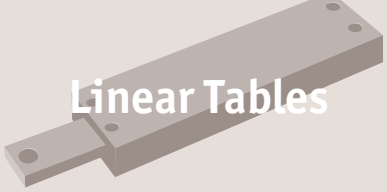
Material
Steel body (S50C), nickel plated.
Nickel plated cross roller rails and fasteners, steel rollers, stainless steel roller cages.

Technical Notes
Straight line accuracy: 3µ/25mm of travel.
Positional repeatability: 3µ.
Coefficient of friction: 0,003.

Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Stroke l_1	Load kg max.	w_1 ±0.1	l_2	h_1 ±0.1	l_3	l_4	l_5	l_6	l_7	w_2	w_3
L1027.020-012-SS	12	23	20	25	8	3.5	1x18	3.5	18	-	6.6	14
L1027.020-018-SS	18	32	20	35	8	3.5	1x28	5.0	25	-	6.6	14
L1027.020-025-SS	25	47	20	45	8	12.5	1x20	3.5	38	25	6.6	14
L1027.020-032-SS	32	54	20	55	8	12.5	1x30	3.5	48	29	6.6	14
L1027.020-040-SS	40	60	20	65	8	12.5	2x20	5.0	55	31	6.6	14
L1027.020-045-SS	45	73	20	75	8	22.5	1x30	5.0	65	35	6.6	14
L1027.020-050-SS	50	79	20	85	8	12.5	2x30	5.0	75	40	6.6	14
L1027.030-018-SS	18	40	30	35	12	3.5	1x28	5.0	25	-	12.0	22
L1027.030-030-SS	30	63	30	50	12	3.5	1x43	7.5	35	-	12.0	22
L1027.030-040-SS	40	75	30	65	12	17.5	1x30	5.0	55	33	12.0	22
L1027.030-050-SS	50	95	30	80	12	17.5	1x45	5.0	70	40	12.0	22
L1027.030-060-SS	60	105	30	95	12	17.5	2x30	5.0	85	45	12.0	22
L1027.030-070-SS	70	120	30	110	12	32.5	1x45	7.5	95	50	12.0	22
L1027.030-080-SS	80	130	30	125	12	17.5	2x45	7.5	110	55	12.0	22
L1027.040-030-SS	30	126	40	55	16	7.5	1x40	7.5	40	-	16.0	30
L1027.040-045-SS	45	183	40	80	16	7.5	1x65	6.0	68	43	16.0	30
L1027.040-060-SS	60	220	40	105	16	27.5	1x50	7.5	90	55	16.0	30
L1027.040-075-SS	75	275	40	130	16	27.5	1x75	7.5	115	65	16.0	30
L1027.040-090-SS	90	310	40	155	16	27.5	2x50	7.5	140	95	16.0	30
L1027.040-105-SS	105	355	40	180	16	52.5	1x75	7.5	165	85	16.0	30
L1027.040-130-SS	130	375	40	205	16	27.5	2x75	7.5	190	90	16.0	30

Order No.	h_2	h_3	h_4	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	No. of base holes	No. of carr holes
L1027.020-012-SS	4	3.5	2.5	M2	3.9	2.6	0.80	1.29	1.33	2	4
L1027.020-018-SS	4	3.5	2.5	M2	3.9	2.6	1.04	2.59	2.71	2	4
L1027.020-025-SS	4	3.5	2.5	M2	3.9	2.6	1.51	4.55	4.79	4	4
L1027.020-032-SS	4	3.5	2.5	M2	3.9	2.6	1.74	5.36	5.63	4	4
L1027.020-040-SS	4	3.5	2.5	M2	3.9	2.6	1.94	8.16	8.33	4	6
L1027.020-045-SS	4	3.5	2.5	M2	3.9	2.6	2.27	11.5	12.1	4	4
L1027.020-050-SS	4	3.5	2.5	M2	3.9	2.6	2.55	13.9	14.6	4	6

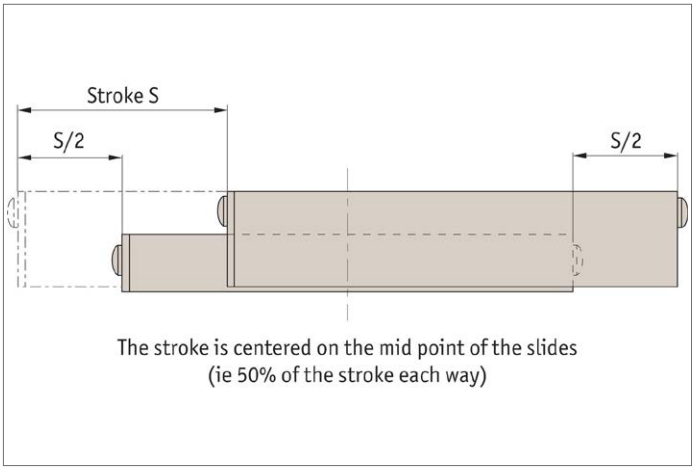


Low Profile Crossed Roller Table

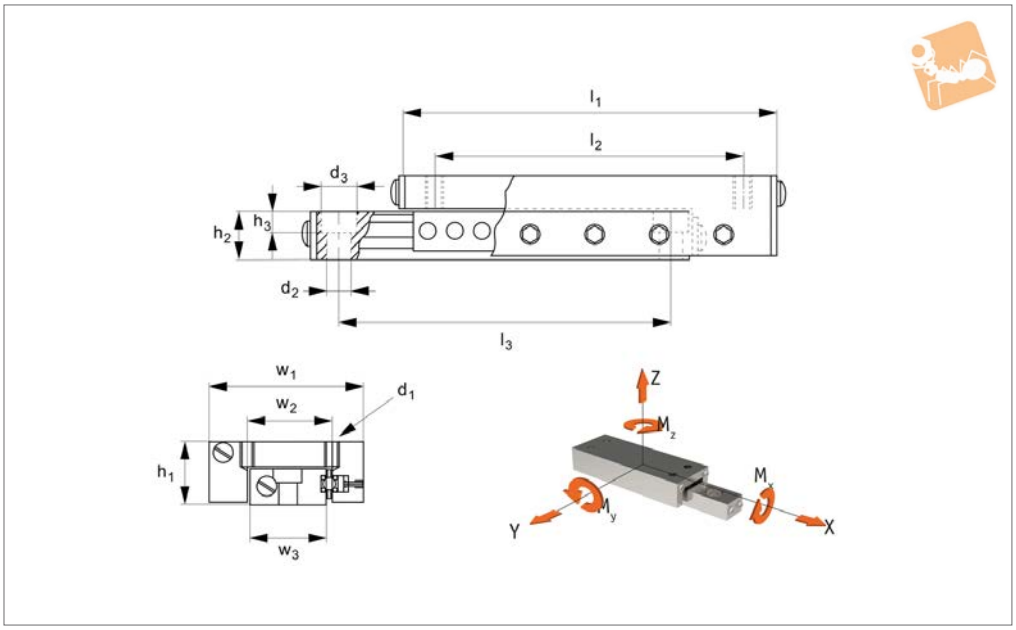
anti-corrosion, nickel plated



Order No.	h_2	h_3	h_4	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	No. of base holes	No. of carr holes
L1027.030-018-SS	6	5.5	3.8	M4	6.1	4	2.35	3.06	3.21	2	4
L1027.030-030-SS	6	5.5	3.8	M4	6.1	4	3.71	6.49	6.80	2	4
L1027.030-040-SS	6	5.5	3.8	M4	6.1	4	4.41	9.92	10.4	4	4
L1027.030-050-SS	6	5.5	3.8	M4	6.1	4	5.58	15.3	16.1	4	4
L1027.030-060-SS	6	5.5	3.8	M4	6.1	4	6.17	20.0	21.0	4	6
L1027.030-070-SS	6	5.5	3.8	M4	6.1	4	7.05	26.4	27.7	4	4
L1027.030-080-SS	6	5.5	3.8	M4	6.1	4	7.64	32.4	34.1	4	6
L1027.040-030-SS	8	7.5	5.2	M5	8.3	5.2	9.87	14.8	15.5	2	4
L1027.040-045-SS	8	7.5	5.2	M5	8.3	5.2	14.4	31.0	32.6	4	4
L1027.040-060-SS	8	7.5	5.2	M5	8.3	5.2	17.2	48.5	50.9	4	4
L1027.040-075-SS	8	7.5	5.2	M5	8.3	5.2	21.5	74.7	78.4	4	4
L1027.040-090-SS	8	7.5	5.2	M5	8.3	5.2	24.2	100	105	4	6
L1027.040-105-SS	8	7.5	5.2	M5	8.3	5.2	27.8	136	142	4	4
L1027.040-130-SS	8	7.5	5.2	M5	8.3	5.2	29.4	158	166	4	6



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)





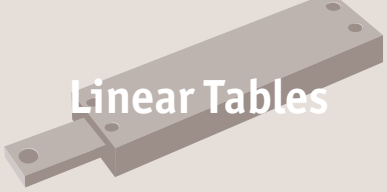
L1038

Material
Aluminium carriage (clear anodized) and base (black anodized).
Hardened stainless steel balls, shafts and preload gibs.

Technical Notes
Straight line accuracy: 13µ/25mm of travel.
Positional repeatability: 5µ.
Coefficient of friction: 0,003.
Increased life with overhanging loads.
Low friction, straight line design.
Factory preload controls side play and backlash.
Particularly useful for vertical applications.

Tips
In certain applications - uneven loads, vertical mounting or offset forces can cause standard ball retainers to become misaligned - leading eventually to a reduction in travel, the need for higher forces for full travel and ultimately failure of the assembly.
The anti-creep retainer used in these units prevents ball retainer misalignment and helps keep the rolling elements centred in the assembly - increasing assembly life and performance.
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	w_2	h_2	w_3	l_3	Weight g
L1038.010-013	13	0.7	9.7	19.0	5.8	13.0	4.0	3.4	4.0	10.0	3
L1038.010-025	25	0.7	9.7	32.0	5.8	26.0	4.0	3.4	4.0	20.0	4
L1038.010-038	38	0.7	9.7	44.0	5.8	37.0	4.0	3.4	4.0	30.0	7
L1038.014-013	13	2	14.2	27.0	8.0	15.0	6.0	4.7	6.4	19.0	9
L1038.014-025	25	4	14.2	52.0	8.0	41.0	6.0	4.7	6.4	35.0	14
L1038.014-050	50	5	14.2	78.0	8.0	66.0	6.0	4.7	6.4	60.0	23
L1038.014-075	75	6	14.2	103.0	8.0	92.0	6.0	4.7	6.4	86.0	31
L1038.014-100	100	8	14.2	128.0	8.0	117.0	6.0	4.7	6.4	89.0	34
L1038.014-127	127	8	14.2	154.0	8.0	142.0	6.0	4.7	6.4	114.0	43
L1038.019-013	13	4	19.0	27.0	10.4	15.0	9.0	6.3	9.5	19.0	11
L1038.019-025	25	5	19.0	52.0	10.4	41.0	9.0	6.3	9.5	35.0	26
L1038.019-050	50	5	19.0	78.0	10.4	660	9.0	6.3	9.5	60.0	37
L1038.019-075	75	6	19.0	103.0	10.4	92.0	9.0	6.3	9.5	86.0	48
L1038.019-100	100	7	19.0	128.0	10.4	117.0	9.0	6.3	9.5	89.0	60
L1038.019-127	127	8	19.0	154.0	10.4	142.0	9.0	6.3	9.5	114.0	71
L1038.025-013	13	5	25.4	40.0	12.7	32.0	10.0	6.3	12.7	32.0	34
L1038.025-025	25	5	25.4	65.0	12.7	57.0	10.0	6.3	12.7	57.0	48
L1038.025-038	38	6	25.4	78.0	12.7	65.0	10.0	6.3	12.7	65.0	54
L1038.025-050	50	7	25.4	90.0	12.7	82.0	10.0	6.3	12.7	82.0	62
L1038.025-075	75	8	25.4	116.0	12.7	108.0	10.0	6.3	12.7	108.0	142
L1038.027-019	19	7	26.9	40.0	13.4	32.0	10.0	7.9	12.7	28.0	37
L1038.027-038	38	8	26.9	65.0	13.4	57.0	10.0	7.9	12.7	54.0	65
L1038.027-050	50	9	26.9	90.0	13.4	82.0	10.0	7.9	12.7	79.0	85
L1038.027-075	75	11	26.9	116.0	13.4	102.0	10.0	7.9	12.7	82.0	147
L1038.027-100	100	14	26.9	152.0	13.4	140.0	10.0	7.9	12.7	102.0	170



Anti-Creep Ball Slide Assemblies



Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	w_2	h_2	w_3	l_3	Weight g
L1038.027-150	150	16	26.9	203.0	13.4	190.0	10.0	7.9	12.7	127.0	198
L1038.027-200	200	18	26.9	254.0	13.4	240.0	10.0	7.9	12.7	178.0	227
L1038.038-025	25	7	38.0	51.0	15.8	35.0	16.0	8.6	19.0	37.0	82
L1038.038-050	50	9	38.0	76.0	15.8	60.0	16.0	8.6	19.0	60.0	122
L1038.038-075	75	11	38.0	102.0	15.8	85.0	16.0	8.6	19.0	85.0	170
L1038.038-088	88	14	38.0	127.0	15.8	110.0	16.0	8.6	19.0	85.0	190
L1038.038-100	100	16	38.0	152.0	15.8	136.0	16.0	8.6	19.0	100.0	232
L1038.038-150	150	20	38.0	203.0	15.8	186.0	16.0	8.6	19.0	128.0	261
L1038.038-200	200	25	38.0	254.0	15.8	238.0	16.0	8.6	19.0	178.0	326
L1038.045-025	25	9	44.0	51.0	19.0	35.0	20.0	10.2	22.2	38.0	113
L1038.045-038	38	14	44.0	70.0	19.0	55.0	20.0	10.2	22.2	55.0	170
L1038.045-050	50	19	44.0	83.0	19.0	65.0	20.0	10.2	22.2	65.0	184
L1038.045-075	75	24	44.0	102.0	19.0	85.0	20.0	10.2	22.2	85.0	227
L1038.045-100	100	27	44.0	152.0	19.0	140.0	20.0	10.2	22.2	100.0	335
L1038.045-150	150	34	44.0	203.0	19.0	190.0	20.0	10.2	22.2	126.0	445
L1038.045-200	200	41	44.0	254.0	19.0	240.0	20.0	10.2	22.2	178.0	553
L1038.067-025	25	14	66.5	67.0	25.4	54.0	35.0	15.9	38.1	54.0	283
L1038.067-038	38	16	66.5	67.0	25.4	42.0	35.0	15.9	38.1	42.0	283
L1038.067-050	50	28	66.5	102.0	25.4	75.0	35.0	15.9	38.1	75.0	425
L1038.067-075	75	40	66.5	127.0	25.4	100.0	35.0	15.9	38.1	100.0	590
L1038.067-100	100	54	66.5	152.0	25.4	125.0	35.0	15.9	38.1	125.0	771
L1038.067-127	127	61	66.5	203.0	25.4	175.0	35.0	15.9	38.1	187.0	879
L1038.067-150	150	68	66.5	229.0	25.4	75.0	35.0	15.9	38.1	178.0	498
L1038.067-228	228	84	66.5	305.0	25.4	75.0	35.0	15.9	38.1	254.0	1318
L1038.067-304	304	93	66.5	381.0	25.4	75.0	35.0	15.9	38.1	330.0	1644

Order No.	d_1	d_2	d_3	h_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Counterbore screw size
L1038.010-013	M2	M2	-	-	0.1	0.2	0.2	-
L1038.010-025	M2	M2	-	-	0.1	0.3	0.3	-
L1038.010-038	M2	M2	-	-	0.1	0.5	0.5	-
L1038.014-013	M2	2.2	4.0	2.2	0.5	1.0	1.0	M2
L1038.014-025	M2	2.2	4.0	2.2	1.2	4.5	4.7	M2
L1038.014-050	M2	2.2	4.0	2.2	1.5	8.64	9.1	M2
L1038.014-075	M2	2.2	4.0	2.2	1.8	13.4	14.1	M2
L1038.014-100	M2	2.2	4.0	2.2	2.0	17.9	18.8	M2
L1038.014-127	M2	2.2	4.0	2.2	2.3	23.0	24.2	M2
L1038.019-013	M3	3.5	6.1	3.4	1.5	1.9	2.0	M3
L1038.019-025	M3	3.5	6.1	3.4	1.9	4.8	5.0	M3
L1038.019-050	M3	3.5	6.1	3.4	2.3	8.6	9.1	M3
L1038.019-075	M3	3.5	6.1	3.4	2.7	13.4	14.1	M3
L1038.019-100	M3	3.5	6.1	3.4	3.1	17.9	18.8	M3
L1038.019-127	M3	3.5	6.1	3.4	3.5	23.0	24.1	M3
L1038.025-013	M4	3.5	6.1	3.4	2.5	3.3	3.5	M3
L1038.025-025	M4	3.5	6.1	3.4	3.0	8.6	9.1	M3
L1038.025-038	M4	3.5	6.1	3.4	3.2	10.4	10.9	M3
L1038.025-050	M4	3.5	6.1	3.4	3.7	13.2	13.9	M3
L1038.025-075	M4	3.5	6.1	3.4	4.5	20.2	21.2	M3
L1038.027-019	M4	4.6	6.1	4.4	3.8	4.5	4.7	M4
L1038.027-038	M4	4.6	6.1	4.4	4.6	10.8	11.3	M4
L1038.027-050	M4	4.6	6.1	4.4	5.3	18.0	18.9	M4
L1038.027-075	M4	4.6	6.1	4.4	6.4	27.5	28.9	M4
L1038.027-100	M4	4.6	6.1	4.4	7.7	45.0	47.3	M4
L1038.027-150	M4	4.6	6.1	4.4	9.0	66.5	69.8	M4
L1038.027-200	M4	4.6	6.1	4.4	10.2	92.0	96.6	M4
L1038.038-025	M4	4.6	8.1	4.4	M4	5.6	6.0	6.3
L1038.038-050	M4	4.6	8.1	4.4	M4	7.4	12.0	12.6
L1038.038-075	M4	4.6	8.1	4.4	M4	9.2	20.0	21.0
L1038.038-088	M4	4.6	8.1	4.4	M4	11.1	33.0	34.6
L1038.038-100	M4	4.6	8.1	4.4	M4	12.9	49.0	51.4
L1038.038-150	M4	4.6	8.1	4.4	M4	16.6	81.0	85.0
L1038.038-200	M4	4.6	8.1	4.4	M4	20.3	121	127
L1038.045-025	M4	4.6	8.1	4.4	M4	8.5	8.0	8.4
L1038.045-038	M4	4.6	8.1	4.4	M4	12.8	18.0	18.9
L1038.045-050	M4	4.6	8.1	4.4	M4	17.9	29.4	30.9
L1038.045-075	M4	4.6	8.1	4.4	M4	22.1	41.6	43.7

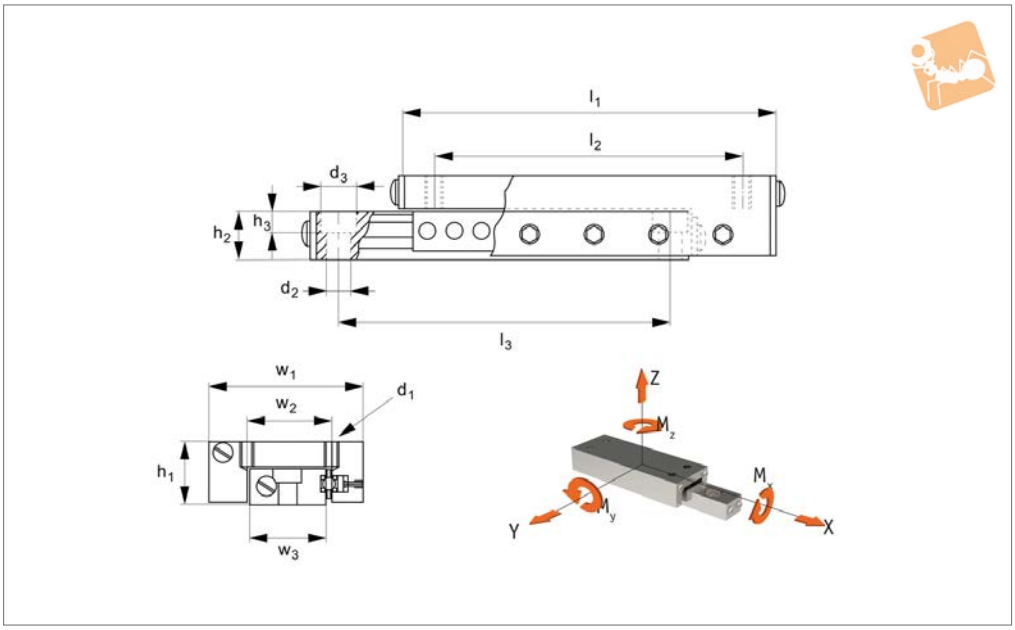


Order No.	d_1	d_2	d_3	h_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Counterbore screw size
L1038.045-100	M4	4.6	8.1	4.4	M4	25.5	84.0	88.2
L1038.045-150	M4	4.6	8.1	4.4	M4	31.9	135	141
L1038.045-200	M4	4.6	8.1	4.4	M4	38.3	198	207
L1038.067-025	M5	5.8	10.0	5.3	M5	21.9	16.8	17.6
L1038.067-038	M5	5.8	10.0	5.3	M5	25.5	16.8	17.6
L1038.067-050	M5	5.8	10.0	5.3	M5	45.2	60.8	63.8
L1038.067-075	M5	5.8	10.0	5.3	M5	64.1	110.9	116.4
L1038.067-100	M5	5.8	10.0	5.3	M5	86.0	181	190
L1038.067-127	M5	5.8	10.0	5.3	M5	98.4	283	297
L1038.067-150	M5	5.8	10.0	5.3	M5	109.3	357	374
L1038.067-228	M5	5.8	10.0	5.3	M5	134.9	543	571
L1038.067-304	M5	5.8	10.0	5.3	M5	149.4	717	753

Non-Magnetic Ball Slide Assemblies



L1039



Material
Base and carriage aluminium. Titanium shafting gib strips, silicone nitride ceramic balls, brass fasteners.

Technical Notes
Straight line accuracy: 13µ/25mm travel.
Positional repeatability: 5µ.
Coefficient of friction 0,003 typical.

Tips
Non-magnetic and no lubrication required due to the self-cleaning ball bearing design.

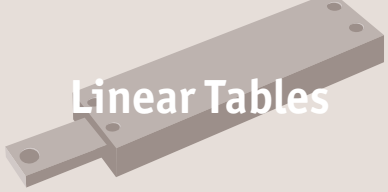
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	w_2	h_2	w_3	l_3	Weight g
L1039.014-013	13	0.5	14.2	27.0	8.0	15.0	6.0	4.7	6.4	19.0	9
L1039.014-025	25	1.1	14.2	52.0	8.0	41.0	6.0	4.7	6.4	35.0	14
L1039.014-050	50	1.6	14.2	78.0	8.0	66.0	6.0	4.7	6.4	60.0	23
L1039.014-075	75	1.9	14.2	103.0	8.0	92.0	6.0	4.7	6.4	86.0	31
L1039.014-100	100	2.2	14.2	128.0	8.0	117.0	6.0	4.7	6.4	89.0	34
L1039.014-127	127	2.5	14.2	154.0	8.0	142.0	6.0	4.7	6.4	114.0	43
L1039.019-013	13	1.1	19.0	27.0	10.4	15.0	9.0	6.3	9.5	19.0	11
L1039.019-025	25	1.4	19.0	52.0	10.4	41.0	9.0	6.3	9.5	35.0	26
L1039.019-050	50	1.6	19.0	78.0	10.4	66.0	9.0	6.3	9.5	60.0	37
L1039.019-075	75	1.9	19.0	103.0	10.4	92.0	9.0	6.3	9.5	86.0	48
L1039.019-100	100	2.2	19.0	128.0	10.4	117.0	9.0	6.3	9.5	89.0	60
L1039.019-127	127	2.5	19.0	154.0	10.4	142.0	9.0	6.3	9.5	114.0	71
L1039.025-013	13	1.4	25.4	40.0	12.7	32.0	10.0	6.3	12.7	32.0	34
L1039.025-025	25	1.6	25.4	65.0	12.7	57.0	10.0	6.3	12.7	57.0	48
L1039.025-038	38	1.8	25.4	78.0	12.7	65.0	10.0	6.3	12.7	65.0	54
L1039.025-050	50	2.1	25.4	90.0	12.7	82.0	10.0	6.3	12.7	82.0	62
L1039.025-075	75	2.5	25.4	116.0	12.7	108.0	10.0	6.3	12.7	108.0	142
L1039.027-019	19	2.1	26.9	40.0	13.4	32.0	10.0	7.9	12.7	28.0	37
L1039.027-038	38	2.5	26.9	65.0	13.4	57.0	10.0	7.9	12.7	54.0	65
L1039.027-050	50	2.7	26.9	90.0	13.4	82.0	10.0	7.9	12.7	79.0	85
L1039.027-075	75	3.4	26.9	116.0	13.4	102.0	10.0	7.9	12.7	82.0	147
L1039.027-100	100	4.1	26.9	152.0	13.4	140.0	10.0	7.9	12.7	102.0	170
L1039.027-150	150	4.8	26.9	203.0	13.4	190.0	10.0	7.9	12.7	127.0	198
L1039.027-200	200	5.4	26.9	254.0	13.4	240.0	10.0	7.9	12.7	178.0	227
L1039.038-025	25	2.1	38.0	51.0	15.8	35.0	16.0	8.6	19.0	37.0	82
L1039.038-050	50	2.7	38.0	76.0	15.8	60.0	16.0	8.6	19.0	60.0	122
L1039.038-075	75	3.4	38.0	102.0	15.8	85.0	16.0	8.6	19.0	85.0	170
L1039.038-088	88	4.1	38.0	127.0	15.8	110.0	16.0	8.6	19.0	85.0	190
L1039.038-100	100	4.8	38.0	152.0	15.8	136.0	16.0	8.6	19.0	100.0	232
L1039.038-150	150	6.1	38.0	203.0	15.8	186.0	16.0	8.6	19.0	128.0	261



Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	w_2	h_2	w_3	l_3	Weight g
L1039.038-200	200	7.5	38.0	254.0	15.8	238.0	16.0	8.6	19.0	178.0	326
L1039.044-025	25	2.7	44.0	51.0	19.0	35.0	20.0	10.2	22.2	38.0	113
L1039.044-038	38	4.1	44.0	70.0	19.0	55.0	20.0	10.2	22.2	55.0	170
L1039.044-050	50	5.7	44.0	83.0	19.0	65.0	20.0	10.2	22.2	65.0	184
L1039.044-075	75	7.0	44.0	102.0	19.0	85.0	20.0	10.2	22.2	85.0	227
L1039.044-100	100	8.2	44.0	152.0	19.0	140.0	20.0	10.2	22.2	100.0	335
L1039.044-150	150	10.2	44.0	203.0	19.0	190.0	20.0	10.2	22.2	126.0	445
L1039.044-200	200	12.3	44.0	254.0	19.0	240.0	20.0	10.2	22.2	178.0	553
L1039.067-025	25	4.1	66.5	67.0	25.4	54.0	35.0	15.9	38.1	54.0	283
L1039.067-038	38	4.8	66.5	67.0	25.4	42.0	35.0	15.9	38.1	42.0	283
L1039.067-050	50	8.5	66.5	102.0	25.4	75.0	35.0	15.9	38.1	75.0	425
L1039.067-075	75	12.0	66.5	127.0	25.4	100.0	35.0	15.9	38.1	100.0	590
L1039.067-100	100	16.1	66.5	152.0	25.4	125.0	35.0	15.9	38.1	125.0	771
L1039.067-127	127	18.4	66.5	203.0	25.4	175.0	35.0	15.9	38.1	187.0	879
L1039.067-150	150	20.5	66.5	229.0	25.4	75.0	35.0	15.9	38.1	178.0	498
L1039.067-228	228	25.2	66.5	305.0	25.4	75.0	35.0	15.9	38.1	254.0	1318
L1039.067-304	304	28.0	66.5	381.0	25.4	75.0	35.0	15.9	38.1	330.0	1644

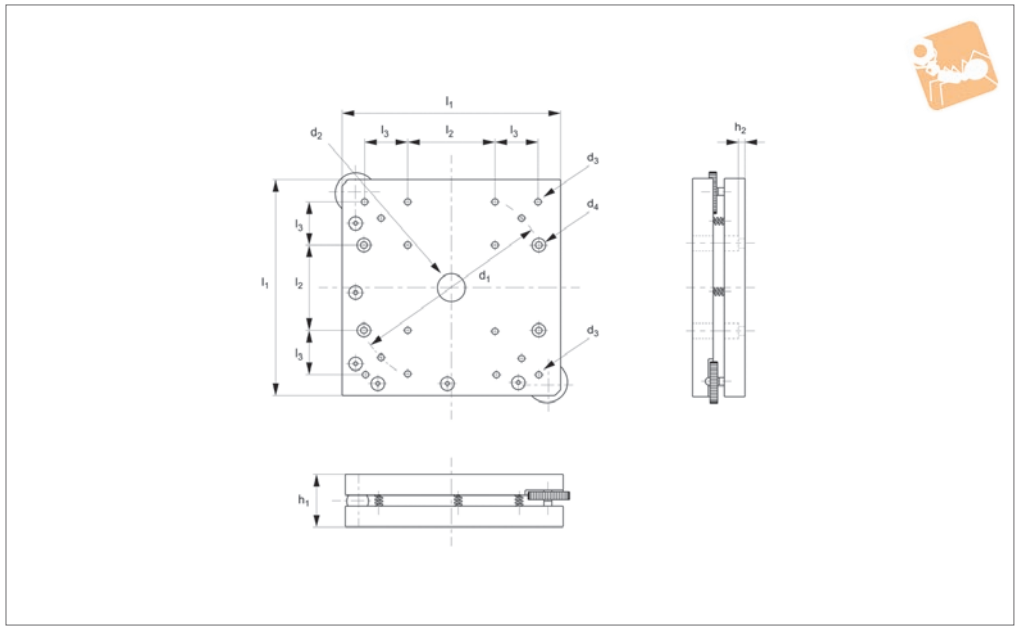
Order No.	d_1	d_2	d_3	h_3	Counterbore screw size	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1039.014-013	M2	2.2	4.0	2.2	M2	0.02	0.03	0.03
L1039.014-025	M2	2.2	4.0	2.2	M2	0.03	0.15	0.15
L1039.014-050	M2	2.2	4.0	2.2	M2	0.06	0.30	0.30
L1039.014-075	M2	2.2	4.0	2.2	M2	0.06	0.45	0.48
L1039.014-100	M2	2.2	4.0	2.2	M2	0.06	0.18	0.63
L1039.014-127	M2	2.2	4.0	2.2	M2	0.09	0.78	0.81
L1039.019-013	M3	3.5	6.1	3.4	M3	0.06	0.06	0.06
L1039.019-025	M3	3.5	6.1	3.4	M3	0.06	0.15	0.18
L1039.019-050	M3	3.5	6.1	3.4	M3	0.09	0.09	0.30
L1039.019-075	M3	3.5	6.1	3.4	M3	0.09	0.45	0.48
L1039.019-100	M3	3.5	6.1	3.4	M3	0.09	0.18	0.63
L1039.019-127	M3	3.5	6.1	3.4	M3	0.12	0.78	0.81
L1039.025-013	M4	3.5	6.1	3.4	M3	0.09	0.12	0.72
L1039.025-025	M4	3.5	6.1	3.4	M3	0.09	0.09	0.09
L1039.025-038	M4	3.5	6.1	3.4	M3	0.12	0.36	0.36
L1039.025-050	M4	3.5	6.1	3.4	M3	0.12	0.45	0.48
L1039.025-075	M4	3.5	6.1	3.4	M3	0.15	0.69	0.72
L1039.027-019	M4	4.6	8.1	4.4	M4	0.12	0.15	0.15
L1039.027-038	M4	4.6	8.1	4.4	M4	0.15	0.36	0.39
L1039.027-050	M4	4.6	8.1	4.4	M4	0.18	0.18	0.63
L1039.027-075	M4	4.6	8.1	4.4	M4	0.21	0.93	0.99
L1039.027-100	M4	4.6	8.1	4.4	M4	0.04	1.53	1.59
L1039.027-150	M4	4.6	8.1	4.4	M4	0.09	2.25	2.37
L1039.027-200	M4	4.6	8.1	4.4	M4	0.36	3.09	3.27
L1039.038-025	M4	4.6	8.1	4.4	M4	0.18	0.21	0.21
L1039.038-050	M4	4.6	8.1	4.4	M4	0.24	0.42	0.42
L1039.038-075	M4	4.6	8.1	4.4	M4	0.09	0.69	0.72
L1039.038-088	M4	4.6	8.1	4.4	M4	0.36	1.11	1.17
L1039.038-100	M4	4.6	8.1	4.4	M4	0.45	1.65	1.74
L1039.038-150	M4	4.6	8.1	4.4	M4	0.57	2.73	2.88
L1039.038-200	M4	4.6	8.1	4.4	M4	0.69	4.08	4.29
L1039.044-025	M4	4.6	8.1	4.4	M4	0.30	0.27	0.27
L1039.044-038	M4	4.6	8.1	4.4	M4	1.1	0.60	0.63
L1039.044-050	M4	4.6	8.1	4.4	M4	0.60	0.99	1.05
L1039.044-075	M4	4.6	8.1	4.4	M4	0.75	1.41	1.47
L1039.044-100	M4	4.6	8.1	4.4	M4	0.87	3.00	3.00
L1039.044-150	M4	4.6	8.1	4.4	M4	1.08	4.56	4.8
L1039.044-200	M4	4.6	8.1	4.4	M4	1.29	6.69	7.02
L1039.067-025	M5	5.8	10.0	5.3	M5	0.75	0.57	0.6
L1039.067-038	M5	5.8	10.0	5.3	M5	0.87	0.57	0.6
L1039.067-050	M5	5.8	10.0	5.3	M5	1.53	2.07	2.16
L1039.067-075	M5	5.8	10.0	5.3	M5	2.16	3.75	3.93
L1039.067-100	M5	5.8	10.0	5.3	M5	2.91	6.15	6.45
L1039.067-127	M5	5.8	10.0	5.3	M5	3.33	9.60	10.08
L1039.067-150	M5	5.8	10.0	5.3	M5	3.69	12.09	12.69
L1039.067-228	M5	5.8	10.0	5.3	M5	4.56	18.42	19.35

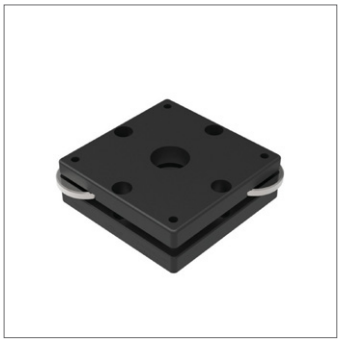


Non-Magnetic Ball Slide Assemblies



Order No.	d_1	d_2	d_3	h_3	Counterbore screw size	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1039.067-304	M5	5.8	10.0	5.3	M5	5.04	24.3	25.53

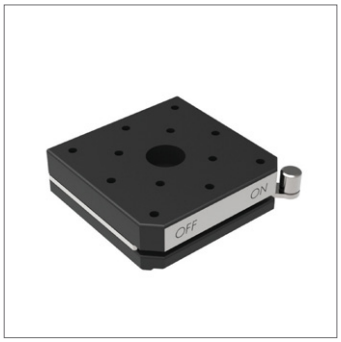




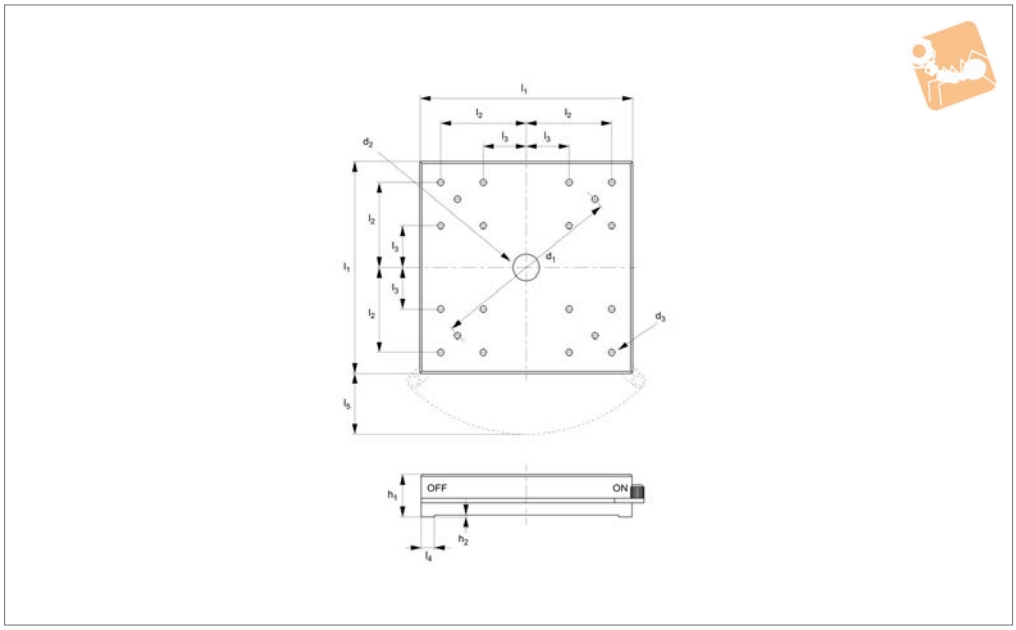
L3310

Material
Aluminium body blackened, steel knob.

Order No.	h_1	Load kg max.	Travel/rev	Travel distance	d_1	d_2	d_3	d_4	h_2	l_1	l_2	l_3
L3310.030	15	2.0	1° 25‘	±2°	-	M 6x1	M2	2.5	2	30	24	-
L3310.060	20	4.0	0° 40‘	±2°	-	M16x1	M4	4.5	4	60	50	-
L3310.090	23	5.0	0° 24‘	±2°	114	M16x1	M4	4.5	4	90	50	-
L3310.125	30	5.0	0° 15‘	±2°	114	M16x1	M4	4.5	4	125	50	25

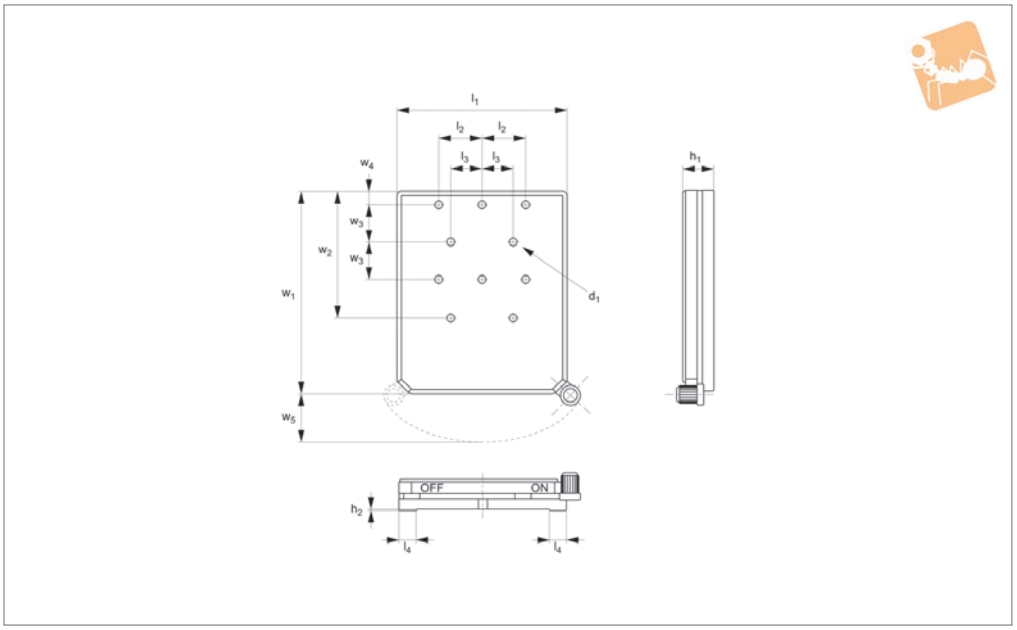


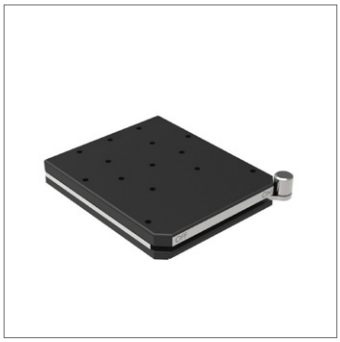
L3314



Material
Aluminium body blackened, steel knob.

Order No.	l_1	h_1	Holding force kgf	Parallelism	l_2	l_3	l_4	l_5	d_1	d_2	d_3	h_2
L3314.045	45	20	17.0	0.015	12	-	3	14.5	-	M 6x1	M2	1
L3314.065	65	20	20.0	0.020	25	-	4	18.5	-	M16x1	M4	1
L3314.090	90	20	25.0	0.020	25	-	6	28.0	114	M16x1	M4	1
L3314.125	125	25	100.0	0.020	50	25	8	35.5	114	M16x1	M4	1





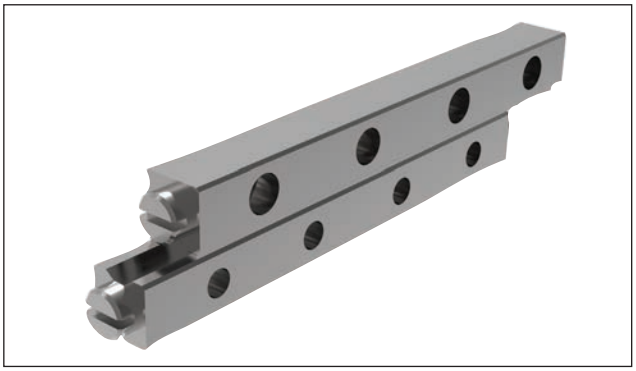
L3315

Material
Aluminium body blackened, steel knob.

Order No.	l_1	h_1	w_1	Holding force kgf	Parallelism	l_2	l_3	l_4	d_1	w_2	w_3	w_4	h_2	w_5
L3315.038	38	12	51	1.0	0.015	12.5	8.5	12.5	M3	35	15	5	0.5	16
L3315.052	52	12	63	3.3	0.020	17.0	12.5	12.0	M3	50	15	5	0.5	18
L3315.066	66	12	80	3.8	0.020	17.0	12.5	10.0	M3	50	15	5	0.5	19

Linear Rail Sets

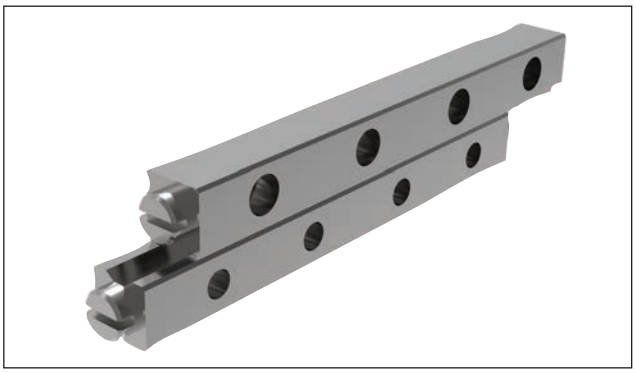
Overview



Standard cross roller rail sets

L1000 & L1001

- Seven rail profiles (Sizes 1-12)
- Lengths: 20mm to 1 metre
- L1000 standard rail set
- L1001 corrosion resistant rail sets



Deep groove and anti-creep rail sets

L1002 + L1003

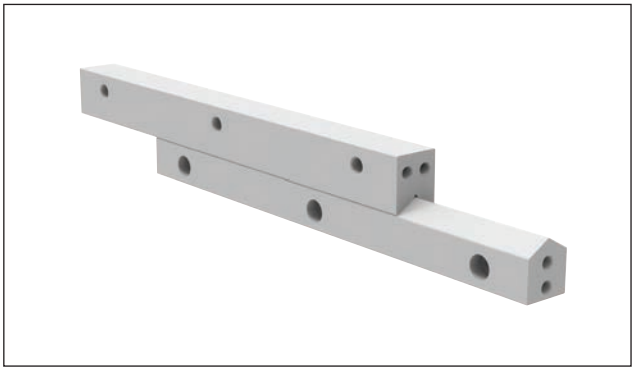
- 3 x load capacity of standard rail sets (due to deep V groove)
- Two rail profiles (Sizes 4 & 6)
- Lengths 50mm to 400mm
- Anti-creep versions for high acceleration applications



Needle roller rail sets

L1004

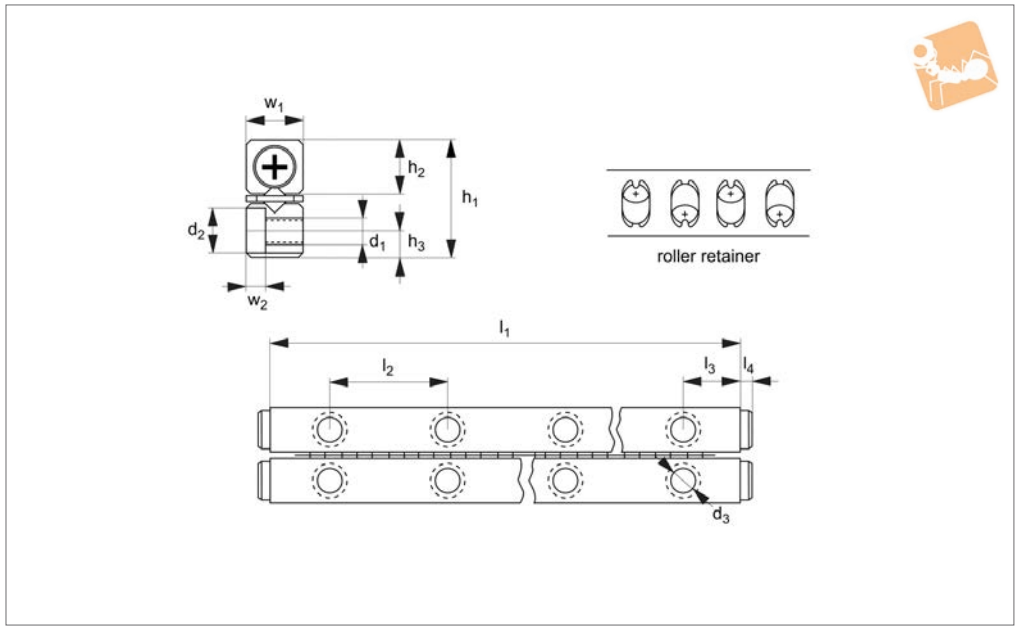
- Heavy load ratings and needle rollers are used
- Five rail profile size
- Lengths: 200mm to 1.2 metres



Anti-friction coated rail sets

L1005 & L1006

- Same profile as needle roller rails but contact face Teflon coated.
- Ideal for harsh, dirty conditions
- Vibration damping characteristics





L1000

Material
Alloy steel rail and roller (DIN 1.2842), through hardened to 60±2 HRC.
Stainless steel roller retainer (AISI 304).

Technical Notes
Supplied in sets of 4 rails (with 2 roller cages and 8 end screws as standard). See table for number of rollers in each cage.

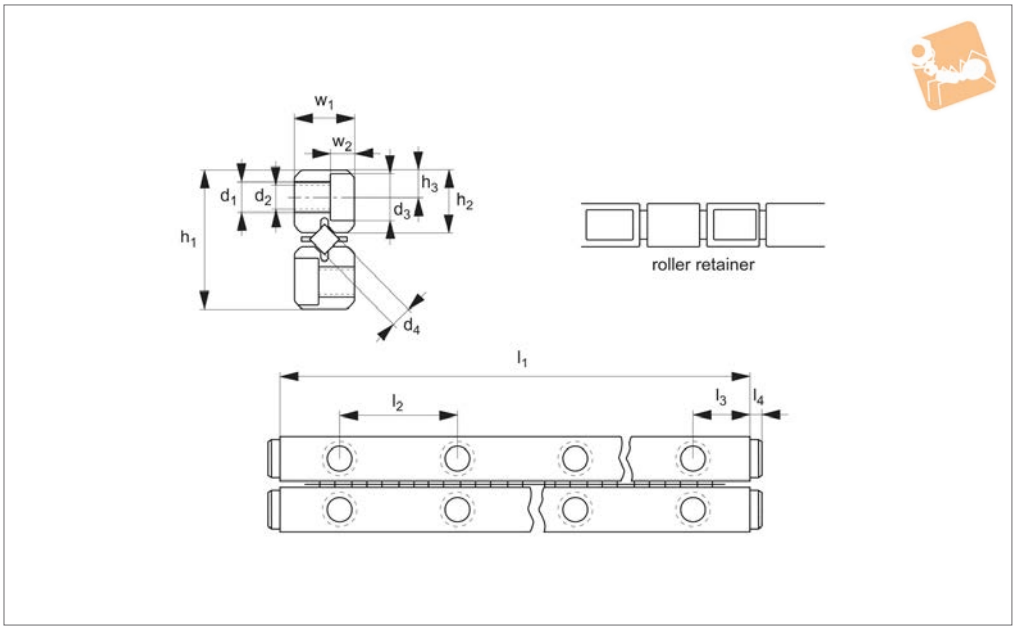
Crossed roller cages can be cut to length to alter stroke - but this affects load rating, please see technical pages.

Order No.	l_1	Stroke max.	w_1	d_1	d_2	d_3	h_1 +0|-0.3	h_2	h_3	l_2	l_3	l_4	w_2	No. of rollers	Dyn. load C kN max.	Static load C_0 kN max.	Weight kg
L1000.01-020	20	13	4	1,65	3,0	M 2	8,5	3,9	1,8	10	5	1,3	1,4	5	0,63	0,72	0,01
L1000.01-030	30	21	4	1,65	3,0	M 2	8,5	3,9	1,8	10	5	1,3	1,4	7	0,88	1,00	0,01
L1000.01-040	40	29	4	1,65	3,0	M 2	8,5	3,9	1,8	10	5	1,3	1,4	9	1,13	1,30	0,02
L1000.01-050	50	37	4	1,65	3,0	M 2	8,5	3,9	1,8	10	5	1,3	1,4	11	1,38	1,58	0,02
L1000.01-060	60	45	4	1,65	3,0	M 2	8,5	3,9	1,8	10	5	1,3	1,4	13	1,63	1,88	0,02
L1000.01-070	70	53	4	1,65	3,0	M 2	8,5	3,9	1,8	10	5	1,3	1,4	15	1,88	2,16	0,03
L1000.01-080	80	61	4	1,65	3,0	M 2	8,5	3,9	1,8	10	5	1,3	1,4	17	12,1	2,45	0,03
L1000.02-030	30	24	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	5	1,47	1,46	0,03
L1000.02-045	45	30	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	8	2,34	2,34	0,04
L1000.02-060	60	44	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	10	2,93	2,92	0,05
L1000.02-075	75	58	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	12	3,52	3,50	0,06
L1000.02-090	90	72	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	14	4,10	4,09	0,08
L1000.02-105	105	86	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	16	4,69	4,67	0,09
L1000.02-120	120	100	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	18	5,27	5,26	0,11
L1000.02-135	135	106	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	21	6,15	6,13	0,12
L1000.02-150	150	120	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	23	6,74	6,72	0,13
L1000.02-165	165	134	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	25	7,33	7,30	0,14
L1000.02-180	180	148	6	2,55	4,4	M 3	12	5,5	2,5	15	7,5	1,5	2,0	27	7,91	7,88	0,16
L1000.03-050	50	34	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	7	4,47	5,33	0,92
L1000.03-075	75	54	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	10	6,38	7,61	0,14
L1000.03-100	100	74	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	13	8,29	9,89	0,18
L1000.03-125	125	104	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	15	9,57	11,4	0,23
L1000.03-150	150	124	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	18	11,5	13,7	0,27
L1000.03-175	175	144	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	21	13,4	16,0	0,32
L1000.03-200	200	164	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	24	15,3	18,3	0,36
L1000.03-225	225	184	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	27	17,2	20,6	0,41
L1000.03-250	250	204	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	30	19,1	22,8	0,45
L1000.03-275	275	224	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	33	21,1	25,1	0,49
L1000.03-300	300	244	8	3,3	6,0	M 4	18	8,3	3,5	25	12,5	2,0	3,1	36	23,0	27,4	0,54
L1000.04-080	80	54	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	8	9,84	9,36	0,25
L1000.04-120	120	92	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	11	13,5	12,9	0,36
L1000.04-160	160	130	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	14	17,2	16,4	0,38

Crossed Roller Rail Sets



Order No.	l_1	Stroke max.	w_1	d_1	d_2	d_3	h_1 +0|-0.3	h_2	h_3	l_2	l_3	l_4	w_2	No. of rollers	Dyn. load C kN max.	Static load C_0 kN max.	Weight kg
L1000.04-200	200	154	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	18	22,1	21,1	0,60
L1000.04-240	240	192	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	21	25,8	24,6	0,71
L1000.04-280	280	230	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	24	29,5	28,1	0,83
L1000.04-320	320	254	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	28	34,4	32,8	0,95
L1000.04-360	360	292	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	31	38,1	36,3	1,06
L1000.04-400	400	330	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	34	41,8	39,8	1,18
L1000.04-440	440	354	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	38	46,7	44,5	1,40
L1000.04-480	480	392	11	4,3	7,5	M 5	22	10	4,5	40	20	2,0	4,1	41	50,4	48,0	1,41
L1000.06-100	100	80	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	7	18,0	18,4	0,58
L1000.06-150	150	108	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	11	28,3	29,0	0,87
L1000.06-200	200	154	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	14	36,0	36,9	1,16
L1000.06-250	250	200	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	17	43,7	44,7	1,44
L1000.06-300	300	246	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	20	51,4	52,6	1,73
L1000.06-350	350	274	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	24	61,7	63,2	2,01
L1000.06-400	400	320	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	27	69,4	71,1	2,30
L1000.06-450	450	366	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	30	77,1	79,0	2,59
L1000.06-500	500	412	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	33	84,8	86,9	2,87
L1000.06-550	550	458	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	36	92,5	94,8	3,16
L1000.06-600	600	486	15	5,3	9,5	M 6	31	14	6	50	25	2,0	5,2	40	103,0	105,0	2,55
L1000.09-200	200	158	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	9	64,7	65,5	2,54
L1000.09-300	300	246	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	13	93,5	94,6	3,78
L1000.09-400	400	306	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	18	129,0	131,0	5,02
L1000.09-500	500	394	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	22	158,0	160,0	6,27
L1000.09-600	600	482	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	26	187,0	189,0	7,51
L1000.09-700	700	570	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	30	216,0	218,0	9,26
L1000.09-800	800	658	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	34	245,0	247,0	9,83
L1000.09-900	900	746	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	38	273,0	276,0	11,05
L1000.09-1000	1000	805	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	43	309,0	311,0	12,20
L1000.09-1100	1100	894	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	47	337,0	341,0	13,50
L1000.09-1200	1200	982	22	6,8	10,5	M 8	44	20,2	9	100	50	3,5	5,2	51	366,0	371,0	14,70
L1000.12-200	200	160	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	7	103,0	92,3	4,23
L1000.12-300	300	216	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	11	162,0	145,0	6,32
L1000.12-400	400	308	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	14	206,0	185,0	8,39
L1000.12-500	500	400	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	17	250,0	224,0	10,49
L1000.12-600	600	492	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	20	294,0	264,0	12,520
L1000.12-700	700	548	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	24	353,0	317,0	15,47
L1000.12-800	800	640	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	27	397,0	356,0	17,66
L1000.12-900	900	732	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	30	441,0	396,0	18,52
L1000.12-1000	1000	824	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	33	485,0	435,0	20,40
L1000.12-1100	1100	916	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	36	529,0	474,0	22,60
L1000.12-1200	1200	972	28	8,5	13,5	M10	58	26,9	12	100	50	3,5	8,2	40	588,0	527,0	24,70





L1002

Material
Alloy steel rail and roller (DIN 1.2842), through hardened to 60±2 HRC.
Cross rollers retained in delrin cage.

Technical Notes
Supplied in sets of 4 rails (with 2 roller cages and 8 end screws as standard). See table for number of rollers in each cage. Crossed roller cages can be cut to length to alter stroke - but this affects load rating, please see technical pages.

Tips
This rail set type has improved load carrying capacity, typically 3x that of standard L1000 type sets (as they have a deeper V groove).

Order No.	l_1	Stroke max.	w_1	d_1	d_2	d_3	d_4	h_1	h_2	h_3	l_2	l_3	l_4	w_2	No. of rollers	Weight kg
L1002.04-050	50	40	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	4	0.06
L1002.04-075	75	62	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	6	0.09
L1002.04-100	100	81	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	9	0.13
L1002.04-125	125	102	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	11	0.16
L1002.04-150	150	121	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	13	0.19
L1002.04-175	175	143	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	16	0.20
L1002.04-200	200	161	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	18	0.23
L1002.04-225	225	183	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	20	0.25
L1002.04-250	250	201	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	23	0.28
L1002.04-275	275	223	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	25	0.31
L1002.04-300	300	242	9	4.5	M3	2.65	5.5	19	9	3.5	25	12.5	2.5	2.7	27	0.33
L1002.06-100	100	83	12	6.5	M4	3.30	7.0	25	12	5.0	25	12.5	3.0	3.2	6	0.18
L1002.06-150	150	120	12	6.5	M4	3.30	7.0	25	12	5.0	25	12.5	3.0	3.2	10	0.28
L1002.06-200	200	162	12	6.5	M4	3.30	7.0	25	12	5.0	25	12.5	3.0	3.2	14	0.37
L1002.06-250	250	203	12	6.5	M4	3.30	7.0	25	12	5.0	25	12.5	3.0	3.2	17	0.46
L1002.06-300	300	241	12	6.5	M4	3.30	7.0	25	12	5.0	25	12.5	3.0	3.2	21	0.55
L1002.06-350	350	282	12	6.5	M4	3.30	7.0	25	12	5.0	25	12.5	3.0	3.2	24	0.64
L1002.06-400	400	324	12	6.5	M4	3.30	7.0	25	12	5.0	25	12.5	3.0	3.2	28	0.74

Linear Cross Roller Rail Sets

Accuracy overview



Our cross roller rail sets are of the highest quality.

- Close tolerance ±5µ
- Speeds up to 50 m/min
- Temperature range -40°C to +80°C up to +250°C if applying a temperature factor
- Through hardened to 60 ±2 HRC
- Acceleration up to 50 m/sec^2
- Typical 0.003 coefficient of friction dependent on mounting surface accuracy

Expected life calculation:

$$\text{Life (Km) } L = (C/P)^{3.3} \times 1.15 \times 10^5 \text{m}$$

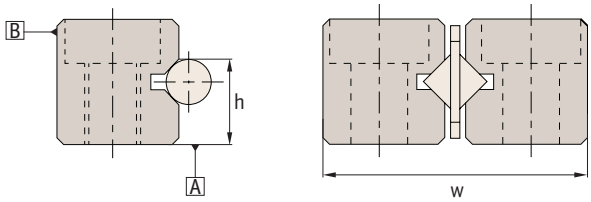
C = effective dynamic load (N)
P = equivalent load (N)

Working life calculation:

$$L_h \text{ (hours)} = \frac{L \times 10^6}{2 \times L_s \times n \times 60}$$

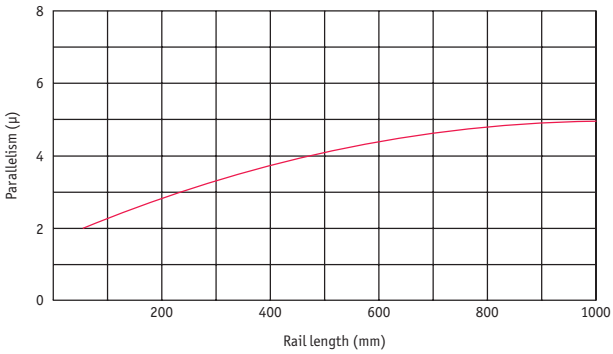
L = Life (Km), see above
L_s = Stroke Length (mm)
n = Number of operations/min

Accuracy Specification:



Accuracy level	
Parallelism of rolling plane A&B	graph below
Allowable height tolerance (h)	±0,02
Paired mutual height tolerance (h)	0,01
Allowable width tolerance (w)	+0, -0,02

Parallelism



Lubrication:

The units are lubricated with lithium soap lubricant. Relubricate if required.

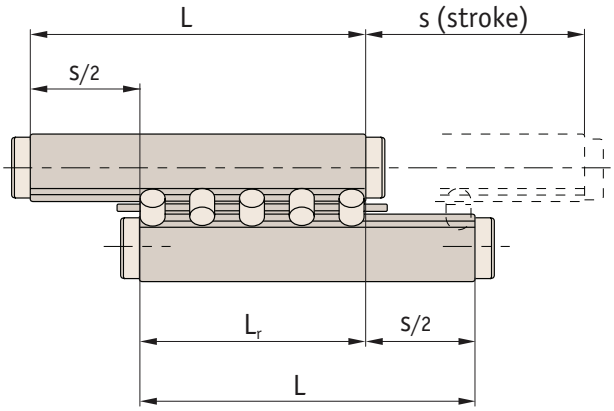
Straightness		
Length (mm)		Straightness (µ)
Above	Below	
0	50	2,0
50	100	2,0
100	160	3,0
160	310	3,0
310	510	4,0
510	600	4,0

(Ra 0,2 µm)

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Load capacity depends on:

- Rail size
- Number of rollers in cage
- Load rating = number of rollers x load rating/roller
- Number of rollers (N_r) = cage length (L_c) / pitch p
- Cage length affects the stroke and travel of the system



Load calculations

Calculations of retainer length and number of rollers:

$$L_r = L - \frac{S}{2}$$

L_r = distance between two rollers in ends of retainer (mm)

L = rail length (mm)

S = stroke length (mm)

Worked example:

Assume L1000.09-400 with a stroke of 250mm:

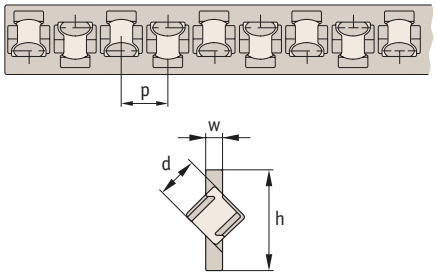
Cage length = 400 - (250/2) = 275mm

Roller Ø = 9mm with a pitch (see table) of 18mm:

Number of rollers = 275/18 = 15

Load rating of system = load/roller* x no. of rollers
(a pair of rollers) = 2420N x 15
= 36,300N

*See product table for allowable load per roller.
Allowable load rating with a 3x safety factor compared to static load.



Plastic cage



L1008.###-PR-xxx
Plastic cage with steel rollers, for horizontal and vertical use.

Steel cage

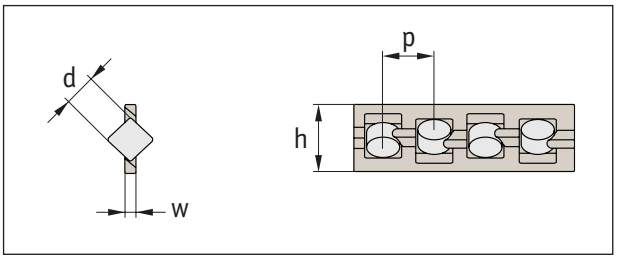


L1008.###-AA-xxx
Steel cage with steel rollers, for horizontal use only.

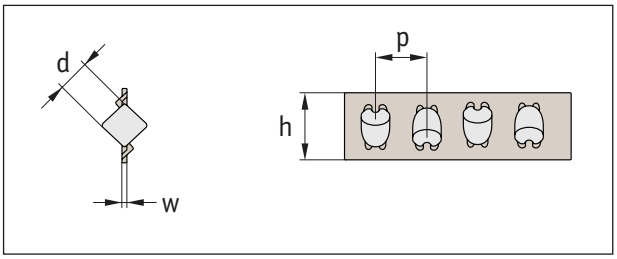
Order no.	d	p	h	w	Cage material
L1008.020-PR-xxx	2	3,9	5	0,75	Plastic - black
L1008.030-PR-xxx	3	5,0	7	1,00	Plastic - black
L1008.060-PR-xxx	6	8,5	14	2,00	Plastic - black
L1008.090-PR-xxx	9	14,0	20	3,00	Plastic - black
L1008.020-AA-xxx	2	4	5,5	0,80	Steel
L1008.030-AA-xxx	3	5	7,5	0,50	Steel
L1008.060-AA-xxx	6	12	14	0,80	Steel
L1008.090-AA-xxx	9	18	19,5	1,00	Steel
L1008.120-AA-xxx	12	22	25	1,20	Steel



Plastic cage (type PR)



Steel cage (type AA)

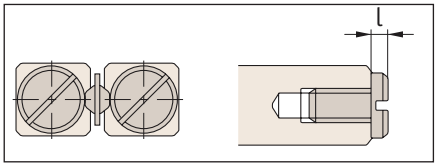


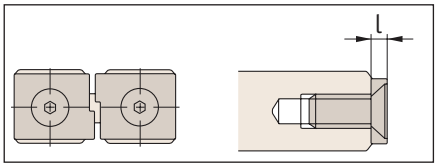
Roller load ratings (per roller)			
Rail size	Max. dynamic load C_o N	Max. static load C N	Allowable* load N
1	125	144	48
2	290	290	95
3	630	760	250
4	1230	1170	390
6	2570	2630	870
9	7190	7270	2420
12	14700	13100	4300

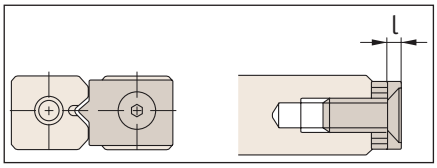
The more rollers the greater the load capacity

* Allowable load is 1/3 of max. static load/roller, to allow a safety factor in calculations of 3.

End pieces







Type GA

- For horizontal applications, most used.

Type GB

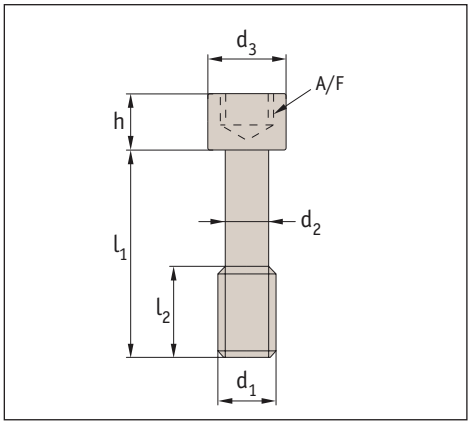
- For horizontal or vertical applications.

Type GC

- For horizontal or vertical applications.
- Mount on longer rail only.

Type			
Rail size	GA l	GB l	GC l
1	1,5	-	-
2	2	3	-
3	2	2	3
6	3	3	5
9	3	4	6
12	3	5	8

End screws

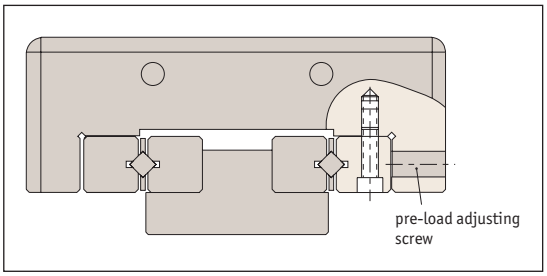


Rail	h	d_1	d_2	d_3	l_1	l_2	A/F
3	3	M3	2,3	5	12	5	2,5
6	5	M5	3,9	8	20	8	4
9	6	M6	4,6	8,5	30	12	5
12	8	M8	6,25	11,3	40	17	6

ov-crossed-slides-roller-elements-lnh-Updated-14-03-2023

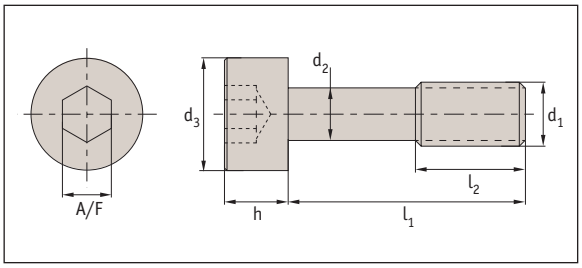
Recommended torque for pre-load screws

Rail size	Set screw size	Torque to Nm
1	M2	0,008
2	M3	0,012
3	M4	0,05
4	M4	0,08
6	M5	0,2
9	M6	0,4



Fixing screws

Rail size	d_1	d_2	d_3	h	l_1	l_2	A/F	Torque to Nm
3	M3	2,3	5	3	12	5	2,5	1,0
4	M4	3,1	5,8	4	15	7	3	2,4
6	M5	3,9	8	5	20	8	4	4,8
9	M6	4,6	8,5	6	30	12	5	8,1
11	M8	6,25	11,3	8	40	17	6	19,7



Important notes:

Inaccurate assembly

Inaccurate assembly or machining of surfaces will lead to low accuracy and cage creep which affects system reliability and life.

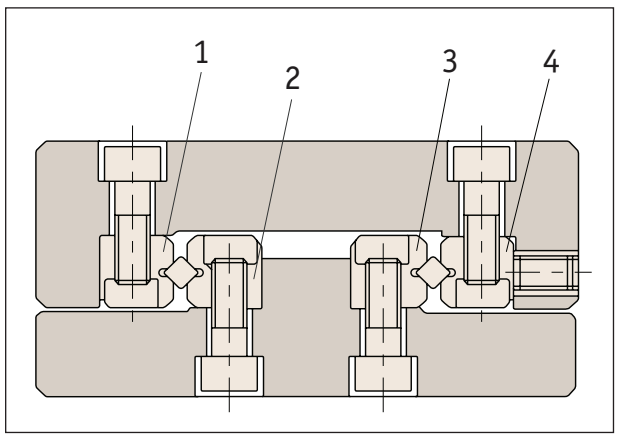
Cage creep

High speeds or off-set loads, high levels of vibration can cause cage creep.

End screws

These function to prevent the cage falling out. They are not designed as end stops. If this is required it should be designed into your system.

Ensure structure is rigid and machined accurately.



- Assemble rails 2 and 3
- Check for run-out and parallelism
- Install rails 3 and 4 without tightening screws
- Install cages and end pieces
- Slide the moving part to end of the travel to allow the centering of the cage
- Tighten the preload screws to eliminate clearance
- Tighten the retaining screws
- Ensure the extended end stops are hit before the cage hits the screws or end piece

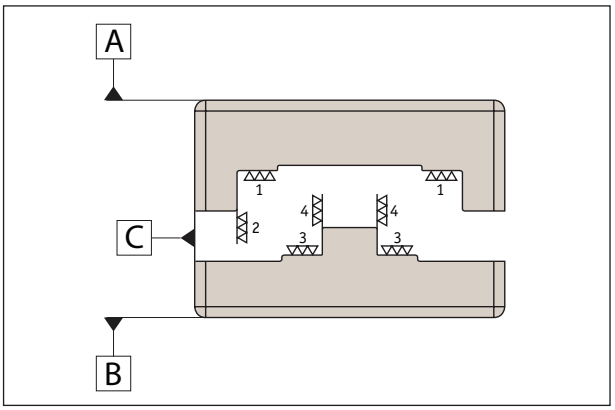
Linear Motion Slide Rail Set

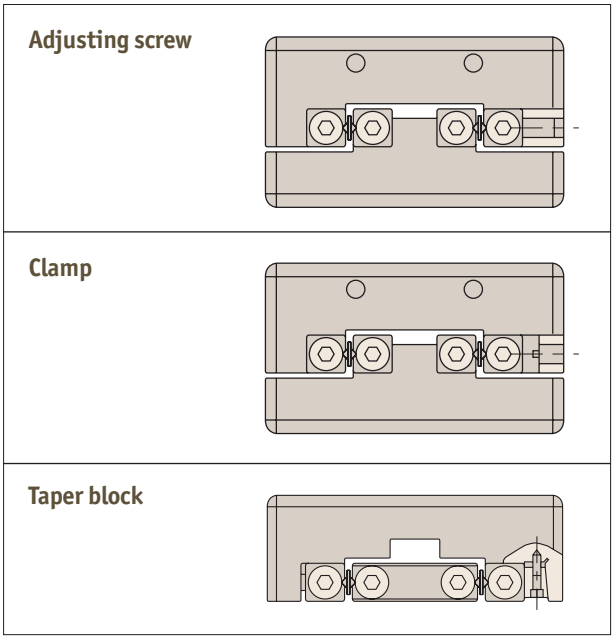
Assembly

Installation surfaces

All burrs, dents, dust, etc. on the table and base need to be reduced.

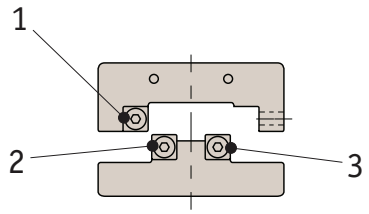
Pre-load adjustment; too much preload can cause damage & reduced life. We recommend to used no or a small amount of pre-load.



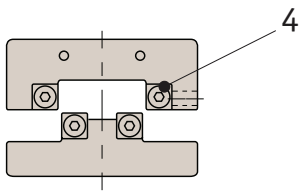


Assembly process

1. Apply a low viscosity oil on contact surface, fix rail (1,2 & 3) lightly.



2. Temporarily fix the rail in adjusted side (4)

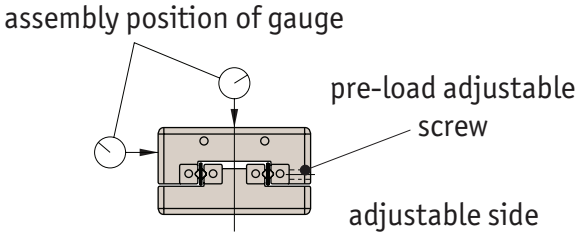


3. Disassemble end screw from one end, and carefully insert roller retainer to nearly the centre of the rail.

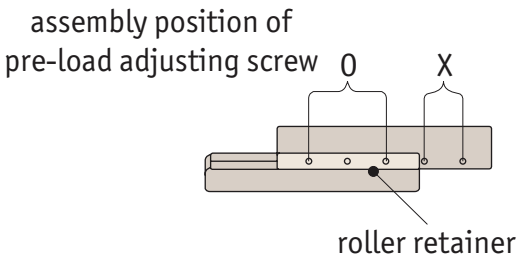
Replace the end screw.

Slowly move table back and forth to the rail end, and adjust roller retainer position to rail centre.

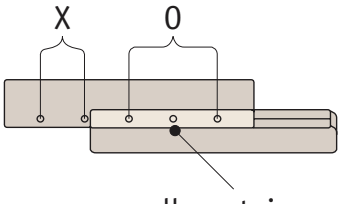
4. Fix gauges both in centre and the side of the table.



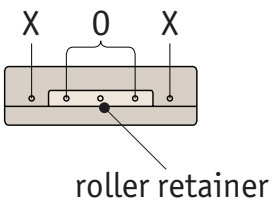
5. Move the table to one end and adjust pre-load screw slightly.



6. Move table to the other end and repeat.



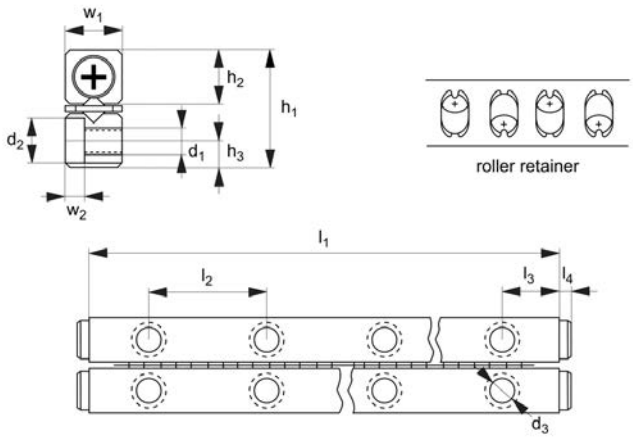
7. Return the table back to centre and lock the pre-load adjusting screw slightly. Adjust the clearance of table to zero. For final adjustment of preload, set correct torque value with a torque wrench and prepare to lock the rail fixing screw.



7. Finally securely lock the rail.

O : Loading on to pre-load adjusting screw

X : Loading off to pre-load adjusting screw





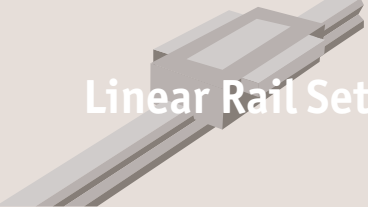
L1001

Material
Stainless steel rail and rollers (AISI 440C). Hardness 60±2 HRC. Stainless steel roller retainer (AISI 304).

Technical Notes
Supplied in sets of 4 rails (with 2 roller cages and 8 end screws as standard). See table for number of rollers in each cage.

Crossed roller cages can be cut to length to alter stroke - but this affects load rating, please see technical pages.

Order No.	l_1	Stroke max.	w_1	h_1 +0|-0.3	h_2	h_3	l_2	l_3	l_4	No. of rollers	Dyn. load C kN max.	Static load C_0 kN max.	d_1	d_2	d_3	w_2	Weight kg
L1001.01-020	20	13	4	8,5	3,9	1,8	10	5	1,3	5	0,63	0,72	1,65	3,0	M 2	1,4	0,01
L1001.01-030	30	21	4	8,5	3,9	1,8	10	5	1,3	7	0,88	1,01	1,65	3,0	M 2	1,4	0,01
L1001.01-040	40	29	4	8,5	3,9	1,8	10	5	1,3	9	1,13	1,30	1,65	3,0	M 2	1,4	0,02
L1001.01-050	50	37	4	8,5	3,9	1,8	10	5	1,3	11	1,38	1,58	1,65	3,0	M 2	1,4	0,02
L1001.01-060	60	45	4	8,5	3,9	1,8	10	5	1,3	13	1,63	1,88	1,65	3,0	M 2	1,4	0,03
L1001.01-070	70	53	4	8,5	3,9	1,8	10	5	1,3	15	1,88	2,16	1,65	3,0	M 2	1,4	0,03
L1001.01-080	80	61	4	8,5	3,9	1,8	10	5	1,3	17	12,1	2,45	1,65	3,0	M 2	1,4	0,03
L1001.02-030	30	24	6	12	5,5	2,5	15	7,5	1,5	5	1,47	1,46	2,55	4,4	M 3	2,0	0,03
L1001.02-045	45	30	6	12	5,5	2,5	15	7,5	1,5	8	2,34	2,34	2,55	4,4	M 3	2,0	0,04
L1001.02-060	60	44	6	12	5,5	2,5	15	7,5	1,5	10	2,93	2,92	2,55	4,4	M 3	2,0	0,06
L1001.02-075	75	58	6	12	5,5	2,5	15	7,5	1,5	12	3,52	3,50	2,55	4,4	M 3	2,0	0,07
L1001.02-090	90	72	6	12	5,5	2,5	15	7,5	1,5	14	4,10	4,09	2,55	4,4	M 3	2,0	0,08
L1001.02-105	105	86	6	12	5,5	2,5	15	7,5	1,5	16	2,50	4,34	2,55	4,0	M 3	2,0	0,10
L1001.02-120	120	100	6	12	5,5	2,5	15	7,5	1,5	18	5,27	5,26	2,55	4,4	M 3	2,0	0,11
L1001.02-135	135	106	6	12	5,5	2,5	15	7,5	1,5	21	6,15	6,13	2,55	4,4	M 3	2,0	0,13
L1001.02-150	150	120	6	12	5,5	2,5	15	7,5	1,5	23	6,74	6,72	2,55	4,4	M 3	2,0	0,14
L1001.02-165	165	134	6	12	5,5	2,5	15	7,5	1,5	25	7,33	7,30	2,55	4,4	M 3	2,0	0,15
L1001.02-180	180	148	6	12	5,5	2,5	15	7,5	1,5	27	7,91	7,88	2,55	4,4	M 3	2,0	0,17
L1001.03-050	50	34	8	18	8,3	3,5	25	12,5	2,0	7	4,47	5,33	3,3	6,0	M 4	3,1	0.10
L1001.03-075	75	54	8	18	8,3	3,5	25	12,5	2,0	10	6,38	7,61	3,3	6,0	M 4	3,1	0,15
L1001.03-100	100	74	8	18	8,3	3,5	25	12,5	2,0	13	8,29	9,89	3,3	6,0	M 4	3,1	0,20
L1001.03-125	125	104	8	18	8,3	3,5	25	12,5	2,0	15	9,57	11,4	3,3	6,0	M 4	3,1	0,24
L1001.03-150	150	124	8	18	8,3	3,5	25	12,5	2,0	18	11,5	13,7	3,3	6,0	M 4	3,1	0,29
L1001.03-175	175	144	8	18	8,3	3,5	25	12,5	2,0	21	13,4	16,0	3,3	6,0	M 4	3,1	0,34
L1001.03-200	200	164	8	18	8,3	3,5	25	12,5	2,0	24	15,3	18,3	3,3	6,0	M 4	3,1	0,38
L1001.03-225	225	184	8	18	8,3	3,5	25	12,5	2,0	27	17,2	20,6	3,3	6,0	M 4	3,1	0,43
L1001.03-250	250	204	8	18	8,3	3,5	25	12,5	2,0	30	19,1	22,8	3,3	6,0	M 4	3,1	0,48
L1001.03-275	275	224	8	18	8,3	3,5	25	12,5	2,0	33	21,1	25,1	3,3	6,0	M 4	3,1	0,53
L1001.03-300	300	244	8	18	8,3	3,5	25	12,5	2,0	36	23,0	27,4	3,3	6,0	M 4	3,1	0,57
L1001.04-080	80	54	11	22	10	4,5	40	20	2,0	8	9,84	9,36	4,3	7,5	M 5	4,1	0,26
L1001.04-120	120	92	11	22	10	4,5	40	20	2,0	11	13,5	12,9	4,3	7,5	M 5	4,1	0,39
L1001.04-160	160	130	11	22	10	4,5	40	20	2,0	14	17,2	16,4	4,3	7,5	M 5	4,1	0,51
L1001.04-200	200	154	11	22	10	4,5	40	20	2,0	18	22,1	21,1	4,3	7,5	M 5	4,1	0,64

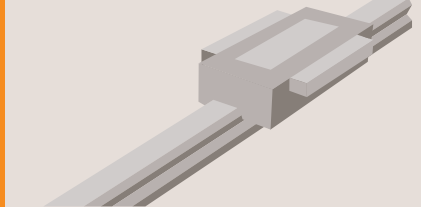


Stainless Crossed Roller Rail Sets

corrosion resistant



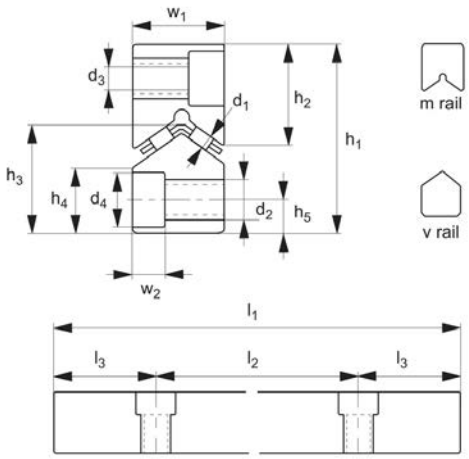
Order No.	l_1	Stroke max.	w_1	h_1 +0|-0.3	h_2	h_3	l_2	l_3	l_4	No. of rollers	Dyn. load C kN max.	Static load C_0 kN max.	d_1	d_2	d_3	w_2	Weight kg
L1001.04-240	240	192	11	22	10	4,5	40	20	2,0	21	25,8	24,6	4,3	7,5	M 5	4,1	0,76
L1001.04-280	280	230	11	22	10	4,5	40	20	2,0	24	29,5	28,1	4,3	7,5	M 5	4,1	0,89
L1001.04-320	320	254	11	22	10	4,5	40	20	2,0	28	34,4	32,8	4,3	7,5	M 5	4,1	1,01
L1001.04-360	360	292	11	22	10	4,5	40	20	2,0	31	38,1	36,3	4,3	7,5	M 5	4,1	1,14
L1001.04-400	400	330	11	22	10	4,5	40	20	2,0	34	41,8	39,8	4,3	7,5	M 5	4,1	1,27
L1001.04-440	440	354	11	22	10	4,5	40	20	2,0	38	46,7	44,5	4,3	7,5	M 5	4,1	1,39
L1001.04-480	480	392	11	22	10	4,5	40	20	2,0	41	50,4	48,0	4,3	7,5	M 5	4,1	1,51
L1001.06-100	100	80	15	31	14	6	50	25	2,0	7	18,0	18,4	5,3	9,5	M 6	5,2	9,62
L1001.06-150	150	108	15	31	14	6	50	25	2,0	11	28,3	29,0	5,3	9,5	M 6	5,2	0,93
L1001.06-200	200	154	15	31	14	6	50	25	2,0	14	36,0	36,9	5,3	9,5	M 6	5,2	1,24
L1001.06-250	250	200	15	31	14	6	50	25	2,0	17	43,7	44,8	5,3	9,5	M 6	5,2	1,55
L1001.06-300	300	246	15	31	14	6	50	25	2,0	20	51,4	52,6	5,3	9,5	M 6	5,2	1,85
L1001.06-350	350	274	15	31	14	6	50	25	2,0	24	61,7	63,2	5,3	9,5	M 6	5,2	2,16
L1001.06-400	400	320	15	31	14	6	50	25	2,0	27	69,4	71,1	5,3	9,5	M 6	5,2	2,47
L1001.06-450	450	366	15	31	14	6	50	25	2,0	30	77,1	79,0	5,3	9,5	M 6	5,2	2,77
L1001.06-500	500	412	15	31	14	6	50	25	2,0	33	84,8	86,9	5,3	9,5	M 6	5,2	3,08
L1001.06-550	550	458	15	31	14	6	50	25	2,0	36	92,5	94,8	5,3	9,5	M 6	5,2	3,38
L1001.06-600	600	486	15	31	14	6	50	25	2,0	40	103,0	105,0	5,3	9,5	M 6	5,2	3,69



Needle Roller Rail Sets - M rail
high load capacity



L1004.M



Material
Hardened steel alloy (DIN 1.2842), hardness 60±2 HRC.

Technical Notes
Normally supplied in a set of 4 (two M and two V) with needle rollers in aluminium cage - **(cage length required needs to be specified)**, with GM end stops.
M and V type rails do not need to be of same length.

Tips
For specific length needle roller cages (aluminium HW type normally used) and end stops please see technical pages.

Needle roller rails have a higher load rating than cross roller rails (L1000). The length of the cage affects both the stroke of the rail and it's load carrying capacity see technical pages.

Order No.	Rail type	h_1 +0|-0.3	w_1	l_1	l_2	l_3	h_2	h_3	h_4	h_5	w_2	d_1	d_2	d_3	d_4	Weight kg
L1004.M22-0200	M	44	22	200	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	0.69
L1004.M22-0300	M	44	22	300	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	1.02
L1004.M22-0400	M	44	22	400	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	1.36
L1004.M22-0500	M	44	22	500	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	1.69
L1004.M22-0600	M	44	22	600	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	2.03
L1004.M22-0700	M	44	22	700	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	2.36
L1004.M22-0800	M	44	22	800	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	2.70
L1004.M22-0900	M	44	22	900	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	3.03
L1004.M22-1000	M	44	22	1000	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	3.37
L1004.M22-1100	M	44	22	1100	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	3.70
L1004.M22-1200	M	44	22	1200	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	4.04
L1004.M25-0200	M	52	25	200	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	0.90
L1004.M25-0300	M	52	25	300	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	1.37
L1004.M25-0400	M	52	25	400	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	1.83
L1004.M25-0500	M	52	25	500	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	2.30
L1004.M25-0600	M	52	25	600	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	2.76
L1004.M25-0700	M	52	25	700	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	3.23
L1004.M25-0800	M	52	25	800	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	3.69
L1004.M25-0900	M	52	25	900	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	4.16
L1004.M25-1000	M	52	25	1000	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	4.62
L1004.M25-1100	M	52	25	1100	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	5.09
L1004.M25-1200	M	52	25	1200	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	5.55
L1004.M30-0300	M	62	30	300	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	1.91
L1004.M30-0400	M	62	30	400	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	2.54
L1004.M30-0500	M	62	30	500	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	3.18
L1004.M30-0600	M	62	30	600	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	3.81
L1004.M30-0700	M	62	30	700	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	4.45
L1004.M30-0800	M	62	30	800	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	5.08
L1004.M30-0900	M	62	30	900	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	5.72
L1004.M30-1000	M	62	30	1000	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	6.35

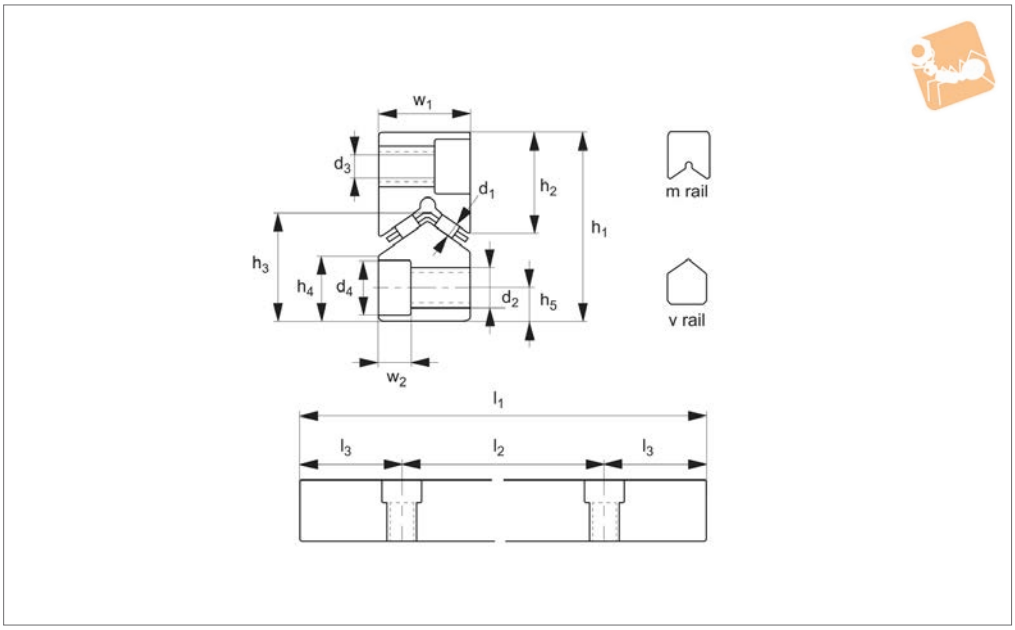
Order No.	Rail type	h_1 +0|-0.3	w_1	l_1	l_2	l_3	h_2	h_3	h_4	h_5	w_2	d_1	d_2	d_3	d_4	Weight kg
L1004.M30-1100	M	62	30	1100	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	6.99
L1004.M30-1200	M	62	30	1200	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	7.62
L1004.M35-0400	M	74	35	400	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	3.66
L1004.M35-0500	M	74	35	500	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	4.58
L1004.M35-0600	M	74	35	600	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	5.49
L1004.M35-0700	M	74	35	700	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	6.41
L1004.M35-0800	M	74	35	800	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	7.32
L1004.M35-0900	M	74	35	900	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	8.24
L1004.M35-1000	M	74	35	1000	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	9.15
L1004.M35-1100	M	74	35	1100	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	10.07
L1004.M35-1200	M	74	35	1200	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	10.98
L1004.M45-0500	M	78	45	500	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	6.17
L1004.M45-0600	M	78	45	600	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	7.41
L1004.M45-0700	M	78	45	700	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	8.65
L1004.M45-0800	M	78	45	800	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	9.89
L1004.M45-0900	M	78	45	900	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	11.13
L1004.M45-1000	M	78	45	1000	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	12.37
L1004.M45-1100	M	78	45	1100	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	13.61
L1004.M45-1200	M	78	45	1200	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	14.85



Needle Roller Rail Sets - V rail
high load capacity



L1004.V



Material
Hardened steel alloy (DIN 1.2842), hardness 60±2 HRC.

Technical Notes
Normally supplied in a set of 4 (two M and two V) with needle rollers in aluminium cage - **(cage length required needs to be specified)**, with GM end stops.
M and V type rails do not need to be of same length.

Tips
For specific length needle roller cages (aluminium HW type normally used) and end stops please see technical pages.

Needle roller rails have a higher load rating than cross roller rails (L1000). The length of the cage affects both the stroke of the rail and it's load carrying capacity see technical pages.

Order No.	Rail type	h_1 +0|-0.3	w_1	l_1	l_2	l_3	h_2	h_3	h_4	h_5	w_2	d_1	d_2	d_3	d_4	Weight kg
L1004.V22-0200	V	44	22	200	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	0.70
L1004.V22-0300	V	44	22	300	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	1.03
L1004.V22-0400	V	44	22	400	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	1.37
L1004.V22-0500	V	44	22	500	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	1.70
L1004.V22-0600	V	44	22	600	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	2.04
L1004.V22-0700	V	44	22	700	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	2.37
L1004.V22-0800	V	44	22	800	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	2.71
L1004.V22-0900	V	44	22	900	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	3.04
L1004.V22-1000	V	44	22	1000	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	3.38
L1004.V22-1100	V	44	22	1100	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	3.71
L1004.V22-1200	V	44	22	1200	100	50	24	24.5	15	9	6.2	2	M 8	6.8	10.5	4.05
L1004.V25-0200	V	52	25	200	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	0.90
L1004.V25-0300	V	52	25	300	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	1.35
L1004.V25-0400	V	52	25	400	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	1.80
L1004.V25-0500	V	52	25	500	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	2.25
L1004.V25-0600	V	52	25	600	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	2.70
L1004.V25-0700	V	52	25	700	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	3.15
L1004.V25-0800	V	52	25	800	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	3.60
L1004.V25-0900	V	52	25	900	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	4.05
L1004.V25-1000	V	52	25	1000	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	4.50
L1004.V25-1100	V	52	25	1100	100	50	28	29	18	10	8.2	2	M10	8.5	13.5	4.95
L1004.V25-1200	V	52	25	1200	100	50	28	28	18	10	8.2	2	M10	8.5	13.5	5.40
L1004.V30-0300	V	62	30	300	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	1.97
L1004.V30-0400	V	62	30	400	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	2.62
L1004.V30-0500	V	62	30	500	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	3.28
L1004.V30-0600	V	62	30	600	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	3.93
L1004.V30-0700	V	62	30	700	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	4.59
L1004.V30-0800	V	62	30	800	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	5.24
L1004.V30-0900	V	62	30	900	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	6.00
L1004.V30-1000	V	62	30	1000	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	6.65

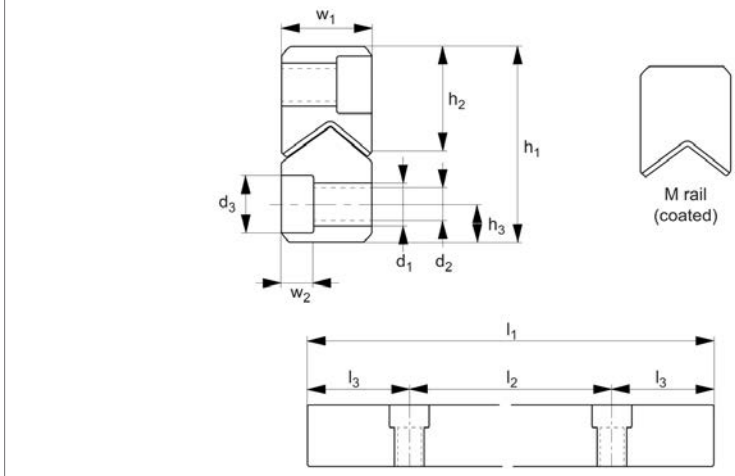
Order No.	Rail type	h_1 +0|-0.3	w_1	l_1	l_2	l_3	h_2	h_3	h_4	h_5	w_2	d_1	d_2	d_3	d_4	Weight kg
L1004.V30-1100	V	62	30	1100	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	7.21
L1004.V30-1200	V	62	30	1200	100	50	34	35	22	12	10.2	2.5	M12	10.5	16.5	7.86
L1004.V35-0400	V	74	35	400	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	3.46
L1004.V35-0500	V	74	35	500	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	4.33
L1004.V35-0600	V	74	35	600	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	5.19
L1004.V35-0700	V	74	35	700	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	6.06
L1004.V35-0800	V	74	35	800	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	6.92
L1004.V35-0900	V	74	35	900	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	7.79
L1004.V35-1000	V	74	35	1000	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	8.65
L1004.V35-1100	V	74	35	1100	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	9.52
L1004.V35-1200	V	74	35	1200	100	50	42.5	40	25	14	12.2	3	M14	12.5	18.5	1.04
L1004.V45-0500	V	78	45	500	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	6.10
L1004.V45-0600	V	78	45	600	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	7.32
L1004.V45-0700	V	78	45	700	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	8.54
L1004.V45-0800	V	78	45	800	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	9.76
L1004.V45-0900	V	78	45	900	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	10.98
L1004.V45-1000	V	78	45	1000	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	12.20
L1004.V45-1100	V	78	45	1100	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	13.42
L1004.V45-1200	V	78	45	1200	100	50	45	45	25	14	12.2	3.5	M14	12.5	18.5	14.64



Anti-friction Coated M Rail
medium load capacity



L1005.M



Material
Hardened steel alloy (DIN 1,2842), coated with anti-friction material (Zedex 100).

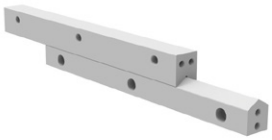
Technical Notes
These are similar in size to the L1000 rails but are primarily used as dirt-proof units, to reduce system vibration and improve rigidity.
Working temperature must be less than 50°C.
Load capacity per unit (cm^2) = 4500N (dynamic), 7500N (static).

For total load capacity take width of bearing surface (in cm) x length (in cm) x load capacity (above).

Tips
Use with V rail L1005.V.

Order No.	Rail type	l_1	h_1 +0|-0.3	w_1	l_2	l_3	d_1	h_2	h_3	w_2	d_2	d_3	Bearing surface width cm	Weight kg
L1005.M03-0050	M	50	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.02
L1005.M03-0075	M	75	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.03
L1005.M03-0100	M	100	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.04
L1005.M03-0125	M	125	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.05
L1005.M03-0150	M	150	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.06
L1005.M03-0175	M	175	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.07
L1005.M03-0200	M	200	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.09
L1005.M03-0225	M	225	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.10
L1005.M03-0250	M	250	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.11
L1005.M03-0275	M	275	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.12
L1005.M03-0300	M	300	18	8	25	12.5	M 4	9	3.5	3.1	3.3	6	0.3	0.13
L1005.M06-0100	M	100	31	15	50	25.0	M 6	16	6.0	5.2	5.3	10	0.6	0.15
L1005.M06-0150	M	150	31	15	50	25.0	M 6	16	6.0	5.2	5.3	10	0.6	0.22
L1005.M06-0200	M	200	31	15	50	25.0	M 6	16	6.0	5.2	5.3	10	0.6	0.29
L1005.M06-0250	M	250	31	15	50	25.0	M 6	16	6.0	5.2	5.3	10	0.6	0.36
L1005.M06-0300	M	300	31	15	50	25.0	M 6	16	6.0	5.2	5.3	10	0.6	0.44
L1005.M06-0350	M	350	31	15	50	25.0	M 6	16	6.0	5.2	5.3	10	0.6	0.51
L1005.M06-0400	M	400	31	15	50	25.0	M 6	16	6.0	5.2	5.3	10	0.6	0.58
L1005.M06-0450	M	450	31	15	50	25.0	M 6	16	6.0	5.2	5.3	10	0.6	0.65
L1005.M06-0500	M	500	31	15	50	25.0	M 6	16	6.0	5.2	5.3	10	0.6	0.73
L1005.M09-0200	M	200	44	22	100	50.0	M 8	24	9.0	6.2	6.8	11	1.2	0.64
L1005.M09-0300	M	300	44	22	100	50.0	M 8	24	9.0	6.2	6.8	11	1.2	0.96
L1005.M09-0400	M	400	44	22	100	50.0	M 8	24	9.0	6.2	6.8	11	1.2	1.27
L1005.M09-0500	M	500	44	22	100	50.0	M 8	24	9.0	6.2	6.8	11	1.2	1.59
L1005.M09-0600	M	600	44	22	100	50.0	M 8	24	9.0	6.2	6.8	11	1.2	1.90
L1005.M09-0700	M	700	44	22	100	50.0	M 8	24	9.0	6.2	6.8	11	1.2	2.22
L1005.M09-0800	M	800	44	22	100	50.0	M 8	24	9.0	6.2	6.8	11	1.2	2.53
L1005.M09-0900	M	900	44	22	100	50.0	M 8	24	9.0	6.2	6.8	11	1.2	2.85
L1005.M09-1000	M	1000	44	22	100	50.0	M 8	24	9.0	6.2	6.8	11	1.2	3.16
L1005.M12-0200	M	200	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	1.13
L1005.M12-0300	M	300	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	1.69

Order No.	Rail type	l_1	h_1 +0|-0.3	w_1	l_2	l_3	d_1	h_2	h_3	w_2	d_2	d_3	Bearing surface width cm	Weight kg
L1005.M12-0400	M	400	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	2.25
L1005.M12-0500	M	500	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	2.81
L1005.M12-0600	M	600	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	3.37
L1005.M12-0700	M	700	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	3.93
L1005.M12-0800	M	800	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	4.49
L1005.M12-0900	M	900	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	5.05
L1005.M12-1000	M	1000	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	5.61
L1005.M12-1100	M	1100	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	6.18
L1005.M12-1200	M	1200	58	28	100	50.0	M10	33	12.0	8.2	8.5	15	1.6	6.74



Load Capacity Example

Product Number : L100J-300

Given: Bearing surface width (table)
Length 300mm (30cm)

Load Rating / cm^2 (Data sheet)

Dynamic Load (N) : 0.6 x 30 x4500 = 81.000N
= 81kN

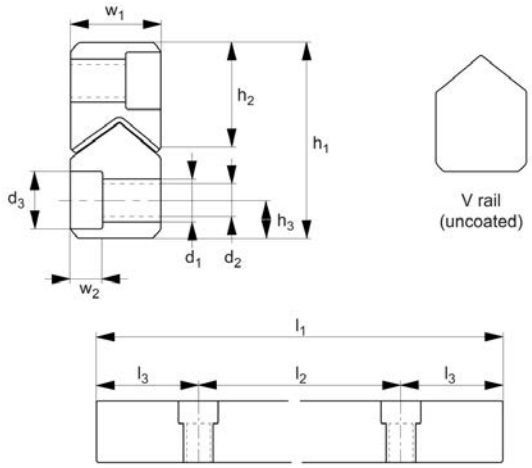
Static Load (kN) : 0.6 x 30 x7500 = 135.000N
= 135kN

Anti-friction Coated Rail Set

V rail - uncoated



L1005.V



Material

Alloy steel rail and roller (DIN 1.2842), through hardened to 60±2 HRC.

Technical Notes

These are similar in size to the L1000 rails but are primarily used as dirt-proof units, to reduce system vibration and improve rigidity.
Working temperature must be less than 50°C.
Load capacity per unit (cm^2) = 4500N (dynamic), 7500N (static).

For total load capacity take width of bearing surface (in cm) x length (in cm) x load capacity (above).

Tips

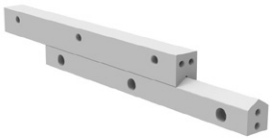
Use with V rail L1005.M.

Order No.	Rail type	l_1	h_1 +0|-0.3	w_1	l_2	l_3	d_1	h_2	h_3	w_2	d_2	d_3	Bearing surface width cm	Weight kg
L1005.V03-0050	V	50	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.03
L1005.V03-0075	V	75	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.04
L1005.V03-0100	V	100	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.05
L1005.V03-0125	V	125	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.06
L1005.V03-0150	V	150	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.08
L1005.V03-0175	V	175	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.09
L1005.V03-0200	V	200	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.10
L1005.V03-0225	V	225	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.12
L1005.V03-0250	V	250	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.13
L1005.V03-0275	V	275	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.14
L1005.V03-0300	V	300	18	8	25	12.5	M 4	10.8	3.5	3.1	3.3	6	0.3	0.16
L1005.V06-0100	V	100	31	15	50	25.0	M 6	19.3	6.0	5.2	5.3	10	0.6	0.18
L1005.V06-0150	V	150	31	15	50	25.0	M 6	19.3	6.0	5.2	5.3	10	0.6	0.26
L1005.V06-0200	V	200	31	15	50	25.0	M 6	19.3	6.0	5.2	5.3	10	0.6	0.35
L1005.V06-0250	V	250	31	15	50	25.0	M 6	19.3	6.0	5.2	5.3	10	0.6	0.44
L1005.V06-0300	V	300	31	15	50	25.0	M 6	19.3	6.0	5.2	5.3	10	0.6	0.53
L1005.V06-0350	V	350	31	15	50	25.0	M 6	19.3	6.0	5.2	5.3	10	0.6	0.61
L1005.V06-0400	V	400	31	15	50	25.0	M 6	19.3	6.0	5.2	5.3	10	0.6	0.70
L1005.V06-0450	V	450	31	15	50	25.0	M 6	19.3	6.0	5.2	5.3	10	0.6	0.79
L1005.V06-0500	V	500	31	15	50	25.0	M 6	19.3	6.0	5.2	5.3	10	0.6	0.88
L1005.V09-0200	V	200	44	22	100	50.0	M 8	28.0	9.0	6.2	6.8	11	1.2	0.64
L1005.V09-0300	V	300	44	22	100	50.0	M 8	28.0	9.0	6.2	6.8	11	1.2	0.96
L1005.V09-0400	V	400	44	22	100	50.0	M 8	28.0	9.0	6.2	6.8	11	1.2	1.27
L1005.V09-0500	V	500	44	22	100	50.0	M 8	28.0	9.0	6.2	6.8	11	1.2	1.59
L1005.V09-0600	V	600	44	22	100	50.0	M 8	28.0	9.0	6.2	6.8	11	1.2	1.90
L1005.V09-0700	V	700	44	22	100	50.0	M 8	28.0	9.0	6.2	6.8	11	1.2	2.22
L1005.V09-0800	V	800	44	22	100	50.0	M 8	28.0	9.0	6.2	6.8	11	1.2	2.53
L1005.V09-0900	V	900	44	22	100	50.0	M 8	28.0	9.0	6.2	6.8	11	1.2	2.85
L1005.V09-1000	V	1000	44	22	100	50.0	M 8	28.0	9.0	6.2	6.8	11	1.2	3.16
L1005.V12-0200	V	200	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	1.13
L1005.V12-0300	V	300	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	1.69

Anti-friction Coated Rail Set

V rail - uncoated

Order No.	Rail type	l_1	h_1 +0|-0.3	w_1	l_2	l_3	d_1	h_2	h_3	w_2	d_2	d_3	Bearing surface width cm	Weight kg
L1005.V12-0400	V	400	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	2.25
L1005.V12-0500	V	500	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	2.81
L1005.V12-0600	V	600	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	3.37
L1005.V12-0700	V	700	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	3.93
L1005.V12-0800	V	800	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	4.49
L1005.V12-0900	V	900	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	5.05
L1005.V12-1000	V	1000	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	5.61
L1005.V12-1100	V	1100	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	6.18
L1005.V12-1200	V	1200	58	28	100	50.0	M10	35.5	12.0	8.2	8.5	15	1.6	6.74



Load Capacity Example

Product Number : L100J-300

Given: Bearing surface width (table)
Length 300mm (30cm)

Load Rating / cm^2 (Data sheet)

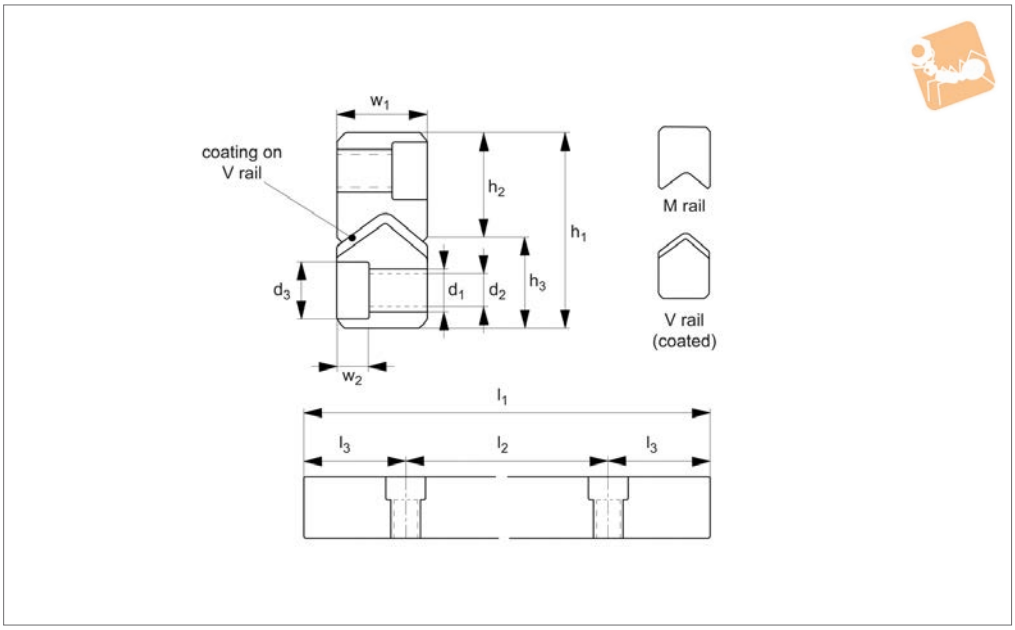
Dynamic Load (N) : 0.6 x 30 x4500 = 81.000N
= 81kN

Static Load (kN) : 0.6 x 30 x7500 = 135.000N
= 135kN

Anti-friction Coated V Rail
high load capacity



L1006.V

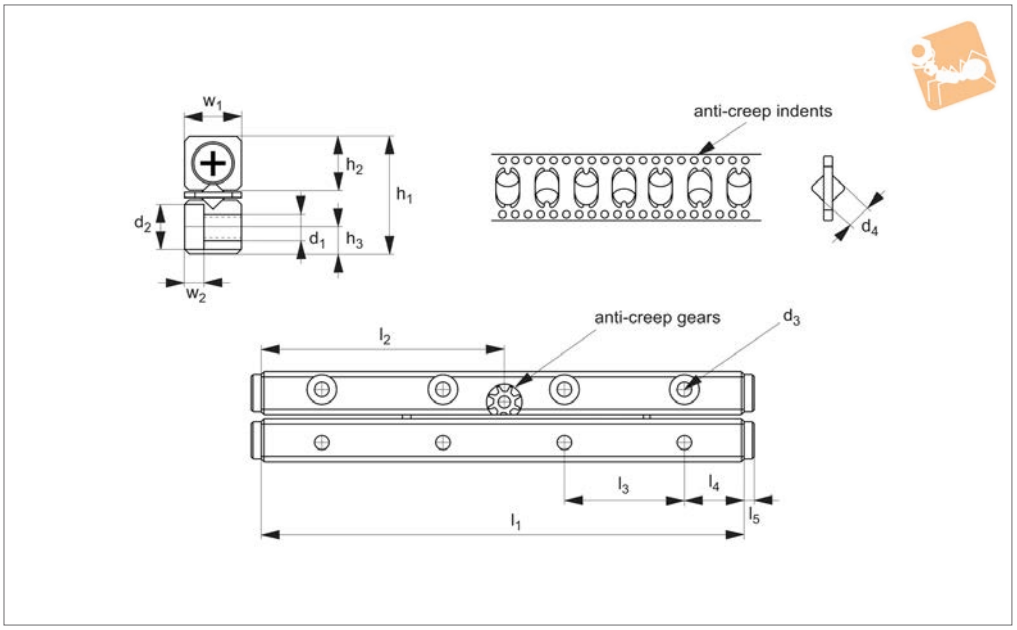


Material
Hardened steel alloy (DIN 1,2842), coated with anti-friction material (Zedex 100).

Technical Notes
These are similar in size to the L1004 rails but are primarily used as dirt-proof units:- to reduce any system vibration and improve rigidity.
Working temperature must be less than 50°C.
Load capacity per unit (cm^2) = 4500N (dynamic), 7500N (static).
For total load capacity take width of bearing surface (in cm) x length (in cm) x load capacity (above).

Tips
Select the anti-friction coated rail and combine with any length of standard L1004.M type rail.
Used where speed is relatively low (20m/minute max.).

Order No.	Rail size	l_1	h_1 +0|-0.3	w_1	l_2	l_3	d_1	h_2	h_3	w_2	d_2	d_3	Bearing surface width cm	Weight kg
L1006.V22-0200	22	200	44	22	100	50	M 8	24	9	6.2	6.8	10.5	1.05	0.70
L1006.V22-0300	22	300	44	22	100	50	M 8	24	9	6.2	6.8	10.5	1.05	1.03
L1006.V22-0400	22	400	44	22	100	50	M 8	24	9	6.2	6.8	10.5	1.05	1.34
L1006.V22-0500	22	500	44	22	100	50	M 8	24	9	6.2	6.8	10.5	1.05	1.70
L1006.V22-0600	22	600	44	22	100	50	M 8	24	9	6.2	6.8	10.5	1.05	2.04
L1006.V25-0200	25	200	52	25	100	50	M10	28	10	8.2	8.5	13.5	1.15	0.90
L1006.V25-0300	25	300	52	25	100	50	M10	28	10	8.2	8.5	13.5	1.15	1.35
L1006.V25-0400	25	400	52	25	100	50	M10	28	10	8.2	8.5	13.5	1.15	1.80
L1006.V25-0500	25	500	52	25	100	50	M10	28	10	8.2	8.5	13.5	1.15	2.25
L1006.V25-0600	25	600	52	25	100	50	M10	28	10	8.2	8.5	13.5	1.15	2.70
L1006.V30-0300	30	300	62	30	100	50	M12	34	12	10.2	10.5	16.5	1.50	1.97
L1006.V30-0400	30	400	62	30	100	50	M12	34	12	10.2	10.5	16.5	1.50	2.62
L1006.V30-0500	30	500	62	30	100	50	M12	34	12	10.2	10.5	16.5	1.50	3.28
L1006.V30-0600	30	600	62	30	100	50	M12	34	12	10.2	10.5	16.5	1.50	3.93
L1006.V35-0400	35	400	74	35	100	50	M14	42.5	14	12.2	12.5	18.5	1.75	3.46
L1006.V35-0500	35	500	74	35	100	50	M14	42.5	14	12.2	12.5	18.5	1.75	4.33
L1006.V35-0600	35	600	74	35	100	50	M14	42.5	14	12.2	12.5	18.5	1.75	5.19
L1006.V45-0600	45	600	78	45	100	50	M14	45	14	12.2	12.5	18.5	2.45	7.32
L1006.V45-0500	45	500	78	45	100	50	M14	45	14	12.2	12.5	18.5	2.45	6.10





L1003

Material
Stainless steel rail and rollers (AISI 440C), Ni plated apart from V groove. Hardness 60±2 HRC. Stainless steel rollers in brass retainer with special anti-creep mechanism (stainless 304).

Technical Notes
Supplied in sets of 4 rails (with 2 roller cages and 8 end screws as standard). See table for number of rollers in each cage and technical pages for load calculations (based on number of rollers).

Tips
These rail sets are designed for high acceleration applications, or systems with significant moment loads.

Order No.	l_1	Stroke max.	h_1	w_1	l_2	l_3	h_2	h_3	w_2	d_1	d_2	d_3	d_4	l_4	l_5	No. of rollers	Weight kg
L1003.02-030	30	22	12	6	15	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	5	0.03
L1003.02-045	45	18	12	6	15	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	9	0.04
L1003.02-060	60	40	12	6	30	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	10	0.06
L1003.02-075	75	52	12	6	30	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	12	0.07
L1003.02-090	90	74	12	6	45	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	13	0.08
L1003.02-105	105	78	12	6	45	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	16	0.10
L1003.02-120	120	100	12	6	60	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	17	0.11
L1003.02-135	135	106	12	6	60	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	20	0.12
L1003.02-150	150	127	12	6	75	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	21	0.14
L1003.02-165	165	140	12	6	75	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	23	0.15
L1003.02-180	180	144	12	6	90	15	55	2.5	2	2.6	4.4	M3	Ø2	7.5	1.5	26	0.16
L1003.03-050	50	34	18	8	25	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	8	0.10
L1003.03-075	75	50	18	8	30	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	12	0.15
L1003.03-100	100	76	18	8	50	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	15	0.19
L1003.03-125	125	100	18	8	55	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	18	0.24
L1003.03-150	150	125	18	8	75	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	21	0.29
L1003.03-175	175	150	18	8	80	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	24	0.34
L1003.03-200	20	166	18	8	100	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	28	0.38
L1003.03-225	225	182	18	8	105	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	32	0.43
L1003.03-250	250	208	18	8	125	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	35	0.48
L1003.03-275	275	216	18	8	130	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	40	0.52
L1003.03-300	300	248	18	8	150	25	8.3	3.5	3.1	3.3	6	M4	Ø3	12.5	2	42	0.57
L1003.04-080	80	62	22	11	40	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	8	0.26
L1003.04-120	120	92	22	11	50	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	12	0.39
L1003.04-160	160	134	22	11	80	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	15	0.51
L1003.04-200	200	164	22	11	90	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	19	0.63
L1003.04-240	240	194	22	11	120	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	23	0.76
L1003.04-280	280	236	22	11	130	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	26	0.88
L1003.04-320	320	252	22	11	160	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	31	1.01
L1003.04-360	360	308	22	11	170	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	33	1.14
L1003.04-400	400	338	22	11	200	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	37	1.26
L1003.04-440	440	355	22	11	210	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	42	1.39

Anti-Creep Crossed Roller Rail Sets

corrosion resistant



Order No.	l_1	Stroke max.	h_1	w_1	l_2	l_3	h_2	h_3	w_2	d_1	d_2	d_3	d_4	l_4	l_5	No. of rollers	Weight kg
L1003.04-480	480	396	22	11	240	40	10	4.5	4.1	4.3	7.5	M5	Ø4	20	2	45	1.51
L1003.06-100	10	86	31	14	50	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	7	0.62
L1003.06-150	150	118	31	14	65	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	11	0.93
L1003.06-200	200	168	31	14	80	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	14	1.24
L1003.06-250	250	212	31	14	115	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	17	1.55
L1003.06-300	300	260	31	14	120	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	20	1.85
L1003.06-350	350	292	31	14	165	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	24	2.17
L1003.06-400	400	340	31	14	160	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	27	2.46
L1003.06-450	450	388	31	14	215	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	30	2.77
L1003.06-500	500	436	31	14	200	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	33	3.08
L1003.06-550	550	484	31	14	265	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	36	3.38
L1003.06-600	600	516	31	14	300	50	14	6	5.2	5.3	9.5	M6	Ø6	25	2	40	3.69

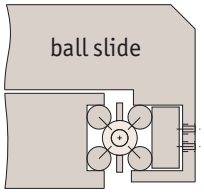
Cage creep can occur due to especially high acceleration and deceleration forces, system vibration, uneven loading or with high moment loads. Our anti-creep rail sets have a special cage which is linked to an anti-creep gear which runs up and down in the mating indents on the roller cage system. It is a sturdy, all metal design, allowing accelerations up to 15G and is integrated into the rail system.

Rail size	Max. dynamic load/roller N	Max. static load/roller N	Max. allowable load/roller N
L1003.02	290	290	95
L1003.03	630	760	250
L1003.04	1230	1170	390
L1003.06	2550	2630	875

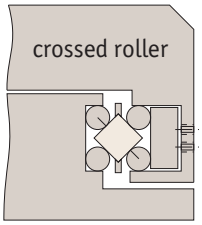
- Max. allowable load is 1/3 of max. static load to give a 3 x safety factor.

There are two different load ratings for these stages.

Ball slides:
These have precision steel balls rolling in the tracks. They are the least expensive, loads up to 28Kg.

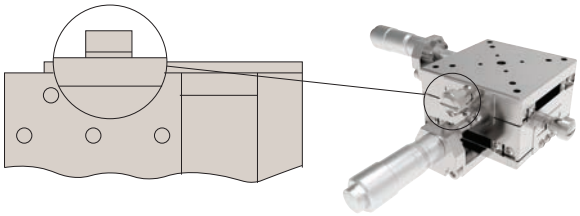


Cross roller slides:
These have the same dimensions but have rollers allowing the slide to carry large loads and absorb greater moment loads up to 54Kg.

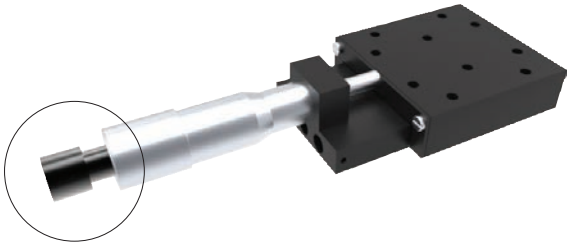


Locking options

Posi-lock:
Allows locking of the carriage in place with a friction locking mechanism.



Locking micrometer:
Locking of the micrometer to fix the micrometer setting.



Front drive micrometer positioning stages



X Stage



XY Stage

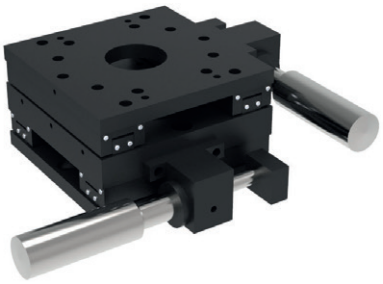


XYZ Stage

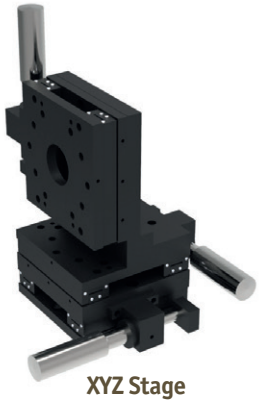
Side drive micrometer positioning stages



X Stage



XY Stage



XYZ Stage

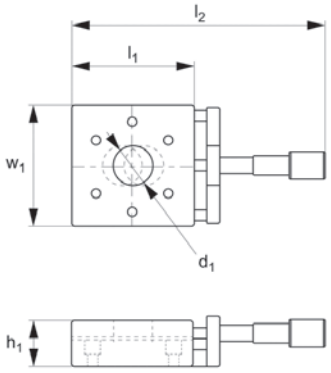
Also available in stainless steel.

Positioning Stages - Front Micrometer

X Stage, main dimensions



L3100



Material

Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements.

Technical Notes

Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.
Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.

Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.
For further fixing and mounting hole dimensions please see part number L3100.FH.

Tips

Other options:
- LM (locking micrometer). Not available for .0101, .0201 and .0301 sizes.
- PL (posi-lock carriage lock)
For XY and XYZ axes see L3106-L3113.

Important Notes

Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

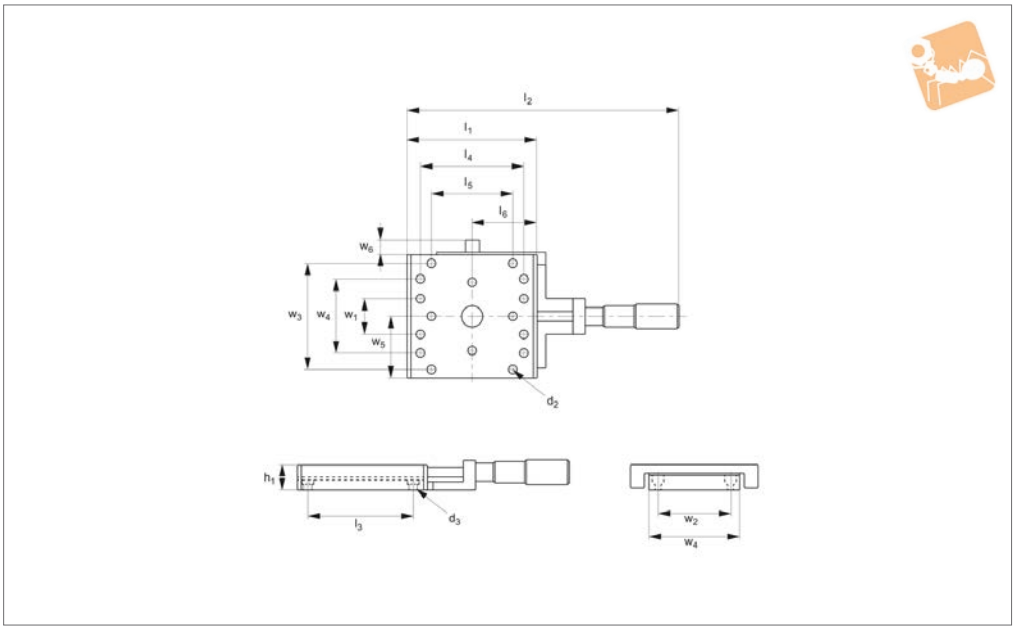
Order No.	Type	Travel	l_1	l_2	h_1	Through hole d_1	w_1	Load X & XY kg max.	Load Z kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.	Weight kg
L3100.0099-B	Ball	6	19,1	57,9	13,5		19,1	2,3	0,7	0,11	0,11	0,11	2,3
L3100.0101-B	Ball	13	31,8	82,6	9,7		31,8	1,8	0,7	0,19	0,18	0,18	1,8
L3100.0201-B	Ball	13	44,5	95,3	9,7		44,5	1,8	0,7	0,28	0,27	0,27	1,8
L3100.0301-B	Ball	13	38,1	88,9	15,7	8	38,1	5,4	0,9	0,50	0,50	0,50	5,4
L3100.0450-B	Ball	13	44,5	111,3	19,1		44,5	9,1	0,9	0,96	0,96	0,96	9,1
L3100.0451-B	Ball	25	44,5	149,4	19,1		44,5	9,1	0,9	0,96	0,96	0,96	9,1
L3100.0453-B	Ball	13	44,5	111,3	19,1	13	44,5	9,1	0,9	0,96	0,96	0,96	9,1
L3100.0750-B	Ball	13	66,5	133,4	25,4		66,5	27,2	0,9	4,94	4,94	4,94	27,2
L3100.0751-B	Ball	25	66,5	171,5	25,4		66,5	27,2	0,9	4,94	4,94	4,94	27,2
L3100.0753-B	Ball	13	66,5	133,4	25,4	25	66,5	27,2	0,9	4,94	4,94	4,94	27,2
L3100.0401-B	Ball	13	50,8	117,3	19,1		44,5	9,1	9,0	0,96	0,96	0,96	9,1
L3100.0501-B	Ball	13	82,6	148,8	19,1		44,5	19,0	9,0	2,02	2,02	2,02	19,0
L3100.0502-B	Ball	25	82,6	188,2	19,1		44,5	19,0	9,0	2,02	2,02	2,02	19,0
L3100.0701-B	Ball	13	101,6	168,1	25,4		66,5	27,2	9,0	4,94	4,94	4,94	27,2
L3100.0702-B	Ball	25	101,6	209,6	25,4		66,5	27,2	9,0	4,94	4,94	4,94	27,2
L3100.1201-B	Ball	25	79,2	184,2	23,1		79,2	13,6	13,6	2,05	1,95	1,95	13,6
L3100.1203-B	Ball	25	79,2	184,2	23,1	25	79,2	13,6	13,6	2,05	1,95	1,95	13,6
L3100.2201-B	Ball	25	104,6	209,6	23,1		104,6	13,6	13,6	3,21	3,04	3,04	13,6
L3100.2202-B	Ball	50	104,6	260,4	23,1		104,6	13,6	13,6	3,21	3,04	3,04	13,6
L3100.2203-B	Ball	25	104,6	209,6	23,1	38	104,6	13,6	13,6	3,21	3,04	3,04	13,6
L3100.2204-B	Ball	50	104,6	260,4	23,1	38	104,6	13,6	13,6	3,21	3,04	3,04	13,6
L3100.3201-B	Ball	25	130,2	235,0	23,1		130,2	13,6	13,6	4,25	4,05	4,05	13,6
L3100.3202-B	Ball	50	130,2	285,8	23,1		130,2	13,6	13,6	4,25	4,05	4,05	13,6
L3100.3203-B	Ball	25	130,2	235,0	23,1	51	130,2	13,6	13,6	4,25	4,05	4,05	13,6
L3100.3204-B	Ball	50	130,2	285,8	23,1	51	130,2	13,6	13,6	4,25	4,05	4,05	13,6

Order No.	Type	Travel	l_1	l_2	h_1	Through hole d_1	w_1	Load X & XY kg max.	Load Z kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.	Weight kg
L3100.0099-R	Roller	6	19,1	57,9	13,5		19,1	18,1	0,7				18,1
L3100.0101-R	Roller	13	31,8	82,6	9,7		31,8	10,4	0,7	1,09	1,04	1,04	10,4
L3100.0201-R	Roller	13	44,5	95,3	9,7		44,5	10,4	0,7	1,64	1,56	1,56	10,4
L3100.0301-R	Roller	13	38,1	88,9	15,7	8	38,1	18,1	0,9	2,88	2,88	2,88	18,1
L3100.0450-R	Roller	13	44,5	111,3	19,1		44,5	18,1	0,9	1,92	1,92	1,92	18,1
L3100.0451-R	Roller	25	44,5	149,4	19,1		44,5	18,1	0,9	1,92	1,92	1,92	18,1
L3100.0453-R	Roller	13	44,5	111,3	19,1	13	44,5	18,1	0,9	1,92	1,92	1,92	18,1
L3100.0750-R	Roller	13	66,5	133,4	25,4		66,5	54,4	0,9	9,88	9,88	9,88	54,4
L3100.0751-R	Roller	25	66,5	171,5	25,4		66,5	54,4	0,9	9,88	9,88	9,88	54,4
L3100.0753-R	Roller	13	66,5	133,4	25,4	25	66,5	54,4	0,9	9,88	9,88	9,88	54,4
L3100.0401-R	Roller	13	50,8	117,3	19,1		44,5	18,1	9,0	1,92	1,92	1,92	18,1
L3100.0501-R	Roller	13	82,6	148,8	19,1		44,5	36,3	9,0	3,84	3,84	3,84	36,3
L3100.0502-R	Roller	25	82,6	188,2	19,1		44,5	36,3	9,0	3,84	3,84	3,84	36,3
L3100.0701-R	Roller	13	101,6	168,1	25,4		66,5	72,5	9,0	13,18	13,18	13,18	72,5
L3100.0702-R	Roller	25	101,6	209,6	25,4		66,5	72,5	9,0	13,18	13,18	13,18	72,5
L3100.1201-R	Roller	25	79,2	184,2	23,1		79,2	38,5	13,6	5,81	5,53	5,53	38,5
L3100.1203-R	Roller	25	79,2	184,2	23,1	25	79,2	38,5	13,6	5,81	5,53	5,53	38,5
L3100.2201-R	Roller	25	104,6	209,6	23,1		104,6	38,5	13,6	9,10	8,60	8,60	38,5
L3100.2202-R	Roller	50	104,6	260,4	23,1		104,6	38,5	13,6	9,10	8,60	8,60	38,5
L3100.2203-R	Roller	25	104,6	209,6	23,1	38	104,6	38,5	13,6	9,10	8,60	8,60	38,5
L3100.2204-R	Roller	50	104,6	260,4	23,1	38	104,6	38,5	13,6	9,10	8,60	8,60	38,5
L3100.3201-R	Roller	25	130,2	235,0	23,1		130,2	38,5	13,6	12,05	11,47	11,47	38,5
L3100.3202-R	Roller	50	130,2	285,8	23,1		130,2	38,5	13,6	12,05	11,47	11,47	38,5
L3100.3203-R	Roller	25	130,2	235,0	23,1	51	130,2	38,5	13,6	12,05	11,47	11,47	38,5
L3100.3204-R	Roller	50	130,2	285,8	23,1	51	130,2	38,5	13,6	12,05	11,47	11,47	38,5

Front Micrometer Stages
further fixing holes detail



L3100.FH

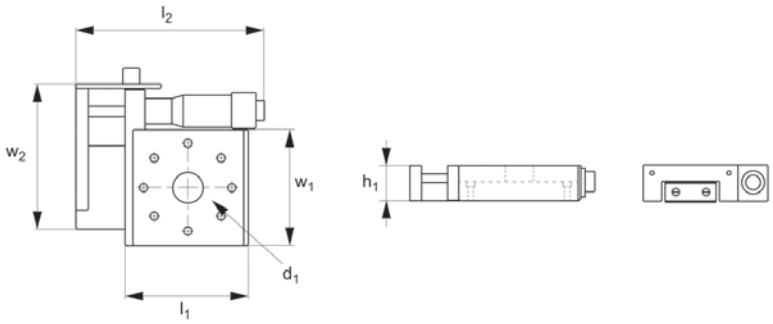


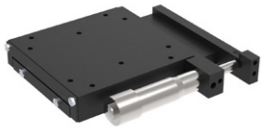
Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements.

Technical Notes
For main dimensions and load ratings please see product page then refer to this information for detailed hole fixing data. These tables simply show additional mounting and fixing hole information. Dimensions l_6 and w_7 relate to optional posilock device.

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	l_1	l_2	l_3	l_4	l_5	l_6	d_2	d_3 for	w_1	w_2	w_3	w_4	w_5	w_6
L3100.0099-X	19.1	57.9	13.5	14.3	7.9	-	M2	M2	13.5	7.9	-	-	14.3	-
L3100.0101-X	31.8	82.6	25.4	25.4	17.5	32.1	M2	M2	25.4	12.7	-	23.9	17.5	5.7
L3100.0201-X	44.5	95.3	38.1	38.1	30.2	38.5	M2	M2	38.1	25.4	-	36.6	30.2	5.7
L3100.0301-X	38.1	88.9	30.1	30.1	0.0	29.5	M3	M3	-	30.1	-	22.2	-	6.1
L3100.0450-X	44.5	111.3	33.3	25.4	-	45.0	M4	M4	25.4	-	-	22.2	-	6.1
L3100.0451-X	44.5	149.4	33.3	25.4	0.0	60.7	M4	M4	25.4	16.7	-	22.2	-	6.1
L3100.0453-X	44.5	111.3	33.3	25.4	-	45.0	M5	M5	25.4	16.7	-	38.1	-	6.1
L3100.0750-X	66.5	133.4	50.8	50.8	35.9	45.5	M5	M5	22.2	-	-	38.1	-	6.1
L3100.0751-X	66.5	171.5	50.8	50.8	35.9	60.7	M5	M5	22.2	-	-	38.1	-	6.1
L3100.0753-X	66.5	133.4	50.8	50.8	?	45.5	M5	M5	22.2	-	-	38.1	-	6.1
L3100.0401-X	50.8	117.3	41.1	25.4	-	45.0	M4	M4	22.2	-	-	22.2	-	6.4
L3100.0501-X	82.6	148.8	69.9	56.0	28.0	45.0	M4	M4	22.2	-	-	22.2	-	6.4
L3100.0502-X	82.6	188.2	69.9	56.0	28.0	60.7	M4	M4	22.2	-	-	22.2	-	6.4
L3100.0701-X	101.6	168.1	85.9	50.8	-	45.0	M5	M5	31.8	-	-	38.1	-	6.4
L3100.0702-X	101.6	209.6	85.9	50.8	-	60.7	M5	M5	31.8	-	-	38.1	-	6.4
L3100.1201-X	79.2	184.2	66.7	54.0	31.5	44.5	M5	M5	66.7	54.0	31.5	-	-	5.9
L3100.1203-X	79.2	184.2	66.7	54.0	31.5	44.5	M5	M5	66.7	54.0	31.5	-	-	5.9
L3100.2201-X	104.6	208.6	92.1	79.4	31.5	57.2	M5	M5	92.1	79.4	31.5	-	-	5.9
L3100.2202-X	104.6	260.4	92.1	79.4	31.5	57.2	M5	M5	92.1	79.4	31.5	-	-	5.9
L3100.2203-X	104.6	209.6	92.1	79.4	31.5	57.2	M5	M5	92.1	79.4	31.5	-	-	5.9
L3100.2204-X	104.6	206.4	92.1	79.4	31.5	57.2	M5	M5	92.1	79.4	31.5	-	-	5.9
L3100.3201-X	130.2	235.0	117.5	104.8	31.5	69.9	M5	M5	117.5	104.8	31.5	-	-	5.9
L3100.3202-X	130.2	285.8	117.5	104.8	31.5	69.9	M5	M5	117.5	104.8	31.5	-	-	5.9
L3100.3203-X	130.2	235.0	117.5	104.8	31.5	69.9	M5	M5	117.5	104.8	31.5	-	-	5.9
L3100.3204-X	130.2	285.8	117.5	104.8	31.5	69.9	M5	M5	117.5	104.8	31.5	-	-	5.9





L3102

Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements

Technical Notes
Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.
Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.
Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.
For further fixing and mounting hole dimensions please see part number L3100.FH.

Tips
Other options:
- LM (locking micrometer). Not available for .0101, .0201 and .0301 sizes.
- PL (posi-lock carriage lock)
For XY and XYZ axes see L3106-L3113.

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

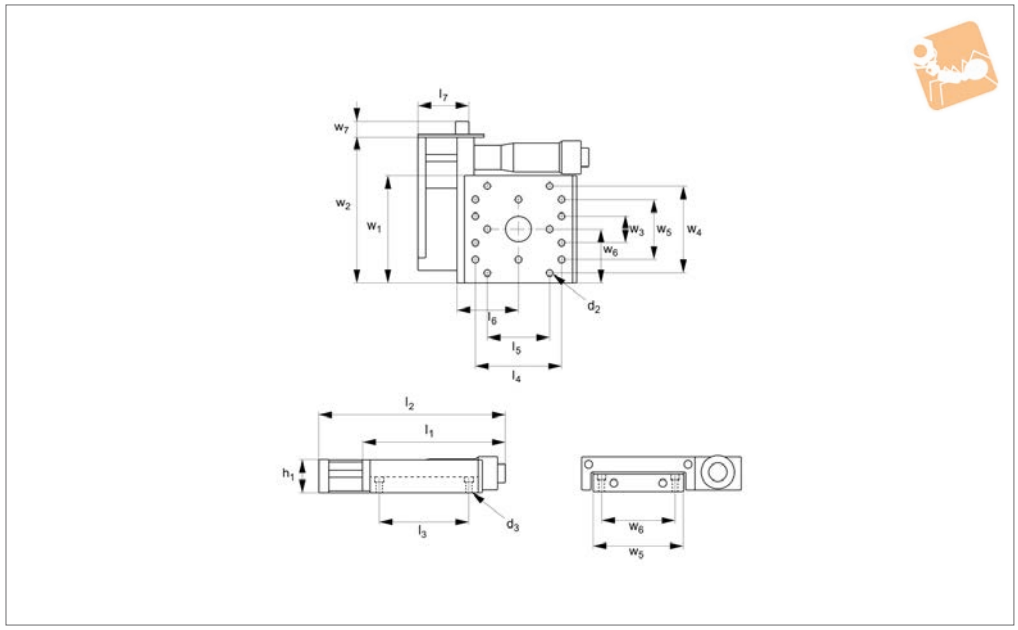
Order No.	Type	Travel	l_1	l_2	h_1	Through hole d_1	w_1	w_2	Load X & XY kg max.	Load Z kg max.	Moment load X N max.	Moment load Y N max.	Moment load Z N max.	Weight kg
L3102.0099-B	Ball	6	19,1	37,6	13,5		19,1	32,7	2,3	0,7	0,11	0,11	0,11	2,3
L3102.0101-B	Ball	13	31,8	54,9	9,7		31,8	44,5	1,8	0,7	0,19	0,18	0,18	1,8
L3102.0201-B	Ball	13	44,5	61,5	9,7		44,5	57,4	1,8	0,7	0,28	0,27	0,27	1,8
L3102.0301-B	Ball	13	38,1	55,4	15,7	8	38,1	51,1	5,4	0,9	0,50	0,50	0,50	5,4
L3102.0450-B	Ball	13	44,5	74,9	19,1		44,5	61,0	9,1	0,9	0,96	0,96	0,96	9,1
L3102.0451-B	Ball	25	44,5	114,5	19,1		44,5	64,8	9,1	0,9	0,96	0,96	0,96	9,1
L3102.0453-B	Ball	13	44,5	74,9	19,1	13	44,5	61,0	9,1	0,9	0,96	0,96	0,96	9,1
L3102.0750-B	Ball	13	66,5	89,4	25,4		66,5	83,1	27,2	0,9	4,94	4,94	4,94	27,2
L3102.0751-B	Ball	25	66,5	113,8	25,4		66,5	87,1	27,2	0,9	4,94	4,94	4,94	27,2
L3102.0753-B	Ball	13	66,5	89,4	25,4	25	66,5	83,1	27,2	0,9	4,94	4,94	4,94	27,2
L3102.0401-B	Ball	13	50,8	74,9	19,1		44,5	61,0	9,1	9,0	0,96	0,96	0,96	9,1
L3102.0501-B	Ball	13	82,6	105,4	19,1		44,5	61,0	19,0	9,0	2,02	2,02	2,02	19,0
L3102.0502-B	Ball	25	82,6	114,5	19,1		44,5	64,8	19,0	9,0	2,02	2,02	2,02	19,0
L3102.0701-B	Ball	13	101,6	124,5	25,4		66,5	84,1	27,2	9,0	4,94	4,94	4,94	27,2
L3102.0702-B	Ball	25	101,6	131,6	25,4		66,5	87,1	27,2	9,0	4,94	4,94	4,94	27,2
L3102.1201-B	Ball	25	79,2	120,7	23,1		79,2	102,6	13,6	13,6	2,05	1,95	1,95	13,6
L3102.1203-B	Ball	25	79,2	120,7	23,1	25	79,2	102,6	13,6	13,6	2,05	1,95	1,95	13,6
L3102.2201-B	Ball	25	104,6	120,7	23,1		104,6	128,0	13,6	13,6	3,21	3,04	3,04	13,6
L3102.2202-B	Ball	50	104,6	171,7	23,1		104,6	128,0	13,6	13,6	3,21	3,04	3,04	13,6
L3102.2203-B	Ball	25	104,6	120,7	23,1	38	104,6	128,0	13,6	13,6	3,21	3,04	3,04	13,6
L3102.2204-B	Ball	50	104,6	171,7	23,1	38	104,6	128,0	13,6	13,6	3,21	3,04	3,04	13,6
L3102.3201-B	Ball	25	130,0	130,0	23,1		130,0	153,4	13,6	13,6	4,25	4,05	4,05	13,6
L3102.3202-B	Ball	50	130,0	171,7	23,1		130,0	153,4	13,6	13,6	4,25	4,05	4,05	13,6
L3102.3203-B	Ball	25	130,0	130,0	23,1	51	130,0	153,4	13,6	13,6	4,25	4,05	4,05	13,6
L3102.3204-B	Ball	50	130,0	171,7	23,1	51	130,0	153,4	13,6	13,6	4,25	4,05	4,05	13,6

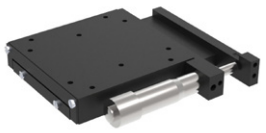
Positioning Stages - Side Micrometer

X stage, main dimensions



Order No.	Type	Travel	l_1	l_2	h_1	Through hole d_1	w_1	w_2	Load X & XY kg max.	Load Z kg max.	Moment load X N max.	Moment load Y N max.	Moment load Z N max.	Weight kg
L3102.0099-R	Roller	6	19,1	37,6	13,5		19,1	32,7	18,1	0,7				18,1
L3102.0101-R	Roller	13	31,8	54,9	9,7		31,8	44,5	10,4	0,7	1,09	1,04	1,04	10,4
L3102.0201-R	Roller	13	44,5	61,5	9,7		44,5	57,4	10,4	0,7	1,64	1,56	1,56	10,4
L3102.0301-R	Roller	13	38,1	55,4	15,7	8	38,1	51,1	18,1	0,9	2,88	2,88	2,88	18,1
L3102.0450-R	Roller	13	44,5	74,9	19,1		44,5	61,0	18,1	0,9	1,92	1,92	1,92	18,1
L3102.0451-R	Roller	25	44,5	114,5	19,1		44,5	64,8	18,1	0,9	1,92	1,92	1,92	18,1
L3102.0453-R	Roller	13	44,5	74,9	19,1	13	44,5	61,0	18,1	0,9	1,92	1,92	1,92	18,1
L3102.0750-R	Roller	13	66,5	89,4	25,4		66,5	83,1	54,4	0,9	9,88	9,88	9,88	54,4
L3102.0751-R	Roller	25	66,5	113,8	25,4		66,5	87,1	54,4	0,9	9,88	9,88	9,88	54,4
L3102.0753-R	Roller	13	66,5	89,4	25,4	25	66,5	83,1	54,4	0,9	9,88	9,88	9,88	54,4
L3102.0401-R	Roller	13	50,8	74,9	19,1		44,5	61,0	18,1	9,0	1,92	1,92	1,92	18,1
L3102.0501-R	Roller	13	82,6	105,4	19,1		44,5	61,0	36,3	9,0	3,84	3,84	3,84	36,3
L3102.0502-R	Roller	25	82,6	114,5	19,1		44,5	64,8	36,3	9,0	3,84	3,84	3,84	36,3
L3102.0701-R	Roller	13	101,6	124,5	25,4		66,5	84,1	72,5	9,0	13,18	13,18	13,18	72,5
L3102.0702-R	Roller	25	101,6	131,6	25,4		66,5	87,1	72,5	9,0	13,18	13,18	13,18	72,5
L3102.1201-R	Roller	25	79,2	120,7	23,1		79,2	102,6	38,5	13,6	5,81	5,53	5,53	38,5
L3102.1203-R	Roller	25	79,2	120,7	23,1	25	79,2	102,6	38,5	13,6	5,81	5,53	5,53	38,5
L3102.2201-R	Roller	25	104,6	120,7	23,1		104,6	128,0	38,5	13,6	9,10	8,60	8,60	38,5
L3102.2202-R	Roller	50	104,6	171,7	23,1		104,6	128,0	38,5	13,6	9,10	8,60	8,60	38,5
L3102.2203-R	Roller	25	104,6	120,7	23,1	38	104,6	128,0	38,5	13,6	9,10	8,60	8,60	38,5
L3102.2204-R	Roller	50	104,6	171,7	23,1	38	104,6	128,0	38,5	13,6	9,10	8,60	8,60	38,5
L3102.3201-R	Roller	25	130,0	130,0	23,1		130,0	153,4	38,5	13,6	12,05	11,47	11,47	38,5
L3102.3202-R	Roller	50	130,0	171,7	23,1		130,0	153,4	38,5	13,6	12,05	11,47	11,47	38,5
L3102.3203-R	Roller	25	130,0	130,0	23,1	51	130,0	153,4	38,5	13,6	12,05	11,47	11,47	38,5
L3102.3204-R	Roller	50	130,0	171,7	23,1	51	130,0	153,4	38,5	13,6	12,05	11,47	11,47	38,5





L3102.FH

Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements

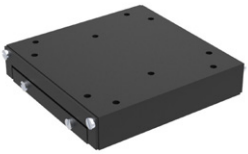
Technical Notes
For main dimensions and load ratings please see product page then refer to this information for detailed hole fixing data. These tables simply show additional mounting and fixing hole information. Dimensions l_7 and w_7 relate to optional posilock device.

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

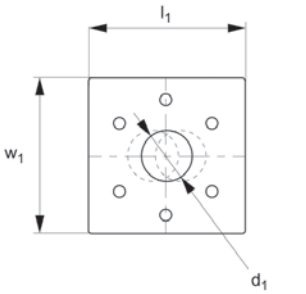
Order No.	l_3	l_4	l_5	l_6	l_7	d_2	d_3 for	w_2	w_3	w_4	w_5	w_6	w_7
L3102.0099-X	13.5	14.3	7.9	-	-	M2	M2	13.5	7.9	-	-	14.3	-
L3102.0101-X	25.4	25.4	17.5	15.5	15.5	M2	M2	25.4	12.7	-	23.9	17.5	5.7
L3102.0201-X	38.1	38.1	30.2	15.5	15.5	M2	M2	38.1	25.4	-	36.6	30.2	5.7
L3102.0301-X	30.1	30.1	0.0	16.0	16.0	M3	M3	0.0	30.1	-	22.2	-	6.1
L3102.0450-X	33.3	25.4	-	25.6	25.6	M4	M4	25.4	-	-	22.2	-	6.1
L3102.0451-X	33.3	25.4	0.0	25.6	25.6	M4	M4	25.4	16.7	-	22.2	-	6.1
L3102.0453-X	33.3	25.4	-	25.6	25.6	M5	M5	25.4	16.7	-	38.1	-	6.1
L3102.0750-X	50.8	?	?	26.1	26.1	M5	M5	50.8	35.9	-	38.1	-	6.1
L3102.0751-X	50.8	?	?	38.2	38.2	M5	M5	50.8	35.9	-	38.1	-	6.1
L3102.0753-X	50.8	?	?	38.2	38.2	M5	M5	50.8	35.9	-	38.1	-	6.1
L3102.0401-X	41.1	25.4	-	25.6	25.6	M4	M4	22.2	-	-	22.2	-	6.4
L3102.0501-X	69.9	56.0	28.0	25.6	25.6	M4	M4	22.2	-	-	22.2	-	6.4
L3102.0502-X	69.9	56.0	28.0	38.2	38.2	M4	M4	22.2	-	-	22.2	-	6.4
L3102.0701-X	85.9	50.8	-	26.1	26.1	M5	M5	31.8	-	-	38.1	-	6.4
L3102.0702-X	85.9	50.8	-	38.2	38.2	M5	M5	31.8	-	-	38.1	-	6.4
L3102.1201-X	66.7	54.0	31.5	44.5	44.5	M5	M5	66.7	54.0	31.5	-	-	5.9
L3102.1203-X	66.7	54.0	31.5	44.5	55.6	M5	M5	66.7	54.0	31.5	-	-	5.9
L3102.2201-X	92.1	79.4	31.5	55.6	69.9	M5	M5	92.1	79.4	31.5	-	-	5.9
L3102.2202-X	92.1	79.4	31.5	55.6	69.9	M5	M5	92.1	79.4	31.5	-	-	5.9
L3102.2203-X	92.1	79.4	31.5	55.6	69.9	M5	M5	92.1	79.4	31.5	-	-	5.9
L3102.2204-X	92.1	79.4	31.5	55.6	69.9	M5	M5	92.1	79.4	31.5	-	-	5.9
L3102.3201-X	117.5	104.8	31.5	69.9	69.9	M5	M5	117.5	104.8	31.5	-	-	5.9
L3102.3202-X	117.5	104.8	31.5	69.9	69.9	M5	M5	117.5	104.8	31.5	-	-	5.9
L3102.3203-X	117.5	104.8	31.5	69.9	69.9	M5	M5	117.5	104.8	31.5	-	-	5.9
L3102.3204-X	117.5	104.8	31.5	69.9	69.9	M5	M5	117.5	104.8	31.5	-	-	5.9

Positioning Stages - Plain

X Stage, main dimensions



L3103



Material

Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements

Technical Notes

Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.

Straight line accuracy 12µ/25mm travel. Repeatability 3µ.
These plain units are supplied with no micrometers, no micrometer brackets and no springs.
For further fixing and mounting hole dimensions please see part number L3100.FH.

Tips

-PL after part shows option with posi-lock feature.

Important Notes

Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

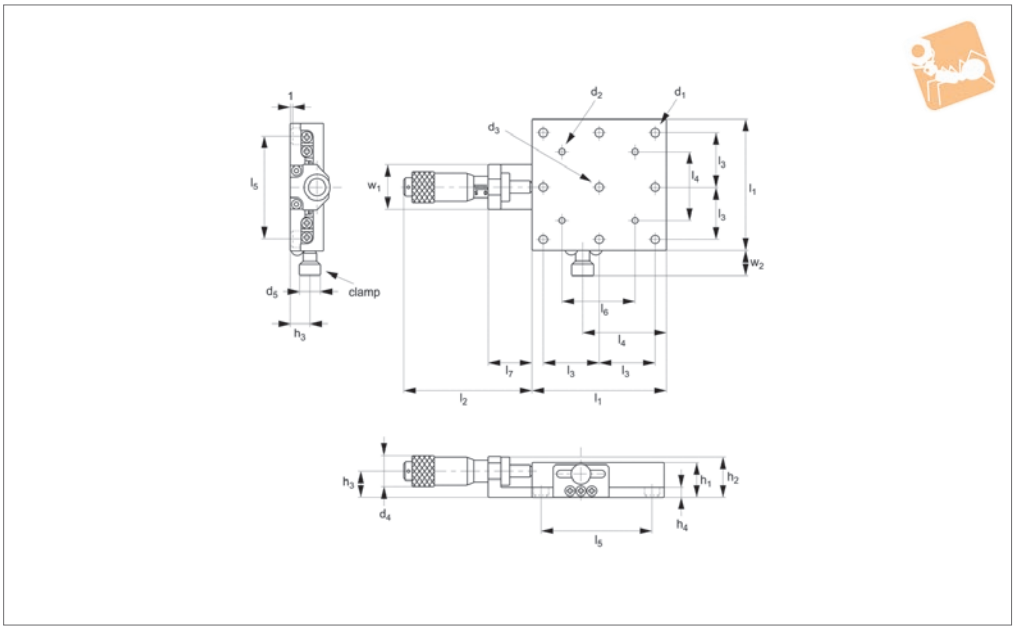
Order No.	Type	Travel	l_1	h_1	Through hole d_1	w_1	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.	Weight kg
L3103.0101-B	Ball	13	31.8	9.7	-	31.8	1.8	-	-	-	1.8
L3103.0201-B	Ball	13	44.5	9.7	-	44.5	1.8	-	-	-	1.8
L3103.0301-B	Ball	13	38.1	15.7	8	38.1	5.4	0.50	0.68	0.71	5.4
L3103.0451-B	Ball	25	44.5	19.1	-	44.5	9.1	0.96	1.13	1.19	9.1
L3103.0452-B	Ball	25	44.5	19.1	13	44.5	9.1	0.96	1.13	1.19	9.1
L3103.0751-B	Ball	25	66.5	25.4	-	66.5	27.2	4.94	5.75	6.04	27.2
L3103.0752-B	Ball	25	66.5	25.4	25	66.5	27.2	4.94	5.75	6.04	27.2
L3103.1202-B	Ball	50	79.2	23.1	-	79.2	13.6	2.89	1.95	2.05	13.6
L3103.1204-B	Ball	50	79.2	23.1	25	79.2	13.6	2.89	1.95	2.05	13.6
L3103.2205-B	Ball	75	104.6	23.1	-	104.6	13.6	4.80	3.04	3.21	13.6
L3103.2206-B	Ball	75	104.6	23.1	38	104.6	13.6	4.80	3.04	3.21	13.6
L3103.3205-B	Ball	100	130.2	23.1	-	130.2	13.6	4.80	3.04	3.21	13.6
L3103.3206-B	Ball	100	130.2	23.1	51	130.2	13.6	7.11	4.05	4.25	13.6
L3103.1202-B-PL	Ball	50	79.2	23.1	-	79.2	13.6	2.89	1.95	2.05	13.6
L3103.1204-B-PL	Ball	50	79.2	23.1	25	79.2	13.6	2.89	1.95	2.05	13.6
L3103.2205-B-PL	Ball	75	104.6	23.1	-	104.6	13.6	4.80	3.04	3.21	13.6
L3103.2206-B-PL	Ball	75	104.6	23.1	38	104.6	13.6	4.80	3.04	3.21	13.6
L3103.3205-B-PL	Ball	100	130.2	23.1	-	130.2	13.6	4.80	3.04	3.21	13.6
L3103.3206-B-PL	Ball	100	130.2	23.1	51	130.2	13.6	7.11	4.05	4.25	13.6
L3103.0101-R	Roller	13	31.8	9.7	-	31.8	10.4	-	-	-	10.4
L3103.0201-R	Roller	13	44.5	9.7	-	44.5	10.4	-	-	-	10.4
L3103.0301-R	Roller	13	38.1	15.7	8	38.1	18.1	1.67	2.26	2.37	18.1
L3103.0451-R	Roller	25	44.5	19.1	-	44.5	18.1	1.92	2.26	2.37	18.1
L3103.0452-R	Roller	25	44.5	19.1	13	44.5	18.1	1.92	2.26	2.37	18.1
L3103.0751-R	Roller	25	66.5	25.4	-	66.5	54.4	9.88	11.50	12.07	54.4
L3103.0752-R	Roller	25	66.5	25.4	25	66.5	54.4	9.88	11.50	12.07	54.4
L3103.1202-R	Roller	50	79.2	23.1	-	79.2	38.5	8.19	5.53	5.81	38.5
L3103.1204-R	Roller	50	79.2	23.1	25	79.2	38.5	8.19	5.53	5.81	38.5

Order No.	Type	Travel	l_1	h_1	Through hole d_1	w_1	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.	Weight kg
L3103.2205-R	Roller	75	104.6	23.1	-	104.6	38.5	13.60	8.60	9.10	38.5
L3103.2206-R	Roller	75	104.6	23.1	38	104.6	38.5	13.60	8.60	9.10	38.5
L3103.3205-R	Roller	100	130.2	23.1	-	130.2	38.5	13.60	8.60	9.10	38.5
L3103.3206-R	Roller	100	130.2	23.1	51	130.2	38.5	20.15	11.47	12.05	38.5
L3103.1202-R-PL	Roller	50	79.2	23.1	-	79.2	38.5	8.19	5.53	5.81	38.5
L3103.1204-R-PL	Roller	50	79.2	23.1	25	79.2	38.5	8.19	5.53	5.81	38.5
L3103.2205-R-PL	Roller	75	104.6	23.1	-	104.6	38.5	13.60	8.60	9.10	38.5
L3103.2206-R-PL	Roller	75	104.6	23.1	38	104.6	38.5	13.60	8.60	9.10	38.5
L3103.3205-R-PL	Roller	100	130.2	23.1	-	130.2	38.5	13.60	8.60	9.10	38.5
L3103.3206-R-PL	Roller	100	130.2	23.1	51	130.2	38.5	20.15	11.47	12.05	38.5

Stainless Micrometer X Stages
front drive



L3120



Material
Stainless steel (440C) with electroless nickel plating.

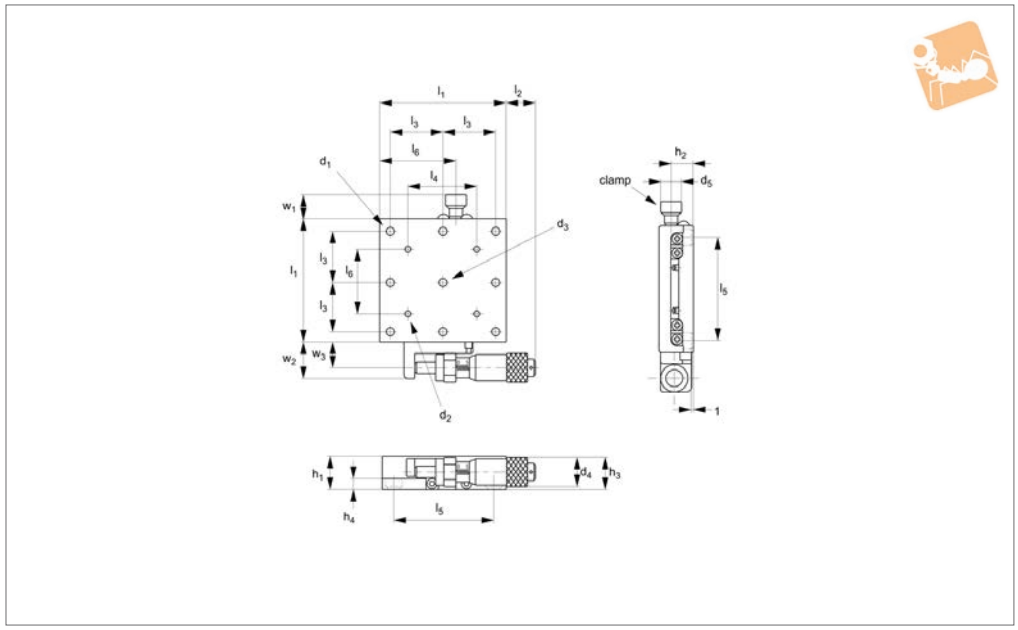
Technical Notes
Straightness accuracy 5µ.

Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Travel	l_1	l_2	l_3	l_4	l_5	l_6	l_7	h_1	h_2	h_3
L3120.040	13	40	58.5	16	26	32	-	20.5	16.0	19.0	10.5
L3120.060	13	60	58.5	25	36	50	32	20.5	16.0	19.0	10.5
L3120.080	25	80	80.0	35	55	70	50	24.5	20.0	24.3	16.8
L3120.100	25	100	80.0	45	67.5	90	70	24.5	20.0	24.3	16.8

Order No.	h_4	d_1	d_2	d_3	d_4	d_5	w_1	w_2	Load kg max.
L3120.040	4.5	M3	-	4	13	10	20	11.5	10.0
L3120.060	5.0	M4	M3	4	13	10	20	11.5	20.0
L3120.080	6.5	M4	M4	4	13	10	24	11.2	27.0
L3120.100	6.5	M4	M4	4	13	10	24	11.2	35.0





L3122

Material
Stainless steel (440C) with electroless nickel plating.

Technical Notes
Straightness accuracy 5µ.

Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.

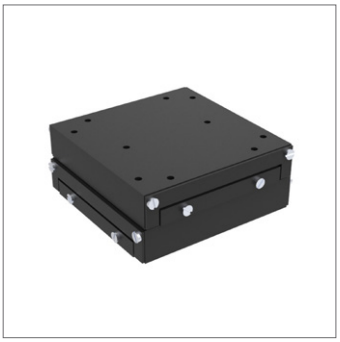
Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Travel	l_1	l_2	l_3	l_4	l_5	l_6	h_1	h_2	h_3	h_4
L3122.040	13	40	23.7	16	-	32	26	16.0	10.5	9	4.5
L3122.060	13	60	13.8	25	32	50	36	16.0	10.5	9	5.0
L3122.080	25	80	32.5	25	50	70	55	20.0	14.5	10.8	6.5
L3122.100	25	100	17.5	25	70	90	67.5	20.0	14.5	10.8	6.5

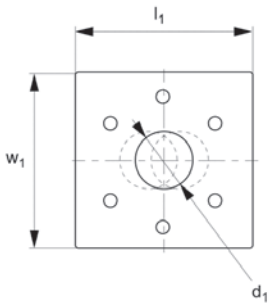
Order No.	d_1	d_2	d_3	d_4	d_5	w_1	w_2	Load kg max.
L3122.040	M3	-	4	13	10	18.5	12	10.0
L3122.060	M4	M3	4	13	10	18.5	12	20.0
L3122.080	M4	M4	4	13	10	23.5	17	27.0
L3122.100	M4	M4	4	13	10	23.5	17	35.0

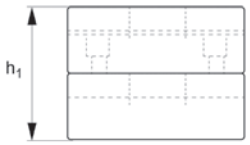
Plain Positioning XY Stages

XY Stage, main dimensions



L3104



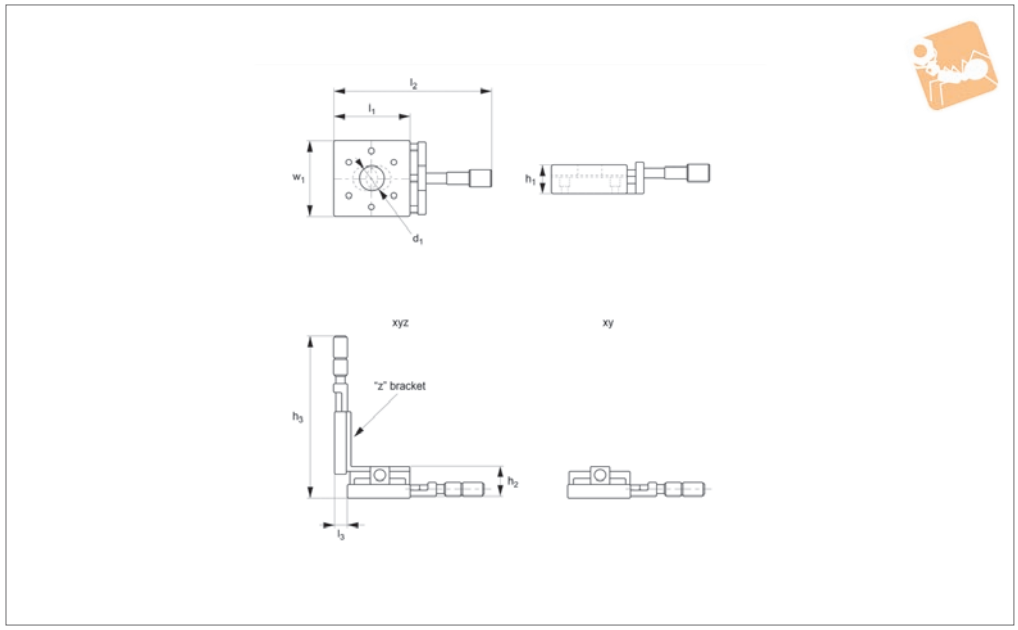


Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements

Technical Notes
Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.
Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.
These plain units are supplied with no micrometers, no micrometer brackets and no springs.
For further fixing and mounting hole dimensions please see part number L3100.FH.

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Type	Travel	h_1	l_1	w_1	Through hole d_1	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.	Weight kg
L3104.0101-B	XY Ball	13	19.0	31.8	31.8	-	1.8	-	-	-	1.8
L3104.0201-B	XY Ball	13	19.0	44.5	44.5	-	1.8	-	-	-	1.8
L3104.0301-B	XY Ball	13	31.8	38.1	38.1	8	5.4	0.50	0.68	0.71	5.4
L3104.0451-B	XY Ball	25	38.1	44.5	44.5	-	9.1	0.96	1.13	1.19	9.1
L3104.0452-B	XY Ball	25	38.1	44.5	44.5	13	9.1	0.96	1.13	1.19	9.1
L3104.0751-B	XY Ball	25	50.8	66.5	66.5	-	27.2	4.94	5.75	6.04	27.2
L3104.0752-B	XY Ball	25	50.8	66.5	66.5	25	27.2	4.94	5.75	6.04	27.2
L3104.1202-B	XY Ball	50	46.2	79.2	79.2	-	13.6	2.89	1.95	2.05	13.6
L3104.1204-B	XY Ball	50	46.2	79.2	79.2	25	13.6	2.89	1.95	2.05	13.6
L3104.2205-B	XY Ball	75	46.2	104.6	104.6	-	13.6	4.80	3.04	3.21	13.6
L3104.2206-B	XY Ball	75	46.2	104.6	104.6	38	13.6	4.80	3.04	3.21	13.6
L3104.3205-B	XY Ball	100	46.2	130.2	130.2	-	13.6	4.80	3.04	3.21	13.6
L3104.3206-B	XY Ball	100	46.2	130.2	130.2	51	13.6	7.11	4.05	4.25	13.6
L3104.0101-R	XY Roller	13	19.0	31.8	31.8	-	10.4	-	-	-	10.4
L3104.0201-R	XY Roller	13	19.0	44.5	44.5	-	10.4	-	-	-	10.4
L3104.0301-R	XY Roller	13	31.8	38.1	38.1	8	18.1	1.67	2.26	2.37	18.1
L3104.0451-R	XY Roller	25	38.1	44.5	44.5	-	18.1	1.92	2.26	2.37	18.1
L3104.0452-R	XY Roller	25	38.1	44.5	44.5	13	18.1	1.92	2.26	2.37	18.1
L3104.0751-R	XY Roller	25	50.8	66.5	66.5	-	54.4	9.88	11.50	12.07	54.4
L3104.0752-R	XY Roller	25	50.8	66.5	66.5	25	54.4	9.88	11.50	12.07	54.4
L3104.1202-R	XY Roller	50	46.2	79.2	79.2	-	38.5	8.19	5.53	5.81	38.5
L3104.1204-R	XY Roller	50	46.2	79.2	79.2	25	38.5	8.19	5.53	5.81	38.5
L3104.2205-R	XY Roller	75	46.2	104.6	104.6	-	38.5	13.60	8.60	9.10	38.5
L3104.2206-R	XY Roller	75	46.2	104.6	104.6	38	38.5	13.60	8.60	9.10	38.5
L3104.3205-R	XY Roller	100	46.2	130.2	130.2	-	38.5	13.60	8.60	9.10	38.5
L3104.3206-R	XY Roller	100	46.2	130.2	130.2	51	38.5	20.15	11.47	12.05	38.5





L3105

Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements.

Technical Notes
Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.

Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.
Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.

Tips
Other options:
- LM (locking micrometer).
- PL (posi-lock carriage lock).

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

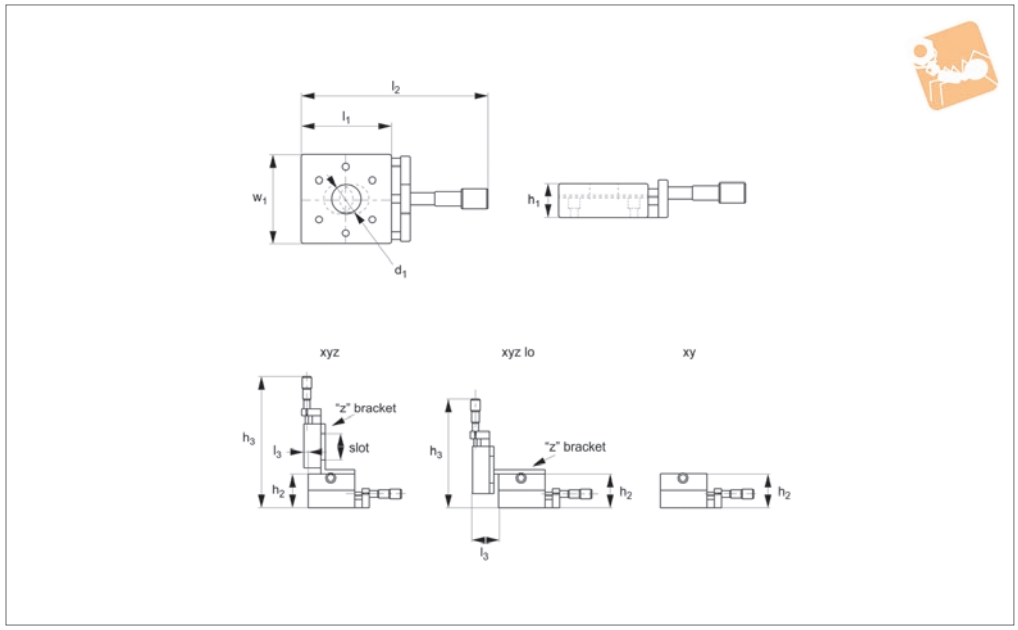
Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_1	Weight kg
L3105.0101-XYB	XY Ball	13	9.7	19.0	-	31.8	82.6	-	31.8	1.8
L3105.0201-XYB	XY Ball	13	9.7	19.0	-	44.5	95.3	-	44.5	1.8
L3105.0101-XYR	XY Roller	13	9.7	19.0	-	31.8	82.6	-	31.8	10.4
L3105.0201-XYR	XY Roller	13	9.7	19.0	-	44.5	95.3	-	44.5	10.4
L3105.0101-XYZB	XYZ Ball	13	9.7	19.0	98.3	31.8	82.6	9.7	31.8	1.8
L3105.0201-XYZB	XYZ Ball	13	9.7	19.0	111.0	44.5	95.3	11.3	44.5	1.8
L3105.0101-XYZR	XYZ Roller	13	9.7	19.0	98.3	31.8	82.6	9.7	31.8	10.4
L3105.0201-XYZR	XYZ Roller	13	9.7	19.0	111.0	44.5	95.3	11.3	44.5	10.4

Order No.	Load Z kg max.	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.
L3105.0101-XYB	0.7	1.8	0.19	0.18	0.18
L3105.0201-XYB	0.7	1.8	0.28	0.27	0.27
L3105.0101-XYR	0.7	10.4	1.09	1.04	1.04
L3105.0201-XYR	0.7	10.4	1.64	1.56	1.56
L3105.0101-XYZB	0.7	1.8	0.19	0.18	0.18
L3105.0201-XYZB	0.7	1.8	0.28	0.27	0.27
L3105.0101-XYZR	0.7	10.4	1.09	1.04	1.04
L3105.0201-XYZR	0.7	10.4	1.64	1.56	1.56

Micrometer Positioning XY, XYZ

front drive, small sizes







L3106

Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements.

Technical Notes
Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.
Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.
Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.
For further fixing and mounting hole dimensions please see part number L3100.FH.

Tips
Other options:
- LM (locking micrometer).
- PL (posi-lock carriage lock).

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_1	Weight kg
L3106.0301-XYB	XY Ball	13	15.7	31.8	-	38.1	88.9	-	38.1	5.4
L3106.0450-XYB	XY Ball	13	19.1	38.1	-	44.5	111.3	-	44.5	9.1
L3106.0451-XYB	XY Ball	25	19.1	38.1	-	44.5	149.4	-	44.5	9.1
L3106.0453-XYB	XY Ball	13	19.1	38.1	-	44.5	111.3	-	44.5	9.1
L3106.0750-XYB	XY Ball	13	25.4	50.8	-	66.5	133.4	-	66.5	27.2
L3106.0751-XYB	XY Ball	25	25.4	50.8	-	66.5	171.5	-	66.5	27.2
L3106.0753-XYB	XY Ball	13	25.4	50.8	-	66.5	133.4	-	66.5	27.2
L3106.0301-XYR	XY Roller	13	15.7	31.8	-	38.1	88.9	-	38.1	18.1
L3106.0450-XYR	XY Roller	13	19.1	38.1	-	44.5	111.3	-	44.5	18.1
L3106.0451-XYR	XY Roller	25	19.1	38.1	-	44.5	149.4	-	44.5	18.1
L3106.0453-XYR	XY Roller	13	19.1	38.1	-	44.5	111.3	-	44.5	18.1
L3106.0750-XYR	XY Roller	13	25.4	50.8	-	66.5	133.4	-	66.5	54.4
L3106.0751-XYR	XY Roller	25	25.4	50.8	-	66.5	171.5	-	66.5	54.4
L3106.0753-XYR	XY Roller	13	25.4	50.8	-	66.5	133.4	-	66.5	54.4
L3106.0301-XYZB	XYZ Ball	13	15.7	31.8	130	38.1	88.9	8.1	38.1	5.4
L3106.0450-XYZB	XYZ Ball	13	19.1	38.1	162.1	44.5	111.3	0	44.5	9.1
L3106.0451-XYZB	XYZ Ball	25	19.1	38.1	200.2	44.5	149.4	0	44.5	9.1
L3106.0453-XYZB	XYZ Ball	13	19.1	38.1	162.1	44.5	111.3	0	44.5	9.1
L3106.0750-XYZB	XYZ Ball	13	25.4	50.8	199.9	66.5	133.4	1.5	66.5	27.2
L3106.0751-XYZB	XYZ Ball	25	25.4	50.8	238	66.5	171.5	1.5	66.5	27.2
L3106.0753-XYZB	XYZ Ball	13	25.4	50.8	199.9	66.5	133.4	1.5	66.5	27.2
L3106.0301-XYZR	XYZ Roller	13	15.7	31.8	130	38.1	88.9	8.1	38.1	18.1
L3106.0450-XYZR	XYZ Roller	13	19.1	38.1	162.1	44.5	111.3	0	44.5	18.1
L3106.0451-XYZR	XYZ Roller	25	19.1	38.1	200.2	44.5	149.4	0	44.5	18.1
L3106.0453-XYZR	XYZ Roller	13	19.1	38.1	162.1	44.5	111.3	0	44.5	18.1
L3106.0750-XYZR	XYZ Roller	13	25.4	50.8	199.9	66.5	133.4	1.5	66.5	54.4
L3106.0751-XYZR	XYZ Roller	25	25.4	50.8	238	66.5	171.5	1.5	66.5	54.4
L3106.0753-XYZR	XYZ Roller	13	25.4	50.8	199.9	66.5	133.4	1.5	66.5	54.4

Micrometer Positioning XY, XYZ

front drive, medium sizes



Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_1	Weight kg
L3106.0301-XYZLB	XYZ Ball Lo	13	15.7	31.8	100.1	38.1	88.9	25.4	38.1	5.4
L3106.0450-XYZLB	XYZ Ball Lo	13	19.1	38.1	128.8	44.5	111.3	28.4	44.5	9.1
L3106.0451-XYZLB	XYZ Ball Lo	25	19.1	38.1	166.9	44.5	149.4	28.4	44.5	9.1
L3106.0453-XYZLB	XYZ Ball Lo	13	19.1	38.1	128.8	44.5	111.3	28.4	44.5	9.1
L3106.0750-XYZLB	XYZ Ball Lo	13	25.4	50.8	150.9	66.5	133.4	38.1	66.5	27.2
L3106.0751-XYZLB	XYZ Ball Lo	25	25.4	50.8	189	66.5	171.5	38.1	66.5	27.2
L3106.0753-XYZLB	XYZ Ball Lo	13	25.4	50.8	150.9	66.5	133.4	38.1	66.5	27.2
L3106.0301-XYZLR	XYZ Roller Lo	13	15.7	31.8	106.4	38.1	88.9	25.4	38.1	18.1
L3106.0450-XYZLR	XYZ Roller Lo	13	19.1	38.1	128.8	44.5	111.3	28.4	44.5	18.1
L3106.0451-XYZLR	XYZ Roller Lo	25	19.1	38.1	166.9	44.5	149.4	28.4	44.5	18.1
L3106.0453-XYZLR	XYZ Roller Lo	13	19.1	38.1	128.8	44.5	111.3	28.4	44.5	18.1
L3106.0750-XYZLR	XYZ Roller Lo	13	25.4	50.8	150.9	66.5	133.4	38.1	66.5	54.4
L3106.0751-XYZLR	XYZ Roller Lo	25	25.4	50.8	189	66.5	171.5	38.1	66.5	54.4
L3106.0753-XYZLR	XYZ Roller Lo	13	25.4	50.8	150.9	66.5	133.4	38.1	66.5	54.4

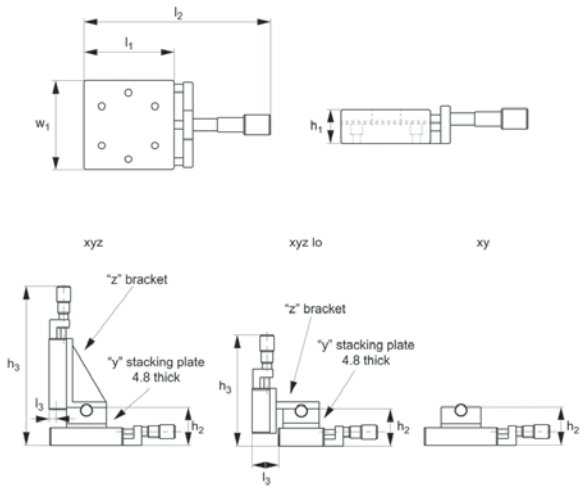
Order No.	Through hole d_1	Load Z kg max.	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.	Slot size
L3106.0301-XYB	8	0.9	5.4	0.50	0.50	0.50	-
L3106.0450-XYB	-	0.9	9.1	0.96	0.96	0.96	-
L3106.0451-XYB	-	0.9	9.1	0.96	0.96	0.96	-
L3106.0453-XYB	13	0.9	9.1	0.96	0.96	0.96	-
L3106.0750-XYB	-	0.9	27.2	4.94	4.94	4.94	-
L3106.0751-XYB	-	0.9	27.2	4.94	4.94	4.94	-
L3106.0753-XYB	25	0.9	27.2	4.94	4.94	4.94	-
L3106.0301-XYR	8	0.9	18.1	2.88	2.88	2.88	-
L3106.0450-XYR	-	0.9	18.1	1.92	1.92	1.92	-
L3106.0451-XYR	-	0.9	18.1	1.92	1.92	1.92	-
L3106.0453-XYR	13	0.9	18.1	1.92	1.92	1.92	-
L3106.0750-XYR	-	0.9	54.4	9.88	9.88	9.88	-
L3106.0751-XYR	-	0.9	54.4	9.88	9.88	9.88	-
L3106.0753-XYR	25	0.9	54.4	9.88	9.88	9.88	-
L3106.0301-XYZB	8	0.9	5.4	0.50	0.50	0.50	10x22
L3106.0450-XYZB	-	0.9	9.1	0.96	0.96	0.96	13x25
L3106.0451-XYZB	-	0.9	9.1	0.96	0.96	0.96	13x25
L3106.0453-XYZB	13	0.9	9.1	0.96	0.96	0.96	13x25
L3106.0750-XYZB	-	0.9	27.2	4.94	4.94	4.94	25x38
L3106.0751-XYZB	-	0.9	27.2	4.94	4.94	4.94	25x38
L3106.0753-XYZB	25	0.9	27.2	4.94	4.94	4.94	25x38
L3106.0301-XYZR	8	0.9	18.1	2.88	2.88	2.88	10x22
L3106.0450-XYZR	-	0.9	18.1	1.92	1.92	1.92	13x25
L3106.0451-XYZR	-	0.9	18.1	1.92	1.92	1.92	13x25
L3106.0453-XYZR	13	0.9	18.1	1.92	1.92	1.92	13x25
L3106.0750-XYZR	-	0.9	54.4	9.88	9.88	9.88	25x38
L3106.0751-XYZR	-	0.9	54.4	9.88	9.88	9.88	25x38
L3106.0753-XYZR	25	0.9	54.4	9.88	9.88	9.88	25x38
L3106.0301-XYZLB	8	0.9	5.4	0.50	0.50	0.50	10x22
L3106.0450-XYZLB	-	0.9	9.1	0.96	0.96	0.96	13x25
L3106.0451-XYZLB	-	0.9	9.1	0.96	0.96	0.96	13x25
L3106.0453-XYZLB	13	0.9	9.1	0.96	0.96	0.96	13x25
L3106.0750-XYZLB	-	0.9	27.2	4.94	4.94	4.94	25x38
L3106.0751-XYZLB	-	0.9	27.2	4.94	4.94	4.94	25x38
L3106.0753-XYZLB	25	0.9	27.2	4.94	4.94	4.94	25x38
L3106.0301-XYZLR	8	0.9	18.1	2.88	2.88	2.88	10x22
L3106.0450-XYZLR	-	0.9	18.1	1.92	1.92	1.92	13x25
L3106.0451-XYZLR	-	0.9	18.1	1.92	1.92	1.92	13x25
L3106.0453-XYZLR	13	0.9	18.1	1.92	1.92	1.92	13x25
L3106.0750-XYZLR	-	0.9	54.4	9.88	9.88	9.88	25x38
L3106.0751-XYZLR	-	0.9	54.4	9.88	9.88	9.88	25x38
L3106.0753-XYZLR	25	0.9	54.4	9.88	9.88	9.88	25x38



Micrometer Positioning XY, XYZ
front drive, medium sizes



L3107



Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements.

Technical Notes
Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.
Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.

Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.
For further fixing and mounting hole dimensions please see part number L3100.FH.

Tips
Other options:
- LM (locking micrometer).
- PL (posi-lock carriage lock).

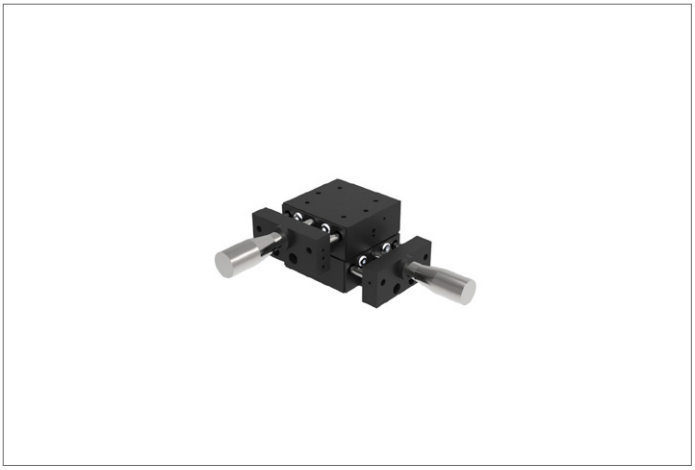
Loads on the Z axis may extend springs if the loads are too heavy. These stages have the micrometer bracket reversed to prevent this and increase the Z load capacity.

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_1	Weight kg
L3107.0401-XYB	XY Ball	13	19.1	42.9	-	50.8	117.3	-	44.5	9.1
L3107.0501-XYB	XY Ball	13	19.1	42.9	-	82.6	148.8	-	44.5	19.0
L3107.0502-XYB	XY Ball	25	19.1	42.9	-	82.6	188.2	-	44.5	19.0
L3107.0701-XYB	XY Ball	13	25.4	55.6	-	101.6	168.1	-	66.5	27.2
L3107.0702-XYB	XY Ball	25	25.4	55.6	-	101.6	209.6	-	66.5	27.2
L3107.0401-XYR	XY Roller	13	19.1	42.9	-	50.8	117.3	-	44.5	18.1
L3107.0501-XYR	XY Roller	13	19.1	42.9	-	82.6	148.8	-	44.5	36.3
L3107.0502-XYR	XY Roller	25	19.1	42.9	-	82.6	188.2	-	44.5	36.3
L3107.0701-XYR	XY Roller	13	25.4	55.6	-	101.6	168.1	-	66.5	72.5
L3107.0702-XYR	XY Roller	25	25.4	55.6	-	101.6	209.6	-	66.5	72.5
L3107.0401-XYZLB	XYZ Ball Lo	13	19.1	42.9	130	50.8	117.3	28.4	44.5	9.1
L3107.0501-XYZB	XYZ Ball	13	19.1	42.9	188.4	82.6	148.8	0	44.5	19.0
L3107.0502-XYZB	XYZ Ball	25	19.1	42.9	227.8	82.6	188.2	0	44.5	19.0
L3107.0701-XYZB	XYZ Ball	13	25.4	55.6	220.4	101.6	168.1	8.1	66.5	27.2
L3107.0702-XYZB	XYZ Ball	25	25.4	55.6	261.9	101.6	209.6	8.1	66.5	27.2
L3107.0401-XYZLR	XYZ Roller Lo	13	19.1	42.9	130	50.8	117.3	28.4	44.5	18.1
L3107.0501-XYZR	XYZ Roller	13	19.1	42.9	188.4	82.6	148.8	0	44.5	36.3
L3107.0502-XYZR	XYZ Roller	25	19.1	42.9	227.8	82.6	188.2	0	44.5	36.3
L3107.0701-XYZR	XYZ Roller	13	25.4	55.6	220.4	101.6	168.1	8.1	66.5	72.5
L3107.0702-XYZR	XYZ Roller	25	25.4	55.6	261.9	101.6	209.6	8.1	66.5	72.5

Order No.	Load Z kg max.	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.
L3107.0401-XYB	9.0	9.1	0.96	0.96	0.96
L3107.0501-XYB	9.0	19.0	2.02	2.02	2.02

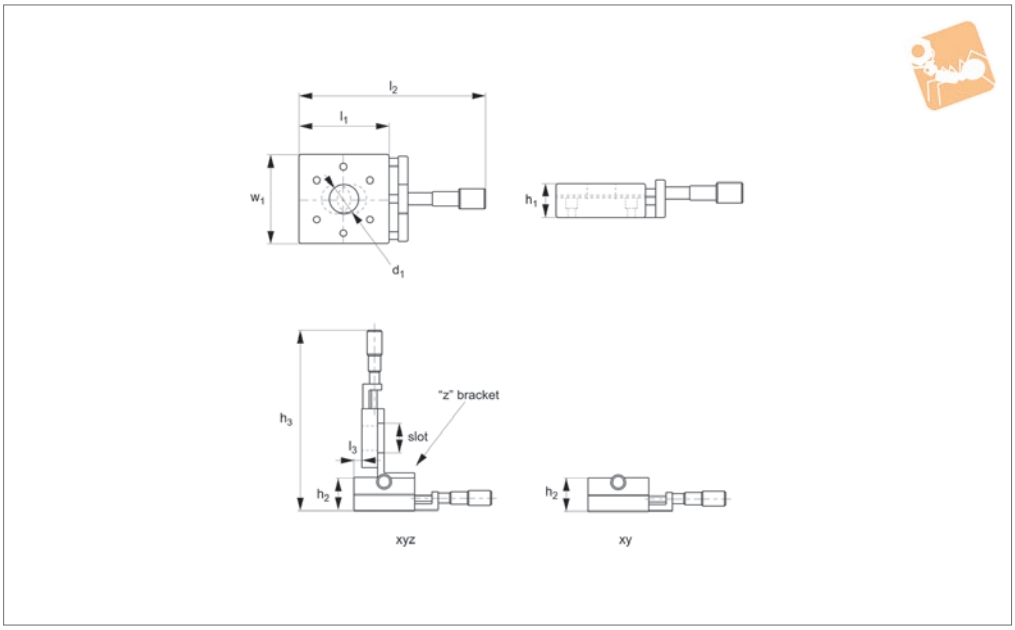
Order No.	Load Z kg max.	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.
L3107.0502-XYB	9.0	19.0	2.02	2.02	2.02
L3107.0701-XYB	9.0	27.2	4.94	4.94	4.94
L3107.0702-XYB	9.0	27.2	4.94	4.94	4.94
L3107.0401-XYR	9.0	18.1	1.92	1.92	1.92
L3107.0501-XYR	9.0	36.3	3.84	3.84	3.84
L3107.0502-XYR	9.0	36.3	3.84	3.84	3.84
L3107.0701-XYR	9.0	72.5	13.18	13.18	13.18
L3107.0702-XYR	9.0	72.5	13.18	13.18	13.18
L3107.0401-XYZLB	9.0	9.1	0.96	0.96	0.96
L3107.0501-XYZB	9.0	19.0	2.02	2.02	2.02
L3107.0502-XYZB	9.0	19.0	2.02	2.02	2.02
L3107.0701-XYZB	9.0	27.2	4.94	4.94	4.94
L3107.0702-XYZB	9.0	27.2	4.94	4.94	4.94
L3107.0401-XYZLR	9.0	18.1	1.92	1.92	1.92
L3107.0501-XYZR	9.0	36.3	3.84	3.84	3.84
L3107.0502-XYZR	9.0	36.3	3.84	3.84	3.84
L3107.0701-XYZR	9.0	72.5	13.18	13.18	13.18
L3107.0702-XYZR	9.0	72.5	13.18	13.18	13.18



Micrometer Positioning XY, XYZ
front drive, large sizes



L3108



Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements.

Technical Notes
Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.
Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.
Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.
For further fixing and mounting hole dimensions please see part number L3100.FH.

Tips
Other options:
- LM (locking micrometer).
- PL (posi-lock carriage lock).

Loads on the Z axis may extend springs if the loads are too heavy. These stages have the micrometer bracket reversed to prevent this and increase the Z load capacity.

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_2	Weight kg
L3108.1201-XYB	XY Ball	25	23.1	46.2	-	79.2	184.2	-	79.2	13.6
L3108.1203-XYB	XY Ball	25	23.1	46.2	-	79.2	184.2	-	79.2	13.6
L3108.2201-XYB	XY Ball	25	23.1	46.2	-	104.6	209.6	-	104.6	13.6
L3108.2202-XYB	XY Ball	50	23.1	46.2	-	104.6	260.4	-	104.6	13.6
L3108.2203-XYB	XY Ball	25	23.1	46.2	-	104.6	209.6	-	104.6	13.6
L3108.2204-XYB	XY Ball	50	23.1	46.2	-	104.6	260.4	-	104.6	13.6
L3108.3201-XYB	XY Ball	25	23.1	46.2	-	130.2	235.0	-	130.2	13.6
L3108.3202-XYB	XY Ball	50	23.1	46.2	-	130.2	285.8	-	130.2	13.6
L3108.3203-XYB	XY Ball	25	23.1	46.2	-	130.2	235.0	-	130.2	13.6
L3108.3204-XYB	XY Ball	50	23.1	46.2	-	130.2	285.8	-	130.2	13.6
L3108.1201-XYR	XY Roller	25	23.1	46.2	-	79.2	184.2	-	79.2	38.5
L3008.1203-XYR	XY Roller	25	23.1	46.2	-	79.2	184.2	-	79.2	38.5
L3108.2201-XYR	XY Roller	25	23.1	46.2	-	104.6	209.6	-	104.6	38.5
L3108.2202-XYR	XY Roller	50	23.1	46.2	-	104.6	260.4	-	104.6	38.5
L3108.2203-XYR	XY Roller	25	23.1	46.2	-	104.6	209.6	-	104.6	38.5
L3108.2204-XYR	XY Roller	50	23.1	46.2	-	104.6	260.4	-	104.6	38.5
L3108.3201-XYR	XY Roller	25	23.1	46.2	-	130.2	235.0	-	130.2	38.5
L3108.3202-XYR	XY Roller	50	23.1	46.2	-	130.2	285.8	-	130.2	38.5
L3108.3203-XYR	XY Roller	25	23.1	46.2	-	130.2	235.0	-	130.2	38.5
L3108.3204-XYR	XY Roller	50	23.1	46.2	-	130.2	285.8	-	130.2	38.5
L3108.1201-XYZB	XYZ Ball	25	23.1	46.2	249.7	79.2	184.2	8.4	79.2	13.6
L3108.1203-XYZB	XYZ Ball	25	23.1	46.2	249.7	79.2	184.2	8.4	79.2	13.6
L3108.2201-XYZB	XYZ Ball	25	23.1	46.2	287.8	104.6	209.6	13.2	104.6	13.6
L3108.2202-XYZB	XYZ Ball	50	23.1	46.2	338.6	104.6	260.4	13.2	104.6	13.6
L3108.2203-XYZB	XYZ Ball	25	23.1	46.2	287.8	104.6	209.6	13.2	104.6	13.6
L3108.2204-XYZB	XYZ Ball	50	23.1	46.2	338.6	104.6	260.4	13.2	104.6	13.6

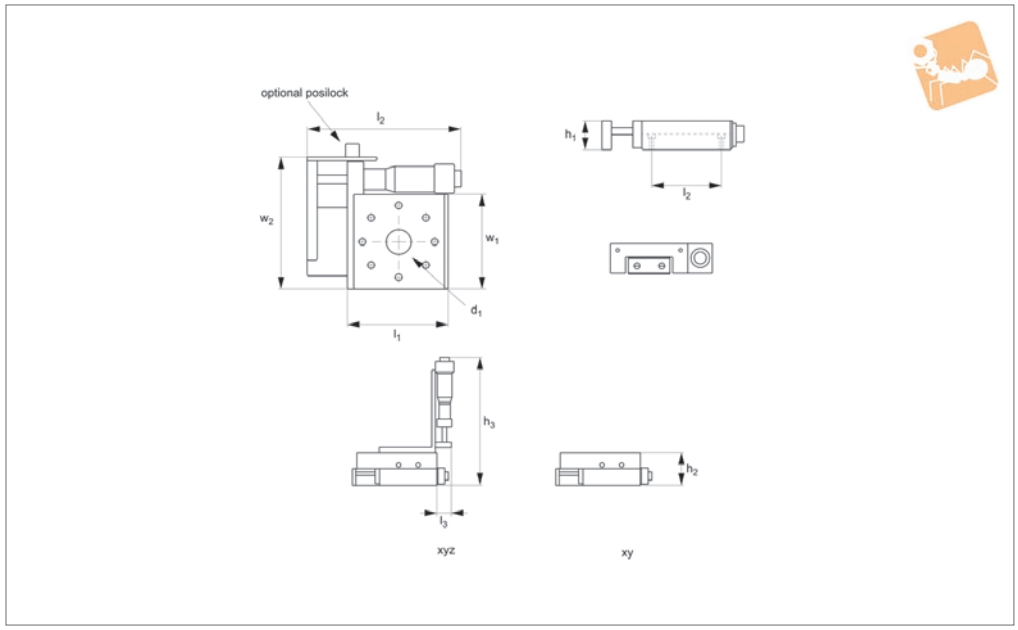
Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_2	Weight kg
L3108.3201-XYZB	XYZ Ball	25	23.1	46.2	313.2	130.2	235.0	27.7	130.2	13.6
L3108.3202-XYZB	XYZ Ball	50	23.1	46.2	364.0	130.2	285.8	27.7	130.2	13.6
L3108.3203-XYZB	XYZ Ball	25	23.1	46.2	313.2	130.2	235.0	27.7	130.2	13.6
L3108.3204-XYZB	XYZ Ball	50	23.1	46.2	364.0	130.2	285.8	27.7	130.2	13.6
L3108.1201-XYZR	XYZ Roller	25	23.1	46.2	249.7	79.2	184.2	8.4	79.2	38.5
L3008.1203-XYZR	XYZ Roller	25	23.1	46.2	249.7	79.2	184.2	8.4	79.2	38.5
L3108.2201-XYZR	XYZ Roller	25	23.1	46.2	287.8	104.6	209.6	13.2	104.6	38.5
L3108.2202-XYZR	XYZ Roller	50	23.1	46.2	338.6	104.6	260.4	13.2	104.6	38.5
L3108.2203-XYZR	XYZ Roller	25	23.1	46.2	287.8	104.6	209.6	13.2	104.6	38.5
L3108.2204-XYZR	XYZ Roller	50	23.1	46.2	338.6	104.6	260.4	13.2	104.6	38.5
L3108.3201-XYZR	XYZ Roller	25	23.1	46.2	313.2	130.2	235.0	27.7	130.2	38.5
L3108.3202-XYZR	XYZ Roller	50	23.1	46.2	364.0	130.2	285.8	27.7	130.2	38.5
L3108.3203-XYZR	XYZ Roller	25	23.1	46.2	313.2	130.2	235.0	27.7	130.2	38.5
L3108.3204-XYZR	XYZ Roller	50	23.1	46.2	364.0	130.2	285.8	27.7	130.2	38.5

Order No.	Through hole dia. d_1	Load Z kg max.	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.
L3108.1201-XYB	-	13.6	13.6	2.05	1.95	1.95
L3108.1203-XYB	25	13.6	13.6	2.05	1.95	1.95
L3108.2201-XYB	-	13.6	13.6	3.21	3.04	3.04
L3108.2202-XYB	-	13.6	13.6	3.21	3.04	3.04
L3108.2203-XYB	38	13.6	13.6	3.21	3.04	3.04
L3108.2204-XYB	38	13.6	13.6	3.21	3.04	3.04
L3108.3201-XYB	-	13.6	13.6	4.25	4.05	4.05
L3108.3202-XYB	-	13.6	13.6	4.25	4.05	4.05
L3108.3203-XYB	51	13.6	13.6	4.25	4.05	4.05
L3108.3204-XYB	51	13.6	13.6	4.25	4.05	4.05
L3108.1201-XYR	-	13.6	38.5	5.81	5.53	5.53
L3008.1203-XYR	25	13.6	38.5	5.81	5.53	5.53
L3108.2201-XYR	-	13.6	38.5	9.10	8.60	8.60
L3108.2202-XYR	-	13.6	38.5	9.10	8.60	8.60
L3108.2203-XYR	38	13.6	38.5	9.10	8.60	8.60
L3108.2204-XYR	38	13.6	38.5	9.10	8.60	8.60
L3108.3201-XYR	-	13.6	38.5	12.05	11.47	11.47
L3108.3202-XYR	-	13.6	38.5	12.05	11.47	11.47
L3108.3203-XYR	51	13.6	38.5	12.05	11.47	11.47
L3108.3204-XYR	51	13.6	38.5	12.05	11.47	11.47
L3108.1201-XYZB	-	13.6	13.6	2.05	1.95	1.95
L3108.1203-XYZB	25	13.6	13.6	2.05	1.95	1.95
L3108.2201-XYZB	-	13.6	13.6	3.21	3.04	3.04
L3108.2202-XYZB	-	13.6	13.6	3.21	3.04	3.04
L3108.2203-XYZB	38	13.6	13.6	3.21	3.04	3.04
L3108.2204-XYZB	38	13.6	13.6	3.21	3.04	3.04
L3108.3201-XYZB	-	13.6	13.6	4.25	4.05	4.05
L3108.3202-XYZB	-	13.6	13.6	4.25	4.05	4.05
L3108.3203-XYZB	51	13.6	13.6	4.25	4.05	4.05
L3108.3204-XYZB	51	13.6	13.6	4.25	4.05	4.05
L3108.1201-XYZR	-	13.6	38.5	5.81	5.53	5.53
L3008.1203-XYZR	25	13.6	38.5	5.81	5.53	5.53
L3108.2201-XYZR	-	13.6	38.5	9.10	8.60	8.60
L3108.2202-XYZR	-	13.6	38.5	9.10	8.60	8.60
L3108.2203-XYZR	38	13.6	38.5	9.10	8.60	8.60
L3108.2204-XYZR	38	13.6	38.5	9.10	8.60	8.60
L3108.3201-XYZR	-	13.6	38.5	12.05	11.47	11.47
L3108.3202-XYZR	-	13.6	38.5	12.05	11.47	11.47
L3108.3203-XYZR	51	13.6	38.5	12.05	11.47	11.47
L3108.3204-XYZR	51	13.6	38.5	12.05	11.47	11.47

Micrometer Positioning XY, XYZ

front drive, large sizes







L3110

Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements

Technical Notes
Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.
Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.
Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.
For further fixing and mounting hole dimensions please see part number L3100.FH.

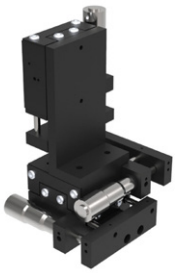
Tips
Other options:
- LM (locking micrometer).
- PL (posi-lock carriage lock).

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

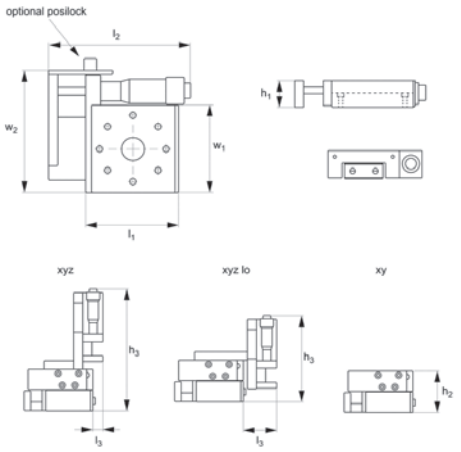
Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_1	Weight kg
L3110.0101-XYB	XY Ball	13	9.7	19.0	-	31.8	54.9	-	31.8	1.8
L3110.0201-XYB	XY Ball	13	9.7	19.0	-	44.5	61.5	-	44.5	1.8
L3110.0101-XYR	XY Roller	13	9.7	19.0	-	31.8	54.9	-	31.8	10.4
L3110.0201-XYR	XY Roller	13	9.7	19.0	-	44.5	61.5	-	44.5	10.4
L3110.0101-XYZB	XYZ Ball	13	9.7	19.0	77.1	31.8	54.9	9.7	31.8	1.8
L3110.0201-XYZB	XYZ Ball	13	9.7	19.0	83.7	44.5	61.5	11.2	44.5	1.8
L3110.0101-XYZR	XYZ Roller	13	9.7	19.0	77.1	31.8	54.9	9.7	31.8	10.4
L3110.0201-XYZR	XYZ Roller	13	9.7	19.0	83.7	44.5	61.5	11.2	44.5	10.4

Order No.	w_2	Load Z kg max.	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.
L3110.0101-XYB	44.5	0.7	1.8	0.19	0.18	0.18
L3110.0201-XYB	57.4	0.7	1.8	0.28	0.27	0.27
L3110.0101-XYR	44.5	0.7	10.4	1.09	1.04	1.04
L3110.0201-XYR	57.4	0.7	10.4	1.64	1.56	1.56
L3110.0101-XYZB	44.5	0.7	1.8	0.19	0.18	0.18
L3110.0201-XYZB	57.4	0.7	1.8	0.28	0.27	0.27
L3110.0101-XYZR	44.5	0.7	10.4	1.09	1.04	1.04
L3110.0201-XYZR	57.4	0.7	10.4	1.64	1.56	1.56

Micrometer Positioning XY, XYZ
side drive, medium sizes



L3111



Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements

Technical Notes
Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.
Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.
Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.
For further fixing and mounting hole dimensions please see part number L3100.FH.

Tips
Other options:
- LM (locking micrometer).
- PL (posi-lock carriage lock).

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_1	Weight kg
L3111.0301-XYB	XY Ball	13	15.7	31.8	-	38.1	55.4	-	38.1	5.4
L3111.0450-XYB	XY Ball	13	19.1	38.1	-	44.5	74.9	-	44.5	9.1
L3111.0451-XYB	XY Ball	25	19.1	38.1	-	44.5	114.5	-	44.5	9.1
L3111.0453-XYB	XY Ball	13	19.1	38.1	-	44.5	74.9	-	44.5	9.1
L3111.0750-XYB	XY Ball	13	25.4	50.8	-	66.5	89.4	-	66.5	27.2
L3111.0751-XYB	XY Ball	25	25.4	50.8	-	66.5	113.8	-	66.5	27.2
L3111.0753-XYB	XY Ball	13	25.4	50.8	-	66.5	89.4	-	66.5	27.2
L3111.0301-XYR	XY Roller	13	15.7	31.8	-	38.1	55.4	-	38.1	18.1
L3111.0450-XYR	XY Roller	13	19.1	38.1	-	44.5	74.9	-	44.5	18.1
L3111.0451-XYR	XY Roller	25	19.1	38.1	-	44.5	114.5	-	44.5	18.1
L3111.0453-XYR	XY Roller	13	19.1	38.1	-	44.5	74.9	-	44.5	18.1
L3111.0750-XYR	XY Roller	13	25.4	50.8	-	66.5	89.4	-	66.5	54.4
L3111.0751-XYR	XY Roller	25	25.4	50.8	-	66.5	113.8	-	66.5	54.4
L3111.0753-XYR	XY Roller	13	25.4	50.8	-	66.5	89.4	-	66.5	54.4
L3111.0301-XYZB	XYZ Ball	13	15.7	31.8	93.5	38.1	55.4	8.0	38.1	5.4
L3111.0450-XYZB	XYZ Ball	13	19.1	38.1	93.5	44.5	74.9	0	44.5	9.1
L3111.0451-XYZB	XYZ Ball	25	19.1	38.1	93.5	44.5	114.5	0	44.5	9.1
L3111.0453-XYZB	XYZ Ball	13	19.1	38.1	93.5	44.5	74.9	0	44.5	9.1
L3111.0750-XYZB	XYZ Ball	13	25.4	50.8	113.3	66.5	89.4	7.6	66.5	27.2
L3111.0751-XYZB	XYZ Ball	25	25.4	50.8	137.7	66.5	113.8	7.6	66.5	27.2
L3111.0753-XYZB	XYZ Ball	13	25.4	50.8	113.3	66.5	89.4	7.6	66.5	27.2
L3111.0301-XYZR	XYZ Roller	13	15.7	31.8	66.6	38.1	55.4	8.0	38.1	18.1
L3111.0450-XYZR	XYZ Roller	13	19.1	38.1	92.4	44.5	74.9	0	44.5	18.1
L3111.0451-XYZR	XYZ Roller	25	19.1	38.1	132.0	44.5	114.5	0	44.5	18.1
L3111.0453-XYZR	XYZ Roller	13	19.1	38.1	92.4	44.5	74.9	0	44.5	18.1
L3111.0750-XYZR	XYZ Roller	13	25.4	50.8	113.3	66.5	89.4	7.6	66.5	54.4
L3111.0751-XYZR	XYZ Roller	25	25.4	50.8	137.7	66.5	113.8	7.6	66.5	54.4
L3111.0753-XYZR	XYZ Roller	13	25.4	50.8	113.3	66.5	89.4	7.6	66.5	54.4

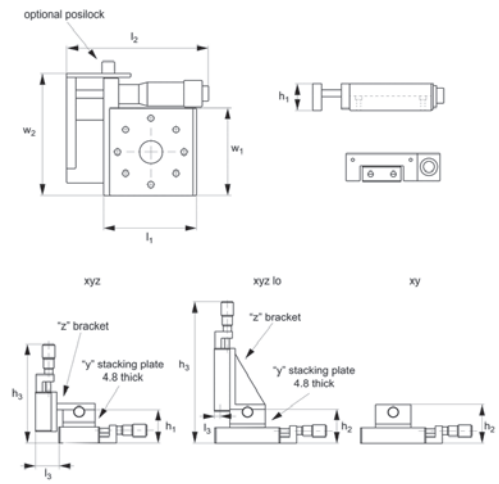
Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_1	Weight kg
L3111.0301-XYZLB	XYZ Ball Lo	13	15.7	31.8	66.6	38.1	55.4	25.4	38.1	5.4
L3111.0450-XYZLB	XYZ Ball Lo	13	19.1	38.1	92.4	44.5	74.9	28.5	44.5	9.1
L3111.0451-XYZLB	XYZ Ball Lo	25	19.1	38.1	132.0	44.5	114.5	28.5	44.5	9.1
L3111.0453-XYZLB	XYZ Ball Lo	13	19.1	38.1	92.4	44.5	74.9	28.5	44.5	9.1
L3111.0750-XYZLB	XYZ Ball Lo	13	25.4	50.8	113.3	66.5	89.4	38.1	66.5	27.2
L3111.0751-XYZLB	XYZ Ball Lo	25	25.4	50.8	137.7	66.5	113.8	38.1	66.5	27.2
L3111.0753-XYZLB	XYZ Ball Lo	13	25.4	50.8	113.3	66.5	89.4	38.1	66.5	27.2
L3111.0301-XYZLR	XYZ Roller Lo	13	15.7	31.8	66.6	38.1	55.4	25.4	38.1	18.1
L3111.0450-XYZLR	XYZ Roller Lo	13	19.1	38.1	92.4	44.5	74.9	28.5	44.5	18.1
L3111.0451-XYZLR	XYZ Roller Lo	25	19.1	38.1	132.0	44.5	114.5	28.5	44.5	18.1
L3111.0453-XYZLR	XYZ Roller Lo	13	19.1	38.1	92.4	44.5	74.9	28.5	44.5	18.1
L3111.0750-XYZLR	XYZ Roller Lo	13	25.4	50.8	113.3	66.5	89.4	38.1	66.5	54.4
L3111.0751-XYZLR	XYZ Roller Lo	25	25.4	50.8	137.7	66.5	113.8	38.1	66.5	54.4
L3111.0753-XYZLR	XYZ Roller Lo	13	25.4	50.8	113.3	66.5	89.4	38.1	66.5	54.4

Order No.	w_2	Through hole dia. d_1	Load Z kg max.	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.
L3111.0301-XYB	51.1	8	0.9	5.4	0.50	0.50	0.50
L3111.0450-XYB	61.0	-	0.9	9.1	0.96	0.96	0.96
L3111.0451-XYB	64.8	-	0.9	9.1	0.96	0.96	0.96
L3111.0453-XYB	61.0	13	0.9	9.1	0.96	0.96	0.96
L3111.0750-XYB	83.1	-	0.9	27.2	4.94	4.94	4.94
L3111.0751-XYB	87.1	-	0.9	27.2	4.94	4.94	4.94
L3111.0753-XYB	83.1	25	0.9	27.2	4.94	4.94	4.94
L3111.0301-XYR	51.1	8	0.9	18.1	2.88	2.88	2.88
L3111.0450-XYR	61.0	-	0.9	18.1	1.92	1.92	1.92
L3111.0451-XYR	64.8	-	0.9	18.1	1.92	1.92	1.92
L3111.0453-XYR	61.0	13	0.9	18.1	1.92	1.92	1.92
L3111.0750-XYR	83.1	-	0.9	54.4	9.88	9.88	9.88
L3111.0751-XYR	87.1	-	0.9	54.4	9.88	9.88	9.88
L3111.0753-XYR	83.1	25	0.9	54.4	9.88	9.88	9.88
L3111.0301-XYZB	51.1	8	0.9	5.4	0.50	0.50	0.50
L3111.0450-XYZB	61.0	-	0.9	9.1	0.96	0.96	0.96
L3111.0451-XYZB	64.8	-	0.9	9.1	0.96	0.96	0.96
L3111.0453-XYZB	61.0	13	0.9	9.1	0.96	0.96	0.96
L3111.0750-XYZB	83.1	-	0.9	27.2	4.94	4.94	4.94
L3111.0751-XYZB	87.1	-	0.9	27.2	4.94	4.94	4.94
L3111.0753-XYZB	83.1	25	0.9	27.2	4.94	4.94	4.94
L3111.0301-XYZR	51.1	8	0.9	18.1	2.88	2.88	2.88
L3111.0450-XYZR	61.0	-	0.9	18.1	1.92	1.92	1.92
L3111.0451-XYZR	64.8	-	0.9	18.1	1.92	1.92	1.92
L3111.0453-XYZR	61.0	13	0.9	18.1	1.92	1.92	1.92
L3111.0750-XYZR	83.1	-	0.9	54.4	9.88	9.88	9.88
L3111.0751-XYZR	87.1	-	0.9	54.4	9.88	9.88	9.88
L3111.0753-XYZR	83.1	25	0.9	54.4	9.88	9.88	9.88
L3111.0301-XYZLB	51.1	8	0.9	5.4	0.50	0.50	0.50
L3111.0450-XYZLB	61.0	-	0.9	9.1	0.96	0.96	0.96
L3111.0451-XYZLB	64.8	-	0.9	9.1	0.96	0.96	0.96
L3111.0453-XYZLB	61.0	13	0.9	9.1	0.96	0.96	0.96
L3111.0750-XYZLB	83.1	-	0.9	27.2	4.94	4.94	4.94
L3111.0751-XYZLB	87.1	-	0.9	27.2	4.94	4.94	4.94
L3111.0753-XYZLB	83.1	25	0.9	27.2	4.94	4.94	4.94
L3111.0301-XYZLR	51.1	8	0.9	18.1	2.88	2.88	2.88
L3111.0450-XYZLR	61.0	-	0.9	18.1	1.92	1.92	1.92
L3111.0451-XYZLR	64.8	-	0.9	18.1	1.92	1.92	1.92
L3111.0453-XYZLR	61.0	13	0.9	18.1	1.92	1.92	1.92
L3111.0750-XYZLR	83.1	-	0.9	54.4	9.88	9.88	9.88
L3111.0751-XYZLR	87.1	-	0.9	54.4	9.88	9.88	9.88
L3111.0753-XYZLR	83.1	25	0.9	54.4	9.88	9.88	9.88

Micrometer Positioning XY, XYZ
side drive, medium sizes



L3112



Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements

Technical Notes
Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.
Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.

Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.
For further fixing and mounting hole dimensions please see part number L3100.FH.

Tips
Other options:
- LM (locking micrometer).
- PL (posi-lock carriage lock).

Loads on the Z axis may extend springs if the loads are too heavy. These stages have the micrometer bracket reversed to prevent this and increase the Z load capacity.

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_1	Weight kg
L3112.0401-XYB	XY Ball	13	19.1	42.9	-	50.8	74.9	-	44.5	9.1
L3112.0501-XYB	XY Ball	13	19.1	42.9	-	82.6	105.4	-	44.5	19.0
L3112.0502-XYB	XY Ball	25	19.1	42.9	-	82.6	114.5	-	44.5	19.0
L3112.0701-XYB	XY Ball	13	25.4	55.6	-	101.6	124.5	-	66.5	27.2
L3112.0702-XYB	XY Ball	25	25.4	55.6	-	101.6	131.6	-	66.5	27.2
L3112.0401-XYR	XY Roller	13	19.1	42.9	-	50.8	74.9	-	44.5	18.1
L3112.0501-XYR	XY Roller	13	19.1	42.9	-	82.6	105.4	-	44.5	36.3
L3112.0502-XYR	XY Roller	25	19.1	42.9	-	82.6	114.5	-	44.5	36.3
L3112.0701-XYR	XY Roller	13	25.4	55.6	-	101.6	124.5	-	66.5	72.5
L3112.0702-XYR	XY Roller	25	25.4	55.6	-	101.6	131.6	-	66.5	72.5
L3112.0401-XYZB	XYZ Ball	13	19.1	42.9	124.2	50.8	74.9	14.6	44.5	9.1
L3112.0501-XYZB	XYZ Ball	13	19.1	42.9	154.7	82.6	105.4	0	44.5	19.0
L3112.0502-XYZB	XYZ Ball	25	19.1	42.9	163.8	82.6	114.5	0	44.5	19.0
L3112.0701-XYZB	XYZ Ball	13	25.4	55.6	189.5	101.6	124.5	9.3	66.5	27.2
L3112.0702-XYZB	XYZ Ball	25	25.4	55.6	196.6	101.6	131.6	9.3	66.5	27.2
L3112.0401-XYZR	XYZ Roller	13	19.1	42.9	124.2	50.8	74.9	14.6	44.5	18.1
L3112.0501-XYZR	XYZ Roller	13	19.1	42.9	154.7	82.6	105.4	0	44.5	36.3
L3112.0502-XYZR	XYZ Roller	25	19.1	42.9	163.8	82.6	114.5	0	44.5	36.3
L3112.0701-XYZR	XYZ Roller	13	25.4	55.6	189.5	101.6	124.5	9.3	66.5	72.5
L3112.0702-XYZR	XYZ Roller	25	25.4	55.6	196.6	101.6	131.6	9.3	66.5	72.5

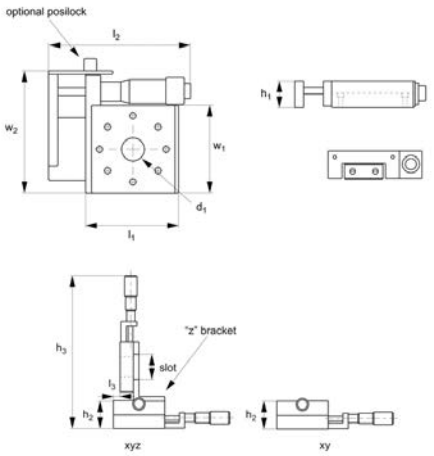
Order No.	w_2	Load Z kg max.	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.
L3112.0401-XYB	61.0	9.0	9.1	0.96	0.96	0.96
L3112.0501-XYB	61.0	9.0	19.0	2.02	2.02	2.02

Order No.	w_2	Load Z kg max.	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.
L3112.0502-XYB	64.8	9.0	19.0	2.02	2.02	2.02
L3112.0701-XYB	84.1	9.0	27.2	4.94	4.94	4.94
L3112.0702-XYB	87.1	9.0	27.2	4.94	4.94	4.94
L3112.0401-XYR	61.0	9.0	18.1	1.92	1.92	1.92
L3112.0501-XYR	61.0	9.0	36.3	3.84	3.84	3.84
L3112.0502-XYR	64.8	9.0	36.3	3.84	3.84	3.84
L3112.0701-XYR	84.1	9.0	72.5	13.18	13.18	13.18
L3112.0702-XYR	87.1	9.0	72.5	13.18	13.18	13.18
L3112.0401-XYZB	61.0	9.0	9.1	0.96	0.96	0.96
L3112.0501-XYZB	61.0	9.0	19.0	2.02	2.02	2.02
L3112.0502-XYZB	64.8	9.0	19.0	2.02	2.02	2.02
L3112.0701-XYZB	84.1	9.0	27.2	4.94	4.94	4.94
L3112.0702-XYZB	87.1	9.0	27.2	4.94	4.94	4.94
L3112.0401-XYZR	61.0	9.0	18.1	1.92	1.92	1.92
L3112.0501-XYZR	61.0	9.0	36.3	3.84	3.84	3.84
L3112.0502-XYZR	64.8	9.0	36.3	3.84	3.84	3.84
L3112.0701-XYZR	84.1	9.0	72.5	13.18	13.18	13.18
L3112.0702-XYZR	87.1	9.0	72.5	13.18	13.18	13.18

Micrometer Positioning XY, XYZ
side drive, large sizes



L3113



Material
Aluminium carriage and base, black anodised steel fixing, hardened steel shafts and balls and roller elements

Technical Notes
Ball roller versions recommended for light loads. Cross roller versions for heavier loads and moment loads.
Straight line accuracy 12µ/25mm travel.
Repeatability 3µ.
Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.
For further fixing and mounting hole dimensions please see part number L3100.FH.

Tips
Other options:
- LM (locking micrometer).
- PL (posi-lock carriage lock).

Loads on the Z axis may extend springs if the loads are too heavy. These stages have the micrometer bracket reversed to prevent this and increase the Z load capacity.

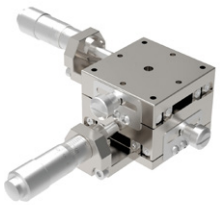
Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_1	Weight kg
L3113.1201-XYB	XY Ball	25	23.1	46.2	-	79.2	120.7	-	79.2	13.6
L3113.1203-XYB	XY Ball	25	23.1	46.2	-	79.2	120.7	-	79.2	13.6
L3113.2201-XYB	XY Ball	25	23.1	46.2	-	104.6	120.7	-	104.6	13.6
L3113.2202-XYB	XY Ball	50	23.1	46.2	-	104.6	171.7	-	104.6	13.6
L3113.2203-XYB	XY Ball	25	23.1	46.2	-	104.6	120.7	-	104.6	13.6
L3113.2204-XYB	XY Ball	50	23.1	46.2	-	104.6	171.7	-	104.6	13.6
L3113.3201-XYB	XY Ball	25	23.1	46.2	-	130.0	130.0	-	130.0	13.6
L3113.3202-XYB	XY Ball	50	23.1	46.2	-	130.0	171.7	-	130.0	13.6
L3113.3203-XYB	XY Ball	25	23.1	46.2	-	130.0	130.0	-	130.0	13.6
L3113.3204-XYB	XY Ball	50	23.1	46.2	-	130.0	171.7	-	130.0	13.6
L3113.1201-XYR	XY Roller	25	23.1	46.2	-	79.2	120.7	-	79.2	38.5
L3113.1203-XYR	XY Roller	25	23.1	46.2	-	79.2	120.7	-	79.2	38.5
L3113.2201-XYR	XY Roller	25	23.1	46.2	-	104.6	120.7	-	104.6	38.5
L3113.2202-XYR	XY Roller	50	23.1	46.2	-	104.6	171.7	-	104.6	38.5
L3113.2203-XYR	XY Roller	25	23.1	46.2	-	104.6	120.7	-	104.6	38.5
L3113.2204-XYR	XY Roller	50	23.1	46.2	-	104.6	171.7	-	104.6	38.5
L3113.3201-XYR	XY Roller	25	23.1	46.2	-	130.0	130.0	-	130.0	38.5
L3113.3202-XYR	XY Roller	50	23.1	46.2	-	130.0	171.7	-	130.0	38.5
L3113.3203-XYR	XY Roller	25	23.1	46.2	-	130.0	130.0	-	130.0	38.5
L3113.3204-XYR	XY Roller	50	23.1	46.2	-	130.0	171.7	-	130.0	38.5
L3113.1201-XYZB	XYZ Ball	25	23.1	46.2	186.2	79.2	120.7	8.4	79.2	13.6
L3113.1203-XYZB	XYZ Ball	25	23.1	46.2	186.2	79.2	120.7	8.4	79.2	13.6
L3113.2201-XYZB	XYZ Ball	25	23.1	46.2	198.9	104.6	120.7	13.2	104.6	13.6
L3113.2202-XYZB	XYZ Ball	50	23.1	46.2	249.9	104.6	171.7	13.2	104.6	13.6
L3113.2203-XYZB	XYZ Ball	25	23.1	46.2	198.9	104.6	120.7	13.2	104.6	13.6
L3113.2204-XYZB	XYZ Ball	50	23.1	46.2	249.9	104.6	171.7	13.2	104.6	13.6

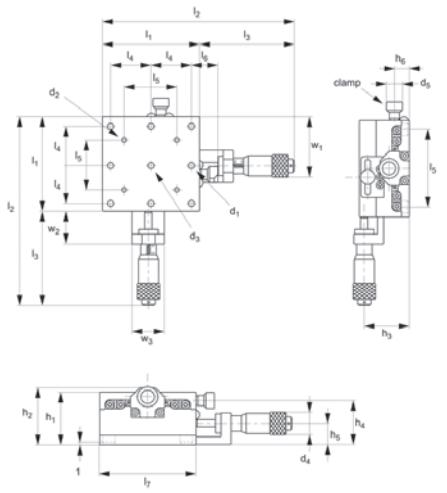
Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_2	l_3	w_1	Weight kg
L3113.3201-XYZB	XYZ Ball	25	23.1	46.2	208.2	130.0	130.0	27.7	130.0	13.6
L3113.3202-XYZB	XYZ Ball	50	23.1	46.2	249.9	130.0	171.7	27.7	130.0	13.6
L3113.3203-XYZB	XYZ Ball	25	23.1	46.2	208.2	130.0	130.0	27.7	130.0	13.6
L3113.3204-XYZB	XYZ Ball	50	23.1	46.2	249.9	130.0	171.7	27.7	130.0	13.6
L3113.1201-XYZR	XYZ Roller	25	23.1	46.2	186.2	79.2	120.7	8.4	79.2	38.5
L3113.1203-XYZR	XYZ Roller	25	23.1	46.2	186.2	79.2	120.7	8.4	79.2	38.5
L3113.2201-XYZR	XYZ Roller	25	23.1	46.2	198.9	104.6	120.7	13.2	104.6	38.5
L3113.2202-XYZR	XYZ Roller	50	23.1	46.2	249.9	104.6	171.7	13.2	104.6	38.5
L3113.2203-XYZR	XYZ Roller	25	23.1	46.2	198.9	104.6	120.7	13.2	104.6	38.5
L3113.2204-XYZR	XYZ Roller	50	23.1	46.2	249.9	104.6	171.7	13.2	104.6	38.5
L3113.3201-XYZR	XYZ Roller	25	23.1	46.2	208.2	130.0	130.0	27.7	130.0	38.5
L3113.3202-XYZR	XYZ Roller	50	23.1	46.2	249.9	130.0	171.7	27.7	130.0	38.5
L3113.3203-XYZR	XYZ Roller	25	23.1	46.2	208.2	130.0	130.0	27.7	130.0	38.5
L3113.3204-XYZR	XYZ Roller	50	23.1	46.2	249.9	130.0	171.7	27.7	130.0	38.5

Order No.	w_2	Through hole d_1	Load Z kg max.	Load X & XY kg max.	X moment load Nm max.	Y moment load Nm max.	Z moment load Nm max.
L3113.1201-XYB	102.6	-	13.6	13.6	2.05	1.95	1.95
L3113.1203-XYB	102.6	25	13.6	13.6	2.05	1.95	1.95
L3113.2201-XYB	128.0	-	13.6	13.6	3.21	3.04	3.04
L3113.2202-XYB	128.0	-	13.6	13.6	3.21	3.04	3.04
L3113.2203-XYB	128.0	38	13.6	13.6	3.21	3.04	3.04
L3113.2204-XYB	128.0	38	13.6	13.6	3.21	3.04	3.04
L3113.3201-XYB	153.4	-	13.6	13.6	4.25	4.05	4.05
L3113.3202-XYB	153.4	-	13.6	13.6	4.25	4.05	4.05
L3113.3203-XYB	153.4	51	13.6	13.6	4.25	4.05	4.05
L3113.3204-XYB	153.4	51	13.6	13.6	4.25	4.05	4.05
L3113.1201-XYR	102.6	-	13.6	38.5	5.81	5.53	5.53
L3113.1203-XYR	102.6	25	13.6	38.5	5.81	5.53	5.53
L3113.2201-XYR	128.0	-	13.6	38.5	9.10	8.60	8.60
L3113.2202-XYR	128.0	-	13.6	38.5	9.10	8.60	8.60
L3113.2203-XYR	128.0	38	13.6	38.5	9.10	8.60	8.60
L3113.2204-XYR	128.0	38	13.6	38.5	9.10	8.60	8.60
L3113.3201-XYR	153.4	-	13.6	38.5	12.05	11.47	11.47
L3113.3202-XYR	153.4	-	13.6	38.5	12.05	11.47	11.47
L3113.3203-XYR	153.4	51	13.6	38.5	12.05	11.47	11.47
L3113.3204-XYR	153.4	51	13.6	38.5	12.05	11.47	11.47
L3113.1201-XYZB	102.6	-	13.6	13.6	2.05	1.95	1.95
L3113.1203-XYZB	102.6	25	13.6	13.6	2.05	1.95	1.95
L3113.2201-XYZB	128.0	-	13.6	13.6	3.21	3.04	3.04
L3113.2202-XYZB	128.0	-	13.6	13.6	3.21	3.04	3.04
L3113.2203-XYZB	128.0	38	13.6	13.6	3.21	3.04	3.04
L3113.2204-XYZB	128.0	38	13.6	13.6	3.21	3.04	3.04
L3113.3201-XYZB	153.4	-	13.6	13.6	4.25	4.05	4.05
L3113.3202-XYZB	153.4	-	13.6	13.6	4.25	4.05	4.05
L3113.3203-XYZB	153.4	51	13.6	13.6	4.25	4.05	4.05
L3113.3204-XYZB	153.4	51	13.6	13.6	4.25	4.05	4.05
L3113.1201-XYZR	102.6	-	13.6	38.5	5.81	5.53	5.53
L3113.1203-XYZR	102.6	25	13.6	38.5	5.81	5.53	5.53
L3113.2201-XYZR	128.0	-	13.6	38.5	9.10	8.60	8.60
L3113.2202-XYZR	128.0	-	13.6	38.5	9.10	8.60	8.60
L3113.2203-XYZR	128.0	38	13.6	38.5	9.10	8.60	8.60
L3113.2204-XYZR	128.0	38	13.6	38.5	9.10	8.60	8.60
L3113.3201-XYZR	153.4	-	13.6	38.5	12.05	11.47	11.47
L3113.3202-XYZR	153.4	-	13.6	38.5	12.05	11.47	11.47
L3113.3203-XYZR	153.4	51	13.6	38.5	12.05	11.47	11.47
L3113.3204-XYZR	153.4	51	13.6	38.5	12.05	11.47	11.47

Stainless Micrometer XY Stages
front drive



L3121



Material
Stainless steel (440C) with electroless nickel plating.

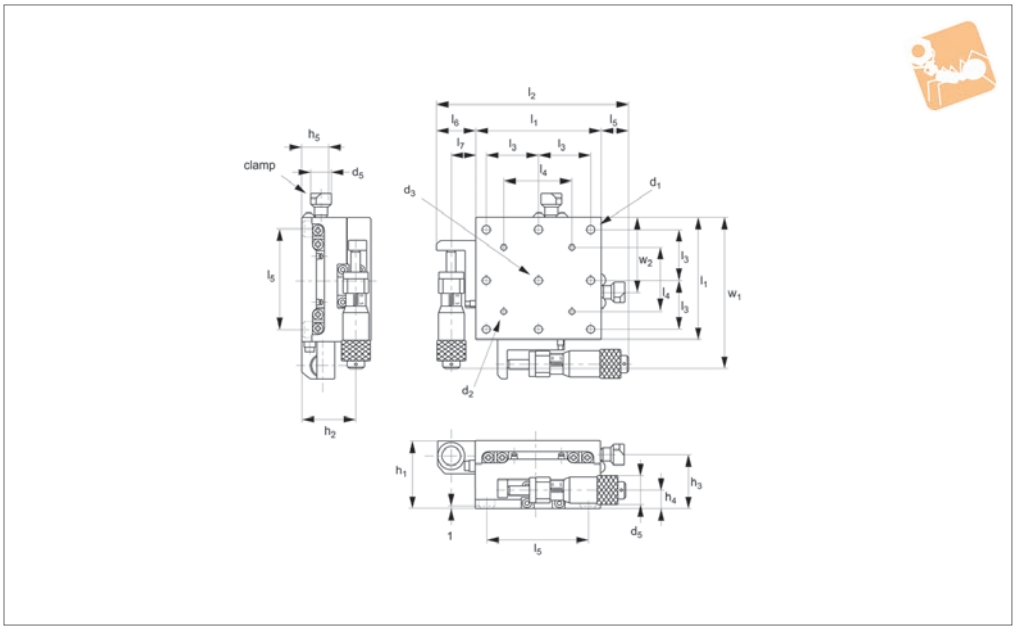
Technical Notes
Straightness accuracy 5µ.

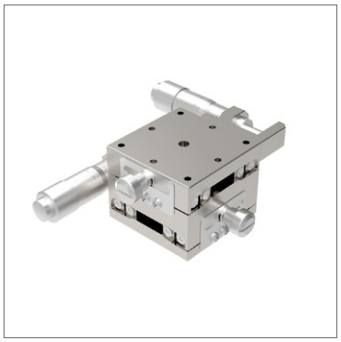
Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Travel	d_1	d_2	d_3 tol. H7	d_4	d_5	h_1	h_2	h_3	h_4	h_5
L3121.040	13	M3	-	4	13	10	32.0	35.0	29.0	26.5	13.0
L3121.060	13	M4	M3	4	13	10	32.0	35.0	29.0	26.5	13.0
L3121.080	25	M4	M3	4	13	10	40.0	44.3	36.8	34.5	16.8
L3121.100	25	M4	M4	4	13	10	40.0	44.3	36.8	34.5	16.8

Order No.	h_6	l_1	l_2	l_3	l_4	l_5	l_6	l_7	w_1	w_2	w_3	Load kg max.
L3121.040	10.5	40	98.5	58.5	16	32	15.5	32	26	20.5	21	9.7
L3121.060	10.5	60	118.5	58.5	25	50	16.5	50	36	20.5	20	19.6
L3121.080	14.5	80	160	80.0	25	70	24.5	70	55	24.5	24	26.1
L3121.100	14.5	100	180	80.0	25	90	24.5	90	67.5	24.5	24	33.6





L3123

Material
Stainless steel (440C) with electroless nickel plating.

Technical Notes
Straightness accuracy 5µ.

Spring loaded micrometer allows precise repeatable adjustments with low friction and zero backlash.
Micrometer increments 0,01mm.

Important Notes
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).
3D CAD available.

Order No.	Travel	d_1	d_2	d_3	d_4	d_5	h_1	h_2	h_3	h_4	h_5
L3123.040	13	M3	-	4	13	10	32.0	25.0	26.5	9	10.5
L3123.060	13	M4	M3	4	13	10	32.0	25.0	26.5	9	10.5
L3123.080	25	M4	M4	4	13	10	40.0	30.8	34.5	10.8	14.5
L3123.100	25	M4	M4	4	13	10	40.0	30.8	34.5	10.8	14.5

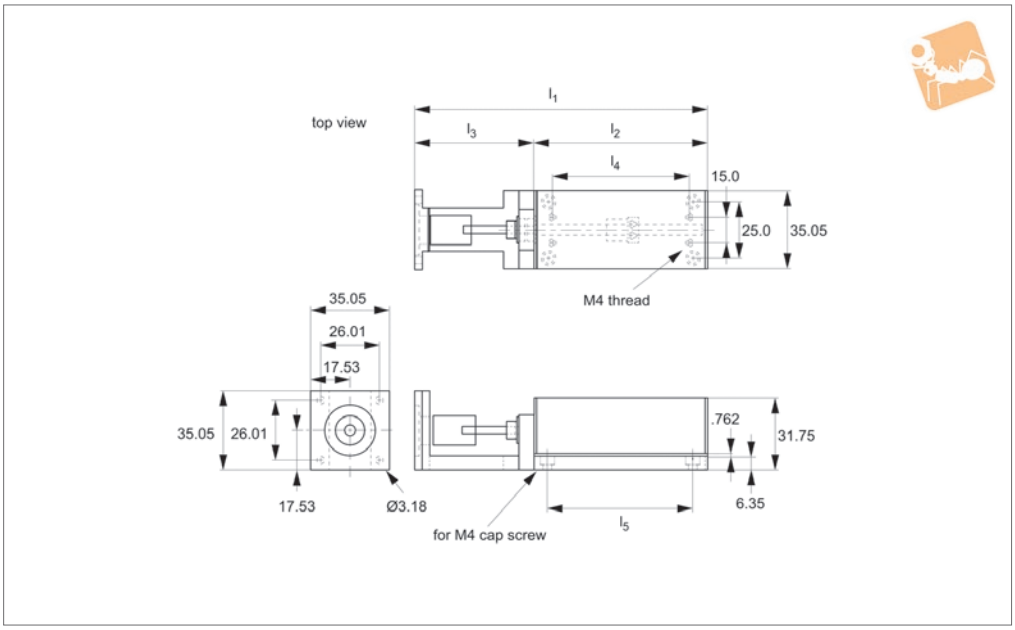
Order No.	l_1	l_2	l_3	l_4	l_5	l_6	l_7	w_1	Load kg max.
L3123.040	40	82.3	16	-	23.8	18.5	12	75	9.7
L3123.060	60	92.3	25	32	13.8	18.5	12	73.75	19.6
L3123.080	80	136	25	70	32.5	23.5	17	123.7	26.1
L3123.100	100	141	25	90	17.5	23.5	17	128.7	33.6

Lead Screw Driven Stages

size 1 light duty, prepared for motor



L3141



Material

Black anodised aluminium. Hardened cross roller or ball slides, lead screw with anti-backlash nut.

Technical Notes

Driven by lead screw 4.3mm diameter 0.5mm pitch lead with anti-backlash nut and zero backlash flexible coupling for 5mm motor shaft.

Cross roller versions are heavier duty.
Ready to accept Nema 14 motor. Max. 1200 rpm.
Accuracy 3µ/25mm, repeatability 3µ.

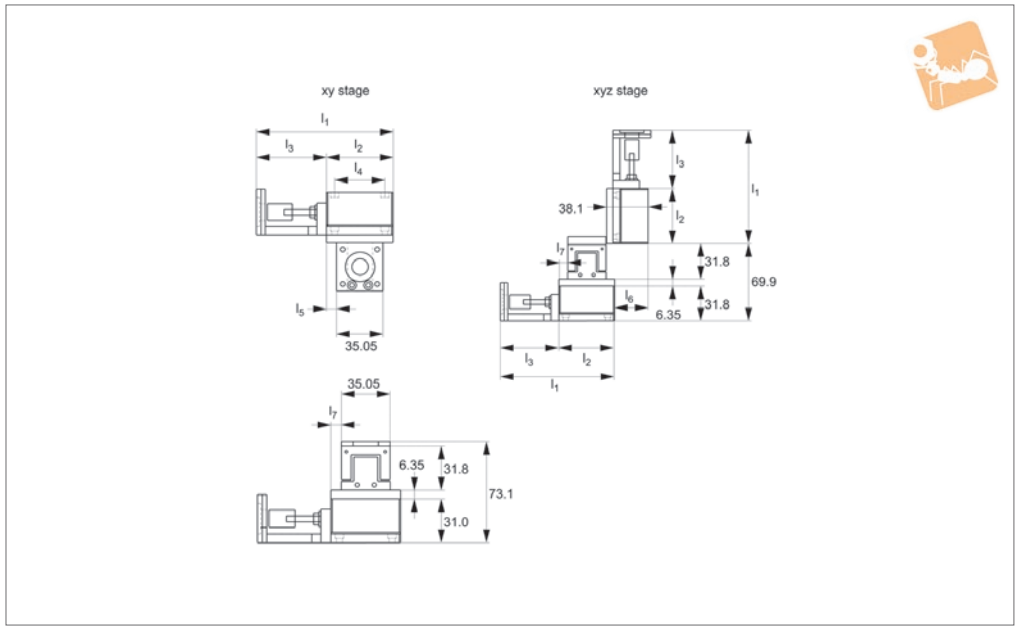
Tips

Supplied without motor. We can quote to supply motors or can also supply with a handwheel for manual operation.
Available in XY and XYZ combinations.

Important Notes

We can also offer end or travel and/or home position switches, normally open or normally closed, with 3 metre cables.
-EHP = end-of-travel and home switches, PNP.
-EHN = end-of-travel and home switches, NPN.

Order No.	Type	Travel	l_1	l_2	l_3	l_4	l_5	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw pitch	Load kg max.
L3141.025B-X	Ball	25	103.4	50.8	52.6	35	37	0.6	0.6	0.7	0.5	3.6
L3141.050B-X	Ball	50	128.8	76.2	52.6	60	60	0.8	1.3	1.4	0.5	4.5
L3141.075B-X	Ball	75	154.2	101.6	52.6	85	85	1.0	2.2	2.3	0.5	6.8
L3141.100B-X	Ball	100	211.3	152.4	58.9	135	100	1.4	5.5	5.8	0.5	9.1
L3141.025R-X	Roller	25	103.4	50.8	52.6	35	37	5.5	6.6	7.0	0.5	6.8
L3141.050R-X	Roller	50	128.8	76.2	52.6	60	60	6.3	9.5	10.0	0.5	9.1
L3141.075R-X	Roller	75	154.2	101.6	52.6	85	85	7.3	15.6	16.3	0.5	13.6
L3141.100R-X	Roller	100	211.3	152.4	58.9	135	100	12.8	46.7	49.1	0.5	18.1





L3141.XY

Material
Black anodised aluminium. Hardened cross roller or ball slides, lead screw with anti-backlash nut.

Technical Notes
Driven by lead screw 4.3mm diameter 0.5mm pitch lead with anti-backlash nut and zero backlash flexible coupling for 5mm motor shaft. Cross roller versions are heavier duty.

Ready to accept Nema 14 motor. Max. 1200 rpm.
Accuracy 3µ/25mm, repeatability 3µ.

Tips
For other fixing and mounting hole dimensions refer to the X stage layout. Supplied without motor. We can quote to supply motors or can also supply with a hand-wheel for manual operation.
Available in XY and XYZ combinations.

Important Notes
We can also offer end or travel and/or home position switches, normally open or normally closed, with 3 metre cables.
-EHP = end-of-travel and home switches, PNP.
-EHN = end-of-travel and home switches, NPN.

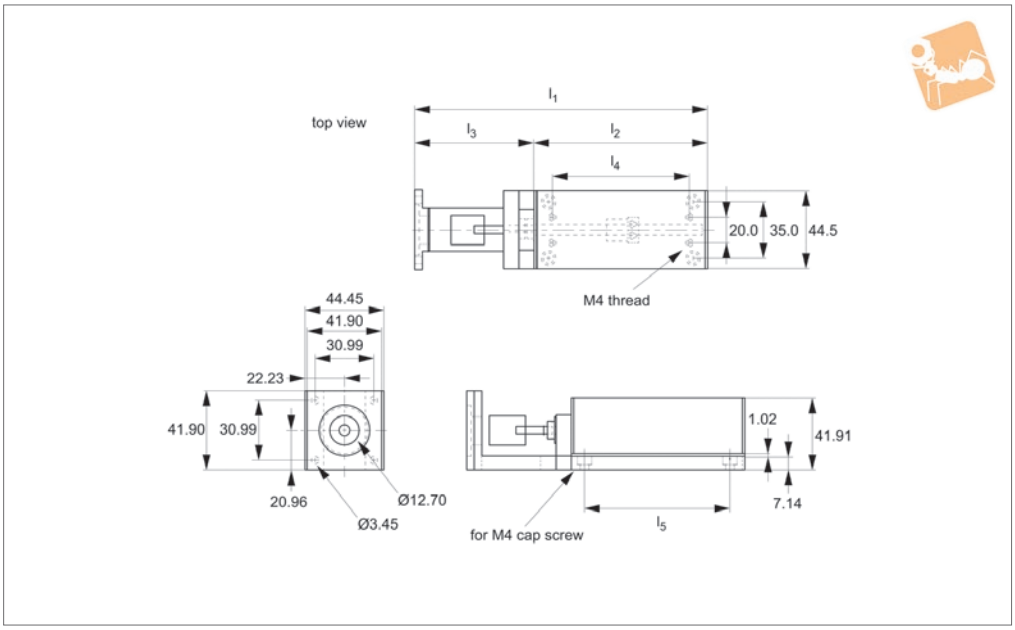
Order No.	Type	Travel	l_1	l_2	l_3	l_4	l_5	l_6	l_7	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw pitch	Load kg max.
L3141.025B-XY	XY Ball	25	103,4	50,8	52,6	35	37	30,20	7,87	0,63	0,68	0,71	0,5	3,6
L3141.050B-XY	XY Ball	50	128,8	76,2	52,6	60	60	17,52	20,57	0,83	1,36	1,42	0,5	4,5
L3141.075B-XY	XY Ball	75	154,2	101,6	52,6	85	85	25,15	34,04	1,04	2,26	2,37	0,5	6,8
L3141.100B-XY	XY Ball	100	211,3	152,4	58,9	135	100	25,15	58,67	1,46	5,54	5,81	0,5	9,1
L3141.025R-XY	XY Roller	25	103,4	50,8	52,6	35	37	30,20	7,87	5,50	6,68	7,02	0,5	6,8
L3141.050R-XY	XY Roller	50	128,8	76,2	52,6	60	60	17,52	20,57	6,29	9,55	10,03	0,5	9,1
L3141.075R-XY	XY Roller	75	154,2	101,6	52,6	85	85	25,15	34,04	7,34	15,59	16,37	0,5	13,6
L3141.100R-XY	XY Roller	100	211,3	152,4	58,9	135	100	25,15	58,67	12,84	46,77	49,11	0,5	18,1
L3141.025B-XYZ	XYZ Ball	25	103,4	50,8	52,6	35	37	30,20	7,87	0,63	0,68	0,71	0,5	3,6
L3141.050B-XYZ	XYZ Ball	50	128,8	76,2	52,6	60	60	17,52	20,57	0,83	1,36	1,42	0,5	4,5
L3141.075B-XYZ	XYZ Ball	75	154,2	101,6	52,6	85	85	25,15	34,04	1,04	2,26	2,37	0,5	6,8
L3141.100B-XYZ	XYZ Ball	100	211,3	152,4	58,9	135	100	25,15	58,67	1,46	5,54	5,81	0,5	9,1
L3141.025R-XYZ	XYZ Roller	25	103,4	50,8	52,6	35	37	30,20	7,87	5,50	6,68	7,02	0,5	6,8
L3141.050R-XYZ	XYZ Roller	50	128,8	76,2	52,6	60	60	17,52	20,57	6,29	9,55	10,03	0,5	9,1
L3141.075R-XYZ	XYZ Roller	75	154,2	101,6	52,6	85	85	25,15	34,04	7,34	15,59	16,37	0,5	13,6
L3141.100R-XYZ	XYZ Roller	100	211,3	152,4	58,9	135	100	25,15	58,67	12,84	46,77	49,11	0,5	18,1

Lead Screw Driven Stages

size 2 medium duty, prepared for motor



L3142



Material

Black anodised aluminium. Hardened cross roller or ball slides, lead screw with anti-backlash nut.

Technical Notes

Driven by lead screw 6.3mm diameter 2mm pitch lead with anti-backlash nut and zero backlash flexible coupling for 5mm motor shaft. Cross roller versions are heavier duty.

For other lead screw pitches replace -02X with -01X (for 1mm) and -03X (for 3mm). Ready to accept Nema 17 motor. Max. 1200 rpm.
Accuracy 3µ/25mm, repeatability 3µ.

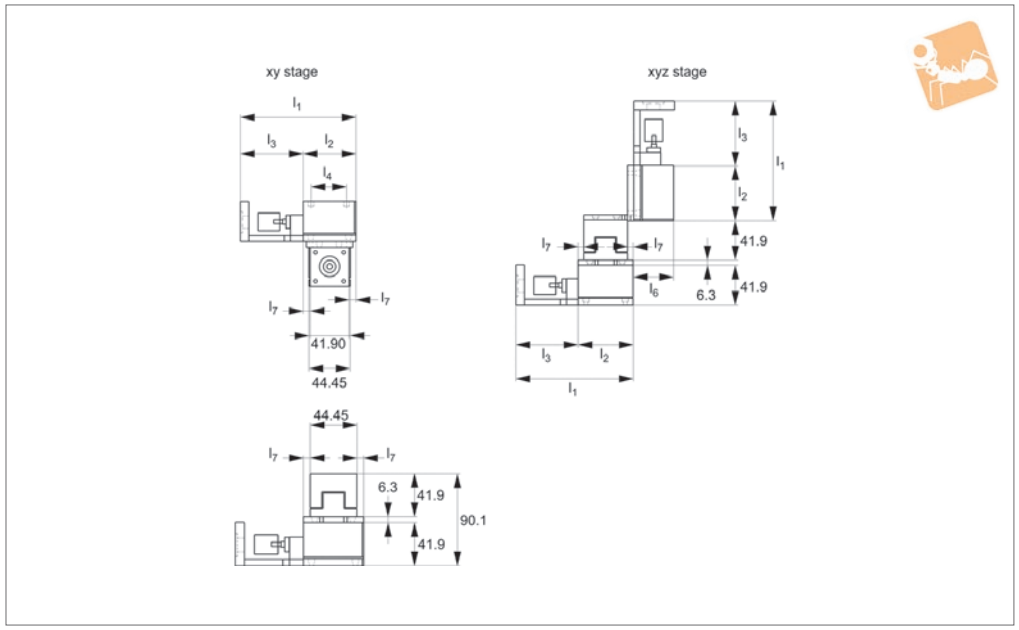
Tips

Supplied without motor. We can quote to supply motors or can also supply with a handwheel for manual operation.
Available in XY and XYZ combinations.

Important Notes

We can also offer end or travel and/or home position switches, normally open or normally closed, with 3 metre cables.
-EHP = end-of-travel and home switches, PNP.
-EHN = end-of-travel and home switches, NPN.

Order No.	Type	Travel	l_1	l_2	l_3	l_4	l_5	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw pitch	Load kg max.
L3142.025B-02X	Ball	25	124.0	57.2	66.8	35	38	0.9	0.9	0.9	2	4.5
L3142.038B-02X	Ball	38	143.0	76.2	66.8	55	55	1.4	2.0	2.1	2	6.8
L3142.050B-02X	Ball	50	155.7	88.9	66.8	65	65	2.0	3.3	3.5	2	9.1
L3142.075B-02X	Ball	75	174.8	108.0	66.8	85	85	2.5	4.7	4.9	2	11.0
L3142.100B-02X	Ball	100	219.2	152.4	66.8	140	100	2.8	9.5	9.9	2	14.0
L3142.025R-02X	Roller	25	124.0	57.2	66.8	35	38	6.3	6.6	7.0	2	9.1
L3142.038R-02X	Roller	38	143.0	76.2	66.8	55	55	7.0	10.4	11.1	2	14.0
L3142.050R-02X	Roller	50	155.7	88.9	66.8	65	65	8.4	13.3	14.0	2	18.0
L3142.075R-02X	Roller	75	174.8	108.0	66.8	85	85	9.9	15.6	16.3	2	23.0
L3142.100R-02X	Roller	100	219.2	152.4	66.8	140	100	14.8	46.7	49.1	2	27.0





L3142.XY

Material
Black anodised aluminium. Hardened cross roller or ball slides, lead screw with anti-backlash nut.

Technical Notes
Driven by lead screw 6.3mm diameter 2mm pitch lead with anti-backlash nut and zero backlash flexible coupling for 5mm motor shaft. Cross roller versions are heavier duty.

For other lead screw pitches replace -02X with -01X (for 1mm) and -03X (for 3mm). Ready to accept Nema 17 motor. Max. 1200 rpm.
Accuracy 3µ/25mm, repeatability 3µ.

Tips
For other fixing and mounting hole dimensions refer to the X stage layout. Supplied without motor. We can quote to supply motors or can also supply with a hand-wheel for manual operation.
Available in XY and XYZ combinations.

Important Notes
We can also offer end or travel and/or home position switches, normally open or normally closed, with 3 metre cables.
-EHP = end-of-travel and home switches, PNP.
-EHN = end-of-travel and home switches, NPN.

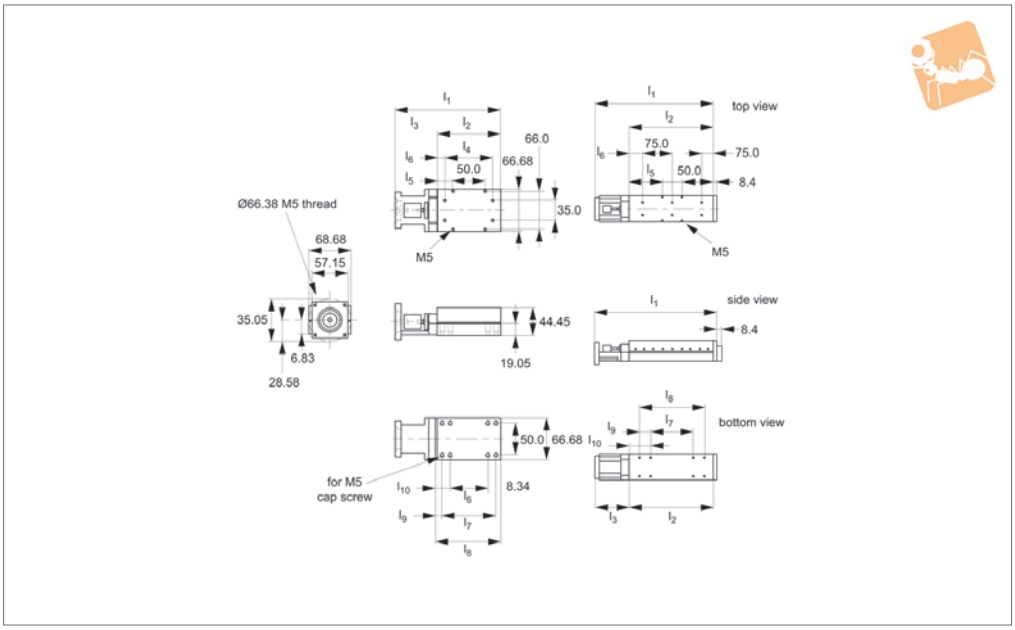
Order No.	Type	Travel	l_1	l_2	l_3	l_4	l_5	l_6	l_7	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw pitch	Load kg max.
L3142.025B-02XY	XY Ball	25	124,0	57,2	66,8	35	38	41,91	6,35	0,93	0,90	0,95	2	4,5
L3142.038B-02XY	XY Ball	38	143,0	76,2	66,8	55	55	32,39	15,88	1,44	2,03	2,14	2	6,8
L3142.050B-02XY	XY Ball	50	155,7	88,9	66,8	65	65	26,04	22,23	2,02	3,32	3,49	2	9,1
L3142.075B-02XY	XY Ball	75	174,8	108,0	66,8	85	85	16,51	31,75	2,50	4,70	4,94	2	11,0
L3142.100B-02XY	XY Ball	100	219,2	152,4	66,8	140	100	45,09	53,98	2,88	9,49	9,97	2	14,0
L3142.025R-02XY	XY Roller	25	124,0	57,2	66,8	35	38	41,91	6,35	6,34	6,68	7,02	2	9,1
L3142.038R-02XY	XY Roller	38	143,0	76,2	66,8	55	55	32,39	15,88	7,06	10,42	11,12	2	14,0
L3142.050R-02XY	XY Roller	50	155,7	88,9	66,8	65	65	26,04	22,23	8,46	13,36	14,03	2	18,0
L3142.075R-02XY	XY Roller	75	174,8	108,0	66,8	85	85	16,51	31,75	9,86	15,59	16,29	2	23,0
L3142.100R-02XY	XY Roller	100	219,2	152,4	66,8	140	100	45,09	53,98	14,80	46,77	49,11	2	27,0
L3142.025B-02XYZ	XYZ Ball	25	124,0	57,2	66,8	35	38	41,91	6,35	0,93	0,90	0,95	2	4,5
L3142.038B-02XYZ	XYZ Ball	38	143,0	76,2	66,8	55	55	32,39	15,88	1,44	2,03	2,14	2	6,8
L3142.050B-02XYZ	XYZ Ball	50	155,7	88,9	66,8	65	65	26,04	22,23	2,02	3,32	3,49	2	9,1
L3142.075B-02XYZ	XYZ Ball	75	174,8	108,0	66,8	85	85	16,51	31,75	2,50	4,70	4,94	2	11,0
L3142.100B-02XYZ	XYZ Ball	100	219,2	152,4	66,8	140	100	45,09	53,98	2,88	9,49	9,97	2	14,0
L3142.025R-02XYZ	XYZ Roller	25	124,0	57,2	66,8	35	38	41,91	6,35	6,34	6,68	7,02	2	9,1
L3142.038R-02XYZ	XYZ Roller	38	143,0	76,2	66,8	55	55	32,385	15,88	7,06	10,42	11,12	2	14,0
L3142.050R-02XYZ	XYZ Roller	50	155,7	88,9	66,8	65	65	26,035	22,23	8,46	13,36	14,03	2	18,0
L3142.075R-02XYZ	XYZ Roller	75	174,8	108,0	66,8	85	85	16,51	31,75	9,86	15,59	16,29	2	23,0
L3142.100R-02XYZ	XYZ Roller	100	219,2	152,4	66,8	140	100	45,085	53,98	14,80	46,77	49,11	2	27,0

Lead Screw Driven Stages

size 3 medium duty, prepared for motor



L3143



Material

Black anodised aluminium. Hardened cross roller or ball slides, lead screw with anti-backlash nut.

Technical Notes

Driven by lead screw 10mm diameter 2mm pitch lead with anti-backlash nut and zero backlash flexible coupling for 8mm motor shaft. Cross roller versions are heavier duty.

For other lead screw pitches replace -02X with -03X (for 3mm) and -20X (for 20mm). Ready to accept Nema 23 motor. Max. 1200 rpm (for 2mm pitch) and 600 rpm for 3mm and 20mm lead screw pitch options. Accuracy 3µ/25mm, repeatability 3µ.

Tips

Supplied without motor. We can quote to supply motors or can also supply with a handwheel for manual operation. Available in XY and XYZ combinations.

Important Notes

We can also offer end or travel and/or home position switches, normally open or normally closed, with 3 metre cables.
-EHP = end-of-travel and home switches, PNP.
-EHN = end-of-travel and home switches, NPN.

Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_{10}	l_{11}	l_{12}
L3143.025B-02X	Ball	25	95	-	8	143	8.0	5	52
L3143.050B-02X	Ball	50	95	-	8	168	21.0	17	40
L3143.075B-02X	Ball	75	95	-	8	194	33.5	30	27
L3143.100B-02X	Ball	100	95	-	19	219	46.0	43	14
L3143.150B-02X	Ball	150	104	10	44	321	64.5	81	-24
L3143.200B-02X	Ball	200	104	10	70	397	64.5	106	-49
L3143.250B-02X	Ball	250	104	10	95	473	65.0	132	-75
L3143.300B-02X	Ball	300	104	10	121	549	65.5	157	-100
L3143.025R-02X	Roller	25	95	-	8	143	8.0	5	52
L3143.050R-02X	Roller	50	95	-	8	168	21.0	17	40
L3143.075R-02X	Roller	75	95	-	8	194	33.5	30	27
L3143.100R-02X	Roller	100	95	-	19	219	46.0	43	14
L3143.150R-02X	Roller	150	104	10	44	321	64.5	81	-24
L3143.200R-02X	Roller	200	104	10	70	397	64.5	106	-49
L3143.250R-02X	Roller	250	104	10	95	473	65.0	132	-75
L3143.300R-02X	Roller	300	104	10	121	549	65.5	157	-100

Order No.	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw pitch	Load kg max.
L3143.025B-02X	76	67	55	13.0	10.5	60	-	-	2.47	1.9	2.0	2	14
L3143.050B-02X	102	67	75	26.0	13.5	60	85	8.5	5.11	6.8	7.2	2	16
L3143.075B-02X	127	67	100	38.5	13.5	60	110	8.5	7.25	12.5	13.1	2	18
L3143.100B-02X	152	67	125	51.0	13.5	60	135	8.5	9.72	10.5	21.5	2	20
L3143.150B-02X	229	92	-	89.5	39.5	100	175	27.0	12.35	40.3	42.3	2	25
L3143.200B-02X	279	118	-	114.5	27.0	150	225	27.0	13.84	49.9	53.9	2	27
L3143.250B-02X	330	143	-	140.0	15.0	200	275	27.5	16.03	71.1	75.1	2	34

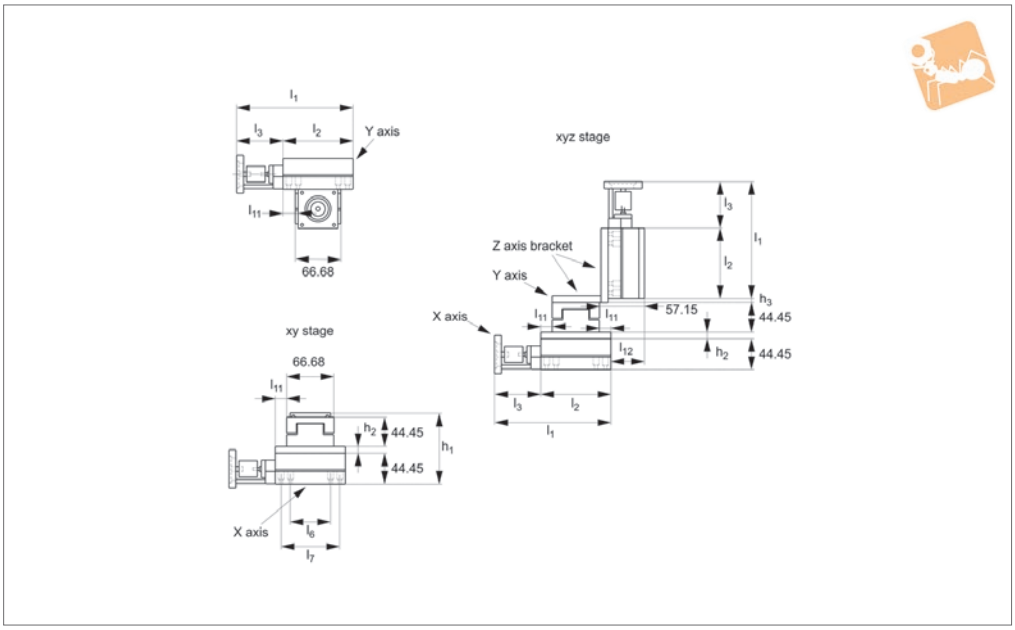
Order No.	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw pitch	Load kg max.
L3143.300B-02X	381	168	-	165.5	40.5	250	325	28.0	16.89	81.0	85.1	2	41
L3143.025R-02X	76	67	55	13.0	10.5	60	-	-	21.54	17.9	18.8	2	27
L3143.050R-02X	102	67	75	26.0	13.5	60	85	8.5	28.72	35.8	37.5	2	32
L3143.075R-02X	127	67	100	38.5	13.5	60	110	8.5	35.91	59.6	62.6	2	36
L3143.100R-02X	152	67	125	51.0	13.5	60	135	8.5	42.75	74.5	78.3	2	41
L3143.150R-02X	229	92	-	89.5	39.5	100	175	27.0	57.45	167.0	175.4	2	50
L3143.200R-02X	279	118	-	114.5	27.0	150	225	27.0	64.35	206.8	223.3	2	54
L3143.250R-02X	330	143	-	140.0	15.0	200	275	27.5	74.54	294.6	311.2	2	68
L3143.300R-02X	381	168	-	165.5	40.5	250	325	28.0	78.78	324.4	352.7	2	82

Lead Screw Driven XY & XYZ Stages

size 3 medium duty, prepared for motor



L3143.XY



Material

Black anodised aluminium. Hardened cross roller or ball slides, lead screw with anti-backlash nut.

Technical Notes

Driven by lead screw 10mm diameter 2mm pitch lead with anti-backlash nut and zero backlash flexible coupling for 8mm motor shaft. Cross roller versions are heavier duty.
For other lead screw pitches replace -02X with -03X (for 3mm) and -20X (for 20mm). Ready to accept Nema 23 motor. Max. 1200 rpm (for 2mm pitch) and 600 rpm for 3mm and 20mm lead screw pitch options. Accuracy 3µ/25mm, repeatability 3µ.

Tips

For other fixing and mounting hole dimensions refer to the X stage layout. Supplied without motor. We can quote to supply motors or can also supply with a hand-wheel for manual operation.
Available in XY and XYZ combinations.

Important Notes

We can also offer end or travel and/or home position switches, normally open or normally closed, with 3 metre cables.
-EHP = end-of-travel and home switches, PNP.
-EHN = end-of-travel and home switches, NPN.

Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_{10}	l_{11}	l_{12}
L3143.025B-02XY	XY Ball	25	95	-	8	143	8.0	5	52
L3143.050B-02XY	XY Ball	50	95	-	8	168	21.0	17	40
L3143.075B-02XY	XY Ball	75	95	-	8	194	33.5	30	27
L3143.100B-02XY	XY Ball	100	95	-	19	219	46.0	43	14
L3143.150B-02XY	XY Ball	150	104	10	44	321	64.5	81	-24
L3143.200B-02XY	XY Ball	200	104	10	70	397	64.5	106	-49
L3143.250B-02XY	XY Ball	250	104	10	95	473	65.0	132	-75
L3143.300B-02XY	XY Ball	300	104	10	121	549	65.5	157	-100
L3143.025R-02XY	XY Roller	25	95	-	8	143	8.0	5	52
L3143.050R-02XY	XY Roller	50	95	-	8	168	21.0	17	40
L3143.075R-02XY	XY Roller	75	95	-	8	194	33.5	30	27
L3143.100R-02XY	XY Roller	100	95	-	19	219	46.0	43	14
L3143.150R-02XY	XY Roller	150	104	10	44	321	64.5	81	-24
L3143.200R-02XY	XY Roller	200	104	10	70	397	64.5	106	-49
L3143.250R-02XY	XY Roller	250	104	10	95	473	65.0	132	-75
L3143.300R-02XY	XY Roller	300	104	10	121	549	65.5	157	-100
L3143.025B-02XYZ	XYZ Ball	25	95	-	8	143	8.0	5	52
L3143.050B-02XYZ	XYZ Ball	50	95	-	8	168	21.0	17	40
L3143.075B-02XYZ	XYZ Ball	75	95	-	8	194	33.5	30	27
L3143.100B-02XYZ	XYZ Ball	100	95	-	19	219	46.0	43	14
L3143.150B-02XYZ	XYZ Ball	150	104	10	44	321	64.5	81	-24
L3143.200B-02XYZ	XYZ Ball	200	104	10	70	397	64.5	106	-49
L3143.250B-02XYZ	XYZ Ball	250	104	10	95	473	65.0	132	-75
L3143.300B-02XYZ	XYZ Ball	300	104	10	121	549	65.5	157	-100
L3143.025R-02XYZ	XYZ Roller	25	95	-	8	143	8.0	5	52
L3143.050R-02XYZ	XYZ Roller	50	95	-	8	168	21.0	17	40

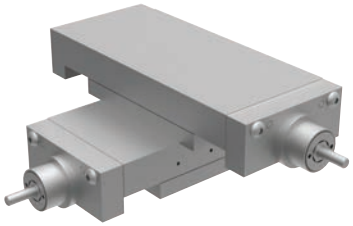
Order No.	Type	Travel	h_1	h_2	h_3	l_1	l_{10}	l_{11}	l_{12}
L3143.075R-02XYZ	XYZ Roller	75	95	-	8	194	33.5	30	27
L3143.100R-02XYZ	XYZ Roller	100	95	-	19	219	46.0	43	14
L3143.150R-02XYZ	XYZ Roller	150	104	10	44	321	64.5	81	-24
L3143.200R-02XYZ	XYZ Roller	200	104	10	70	397	64.5	106	-49
L3143.250R-02XYZ	XYZ Roller	250	104	10	95	473	65.0	132	-75
L3143.300R-02XYZ	XYZ Roller	300	104	10	121	549	65.5	157	-100

Order No.	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw pitch	Load kg max.
L3143.025B-02XY	76	67	55	13.0	10.5	60	-	-	2.47	1.90	1.99	2	14
L3143.050B-02XY	102	67	75	26.0	13.5	60	85	8.5	5.11	6.86	7.21	2	16
L3143.075B-02XY	127	67	100	38.5	13.5	60	110	8.5	7.25	12.53	13.15	2	18
L3143.100B-02XY	152	67	125	51.0	13.5	60	135	8.5	9.72	10.53	21.56	2	20
L3143.150B-02XY	229	92	-	89.5	39.5	100	175	27.0	12.35	40.34	42.35	2	25
L3143.200B-02XY	279	118	-	114.5	27.0	150	225	27.0	13.84	49.94	53.92	2	27
L3143.250B-02XY	330	143	-	140.0	15.0	200	275	27.5	16.03	71.14	75.16	2	34
L3143.300B-02XY	381	168	-	165.5	40.5	250	325	28.0	16.89	81.07	85.12	2	41
L3143.025R-02XY	76	67	55	13.0	10.5	60	-	-	21.54	17.90	18.79	2	27
L3143.050R-02XY	102	67	75	26.0	13.5	60	85	8.5	28.72	35.79	37.58	2	32
L3143.075R-02XY	127	67	100	38.5	13.5	60	110	8.5	35.91	59.66	62.64	2	36
L3143.100R-02XY	152	67	125	51.0	13.5	60	135	8.5	42.75	74.57	78.30	2	41
L3143.150R-02XY	229	92	-	89.5	39.5	100	175	27.0	57.45	167.04	175.39	2	50
L3143.200R-02XY	279	118	-	114.5	27.0	150	225	27.0	64.35	206.81	223.29	2	54
L3143.250R-02XY	330	143	-	140.0	15.0	200	275	27.5	74.54	294.61	311.25	2	68
L3143.300R-02XY	381	168	-	165.5	40.5	250	325	28.0	78.78	324.41	352.70	2	82
L3143.025B-02XYZ	76	67	55	13.0	10.5	60	-	-	2.47	1.90	1.99	2	14
L3143.050B-02XYZ	102	67	75	26.0	13.5	60	85	8.5	5.11	6.86	7.21	2	16
L3143.075B-02XYZ	127	67	100	38.5	13.5	60	110	8.5	7.25	12.53	13.15	2	18
L3143.100B-02XYZ	152	67	125	51.0	13.5	60	135	8.5	9.72	10.53	21.56	2	20
L3143.150B-02XYZ	229	92	-	89.5	39.5	100	175	27.0	12.35	40.34	42.35	2	25
L3143.200B-02XYZ	279	118	-	114.5	27.0	150	225	27.0	13.84	49.94	53.92	2	27
L3143.250B-02XYZ	330	143	-	140.0	15.0	200	275	27.5	16.03	71.14	75.16	2	34
L3143.300B-02XYZ	381	168	-	165.5	40.5	250	325	28.0	16.89	81.07	85.12	2	41
L3143.025R-02XYZ	76	67	55	13.0	10.5	60	-	-	21.54	17.90	18.79	2	27
L3143.050R-02XYZ	102	67	75	26.0	13.5	60	85	8.5	28.72	35.79	37.58	2	32
L3143.075R-02XYZ	127	67	100	38.5	13.5	60	110	8.5	35.91	59.66	62.64	2	36
L3143.100R-02XYZ	152	67	125	51.0	13.5	60	135	8.5	42.75	74.57	78.30	2	41
L3143.150R-02XYZ	229	92	-	89.5	39.5	100	175	27.0	57.45	167.04	175.39	2	50
L3143.200R-02XYZ	279	118	-	114.5	27.0	150	225	27.0	64.35	206.81	223.29	2	54
L3143.250R-02XYZ	330	143	-	140.0	15.0	200	275	27.5	74.54	294.61	311.25	2	68
L3143.300R-02XYZ	381	168	-	165.5	40.5	250	325	28.0	78.78	324.41	352.70	2	82

Heavy Duty Linear Stages

Overview

Heavy duty linear stages

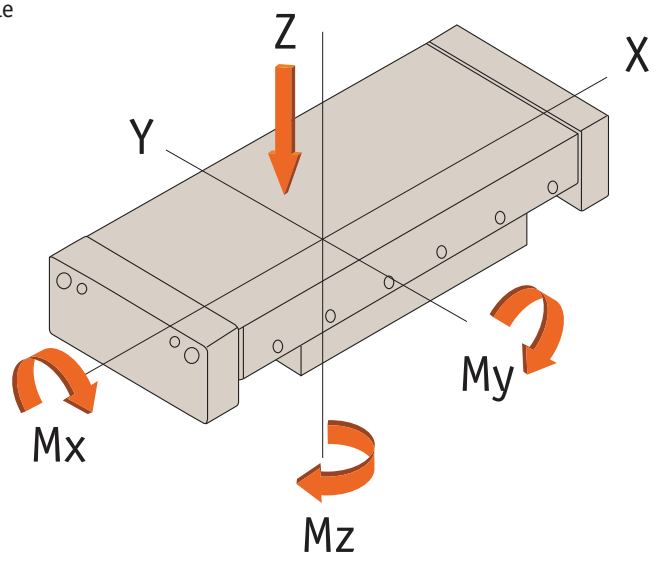
Plain stages	Lead screw & handle	Lead screw & knob
		
XYθ stage	**Motorised stage**	**XY stage**
		

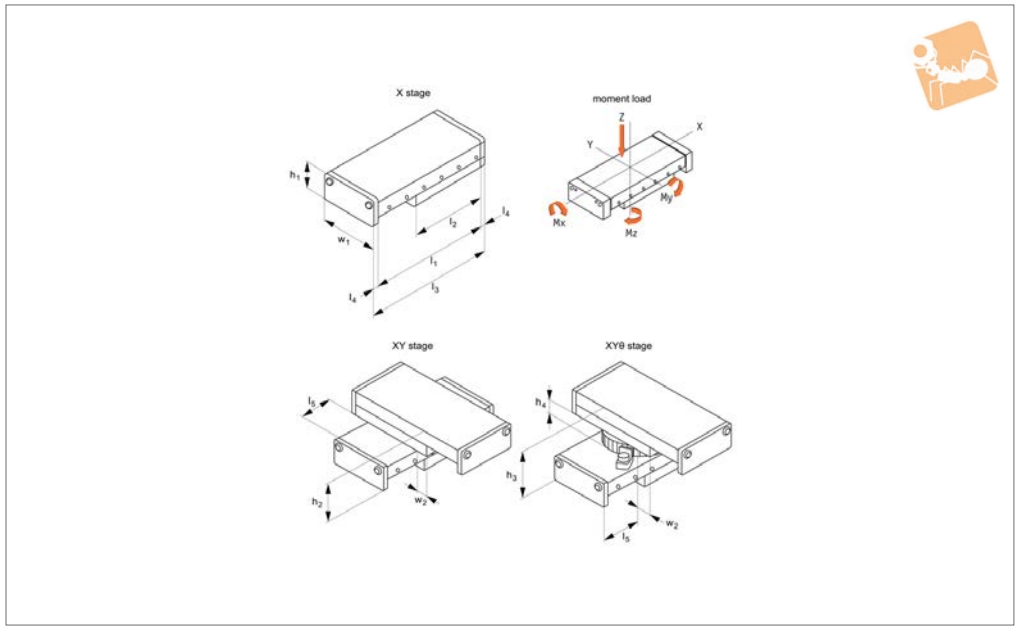
Available with the following sliding elements:

Cross roller:	For medium loads, low friction.
Dovetail:	Less expensive, higher friction, higher loads.
Needle roller:	Highest loads, low friction, more expensive.

Moment loads

All loads shown in tables are based upon an evenly distributed load with slide in centre position. All loads apply to a single slide.







L3170

Material
Cast iron body (ENGJL-250), with hardened cross roller linear rail set.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity. Other versions are also available - dovetail slides (L3480) for vibration damping, and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide. Coefficient of friction 0,003.

Tips
With no lead screw drive.
Replace -* with
-X for X axis stage
- XY for X,Y axes stage
-XYT for X,Y,. stage
Centre mounting of compound slides is standard. Please advise dimensions w_2 and l_5 when off-centre mounting is required.

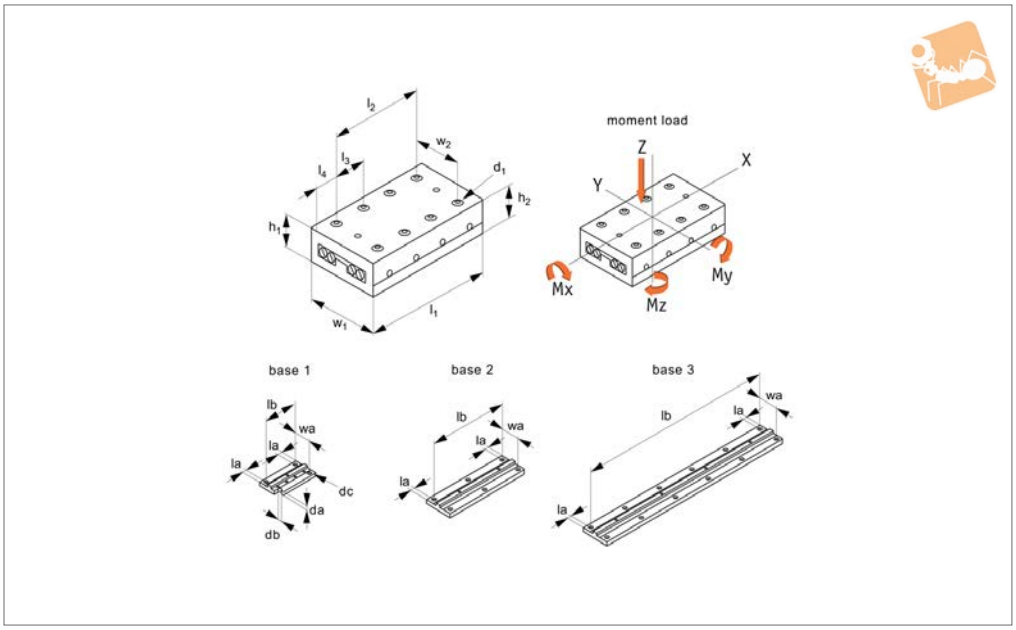
Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	w_1	Stroke	l_1	h_1	h_2	h_3	h_4	l_2	l_3	Weight kg
L3170.050-022-*	50	22	76	25	50	-	-	50	88	0.6
L3170.050-025-*	50	25	102	25	50	-	-	76	114	0.8
L3170.050-050-*	50	50	152	25	50	-	-	101	164	1.1
L3170.075-025-*	75	25	102	32	64	82	18	76	114	1.8
L3170.075-026-*	75	25	127	32	64	82	18	101	139	2.0
L3170.075-050-*	75	50	152	32	64	82	18	101	164	2.5
L3170.100-025-*	100	25	152	37	74	92	18	126	164	4.0
L3170.100-050-*	100	50	203	37	74	92	18	152	215	4.7
L3170.100-051-*	100	50	254	37	74	92	18	203	266	6.1
L3170.100-075-*	100	75	305	37	74	92	18	228	317	7.0
L3170.150-050-*	150	50	203	50	100	120	20	152	219	10.0
L3170.150-100-*	150	100	305	50	100	120	20	203	321	13.2
L3170.150-101-*	150	100	406	50	100	120	20	304	422	18.0
L3170.150-150-*	150	150	406	50	100	120	20	253	422	16.5
L3170.200-150-*	200	150	457	58	116	136	20	304	473	30.0
L3170.200-200-*	200	200	610	58	116	136	20	406	626	40.0
L3170.300-100-*	300	100	410	75	150	180	30	308	430	59.0
L3170.300-200-*	300	200	610	75	150	180	30	408	630	80.0
L3170.300-300-*	300	300	710	75	150	180	30	408	730	91.5
L3170.300-400-*	300	400	910	75	150	180	30	508	930	110
L3170.300-500-*	300	500	1010	75	150	180	30	508	1030	125
L3170.300-600-*	300	600	1210	75	150	180	30	608	1230	145

Plain Positioning Stages
cross roller



Order No.	l_4	l_5	w_2	Load kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3170.050-022-*	6	13.0	0.0	0.34	12	5.7	6.4
L3170.050-025-*	6	26.0	13.0	0.59	20	17	19
L3170.050-050-*	6	51.0	25.5	0.74	25	26	29
L3170.075-025-*	6	13.5	0.5	0.59	32	18	19
L3170.075-026-*	6	26.0	13.0	0.84	45	37	39
L3170.075-050-*	6	38.5	13.0	0.74	40	27	29
L3170.100-025-*	6	26.0	13.0	1.08	67	41	48
L3170.100-050-*	6	51.5	26.0	1.23	76	52	62
L3170.100-051-*	6	77.0	51.5	1.72	106	104	124
L3170.100-075-*	6	102.5	64.0	1.82	112	118	141
L3170.150-050-*	8	26.5	1.0	2.60	220	104	123
L3170.150-100-*	8	77.5	26.5	3.20	270	157	186
L3170.150-101-*	8	128.0	77.0	5.43	460	460	545
L3170.150-150-*	8	128.0	51.5	3.82	324	220	260
L3170.200-150-*	8	128.5	52.0	5.03	705	445	455
L3170.200-200-*	8	205.0	103.0	6.64	935	798	815
L3170.300-100-*	10	55.0	4.0	8.38	3190	800	825
L3170.300-200-*	10	155.0	54.0	10.4	3950	1205	1245
L3170.300-300-*	10	205.0	54.0	8.38	3190	800	825
L3170.300-400-*	10	305.0	104.0	10.4	3950	1205	1245
L3170.300-500-*	10	355.0	104.0	8.38	3190	800	825
L3170.300-600-*	10	455.0	154.0	10.4	3950	1205	1245





L3171

Material
Cast iron body (ENGJL-250), with hardened cross roller linear rail set.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Other versions are also available - dovetail slides (L3480) for vibration damping, and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position.
Coefficient of friction 0,003.

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	w_1	Stroke	d_1	d_a	d_b	d_c	l_1	h_1	h_2	Hole pattern	l_2	Weight kg
L3171.030-012	30	12	4.3	2.3	2.4	4.3	25	17	9.0	1	$1xl_3$	0.1
L3171.030-018	30	18	4.3	2.3	2.4	4.3	35	17	9.0	1	$2xl_3$	0.1
L3171.030-025	30	25	4.3	2.3	2.4	4.3	45	17	9.0	1	$3xl_3$	0.1
L3171.030-032	30	32	4.3	2.3	2.4	4.3	55	17	9.0	2	$4xl_3$	0.2
L3171.030-040	30	40	4.3	2.3	2.4	4.3	65	17	9.0	2	$5xl_3$	0.2
L3171.030-045	30	45	4.3	2.3	2.4	4.3	75	17	9.0	2	$6xl_3$	0.2
L3171.030-050	30	50	4.3	2.3	2.4	4.3	85	17	9.0	2	$7xl_3$	0.3
L3171.040-018	40	18	6.0	3.5	3.4	6.0	35	21	11.0	1	$1xl_3$	0.2
L3171.040-030	40	30	6.0	3.5	3.4	6.0	50	21	11.0	1	$2xl_3$	0.3
L3171.040-040	40	40	6.0	3.5	3.4	6.0	65	21	11.0	1	$3xl_3$	0.3
L3171.040-050	40	50	6.0	3.5	3.4	6.0	80	21	11.0	2	$4xl_3$	0.4
L3171.040-060	40	60	6.0	3.5	3.4	6.0	95	21	11.0	2	$5xl_3$	0.5
L3171.040-070	40	70	6.0	3.5	3.4	6.0	110	21	11.0	2	$6xl_3$	0.6
L3171.040-080	40	80	6.0	3.5	3.4	6.0	125	21	11.0	2	$7xl_3$	0.7
L3171.060-030	60	30	8.0	4.5	4.5	8.0	55	28	14.5	1	$1xl_3$	0.6
L3171.060-045	60	45	8.0	4.5	4.5	8.0	80	28	14.5	1	$2xl_3$	0.8
L3171.060-060	60	60	8.0	4.5	4.5	8.0	105	28	14.5	1	$3xl_3$	1.0
L3171.060-075	60	75	8.0	4.5	4.5	8.0	130	28	14.5	1	$4xl_3$	1.3
L3171.060-090	60	90	8.0	4.5	4.5	8.0	155	28	14.5	2	$5xl_3$	1.5
L3171.060-105	60	105	8.0	4.5	4.5	8.0	180	28	14.5	2	$6xl_3$	1.7
L3171.060-130	60	130	8.0	4.5	4.5	8.0	205	28	14.5	3	$7xl_3$	2.0
L3171.100-060	100	60	11.0	6.5	6.6	11.0	110	45	23.5	1	$1xl_3$	3.1
L3171.100-095	100	95	11.0	6.5	6.6	11.0	160	45	23.5	1	$2xl_3$	4.5
L3171.100-130	100	130	11.0	6.5	6.6	11.0	210	45	23.5	2	$3xl_3$	5.9
L3171.100-165	100	165	11.0	6.5	6.6	11.0	260	45	23.5	2	$4xl_3$	7.2
L3171.100-200	100	200	11.0	6.5	6.6	11.0	310	45	23.5	2	$5xl_3$	8.6
L3171.100-235	100	235	11.0	6.5	6.6	11.0	360	45	23.5	3	$6xl_3$	10.0
L3171.100-265	100	265	11.0	6.5	6.6	11.0	410	45	23.5	3	$7xl_3$	11.4
L3171.145-130	145	130	15.0	8.5	9.0	15.0	210	60	32.0	1	$1xl_3$	11.8

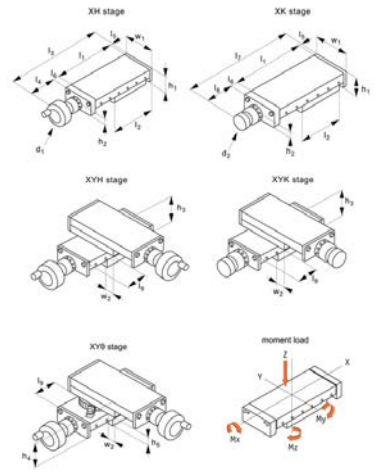
Plain Compact Positioning Stages

cross roller



Order No.	w_1	Stroke	d_1	d_a	d_b	d_c	l_1	h_1	h_2	Hole pattern	l_2	Weight kg
L3171.145-180	145	180	15.0	8.5	9.0	15.0	310	60	32.0	1	$2xl_3$	17.3
L3171.145-350	145	350	15.0	8.5	9.0	15.0	410	60	32.0	2	$3xl_3$	22.8
L3171.145-450	145	450	15.0	8.5	9.0	15.0	510	60	32.0	2	$4xl_3$	28.3
L3171.145-550	145	550	15.0	8.5	9.0	15.0	610	60	32.0	2	$5xl_3$	33.8
L3171.145-650	145	650	15.0	8.5	9.0	15.0	710	60	32.0	3	$6xl_3$	39.3
L3171.145-750	145	750	15.0	8.5	9.0	15.0	810	60	32.0	2	$7xl_3$	44.8
L3171.145-850	145	850	15.0	8.5	9.0	15.0	910	60	32.0	3	$8xl_3$	50.3
L3171.145-950	145	950	15.0	8.5	9.0	15.0	1010	60	32.0	2	$9xl_3$	55.8

Order No.	l_3	l_4	l_a	l_b	w_2	w_a	Load kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3171.030-012	10	7.5	3.5	1x18	18.4	22	0.16	1.4	0.4	0.4
L3171.030-018	10	7.5	3.5	1x18	18.4	22	0.28	2.4	1.2	1.3
L3171.030-025	10	7.5	3.5	1x38	18.5	22	0.36	3.0	2.1	2.4
L3171.030-032	10	7.5	3.5	1x10 / 1x28 / 1x10	18.6	22	0.44	3.7	3.3	3.7
L3171.030-040	10	7.5	3.5	1x10 / 1x38 / 1x10	18.7	22	0.52	4.4	4.7	5.2
L3171.030-045	10	7.5	3.5	1x10 / 1x48 / 1x10	18.8	22	0.60	5.1	6.6	7.3
L3171.030-050	10	7.5	3.5	1x10 / 1x58 / 1x10	18.9	22	0.72	6.1	9.3	10
L3171.040-018	15	10	5.0	1x25	25.0	30	0.29	3.8	1.3	1.5
L3171.040-030	15	10	5.0	1x40	25.0	30	0.41	5.4	2.9	3.2
L3171.040-040	15	10	5.0	1x55	25.0	30	0.59	7.7	5.9	6.6
L3171.040-050	15	10	5.0	1x15 / 1x40 / 1x15	25.0	30	0.71	9.2	9.1	10
L3171.040-060	15	10	5.0	1x15 / 1x55 / 1x15	25.0	30	0.89	11	14	15
L3171.040-070	15	10	5.0	1x15 / 1x70 / 1x15	25.0	30	1.01	13	18	21
L3171.040-080	15	10	5.0	1x15 / 1x85 / 1x15	25.0	30	1.19	15	25	28
L3171.060-030	25	15	10.0	1x35	39.0	40	0.70	12	5.1	5.6
L3171.060-045	25	15	10.0	1x60	39.0	40	1.0	18	11	13
L3171.060-060	25	15	10.0	1x85	39.0	40	1.40	25	23	25
L3171.060-075	25	15	10.0	1x110	39.0	40	1.70	30	36	40
L3171.060-090	25	15	10.0	1x25 / 1x85 / 1x25	39.0	40	2.10	38	54	60
L3171.060-105	25	15	10.0	1x25 / 1x110 / 1x25	39.0	40	2.40	43	73	81
L3171.060-130	25	15	10.0	2x25 / 1x85 / 2x22	39.0	40	27.0	49	91	101
L3171.100-060	50	30	10.0	1x90	64.0	60	2.05	59	28	33
L3171.100-095	50	30	10.0	1x140	64.0	60	3.20	93	70	83
L3171.100-130	50	30	10.0	1x50 / 1x85 / 1x50	64.0	60	4.37	127	131	156
L3171.100-165	50	30	10.0	1x50 / 1x140 / 1x50	64.0	60	5.20	152	200	235
L3171.100-200	50	30	10.0	1x50 / 1x190 / 1x50	64.0	60	6.40	186	295	350
L3171.100-235	50	30	10.0	2x50 / 1x140 / 1x50	64.0	60	7.28	210	395	470
L3171.100-265	50	30	10.0	2x50 / 1x190 / 1x50	64.0	60	8.45	245	530	635
L3171.145-130	100	55	55.0	1x100	98.0	90	6.90	270	180	210
L3171.145-180	100	55	55.0	1x200	98.0	90	11.5	455	500	590
L3171.145-350	100	55	55.0	3x100	98.0	90	12.2	485	575	680
L3171.145-450	100	55	55.0	1x100/1x200/1x100	98.0	90	14.5	575	855	1010
L3171.145-550	100	55	55.0	5x100	98.0	90	17.6	695	1240	1465
L3171.145-650	100	55	55.0	2x10/1x200/2x100	98.0	90	19.9	790	1635	1930
L3171.145-750	100	55	55.0	7x100	98.0	90	23.0	910	2155	2545
L3171.145-850	100	55	55.0	3x100/1x200/3x100	98.0	90	25.3	1000	2665	3150
L3171.145-950	100	55	55.0	9x100	98.0	90	28.3	1125	3320	3920





L3172

Material
Cast iron body (ENGJL-250), with hardened cross roller linear rail set. Hardened and ground lead screw, pitch accuracy ±0.02mm/300mm.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity. Other versions are also available - dovetail slides (L3480) for vibration damping, and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide. Coefficient of friction 0,003.

Tips
Replace -* with
-XH for X axis stage with handle
-XK for X axis stage with knob
-XYH for X,Y axes stage with handle
-XYK for X,Y axes stage with knob
-XYTH for X,Y,. stage with handle
-XYTK for X,Y,. stage with knob

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

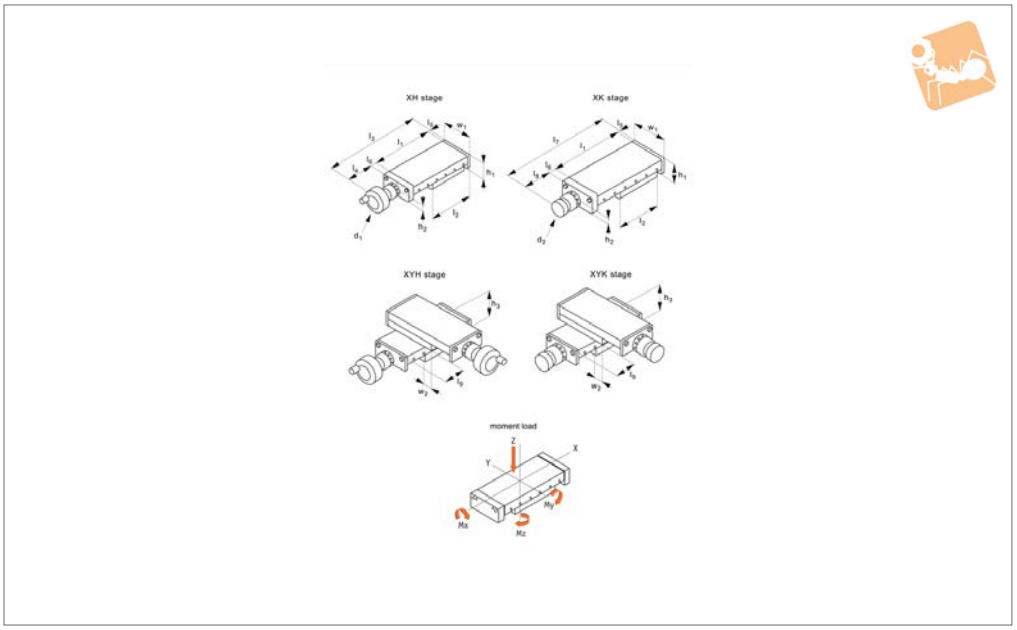
Order No.	w_1	Stroke	d_1	d_2	l_1	h_1	h_2	h_3	h_4	h_5	l_2	l_3	Weight kg
L3172.050-022-*	50	22	50	23.9	76	25	12.5	50	-	-	50	156	0.6
L3172.050-025-*	50	25	50	23.9	102	25	12.5	50	-	-	76	182	0.8
L3172.050-050-*	50	50	50	23.9	152	25	12.5	50	-	-	101	232	1.1
L3172.075-025-*	75	25	56	31	102	32	16.0	64	82	18	76	193	1.8
L3172.075-026-*	75	25	56	31	127	32	16.0	64	82	18	101	218	2.0
L3172.075-050-*	75	50	56	31	152	32	16.0	64	82	18	101	243	2.5
L3172.100-025-*	100	25	56	35	152	37	18.0	74	92	18	126	243	4.0
L3172.100-050-*	100	50	56	35	203	37	18.0	74	92	18	152	294	4.7
L3172.100-051-*	100	50	56	35	254	37	18.0	74	92	18	203	345	6.1
L3172.100-075-*	100	75	56	35	305	37	18.0	74	92	18	228	396	7.0
L3172.150-050-*	150	50	106	48	203	50	24.3	100	120	20	152	334	10.0
L3172.150-100-*	150	100	106	48	305	50	24.3	100	120	20	203	436	13.2
L3172.150-101-*	150	100	106	48	406	50	24.3	100	120	20	304	537	18.0
L3172.150-150-*	150	150	106	48	406	50	24.3	100	120	20	253	537	16.5
L3172.200-150-*	200	150	106	48	457	58	28.3	116	136	20	304	588	30.0
L3172.200-200-*	200	200	106	48	610	58	28.3	116	136	20	406	741	40.0
L3172.300-100-*	300	100	125	68	410	75	35.0	150	180	30	308	607	59.0
L3172.300-200-*	300	200	125	68	610	75	35.0	150	180	30	408	807	80.0
L3172.300-300-*	300	300	125	68	408	75	35.0	150	180	30	408	907	91.5
L3172.300-400-*	300	400	125	68	910	75	35.0	150	180	30	508	1107	110.0
L3172.300-500-*	300	500	125	68	1010	75	35.0	150	180	30	508	1207	125.0
L3172.300-600-*	300	600	125	68	1210	75	35.0	150	180	30	608	1407	145.0

Manual Lead Screw Stages

cross roller



Order No.	l_4	l_5	l_6	l_7	l_8	l_9	w_2	Lead screw	Load kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3172.050-022-*	60	6	14	138	42	13.0	0.0	M 6x1	0.3	12	5.7	6.4
L3172.050-025-*	60	6	14	164	42	26.0	13.0	M 6x1	0.6	20	17	19
L3172.050-050-*	60	6	14	214	42	51.0	25.5	M 6x1	0.7	25	26	29
L3172.075-025-*	70	6	15	170	47	13.5	0.5	M 6x1	0.6	32	18	19
L3172.075-026-*	70	6	15	195	47	26.0	13.0	M 8x1	0.8	45	37	39
L3172.075-050-*	70	6	15	220	47	38.5	13.0	M 8x1	0.7	40	27	29
L3172.100-025-*	70	6	15	222	49	26.0	13.0	M 8x1	1.1	67	41	48
L3172.100-050-*	70	6	15	273	49	51.5	26.0	M12x1	1.2	76	52	62
L3172.100-051-*	70	6	15	324	49	77.0	51.5	M12x1	1.7	106	104	124
L3172.100-075-*	70	6	15	375	49	102.5	64.0	M12x1	1.8	112	118	141
L3172.150-050-*	107	8	16	297	70	26.5	1.0	M12x1	2.6	220	104	123
L3172.150-100-*	107	8	16	399	70	77.5	26.5	M20x1	3.2	270	157	186
L3172.150-101-*	107	8	16	500	70	128.0	77.0	M20x1	5.4	460	460	545
L3172.150-150-*	107	8	16	500	70	128.0	51.5	M20x1	3.8	324	220	260
L3172.200-150-*	107	8	16	551	70	128.5	52.0	M20x1	5.0	705	445	455
L3172.200-200-*	107	8	16	704	70	205.0	103.0	M20x1	6.6	935	795	815
L3172.300-100-*	166.5	8	20	538	97.5	55.0	4.0	Tr26x4	8.4	3190	800	825
L3172.300-200-*	166.5	10	20	738	97.5	155.0	54.0	Tr26x4	10.4	3950	1205	1245
L3172.300-300-*	166.5	10	20	838	97.5	54.0	54.0	Tr26x4	8.4	3190	800	825
L3172.300-400-*	166.5	10	20	1038	97.5	305.0	104.0	Tr26x4	10.4	3950	1205	1245
L3172.300-500-*	166.5	10	20	1138	97.5	355.0	104.0	Tr26x4	8.4	3190	800	825
L3172.300-600-*	166.5	10	20	1338	97.5	455.0	154.0	Tr26x4	10.4	3950	1205	1245





L3173

Material
Cast iron body (ENGJL-250), with hardened cross roller linear rail set. Hardened and ground lead screw, pitch accuracy ±0.02mm/300mm.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity. Other versions are also available - dovetail slides (L3480) for vibration damping, and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide. Coefficient of friction 0,003.

Tips
Replace -* with
-XH for X axis stage with handle
-XK for X axis stage with knob
-XYH for X,Y axes stage with handle
-XYK for X,Y axes stage with knob

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	w_1	Stroke	d_1	d_2	l_1	h_1	h_2	h_3	l_2	l_3	Weight kg
L3173.060-025-*	60	25	50	23.9	80	28	14	56	55	160	0.8
L3173.060-050-*	60	50	50	23.9	130	28	14	56	80	210	1.2
L3173.060-075-*	60	75	50	23.9	205	28	14	56	130	285	1.9
L3173.060-100-*	60	100	50	23.9	255	28	14	56	155	335	2.3
L3173.100-025-*	100	25	50	35.0	135	45	21	90	110	226	3.3
L3173.100-050-*	100	50	56	35.0	210	45	21	90	160	301	5.9
L3173.100-075-*	100	75	56	35.0	285	45	21	90	210	376	7.5
L3173.100-100-*	100	100	56	35.0	360	45	21	90	260	451	9.5
L3173.100-150-*	100	150	56	35.0	460	45	21	90	310	551	11.4
L3173.100-175-*	100	175	56	35.0	535	45	21	90	360	626	13.8
L3173.100-200-*	100	200	56	35.0	610	45	21	90	410	701	14.5
L3173.145-050-*	145	50	106	48.0	260	60	26	120	210	391	13.0
L3173.145-100-*	145	100	106	48.0	310	60	26	120	210	441	14.2
L3173.145-150-*	145	150	106	48.0	460	60	26	120	310	591	19.3
L3173.145-200-*	145	200	106	48.0	510	60	26	120	310	641	23.0
L3173.145-250-*	145	250	106	48.0	660	60	26	120	410	791	26.8
L3173.145-300-*	145	300	106	48.0	710	60	26	120	410	841	30.0

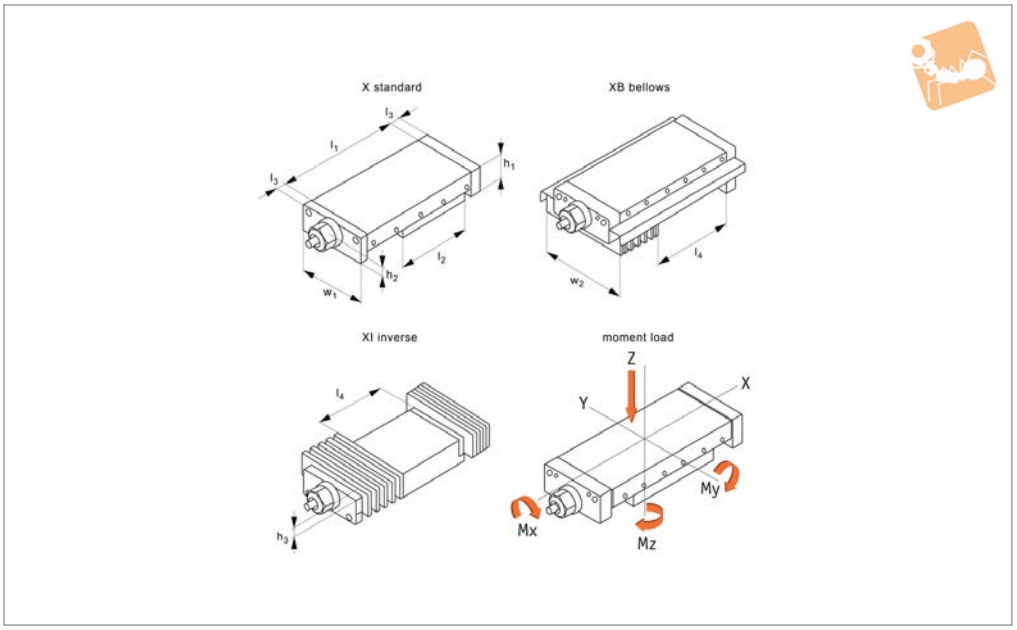
Order No.	l_4	l_5	l_6	l_7	l_8	l_9	w_2	Lead screw	Load kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3173.060-025-*	142	6	14	142	42	10.0	0.0	M 6x1	0.4	12	5.5	6.1
L3173.060-050-*	192	6	14	192	42	35.0	10.0	M 6x1	0.6	18	11	12
L3173.060-075-*	267	6	14	267	42	72.5	35.0	M 6x1	1.0	30	36	40

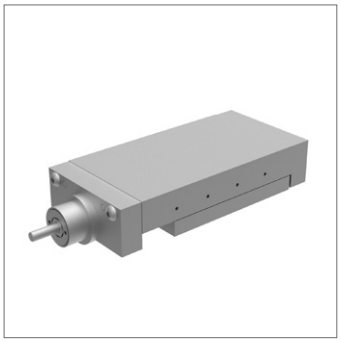
Manual Lead Screw Stages

compact, cross roller



Order No.	l_4	l_5	l_6	l_7	l_8	l_9	w_2	Lead screw	Load kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3173.060-100-*	317	6	14	317	42	97.5	47.5	M 8x1	1.2	36	49	54
L3173.100-025-*	205	6	15	205	49	17.5	5.0	M 8x1	1.6	76	47	56
L3173.100-050-*	280	6	15	280	49	55.0	30.0	M 8x1	2.3	110	104	124
L3173.100-075-*	355	6	15	355	49	92.5	55.0	M12x1	3.1	152	193	230
L3173.100-100-*	430	6	15	430	49	130.0	80.0	M12x1	3.8	186	295	350
L3173.100-150-*	530	6	15	530	49	180.0	105.0	M12x1	4.3	210	380	455
L3173.100-175-*	605	6	15	605	49	217.5	130.0	M12x1	5.1	245	520	620
L3173.100-200-*	680	6	15	680	49	255.0	155.0	M20x1	5.8	275	685	815
L3173.145-050-*	354	8	16	354	70	57.5	32.5	M20x1	6.4	365	325	385
L3173.145-100-*	404	8	16	404	70	82.5	32.5	M20x1	5.3	300	225	265
L3173.145-150-*	554	8	16	554	70	157.5	82.5	M20x1	8.5	485	575	680
L3173.145-200-*	604	8	16	604	70	182.5	82.5	TR26x4	7.5	425	440	520
L3173.145-250-*	754	8	16	754	70	257.5	132.5	TR26x4	10.1	575	855	1010
L3173.145-300-*	804	8	16	804	70	282.5	132.5	TR26x4	9.1	515	685	815





L3174

Material
Cast iron body (ENGJL-250), with hardened cross roller linear rail set. Hardened and ground lead screw, pitch accuracy ±0.02mm/300mm.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity. Other versions are also available - dovetail slides (L3480) for vibration damping, and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,003.
Speeds up to 3000 rpm, max. 20 m/min.
Positioning accuracy max. 0.001mm.

Tips
Replace -* with
-X for X axis stage
-XB for X axis stage with bellows
-XI for inverse X axis stage with bellows.
Optionally with ball screw not lead screw.
When limit switches are installed the stroke is reduced by approx. 20mm.

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

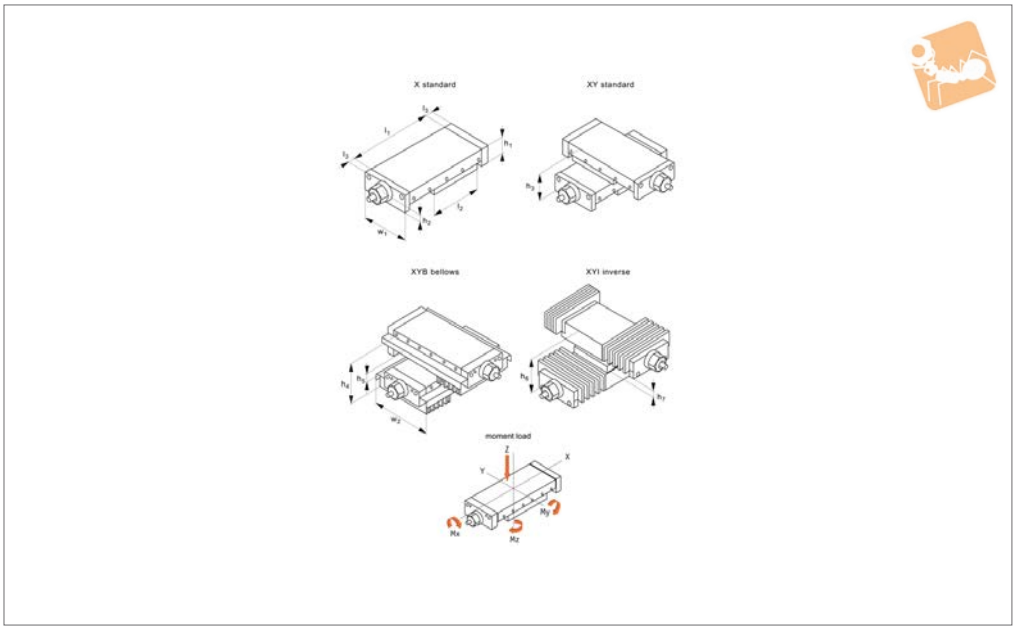
Order No.	w_1	Stroke	l_1	h_1	h_2	h_3	l_2	l_3	Weight kg
L3174.075-025-*	75	25	102	32	11.5	14	76	15	1.8
L3174.075-026-*	75	25	127	32	11.5	14	101	15	2.0
L3174.075-050-*	75	50	152	32	11.5	14	101	15	2.5
L3174.100-025-*	100	25	152	37	13.5	14	126	15	4.0
L3174.100-050-*	100	50	203	37	13.5	14	152	15	4.7
L3174.100-051-*	100	50	254	37	13.5	14	203	15	6.1
L3174.100-075-*	100	75	305	37	13.5	14	228	15	7.0
L3174.150-050-*	150	50	203	50	19.0	24	152	16	10.0
L3174.150-100-*	150	100	305	50	19.0	24	203	16	13.2
L3174.150-101-*	150	100	406	50	19.0	24	406	16	18.0
L3174.150-150-*	150	150	406	50	19.0	24	253	16	16.5
L3174.200-150-*	200	150	457	58	21.5	24	304	16	30.0
L3174.200-200-*	200	200	610	58	21.5	24	406	16	40.0
L3174.300-100-*	300	100	410	75	26.0	32	308	20	59.0
L3174.300-200-*	300	200	610	75	26.0	32	408	20	80.0
L3174.300-300-*	300	300	710	75	26.0	32	408	20	92.0
L3174.300-400-*	300	400	910	75	26.0	32	508	20	110.0
L3174.300-500-*	300	500	1010	75	26.0	32	508	20	125.0
L3174.300-600-*	300	600	1210	75	26.0	32	608	20	145.0

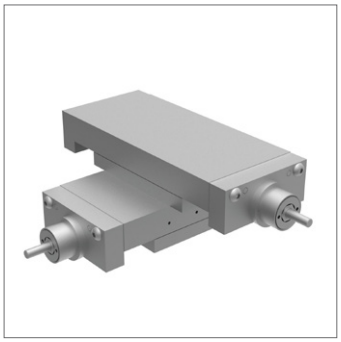
Motor Lead Screw X Stages

cross roller



Order No.	l_4	l_5	w_2	Lead screw	Load kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3174.075-025-*	50	13.5	0.5	8x1	0.6	32	18	19
L3174.075-026-*	65	26.0	13.0	8x1	0.8	45	37	40
L3174.075-050-*	55	38.5	13.0	8x1	0.7	40	27	29
L3174.100-025-*	100	26.0	13.0	8x1	1.2	67	41	48
L3174.100-050-*	115	51.5	26.0	8x1	1.2	76	52	62
L3174.100-051-*	160	77.0	51.5	8x1	1.7	106	104	124
L3174.100-075-*	180	102.5	64.0	8x1	1.8	112	118	141
L3174.150-050-*	120	26.5	1.0	15x2	2.6	220	104	123
L3174.150-100-*	150	77.5	26.5	15x2	3.2	270	157	186
L3174.150-101-*	250	128.0	128.0	15x2	5.4	460	460	545
L3174.150-150-*	190	128.0	51.5	15x2	3.8	320	220	260
L3174.200-150-*	250	128.5	52.0	15x2	5.0	705	445	455
L3174.200-200-*	340	205.0	103.0	15x2	6.6	935	795	815
L3174.300-100-*	280	55.0	4.0	23x4	8.4	3190	800	825
L3174.300-200-*	380	155.0	54.0	23x4	10.4	3950	1205	1245
L3174.300-300-*	380	205.0	54.0	23x4	8.4	3190	800	825
L3174.300-400-*	480	305.0	104.0	23x4	10.4	3950	1205	1245
L3174.300-500-*	480	355.0	104.0	23x4	8.4	3190	800	825
L3174.300-600-*	580	455.0	154.0	23x4	10.4	3950	1205	1245





L3175

Material
Cast iron body (ENGJL-250), with hardened cross roller linear rail set. Hardened and ground lead screw, pitch accuracy ±0.02mm/300mm.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity. Other versions are also available - dovetail slides (L3480) for vibration damping, and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,003.
Speeds up to 3000 rpm, max. 20 m/min.
Positioning accuracy up to +/- 0.015mm.

Tips
Replace -* with
-XY for XY axis stage
-XYB for XY axis stage with bellows
-XYI for inverse X axis stage with bellows.
Optionally with ball screw not lead screw.
When limit switches are installed the stroke is reduced by approx. 20mm.

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

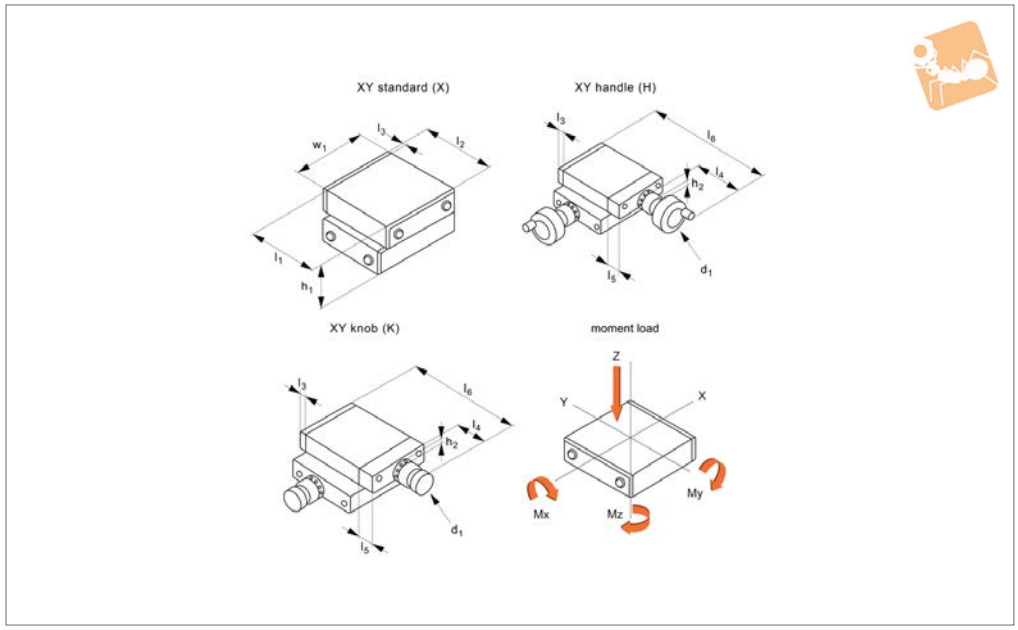
Order No.	w_1	Stroke	l_1	h_1	h_2	h_3	h_4	h_5	h_6	h_7	Weight kg
L3175.075-025-*	75	25	102	32	11.5	64	79	15	79	15	1.8
L3175.075-026-*	75	25	127	32	11.5	64	79	15	79	15	2.0
L3175.075-050-*	75	50	152	32	11.5	64	79	15	79	15	2.5
L3175.100-025-*	100	25	152	37	13.5	74	89	15	89	15	4.0
L3175.100-050-*	100	50	203	37	13.5	74	89	15	89	15	4.7
L3175.100-051-*	100	50	254	37	13.5	74	89	15	89	15	6.1
L3175.100-075-*	100	75	305	37	13.5	74	89	15	89	15	7.0
L3175.150-050-*	150	50	203	50	19.0	100	125	25	125	25	10.0
L3175.150-100-*	150	100	305	50	19.0	100	125	25	125	25	13.2
L3175.150-101-*	150	100	406	50	19.0	100	125	25	125	25	18.0
L3175.150-150-*	150	150	406	50	19.0	100	125	25	125	25	16.5
L3175.200-150-*	200	150	457	58	21.5	116	141	25	141	25	30.0
L3175.200-200-*	200	200	610	58	21.5	116	141	25	141	25	40.0
L3175.300-100-*	300	100	410	75	26.0	150	185	35	185	35	59.0
L3175.300-200-*	300	200	610	75	26.0	150	150	-	185	-	80.0
L3175.300-300-*	300	300	710	75	26.0	150	150	-	150	-	92.0
L3175.300-400-*	300	400	910	75	26.0	150	150	-	150	-	110.0
L3175.300-500-*	300	500	1010	75	26.0	150	150	-	150	-	125.0
L3175.300-600-*	300	600	1210	75	26.0	150	150	-	150	-	145.0

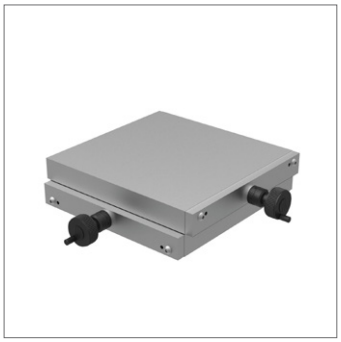
Motor Lead Screw XY Stages

cross roller



Order No.	l_2	l_3	w_2	Lead screw	Load kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3175.075-025-*	76	15	110	8x1	0.6	32	18	19
L3175.075-026-*	101	15	110	8x1	0.8	45	37	40
L3175.075-050-*	101	15	110	8x1	0.7	40	27	29
L3175.100-025-*	126	15	135	8x1	1.1	67	41	48
L3175.100-050-*	152	15	135	8x1	1.2	76	52	62
L3175.100-051-*	203	15	135	8x1	1.7	106	104	124
L3175.100-075-*	228	15	135	8x1	1.8	112	118	141
L3175.150-050-*	152	16	205	15x2	2.6	220	104	123
L3175.150-100-*	203	16	205	15x2	3.2	270	157	186
L3175.150-101-*	406	16	205	15x2	5.4	460	460	545
L3175.150-150-*	253	16	205	15x2	3.8	320	220	260
L3175.200-150-*	304	16	255	15x2	5.0	705	445	455
L3175.200-200-*	406	16	255	15x2	6.6	935	795	815
L3175.300-100-*	308	20	375	23x4	8.4	3190	800	825
L3175.300-200-*	408	20	375	23x4	10.4	3950	1205	1245
L3175.300-300-*	408	20	375	23x4	8.4	3190	800	825
L3175.300-400-*	508	20	375	23x4	10.4	3950	1205	1245
L3175.300-500-*	508	20	375	23x4	8.4	3190	800	825
L3175.300-600-*	608	20	375	23x4	10.4	3950	1205	1245





L3177

Material
Cast iron body (ENGJL-250), with hardened cross roller linear rail set. Hardened and ground lead screw M6x1, pitch accuracy ±0,02mm/300mm.

Technical Notes
Suitable for horizontal applications requiring smooth movement, long life and high load capacity. Other versions are also available - cross roller slides (L3470), and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,003.

Tips
Lead screw pitch M6x1, apart from size 300 = M8x1.

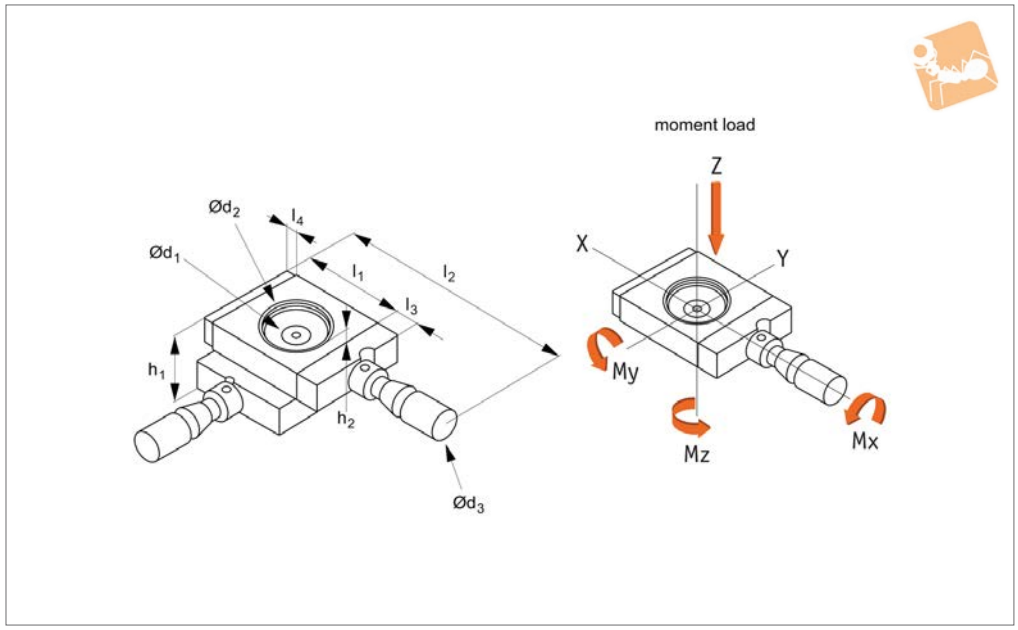
Order No.	w_1	Stroke	d_1	l_1	h_1	h_2	l_2	l_3	l_4	Weight kg
L3177.075-025-X	75	25	-	75	50	-	87	6	-	1.6
L3177.100-025-X	100	25	-	100	50	-	112	6	-	2.5
L3177.150-050-X	150	50	-	150	58	-	166	8	-	7.0
L3177.200-050-X	200	50	-	200	58	-	216	8	-	14.0
L3177.300-100-X	300	100	-	300	80	-	316	8	-	34.0
L3177.075-025-H	75	25	50.0	75	50	12.5	-	6	60	1.6
L3177.100-025-H	100	25	50.0	100	50	12.5	-	6	60	2.5
L3177.150-050-H	150	50	50.0	150	58	16.0	-	8	60	7.0
L3177.200-050-H	200	50	50.0	200	58	16.0	-	8	60	14.0
L3177.075-025-K	75	25	23.9	75	50	12.5	-	6	42	1.6
L3177.100-025-K	100	25	23.9	100	50	12.5	-	6	42	2.5
L3177.150-050-K	150	50	23.9	150	58	16.0	-	8	42	7.0
L3177.200-050-K	200	50	23.9	200	58	16.0	-	8	42	14.0
L3177.300-100-K	300	100	31.0	300	80	23.0	-	8	47	34.0

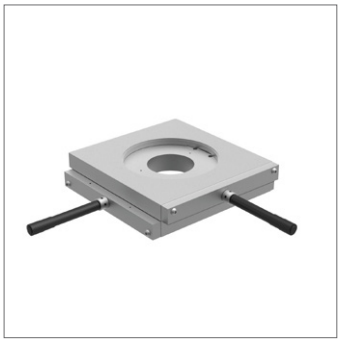
Order No.	l_5	l_6	Lead screw	Load kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3177.075-025-X	14	-	M6x1	0.3	18	5.7	6.1
L3177.100-025-X	14	-	M6x1	0.6	36	11	14
L3177.150-050-X	14	-	M6x1	0.7	64	18	21
L3177.200-050-X	14	-	M6x1	1.2	190	60	62
L3177.300-100-X	15	-	M8x1	3.2	1140	183	188
L3177.075-025-H	14	155	M6x1	0.3	18	5.7	6.1
L3177.100-025-H	14	180	M6x1	0.6	36	11	14
L3177.150-050-H	14	232	M6x1	0.7	64	18	21
L3177.200-050-H	14	282	M6x1	1.2	190	60	62
L3177.075-025-K	14	137	M6x1	0.3	18	5.7	6.1
L3177.100-025-K	14	162	M6x1	0.6	36	11	14
L3177.150-050-K	14	214	M6x1	0.7	64	18	21

Miniature XY stages
cross roller



Order No.	l_5	l_6	Lead screw	Load kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3177.200-050-K	14	264	M6x1	1.2	190	60	62
L3177.300-100-K	15	370	M8x1	3.2	1140	183	188





L3179

Material
Cast iron body (ENGJL-250), with hardened cross roller linear rail set.

Technical Notes
Suitable for horizontal applications requiring smooth movement, long life and high load capacity. Low height profile. The stage has a through hole.
No backlash due to pull back spring, each micrometer has a locking device.
Coefficient of friction 0,003.
Micrometer pitch =1,0 apart from 20mm stroke = 0,5.

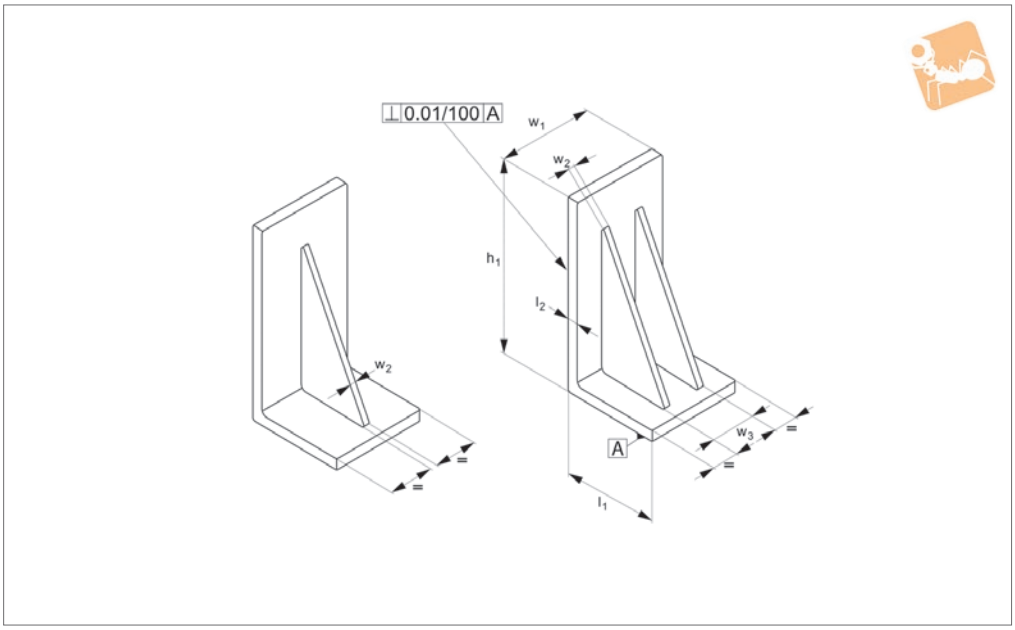
Tips
Micrometer pitch 1,0mm except first two sizes = 0,5mm.
For scientific and medical applications.

Important Notes
3D CAD models available.

Order No.	Stroke	d_1	d_2	d_3	l_1	h_1	h_2	l_2	l_3	l_4	Load kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Weight kg
L3179.075-020	20	20	55	20	75	40	3	186	14	6	0.37	26	7.1	7.5	1.3
L3179.100-020	20	50	80	20	100	40	3	211	14	6	0.64	44	13	15	2.0
L3179.150-045	45	50	105	20	150	50	3	303	16	8	0.74	64	18	22	6.3
L3179.200-045	45	75	130	20	200	50	3	355	16	8	1.23	190	62	63	13.0
L3179.300-095	95	100	205	24	300	70	3	543	20	10	3.22	1140	186	192	32.0

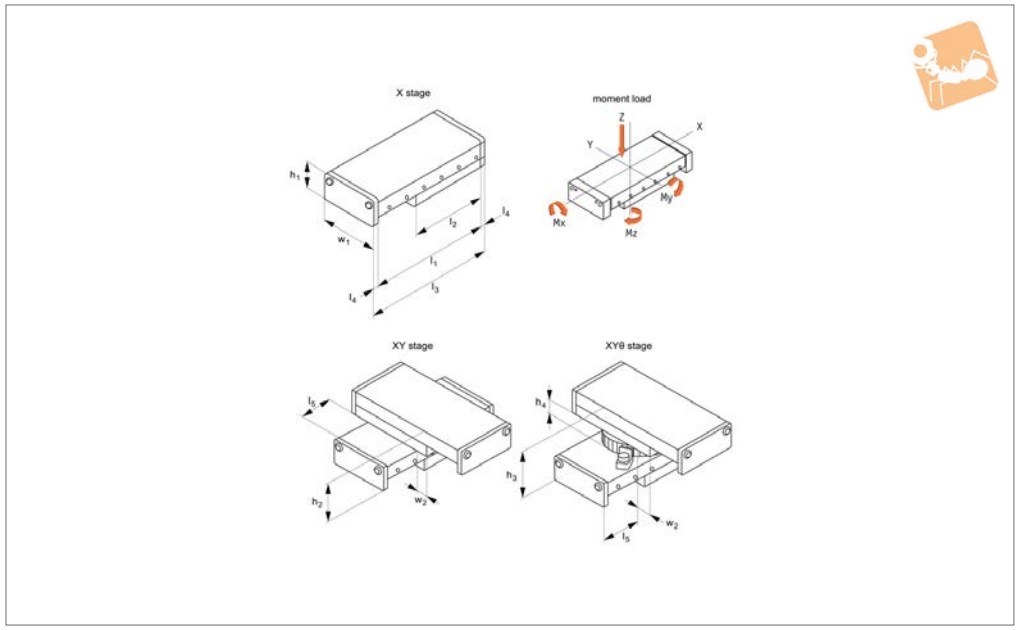


L3199



Material
Cast iron, ground. Aluminium alternative on request.

Order No.	w_1	l_1	h_1	l_2	w_2	w_3	No. of ribs
L3199.050-050	50	50	50	8	8	-	1
L3199.050-100	50	50	100	8	8	-	1
L3199.075-075	75	75	75	10	8	-	1
L3199.075-150	75	75	150	10	8	-	1
L3199.100-100	100	100	100	15	12	-	1
L3199.100-200	100	100	200	15	12	-	1
L3199.150-150	150	150	150	18	10	50	2
L3199.150-300	150	150	300	18	10	45	2
L3199.200-200	200	200	200	22	10	75	2
L3199.200-350	200	200	350	22	10	70	2
L3199.300-400	300	300	400	30	15	145	2
L3199.400-500	400	400	500	35	20	210	2





L3180

Material
Cast iron body (ENGJL-250), with dovetail slide system.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.

Dovetail linear guideways are very stable for use when a degree of vibration damping is required. Other versions are also available - cross roller slides (L3470), and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,1.

Tips
With no lead screw drive.

Replace -* with
-X for X axis stage
- XY for X,Y axes stage
-XYT for X,Y,. stage

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

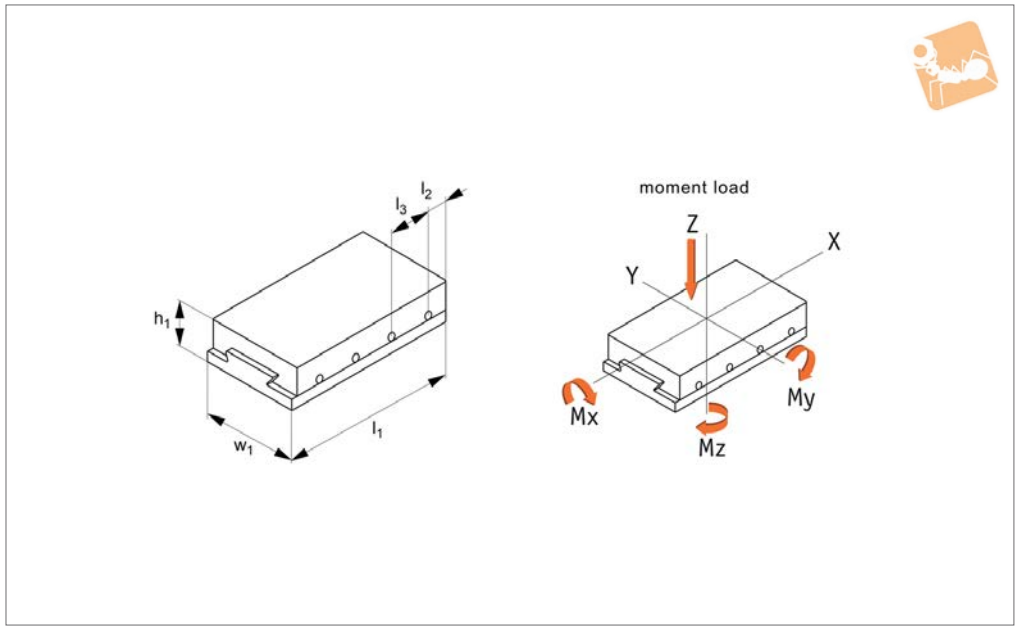
Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	l_4	l_5	Weight kg
L3180.050-022-*	22	50	0.5	25	76	50	88	6	13.0	0.6
L3180.050-025-*	25	50	0.7	25	102	76	114	6	26.0	0.8
L3180.050-050-*	50	50	1.0	25	152	101	164	6	51.0	1.1
L3180.075-025-*	25	75	10.5	32	102	76	114	6	13.5	1.8
L3180.075-026-*	25	75	14.0	32	127	101	139	6	26.0	2.0
L3180.075-050-*	50	75	14.0	32	152	101	164	6	38.5	2.5
L3180.100-025-*	25	100	19.5	37	152	126	164	6	26.0	4.0
L3180.100-050-*	50	100	23.6	37	203	152	215	6	51.5	4.7
L3180.100-051-*	50	100	31.5	37	254	203	266	6	77.0	6.1
L3180.100-075-*	75	100	35.4	37	305	228	317	6	102.5	7.0
L3180.150-050-*	50	150	30.7	50	203	152	219	8	26.5	10.0
L3180.150-100-*	100	150	41.0	50	305	203	321	8	77.5	13.2
L3180.150-101-*	100	150	61.5	50	406	304	422	8	128.0	18.0
L3180.150-150-*	150	150	51.2	50	406	253	422	8	128.0	16.5
L3180.200-150-*	150	200	86.8	58	457	304	473	8	128.5	30.0
L3180.200-200-*	200	200	116	58	610	406	626	8	205.0	40.0
L3180.300-100-*	100	300	114	75	410	308	430	10	55.0	59.0
L3180.300-200-*	200	300	150	75	610	408	630	10	155.0	80.0
L3180.300-300-*	300	300	150	75	710	408	730	10	205.0	92.0
L3180.300-400-*	400	300	187	75	910	508	930	10	305.0	110.0
L3180.300-500-*	500	300	187	75	1010	508	1030	10	355.0	125.0
L3180.300-600-*	600	300	224	75	1210	608	1230	10	455.0	145.0
L3180.400-200-*	200	400	233	102	610	408	650	20	105.0	169.0

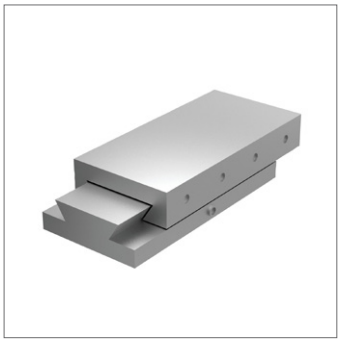
Plain Positioning Stages
dovetail



Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	l_4	l_5	Weight kg
L3180.400-300-*	300	400	233	102	710	408	750	20	155.0	182.0
L3180.400-400-*	400	400	233	102	810	408	850	20	205.0	195.0
L3180.400-401-*	400	400	290	102	910	508	950	20	255.0	225.0
L3180.400-500-*	500	400	290	102	1010	508	1050	20	305.0	238.0
L3180.400-600-*	600	400	290	102	1110	508	1150	20	355.0	251.0
L3180.400-601-*	600	400	347	102	1210	608	1250	20	405.0	270.0

Order No.	w_2	h_2	h_3	h_4	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3180.050-022-*	0.0	50	-	-	3.4	1.8	2.1
L3180.050-025-*	13.0	50	-	-	5.2	4.1	4.9
L3180.050-050-*	25.5	50	-	-	6.9	7.2	8.6
L3180.075-025-*	0.5	64	82	18	10.0	5.1	6.1
L3180.075-026-*	13.0	64	82	18	14.0	9.1	10.0
L3180.075-050-*	13.0	64	82	18	14.0	9.1	10.0
L3180.100-025-*	13.0	74	92	18	33.0	20.0	24.0
L3180.100-050-*	26.0	74	92	18	40.0	29.0	35.0
L3180.100-051-*	51.5	74	92	18	54.0	52.0	63.0
L3180.100-075-*	64.0	74	92	18	61.0	66.0	79.0
L3180.150-050-*	1.0	100	120	20	77.0	30.0	36.0
L3180.150-100-*	26.5	100	120	20	103	54.0	65.0
L3180.150-101-*	77.0	100	120	20	155	123	146
L3180.150-150-*	51.5	100	120	20	129	85.0	101
L3180.200-150-*	52.0	116	136	20	275	164	195
L3180.200-200-*	103.0	116	136	20	365	290	245
L3180.300-100-*	4.0	150	180	30	605	235	280
L3180.300-200-*	54.0	150	180	30	800	410	490
L3180.300-300-*	54.0	150	180	30	800	410	490
L3180.300-400-*	104.0	150	180	30	1000	640	760
L3180.300-500-*	104.0	150	180	30	1000	640	760
L3180.300-600-*	154.0	150	180	30	1195	915	1095
L3180.400-200-*	4.0	204	244	40	1360	470	560
L3180.400-300-*	4.0	204	244	40	1360	470	560
L3180.400-400-*	4.0	204	244	40	1360	470	560
L3180.400-401-*	54.0	204	244	40	1695	730	870
L3180.400-500-*	54.0	204	244	40	1685	730	870
L3180.400-600-*	54.0	204	244	40	1695	730	870
L3180.400-601-*	104.0	204	244	40	2025	1050	1250





L3181

Material
Cast iron body (ENGJL-250), with dovetail slide system.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.
Dovetail linear guideways are very stable for use when a degree of vibration damping is required. Other versions are also available - cross roller slides (L3470), and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,1.

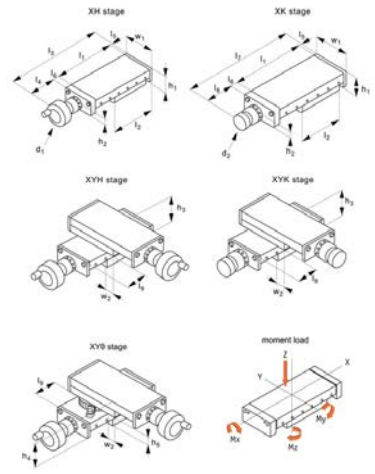
Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

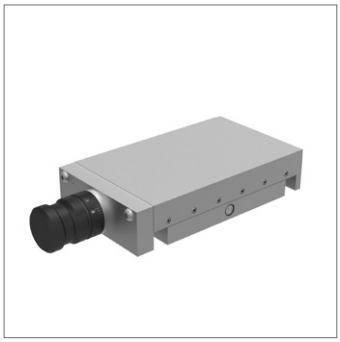
Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Weight kg
L3181.050-025	25	50	0.5	25	50	12.5	1 x25	3.4	1.8	2.1	0.5
L3181.050-050	50	50	1.0	25	101	13.0	3 x25	6.9	7.2	8.6	0.7
L3181.050-075	75	50	1.4	25	152	13.5	5 x25	10	16	19	1.4
L3181.050-100	100	50	1.9	25	202	13.5	7 x25	13	29	34	1.8
L3181.075-050	50	75	1.4	32	102	13.0	3 x25	14	9.2	11	1.8
L3181.075-075	75	75	2.1	32	152	13.5	5 x25	21	20	24	2.9
L3181.075-100	100	75	2.8	32	202	13.5	7 x25	28	36	43	3.9
L3181.075-125	125	75	3.5	32	252	13.5	9 x25	35	56	67	4.8
L3181.075-150	150	75	4.2	32	302	13.5	11x25	42	81	96	6.0
L3181.100-050	50	100	1.6	37	102	13.5	3 x25	27	13	15	8.4
L3181.100-075	75	100	2.3	37	152	13.5	5 x25	40	29	35	4.2
L3181.100-100	100	100	3.2	37	203	14.5	7 x25	54	52	63	5.9
L3181.100-125	125	100	3.9	37	254	14.5	9 x25	67	82	98	6.8
L3181.100-150	150	100	4.7	37	305	15.0	11x25	81	119	142	8.8
L3181.100-175	175	100	5.5	37	355	15.0	13x25	94	161	192	10.5
L3181.100-200	200	100	6.3	37	405	15.0	15x25	108	210	250	11.8
L3181.100-225	225	100	7.1	37	445	15.0	17x25	121	265	315	12.9
L3181.100-250	250	100	7.8	37	505	15.0	19x25	135	325	385	14.0
L3181.150-050	50	150	3.1	50	152	26.0	2 x50	77	30	36	11.0
L3181.150-075	75	150	3.1	50	152	26.0	2 x50	77	30	36	11.0
L3181.150-100	100	150	4.1	50	203	26.5	3 x50	103	54	65	13.8
L3181.150-125	125	150	5.1	50	253	26.5	4 x50	129	85	101	15.0
L3181.150-150	150	150	6.2	50	305	27.5	5 x50	155	123	147	16.0
L3181.150-200	200	150	8.2	50	406	28.0	7 x50	205	219	260	22.0
L3181.150-250	250	150	10.2	50	506	28.0	9 x50	255	340	405	27.5

Plain Compact Stages
dovetail



Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Weight kg
L3181.150-300	300	150	12.3	50	606	28.0	11x50	305	485	580	32.5
L3181.200-050	50	200	5.8	58	203	26.5	3 x50	184	73	87	23.0
L3181.200-100	100	200	5.8	58	203	26.5	3 x50	184	73	87	23.0
L3181.200-150	150	200	8.7	58	304	27.0	5 x50	275	164	195	26.1
L3181.200-200	200	200	11.6	58	406	28.0	7 x50	365	290	345	34.4
L3181.200-250	250	200	14.6	58	510	30.0	9 x50	460	460	550	43.0
L3181.200-300	300	200	17.4	58	610	30.0	11x50	550	660	785	51.5
L3181.200-350	350	200	20.3	58	710	30.0	13x50	645	895	1065	60.0
L3181.200-400	400	200	23.1	58	810	30.0	15x50	735	1165	1385	67.0
L3181.200-500	500	200	23.1	58	810	30.0	15x50	735	1165	1385	67.0
L3181.200-600	600	200	23.1	58	810	30.	15x50	735	1165	1385	67.0





L3182

Material
Cast iron body (ENGJL-250), with dovetail slide system. Hardened and ground lead screw, pitch accuracy ±0.02mm/300mm. Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.

Dovetail linear guideways are very stable for use when a degree of vibration damping is required. Other versions are also available - cross roller slides (L3470), and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,1.

Tips
Replace -* with
-XH for X axis stage with handle
-XK for X axis stage with knob
-XYH for X,Y axes stage with handle
-XYK for X,Y axes stage with knob
-XYTH for X,Y,. stage with handle
-XYTK for X,Y,. stage with knob

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	Weight kg
L3182.050-022-*	22	50	0.5	25	76	50	156	60.0	14	14	138	42.0	0.8
L3182.050-025-*	25	50	0.7	25	102	76	182	60.0	14	14	164	42.0	0.8
L3182.050-050-*	50	50	1.0	20	152	101	232	60.0	14	14	214	42.0	1.1
L3182.075-025-*	25	75	1.1	32	102	76	193	70.0	15	15	170	47.0	1.8
L3182.075-026-*	25	75	1.4	32	127	101	218	70.0	15	15	195	47.0	2.0
L3182.075-050-*	50	75	1.4	32	152	101	243	70.0	15	15	220	47.0	2.5
L3182.100-025-*	25	100	2.0	37	152	126	243	70.0	15	15	222	49.0	4.0
L3182.100-050-*	50	100	2.4	37	203	152	294	70.0	15	15	273	49.0	4.7
L3182.100-051-*	50	100	3.2	37	254	203	345	70.0	15	15	324	49.0	6.1
L3182.100-075-*	75	100	3.5	37	305	228	396	70.0	15	15	375	49.0	7.0
L3182.150-050-*	50	150	3.1	50	203	152	334	107.0	16	16	297	70.0	10.0
L3182.150-100-*	100	150	4.1	50	305	203	436	107.0	16	16	399	70.0	13.2
L3182.150-101-*	100	150	6.2	50	406	304	357	107.0	16	16	500	70.0	18.0
L3182.150-150-*	150	150	5.1	50	406	253	537	107.0	16	16	500	70.0	16.5
L3182.200-150-*	150	200	8.7	58	457	304	588	107.0	16	16	551	70.0	30.0
L3182.200-200-*	200	200	11.6	58	610	406	741	107.0	16	16	704	70.0	40.0
L3182.300-100-*	100	300	11.4	75	410	308	607	166.5	20	20	538	97.5	59.0
L3182.300-200-*	200	300	15.0	75	610	408	87	166.5	20	20	738	97.5	80.0
L3182.300-300-*	300	300	15.0	75	710	408	907	166.5	20	20	838	97.5	92.0
L3182.300-400-*	400	300	18.7	75	910	508	1107	166.5	20	20	1038	97.5	110.0
L3182.300-500-*	500	300	18.7	75	1010	508	1207	166.5	20	20	1138	97.5	125.0
L3182.300-600-*	600	300	22.4	75	1210	608	1407	166.5	20	20	1338	97.5	145.0

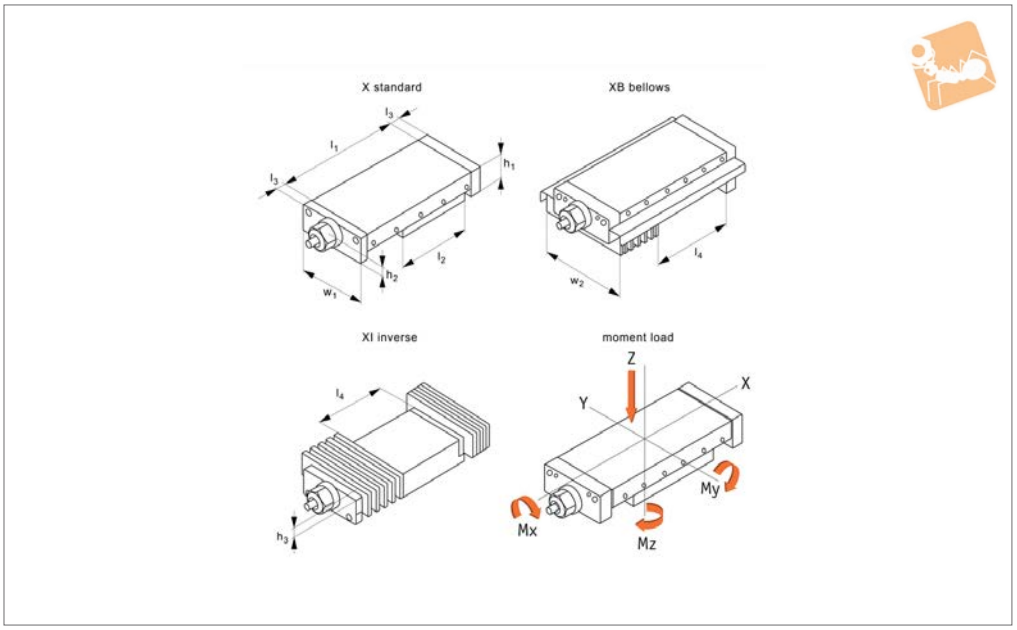
Manual Lead Screw Stages

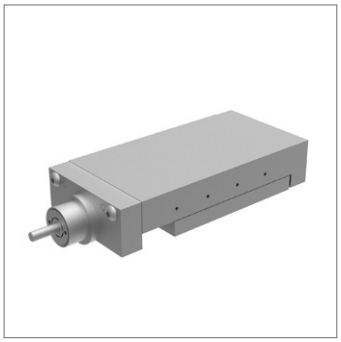
dovetail



Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	Weight kg
L3182.400-200-*	200	400	23.3	102	610	408	868	208.0	30	30	783	123.0	169.0
L3182.400-300-*	300	400	23.3	102	710	408	968	208.0	30	30	883	123.0	182.0
L3182.400-400-*	400	400	23.3	102	810	408	1068	208.0	30	30	983	123.0	195.0
L3182.400-401-*	400	400	29.0	102	910	508	1168	208.0	30	30	1083	123.0	225.0
L3182.400-500-*	500	400	29.0	102	1010	508	1268	208.0	30	30	1183	123.0	238.0
L3182.400-600-*	600	400	29.0	102	1110	508	1368	208.0	30	30	1283	123.0	251.0
L3182.400-601-*	600	400	34.7	102	1210	608	1468	208.0	30	30	1383	123.0	270.0

Order No.	l_9	w_2	h_2	h_3	h_4	h_5	d_1	d_2	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw
L3182.050-022-*	13.0	0.0	12.5	50	-	-	50	23.9	3.4	1.8	2.1	M 6x1
L3182.050-025-*	26.0	13.0	12.5	50	-	-	50	23.9	5.2	4.1	4.9	M 6x1
L3182.050-050-*	51.0	25.5	12.5	50	-	-	50	23.9	9.9	7.2	8.6	M 6x1
L3182.075-025-*	13.5	0.5	16.0	64	82	18	56	31.0	10	5.1	6.1	M 8x1
L3182.075-026-*	26.0	13.0	16.0	64	82	18	56	31.0	14	9.1	10	M 8x1
L3182.075-050-*	38.5	13.0	16.0	64	82	18	56	31.0	14	9.1	10	M 8x1
L3182.100-025-*	26.0	13.0	18.0	74	92	18	56	35.0	33	20	24	M12x1
L3182.100-050-*	51.5	26.0	18.0	74	92	18	56	35.0	40	29	35	M12x1
L3182.100-051-*	77.0	51.5	18.0	74	92	18	56	35.0	54	52	63	M12x1
L3182.100-075-*	102.5	64.0	18.0	74	92	18	56	35.0	61	66	79	M12x1
L3182.150-050-*	26.5	1.0	24.3	100	120	20	106	48.0	77	30	36	M20x1
L3182.150-100-*	77.5	26.5	24.3	100	120	20	106	48.0	103	54	65	M20x1
L3182.150-101-*	128.0	77.0	24.3	100	120	20	106	48.0	155	123	146	M20x1
L3182.150-150-*	128.0	51.5	24.3	100	120	20	106	48.0	129	85	101	M20x1
L3182.200-150-*	128.5	52.0	28.3	116	136	20	106	48.0	275	164	195	M20x1
L3182.200-200-*	205.0	103.0	28.3	116	136	20	106	48.0	365	290	245	M20x1
L3182.300-100-*	55.0	4.0	35.0	150	180	30	125	68.0	605	235	280	TR26x4
L3182.300-200-*	155.0	54.0	35.0	150	180	30	125	68.0	800	410	490	TR26x4
L3182.300-300-*	205.0	54.0	35.0	150	180	30	125	68.0	800	410	490	TR26x4
L3182.300-400-*	305.0	104.0	35.0	150	180	30	125	68.0	1000	640	760	TR26x4
L3182.300-500-*	355.0	104.0	35.0	150	180	30	125	68.0	1000	640	760	TR26x4
L3182.300-600-*	455.0	154.0	35.0	150	180	30	125	68.0	1195	915	1095	TR26x4
L3182.400-200-*	105.0	4.0	43.5	204	244	40	200	84.0	1360	470	560	TR32x4
L3182.400-300-*	155.0	4.0	43.5	204	244	40	200	84.0	1360	470	560	TR32x4
L3182.400-400-*	205.0	4.0	43.5	204	244	40	200	84.0	1360	470	560	TR32x4
L3182.400-401-*	255.0	54.0	43.5	204	244	40	200	84.0	1695	730	870	TR32x4
L3182.400-500-*	305.0	54.0	43.5	204	244	40	200	84.0	1685	730	870	TR32x4
L3182.400-600-*	355.0	54.0	43.5	204	244	40	200	84.0	1695	730	870	TR32x4
L3182.400-601-*	405.0	104.0	43.5	204	244	40	200	84.0	2025	1050	1250	TR32x4





L3184

Material
Cast iron body (ENGJL-250), with dovetail slide system. Hardened and ground lead screw, pitch accuracy ±0.015mm/300mm. Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.
Dovetail linear guideways are very stable for use when a degree of vibration damping is required. Other versions are also available - cross roller slides (L3470), and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,1.
Speeds up to 3000 rpm, max. 20 m/min.
Positioning accuracy max. 0.001mm.

Tips
Replace -* with
-X for X axis stage
-XB for X axis stage with bellows
-XI for inverse X axis stage with bellows
When limit switches are installed the stroke is reduced by approx. 20mm.

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	l_4	Weight kg
L3184.075-025-*	25	75	1.0	32	102	76	15	50	1.8
L3184.075-026-*	25	75	1.4	32	127	101	15	65	2.0
L3184.075-050-*	50	75	1.4	32	152	101	15	55	2.5
L3184.100-025-*	25	100	2.0	37	152	126	15	100	4.0
L3184.100-050-*	50	100	2.4	37	203	152	15	115	4.7
L3184.100-051-*	50	100	3.2	37	254	203	15	160	6.1
L3184.100-075-*	75	100	3.5	37	305	228	15	180	7.0
L3184.150-050-*	50	150	3.1	50	203	152	16	120	10.0
L3184.150-100-*	100	150	4.1	50	305	203	16	150	13.2
L3184.150-101-*	100	150	6.2	50	406	304	16	250	18.0
L3184.150-150-*	150	150	5.1	50	406	253	16	190	16.5
L3184.200-150-*	150	200	8.7	58	457	304	16	250	30.0
L3184.200-200-*	200	200	11.6	58	610	406	16	340	40.0
L3184.300-100-*	100	300	11.4	75	410	308	20	280	59.0
L3184.300-200-*	200	300	15.0	75	610	408	20	380	80.0
L3184.300-300-*	300	300	15.0	75	710	408	20	380	92.0
L3184.300-400-*	400	300	18.7	75	910	508	20	480	110.0
L3184.300-500-*	500	300	18.7	75	1010	508	20	480	125.0
L3184.300-600-*	600	300	22.4	75	1210	608	20	580	145.0
L3184.400-200-*	200	400	23.3	102	610	408	70	380	169.0
L3184.400-300-*	300	400	23.3	102	710	408	70	380	182.0

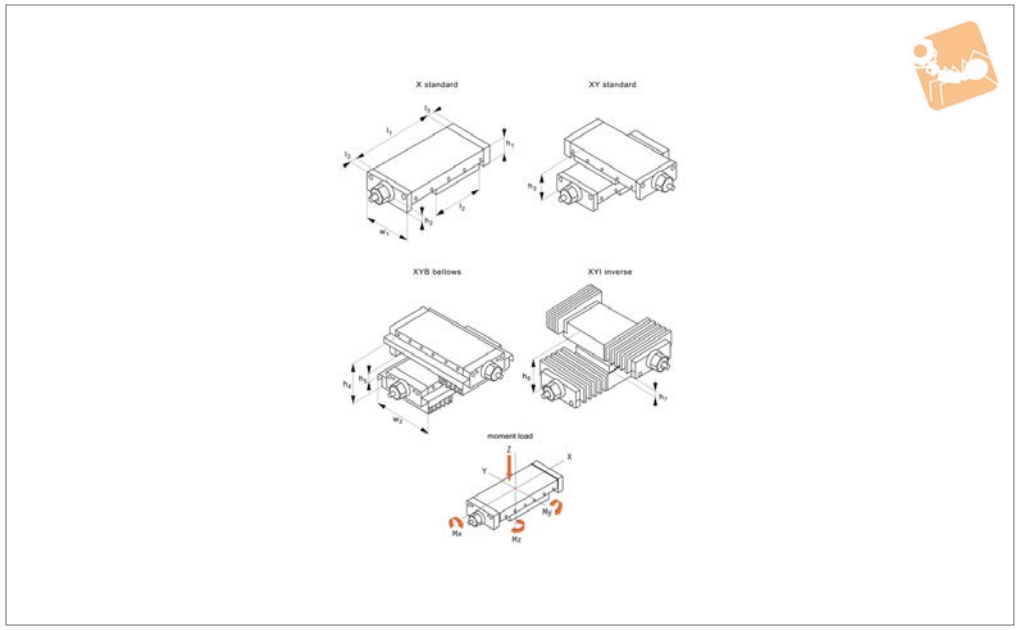
Motor Lead Screw X Stages

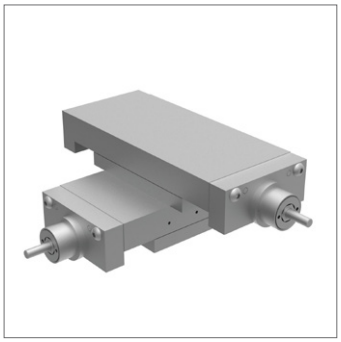
dovetail



Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	l_4	Weight kg
L3184.400-400-*	400	400	23.3	102	810	408	90	380	195.0
L3184.400-401-*	400	400	29.0	102	910	508	90	480	225.0
L3184.400-500-*	500	400	29.0	102	1010	508	100	480	238.0
L3184.400-600-*	600	400	29.0	102	1110	508	100	480	251.0
L3184.400-601-*	600	400	34.7	102	1210	508	100	580	270.0

Order No.	w_2	h_2	h_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw
L3184.075-025-*	110	11.5	14	10	5.1	6.1	8 x1
L3184.075-026-*	110	11.5	14	14	9.1	10	8 x1
L3184.075-050-*	110	11.5	14	14	9.1	10	8 x1
L3184.100-025-*	135	13.5	14	33	20	24	8 x1
L3184.100-050-*	135	13.5	14	40	29	35	8 x1
L3184.100-051-*	135	13.5	14	54	52	63	8 x1
L3184.100-075-*	135	13.5	14	61	66	79	8 x1
L3184.150-050-*	205	19.0	24	77	30	36	15x2
L3184.150-100-*	205	19.0	24	103	54	65	15x2
L3184.150-101-*	205	19.0	24	155	123	146	15x2
L3184.150-150-*	205	19.0	24	129	85	101	15x2
L3184.200-150-*	255	21.5	24	275	164	195	15x2
L3184.200-200-*	255	21.5	24	365	290	345	15x2
L3184.300-100-*	375	26.0	32	605	235	280	23x4
L3184.300-200-*	375	26.0	32	800	410	490	23x4
L3184.300-300-*	375	26.0	32	800	410	490	23x4
L3184.300-400-*	375	26.0	32	1000	640	760	23x4
L3184.300-500-*	375	26.0	32	1000	640	760	23x4
L3184.300-600-*	375	26.0	32	1195	915	1095	23x4
L3184.400-200-*	480	34.0	37	1360	470	560	23x4
L3184.400-300-*	480	34.0	37	1360	470	560	23x4
L3184.400-400-*	480	34.0	37	1360	470	560	23x4
L3184.400-401-*	480	34.0	37	1695	730	870	23x4
L3184.400-500-*	480	34.0	37	1685	730	870	23x4
L3184.400-600-*	480	34.0	37	1695	730	870	23x4
L3184.400-601-*	480	34.0	37	2025	1050	1250	23x4





L3185

Material
Cast iron body (ENGJL-250), with dovetail slide system. Hardened and ground lead screw, pitch accuracy ±0.015mm/300mm. Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.
Dovetail linear guideways are very stable for use when a degree of vibration damping is required. Other versions are also available - cross roller slides (L3470), and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,1.
Speeds up to 3000 rpm, max. 20 m/min.
Positioning accuracy max. 0.001mm.

Tips
Replace -* with
-XY for XY axis stage
-XYB for XY axis stage with bellows
-XYI for inverse X axis stage with bellows
When limit switches are installed the stroke is reduced by approx. 20mm.

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	w_2	h_2	h_3	Weight kg
L3185.075-025-*	25	75	1.0	32	102	76	15	110	11.5	64	1.8
L3185.075-026-*	25	75	1.4	32	127	101	15	110	11.5	64	2.0
L3185.075-050-*	50	75	1.4	32	152	101	15	110	11.5	64	2.5
L3185.100-025-*	25	100	2.0	37	152	126	15	135	13.5	74	4.0
L3185.100-050-*	50	100	2.4	37	203	152	15	135	13.5	74	4.7
L3185.100-051-*	50	100	3.2	37	254	203	15	135	13.5	74	6.1
L3185.100-075-*	75	100	3.5	37	305	228	15	135	13.5	74	7.0
L3185.150-050-*	50	150	3.1	50	203	152	16	205	19.0	100	10.0
L3185.150-100-*	100	150	4.1	50	305	203	16	205	19.0	100	13.2
L3185.150-101-*	100	150	6.2	50	406	304	16	205	19.0	100	18.0
L3185.150-150-*	150	150	5.1	50	406	253	16	205	19.0	100	16.5
L3185.200-150-*	150	200	8.7	58	457	304	16	255	21.5	116	30.0
L3185.200-200-*	200	200	11.6	58	610	406	16	255	21.5	116	40.0
L3185.300-100-*	100	300	11.4	75	410	308	20	375	26.0	150	59.0
L3185.300-200-*	200	300	15.0	75	610	408	20	375	26.0	150	80.0
L3185.300-300-*	300	300	15.0	75	710	408	20	375	26.0	150	92.0
L3185.300-400-*	400	300	18.7	75	910	508	20	375	26.0	150	110.0
L3185.300-500-*	500	300	18.7	75	1010	508	20	375	26.0	150	125.0
L3185.300-600-*	600	300	22.4	75	1210	608	20	375	26.0	150	145.0
L3185.400-200-*	200	400	23.3	102	610	408	70	480	34.0	204	169.0
L3185.400-300-*	300	400	23.3	102	710	408	0	480	34.0	204	182.0

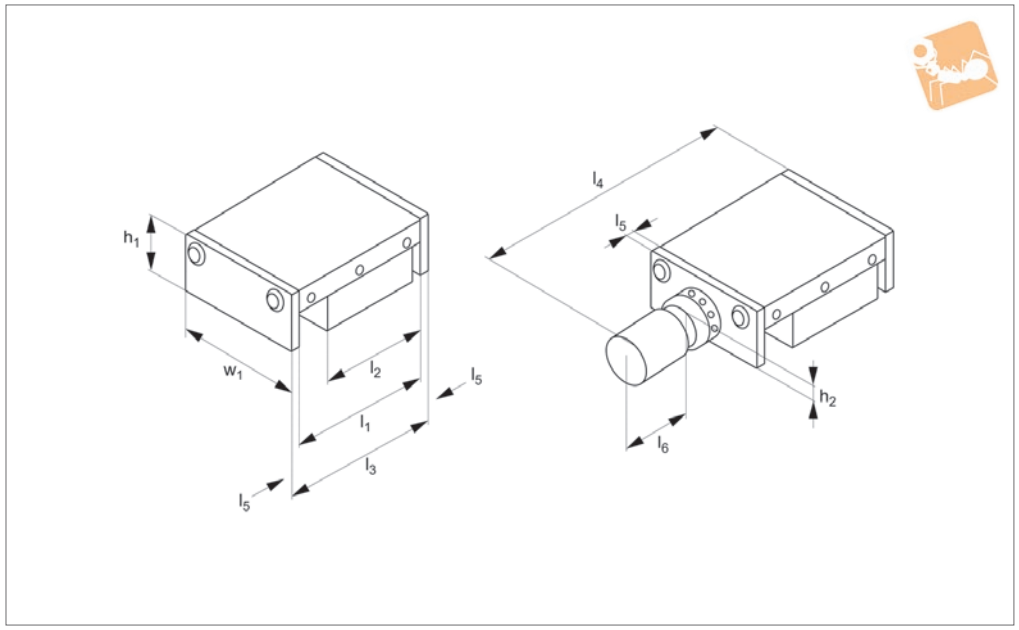
Motor Lead Screw XY Stages

dovetail



Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	w_2	h_2	h_3	Weight kg
L3185.400-400-*	400	400	23.3	102	810	408	90	480	34.0	204	195.0
L3185.400-401-*	400	400	29.0	102	910	508	90	480	34.0	204	225.0
L3185.400-500-*	500	400	29.0	102	1010	508	100	480	34.0	204	238.0
L3185.400-600-*	600	400	29.0	102	1110	508	100	480	34.0	204	251.0
L3185.400-601-*	600	400	34.7	102	1210	508	100	480	34.0	204	270.0

Order No.	h_4	h_5	h_6	h_7	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw
L3185.075-025-*	79	15	79	15	10	5.1	6.1	8 x1
L3185.075-026-*	79	15	79	15	14	9.1	10	8 x1
L3185.075-050-*	79	15	79	15	14	9.1	10	8 x1
L3185.100-025-*	89	15	89	15	33	20	24	8 x1
L3185.100-050-*	89	15	89	15	40	29	35	8 x1
L3185.100-051-*	89	15	89	15	54	52	63	8 x1
L3185.100-075-*	89	15	89	15	61	66	79	8 x1
L3185.150-050-*	125	25	125	25	77	30	36	15x2
L3185.150-100-*	125	25	125	25	103	54	65	15x2
L3185.150-101-*	125	25	125	25	155	123	146	15x2
L3185.150-150-*	125	25	125	25	129	85	101	15x2
L3185.200-150-*	141	25	141	25	275	164	195	15x2
L3185.200-200-*	141	25	141	25	365	290	345	15x2
L3185.300-100-*	185	35	185	35	605	235	280	23x4
L3185.300-200-*	185	-	185	-	800	410	490	23x4
L3185.300-300-*	185	-	185	-	800	410	490	23x4
L3185.300-400-*	185	-	185	-	1000	640	760	23x4
L3185.300-500-*	185	-	185	-	1000	640	760	23x4
L3185.300-600-*	185	-	185	-	1195	915	1095	23x4
L3185.400-200-*	229	25	229	25	1360	470	560	30x4
L3185.400-300-*	229	25	229	25	1360	470	560	30x4
L3185.400-400-*	229	25	229	25	1360	470	560	30x4
L3185.400-401-*	229	25	229	25	1695	730	870	30x4
L3185.400-500-*	204	-	204	-	1685	730	870	30x4
L3185.400-600-*	204	-	204	-	1695	730	870	30x4
L3185.400-601-*	204	-	204	-	2025	1050	1250	30x4





L3188

Material
Cast iron body (ENGJL-250), with dovetail slide system. Hardened and ground lead screw, pitch accuracy ±0.02mm/300mm.

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.
Dovetail linear guideways are very stable for use when a degree of vibration damping is required. Other versions are also available - cross roller slides (L3470), and needle roller slides (L3490) for even higher load ratings. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,1.

Tips
Lead screw pitch M6 x 0,5.

Centre mounting of compound slides is standard. Please advise dimensions w_2 and l_7 when off-centre mounting is required.

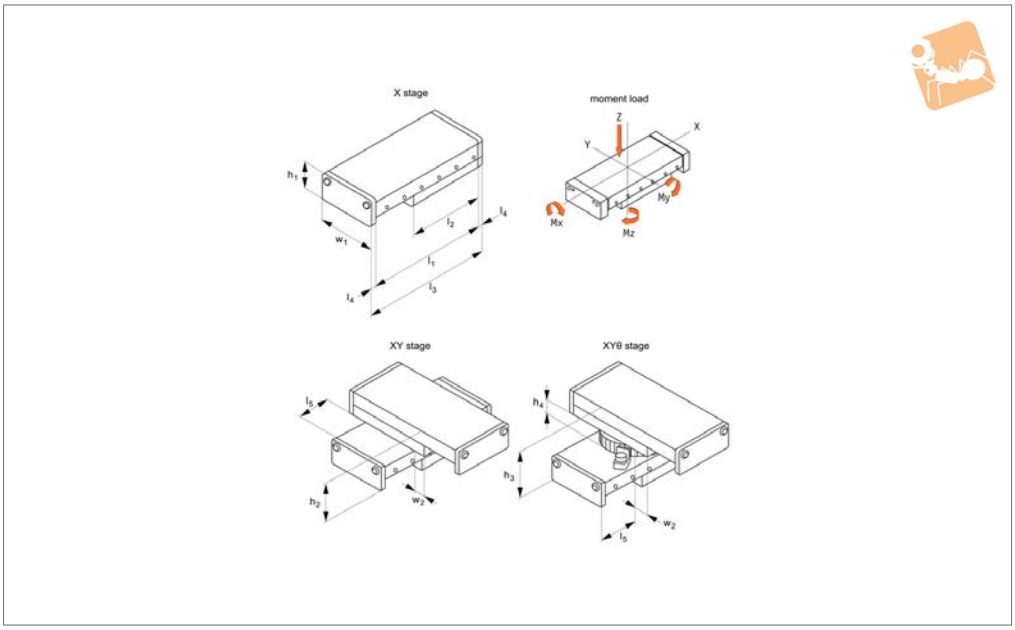
Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	l_4	l_5	h_2	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw	Weight kg
L3188.030-010	10	30	0.15	17	35	25	41	-	3	8.5	0.5	0.2	0.3	M6x0,5	0.2
L3188.030-020	20	30	0.22	17	55	35	61	-	3	8.5	0.7	0.4	0.5	M6x0,5	0.3
L3188.030-030	30	30	0.22	17	65	35	71	-	3	8.5	0.7	0.4	0.5	M6x0,5	0.4
L3188.030-040	40	30	0.28	17	85	45	91	-	3	8.5	1.0	0.7	0.8	M6x0,5	0.5
L3188.030-050	50	30	0.34	17	105	55	111	-	3	8.5	1.2	1.0	1.2	M6x0,5	0.6
L3188.030-010-K	10	30	0.15	17	35	25	41	65	3	8.5	0.5	0.2	0.3	M6x0,5	0.2
L3188.030-020-K	20	30	0.22	17	55	35	61	85	3	8.5	0.7	0.4	0.5	M6x0,5	0.3
L3188.030-030-K	30	30	0.22	17	65	35	71	95	3	8.5	0.7	0.4	0.5	M6x0,5	0.4
L3188.030-040-K	40	30	0.28	17	85	45	91	115	3	8.5	1.0	0.7	0.8	M6x0,5	0.5
L3188.030-050-K	50	30	0.34	17	105	55	111	135	3	8.5	1.2	1.0	1.2	M6x0,5	0.6

Plain Positioning Stages
needle roller



L3190



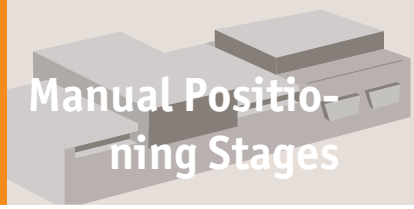
Material
Cast iron body (ENGJL-250), with hardened needle roller linear rail set.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.
Needle roller stages are the highest load rating stages. Other versions are also available - cross roller slides (L3470), and dovetail slides (L3480) for use when vibration damping is required. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,003.

Tips
With no lead screw drive.
Replace -* with
-X for X axis stage
- XY for X,Y axes stage
-XYT for X,Y,. stage
Centre mounting of compound slides is standard. Please advise dimensions w_2 and l_5 when off-centre mounting is required.

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	w_1	Stroke	Load kN max.	l_1	h_1	l_2	h_2	h_3	h_4	Weight kg
L3190.150-050-*	150	50	21.1	203	50	152	100	120	20	10.0
L3190.150-100-*	150	100	28.6	305	50	203	100	120	20	13.2
L3190.150-101-*	150	100	42.9	406	50	304	100	120	20	18.0
L3190.150-150-*	150	150	21.1	305	50	152	100	120	20	12.5
L3190.150-151-*	150	150	35.4	406	50	253	100	120	20	16.5
L3190.150-200-*	150	200	28.6	406	50	203	100	120	20	15.0
L3190.150-250-*	150	250	21.1	406	50	152	100	120	20	13.5
L3190.200-100-*	200	100	22.0	305	58	203	116	136	20	21.0
L3190.200-150-*	200	150	35.4	406	58	253	116	136	20	26.0
L3190.200-151-*	200	150	42.9	457	58	304	116	136	20	30.0
L3190.200-200-*	200	200	42.9	510	58	304	116	136	20	31.5
L3190.200-201-*	200	200	57.2	610	58	405	116	136	20	40.0
L3190.200-250-*	200	250	35.4	510	58	253	116	136	20	29.0
L3190.200-300-*	200	300	42.9	610	58	304	116	136	20	34.5
L3190.300-100-*	300	100	21.0	410	75	308	150	190	30	65.0
L3190.300-200-*	300	200	21.0	510	75	308	150	190	30	70.0
L3190.300-300-*	300	300	21.0	610	75	308	150	190	30	78.0
L3190.300-400-*	300	400	21.0	710	75	308	150	190	30	85.0
L3190.300-201-*	300	200	39.2	610	75	408	150	190	30	88.0
L3190.300-301-*	300	300	39.2	710	75	408	150	190	30	94.0
L3190.300-401-*	300	400	39.2	810	75	408	150	190	30	100.0
L3190.300-500-*	300	500	39.2	910	75	408	150	190	30	108.0



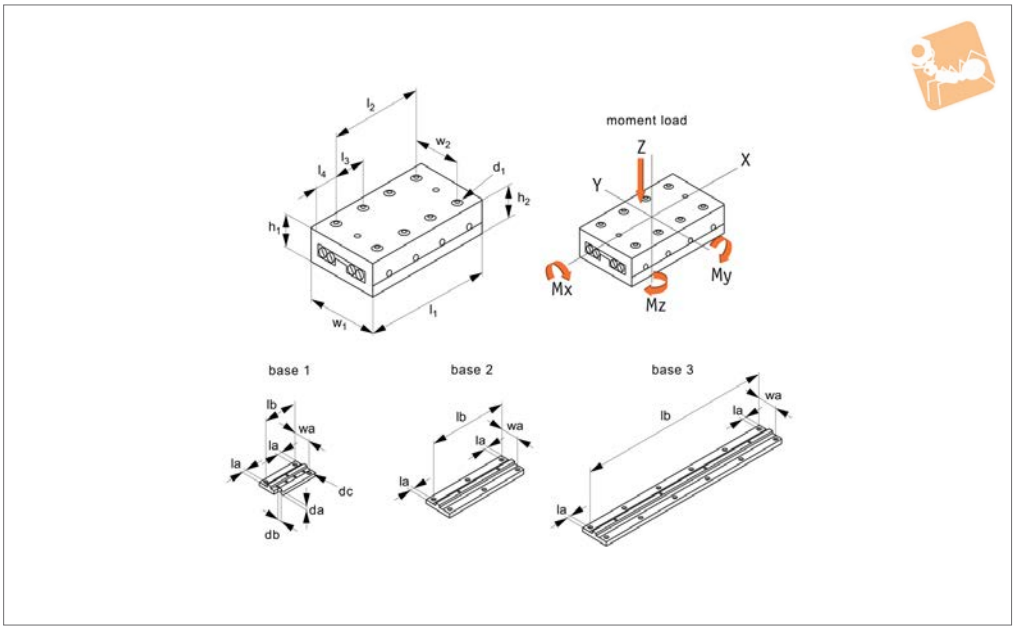
Order No.	w_1	Stroke	Load kN max.	l_1	h_1	l_2	h_2	h_3	h_4	Weight kg
L3190.300-600-*	300	600	39.2	1010	75	408	150	190	30	115.0
L3190.300-700-*	300	700	39.2	1110	75	408	150	190	30	122.0
L3190.300-800-*	300	800	39.2	1210	75	408	150	190	30	128.0
L3190.300-302-*	300	300	39.2	810	75	508	150	190	30	111.0
L3190.300-402-*	300	400	39.2	910	75	508	150	190	30	118.0
L3190.300-501-*	300	500	39.2	1010	75	508	150	190	30	125.0
L3190.300-601-*	300	600	39.2	1110	75	508	150	190	30	132.0
L3190.300-701-*	300	700	39.2	1210	75	508	150	190	30	137.0
L3190.400-200-*	400	200	44.3	610	102	408	204	244	40	169.0
L3190.400-300-*	400	300	44.3	710	102	408	204	244	40	182.0
L3190.400-400-*	400	400	44.3	810	102	408	204	244	40	195.0
L3190.400-500-*	400	500	44.3	910	102	408	204	244	40	208.0
L3190.400-600-*	400	600	44.3	1010	102	408	204	244	40	222.0
L3190.400-700-*	400	700	44.3	1110	102	408	204	244	40	235.0
L3190.400-800-*	400	800	44.3	1210	102	408	204	244	40	249.0
L3190.400-301-*	400	300	58.5	810	102	508	204	244	40	210.0
L3190.400-401-*	400	400	58.5	910	102	508	204	244	40	225.0
L3190.400-501-*	400	500	58.5	1010	102	508	204	244	40	238.0
L3190.400-601-*	400	600	58.5	1110	102	508	204	244	40	251.0
L3190.400-701-*	400	700	58.5	1210	102	508	204	244	40	265.0

Order No.	l_3	l_4	l_5	w_2	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L3190.150-050-*	219	8	26.5	1.0	940	435	435
L3190.150-100-*	321	8	77.5	26.5	1270	800	800
L3190.150-101-*	422	8	128.0	77.0	1910	1830	1830
L3190.150-150-*	321	8	77.5	1.0	940	435	435
L3190.150-151-*	422	8	128.0	51.5	1570	1250	1250
L3190.150-200-*	422	8	128.0	26.5	1270	800	800
L3190.150-250-*	422	8	128.0	1.0	940	435	435
L3190.200-100-*	321	8	52.5	1.5	1150	720	720
L3190.200-150-*	422	8	103.0	26.5	2215	1250	1250
L3190.200-151-*	473	8	128.5	52.0	2680	1830	1830
L3190.200-200-*	526	8	155.0	52.0	2680	1830	1830
L3190.200-201-*	626	8	205.0	102.5	3575	3275	3275
L3190.200-250-*	526	8	155.0	26.5	2215	1250	1250
L3190.200-300-*	626	8	205.0	52.0	2680	1830	1830
L3190.300-100-*	430	10	55.0	4.0	5520	2100	2100
L3190.300-200-*	530	10	105.0	4.0	5520	2100	2100
L3190.300-300-*	630	10	155.0	4.0	5520	2100	2100
L3190.300-400-*	730	10	205.0	4.0	5520	2100	2100
L3190.300-201-*	630	10	155.0	54.0	7440	4060	4060
L3190.300-301-*	730	10	205.0	54.0	7440	4060	4060
L3190.300-401-*	830	10	255.0	54.0	7440	4060	4060
L3190.300-500-*	930	10	305.0	54.0	7440	4060	4060
L3190.300-600-*	1030	10	355.0	54.0	7440	4060	4060
L3190.300-700-*	1130	10	405.0	54.0	7440	4060	4060
L3190.300-800-*	1230	10	455.0	54.0	7440	4060	4060
L3190.300-302-*	830	10	255.0	104.0	9290	6600	6600
L3190.300-402-*	930	10	305.0	104.0	9290	6600	6600
L3190.300-501-*	1030	10	355.0	104.0	9290	6600	6600
L3190.300-601-*	1130	10	405.0	104.0	9290	6600	6600
L3190.300-701-*	1230	10	455.0	104.0	9290	6600	6600
L3190.400-200-*	650	10	105.0	4.0	13000	5920	5920
L3190.400-300-*	750	20	155.0	4.0	13000	5920	5920
L3190.400-400-*	850	20	205.0	4.0	13000	5920	5920
L3190.400-500-*	950	20	255.0	4.0	13000	5920	5920
L3190.400-600-*	1050	20	305.0	4.0	13000	5920	5920
L3190.400-700-*	1150	20	355.0	4.0	13000	5920	5920
L3190.400-800-*	1250	20	405.0	4.0	13000	5920	5920
L3190.400-301-*	850	20	205.0	54.0	16430	9750	9750
L3190.400-401-*	950	20	255.0	54.0	16430	9750	9750
L3190.400-501-*	1050	20	305.0	54.0	16430	9750	9750
L3190.400-601-*	1150	20	355.0	54.0	16430	9750	9750
L3190.400-701-*	1250	20	405.0	54.0	16430	9750	9750

Plain Compact Positioning Stages
needle roller



L3191



Material
Cast iron body (ENGJL-250), with hardened needle roller linear rail set.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.
Needle roller stages are the highest load rating stages. Other versions are also available - cross roller slides (L3470), and dovetail slides (L3480) for use when vibration damping is required. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,003.

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	w_1	Stroke	Load kN max.	l_1	h_1	l_2	d_1	d_a	d_b	d_c	h_2	Weight kg
L3191.100-060	100	60	9.70	110	45	1xl_3	11	6.5	6.6	11	23.5	3.1
L3191.100-095	100	95	14.3	160	45	2xl_3	11	6.5	6.6	11	23.5	4.5
L3191.100-130	100	130	18.8	210	45	3xl_3	11	6.5	6.6	11	23.5	5.9
L3191.100-165	100	165	23.4	260	45	4xl_3	11	6.5	6.6	11	23.5	7.2
L3191.100-200	100	200	28.6	310	45	5xl_3	11	6.5	6.6	11	23.5	8.6
L3191.100-235	100	235	33.1	360	45	6xl_3	11	6.5	6.6	11	23.5	10.0
L3191.100-265	100	265	37.7	410	45	7xl_3	11	6.5	6.6	11	23.5	11.4
L3191.145-130	145	130	18.8	210	60	1xl_3	15	8.5	9.0	15	32.0	11.8
L3191.145-180	145	180	29.7	310	60	2xl_3	15	8.5	9.0	15	32.0	17.3
L3191.145-350	145	350	32.0	410	60	3xl_3	15	8.5	9.0	15	32.0	22.8
L3191.145-450	145	450	38.8	510	60	4xl_3	15	8.5	9.0	15	32.0	28.3
L3191.145-550	145	550	46.3	610	60	5xl_3	15	8.5	9.0	15	32.0	22.8
L3191.145-650	145	650	53.1	710	60	6xl_3	15	8.5	9.0	15	32.0	39.3
L3191.145-750	145	750	60.6	810	60	7xl_3	15	8.5	9.0	15	32.0	44.8
L3191.145-850	145	850	67.4	910	60	8xl_3	15	8.5	9.0	15	32.0	50.3
L3191.145-950	145	950	74.9	1010	60	9xl_3	15	8.5	9.0	15	32.0	55.8

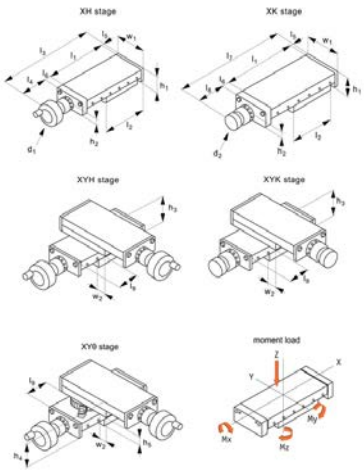
Order No.	l_3	l_4	l_a	l_b	w_2	w_a	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Hole pattern
L3191.100-060	50	30	10	1x90	64	60	215	104	104	1
L3191.100-095	50	30	10	1x140	64	60	320	230	230	1
L3191.100-130	50	30	10	1x50 / 1x90 / 1x50	64	60	420	410	410	2
L3191.100-165	50	30	10	1x50 / 1x140 / 1x50	64	60	525	645	645	2
L3191.100-200	50	30	10	1x50 / 1x190 / 1x50	64	60	640	950	950	2

Order No.	l_3	l_4	l_a	l_b	w_2	w_a	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Hole pattern
L3191.100-235	50	30	10	2x50 / 1x140 / 2x50	64	60	745	1285	1285	3
L3191.100-265	50	30	10	2x50 / 1x190 / 2x50	64	60	845	1695	1695	3
L3191.145-130	100	55	55	1x100	98	90	675	410	410	1
L3191.145-180	100	55	55	1x200	98	90	1070	1035	1035	1
L3191.145-350	100	55	55	3x100	98	90	1150	1200	1200	2
L3191.145-450	100	55	55	1x100 /1x200 /1x100	98	90	1400	1795	1795	2
L3191.145-550	100	55	55	5x100	98	90	1665	2540	2540	2
L3191.145-650	100	55	55	2x100 /1x200 /2x100	98	90	1915	3375	3375	3
L3191.145-750	100	55	55	7x100	98	90	2180	4375	4375	2
L3191.145-850	100	55	55	3x100 /1x200 /3x100	98	90	2425	5455	5455	3
L3191.145-950	100	55	55	9x100	98	90	2695	6705	6705	2

Manual Lead Screw Positioning Stages
needle roller



L3192



Material
Cast iron body (ENGJL-250), with hardened needle roller linear rail set. Hardened and ground lead screw, pitch accuracy ±0.02mm/300mm.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.

Needle roller stages are the highest load rating stages. Other versions are also available - cross roller slides (L3470), and dovetail slides (L3480) for use when vibration damping is required. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,003.

Tips
Replace -* with
-XH for X axis stage with handle
-XK for X axis stage with knob
-XYH for X,Y axes stage with handle
-XYK for X,Y axes stage with knob
-XYTH for X,Y,. stage with handle
-XYTK for X,Y,. stage with knob
Centre mounting of compound slides is standard. Please advise dimensions w_2 and l_9 when off-centre mounting is required.

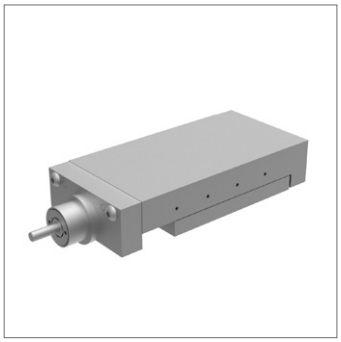
Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	w_1	Stroke	Load kN max.	l_1	h_1	l_2	d_1	d_2	h_2	h_3	h_4	h_5	Weight kg
L3192.150-050-*	150	50	21.1	203	50	152	106	48	24.3	100	120	20	10.0
L3192.150-100-*	150	100	28.6	305	50	203	106	48	24.3	100	120	20	13.2
L3192.150-101-*	150	100	42.9	406	50	304	106	48	24.3	100	120	20	18.0
L3192.150-150-*	150	150	21.1	305	50	152	106	48	24.3	100	120	20	12.5
L3192.150-151-*	150	150	35.4	406	50	253	106	48	24.3	100	120	20	16.5
L3192.150-200-*	150	200	28.6	406	50	203	106	48	24.3	100	120	20	15.0
L3192.150-250-*	150	250	21.1	406	50	152	106	48	24.3	100	120	20	13.5
L3192.200-100-*	200	100	22.0	305	58	203	106	48	28.3	116	136	20	21.0
L3192.200-150-*	200	150	35.4	406	58	253	106	48	28.3	116	136	20	26.0
L3192.200-151-*	200	150	42.9	457	58	304	106	48	28.3	116	136	20	30.0
L3192.200-200-*	200	200	42.9	510	58	304	106	48	28.3	116	136	20	31.5
L3192.200-201-*	200	200	57.2	610	58	406	106	48	28.3	116	136	20	40.0
L3192.200-250-*	200	250	35.4	510	58	253	106	48	28.3	116	136	20	29.0
L3192.200-300-*	200	300	42.9	610	58	304	106	48	28.3	116	136	20	34.5
L3192.300-100-*	300	100	21.0	410	75	308	125	68	35.0	150	190	30	65
L3192.300-200-*	300	200	21.0	510	75	308	125	68	35.0	150	190	30	70
L3192.300-300-*	300	300	21.0	610	75	308	125	68	35.0	150	190	30	78
L3192.300-400-*	300	400	21.0	710	75	308	125	68	35.0	150	190	30	85
L3192.300-201-*	300	200	30.2	610	75	408	125	68	35.0	150	190	30	88
L3192.300-301-*	300	300	30.2	710	75	408	125	68	35.0	150	190	30	94
L3192.300-401-*	300	400	30.2	810	75	408	125	68	35.0	150	190	30	100

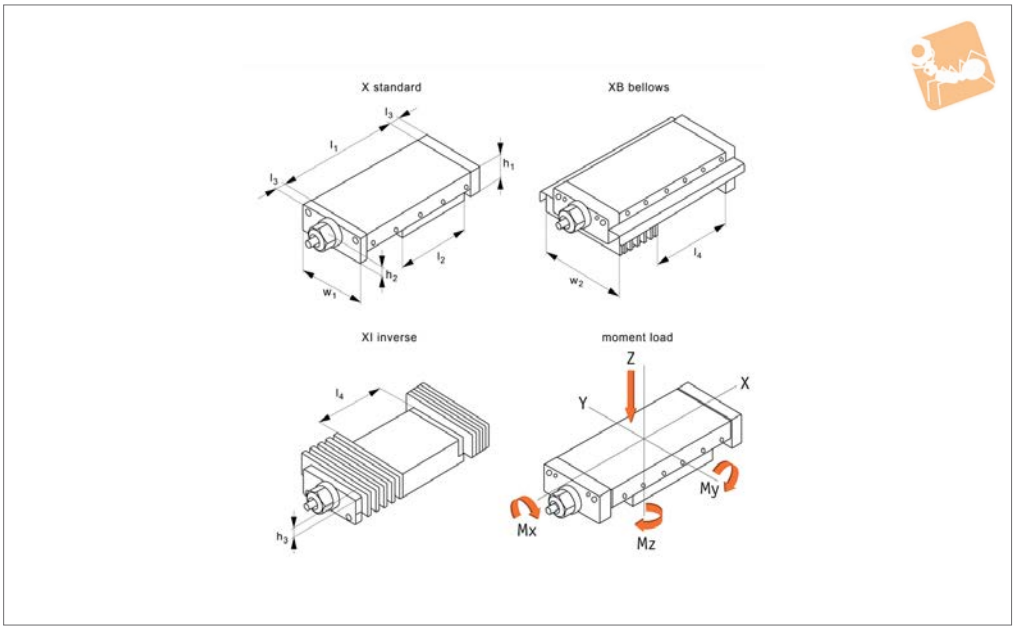
Order No.	w_1	Stroke	Load kN max.	l_1	h_1	l_2	d_1	d_2	h_2	h_3	h_4	h_5	Weight kg
L3192.300-500-*	300	500	30.2	910	75	408	125	68	35.0	150	190	30	108
L3192.300-600-*	300	600	30.2	1010	75	408	125	68	35.0	150	190	30	115
L3192.300-700-*	300	700	30.2	1110	75	408	125	68	35.0	150	190	30	122
L3192.300-800-*	300	800	39.2	1210	75	408	125	68	35.0	150	190	30	128
L3192.300-302-*	300	300	39.2	810	75	508	125	68	35.0	150	190	30	111
L3192.300-402-*	300	400	39.2	910	75	508	125	68	35.0	150	190	30	118
L3192.300-502-*	300	500	39.2	1010	75	508	125	68	35.0	150	190	30	125
L3192.300-602-*	300	600	39.2	1110	75	508	125	68	35.0	150	190	30	132
L3192.300-702-*	300	700	39.2	1210	75	508	125	68	35.0	150	190	30	137
L3192.400-203-*	400	200	44.3	610	102	408	200	84	43.5	204	244	40	169
L3192.400-303-*	400	300	44.3	710	102	408	200	84	43.5	204	244	40	182
L3192.400-403-*	400	400	44.3	810	102	408	200	84	43.5	204	244	40	195
L3192.400-503-*	400	500	44.3	910	102	408	200	84	43.5	204	244	40	208
L3192.400-603-*	400	600	44.3	1010	102	408	200	84	43.5	204	244	40	222
L3192.400-703-*	400	700	44.3	1110	102	408	200	84	43.5	204	244	40	235
L3192.400-803-*	400	800	44.3	1210	102	408	200	84	43.5	204	244	40	249
L3192.400-304-*	400	300	58.2	810	102	508	200	84	43.5	204	244	40	210
L3192.400-404-*	400	400	58.2	910	102	508	200	84	43.5	204	244	40	225
L3192.400-504-*	400	500	58.2	1010	102	508	200	84	43.5	204	244	40	238
L3192.400-604-*	400	600	58.2	1110	102	508	200	84	43.5	204	244	40	251
L3192.400-704-*	400	700	58.2	1210	102	508	200	84	43.5	204	244	40	265

Order No.	l_3	l_4	l_5	l_6	l_7	l_8	l_9	w_2	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw
L3192.150-050-*	334	107	8	16	297	70.0	26.5	1.0	940	435	435	M20x1
L3192.150-100-*	436	107	8	16	399	70.0	77.5	26.5	1270	800	800	M20x1
L3192.150-101-*	537	107	8	16	500	70.0	128.0	77.0	1910	1830	1830	M20x1
L3192.150-150-*	436	107	8	16	399	70.0	77.5	1.0	940	435	435	M20x1
L3192.150-151-*	537	107	8	16	500	70.0	128.0	51.5	1570	1250	1250	M20x1
L3192.150-200-*	537	107	8	16	500	70.0	128.0	26.5	1270	800	800	M20x1
L3192.150-250-*	537	107	8	16	600	70.0	128.0	1.0	940	435	435	M20x1
L3192.200-100-*	436	107	8	16	399	70.0	52.5	1.5	1150	720	720	M20x1
L3192.200-150-*	537	107	8	16	500	70.0	103.0	26.5	2215	1250	1250	M20x1
L3192.200-151-*	588	107	8	16	551	70.0	128.5	52.0	2680	1830	1830	M20x1
L3192.200-200-*	641	107	8	16	604	70.0	155.0	52.0	2680	1830	1830	M20x1
L3192.200-201-*	741	107	8	16	704	70.0	205.0	103.0	3575	3275	3275	M20x1
L3192.200-250-*	841	107	8	16	604	70.0	155.0	26.5	2215	1250	1250	M20x1
L3192.200-300-*	741	107	8	16	704	70.0	205.0	52.0	2680	1830	1830	M20x1
L3192.300-100-*	607	166.5	10	20	538	97.5	55.0	4.0	5520	2100	2100	TR26x4
L3192.300-200-*	707	166.5	10	20	638	97.5	105.0	4.0	5520	2100	2100	TR26x4
L3192.300-300-*	807	166.5	10	20	738	97.5	155.0	4.0	5520	2100	2100	TR26x4
L3192.300-400-*	907	166.5	10	20	838	97.5	205.0	4.0	5520	2100	2100	TR26x4
L3192.300-201-*	807	166.5	10	20	738	97.5	155.0	54.0	7440	4060	4060	TR26x4
L3192.300-301-*	907	166.5	10	20	838	97.5	205.0	54.0	7440	4060	4060	TR26x4
L3192.300-401-*	1007	166.5	10	20	938	97.5	255.0	54.0	7440	4060	4060	TR26x4
L3192.300-500-*	1107	166.5	10	20	1038	97.5	305.0	54.0	7440	4060	4060	TR26x4
L3192.300-600-*	1207	166.5	10	20	1138	97.5	355.0	54.0	7440	4060	4060	TR26x4
L3192.300-700-*	1307	166.5	10	20	1238	97.5	405.0	54.0	7440	4060	4060	TR26x4
L3192.300-800-*	1407	166.5	10	20	1338	97.5	455.0	54.0	7440	4060	4060	TR26x4
L3192.300-302-*	1007	166.5	10	20	938	97.5	255.0	104.0	9290	6600	6600	TR26x4
L3192.300-402-*	1107	166.5	10	20	1038	97.5	305.0	104.0	9290	6600	6600	TR26x4
L3192.300-502-*	1207	166.5	10	20	1138	97.5	355.0	104.0	9290	6600	6600	TR26x4
L3192.300-602-*	1307	166.5	10	20	1238	97.5	405.0	104.0	9290	6600	6600	TR26x4
L3192.300-702-*	1407	166.5	10	20	1338	97.5	455.0	104.0	9290	6600	6600	TR26x4
L3192.400-203-*	868	208.0	20	30	783	123.0	105.0	4.0	13000	5920	5920	TR32x4
L3192.400-303-*	968	208.0	20	30	883	123.0	155.0	4.0	13000	5920	5920	TR32x4
L3192.400-403-*	1068	208.0	20	30	983	123.0	205.0	4.0	13000	5920	5920	TR32x4
L3192.400-503-*	1168	208.0	20	30	1083	123.0	255.0	4.0	13000	5920	5920	TR32x4
L3192.400-603-*	1268	208.0	20	30	1183	123.0	305.0	4.0	13000	5920	5920	TR32x4
L3192.400-703-*	1368	208.0	20	30	1283	123.0	355.0	4.0	13000	5920	5920	TR32x4
L3192.400-803-*	1468	208.0	20	30	1383	123.0	405.0	4.0	13000	5920	5920	TR32x4
L3192.400-304-*	1068	208.0	20	30	983	123.0	205.0	54.0	16430	9750	9750	TR32x4
L3192.400-404-*	1168	208.0	20	30	1083	123.0	255.0	54.0	16430	9750	9750	TR32x4
L3192.400-504-*	1268	208.0	20	30	1183	123.0	305.0	54.0	16430	9750	9750	TR32x4
L3192.400-604-*	1368	208.0	20	30	1283	123.0	355.0	54.0	16430	9750	9750	TR32x4
L3192.400-704-*	1468	208.0	20	30	1383	123.0	405.0	54.0	16430	9750	9750	TR32x4

Motor Lead Screw X Stages
needle roller



L3194



Material
Cast iron body (ENGJL-250), with hardened needle roller linear rail set. Hardened and ground lead screw, pitch accuracy ±0.015mm/300mm.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.

Needle roller stages are the highest load rating stages. Other versions are also available - cross roller slides (L3470), and dovetail slides (L3480) for use when vibration damping is required. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,003.
Speeds up to 2000 rpm, max. 20 m/min.
Positioning accuracy max. 0.001mm.

Tips
Replace -* with
-X for X axis stage

-XB for X axis stage with bellows
-XI for inverse X axis stage with bellows
When limit switches are installed the stroke is reduced by approx. 20mm.

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	w_1	Stroke	Load kN max.	l_1	h_1	l_2	h_2	h_3	Weight kg
L3194.150-050-*	150	50	21.1	203	50	152	19.0	24	10.0
L3194.150-100-*	150	100	21.1	285	50	152	19.0	24	12.0
L3194.150-101-*	150	100	28.6	305	50	203	19.0	24	13.2
L3194.150-102-*	150	100	42.9	406	50	304	19.0	24	18.0
L3194.150-150-*	150	150	21.1	305	50	152	19.0	24	12.5
L3194.150-151-*	150	150	35.4	406	50	253	19.0	24	16.5
L3194.150-200-*	150	200	28.6	406	50	203	19.0	24	15.0
L3194.150-250-*	150	250	21.1	406	50	152	19.0	24	13.5
L3194.150-300-*	150	300	28.6	530	50	203	19.0	24	19.0
L3194.150-400-*	150	400	28.6	650	50	203	19.0	24	19.5
L3194.150-500-*	150	500	28.6	770	50	203	19.0	24	21.0
L3194.150-600-*	150	600	28.6	880	50	203	19.0	24	22.5
L3194.200-100-*	200	100	28.6	335	58	220	21.5	24	22.5
L3194.200-150-*	200	150	35.4	406	58	253	21.5	24	26.0
L3194.200-151-*	200	150	42.9	457	58	304	21.5	24	30.0
L3194.200-200-*	200	200	28.6	460	58	220	21.5	24	25.5
L3194.200-201-*	200	200	42.9	510	58	304	21.5	24	31.5
L3194.200-202-*	200	200	57.2	610	58	406	21.5	24	40.0
L3194.200-250-*	200	250	35.4	520	58	253	21.5	24	29.0
L3194.200-300-*	200	300	28.6	580	58	220	21.5	24	29.0
L3194.200-301-*	200	300	42.9	610	58	304	21.5	24	34.5

Order No.	w_1	Stroke	Load kN max.	l_1	h_1	l_2	h_2	h_3	Weight kg
L3194.200-400-*	200	400	28.6	700	58	220	21.5	24	32.0
L3194.200-500-*	200	500	28.6	820	58	220	21.5	24	35.5
L3194.200-600-*	200	600	28.6	940	58	220	21.5	24	38.5
L3194.200-700-*	200	700	28.6	1070	58	220	21.5	24	42.0
L3194.200-800-*	200	800	28.6	1185	58	220	21.5	24	45.0
L3194.300-100-*	300	100	21.0	410	75	280	26	32	70.0
L3194.300-200-*	300	200	21.0	510	75	280	26	32	75.0
L3194.300-300-*	300	300	21.0	610	75	280	26	32	83.0
L3194.300-400-*	300	400	21.0	710	75	280	26	32	90.0
L3194.300-201-*	300	200	30.2	610	75	380	26	32	93.0
L3194.300-301-*	300	300	30.2	710	75	380	26	32	98.0
L3194.300-401-*	300	400	30.2	810	75	380	26	32	105.0
L3194.300-500-*	300	500	30.2	910	75	380	26	32	113.0
L3194.300-600-*	300	600	30.2	1010	75	380	26	32	120.0
L3194.300-700-*	300	700	30.2	1110	75	380	26	32	127.0
L3194.300-800-*	300	800	30.2	1210	75	380	26	32	133.0
L3194.300-302-*	300	300	39.2	810	75	480	26	32	115.0
L3194.300-402-*	300	400	39.2	910	75	480	26	32	123.0
L3194.300-502-*	300	500	39.2	1010	75	480	26	32	130.0
L3194.300-602-*	300	600	39.2	1110	75	480	26	32	137.0
L3194.300-702-*	300	700	39.2	1210	75	480	26	32	142.0
L3194.400-200-*	400	200	44.3	610	102	380	34	37	174.0
L3194.400-300-*	400	300	44.3	710	102	380	34	37	186.0
L3194.400-400-*	400	400	44.3	810	102	380	34	37	200.0
L3194.400-500-*	400	500	44.3	910	102	380	34	37	213.0
L3194.400-600-*	400	600	44.3	1010	102	380	34	37	227.0
L3194.400-700-*	400	700	44.3	1110	102	380	34	37	240.0
L3194.400-800-*	400	800	44.3	1210	102	380	34	37	254.0
L3194.400-301-*	400	300	58.2	810	102	480	34	37	215.0
L3194.400-401-*	400	400	58.2	910	102	480	34	37	230.0
L3194.400-501-*	400	500	58.2	1010	102	480	34	37	243.0
L3194.400-601-*	400	600	58.2	1110	102	480	34	37	256.0
L3194.400-701-*	400	700	58.2	1210	102	480	34	37	270.0

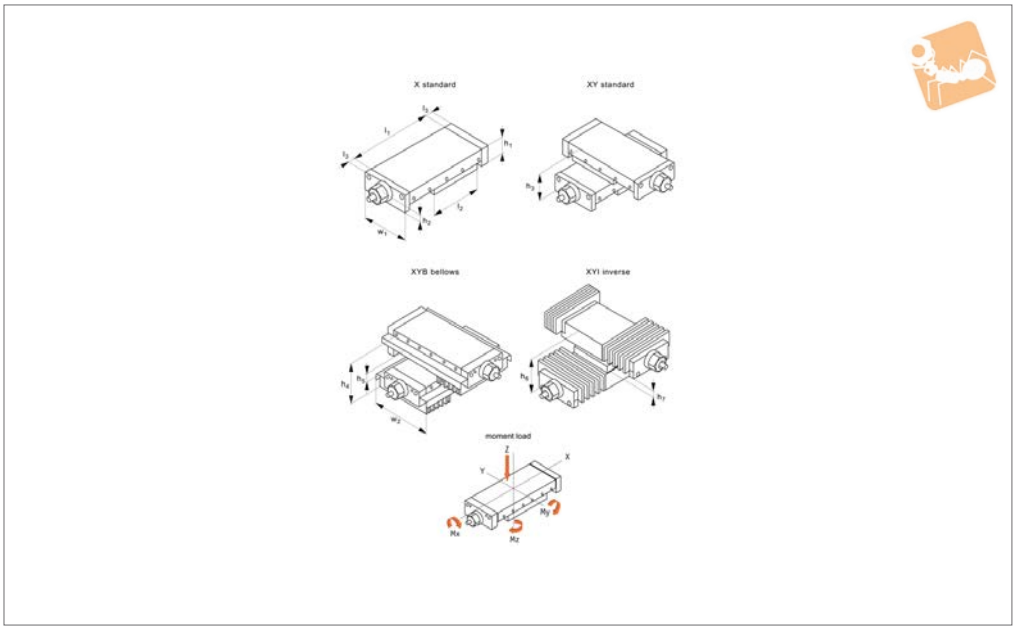
Order No.	l_3	l_4	w_2	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw
L3194.150-050-*	16	120	200	940	435	435	15x2
L3194.150-100-*	16	120	200	940	435	435	15x2
L3194.150-101-*	16	150	200	1270	800	800	15x2
L3194.150-102-*	16	250	200	1910	1830	1830	15x2
L3194.150-150-*	30	130	200	940	435	435	15x2
L3194.150-151-*	16	190	200	1570	1250	1250	15x2
L3194.150-200-*	16	150	200	1270	800	800	15x2
L3194.150-250-*	35	130	200	940	435	435	15x2
L3194.150-300-*	16	150	200	1270	800	800	15x2
L3194.150-400-*	16	150	200	1270	800	800	15x2
L3194.150-500-*	16	150	200	1270	800	800	15x2
L3194.150-600-*	16	150	200	1270	800	800	15x2
L3194.200-100-*	16	200	250	1270	800	800	15x2
L3194.200-150-*	16	200	250	2215	1250	1250	15x2
L3194.200-151-*	16	200	250	2680	1830	1830	15x2
L3194.200-200-*	16	200	250	1785	800	800	15x2
L3194.200-201-*	16	200	250	2680	1830	1830	15x2
L3194.200-202-*	16	200	250	3575	3275	3275	15x2
L3194.200-250-*	16	200	250	2215	1250	1250	15x2
L3194.200-300-*	16	200	250	1785	800	800	15x2
L3194.200-301-*	16	200	250	2680	1830	1830	15x2
L3194.200-400-*	16	200	250	1785	800	800	15x2
L3194.200-500-*	16	200	250	1785	800	800	15x2
L3194.200-600-*	16	200	250	1785	800	800	15x2
L3194.200-700-*	16	200	250	1785	800	800	15x2
L3194.200-800-*	16	200	250	1785	800	800	15x2
L3194.300-100-*	70	280	375	5520	2100	2100	23x4
L3194.300-200-*	70	280	375	5520	2100	2100	23x4
L3194.300-300-*	70	280	375	5520	2100	2100	23x4
L3194.300-400-*	70	280	375	5520	2100	2100	23x4

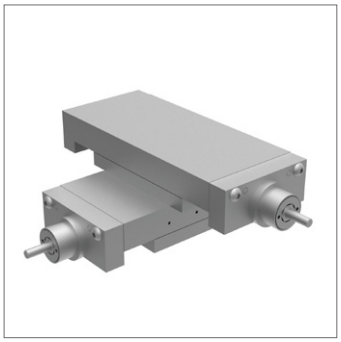
Motor Lead Screw X Stages

needle roller



Order No.	l_3	l_4	w_2	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw
L3194.300-201-*	70	380	375	7440	4060	4060	23x4
L3194.300-301-*	70	380	375	7440	4060	4060	23x4
L3194.300-401-*	70	380	375	7440	4060	4060	23x4
L3194.300-500-*	90	380	375	7440	4060	4060	23x4
L3194.300-600-*	100	380	375	7440	4060	4060	23x4
L3194.300-700-*	100	380	375	7440	4060	4060	23x4
L3194.300-800-*	110	380	375	7440	4060	4060	23x4
L3194.300-302-*	70	480	375	9290	6600	6600	23x4
L3194.300-402-*	70	480	375	9290	6600	6600	23x4
L3194.300-502-*	90	480	375	9290	6600	6600	23x4
L3194.300-602-*	100	480	375	9290	6600	6600	23x4
L3194.300-702-*	100	480	375	9290	6600	6600	23x4
L3194.400-200-*	70	380	480	13000	5920	5920	30x4
L3194.400-300-*	70	380	480	13000	5920	5920	30x4
L3194.400-400-*	90	380	480	13000	5920	5920	30x4
L3194.400-500-*	90	380	480	13000	5920	5920	30x4
L3194.400-600-*	100	380	480	13000	5920	5920	30x4
L3194.400-700-*	100	380	480	13000	5920	5920	30x4
L3194.400-800-*	110	380	480	13000	5920	5920	30x4
L3194.400-301-*	90	480	480	16430	9750	9750	30x4
L3194.400-401-*	90	480	480	16430	9750	9750	30x4
L3194.400-501-*	100	480	480	16430	9750	9750	30x4
L3194.400-601-*	100	480	480	16430	9750	9750	30x4
L3194.400-701-*	110	480	480	16430	9750	9750	30x4





L3195

Material
Cast iron body (ENGJL-250), with hardened needle roller linear rail set. Hardened and ground lead screw, pitch accuracy ±0.015mm/300mm.
Can also be supplied with an aluminium body when lighter weight stages are required (approx. 50% of weight of standard slides and have 50% of the load capacity).

Technical Notes
Suitable for horizontal and vertical applications requiring smooth movement, long life and high load capacity.

Needle roller stages are the highest load rating stages. Other versions are also available - cross roller slides (L3470), and dovetail slides (L3480) for use when vibration damping is required. Load ratings are based on even surface loading with the slide in the centre position, and apply to a single slide.
Coefficient of friction 0,003.
Speeds up to 2000 rpm, max. 20 m/min.
Positioning accuracy max. 0.001mm.

Tips
Replace -* with
-XY for XY axis stage

-XYB for XY axis stage with bellows
-XYI for inverse X axis stage with bellows
Centre mounting of compound slides is standard. Please advise dimensions w_2 and l_9 when off-centre mounting is required. When limit switches are installed the stroke is reduced by approx. 20mm.

Important Notes
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request.
3D CAD models available.

Order No.	w_1	Stroke	Load kN max.	l_1	h_1	l_2	h_2	h_3	h_4	h_5	Weight kg
L3195.300-100-*	300	100	21.0	410	75	308	26	220	185	35	70
L3195.300-200-*	300	200	21.0	510	75	308	26	220	185	35	75
L3195.300-300-*	300	300	21.0	610	75	308	26	220	185	35	83
L3195.300-400-*	300	400	21.0	710	75	308	26	220	185	35	90
L3195.300-201-*	300	200	30.2	610	75	408	26	185	150	-	93
L3195.300-301-*	300	300	30.2	710	75	408	26	185	150	-	98
L3195.300-401-*	300	400	30.2	810	75	408	26	185	150	-	105
L3195.300-500-*	300	500	30.2	910	75	408	26	185	150	-	113
L3195.300-600-*	300	600	30.2	1010	75	408	26	185	150	-	120
L3195.300-700-*	300	700	30.2	1110	75	408	26	185	150	-	127
L3195.300-800-*	300	800	30.2	1210	75	408	26	185	150	-	133
L3195.300-302-*	300	300	39.2	810	75	508	26	150	150	-	115
L3195.300-402-*	300	400	39.2	910	75	508	26	150	150	-	123
L3195.300-502-*	300	500	39.2	1010	75	508	26	150	150	-	130
L3195.300-602-*	300	600	39.2	1110	75	508	26	150	150	-	137
L3195.300-702-*	300	700	39.2	1210	75	508	26	150	150	-	142
L3195.300-202-*	400	200	44.3	610	102	408	34	284	244	40	174
L3195.300-303-*	400	300	44.3	710	102	408	34	284	244	40	186
L3195.300-403-*	400	400	44.3	810	102	408	34	284	244	40	200
L3195.300-503-*	400	500	44.3	910	102	408	34	284	244	40	213
L3195.300-603-*	400	600	44.3	1010	102	408	34	284	244	40	227

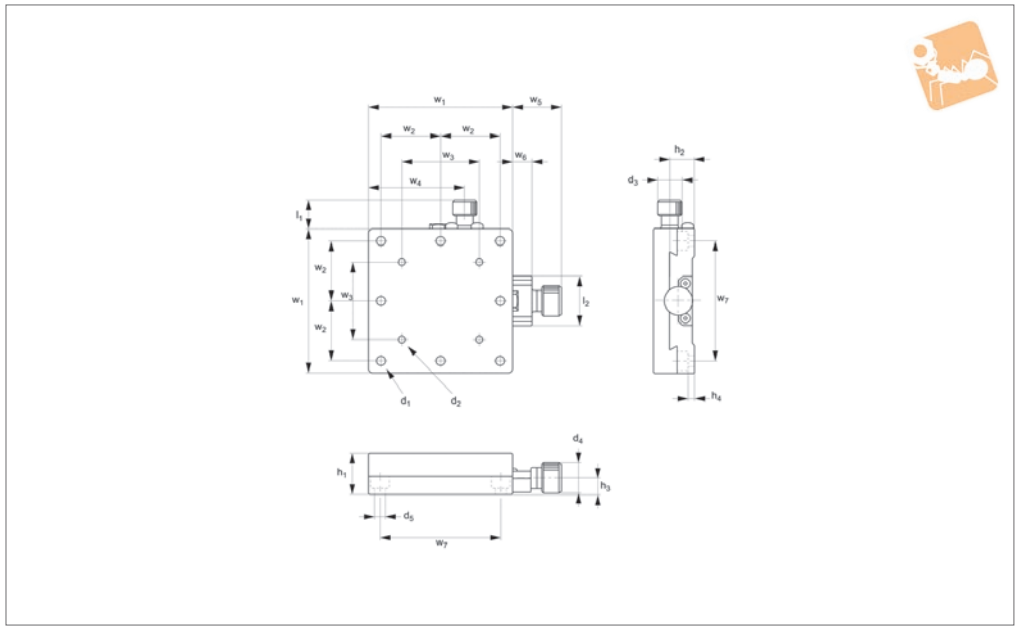
Motor Lead Screw XY Stages

needle roller



Order No.	w_1	Stroke	Load kN max.	l_1	h_1	l_2	h_2	h_3	h_4	h_5	Weight kg
L3195.300-703-*	400	700	44.3	1110	102	408	34	284	244	40	240
L3195.300-803-*	400	800	44.3	1210	102	408	34	284	244	40	254
L3195.300-304-*	400	300	58.2	810	102	508	34	244	204	-	215
L3195.300-404-*	400	400	58.2	910	102	508	34	244	204	-	230
L3195.300-504-*	400	500	58.2	1010	102	508	34	244	204	-	243
L3195.300-604-*	400	600	58.2	1110	102	508	34	244	204	-	256
L3195.300-704-*	400	700	58.2	1210	102	508	34	244	204	-	270

Order No.	h_6	h_7	l_3	w_2	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	Lead screw
L3195.300-100-*	185	35	20	375	5520	2100	2100	23x4
L3195.300-200-*	185	35	20	375	5520	2100	2100	23x4
L3195.300-300-*	185	35	20	375	5520	2100	2100	23x4
L3195.300-400-*	185	35	20	375	5520	2100	2100	23x4
L3195.300-201-*	150	-	20	375	7440	4060	4060	23x4
L3195.300-301-*	150	-	20	375	7440	4060	4060	23x4
L3195.300-401-*	150	-	20	375	7440	4060	4060	23x4
L3195.300-500-*	150	-	20	375	7440	4060	4060	23x4
L3195.300-600-*	150	-	20	375	7440	4060	4060	23x4
L3195.300-700-*	150	-	20	375	7440	4060	4060	23x4
L3195.300-800-*	150	-	20	375	7440	4060	4060	23x4
L3195.300-302-*	150	-	20	375	9290	6600	6600	23x4
L3195.300-402-*	150	-	20	375	9290	6600	6600	23x4
L3195.300-502-*	150	-	20	375	9290	6600	6600	23x4
L3195.300-602-*	150	-	20	375	9290	6600	6600	23x4
L3195.300-702-*	150	-	20	375	9290	6600	6600	23x4
L3195.300-202-*	229	25	30	480	13000	5920	5920	30x4
L3195.300-303-*	229	25	30	480	13000	5920	5920	30x4
L3195.300-403-*	229	25	30	480	13000	5920	5920	30x4
L3195.300-503-*	229	25	30	480	13000	5920	5920	30x4
L3195.300-603-*	229	25	30	480	13000	5920	5920	30x4
L3195.300-703-*	229	25	30	480	13000	5920	5920	30x4
L3195.300-803-*	229	25	30	480	13000	5920	5920	30x4
L3195.300-304-*	204	-	30	480	16430	9750	9750	30x4
L3195.300-404-*	204	-	30	480	16430	9750	9750	30x4
L3195.300-504-*	204	-	30	480	16430	9750	9750	30x4
L3195.300-604-*	204	-	30	480	16430	9750	9750	30x4
L3195.300-704-*	204	-	30	480	16430	9750	9750	30x4





L3300.X

Material
Brass, blackened body, aluminium knob.

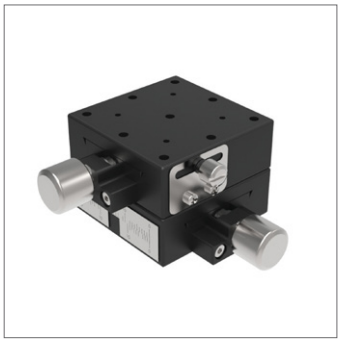
Technical Notes
Travel 0,5mm for one revolution.

Minimum vernier reading 0,1mm.
Straightness accuracy 30µ.

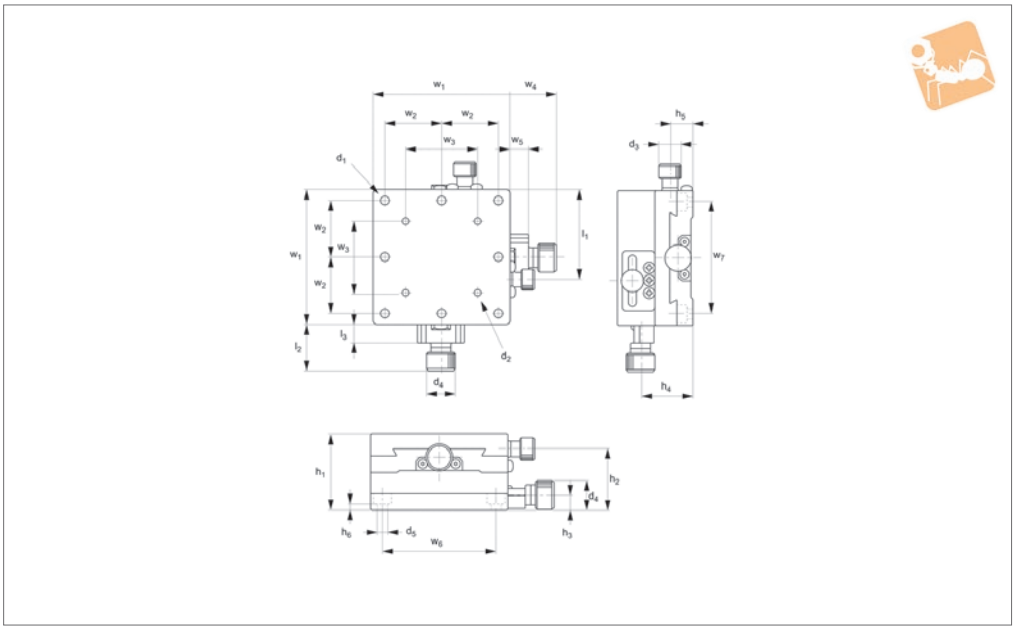
Order No.	h_1	Travel	Load kg max.	w_1	d_1	d_2	d_3	d_4
L3300.025-X	15	±3	3.0	25	M2	-	6	12
L3300.040-X	15	±7	3.0	40	M3	M2	6	12
L3300.060-X	17	±9	4.0	60	M4	M3	10	12

Order No.	d_5	h_2	h_3	l_1	l_2	w_2	w_3	w_4	w_5	w_6	w_7
L3300.025-X	2.5	11.5	7.0	6.7	23	10	-	15	20	8	20
L3300.040-X	3.5	11.5	7.0	6.7	23	20	20	28	20	8	32
L3300.060-X	4.5	10.5	6.5	11.5	20	25	32	40	20	8	50

Miniature Dovetail Stages
XY axis



L3300.XY



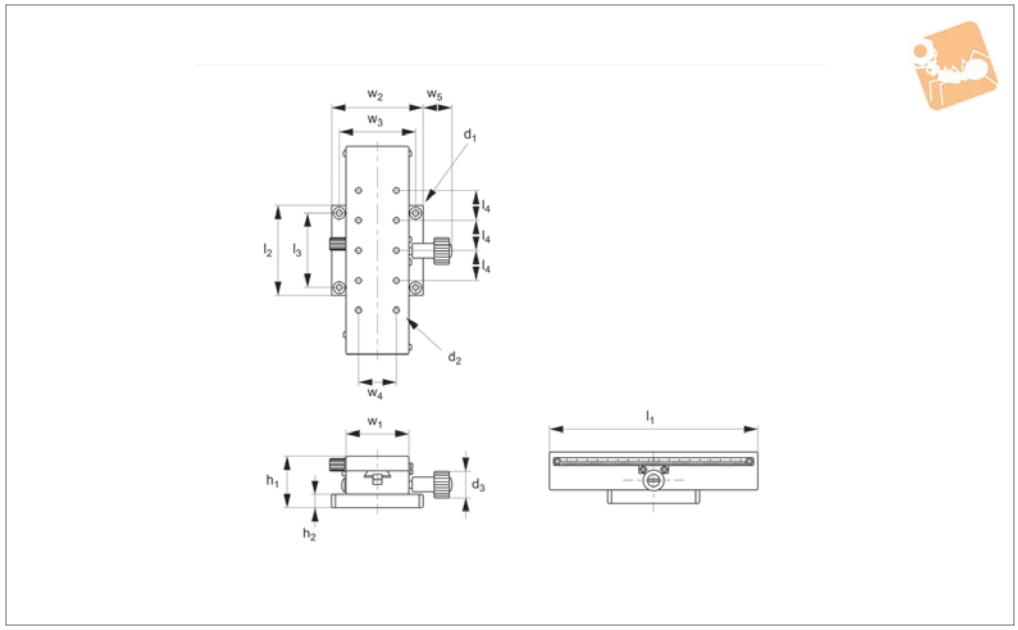
Material
Brass, blackened body, aluminium knob.

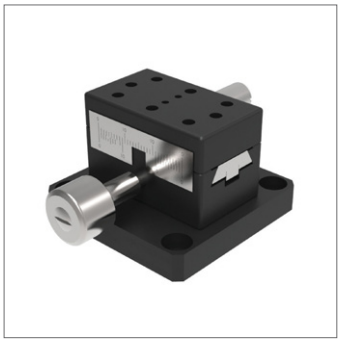
Technical Notes
Travel 0,5mm for one revolution.

Minimum vernier reading 0,1mm.
Straightness accuracy 30µ.

Order No.	h_1	Travel	Load kg max.	w_1	d_1	d_2	d_3	d_4
L3300.025-XY	30	±3	2.9	25	M2	-	6	12
L3300.040-XY	30	±7	2.8	40	M3	M2	6	12
L3300.060-XY	34	±9	3.4	60	M4	M3	10	12

Order No.	d_5	h_2	h_3	h_4	h_5	h_6	l_1	l_2	l_3	w_2	w_3	w_4	w_5	w_6	w_7
L3300.025-XY	2.5	26.5	7.0	22.0	11.5	4.5	15	20	8	10	-	20	8.0	8	20
L3300.040-XY	3.5	26.5	7.0	22.0	11.5	3.5	28	20	8	20	20	20	8.0	8	32
L3300.060-XY	4.5	27.5	6.5	23.5	10.5	2.5	40	20	8	25	32	20	11.5	8	50





L3303.X

Material
Aluminium body blackened, steel knob.

Technical Notes
Travel 18mm for one revolution.

Minimum vernier reading 0,1mm.
Straightness accuracy 30µ.

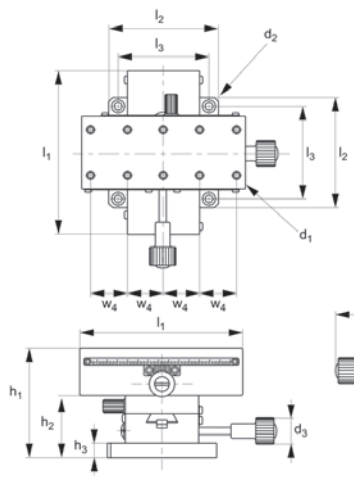
Order No.	h_1	Travel	Load kg max.	w_1	d_1	d_2	d_3	h_2	l_1	l_2	l_3	l_4	w_2	w_3	w_4	w_5
L3303.042-X	34	±12	3.0	24.8	4.5	M4	15	8	42	50	40	20	50	40	15	17.8
L3303.060-X	34	±21	4.0	40.0	4.5	M4	15	8	60	60	50	20	60	50	25	17.8
L3303.090-X	34	±35	4.0	40.0	4.5	M4	15	8	90	60	50	20	60	50	25	17.8
L3303.140-X	34	±60	4.0	40.0	4.5	M4	15	8	140	60	50	20	60	50	25	17.8

Dovetail Stages - Rack & Pinion

XY axis



L3303.XY

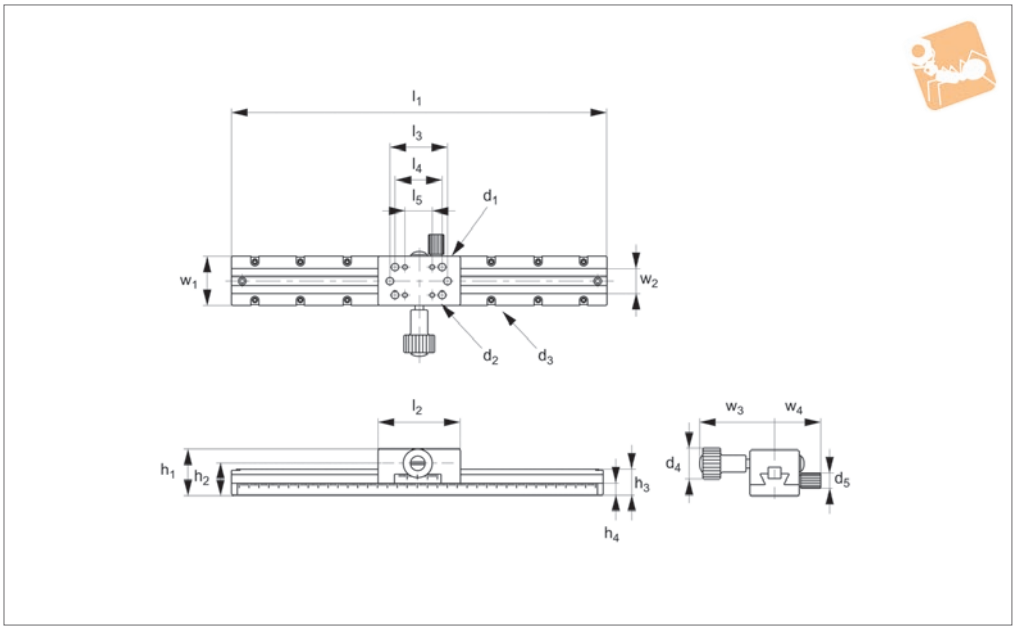


Material
Aluminium body blackened, steel knob.

Technical Notes
Travel 18mm for one revolution.

Minimum vernier reading 0,1mm.
Straightness accuracy 30µ.

Order No.	h_1	Travel	Load kg max.	w_1	d_1	d_2	d_3	h_2	h_3	l_1	l_2	l_3	w_2	w_3	w_4
L3303.042-XY	60	±12	2.5	24.8	M4	4.5	15	8	34	42	50	40	28	12	12.5
L3303.060-XY	60	±21	3.5	40.0	M4	4.5	15	8	34	60	60	50	28	12	20
L3303.090-XY	60	±35	3.5	40.0	M4	4.5	15	8	34	90	60	50	43	13	20





L3305

Material
Aluminium body blackened, steel knob.

Technical Notes
Travel 18mm for one revolution.

Minimum vernier reading 0,1mm.
Straightness accuracy 30µ.
Use screwdriver to adjust knob to allow coarse or fine adjustment.

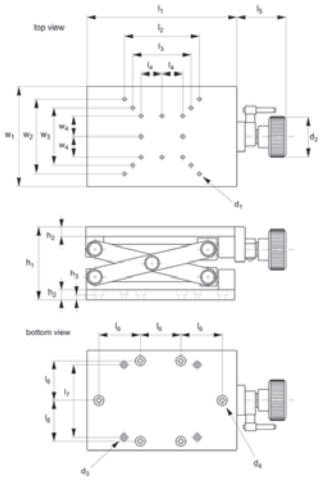
Order No.	h_1	Travel	Load kg max.	w_1	Accuracy	d_1	d_2	d_3 for
L3305.100	25	±40	3.0	25	30µ	M2	M2	M3
L3305.150	25	±60	3.0	25	40µ	M4	M2	M3
L3305.200	25	±95	3.0	25	50µ	M4	M2	M3

Order No.	d_4	d_5	h_2	h_3	h_4	l_1	l_2	l_3	l_4	l_5	w_2	w_3	w_4
L3305.100	15	8	17.1	14.8	6	100	42	30	25	15	15	40.2	24.5
L3305.150	15	8	17.1	14.8	6	150	42	30	25	15	15	40.2	24.5
L3305.200	15	8	17.1	14.8	6	200	42	30	25	15	15	40.2	24.5

Manual Laboratory Jacks
Z axis



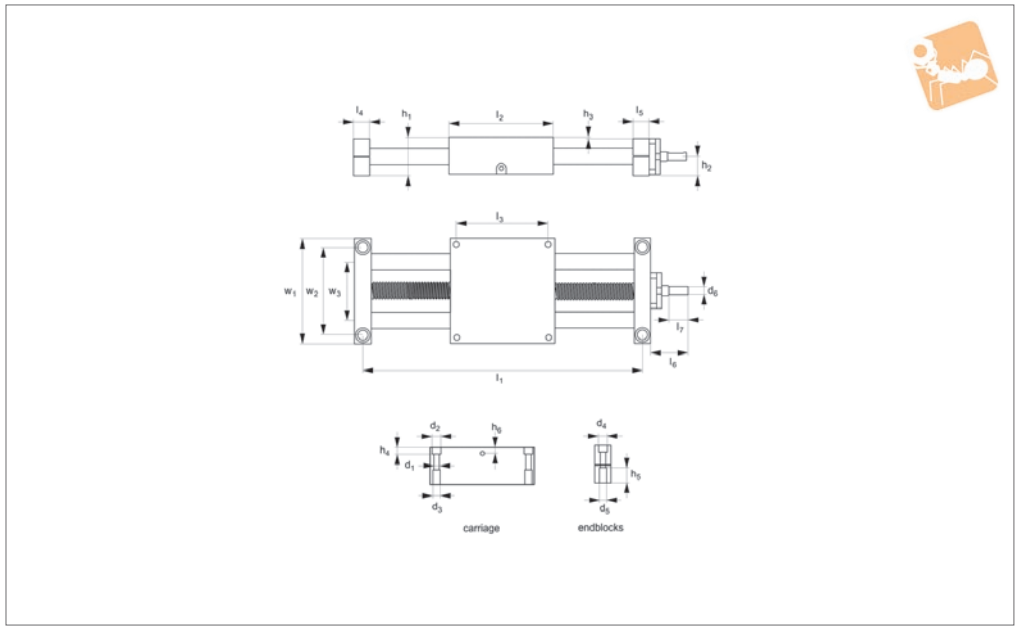
L3320



Material
Aluminium body blackened, steel knob.

Order No.	h_1	w_1	Holding force kgf	Parallelism	d_1	d_2	d_3	d_4
L3320.080	60-100	80	7	0.2	M4	35	4.5	7.0
L3320.120	90-160	120	10	0.2	M4	50	4.5	8.0

Order No.	h_2	h_3	l_1	l_2	l_3	l_4	l_5	l_6	l_7	w_2	w_3	w_4
L3320.080	8	3.5	120	70	-	25	43	35	-	70	-	25
L3320.120	12	5.5	180	90	70	25	61	50	90	90	70	25





L3149.12

Material
Hardened steel shafts.
Aluminium alloy bearing block and end supports.
Self-aligning linear ball bearings, hardened and ground steel body with resin retainers.
Steel ball screw and nut.

Technical Notes
Self-aligning linear ball bearings are used as standard to ensure that the balls are permanently in contact with the shaft, even if the shafts bend slightly due to the load put on the table.
Different stroke lengths available on request.

Tips
Handwheels to suit are available (see part number L1455)

Bellows protection of the lead screw and shaft is available, add -B suffix to the part number.
We strongly recommend you add 50mm to your required stroke.

Order No.	Stroke	l_1	h_1	l_2	l_3	l_4	l_5	l_6	l_7	w_1	w_2	w_3	Weight kg
L3149.12-0100	100	198	31.5	85	73	12	14	23	8	85	73	45	2.2
L3149.12-0150	150	248	31.5	85	73	12	14	23	8	85	73	45	3.3
L3149.12-0200	200	298	31.5	85	73	12	14	23	8	85	73	45	4.4
L3149.12-0250	250	348	31.5	85	73	12	14	23	8	85	73	45	5.5
L3149.12-0300	300	398	31.5	85	73	12	14	23	8	85	73	45	6.6
L3149.12-0350	350	448	31.5	85	73	12	14	23	8	85	73	45	7.7
L3149.12-0400	400	498	31.5	85	73	12	14	23	8	85	73	45	8.8
L3149.12-0450	450	548	31.5	85	73	12	14	23	8	85	73	45	9.9
L3149.12-0500	500	598	31.5	85	73	12	14	23	8	85	73	45	10.10

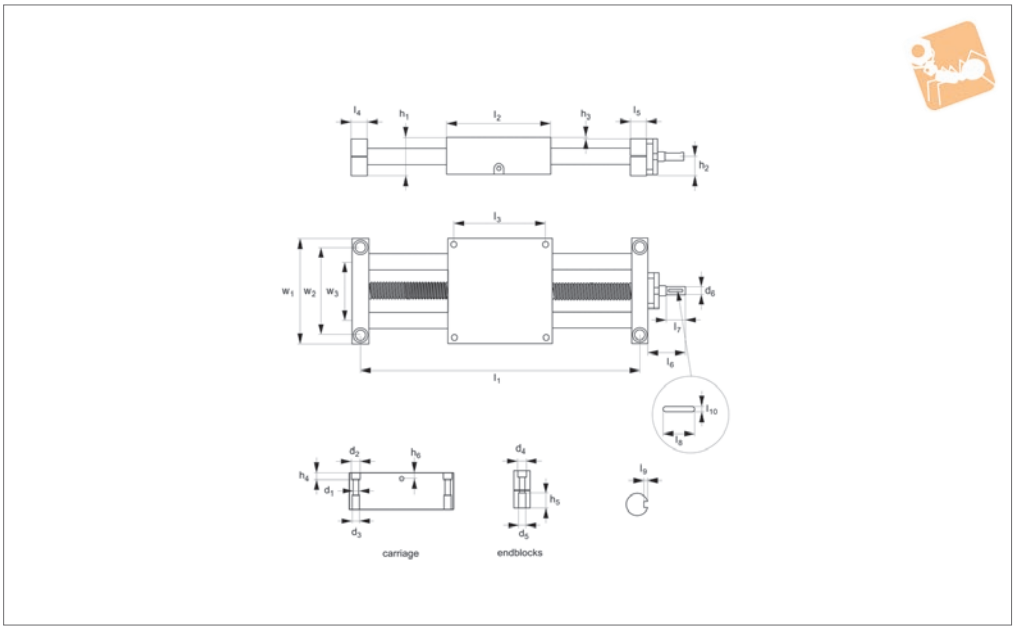
Order No.	d_1	d_2	d_3	d_4	d_5	d_6	h_2	h_3	h_4	h_5	h_6	Ball screw dia. x lead	Static load N max.
L3149.12-0100	5.2	10	M6x12	5.5	10.7	4	15	1.5	5.5	5.7	7.5	8x2,5	3900
L3149.12-0150	5.2	10	M6x12	5.5	10.7	4	15	1.5	5.5	5.7	7.5	8x2,5	3100
L3149.12-0200	5.2	10	M6x12	5.5	10.7	4	15	1.5	5.5	5.7	7.5	8x2,5	2500
L3149.12-0250	5.2	10	M6x12	5.5	10.7	4	15	1.5	5.5	5.7	7.5	8x2,5	1500
L3149.12-0300	5.2	10	M6x12	5.5	10.7	4	15	1.5	5.5	5.7	7.5	8x2,5	1200
L3149.12-0350	5.2	10	M6x12	5.5	10.7	4	15	1.5	5.5	5.7	7.5	8x2,5	1000
L3149.12-0400	5.2	10	M6x12	5.5	10.7	4	15	1.5	5.5	5.7	7.5	8x2,5	900
L3149.12-0450	5.2	10	M6x12	5.5	10.7	4	15	1.5	5.5	5.7	7.5	8x2,2	750
L3149.12-0500	5.2	10	M6x12	5.5	10.7	4	15	1.5	5.5	5.7	7.5	8x2,5	500

Ball Screw Linear Tables

20mm shafts



L3149.20



Material

Hardened steel shafts.
Aluminium alloy bearing block and end supports.
Self-aligning linear ball bearings, hardened and ground steel body with resin retainers.
Steel ball screw and nut.

Technical Notes

Self-aligning linear ball bearings are used as standard to ensure that the balls are permanently in contact with the shaft, even if the shafts bend slightly due to the load put on the table.
Different stroke lengths available on request.

Tips

Handwheels to suit are available (see part number L1455)

Bellows protection of the lead screw and shaft is available, add -B suffix to the part number.
We strongly recommend you add 50mm to your required.

Order No.	Stroke	l_1	h_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	w_1	w_2	Weight kg
L3149.20-0100	100	250	48	130	115	20	20	49	25	18	3	1.8	130	108	6.4
L3149.20-0150	150	300	48	130	115	20	20	49	25	18	3	1.8	130	108	9.6
L3149.20-0200	200	350	48	130	115	20	20	49	25	18	3	1.8	130	108	12.8
L3149.20-0250	250	400	48	130	115	20	20	49	25	18	3	1.8	130	108	16.0
L3149.20-0300	300	450	48	130	115	20	20	49	25	18	3	1.8	130	108	19.2
L3149.20-0350	350	500	48	130	115	20	20	49	25	18	3	1.8	130	108	22.4
L3149.20-0400	400	550	48	130	115	20	20	49	25	18	3	1.8	130	108	25.6
L3149.20-0450	450	600	48	130	115	20	20	49	25	18	3	1.8	130	108	28.8
L3149.20-0500	500	650	48	130	115	20	20	49	25	18	3	1.8	130	108	32.0
L3149.20-0550	550	700	48	130	115	20	20	49	25	18	3	1.8	130	108	35.2
L3149.20-0600	600	750	48	130	115	20	20	49	25	18	3	1.8	130	108	38.4
L3149.20-0650	650	800	48	130	115	20	20	49	25	18	3	1.8	130	108	41.6
L3149.20-0700	700	850	48	130	115	20	20	49	25	18	3	1.8	130	108	44.8
L3149.20-0750	750	900	48	130	115	20	20	49	25	18	3	1.8	130	108	48.0
L3149.20-0800	800	950	48	130	115	20	20	49	25	18	3	1.8	130	108	51.2
L3149.20-0850	850	1000	48	130	115	20	20	49	25	18	3	1.8	130	108	54.4
L3149.20-0900	900	1050	48	130	115	20	20	49	25	18	3	1.8	130	108	57.6
L3149.20-0950	950	1100	48	130	115	20	20	49	25	18	3	1.8	130	108	60.8
L3149.20-1000	1000	1150	48	130	115	20	20	49	25	18	3	1.8	130	108	64.0

Order No.	w_3	d_1	d_2	d_3	d_4	d_5	d_6	h_2	h_3	h_4	h_5	h_6	Ball screw dia. x lead	Static load N max.
L3149.20-0100	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	6750
L3149.20-0150	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	6750
L3149.20-0200	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	6750

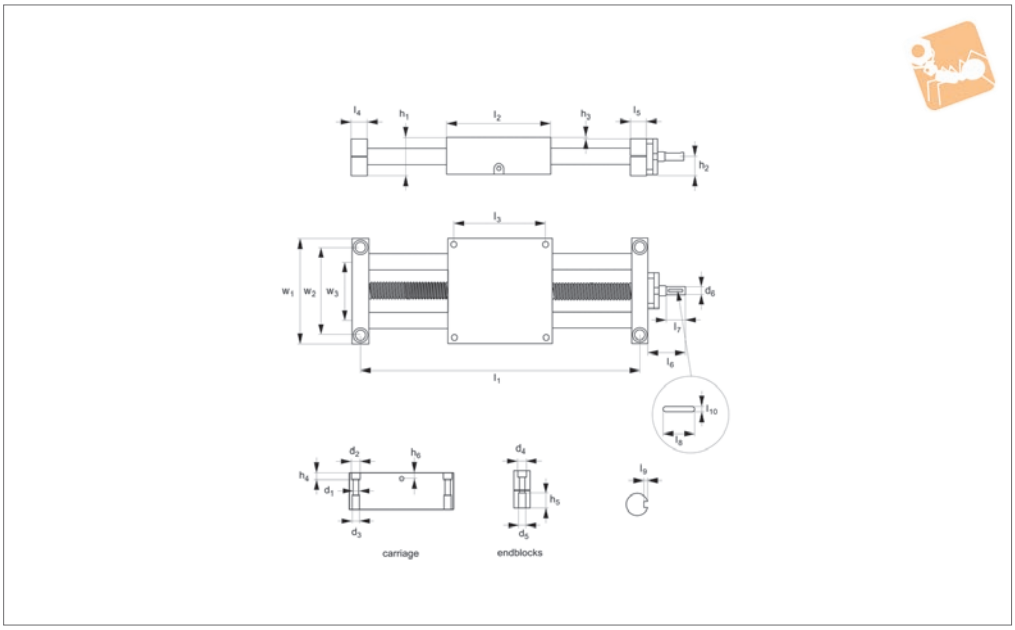
Order No.	w_3	d_1	d_2	d_3	d_4	d_5	d_6	h_2	h_3	h_4	h_5	h_6	Ball screw dia. x lead	Static load N max.
L3149.20-0250	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	6750
L3149.20-0300	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	6750
L3149.20-0350	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	6000
L3149.20-0400	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	4750
L3149.20-0450	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	3500
L3149.20-0500	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	2500
L3149.20-0550	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	1750
L3149.20-0600	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	1500
L3149.20-0650	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	1250
L3149.20-0700	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	1000
L3149.20-0750	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	750
L3149.20-0800	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	750
L3149.20-0850	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	600
L3149.20-0900	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	500
L3149.20-0950	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	400
L3149.20-1000	72	6.8	11	M8x18	11	18	10	24	2	8.5	13.5	7.5	16x05	300

Ball Screw Linear Tables

30mm shafts



L3149.30



Material

Hardened steel shafts.
Aluminium alloy bearing block and end supports.
Self-aligning linear ball bearings, hardened and ground steel body with resin retainers.
Steel ball screw and nut.

Technical Notes

Self-aligning linear ball bearings are used as standard to ensure that the balls are permanently in contact with the shaft, even if the shafts bend slightly due to the load put on the table.
Different stroke lengths available on request.

Tips

Handwheels to suit are available (see part number L1455)

Bellows protection of the lead screw and shaft is available, add -B suffix to the part number.
We strongly recommend you add 50mm to your required.

Order No.	Stroke	l_1	h_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	w_1	w_2	Weight g
L3149.30-0100	100	322	70	200	184	22	22	80	45	36	5	3	200	178	17.1
L3149.30-0150	150	372	70	200	184	22	22	80	45	36	5	3	200	178	25.6
L3149.30-0200	200	422	70	200	184	22	22	80	45	36	5	3	200	178	34.2
L3149.30-0250	250	472	70	200	184	22	22	80	45	36	5	3	200	178	42.7
L3149.30-0300	300	522	70	200	184	22	22	80	45	36	5	3	200	178	51.3
L3149.30-0350	350	572	70	200	184	22	22	80	45	36	5	3	200	178	59.8
L3149.30-0400	400	622	70	200	184	22	22	80	45	36	5	3	200	178	68.4
L3149.30-0450	450	672	70	200	184	22	22	80	45	36	5	3	200	178	76.9
L3149.30-0500	500	722	70	200	184	22	22	80	45	36	5	3	200	178	85.5
L3149.30-0550	550	772	70	200	184	22	22	80	45	36	5	3	200	178	94.0
L3149.30-0600	600	822	70	200	184	22	22	80	45	36	5	3	200	178	102.6
L3149.30-0650	650	872	70	200	184	22	22	80	45	36	5	3	200	178	111.1
L3149.30-0700	700	922	70	200	184	22	22	80	45	36	5	3	200	178	119.7
L3149.30-0750	750	972	70	200	184	22	22	80	45	36	5	3	200	178	128.2
L3149.30-0800	800	1022	70	200	184	22	22	80	45	36	5	3	200	178	136.8
L3149.30-0850	850	1072	70	200	184	22	22	80	45	36	5	3	200	178	145.3
L3149.30-0900	900	1122	70	200	184	22	22	80	45	36	5	3	200	178	153.9
L3149.30-0950	950	1172	70	200	184	22	22	80	45	36	5	3	200	178	162.4
L3149.30-1000	1000	1222	70	200	184	22	22	80	45	36	5	3	200	178	171.0

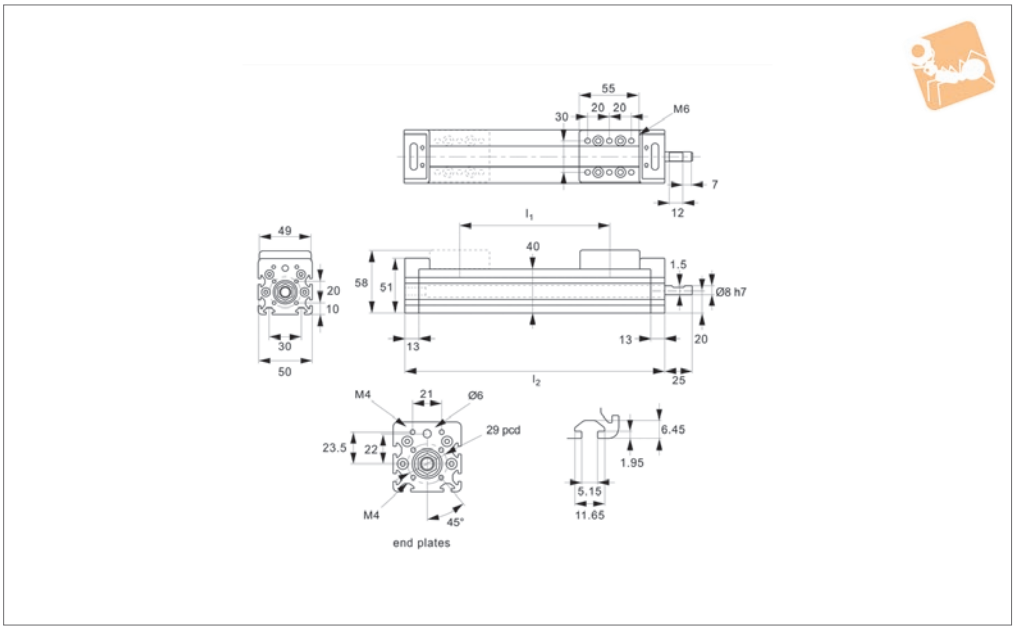
Order No.	w_3	d_1	d_2	d_3	d_4	d_5	d_6	h_2	h_3	h_4	h_5	h_6	Ball screw dia. x lead	Static load N max.
L3149.30-0100	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	11500
L3149.30-0150	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	11500
L3149.30-0200	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	11500

Order No.	w_3	d_1	d_2	d_3	d_4	d_5	d_6	h_2	h_3	h_4	h_5	h_6	Ball screw dia. x lead	Static load N max.
L3149.30-0250	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	11500
L3149.30-0300	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	11500
L3149.30-0350	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	11500
L3149.30-0400	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	11500
L3149.30-0450	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	11500
L3149.30-0500	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	10800
L3149.30-0550	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	9000
L3149.30-0600	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	7000
L3149.30-0650	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	5750
L3149.30-0700	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	4800
L3149.30-0750	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	4000
L3149.30-0800	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	3500
L3149.30-0850	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	3000
L3149.30-0900	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	2500
L3149.30-0950	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	2250
L3149.30-1000	130	6.8	11	M8x18	13	20	16	36	2	8.5	14	15	32x05	2000

Lead Screw Linear Stages
single carriage



L3147.S

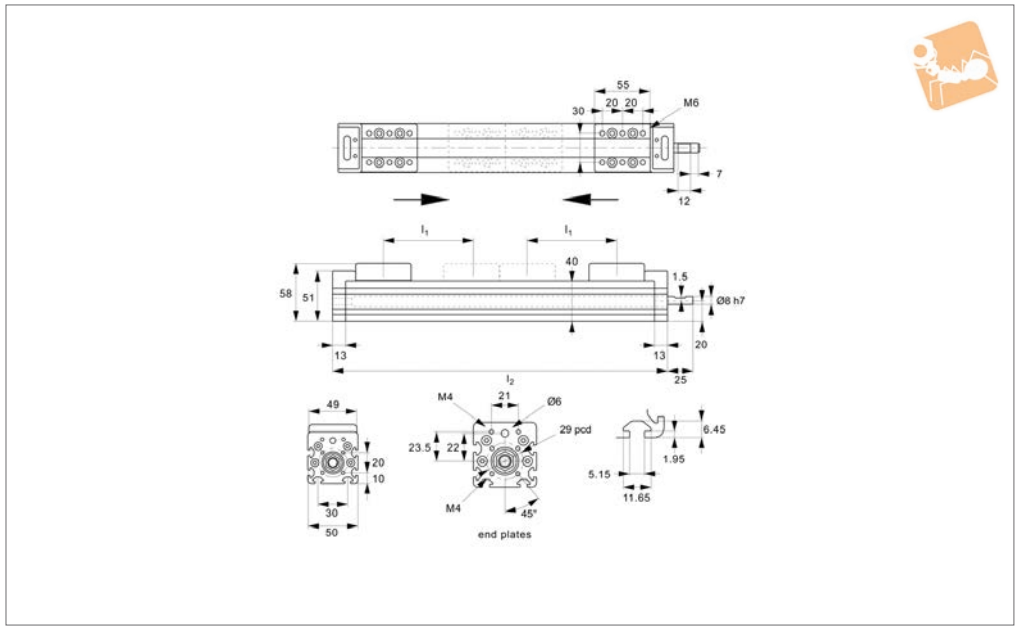


Material
Aluminium body (anodised), with die cast zinc end plates. Steel lead screw with bronze nut. Stainless steel dust cover (AISI 304).

Technical Notes
Uses a 14 trapezoidal lead screw with 3mm pitch.
Rigid, economical and light-weight. Can be used as a single in series, or a single or double unit in parallel, (connected via pulleys and belt drive). Ideal for slide adjustment on conveyors, fixtures, packing machines etc.

Tips
Often used in conjunction with one touch lock spindles, position indicators, hand-wheels etc.

Order No.	Travel l_1	Rotation direction	l_2	Weight kg
L3147.S150-L	150	Counter-clockwise	250	1.7
L3147.S200-R	200	Clockwise	300	1.9
L3147.S200-L	200	Counter-clockwise	300	1.9
L3147.S300-R	300	Clockwise	400	2.0
L3147.S300-L	300	Counter-clockwise	400	2.0
L3147.S150-R	150	Clockwise	250	1.7
L3147.S250-R	250	Clockwise	350	2.0
L3147.S250-L	250	Counter-clockwise	350	2.0





L3147.D

Material
Aluminium body (anodised), with die cast zinc end plates. Steel lead screw with bronze nut. Stainless steel dust cover (AISI 304).

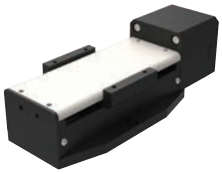
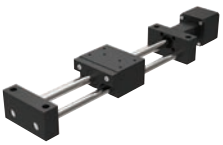
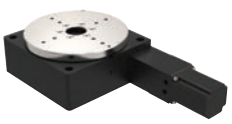
Technical Notes
Uses a 14 trapezoidal lead screw with 3mm pitch.
Rigid, economical and light-weight. Can be used as a single in series, or a single or double unit in parallel, (connected via pulleys and belt drive). Ideal for slide adjustment on conveyors, fixtures, packing machines etc.

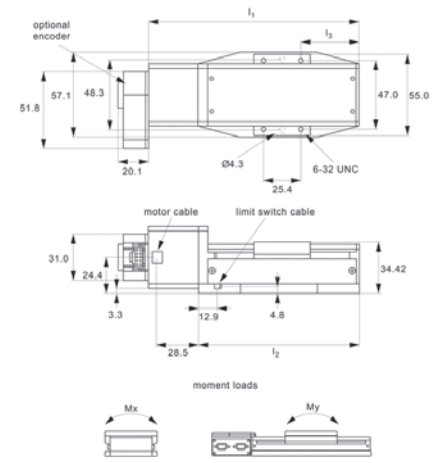
Tips
Often used in conjunction with one touch lock spindles, position indicators, hand-wheels etc.

Order No.	Travel l_1	l_2	Weight kg
L3147.D150	150	455	2.4
L3147.D100	100	355	2.4

Motorised Linear & Rotary Stages

Overview

L3500 **Medium duty motorised stage** 	**L3504** **Heavy-duty motorised stage** 	**L3505** **Motorised linear stage** 	**L3506** **Miniature motorised stage** 
L3508 **Motorised linear stage** 	**L3510** **Motorised linear stage** 	**L3521** **Single axis stepper controller** 	**L3522** **Two axes stepper controller** 
L3524 **Multi-axes stepper controller** 	**L3525** **Single axis servo controller** 	**L3550** **Motorised rotary stage Ø50** 	**L3552** **Motorised rotary stage Ø75** 
L3554 **Motorised rotary stage Ø75** 	**L3556** **Motorised rotary stage Ø125** 	**L3558** **Motorised rotary stage Ø125** 	**L3559** **Manual rotary stage Ø125** 
L3562 **Motorised rotary stage Ø200** 	**L3569** **High speed rotary table** 	**L3591** **Vertical lift stage motorised** 	**L3592** **Vertical lift stage motorised** 





L3506

Material
Black anodised aluminium body (6061). Hardened linear guideways, stainless steel Acme lead screw (with internally lubricated anti-backlash nut).

Technical Notes
Compact, high precision slide.
Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but many pre-existing software packages (such as Labview) can be used.
Can be readily supplied in XY, XZ and XYZ configurations.
Applications - research, semi-conductors, fibre optics, automation etc.
Max. speed 8 mm/sec.
Accuracy ±50µ. Uni-directional repeatability ±5µ, resolution ±0,7µ.

Tips
Motor options:
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Option with 1000 line rotary encoder.
Intelligent stepper - Nema 17 high torque 1.8° stepper motor with a fully programmable motion controller inbuilt (ie no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS-422/485 communications. Input voltage 24VDC.
Limit switches are wired normally open.
Drawings show stepper motor configuration. See special pages for further motor options.

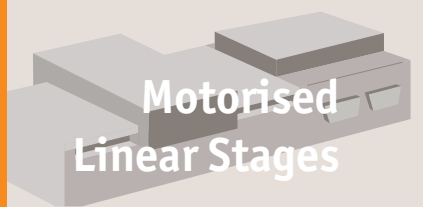
Important Notes
Max. moment loads:
Mx = 4,0 Nm
My = 6,5 Nm
For combined stages, add suffixes:
XY - for XY stage
XZ - for XZ stage
XYZ - for XYZ stage

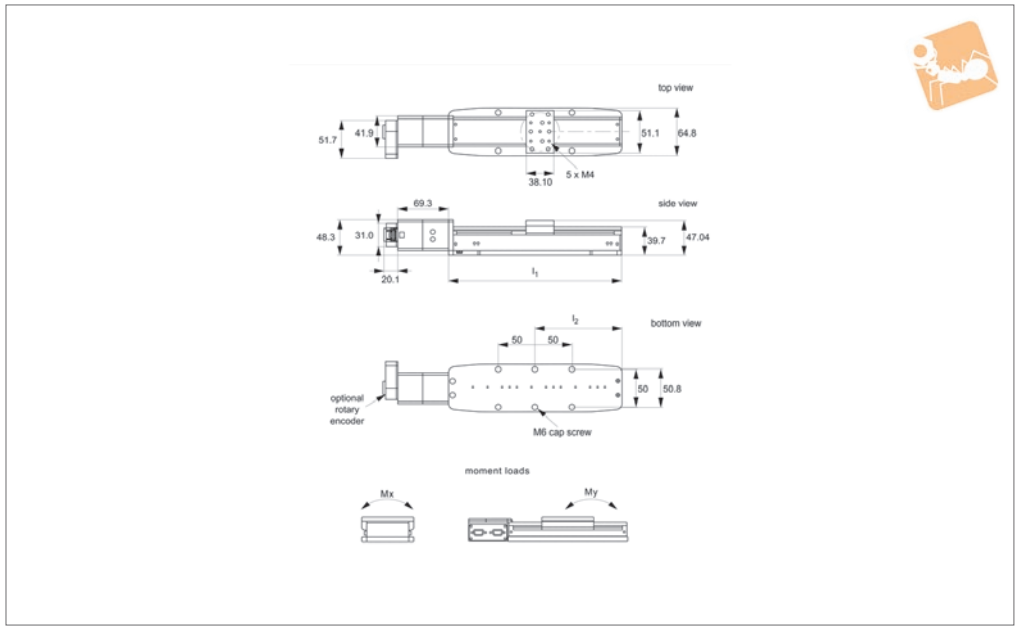
Order No.	Travel	Horizontal load kg max.	Axial load kg max.	Side load kg max.	Lead screw pitch	l_1	Motor code	Motor type	Weight kg
L3506.025-STA	25	2.2	2.2	0.9	1.058	109.2	-STA	Stepper	0.46
L3506.050-STA	50	2.2	2.2	0.9	1.058	143.3	-STA	Stepper	0.59
L3506.025-STB	25	2.2	2.2	0.9	1.058	109.2	-STB	Stepper & enc.	0.46
L3506.050-STB	50	2.2	2.2	0.9	1.058	143.3	-STB	Stepper & enc.	0.59
L3506.025-IMA	25	2.2	2.2	0.9	1.058	109.2	-IMA	Int. stepper	0.46
L3506.050-IMA	50	2.2	2.2	0.9	1.058	143.3	-IMA	Int. stepper	0.59

Order No.	l_2	l_3	Speed mm/s max.	Resolution ±	Accuracy ±	Uni-directional repeatability ±
L3506.025-STA	83.9	41.9	8	0,7µ	50µ	5µ
L3506.050-STA	117.9	54.6	8	0,7µ	50µ	5µ
L3506.025-STB	83.9	41.9	8	0,7µ	50µ	5µ
L3506.050-STB	117.9	54.6	8	0,7µ	50µ	5µ
L3506.025-IMA	83.9	41.9	8	0,7µ	50µ	5µ
L3506.050-IMA	117.9	54.6	8	0,7µ	50µ	5µ

Miniature Motorised Stages
high precision









L3508

Material

Black anodised aluminium body (6061). Hardened linear guideways, stainless steel Acme lead screw (with internally lubricated anti-backlash nut).

Technical Notes

Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but many pre-existing software packages (such as Labview) can be used. Integrated limit switches are provided as standard.
Can be readily supplied in XY, XZ and XYZ configurations.
Applications - research, semi-conductors, fibre optics, automation etc.
Replace -XXX in part number with the code for your preferred motor type - see second data table for codes and specifications.

Tips

Motor options:
Stepper Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Option with 1000 line encoder.
Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (ie no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS 422/485 communications. Input voltage 24VDC.
Option with 512 line encoder.
Limit switches are wired normally closed.
Drawings show stepper motor configuration. See special pages for further motor points.

Important Notes

Max. moment loads:
Mx = 12 Nm
My = 8 Nm
For combined stages, add suffixes:
XY - for XY stage
XZ - for XZ stage
XYZ - for XYZ stage

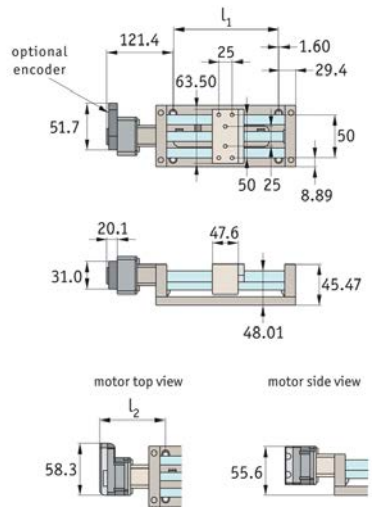
Order No.	Travel	Horizontal load kg max.	Accuracy mm ±	Repeatability ±	Lead screw pitch	Axial load (for 2mm lead screw) kg max.	Axial load (for 10mm lead screw) kg max.	l_1	Weight kg
L3508.025-STA	25	4,5	0,6µ	5µ	2	2,5	0,5	109,0	0,73
L3508.025-STB	25	4,5	0,6µ	5µ	10	2,5	0,5	109,0	0,73
L3508.025-STC	25	4,5	0,6µ	5µ	2	2,5	0,5	109,0	0,73
L3508.025-STD	25	4,5	0,6µ	5µ	10	2,5	0,5	109,0	0,73
L3508.025-IMA	25	4,5	0,6µ	5µ	2	2,5	0,5	109,0	0,73
L3508.050-STA	50	4,5	0,6µ	5µ	2	2,5	0,5	134,4	0,77
L3508.050-STB	50	4,5	0,6µ	5µ	10	2,5	0,5	134,4	0,77
L3508.050-STC	50	4,5	0,6µ	5µ	2	2,5	0,5	134,4	0,77
L3508.050-STD	50	4,5	0,6µ	5µ	10	2,5	0,5	134,4	0,77
L3508.050-IMA	50	4,5	0,6µ	5µ	2	2,5	0,5	134,4	0,77
L3508.100-STA	100	4,5	0,6µ	5µ	2	2,5	0,5	185,2	0,89
L3508.100-STB	100	4,5	0,6µ	5µ	10	2,5	0,5	185,2	0,89
L3508.100-STC	100	4,5	0,6µ	5µ	2	2,5	0,5	185,2	0,89
L3508.100-STD	100	4,5	0,6µ	5µ	10	2,5	0,5	185,2	0,89
L3508.100-IMA	100	4,5	0,6µ	5µ	2	2,5	0,5	185,2	0,89
L3508.150-STA	150	4,5	0,6µ	5µ	2	2,5	0,5	236,0	1,01
L3508.150-STB	150	4,5	0,6µ	5µ	10	2,5	0,5	236,0	1,01

Motorised Linear Stages
high precision



Order No.	Travel	Horizontal load kg max.	Accuracy mm ±	Repeatability ±	Lead screw pitch	Axial load (for 2mm lead screw) kg max.	Axial load (for 10mm lead screw) kg max.	l_1	Weight kg
L3508.150-STC	150	4,5	0,6µ	5µ	2	2,5	0,5	236,0	1,01
L3508.150-STD	150	4,5	0,6µ	5µ	10	2,5	0,5	236,0	1,01
L3508.150-IMA	150	4,5	0,6µ	5µ	2	2,5	0,5	236,0	1,01
L3508.200-STA	200	4,5	0,6µ	5µ	2	2,5	0,5	286,8	1,13
L3508.200-STB	200	4,5	0,6µ	5µ	10	2,5	0,5	286,8	1,13
L3508.200-STC	200	4,5	0,6µ	5µ	2	2,5	0,5	286,8	1,13
L3508.200-STD	200	4,5	0,6µ	5µ	10	2,5	0,5	286,8	1,13
L3508.200-IMA	200	4,5	0,6µ	5µ	2	2,5	0,5	286,8	1,13

Order No.	Motor code	Motor type	l_2	Speed mm/s	Resolution
L3508.025-STA	-STA	Stepper	54.5	25	0,04µ
L3508.025-STB	-STB	Stepper	54.5	100	0,2µ
L3508.025-STC	-STC	Stepper & enc.	54.5	25	0,04µ
L3508.025-STD	-STD	Stepper & enc.	54.5	100	0,2µ
L3508.025-IMA	-IMA	Int. stepper	54.5	25	0,04µ
L3508.050-STA	-STA	Stepper	67.2	25	0,04µ
L3508.050-STB	-STB	Stepper	67.2	100	0,2µ
L3508.050-STC	-STC	Stepper & enc.	67.2	25	0,04µ
L3508.050-STD	-STD	Stepper & enc.	67.2	100	0,2µ
L3508.050-IMA	-IMA	Int. stepper	67.2	25	0,04µ
L3508.100-STA	-STA	Stepper	62.6	25	0,04µ
L3508.100-STB	-STB	Stepper	62.6	100	0,2µ
L3508.100-STC	-STC	Stepper & enc.	62.6	25	0,04µ
L3508.100-STD	-STD	Stepper & enc.	62.6	100	0,2µ
L3508.100-IMA	-IMA	Int. stepper	62.6	25	0,04µ
L3508.150-STA	-STA	Stepper	67.2	25	0,04µ
L3508.150-STB	-STB	Stepper	67.2	100	0,2µ
L3508.150-STC	-STC	Stepper & enc.	67.2	25	0,04µ
L3508.150-STD	-STD	Stepper & enc.	67.2	100	0,2µ
L3508.150-IMA	-IMA	Int. stepper	67.2	25	0,04µ
L3508.200-STA	-STA	Stepper	92.6	25	0,04µ
L3508.200-STB	-STB	Stepper	92.6	100	0,2µ
L3508.200-STC	-STC	Stepper & enc.	92.6	25	0,04µ
L3508.200-STD	-STD	Stepper & enc.	92.6	100	0,2µ
L3508.200-IMA	-IMA	Int. stepper	92.6	25	0,04µ





L3510

Material
Black anodised aluminium body (6061). Hardened linear guideways, stainless steel Acme lead screw (with internally lubricated anti-backlash nut).

Technical Notes
Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but you can also use your own pre-existing software with them such as Labview etc. Integrated limit switches are provided as standard.
Can be readily supplied in XY, XZ and XYZ configurations (for travel lengths <150mm).
Replace -XXX in part number with the code for your preferred motor type - see second data table for codes and specifications.

Tips
Motor options:
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Option with 1000 line encoder.
Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (ie no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS422/485 communications. Input voltage +24VDC. Option with 512 line encoder.
Limit switches are wired normally closed. Drawings show stepper motor configuration. See special pages for further motor points.

Important Notes
For combined stages, add suffixes:
XY - for XY stage
XZ - for XZ stage
XYZ - for XYZ stage

Order No.	Travel	Horizontal load kg max.	Accuracy mm ±	Repeatability ±	Lead screw pitch	l_1	Motor code	Motor type	Speed mm/s max.	Resolution µm ±	Weight kg
L3510.050-IMA	50	4,5	0,06µ	30µ	2	100	IMA	Int. stepper	20	0,04	1,1
L3510.050-IMB	50	4,5	0,06µ	30µ	12	100	IMB	Int. stepper	150	0,24	1,1
L3510.050-STA	50	4,5	0,06µ	30µ	2	100	STA	Stepper	20	0,04	1,1
L3510.050-STB	50	4,5	0,06µ	30µ	12	100	STB	Stepper	150	0,24	1,1
L3510.050-STC	50	4,5	0,06µ	30µ	2	100	STC	Stepper & enc.	20	0,04	1,1
L3510.050-STD	50	4,5	0,06µ	30µ	12	100	STD	Stepper & enc.	150	0,24	1,1
L3510.100-IMA	100	4,5	0,06µ	30µ	2	150	IMA	Int. stepper	20	0,04	1,5
L3510.100-IMB	100	4,5	0,06µ	30µ	12	150	IMB	Int. stepper	150	0,24	1,6
L3510.100-STA	100	4,5	0,06µ	30µ	2	150	STA	Stepper	20	0,04	1,1
L3510.100-STB	100	4,5	0,06µ	30µ	12	150	STB	Stepper	150	0,24	1,2
L3510.100-STC	100	4,5	0,06µ	30µ	2	150	STC	Stepper & enc.	20	0,04	1,3
L3510.100-STD	100	4,5	0,06µ	30µ	12	150	STD	Stepper & enc.	150	0,24	1,4
L3510.150-IMA	150	4,5	0,06µ	30µ	2	200	IMA	Int. stepper	20	0,04	1,5
L3510.150-IMB	150	4,5	0,06µ	30µ	12	200	IMB	Int. stepper	150	0,24	1,6
L3510.150-STA	150	4,5	0,06µ	30µ	2	200	STA	Stepper	20	0,04	1,1
L3510.150-STB	150	4,5	0,06µ	30µ	12	200	STB	Stepper	150	0,24	1,2
L3510.150-STC	150	4,5	0,06µ	30µ	2	200	STC	Stepper & enc.	20	0,04	1,3
L3510.150-STD	150	4,5	0,06µ	30µ	12	200	STD	Stepper & enc.	150	0,24	1,4
L3510.200-IMA	200	4,5	0,06µ	30µ	2	250	IMA	Int. stepper	20	0,04	1,5
L3510.200-IMB	200	4,5	0,06µ	30µ	12	250	IMB	Int. stepper	150	0,24	1,6

Motorised Linear Stages
economy

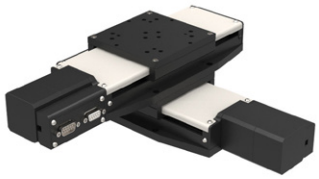


Order No.	Travel	Horizontal load kg max.	Accuracy mm ±	Repeatability ±	Lead screw pitch	l_1	Motor code	Motor type	Speed mm/s max.	Resolution µm ±	Weight kg
L3510.200-STA	200	4,5	0,06µ	30µ	2	250	STA	Stepper	20	0,04	1,1
L3510.200-STB	200	4,5	0,06µ	30µ	12	250	STB	Stepper	150	0,24	1,2
L3510.200-STC	200	4,5	0,06µ	30µ	2	250	STC	Stepper & enc.	20	0,04	1,3
L3510.200-STD	200	4,5	0,06µ	30µ	12	250	STD	Stepper & enc.	150	0,24	1,4
L3510.250-IMA	250	4,5	0,06µ	30µ	2	300	IMA	Int. stepper	20	0,04	1,5
L3510.250-IMB	250	4,5	0,06µ	30µ	12	300	IMB	Int. stepper	150	0,24	1,6
L3510.250-STA	250	4,5	0,06µ	30µ	2	300	STA	Stepper	20	0,04	1,1
L3510.250-STB	250	4,5	0,06µ	30µ	12	300	STB	Stepper	150	0,24	1,2
L3510.250-STC	250	4,5	0,06µ	30µ	2	300	STC	Stepper & enc.	20	0,04	1,3
L3510.250-STD	250	4,5	0,06µ	30µ	12	300	STD	Stepper & enc.	150	0,24	1,4
L3510.300-IMA	300	4,5	0,06µ	30µ	2	350	IMA	Int. stepper	20	0,04	1,5
L3510.300-IMB	300	4,5	0,06µ	30µ	12	350	IMB	Int. stepper	150	0,24	1,6
L3510.300-STA	300	4,5	0,06µ	30µ	2	350	STA	Stepper	20	0,04	1,1
L3510.300-STB	300	4,5	0,06µ	30µ	12	350	STB	Stepper	150	0,24	1,2
L3510.300-STC	300	4,5	0,06µ	30µ	2	350	STC	Stepper & enc.	20	0,04	1,3
L3510.300-STD	300	4,5	0,06µ	30µ	12	350	STD	Stepper & enc.	150	0,24	1,4

Our motorised linear stages are precise, heavy duty and available from 25mm stroke to 800mm.
They can be easily controlled either with an Intelligent motor (this is a motor with an inbuilt driver and controller) or with a motor and one of our motion controller stages.
Programming for both the intelligent motor (less expensive) and the motion controllers is very simple and we provide free software and sample source code for Labview, VB, C++, OSX etc. It is also possible to download a stand-alone programmed to the device so it can run independently of a host.
We also offer a Joystick controller.

The stages can be readily supplied in X, XY, XZ and XYZ configurations and can also be used with our range of rotary tables (L3550 to L3562).

XY Assembly



XY Assembly



XY Assembly



Using intelligent motors

- RS-485 - USB connection.
- Can run independently from host.
- Joystick control option

Using motion controllers

- RS-485 - USB connection.
- Can run independently from host.
- Joystick control option

Stepper limitations

For all of their advantages, stepper motors have a number of limitations which can cause significant implementation and operational issues depending on your application. Stepper motors do not have any reserve power. In fact, stepper motors lose a significant amount of their torque as they approach their maximum driver speed. A loss of 80% of the rated torque at 90% of the maximum speed is typical.

Stepper motors are also not as good as servo motors in accelerating a load. Attempting to accelerate a load too fast where the stepper cannot generate enough torque to move to the next step before the next drive pulse will result in a skipped step and a loss in position. If positional accuracy is essential, either the load on the motor must never exceed its torque or the stepper must be combined with a position encoder to ensure positional accuracy.

Stepper motors may also suffer from vibration and resonance problems. At certain speeds, partially depending on the load dynamics, they may resonate and be unable to drive the load. This may result in skipped steps, stalled motors, excessive vibration and noise.

Servo limitations

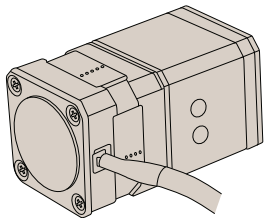
Servo motors are capable of delivering more power than stepper motors, but do require much more complex drive circuitry and positional feedback for accurate positioning. Servo motors are also much considerably expensive than stepper motors and are often harder to find. Servo motors often require gear boxes, especially for lower speed operation.

The requirement for a gearbox and a position encoder makes servo motor designs more mechanically complex and increases the maintenance requirements for the system. To top it all off, servo motors are more expensive than stepper motors before adding on the cost of a position encoder.

Summary

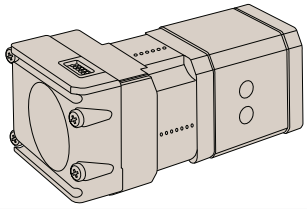
Selecting the best motor for your application depends on a few key design criteria for your system including cost, positional accuracy requirements, torque requirements, drive power availability, and acceleration requirements. Overall, servo motors are best for high speed, high torque applications while stepper motors are better suited for lower acceleration, high holding torque applications as well as generally being less expensive and easier to control.

Motor options



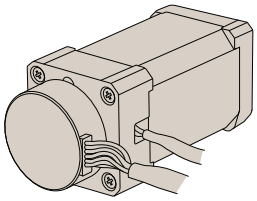
Stepper motor

- Standard
- With rotary encoder (1000 line)



Intelligent stepper motor

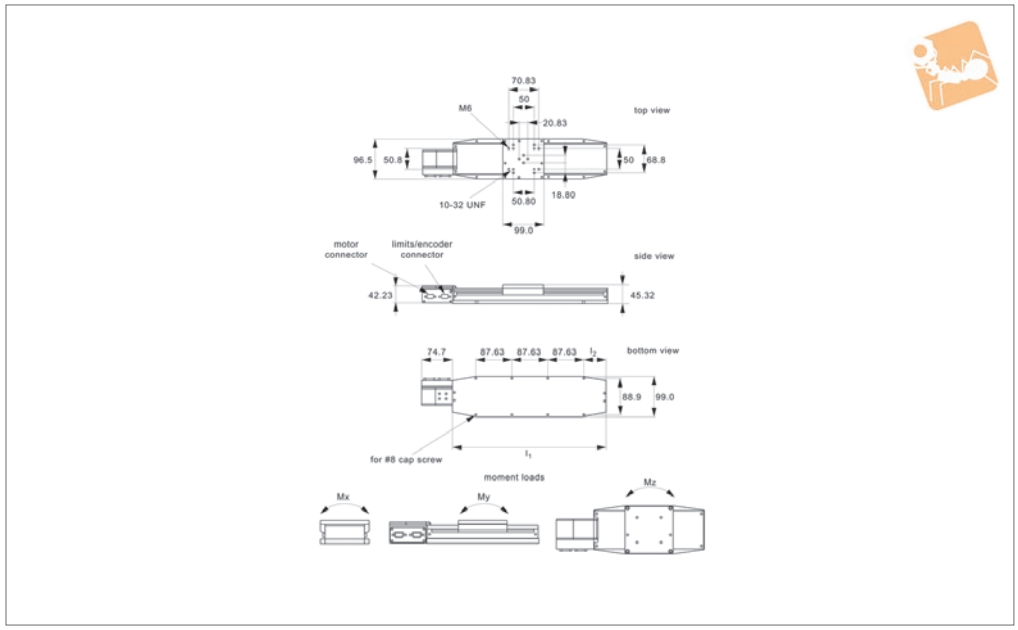
- Standard
- With rotary encoder (512 line)

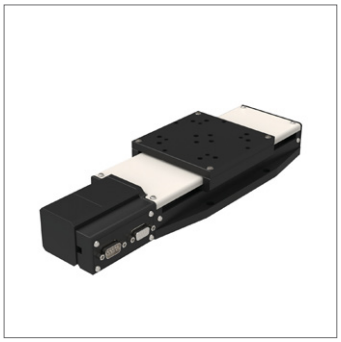


Servo motor

- Standard
- With rotary encoder (1000 line)

ov-stepper&servo-motors-lnh - Updated - 02-03-2023





L3500

Material

Black anodised aluminium body (6061). Hardened linear guideways, stainless steel Acme lead screw (with internally lubricated anti-backlash nut).

Technical Notes

These are smooth running, precise and stiff linear stages. For ease of use they have separate connections for motor power and limit/encoder signals. Integrated limit switches are provided as standard.
Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but many pre-existing software packages (such as Labview) can be used.
Can be readily supplied in XY, XZ and XYZ configurations.
Applications - research, semi-conductors, fibre optics, automation etc.
Replace -XXX in part number with the code for your preferred motor type - see second data table for codes and specifications.

Tips

Motor options:
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optional Stepper & 1000 line linear encoder.
Servo - Nema 17, brushless DC motor. Continuous stall torque 0.25Nm, peak torque 0.7 Nm, with 1000 line rotary encoder.
Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (ie no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS422/485 communications. Input voltage +24VDC.
Limit switches are wired normally open. Option with 512 line encoder. Drawings show stepper motor configuration. See special pages for further motor options.

Important Notes

Max. moment loads:
Mx = 20 Nm
My = 20 Nm
Mz = 19 Nm
For 50mm travel stage Ma and Mb = 12 Nm.
For combined stages, add suffixes:
XY - for XY stage
XZ - for XZ stage
XYZ - for XYZ stage

Order No.	Travel	Motor type	Motor code	Accuracy µm/mm	Bi-directional repeatability	Horizontal load kg max.	Vertical load kg max.	Side load kg max.	Weight kg
L3500.050-STA	50	Stepper	-STA	0,6µ	10µ	23	6.5	18	1.36
L3500.050-STB	50	Stepper	-STB	0,6µ	10µ	23	6.5	18	1.36
L3500.050-STC	50	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	1.36
L3500.050-STD	50	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	1.36
L3500.050-IMA	50	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	1.36
L3500.050-IMB	50	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	1.36
L3500.050-IMC	50	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	1.36
L3500.050-IMD	50	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	1.36
L3500.050-SVA	50	Servo & encoder	-SVA	0,6µ	10µ	23	6.5	18	1.36
L3500.050-SVB	50	Servo & encoder	-SVB	0,6µ	10µ	23	6.5	18	1.36
L3500.150-STA	150	Stepper	-STA	0,6µ	10µ	23	6.5	18	2.41
L3500.150-STB	150	Stepper	-STB	0,6µ	10µ	23	6.5	18	2.41
L3500.150-STC	150	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	2.41

Medium-Duty Motorised Stages
high precision



Order No.	Travel	Motor type	Motor code	Accuracy µm/mm	Bi-directional repeatability	Horizontal load kg max.	Vertical load kg max.	Side load kg max.	Weight kg
L3500.150-STD	150	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	2.41
L3500.150-IMA	150	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	2.41
L3500.150-IMB	150	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	2.41
L3500.150-IMC	150	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	2.41
L3500.150-IMD	150	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	2.41
L3500.150-SVA	150	Servo & encoder	-SVA	0,6µ	10µ	23	6.5	18	2.41
L3500.150-SVB	150	Servo & encoder	-SVB	0,6µ	10µ	23	6.5	18	2.41
L3500.200-STA	200	Stepper	-STA	0,6µ	10µ	23	6.5	18	2.59
L3500.200-STB	200	Stepper	-STB	0,6µ	10µ	23	6.5	18	2.59
L3500.200-STC	200	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	2.59
L3500.200-STD	200	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	2.59
L3500.200-IMA	200	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	2.59
L3500.200-IMB	200	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	2.59
L3500.200-IMC	200	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	2.59
L3500.200-IMD	200	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	2.59
L3500.200-SVA	200	Servo & encoder	-SVA	0,6µ	10µ	23	6.5	18	2.59
L3500.200-SVB	200	Servo & encoder	-SVB	0,6µ	10µ	23	6.5	18	2.59
L3500.250-STA	250	Stepper	-STA	0,6µ	10µ	23	6.5	18	2.86
L3500.250-STB	250	Stepper	-STB	0,6µ	10µ	23	6.5	18	2.86
L3500.250-STC	250	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	2.86
L3500.250-STD	250	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	2.86
L3500.250-IMA	250	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	2.86
L3500.250-IMB	250	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	2.86
L3500.250-IMC	250	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	2.86
L3500.250-IMD	250	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	2.86
L3500.250-SVA	250	Servo & encoder	-SVA	0,6µ	10µ	23	6.5	18	2.86
L3500.250-SVB	250	Servo & encoder	-SVB	0,6µ	10µ	23	6.5	18	2.86
L3500.300-STA	300	Stepper	-STA	0,6µ	10µ	23	6.5	18	3.13
L3500.300-STB	300	Stepper	-STB	0,6µ	10µ	23	6.5	18	3.13
L3500.300-STC	300	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	3.13
L3500.300-STD	300	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	3.13
L3500.300-IMA	300	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	3.13
L3500.300-IMB	300	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	3.13
L3500.300-IMC	300	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	3.13
L3500.300-IMD	300	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	3.13
L3500.300-SVA	300	Servo & encoder	-SVA	0,6µ	10µ	23	6.5	18	3.13
L3500.300-SVB	300	Servo & encoder	-SVB	0,6µ	10µ	23	6.5	18	3.13
L3500.350-STA	350	Stepper	-STA	0,6µ	10µ	23	6.5	18	3.41
L3500.350-STB	350	Stepper	-STB	0,6µ	10µ	23	6.5	18	3.41
L3500.350-STC	350	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	3.41
L3500.350-STD	350	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	3.41
L3500.350-IMA	350	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	3.41
L3500.350-IMB	350	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	3.41
L3500.350-IMC	350	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	3.41
L3500.350-IMD	350	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	3.41
L3500.350-SVA	350	Servo & encoder	-SVA	0,6µ	10µ	23	6.5	18	3.41
L3500.350-SVB	350	Servo & encoder	-SVB	0,6µ	10µ	23	6.5	18	3.41
L3500.400-STA	400	Stepper	-STA	0,6µ	10µ	23	6.5	18	3.68
L3500.400-STB	400	Stepper	-STB	0,6µ	10µ	23	6.5	18	3.68
L3500.400-STC	400	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	3.68
L3500.400-STD	400	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	3.68
L3500.400-IMA	400	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	3.68
L3500.400-IMB	400	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	3.68
L3500.400-IMC	400	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	3.68
L3500.400-IMD	400	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	3.68
L3500.400-SVA	400	Servo & encoder	-SVA	0,6µ	10µ	23	6.5	18	3.68
L3500.400-SVB	400	Servo & encoder	-SVB	0,6µ	10µ	23	6.5	18	3.68
L3500.500-STA	500	Stepper	-STA	0,6µ	10µ	23	6.5	18	3.95
L3500.500-STB	500	Stepper	-STB	0,6µ	10µ	23	6.5	18	3.95
L3500.500-STC	500	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	3.95

Order No.	Travel	Motor type	Motor code	Accuracy µm/mm	Bi-directional repeatability	Horizontal load kg max.	Vertical load kg max.	Side load kg max.	Weight kg
L3500.500-STD	500	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	3.95
L3500.500-IMA	500	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	3.95
L3500.500-IMB	500	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	3.95
L3500.500-IMC	500	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	3.95
L3500.500-IMD	500	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	3.95
L3500.500-SVA	500	Servo & encoder	-SVA	0,6µ	10µ	23	6.5	18	3.95
L3500.500-SVB	500	Servo & encoder	-SVB	0,6µ	10µ	23	6.5	18	3.95
L3500.600-STA	600	Stepper	-STA	0,6µ	10µ	23	6.5	18	4.23
L3500.600-STB	600	Stepper	-STB	0,6µ	10µ	23	6.5	18	4.23
L3500.600-STC	600	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	4.23
L3500.600-STD	600	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	4.23
L3500.600-IMA	600	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	4.23
L3500.600-IMB	600	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	4.23
L3500.600-IMC	600	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	4.23
L3500.600-IMD	600	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	4.23
L3500.600-SVA	600	Servo & encoder	-SVA	0,6µ	10µ	23	6.5	18	4.23
L3500.600-SVB	600	Servo & encoder	-SVB	0,6µ	10µ	23	6.5	18	4.23
L3500.100-STA	100	Stepper	-STA	0,6µ	10µ	23	6.5	18	2.14
L3500.100-STB	100	Stepper	-STB	0,6µ	10µ	23	6.5	18	2.14
L3500.100-STC	100	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	2.14
L3500.100-STD	100	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	2.14
L3500.100-IMA	100	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	2.14
L3500.100-IMB	100	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	2.14
L3500.100-IMC	100	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	2.14
L3500.100-IMD	100	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	2.14
L3500.100-SVA	100	Servo & encoder	-SVA	0,6µ	10µ	23	6.5	18	2.14
L3500.100-SVB	100	Servo & encoder	-SVB	0,6µ	10µ	23	6.5	18	2.14

Order No.	Lead screw pitch	Speed mm/s max.	I_1	I_2	Resolution
L3500.050-STA	1.5875	12.0	176	44.5	0,3µ
L3500.050-STB	6.35	50.0	176	44.5	0,13µ
L3500.050-STC	1.5875	12.0	176	44.5	0,4µ
L3500.050-STD	6.35	50.0	176	44.5	1,6µ
L3500.050-IMA	1.5875	12.0	176	44.5	0,4µ
L3500.050-IMB	6.35	12.0	176	44.5	1,6µ
L3500.050-IMC	1.5875	25.0	176	44.5	0,4µ
L3500.050-IMD	6.35	50.0	176	44.5	1,6µ
L3500.050-SVA	1.5875	25.0	176	44.5	0,4µ
L3500.050-SVB	6.35	100.0	176	44.5	1,6µ
L3500.150-STA	1.5875	12.0	277	94.3	0,3µ
L3500.150-STB	6.35	50.0	277	94.3	0,13µ
L3500.150-STC	1.5875	12.0	277	94.3	0,4µ
L3500.150-STD	6.35	50.0	277	94.3	1,6µ
L3500.150-IMA	1.5875	12.0	277	94.3	0,4µ
L3500.150-IMB	6.35	12.0	277	94.3	1,6µ
L3500.150-IMC	1.5875	25.0	277	94.3	0,4µ
L3500.150-IMD	6.35	50.0	277	94.3	1,6µ
L3500.150-SVA	1.5875	25.0	277	94.3	0,4µ
L3500.150-SVB	6.35	100.0	277	94.3	1,6µ
L3500.200-STA	1.5875	12.0	327	119.7	0,3µ
L3500.200-STB	6.35	50.0	327	119.7	0,13µ
L3500.200-STC	1.5875	12.0	327	119.7	0,4µ
L3500.200-STD	6.35	50.0	327	119.7	1,6µ
L3500.200-IMA	1.5875	12.0	327	119.7	0,4µ
L3500.200-IMB	6.35	12.0	327	119.7	1,6µ
L3500.200-IMC	1.5875	25.0	327	119.7	0,4µ
L3500.200-IMD	6.35	50.0	327	119.7	1,6µ
L3500.200-SVA	1.5875	25.0	327	119.7	0,4µ
L3500.200-SVB	6.35	100.0	327	119.7	1,6µ
L3500.250-STA	1.5875	12.0	378	57.5	0,3µ
L3500.250-STB	6.35	50.0	378	57.5	0,13µ

Medium-Duty Motorised Stages
high precision



Order No.	Lead screw pitch	Speed mm/s max.	l_1	l_2	Resolution
L3500.250-STC	1.5875	12.0	378	57.5	0,4µ
L3500.250-STD	6.35	50.0	378	57.5	1,6µ
L3500.250-IMA	1.5875	12.0	378	57.5	0,4µ
L3500.250-IMB	6.35	12.0	378	57.5	1,6µ
L3500.250-IMC	1.5875	25.0	378	57.5	0,4µ
L3500.250-IMD	6.35	50.0	378	57.5	1,6µ
L3500.250-SVA	1.5875	25.0	378	57.5	0,4µ
L3500.250-SVB	6.35	100.0	378	57.5	1,6µ
L3500.300-STA	1.5875	12.0	429	82.7	0,3µ
L3500.300-STB	6.35	50.0	429	82.7	0,13µ
L3500.300-STC	1.5875	12.0	429	82.7	0,4µ
L3500.300-STD	6.35	50.0	429	82.7	1,6µ
L3500.300-IMA	1.5875	12.0	429	82.7	0,4µ
L3500.300-IMB	6.35	12.0	429	82.7	1,6µ
L3500.300-IMC	1.5875	25.0	429	82.7	0,4µ
L3500.300-IMD	6.35	50.0	429	82.7	1,6µ
L3500.300-SVA	1.5875	25.0	429	82.7	0,4µ
L3500.300-SVB	6.35	100.0	429	82.7	1,6µ
L3500.350-STA	1.5875	12.0	480	82.7	0,3µ
L3500.350-STB	6.35	50.0	480	82.7	0,13µ
L3500.350-STC	1.5875	12.0	480	82.7	0,4µ
L3500.350-STD	6.35	50.0	480	82.7	1,6µ
L3500.350-IMA	1.5875	12.0	480	82.7	0,4µ
L3500.350-IMB	6.35	12.0	480	82.7	1,6µ
L3500.350-IMC	1.5875	25.0	480	82.7	0,4µ
L3500.350-IMD	6.35	50.0	480	82.7	1,6µ
L3500.350-SVA	1.5875	25.0	480	82.7	0,4µ
L3500.350-SVB	6.35	100.0	480	82.7	1,6µ
L3500.400-STA	1.5875	12.0	531	133.7	0,3µ
L3500.400-STB	6.35	50.0	531	133.7	0,13µ
L3500.400-STC	1.5875	12.0	531	133.7	0,4µ
L3500.400-STD	6.35	50.0	531	133.7	1,6µ
L3500.400-IMA	1.5875	12.0	531	133.7	0,4µ
L3500.400-IMB	6.35	12.0	531	133.7	1,6µ
L3500.400-IMC	1.5875	25.0	531	133.7	0,4µ
L3500.400-IMD	6.35	50.0	531	133.7	1,6µ
L3500.400-SVA	1.5875	25.0	531	133.7	0,4µ
L3500.400-SVB	6.35	100.0	531	133.7	1,6µ
L3500.500-STA	1.5875	12.0	632	185.5	0,3µ
L3500.500-STB	6.35	50.0	632	185.5	0,13µ
L3500.500-STC	1.5875	12.0	632	185.5	0,4µ
L3500.500-STD	6.35	50.0	632	185.5	1,6µ
L3500.500-IMA	1.5875	12.0	632	185.5	0,4µ
L3500.500-IMB	6.35	12.0	632	185.5	1,6µ
L3500.500-IMC	1.5875	25.0	632	185.5	0,4µ
L3500.500-IMD	6.35	50.0	632	185.5	1,6µ
L3500.500-SVA	1.5875	25.0	632	185.5	0,4µ
L3500.500-SVB	6.35	100.0	632	185.5	1,6µ
L3500.600-STA	1.5875	12.0	734	235.3	0,3µ
L3500.600-STB	6.35	50.0	734	235.3	0,13µ
L3500.600-STC	1.5875	12.0	734	235.3	0,4µ
L3500.600-STD	6.35	50.0	734	235.3	1,6µ
L3500.600-IMA	1.5875	12.0	734	235.3	0,4µ
L3500.600-IMB	6.35	12.0	734	235.3	1,6µ
L3500.600-IMC	1.5875	25.0	734	235.3	0,4µ
L3500.600-IMD	6.35	50.0	734	235.3	1,6µ
L3500.600-SVA	1.5875	25.0	734	235.3	0,4µ
L3500.600-SVB	6.35	100.0	734	235.3	1,6µ
L3500.100-STA	1.5875	12.0	226	68.9	0,3µ
L3500.100-STB	6.35	50.0	226	68.9	0,13µ
L3500.100-STC	1.5875	12.0	226	68.9	0,4µ
L3500.100-STD	6.35	50.0	226	68.9	1,6µ
L3500.100-IMA	1.5875	12.0	226	68.9	0,4µ
L3500.100-IMB	6.35	12.0	226	68.9	1,6µ
L3500.100-IMC	1.5875	25.0	226	68.9	0,4µ
L3500.100-IMD	6.35	50.0	226	68.9	1,6µ
L3500.100-SVA	1.5875	25.0	226	68.9	0,4µ

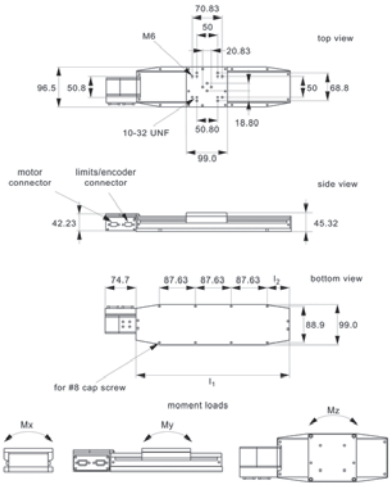
Order No.	Lead screw pitch	Speed mm/s max.	l_1	l_2	Resolution
L3500.100-SVB	6.35	100.0	226	68.9	1,6µ



Vacuum Compatible Motorised Stages
high precision



L3502



Material
Black anodised aluminium body (6061). Hardened linear guideways, stainless steel Acme lead screw (with internally lubricated anti-backlash nut).

Technical Notes
Operation down to 10^{-6} Torr.
Teflon jacketed wire, fluxless soldered connections. Vacuum compatible motor and limit switches. Low vapour pressure lubricant, blind holes are vented. All parts are thoroughly cleaned followed by latex gloved assembly.
Replace -XXX in part number with the code for your preferred motor type - see second data table for codes and specifications.
Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but many pre-existing software packages (such as Labview) can be used.
Can be readily supplied in XY, XZ and XYZ configurations.
Applications - research, semi-conductors, fibre optics, automation etc.
Replace -XXX in part number with the code for your preferred motor type - see second data table for codes and specifications.

Tips
Motor options:
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step.
Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (ie no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS422/485 communications. Input voltage +24VDC.
Drawings show stepper motor configuration. See special pages for further motor options.

Important Notes
Max. moment loads:
Mx = 20 Nm
My = 20 Nm
Mz= 19 Nm
For 50mm travel stage Ma and Mb = 12 Nm.
For combined stages, add suffixes:
XY - for XY stage
XZ - for XZ stage
XYZ - for XYZ stage

Order No.	Travel	Motor type	Motor code	Accuracy mm ±	Bi-directional repeatability ±	Horizontal load kg max.	Vertical load kg max.	Side load kg max.	Weight kg
L3502.050-STA	50	Stepper	-STA	0,6µ	10µ	23	6.5	18	1.36
L3502.050-STB	50	Stepper	-STB	0,6µ	10µ	23	6.5	18	1.36
L3502.050-STC	50	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	1.36
L3502.050-STD	50	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	1.36
L3502.050-IMA	50	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	1.36
L3502.050-IMB	50	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	1.36
L3502.050-IMC	50	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	1.36
L3502.050-IMD	50	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	1.36
L3502.100-STA	100	Stepper	-STA	0,6µ	10µ	23	6.5	18	2.14
L3502.100-STB	100	Stepper	-STB	0,6µ	10µ	23	6.5	18	2.14
L3502.100-STC	100	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	2.14
L3502.100-STD	100	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	2.14
L3502.100-IMA	100	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	2.14

Order No.	Travel	Motor type	Motor code	Accuracy mm ±	Bi-directional repeatability ±	Horizontal load kg max.	Vertical load kg max.	Side load kg max.	Weight kg
L3502.100-IMB	100	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	2.14
L3502.100-IMC	100	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	2.14
L3502.100-IMD	100	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	2.14
L3502.150-STA	150	Stepper	-STA	0,6µ	10µ	23	6.5	18	2.41
L3502.150-STB	150	Stepper	-STB	0,6µ	10µ	23	6.5	18	2.41
L3502.150-STC	150	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	2.41
L3502.150-STD	150	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	2.41
L3502.150-IMA	150	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	2.41
L3502.150-IMB	150	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	2.41
L3502.150-IMC	150	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	2.41
L3502.150-IMD	150	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	2.41
L3502.200-STA	200	Stepper	-STA	0,6µ	10µ	23	6.5	18	2.59
L3502.200-STB	200	Stepper	-STB	0,6µ	10µ	23	6.5	18	2.59
L3502.200-STC	200	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	2.59
L3502.200-STD	200	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	2.59
L3502.200-IMA	200	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	2.59
L3502.200-IMB	200	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	2.59
L3502.200-IMC	200	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	2.59
L3502.200-IMD	200	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	2.59
L3502.250-STA	250	Stepper	-STA	0,6µ	10µ	23	6.5	18	2.86
L3502.250-STB	250	Stepper	-STB	0,6µ	10µ	23	6.5	18	2.86
L3502.250-STC	250	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	2.86
L3502.250-STD	250	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	2.86
L3502.250-IMA	250	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	2.86
L3502.250-IMB	250	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	2.86
L3502.250-IMC	250	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	2.86
L3502.250-IMD	250	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	2.86
L3502.300-STA	300	Stepper	-STA	0,6µ	10µ	23	6.5	18	3.13
L3502.300-STB	300	Stepper	-STB	0,6µ	10µ	23	6.5	18	3.13
L3502.300-STC	300	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	3.13
L3502.300-STD	200	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	3.13
L3502.300-IMA	250	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	3.13
L3502.300-IMB	300	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	3.13
L3502.300-IMC	350	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	3.13
L3502.300-IMD	400	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	3.13
L3502.350-STA	350	Stepper	-STA	0,6µ	10µ	23	108.3	18	3.41
L3502.350-STB	350	Stepper	-STB	0,6µ	10µ	23	108.3	18	3.41
L3502.350-STC	350	Stepper & enc.	-STC	0,6µ	10µ	23	108.3	18	3.41
L3502.350-STD	350	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	3.41
L3502.350-IMA	350	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	3.41
L3502.350-IMB	350	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	3.41
L3502.350-IMC	350	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	3.41
L3502.350-IMD	350	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	3.41
L3502.400-STA	400	Stepper	-STA	0,6µ	10µ	23	6.5	18	3.68
L3502.400-STB	400	Stepper	-STB	0,6µ	10µ	23	6.5	18	3.68
L3502.400-STC	400	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	3.68
L3502.400-STD	400	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	3.68
L3502.400-IMA	400	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	3.68
L3502.400-IMB	400	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	3.68
L3502.400-IMC	400	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	3.68
L3502.400-IMD	400	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	3.68
L3502.500-STA	500	Stepper	-STA	0,6µ	10µ	23	6.5	18	3.95
L3502.500-STB	500	Stepper	-STB	0,6µ	10µ	23	6.5	18	3.95
L3502.500-STC	500	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	3.95
L3502.500-STD	500	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	3.95
L3502.500-IMA	500	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	3.95
L3502.500-IMB	500	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	3.95
L3502.500-IMC	500	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	3.95

Vacuum Compatible Motorised Stages
high precision



Order No.	Travel	Motor type	Motor code	Accuracy mm ±	Bi-directional repeatability ±	Horizontal load kg max.	Vertical load kg max.	Side load kg max.	Weight kg
L3502.500-IMD	500	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	3.95
L3502.600-STA	600	Stepper	-STA	0,6µ	10µ	23	6.5	18	4.23
L3502.600-STB	600	Stepper	-STB	0,6µ	10µ	23	6.5	18	4.23
L3502.600-STC	600	Stepper & enc.	-STC	0,6µ	10µ	23	6.5	18	4.23
L3502.600-STD	600	Stepper & enc.	-STD	0,6µ	10µ	23	6.5	18	4.23
L3502.600-IMA	600	Int. stepper	-IMA	0,6µ	10µ	23	6.5	18	4.23
L3502.600-IMB	600	Int. stepper	-IMB	0,6µ	10µ	23	6.5	18	4.23
L3502.600-IMC	600	Int. stepper & enc.	-IMC	0,6µ	10µ	23	6.5	18	4.23
L3502.600-IMD	600	Int. stepper	-IMD	0,6µ	10µ	23	6.5	18	4.23

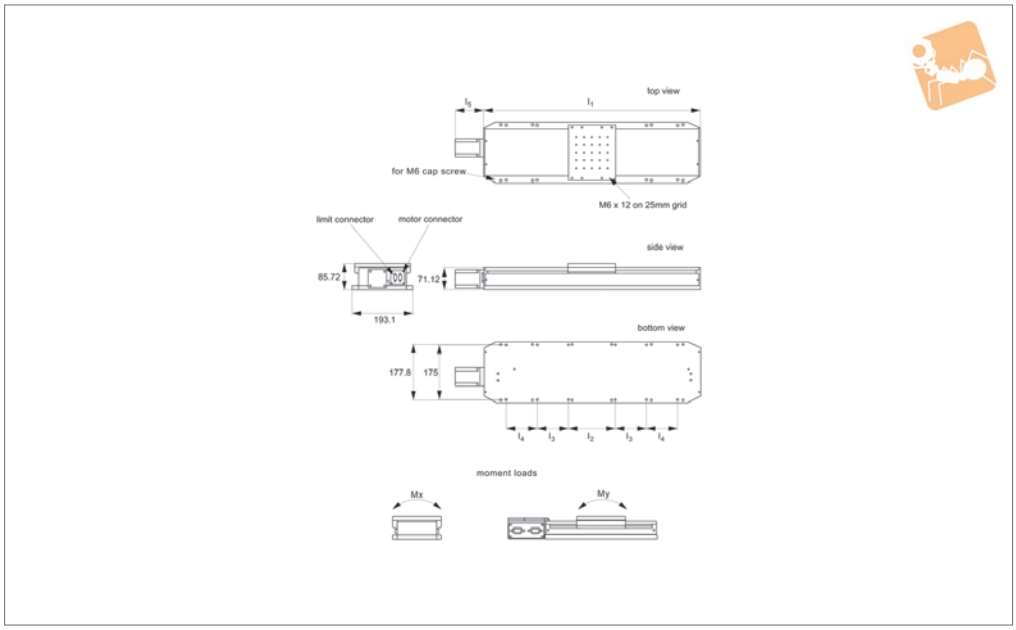
Order No.	Lead screw pitch	Speed mm/s max.	l_1	l_2	Resolution ±
L3502.050-STA	1.5875	12.0	176	44.5	0,03µ
L3502.050-STB	6.35	50.0	176	44.5	0,13µ
L3502.050-STC	1.5875	12.0	176	44.5	0,4µ
L3502.050-STD	6.35	50.0	176	44.5	1,6µ
L3502.050-IMA	1.5875	12.0	176	44.5	0,4µ
L3502.050-IMB	6.35	12.0	176	44.5	1,6µ
L3502.050-IMC	1.5875	25.0	176	44.5	0,4µ
L3502.050-IMD	6.35	50.0	176	44.5	1,6µ
L3502.100-STA	1.5875	12.0	226	68.9	0,03µ
L3502.100-STB	6.35	50.0	226	68.9	0,13µ
L3502.100-STC	1.5875	12.0	226	68.9	0,4µ
L3502.100-STD	6.35	50.0	226	68.9	1,6µ
L3502.100-IMA	1.5875	12.0	226	68.9	0,4µ
L3502.100-IMB	6.35	12.0	226	68.9	1,6µ
L3502.100-IMC	1.5875	25.0	226	68.9	0,4µ
L3502.100-IMD	6.35	50.0	226	68.9	1,6µ
L3502.150-STA	1.5875	12.0	277	44.5	0,03µ
L3502.150-STB	6.35	50.0	277	68.9	0,13µ
L3502.150-STC	1.5875	12.0	277	94.3	0,4µ
L3502.150-STD	6.35	50.0	277	119.7	1,6µ
L3502.150-IMA	1.5875	12.0	277	57.5	0,4µ
L3502.150-IMB	6.35	12.0	277	82.7	1,6µ
L3502.150-IMC	1.5875	25.0	277	108.3	0,4µ
L3502.150-IMD	6.35	50.0	277	133.7	1,6µ
L3502.200-STA	1.5875	12.0	327	119.7	0,03µ
L3502.200-STB	6.35	50.0	327	119.7	0,13µ
L3502.200-STC	1.5875	12.0	327	119.7	0,4µ
L3502.200-STD	6.35	50.0	327	119.7	1,6µ
L3502.200-IMA	1.5875	12.0	327	119.7	0,4µ
L3502.200-IMB	6.35	12.0	327	119.7	1,6µ
L3502.200-IMC	1.5875	25.0	327	119.7	0,4µ
L3502.200-IMD	6.35	50.0	327	119.7	1,6µ
L3502.250-STA	1.5875	12.0	378	57.5	0,03µ
L3502.250-STB	6.35	50.0	378	57.5	0,13µ
L3502.250-STC	1.5875	12.0	378	57.5	0,4µ
L3502.250-STD	6.35	50.0	378	57.5	1,6µ
L3502.250-IMA	1.5875	12.0	378	57.5	0,4µ
L3502.250-IMB	6.35	12.0	378	57.5	1,6µ
L3502.250-IMC	1.5875	25.0	378	57.5	0,4µ
L3502.250-IMD	6.35	50.0	378	57.5	1,6µ
L3502.300-STA	1.5875	12.0	429	82.7	0,03µ
L3502.300-STB	6.35	50.0	429	82.7	0,13µ
L3502.300-STC	1.5875	12.0	429	82.7	0,4µ
L3502.300-STD	6.35	50.0	429	82.7	1,6µ
L3502.300-IMA	1.5875	12.0	429	82.7	0,4µ
L3502.300-IMB	6.35	12.0	429	82.7	1,6µ
L3502.300-IMC	1.5875	25.0	429	82.7	0,4µ
L3502.300-IMD	6.35	50.0	429	82.7	1,6µ
L3502.350-STA	1.5875	12.0	480	44.5	0,03µ
L3502.350-STB	6.35	50.0	480	68.9	0,13µ
L3502.350-STC	1.5875	12.0	480	94.3	0,4µ
L3502.350-STD	6.35	50.0	480	108.3	1,6µ

Order No.	Lead screw pitch	Speed mm/s max.	l_1	l_2	Resolution ±
L3502.350-IMA	1.5875	12.0	480	108.3	0,4µ
L3502.350-IMB	6.35	12.0	480	108.3	1,6µ
L3502.350-IMC	1.5875	25.0	480	108.3	0,4µ
L3502.350-IMD	6.35	50.0	480	108.3	1,6µ
L3502.400-STA	1.5875	12.0	531	133.7	0,03µ
L3502.400-STB	6.35	50.0	531	133.7	0,13µ
L3502.400-STC	1.5875	12.0	531	133.7	0,4µ
L3502.400-STD	6.35	50.0	531	133.7	1,6µ
L3502.400-IMA	1.5875	12.0	531	133.7	0,4µ
L3502.400-IMB	6.35	12.0	531	133.7	1,6µ
L3502.400-IMC	1.5875	25.0	531	133.7	0,4µ
L3502.400-IMD	6.35	50.0	531	133.7	1,6µ
L3502.500-STA	1.5875	12.0	632	185.5	0,03µ
L3502.500-STB	6.35	50.0	632	185.5	0,13µ
L3502.500-STC	1.5875	12.0	632	185.5	0,4µ
L3502.500-STD	6.35	50.0	632	185.5	1,6µ
L3502.500-IMA	1.5875	12.0	632	185.5	0,4µ
L3502.500-IMB	6.35	12.0	632	185.5	1,6µ
L3502.500-IMC	1.5875	25.0	632	185.5	0,4µ
L3502.500-IMD	6.35	50.0	632	185.5	1,6µ
L3502.600-STA	1.5875	12.0	734	235.3	0,03µ
L3502.600-STB	6.35	50.0	734	235.3	0,13µ
L3502.600-STC	1.5875	12.0	734	235.3	0,4µ
L3502.600-STD	6.35	50.0	734	235.3	1,6µ
L3502.600-IMA	1.5875	12.0	734	235.3	0,4µ
L3502.600-IMB	6.35	12.0	734	235.3	1,6µ
L3502.600-IMC	1.5875	25.0	734	235.3	0,4µ
L3502.600-IMD	6.35	50.0	734	235.3	1,6µ

Heavy-Duty Motorised Stages
high precision



L3504



Material
Black anodised aluminium body (6061). Hardened linear guideways, stainless steel Acme lead screw with internally lubricated anti-backlash nut.

Technical Notes
These are smooth running, precise and stiff linear stages. For ease of use they have separate connections for motor power and limit/encoder signals. Integrated limit switches are provided as standard.
Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but you can also use your own pre-existing software with them such as Labview etc.

Replace -XXX in part number with the code for your preferred motor type. See the second data table for these codes and the specifications of these motors.

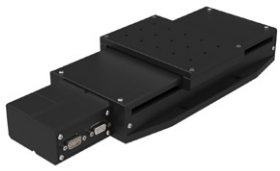
Tips
Motor options:
Stepper - Nema 23, high torque. 2.8 Amp/phase, 0.9 Ohm/phase, 2.5 mH/phase, 1.8°/step. Optionally with optical linear encoder or 1000 line rotary encoder.
Servo - Nema 23 brushless DC motor. Continuous stall torque 0.51Nm, peak torque 1.34 Nm. Option with 4000 count/rev optical rotary encoder with index mark.
Intelligent stepper - Nema 23 with a fully programmable motion controller inbuilt (ie no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS422/485 communications. Input voltage +24VDC.
Limit switches are wired normally closed. Drawings show stepper motor configuration. See special pages for further motor options.

Important Notes
Max. moment loads:
Mx = 200 Nm
My = 280 Nm
For combined stages, add suffixes:
XY - for XY stage
XZ - for XZ stage
XYZ - for XYZ stage

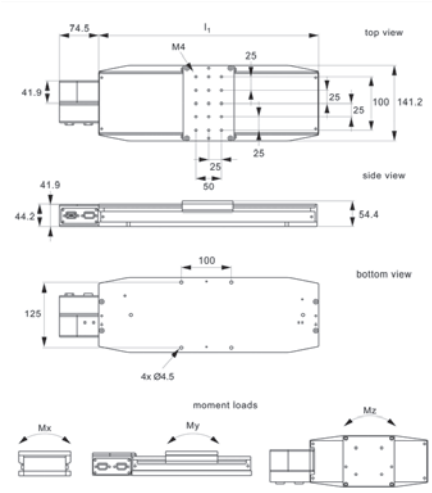
Order No.	Travel	Motor type	Motor code	Horizontal load kg max.	Vertical load kg max.	Accuracy ± /200m	Side load kg max.	Lead screw pitch	Speed mm/s max.	l_1	Weight kg
L3504.200-STA	200	Stepper	-STA	113	36	30µ/200mm	36	4	25	389	9
L3504.200-STB	200	Stepper & rot. enc.	-STB	113	36	30µ/200mm	36	4	25	389	9
L3504.200-STC	200	Stepper & lin. enc.	-STC	113	36	5µ	36	4	25	389	9
L3504.200-IMA	200	Int. stepper	-IMA	113	36	30µ/200mm	36	4	25	389	9
L3504.300-STA	300	Stepper	-STA	113	36	30µ/200mm	36	4	25	490	10
L3504.300-STB	300	Stepper & rot. enc.	-STB	113	36	30µ/200mm	36	4	25	490	10
L3504.300-STC	400	Stepper & lin. enc.	-STC	113	36	5µ	36	4	25	490	10
L3504.300-IMA	500	Int. stepper	-IMA	113	36	30µ/200mm	36	4	25	490	10
L3504.400-STA	400	Stepper	-STA	113	36	30µ/200mm	36	4	25	592	12
L3504.400-STB	400	Stepper & rot. enc.	-STB	113	36	30µ/200mm	36	4	25	592	12
L3504.400-STC	400	Stepper & lin. enc.	-STC	113	36	5µ	36	4	25	592	12
L3504.400-IMA	400	Int. stepper	-IMA	113	36	30µ/200mm	36	4	25	592	12
L3504.500-STA	500	Stepper	-STA	113	36	30µ/200mm	36	4	25	694	14
L3504.500-STB	500	Stepper & rot. enc.	-STB	113	36	30µ/200mm	36	4	25	694	14
L3504.500-STC	500	Stepper & lin. enc.	-STC	113	36	5µ	36	4	25	694	14
L3504.500-IMA	500	Int. stepper	-IMA	113	36	30µ/200mm	36	4	25	694	14

Order No.	l_2	l_3	l_4	l_5	Resolution	Uni-directional repeatability
L3504.200-STA	150	-	-	70	0,08µ	1,0µ
L3504.200-STB	150	-	-	70	1,0µ	1,0µ
L3504.200-STC	150	-	-	70	1,0µ	1,0µ
L3504.200-IMA	150	-	100	70	1,0µ	1,0µ
L3504.300-STA	150	100	-	156	0,08µ	1,0µ
L3504.300-STB	150	100	-	156	1,0µ	1,0µ
L3504.300-STC	150	100	-	156	1,0µ	1,0µ
L3504.300-IMA	150	100	-	156	1,0µ	1,0µ
L3504.400-STA	150	100	-	112	0,08µ	1,0µ
L3504.400-STB	150	100	-	112	1,0µ	1,0µ
L3504.400-STC	150	100	-	112	1,0µ	1,0µ
L3504.400-IMA	150	100	100	112	1,0µ	1,0µ
L3504.500-STA	150	100	100	70	0,08µ	1,0µ
L3504.500-STB	150	100	100	70	1,0µ	1,0µ
L3504.500-STC	150	100	100	70	1,0µ	1,0µ
L3504.500-IMA	150	100	100	70	1,0µ	1,0µ

Motorised Linear Stages
high precision



L3505



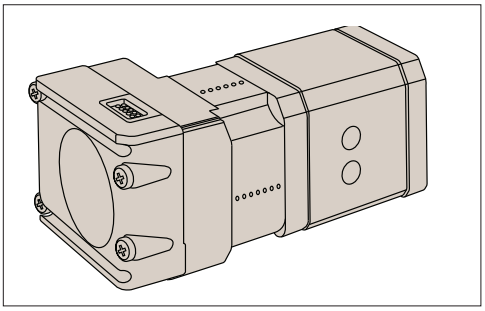
Material
Black anodised aluminium body (6061). Hardened linear guideways, stainless steel Acme lead screw (with internally lubricated anti-backlash nut).

Technical Notes
These are smooth running, precise and stiff linear stages. For ease of use they have separate connections for motor power and limit/encoder signals. Integrated limit switches are provided as standard. Supplied with optical linear encoder.
Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but many pre-existing software packages (such as Labview) can be used.
Can be readily supplied in XY, XZ and XYZ configurations for 100 and 150mm stroke models.
Applications - research, semi-conductors, fibre optics, automation etc.

Tips
Stepper motor - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step.
Limit switches wired normally closed.
Supplied with in-built linear encoder to increase positional accuracy. Drawings show stepper motor configuration. See special pages for further motor options.

Important Notes
Max. moment loads:
My = 20 Nm
Mz = 20 Nm.
For combined stages, add suffixes:
XY - for XY stage
XZ - for XZ stage
XYZ - for XYZ stage

Order No.	Travel	Motor type	Horizontal load kg max.	Accuracy ±	Side load kg max.	Repeatability ±	Lead screw pitch	Speed mm/s max.	l_1	l_2	Resolution ±	Weight kg
L3505.100	100	Stepper & enc.	22,6	3µ	4,5	0,5µ	5	50	225,4	74,7	0,1µ	2,9
L3505.150	150	Stepper & enc.	22,6	3µ	4,5	0,5µ	5	50	275,4	74,7	0,1µ	3,2
L3505.200	200	Stepper & enc.	22,6	3µ	4,5	0,5µ	5	50	325,4	74,7	0,1µ	3,6
L3505.250	250	Stepper & enc.	22,6	3µ	4,5	0,5µ	5	50	375,4	74,7	0,1µ	3,9
L3505.300	300	Stepper & enc.	22,6	3µ	4,5	0,5µ	5	50	425,4	74,7	0,1µ	4,2
L3505.050	50	Stepper & enc.	22,6	3µ	4,5	0,5µ	5	50	174,6	74,7	0,1µ	2,7



Intelligent stepper motor

- No need for separate motion controller.
- Inbuilt motor, driver and controller.

Options

- Standard
- With rotary encoder (512 line)

Separate motor controllers (single axis)

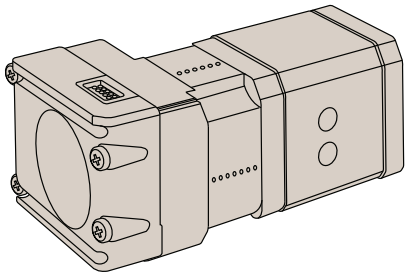
Single axis stepper controller



Single axis servo controller

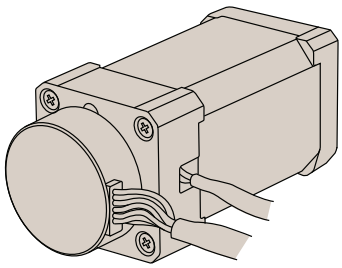


Intelligent stepper motor



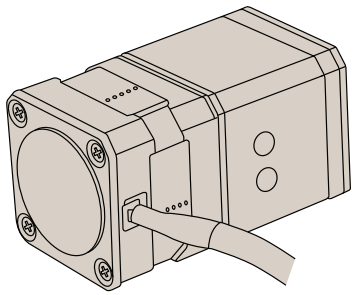
- Standard
- With rotary encoder (512 line)

Stepper motor



- Standard
- With rotary encoder (1000 line)

Servo motor



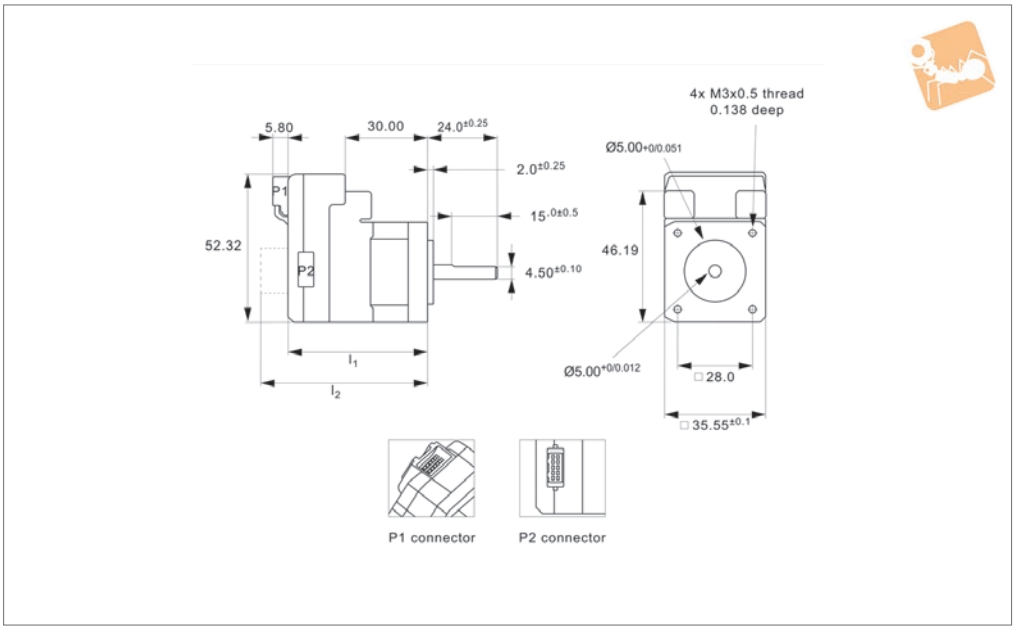
- Standard
- With rotary encoder (1000 line)

Positioning Stages from Automotion Components

Intelligent NEMA 14 Stepper Motors
with mcode software



L3530



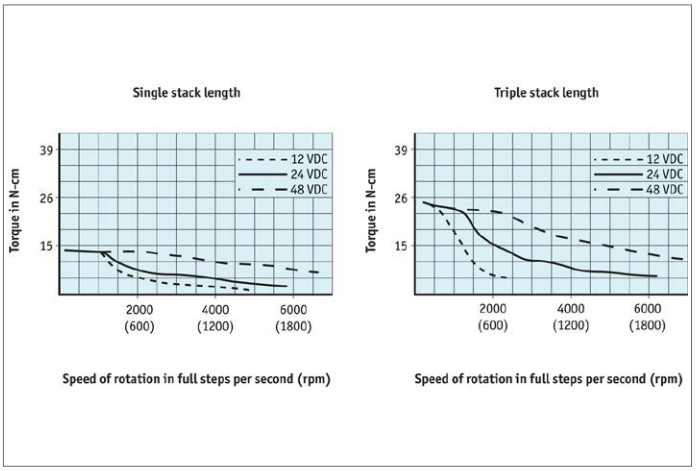
Material
Combined 2 phase, high torque stepper motors with in-built power driver and controller.
IP20 rated (IP 67 optional).

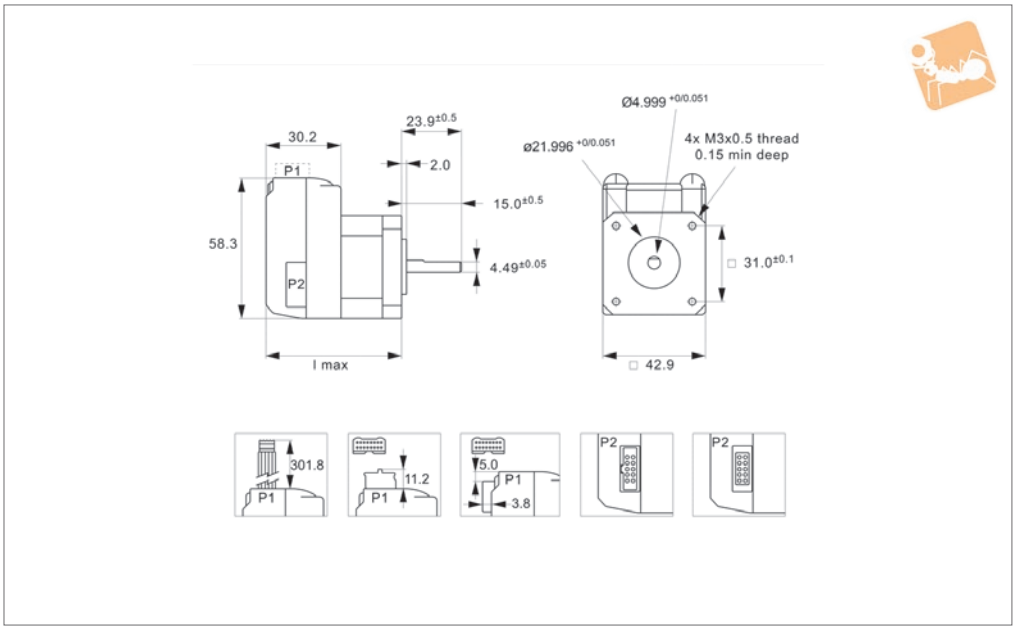
Technical Notes
Allows easy control from a PC or PLC for single or multiple motors. Low cost alternative to motors, drivers and controllers. Easy to use free software, little cabling.
Voltage 12 to 48V DC.
20 microstepping resolutions up to 51,200 steps per rev.
Up to 8 I/O lines, one 10 bit selectable analogue input.

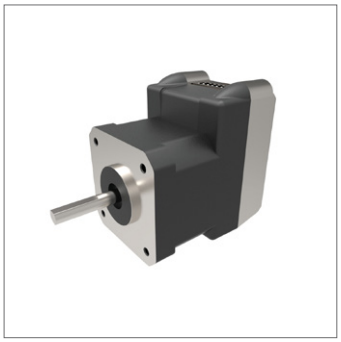
Tips
Can readily be programmed in Labview, VB etc. The motor can be run independently from PC if required (programmed can be downloaded to motor). Easy connection via RS422/485.
Optional encoders, gearing, motor brake etc.

Important Notes
We have a free motor selection help service - including a free motor configuration software programme and technical help to ensure the motor is to your requirement - please consult our technical department for full motor specifications.

Order No.	Holding torque Nm	Flange dimensions	l_1 max.	l_2 max.	Shaft +0|-0.013	Rotor inertia kg·cm²	Weight kg
L3530.14-1	0.13	35x35	49	67	5.00	0.014	0.15
L3530.14-3	0.25	35x35	77	95	5.00	0.057	0.38







L3532

Material
Combined 2 phase, high torque stepper motors with in-built power driver and controller.
IP20 rated (IP 67 optional).

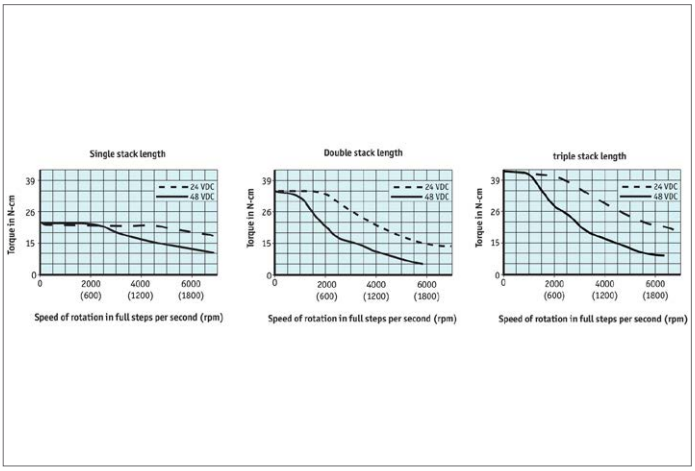
Technical Notes
Allows easy control from a PC or PLC for single or multiple motors. Low cost alternative to motors, drivers and controllers. Easy to use free software, little cabling.

Voltage 12 to 48V DC.
20 microstepping resolutions up to 51,200 steps per rev.
Up to 8 I/O lines, one 10 bit selectable analogue input.

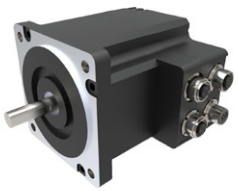
Tips
Can readily be programmed in Labview, VB etc. The motor can be run independently from PC if required (programmed can be downloaded to motor). Easy connection via RS422/485.
Optional encoders, gearing, motor brake etc.

Important Notes
We have a free motor selection help service - including a free motor configuration software programme and technical help to ensure the motor is to your requirement - please consult our technical department for full motor specifications.

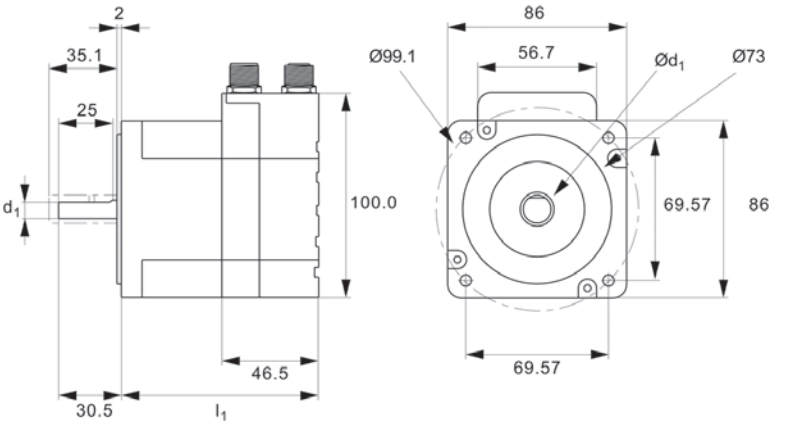
Order No.	Holding torque Nm	Flange dimensions	I_1 max.	Shaft +0|-0.013	Rotor inertia kg·cm²	Weight kg
L3532.17-1	0.23	43x43	56	5.00	0.038	0.30
L3532.17-2	0.42	43x43	62	5.00	0.057	0.34
L3532.17-3	0.53	43x43	71	5.00	0.082	0.43



Intelligent NEMA 34 Stepper Motors
with mactalk software



L3536



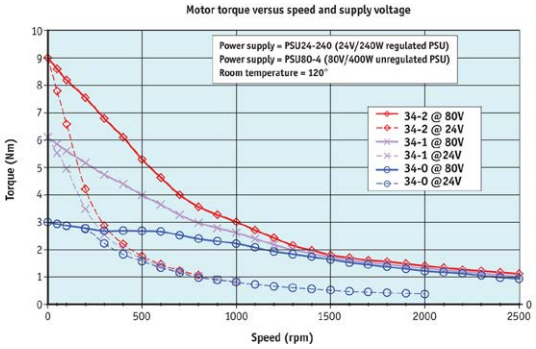
Material
Combined 2 phase, high torque stepper motors with in-built power driver and controller.
IP42/55 rated (IP 67 optional).

Technical Notes
Allows easy control from a PC or PLC for single or multiple motors. Low cost alternative to motors, drivers and controllers. Easy to use free software, little cabling. The I/O points can be set up by users as Input or Output or as analogue input.
Resolution: 409600 counts/rev.
Mainly supply voltage: 12-80V DC.
Control and main I/O supply voltage: 12-28V DC.
Nominal speed range 0.01-3000 rpm.

Tips
8 I/O's that can be configured to Inputs, Outputs or analogue Inputs.
Can readily be programmed in Labview, VB etc. The motor can be run independently from PC if required (programmed can be downloaded to motor). Easy connection via USB port, RS 485, optional wireless and ethernet control.
Optional encoders, gearing, motor brake etc.

Important Notes
We have a free motor selection help service - including a free motor configuration software programme and technical help to ensure the motor is to your requirement - please consult our technical department for full motor specifications.

Order No.	Holding torque Nm	Flange dimensions	Length	Shaft +0|-0.013	Power W max.	Rotor inertia kg·cm²	Typical supply current @24V DC ADC RMS	Typical supply current @48V DC ADC RMS	Typical supply current @80V DC ADC RMS	Weight kg
L3536.34-0	3,0	87x87	95	9,53	260	1,4	5,1	5,1	5,1	2,0
L3536.34-1	6,1	87x87	126	9,53	288	2,7	5,6	5,3	5,6	3,1
L3536.34-2	9,0	87x87	156	14,0	315	4,0	6,0	5,4	6,1	4,2
L3536.34-3	10,5	87x87	220	14,0	>320	5,3	6,3	5,7	6,6	5,3


Motor torque versus speed and supply voltage
Power supply = PSU24-240 (24V/240W regulated PSU)
Power supply = PSU80-4 (80V/400W unregulated PSU)
Room temperature = 120°
34-2 @ 80V
34-2 @ 24V
34-1 @ 80V
34-1 @24V
34-0 @ 80V
34-0 @24V
Torque (Nm)
Speed (rpm)
0
1
2
3
4
5
6
7
8
9
10
500
1000
1500
2000
2500

Positioning Stages from Automotion Components

Controllers



L3294 Single axis stepper motor controller

- Communicate via RS-232 or Ethernet interface
- Uses virtually any programming language



L3295 Two axis stepper motor controller

- Communicate via RS-232 or Ethernet interface
- Programming via Labupu, VB, C++ and OSX etc.
- Stand alone programs can be downloaded
- Max output of 1.5A



L3296 Multi axis stepper motor controller

- Communicate via RS-232 or Ethernet interface
- Can control 4 axis and perform coordinated or independent motion of each or all the axis simultaneously
- Uses virtually and programming language



L3297 Single axis servo motor controller

- Communicate via RS-232 or Ethernet interface
- Uses virtually any programming language

Accessories



Joysticks



Digital readout



Connector RS232-USB



Connector RS422-USB

ov-motors-and-controllers-accessories-lnh - Updated - 02-03-2023

These have major benefits as they combine the motor (from size NEMA17 up) with an inbuilt driver and controller.

- Stepper or servo motor versions.
- Simple to install
- CE certified
- Free software programming

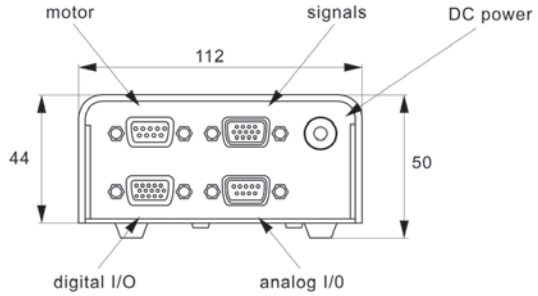
Plug and play

- Download free software
- Connect motor to computer (USB port)
- Connect power supply to the motor
- Start controlling/programming

- Low cost solution.
- The I/O points can be set by users to input, output or analogue input.
- NEMA17, 23, 34, 43 and larger sizes available.
- 12-48VDC.
- High torque stepper motors (1.2 to 10.5 Nm).
- Simple Windows software program provided free).
- Also Labview VB etc. programs.
- IP67, Motor brake.
- Optional Joysticks.



L3521



controller depth = 86mm

Material

Includes universal AC power adapter, user interface software and USB cable.

Technical Notes

Communication: USB 2,0 or RS-485 ASCII (9600 - 115200 bps)
Digital IO Communication: 4 bit motion profile select inputs (DI3-DI6). One start motion input (DI1). One abort/clear motion input (DI2). One in position output (DO1). One error output (DO2).
A/B/Z differential encoder inputs: StepNLoop closed loop control (position verification)
2 x 10-bit analog inputs (joystick control).
Opto-isolated I/O: 6 x inputs, 2 x outputs, 1 x high speed position capture latch input, +limit/-limit/home inputs.

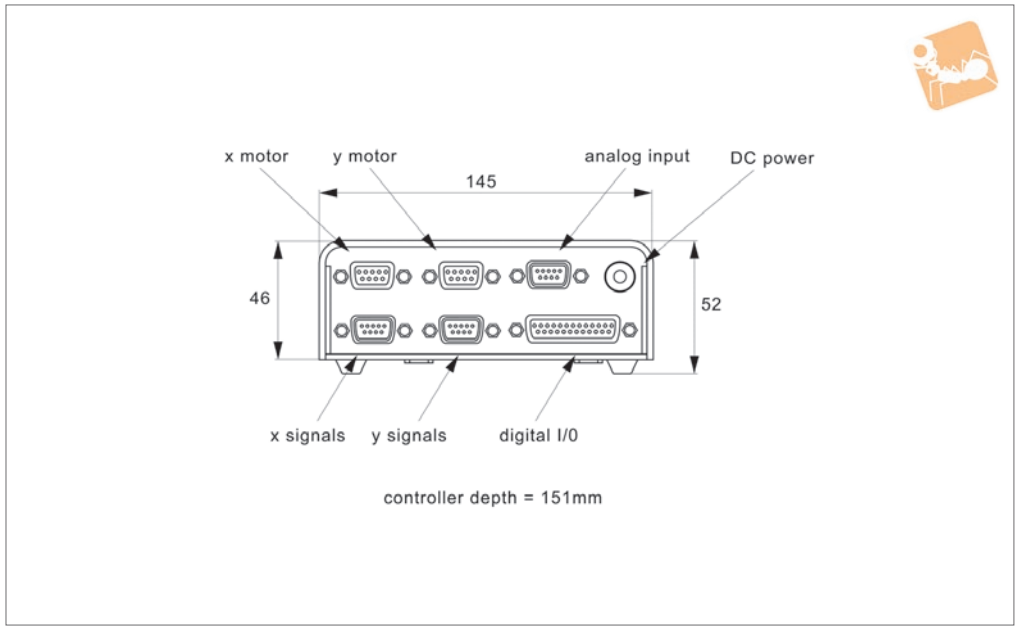
Tips

Can only be plugged into, and control a single axis. Comes with cables and software. Simple plug and play system via USB port of your laptop or PC. Also has analogue inputs for connection of a joystick control.
This motion controller can only be used with stages that have a stepper motor attached. If you have a servo motor, see part number L3297.
Micro-stepping is the number of steps per step of the motor output shaft. e.g the stepper motors have 200 steps per revolution of the shaft. The motion controllers are defaulted to 250 microsteps. This means that the motor shaft has 50,000 steps per revolution (250 x 200).
Compatible with LabView, Matlab, VB, C++, Python, and OS X.

Important Notes

When using with Matlab a RS-485 to USB adapter will be required.

Order No.	No. of axes	Encoder	Input voltage V DC	Output current Amps max.	Micro-step resolution	Weight kg
L3521.ST1X	One	No	+12 to +24	3.0	2 to 500	0.34
L3521.ST1X-E	One	Yes	+12 to +24	3.0	2 to 500	0.34
L3521.RS485	USB cable	-	-	-	-	





L3522

Material
Includes universal AC power adapter, user interface software and USB cable.

Technical Notes
Communication: USB 2,0 or RS-485 ASCII (9600 - 115200 bps)
Digital IO Communication: 4 bit motion profile select inputs (DI3-DI6). One start motion input (DI1). One abort/clear motion input (DI2). One in position output (DO1). One error output (DO2).
A/B/Z differential encoder inputs (Max frequency of 5 MHz): StepNLoop closed loop control (position verification)
2 x 10-bit analog inputs.
Opto-isolated I/O: 8 x inputs, 8 x outputs, +Limit/-Limit/Home inputs per axis
Stand alone programmable.
Max. pulse input rate of 400K.

Tips
Can be plugged into, and control two axis simultaneously. Comes with cables and software. Simple plug and play system via USB port of your laptop or PC.
This motion controller can only be used with stages that have a stepper motor attached. If you have a Servo motor, see part number L3297.
Micro-stepping is the number of steps per step of the motor output shaft. e.g the stepper motors have 200 steps per revolution of the shaft. If the motion controllers are set to 8 microsteps, this means that the motor shaft has 1600 steps per revolution (8 x 200).
Compatible with LabView, Matlab, VB, C++, Python, and OS X.

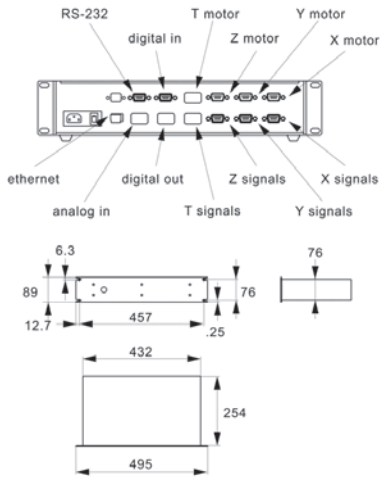
Important Notes
When using with Matlab a RS-485 to USB adapter will be required.

Order No.	No. of axes	Encoder	Input voltage V DC	Output current Amps max.	Micro-step resolution	Weight kg
L3522.ST2X	Two	No	+12 to +24	1.5	1 to 8	0.45
L3522.ST2X-E	Two	Yes	+12 to +24	1.5	1 to 8	0.45
L3522.RS485	USB cable	-	-	-	-	

Multi-Axes Stepper Controllers



L3524



Material

Incorporates a Motorola 32 bit microcomputer. Configurable to run up to four stepper or servo motors. For 2/4 phase bipolar stepper motors.
Power input 100-240V AC, 47-63 Hz.

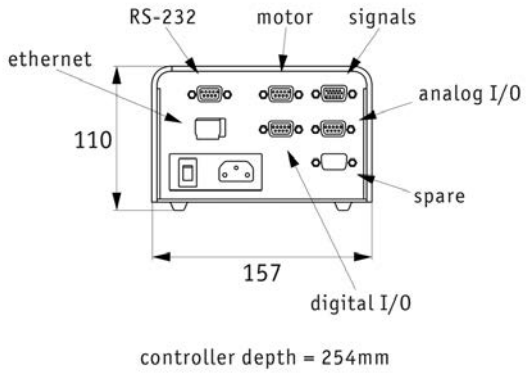
Technical Notes

Communication: RS-485 (up to 19,2 kbps) 10 Base-T Ethernet.
Encoder feedback: High speed differential inputs up to 12Mhz.
Number of I/O: 4 x inputs, 4 x outputs.
Program and data storage: 1000 lines x 80 characters. 510 variables. 8000 array elements in up to 30 arrays.
Easy programming with simple command language. Communication drivers are available for Windows, .NET, Mac OSX and Linux.
Operating temperature 0°C to 50°C, humidity 20-95%.

Tips

Can be plugged into, and control up to four axes simultaneously. Comes with cables and software. Simple plug and play system via USB port of your laptop or PC.
Micro-stepping is the number of steps per revolution of the motor output shaft.

Order No.	No. of axes	Encoder	Voltage for stepper driver	Output current continuous Amps	Output current peak Amps
L3524.ST2X	Two stepper	No	24V DC	-	3
L3524.ST2X-E	Two stepper	Yes	24V DC	-	3
L3524.ST3X	Three stepper	No	24V DC	-	3
L3524.ST3X-E	Three stepper	Yes	24V DC	-	3
L3524.ST4X	Four stepper	No	24V DC	-	3
L3524.ST4X-E	Four stepper	Yes	24V DC	-	3
L3524.SV2X	Two servo	No	48V DC	7	10
L3524.SV2X-E	Two servo	Yes	48V DC	7	10
L3524.SV3X	Three servo	No	48V DC	7	10
L3524.SV3X-E	Three servo	Yes	48V DC	7	10
L3524.STV4X	Four servo	No	48V DC	7	10
L3524.SV4X-E	Four servo	Yes	48V DC	7	10



controller depth = 254mm



L3525

Technical Notes

The L3297 servo motion controller is a single-axis controller and amplifier designed for use with all servo motor stages. The controller can communicate with the host computer through an RS-232 or 10/100 Base-T Ethernet interface. With built-in high level functionality such as position tracking, contouring and teach/playback, programming the controller is greatly simplified.
The motion controller can operate as a stand-alone system through the digital I/O for synchronizing motion with external events. It utilises a 32-bit microprocessor to control the trajectory profile, acceleration, velocity, deceleration and program memory with multi-tasking for simultaneously running up to eight programs.

Tips

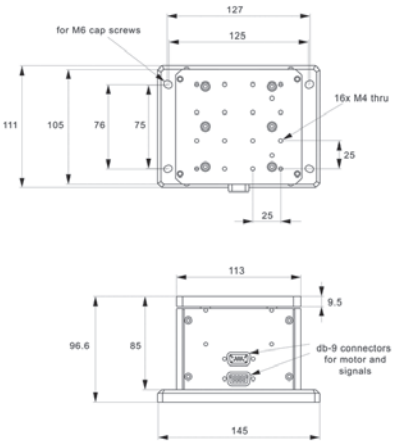
Features:
Single-axis motion controller with on-board PWM drive for brush or brushless servo motor and integrated power supply.
Ethernet 10/100 Base-T and (1) 19.2kb RS232 port.
Accepts encoder feedback up to 12 MHz.
Advanced PID compensation with velocity and acceleration feedforward, integration limits, notch filter and low-pass filter.
Modes of motion include jogging, point-to-point positioning, contouring, electronic gearing and ECAM.
Multi-tasking for concurrent execution of up to eight application programs.
Non-volatile memory for application programs, variables and arrays.
Over 200 English-like commands executable by controller. Includes conditional statements and event triggers.
Home input and forward and reverse limits.
Four TTL uncommitted inputs and 4 outputs.
TWO uncommitted analog inputs (0-5V).

Order No.	No. of axes	Input power	Drive current continuous Amps	Drive current peak Amps
L3525.SV1X	One	120-240V AC	7	10

Motorised Vertical Lift Stages
high precision



L3591



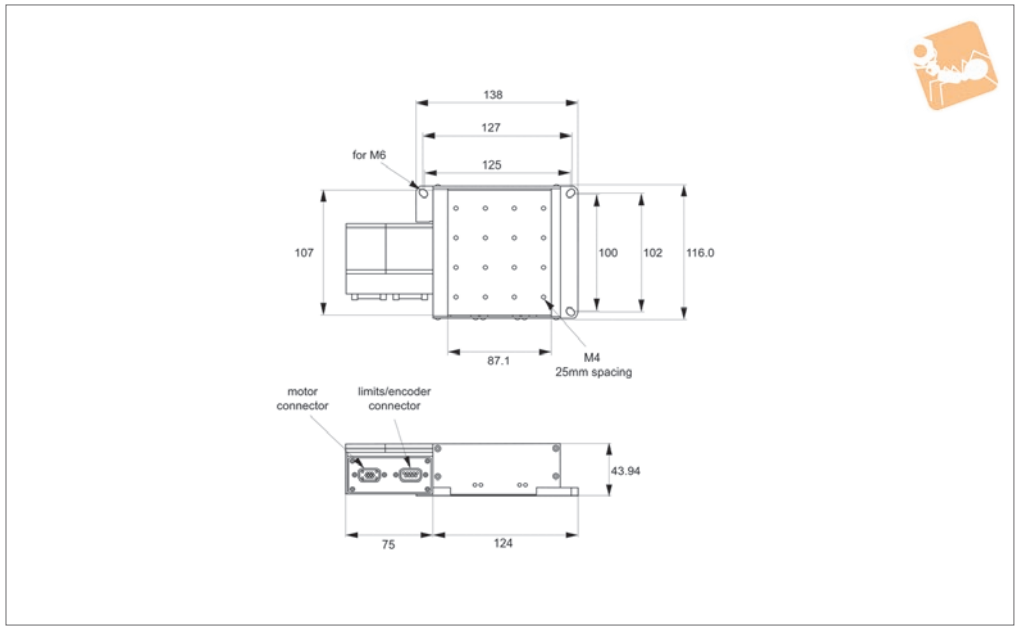
Material
Black anodised aluminium body (6061). Hardened linear guideways, stainless steel Acme lead screw (with internally lubricated anti-backlash nut).

Technical Notes
Easy plug and play system. Integrated limit switches are provided as standard. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but many pre-existing software packages (such as Labview) can be used. Applications - research, semi-conductors, fibre optics, automation etc.

Tips
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Option with 1000 line rotary encoder.
Limit switches are wired normally closed.

Important Notes
Motor resolution 0,03µ, encoder resolution 0,4µ. Minimum step size 0,5µ.

Order No.	Travel	Accuracy ±	Uni-directional repeatability ±	Load kg max.	Speed mm/s max.	Lead screw pitch	Motor type	Weight kg
L3591.025-STA	25	10µ	1µ	7.0	10	1.5875	Stepper	2.5
L3591.025-STB	25	10µ	1µ	7.0	10	1.5875	Stepper & enc.	2.5





L3592

Material
Black anodised aluminium body (6061). Hardened linear guideways, stainless steel Acme lead screw (with internally lubricated anti-backlash nut).

Technical Notes
Easy plug and play system. Integrated limit switches are provided as standard. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but many pre-existing software packages (such as Labview) can be used. Applications - research, semi-conductors, fibre optics, automation etc.

Tips
Motor options:
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Option with 1000 line encoder.
Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (ie no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS422/485 communications. Input voltage +24VDC.
Option with 512 line encoder.
Limit switches are wired normally closed.
Drawings show stepper motor configuration. See special pages for further motor options.

Important Notes
Motor resolution 0.03µ, encoder resolution 0.4µ.

Order No.	Travel	Accuracy ±	Uni-directional repeatability ±	Load kg max.	Speed mm/s max.	Lead screw pitch	Motor type	Weight kg
L3592.015-STB	15	10µ	1µ	7.0	5	1.5875	Stepper & enc.	1.1
L3592.015-IMA	15	10µ	1µ	7.0	5	1.5875	Int. stepper & enc.	1.1
L3592.015-IMB	15	10µ	1µ	7.0	5	1.5875	Int. stepper	1.1
L3592.015-STA	15	10µ	1µ	7.0	5	1.5875	Stepper	1.1

Rotary Stages

Selection



Factors affecting stage selection

- Size and weight of load (including any moment loads)
- Accuracy (positioning, repeatability and resolution)
- Speed of rotation required
- Means of control

Parameters	High precision
Table diameters (mm)	50-200
Maximum loads (Kg) Horizontal Vertical	 125 125
Maximum speed °/sec Stepper motor Servo motor	 25-50 180-360
Accuracy (arc-secs) Positioning Repeatability Resolution	 70″ 5″ <0,7″
Control options	Stepper, servo or intelligent motor Motion controllers available

*Dependent on stage selected

Factors affecting stage performance

Run-out

The displacement of a measure sensor placed on the surface of the rotary table.

Applied loads

These cause small deformations in the stage bearings and are dependent on the stiffness of the stage, the bearings and the stability and flatness of the mounting surface.

Hysteresis errors

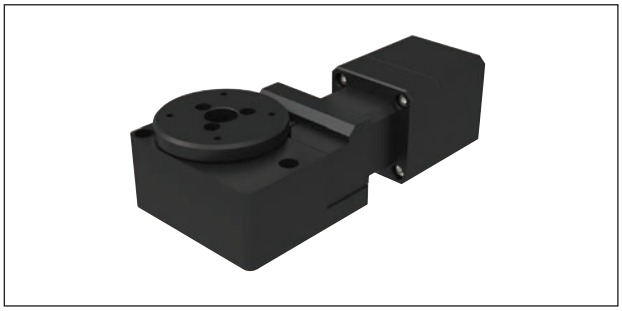
The difference between the control and instructed position.

Backlash errors

Errors caused by the reversal of the direction of travel affected by clearance in the drive chain.

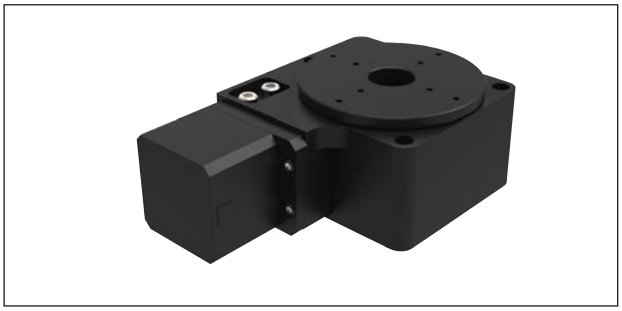
Encoder errors

Imperfections in the operations of the encoder (if present).



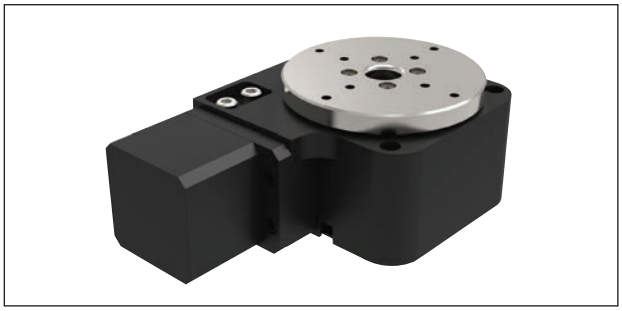
L3550 Ø50 Rotary stage

- Motorised.
- Accurate to 70 arc-secs, repeatedly to 3 arc/sec.
- Loads up to 4.5kg.



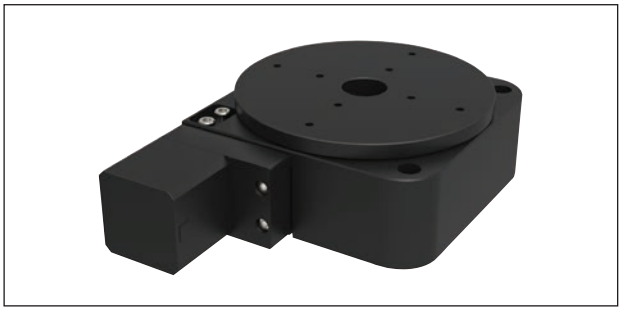
L3552 Ø75 Rotary stage

- Motorised.
- Accurate to 70 arc-secs, repeatedly to 5 arc-secs.
- Loads up to 11kg.



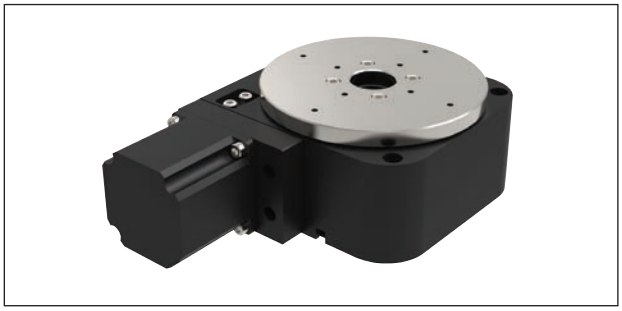
L3554 Ø75 Rotary stage, heavy duty

- Heavy duty.
- Motorised.
- Accurate to 70 arc-secs, repeatedly to 3 arc-secs.
- Loads up to 20kg.



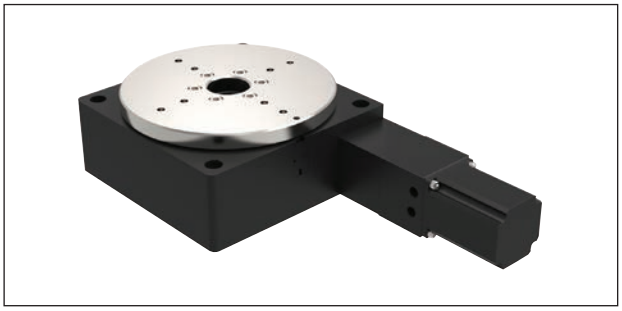
L3556 Ø125 Rotary stage, medium duty

- Motorised.
- Accurate to 70 arc-secs, repeatedly to 5 arc-secs.
- Loads up to 25kg.



L3558 Ø125 Rotary stage, heavy duty

- Heavy duty.
- Motorised.
- Accurate to 70 arc-secs, repeatedly to 3 arc-secs.
- Loads up to 45kg.

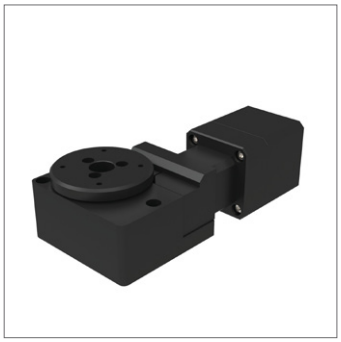


L3662 Ø200 Rotary stage

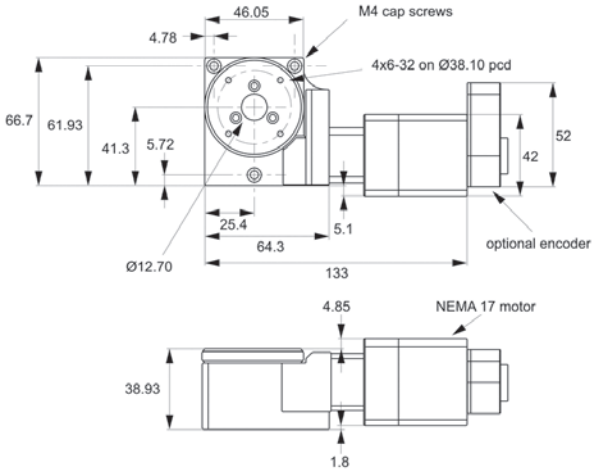
- Motorised.
- Accurate to 70 arc-secs, repeatedly to 5 arc-secs.
- Loads up to 125kg.

Motorised Rotary Stages Ø50

high precision, medium duty



L3550



Material

Aluminium alloy body (light, stiff and stable), black anodised.
Weight 0,45 Kg.

Technical Notes

The design utilises a thrust bearing system for the table movement. This offers excellent stability at low cost, but as a result, is not really suitable for use in a vertical application. For vertical applications see Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but you can also use your own pre-existing software with them such as Labview etc.

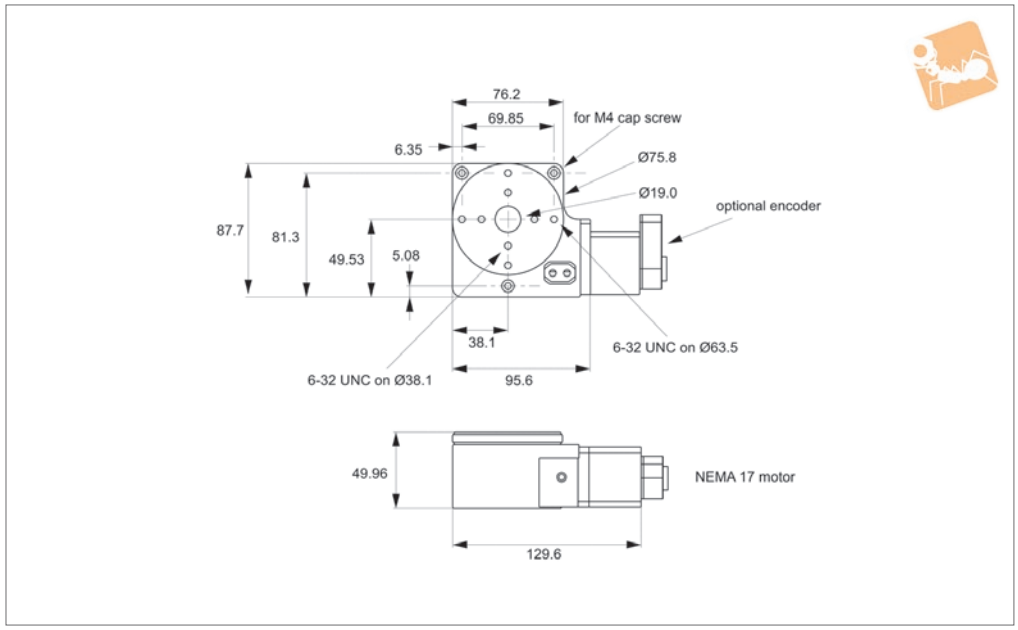
Integrated stepper motor has a motion controller built into it.
The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train.
The travel is 360° continuous.
Easy to use plug and play system when used with a motion controller. Can be used in conjunction with motorised linear stages for multi-axis applications.

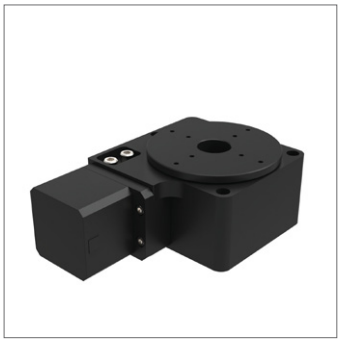
Tips

Requires external home switch (if required).
Motor options:
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optionally with 1000 line rotary encoder.
Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (i.e. no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS422/485 communications. Input voltage +24VDC. Optionally with 512 line rotary encoder.
Drawings show stepper motor configuration. See special pages for further motor options.

Order No.	Motor	Speed °/s max.	Horizontal load kg max.	Vertical load kg max.	Moment load Nm max.	Weight kg
L3550.050-STA	Stepper	30°	4.5	0.3	1.7	0.45
L3550.050-IMA	Int. stepper & enc.	30°	4.5	0.3	1.7	0.45
L3550.050-STB	Stepper	50°	4.5	0.3	1.7	0.45
L3550.050-STC	Stepper & enc.	30°	4.5	0.3	1.7	0.45
L3550.050-STD	Stepper & enc.	50°	4.5	0.3	1.7	0.45
L3550.050-IMB	Int. stepper & enc.	50°	4.5	0.3	1.7	0.45

Order No.	Accuracy ± arc-secs	Uni-directional repeatability ± arc-secs	Bi-directional repeatability ± arc-secs	Gear ratio	Resolution ± arc-secs
L3550.050-STA	70“	5“	45“	80:1	0,3“
L3550.050-IMA	70“	5“	45“	80:1	0,3“
L3550.050-STB	70“	5“	45“	40:1	0,6“
L3550.050-STC	70“	5“	45“	80:1	0,3“
L3550.050-STD	70“	5“	45“	40:1	0,6“
L3550.050-IMB	70“	5“	45“	40:1	0,6“





L3552

Material
Aluminium alloy body (light, stiff and stable), black anodised.
Weight 1,6 Kg.

Technical Notes
The design utilises a thrust bearing system for the table movement. This offers excellent stability at low cost, but as a result, is not really suitable for use in a vertical application. For vertical applications see L3254 and L3258 - L3262.
Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but you can also use your own pre-existing software with them such as Labview etc.
Integrated stepper motor has a motion controller built into it.
The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train.
The travel is 360° continuous.
Easy to use plug and play system when used with a motion controller. Can be used in conjunction with motorised linear stages for multi axis applications.

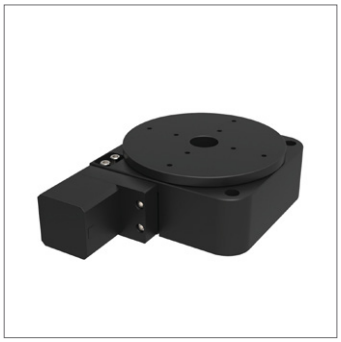
Tips
Requires external home switch (if required).
Motor options:
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optionally with home switch and/or 1000 line rotary encoder.
Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (i.e. no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. Optionally with home switch and/or 512 line rotary encoder. RS422/485 communications. Input voltage +24VDC. Drawings show stepper motor configuration. See special pages for further motor options.

Order No.	Motor	Speed °/s max.	Horizontal load kg max.	Vertical load kg max.	Weight kg
L3552.075-STA	Stepper	30°	11.3	0.75	1.59
L3552.075-IMA	Int. stepper & enc.	30°	11.3	0.75	1.59
L3552.075-STB	Stepper & enc.	30°	11.3	0.75	1.59

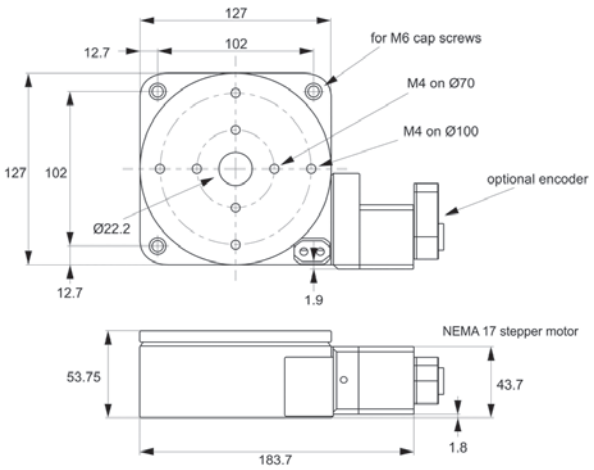
Order No.	Moment load Nm max.	Accuracy ± arc-secs	Uni-directional repeatability ±	Bi-directional repeatability ±	Gear ratio	Resolution ± arc-secs
L3552.075-STA	5.1	70“	5“	45“	90:1	0,29“
L3552.075-IMA	5.1	70“	5“	45“	90:1	0,29“
L3552.075-STB	5.1	70“	5“	45“	90:1	0,29“

Motorised Rotary Stage Ø125

high precision, medium duty



L3556



Material

Aluminium alloy body (light, stiff and stable), black anodised.
Weight 2,3 Kg.

Technical Notes

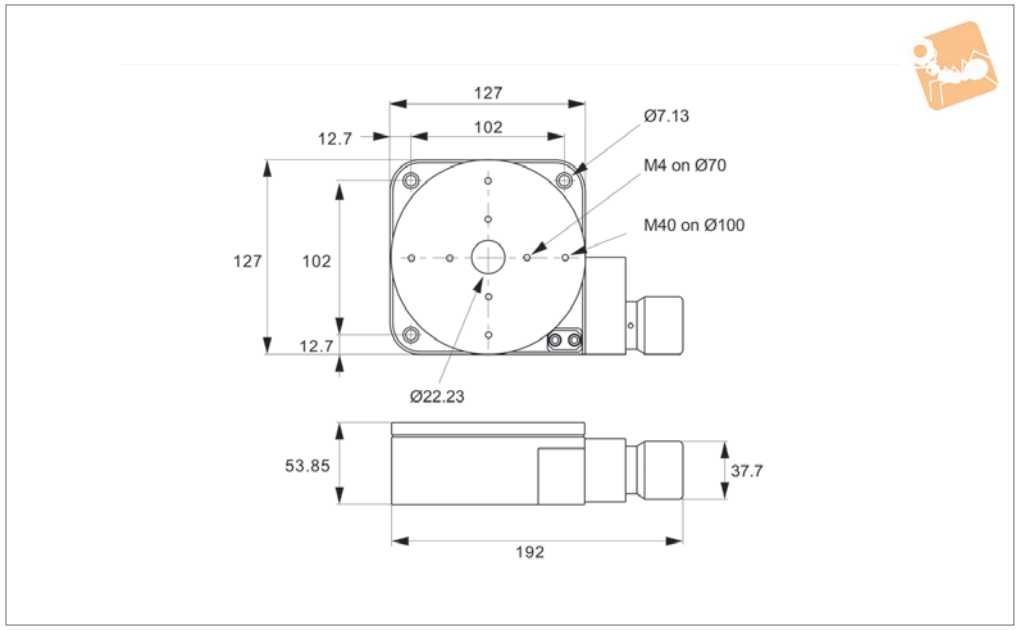
The design utilises a thrust bearing system for the table movement. This offers excellent stability at low cost, but as a result, is not really suitable for use in a vertical application. For vertical applications see L3254 and L3258 - L3262.
Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but you can also use your own pre-existing software with them such as Labview etc.
Integrated stepper motor has a motion controller built into it.
The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train.
The travel is 360° continuous.
Easy to use plug and play system when used with a motion controller. Can be used in conjunction with motorised linear stages for multi axis applications.

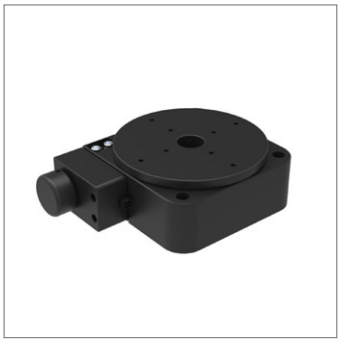
Tips

Requires external home switch (if required).
Motor options:
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optionally with home switch and 1000 line rotary encoder.
Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (i.e. no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS422/485 communications. Input voltage +24VDC. Optionally with home switch and 512 line rotary encoder.
Drawings show stepper motor configuration. See special pages for further motor options.

Order No.	Motor	Speed °/s max.	Horizontal load kg max.	Vertical load kg max.	Weight kg
L3556.125-STA	Stepper	25°	25	1.67	2.27
L3556.125-IMA	Int. stepper	25°	25	1.67	2.27
L3556.125-STB	Stepper & home	25°	25	1.67	2.27
L3556.125-STC	Stepper, home, enc.	25°	25	1.67	2.27
L3556.125-IMB	Int. stepper & home	25°	25	1.67	2.27
L3556.125-IMC	Int. stepper, home, enc.	25°	25	1.67	2.27

Order No.	Moment load Nm max.	Accuracy ± arc-secs	Uni-directional repeatability ± arc-secs	Bi-directional repeatability ± arc-secs	Gear ratio	Resolution ± arc-secs
L3556.125-STA	10.8	70“	5“	45“	72:1	0,36“
L3556.125-IMA	10.8	70“	5“	45“	72:1	0,36“
L3556.125-STB	10.8	70“	5“	45“	72:1	0,36“
L3556.125-STC	10.8	70“	5“	45“	72:1	0,36“
L3556.125-IMB	10.8	70“	5“	45“	72:1	0,36“
L3556.125-IMC	10.8	70“	5“	45“	72:1	0,36“





L3559

Material
Aluminium alloy body (light, stiff and stable), black anodised.
Weight 3,6 Kg.

Technical Notes
The design utilises a single preloaded crossed roller bearing system for the table movement. This eliminates the use of dual bearing configuration, thus improving axial runout and wobble.
The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train.
The travel is 360° continuous.
Resolution 0.00225°.

Tips
A precision rotary encoder provide positional information to a small digital readout (DRO) unit. Positive and negative measurements.
Includes 12V power adapter.
Seven 12mm high numeric digits with blue

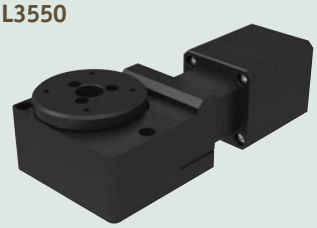
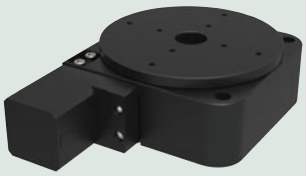
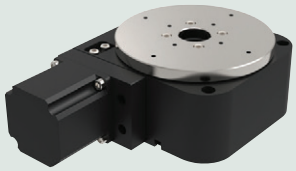
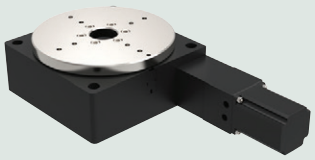
Order No.	Type	Travel	Horizontal load kg max.	Vertical load kg max.	Moment load Nm max.	Repeatability ± arc-secs	Accuracy ± arc-secs	Gear ratio	Resolution ± arc-secs	Weight kg
L3559.125	Manual stage	360°	45.0	45.0	29.3	5“	70“	72:1	0,36“	3.6
L3559.DRO	Digital readout	-	-	-	-	-	-	-	-	



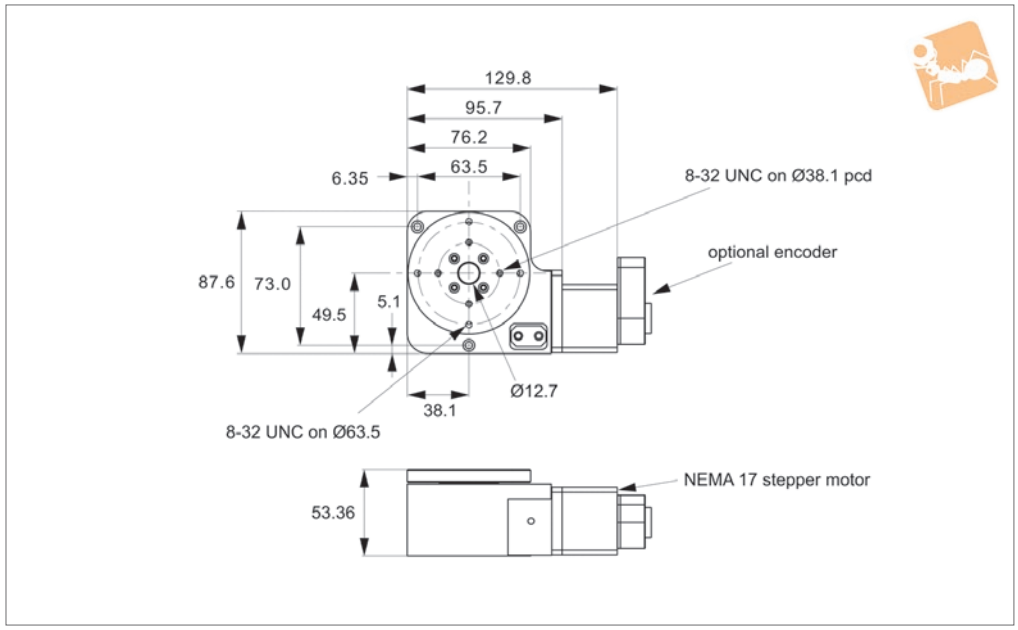
Rotary Stages

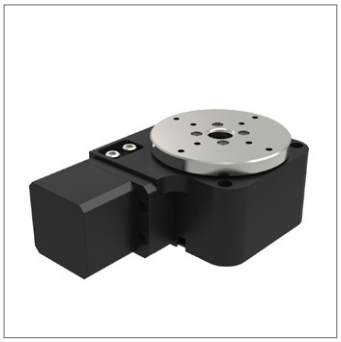
Motor options

Positioning Stages from Automotion Components

Part no.	Stepper	MDrive	Servo
L3550 	✓	✓	✗
L3552 	✓	✓	✗
L3554 	✓	✓	✓
L3556 	✓	✓	✗
L3558 	✓	✓	✗
L3562 	✓	✓	✓

ov-rotary-stages-motor-options-lnh - Updated - 03-03-2023





L3554

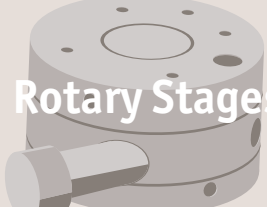
Material
Aluminium alloy body (light, stiff and stable), black anodised.
Weight 1,4 Kg.

Technical Notes
The design utilises a single preloaded crossed roller bearing system for the table movement. This eliminates the use of dual bearing configuration, thus improving axial runout and wobble.
The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train.
The travel is 360° continuous.
Easy to use plug and play system when used with a motion controller. Can be used in conjunction with motorised linear stages for multi axis applications.
Servo motor stages are only compatible with servo motion controllers. These allow for greater speeds but are more expensive.

Tips
Requires external home switch (if required).
Motor options:
Stepper - Nema 23, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optionally with home switch and/or 1000 line rotary encoder.
Servo - Nema 23 with 1000 line rotary encoder.
Intelligent stepper - Nema 23 with a fully programmable motion controller inbuilt (i.e. no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. Optionally with home switch and/or 512 line rotary encoder. RS422/485 communications. Input voltage +24VDC. Drawings show stepper motor configuration. See special pages for further motor options. Resolution up to 0,29 arcsecs, depending on gear ratio and motor.

Order No.	Motor	Speed °/s max.	Horizontal load kg max.	Vertical load kg max.	Moment load Nm max.	Weight kg
L3554.075-STA	Stepper	30°	20.4	20.4	16.9	1.36
L3554.075-SVA	Servo, home, enc.	180°	20.4	20.4	16.9	1.36
L3554.075-IMA	Int. stepper	30°	20.4	20.4	16.9	1.36
L3554.075-STB	Stepper	50°	68.0	68.0	16.9	1.36
L3554.075-STC	Stepper & home	30°	20.4	20.4	16.9	1.36
L3554.075-STE	Stepper, home, enc.	30°	20.4	20.4	16.9	1.36
L3554.075-STD	Stepper & home	50°	68.0	68.0	16.9	1.36
L3554.075-STF	Stepper, home, enc.	50°	68.0	68.0	16.9	1.36
L3554.075-SVB	Servo, home, enc.	360°	68.0	68.0	16.9	1.36
L3554.075-IMB	Int. stepper	50°	68.0	68.0	16.9	1.36
L3554.075-IMC	Int. stepper & home	30°	20.4	20.4	16.9	1.36
L3554.075-IMD	Int. stepper & home	50°	68.0	68.0	16.9	1.36
L3554.075-IME	Int. stepper, home, enc.	30°	20.4	20.4	16.9	1.36
L3554.075-IMF	Int. stepper, home, enc.	50°	68.0	68.0	16.9	1.36

Order No.	Uni-directional repeatability ± arc-secs	Bi-directional repeatability ± arc-secs	Accuracy ± arc-secs	Gear ratio	Resolution ± arc-secs
L3554.075-STA	5“	45“	70“	90:1	0.3

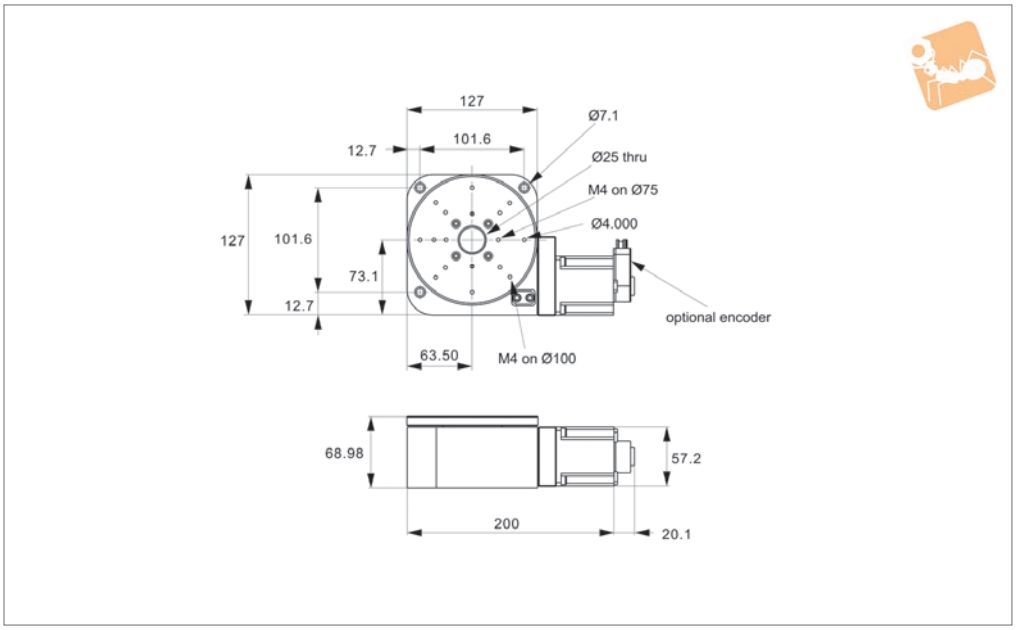


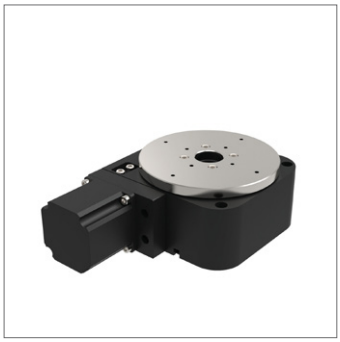
Motorised Rotary Stages Ø75

high precision, heavy duty



Order No.	Uni-directional repeatability ± arc-secs	Bi-directional repeatability ± arc-secs	Accuracy ± arc-secs	Gear ratio	Resolution ± arc-secs
L3554.075-SVA	5“	45“	70“	90:1	3.6
L3554.075-IMA	5“	45“	70“	90:1	0.3
L3554.075-STB	5“	45“	70“	45:1	0.6
L3554.075-STC	5“	45“	70“	90:1	0.3
L3554.075-STE	5“	45“	70“	90:1	0.3
L3554.075-STD	5“	45“	70“	45:1	0.6
L3554.075-STF	5“	45“	70“	45:1	0.6
L3554.075-SVB	5“	45“	70“	45:1	7.2
L3554.075-IMB	5“	45“	70“	45:1	0.6
L3554.075-IMC	5“	45“	70“	90:1	0.3
L3554.075-IMD	5“	45“	70“	45:1	0.6
L3554.075-IME	5“	45“	70“	90:1	0.3
L3554.075-IMF	5“	45“	70“	45:1	0.6





L3558

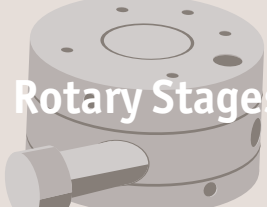
Material
Aluminium alloy body (light, stiff and stable), black anodised.
Weight 3,6 Kg.

Technical Notes
The design utilises a single preloaded crossed roller bearing system for the table movement. This eliminates the use of dual bearing configuration, thus improving axial runout and wobble.
The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train.
The travel is 360° continuous. Maximum output torques is 10,2 Nm.
Easy to use plug and play system when used with a motion controller. Can be used in conjunction with motorised linear stages for multi axis applications.
Servo motor stages are only compatible with servo motion controllers. These allow for greater speeds but are more expensive.

Tips
Requires external home switch (if required).
Motor options:
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optionally with 1000 line rotary encoder and home switch.
Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (i.e. no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS422/485 communications. Input voltage +24VDC. Optionally with home switch, and 512 or 1000 line rotary encoder.
Drawings show stepper motor configuration. See special pages for further motor options.

Order No.	Motor	Speed °/s max.	Horizontal load kg max.	Vertical load kg max.	Moment load Nm max.	Weight kg
L3558.125-STA	Stepper	25°	45.4	45.4	29.3	3.6
L3558.125-SVA	Servo & enc.	180°	45.4	45.4	29.3	3.6
L3558.125-STC	Stepper, home & enc.	25°	45.4	45.4	29.3	3.6
L3558.125-IMA	Int. stepper, 512 enc.	25°	45.4	45.4	29.3	3.6
L3558.125-IMC	Int. stepper, 1000 enc.	25°	45.4	45.4	29.3	3.6
L3558.125-STB	Stepper	50°	45.4	45.4	29.3	3.6
L3558.125-SVB	Servo & enc.	360°	45.4	45.4	29.3	3.6
L3558.125-STD	Stepper, home & enc.	50°	45.4	45.4	29.3	3.6
L3558.125-IMB	Int. stepper, 512 enc.	50°	45.4	45.4	29.3	3.6
L3558.125-IMD	Int. stepper, 1000 enc.	50°	45.4	45.4	29.3	3.6

Order No.	Uni-directional repeatability ± arc-secs	Bi-directional repeatability ± arc-secs	Accuracy ± arc-secs	Gear ratio	Resolution ± arc-secs
L3558.125-STA	5“	45“	70“	72:1	0,36“
L3558.125-SVA	5“	45“	70“	72:1	4,5“
L3558.125-STC	5“	45“	70“	72:1	0,36“
L3558.125-IMA	5“	45“	70“	72:1	0,36“
L3558.125-IMC	5“	45“	70“	72:1	0,36“
L3558.125-STB	5“	45“	70“	36:1	0,72“
L3558.125-SVB	5“	45“	70“	36:1	9,0“

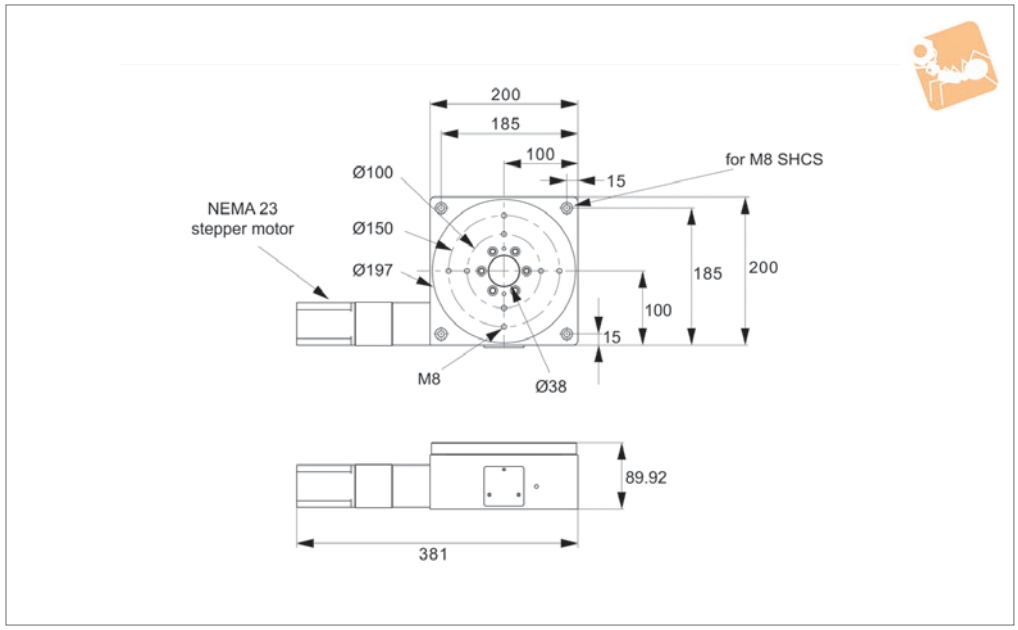


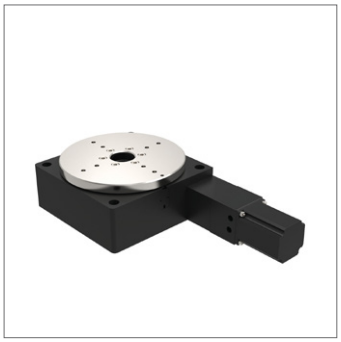
Motorised Rotary Stage Ø125

high precision, heavy duty



Order No.	Uni-directional repeatability ± arc-secs	Bi-directional repeatability ± arc-secs	Accuracy ± arc-secs	Gear ratio	Resolution ± arc-secs
L3558.125-STD	5“	45“	70“	36:1	0,72“
L3558.125-IMB	5“	45“	70“	36:1	0,72“
L3558.125-IMD	5“	45“	70“	36:1	0,72“





L3562

Material
Aluminium alloy body (light, stiff and stable), black anodised. Stainless steel circular plate.

Technical Notes
The design utilises a single preloaded crossed roller bearing system for the table movement. This eliminates the use of dual bearing configuration, thus improving axial runout and wobble.
The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train.
The travel is 360° continuous.
Easy to use plug and play system when used with a motion controller. Can be used in conjunction with motorised linear stages for multi axis applications.
Servo motor stages are only compatible with servo motion controllers. These allow for greater speeds but are more expensive. Can be supplied with an optional pneumatic brake fro added stability when stopped.

Tips
Requires external home switch (if required).
Motor options:
Stepper - Nema 23, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optionally with home switch and/or 1000 line rotary encoder.
Servo - Nema 23,with home switch and 1000 line rotary encoder.
Intelligent stepper - Nema 23 with a fully programmable motion controller inbuilt (i.e. no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC.
Optionally with home switch or 512 line rotary encoder.
RS422/485 communications. Input voltage +24VDC.

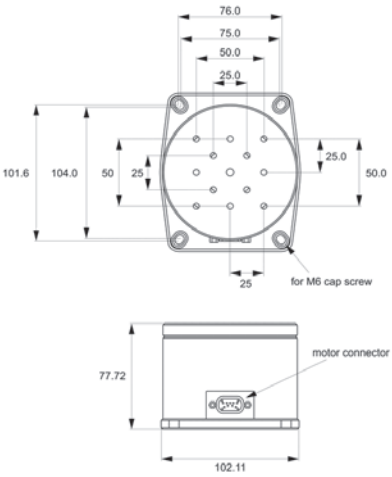
Order No.	Motor	Speed °/s max.	Horizontal load kg max.	Vertical load kg max.	Moment load Nm	Weight kg
L3562.200-STA	Stepper	20°	300	200	82.2	13.6
L3562.200-STB	Stepper & home	20°	300	200	82.2	13.6
L3562.200-STC	Stepper, home, enc.	20°	300	200	82.2	13.6
L3562.200-IMA	Int. stepper	20°	300	200	82.2	13.6
L3562.200-IMB	Int. stepper, home, enc.	20°	300	200	82.2	13.6
L3562.200-SVA	Servo, home, enc.	180°	300	200	82.2	13.6

Order No.	Uni-directional repeatability ± arc-secs	Bi-directional repeatability ± arc-secs	Accuracy ± arc-secs	Gear ratio	Resolution ± arc-secs
L3562.200-STA	5“	45“	70“	80:1	0,32“
L3562.200-STB	5“	45“	70“	80:1	0,32“
L3562.200-STC	5“	45“	70“	80:1	0,32“
L3562.200-IMA	5“	45“	70“	80:1	0,32“
L3562.200-IMB	5“	45“	70“	80:1	0,32“
L3562.200-SVA	5“	45“	70“	80:1	5,0“

High Speed Rotary Tables



L3569

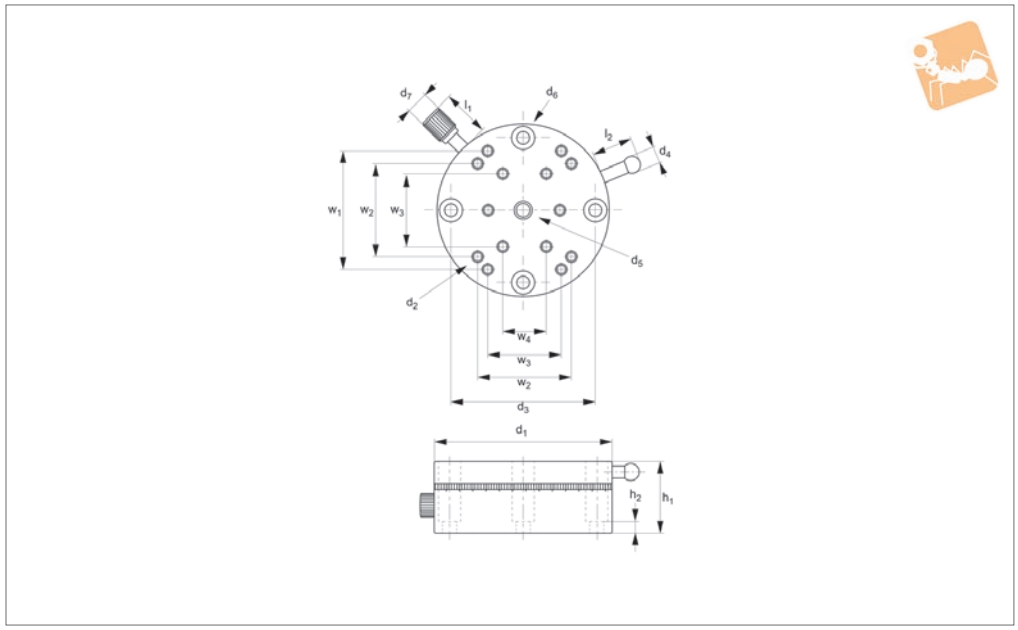


Material
Aluminium alloy body (light, stiff and stable).

Technical Notes
Suitable for fast rotation of light payloads, uses a high torque direct drive Nema 23 stepper motor. This eliminates the use of worm gears enabling fast speeds, high reliability and maintenance free operation. Max. speed (no load) up to 2000 rpm (12,000°/sec), max. acceleration (no load) 900°/sec^2.

Tips
Optionally with an optical rotary encoder (4000 counts.rev).
Can be used with our motion controllers L3521 and L3524.

Order No.	Motor	Speed rpm max.	Acceleration °/s^2 max.	Load kg max.	Holding torque Nm	Resolution @25k steps/rev	Weight kg
L3569.STA	Stepper	2000	900	2.3	0.71	0,014°	1.38
L3569.STB	Stepper & enc.	2000	900	2.3	0.71	0,014°	1.38





L3330

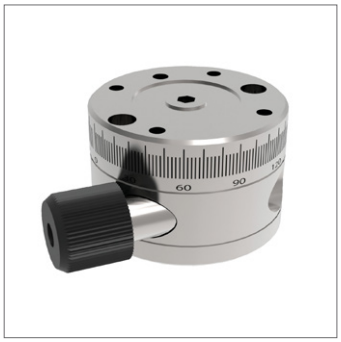
Material
Aluminium body blackened, steel knob.

Technical Notes
360° adjustment.
Runout 50µ.

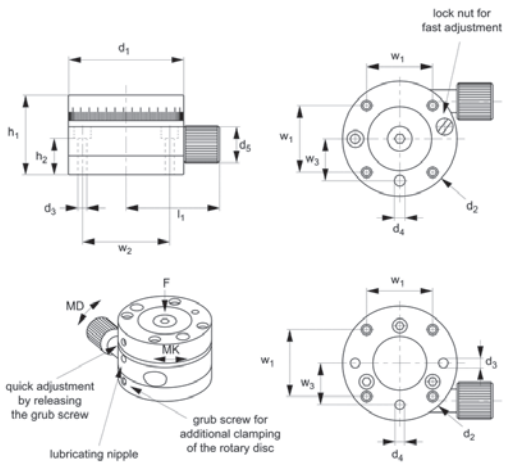
Order No.	Load N max.	d_1	Vernier reading min.	h_1	h_2	d_2	d_3	d_4	Weight kg
L3330.040	5.0	40	2°	20	4	M2	25	5.5	0.14
L3330.060	7.0	60	1°	25	4	M4	50	5.5	0.20

Order No.	d_5	d_6	d_7	l_1	l_2	w_1	w_2	w_3	w_4
L3330.040	M6x 8	7.5	6	10.3	10	25	-	15	-
L3330.060	M6x14	7.5	8	15.5	13	40	32	25	15

Manual Rotary Stages
stainless



L3339

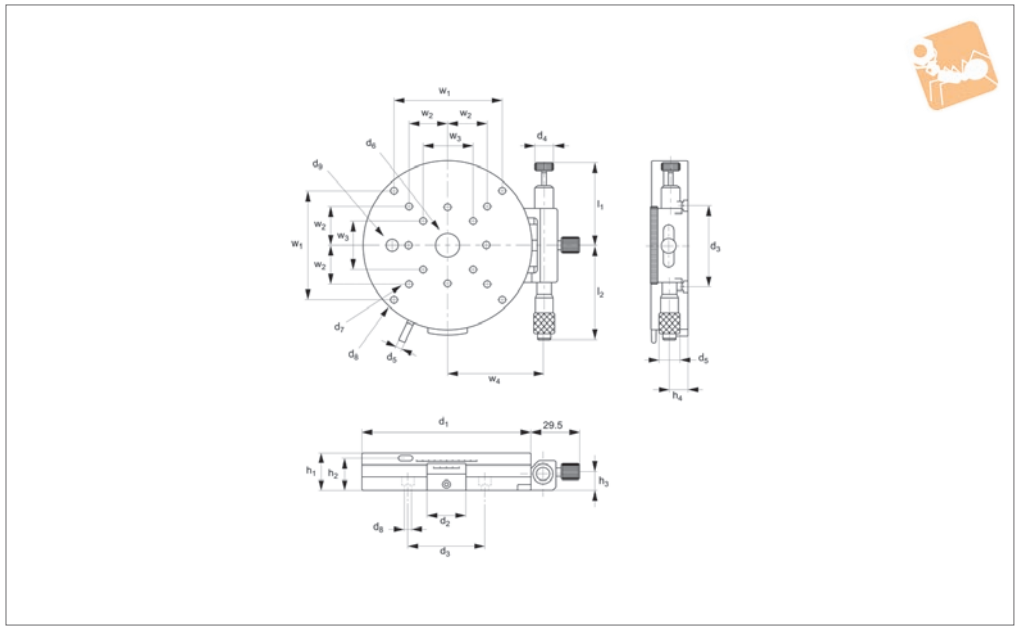


Material
Stainless steel AISI 303 rotary disc, black anodized aluminium control knob. All other part steel or brass.

Technical Notes
The rotary table can be clamped using a grub screw. it also has a fast adjustment when a grub screw on the side of the disc is released.
Rotating range 0° to infinity.

Order No.	d_1 tol. h7	h_1	h_2	d_2	d_3	d_4 tol. H7	d_5	l_1	w_1	w_2	w_3 ±0.02
L3339.055	55	38	17.5	M5x8	4.3	4x10	17	44	32	42	20
L3339.080	80	45	24.0	M5x8	5.4	4x10	23	59	40	60	30

Order No.	Concentricity tolerance	Circular runout tolerance	Knob torque M_d Nm max.	Torque unclamped Nm max.	Torque clamped Nm max.	Load F N max.
L3339.055	±0,02	±0,02	1.5	5	10	50
L3339.080	±0,03	±0,03	2.5	5	10	100





L3331

Material
Aluminium body blackened, steel knob.
Transmission mechanism - brass bush

rotary system.

±5°.

Technical Notes
Coarse 360° adjustment., fine adjustment

Order No.	d_1	Load N max.	Vernier reading min.	h_1	h_2	h_3	h_4	d_2	Weight kg
L3331.038	38	1.0	1‘ 26“	17.5	11	10.5	4.5	16	0.09
L3331.060	60	3.0	0‘ 55“	22.5	13	12.5	11.5	15	0.28
L3331.085	85	4.0	0‘ 43“	25	22	13.0	11.5	20	0.48
L3331.110	110	5.0	0‘ 34“	25	22	13.0	11.5	25	0.75

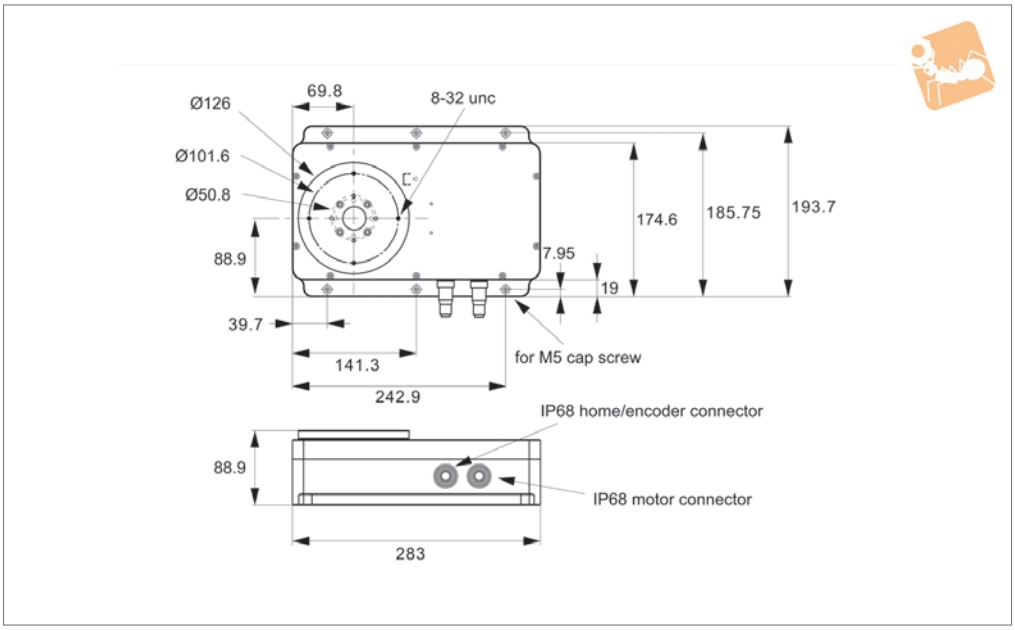
Order No.	d_3	d_4	d_5	d_6	d_7	d_8 for	d_9	w_1	w_2	w_3	w_4	l_1	l_2
L3331.038	32	6	4	M 6x1	M2	M2	-	-	32	14	24.0	37.4	38.5
L3331.060	50	12	4	M16x1	M3	M4	-	-	50	32	37.5	47.8	45.0
L3331.085	50	12	4	M16x1	M3	M4	8	-	50	32	48.0	53.3	62.0
L3331.110	50	12	4	M16x1	M3	M4	8	70	50	32	61.5	53.3	62.0

Motorised Rotary Stage Ø125

high precision, submersible



L3560



Material

Aluminium alloy body (light, stiff and stable), black anodised.
Supplied with optical home switch.
Weight 5,0 Kg.

Technical Notes

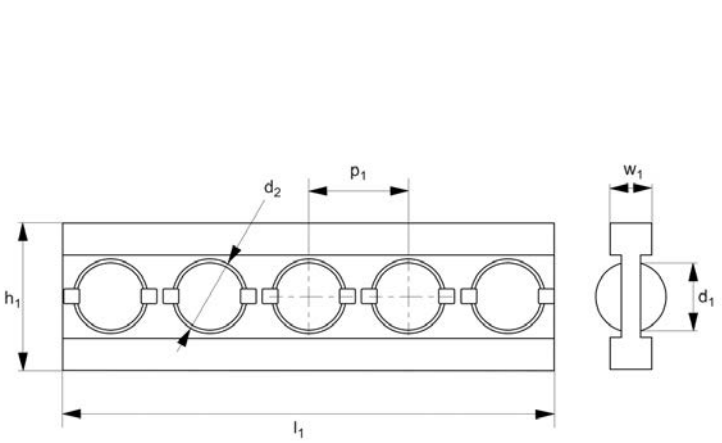
The design utilises a single preloaded crossed roller bearing system for the table movement. This eliminates the use of dual bearing configuration, thus improving axial runout and wobble.
The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train.
The travel is 360° continuous.
Easy to use plug and play system when used with a motion controller.
Servo motor stages are only compatible with servo motion controllers. These allow for greater speeds but are more expensive.

Tips

This rotary table is completely sealed from the outside environment. Perfect for applications such as semi-conductor wafer cutting. It is also suitable for outdoor applications where dust and moisture protection is required.
Requires external home switch (if required).
Motor options:
Stepper - Nema 23, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optionally with a 1000 line rotary encoder.
Servo - Nema 23 with a 1000 line rotary encoder.
RS422/485 communications. Input voltage +24VDC. Drawings show stepper motor configuration. See special pages for further motor options.

Order No.	Motor	Speed °/s max.	Horizontal load kg max.	Vertical load kg max.	Weight kg
L3560.125-STA	Stepper	25°	36.36	36.36	5.0
L3560.125-SVA	Servo & enc.	180°	36.36	36.36	5.0
L3560.125-STB	Stepper	50°	36.36	36.36	5.0
L3560.125-STC	Stepper & enc.	25°	36.36	36.36	5.0
L3560.125-STD	Stepper & enc.	50°	36.36	36.36	5.0
L3560.125-SVB	Servo & enc.	360°	36.36	36.36	5.0

Order No.	Output torque Nm max.	Uni-directional repeatability ± arc-secs	Bi-directional repeatability ±a	Accuracy ± arc-secs	Gear ratio	Resolution ± arc-secs
L3560.125-STA	10.2	5“	45“	70“	72:1	0,36“
L3560.125-SVA	10.2	5“	45“	70“	72:1	4,50“
L3560.125-STB	10.2	5“	45“	70“	36:1	0,72“
L3560.125-STC	10.2	5“	45“	70“	72:1	0,36“
L3560.125-STD	10.2	5“	45“	70“	36:1	0,72“
L3560.125-SVB	10.2	5“	45“	70“	36:1	9,00“





L1007.020

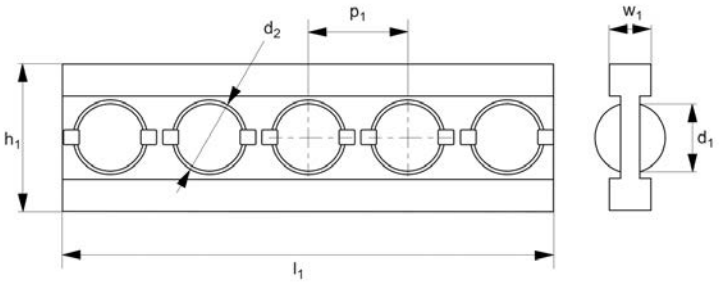
Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.020-0100	2	3	5	100	0.75	2.1	34
L1007.020-0200	2	3	5	200	0.75	2.1	66
L1007.020-0300	2	3	5	300	0.75	2.1	99
L1007.020-0400	2	3	5	400	0.75	2.1	132
L1007.020-0500	2	3	5	500	0.75	2.1	166
L1007.020-0600	2	3	5	600	0.75	2.1	199
L1007.020-0700	2	3	5	700	0.75	2.1	232
L1007.020-0800	2	3	5	800	0.75	2.1	265
L1007.020-0900	2	3	5	900	0.75	2.1	298
L1007.020-1000	2	3	5	1000	0.75	2.1	332



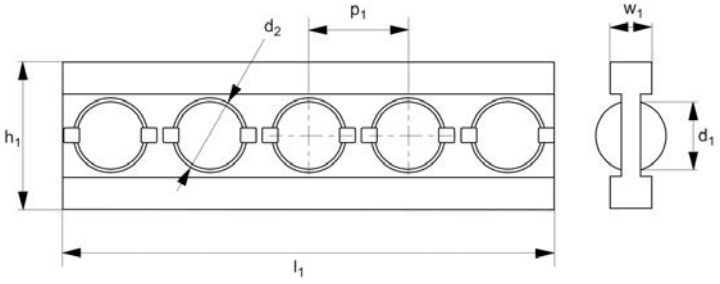
L1007.030



Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.030-0100	3	4.2	7	100	1	3.2	24
L1007.030-0200	3	4.2	7	200	1	3.2	47
L1007.030-0300	3	4.2	7	300	1	3.2	71
L1007.030-0400	3	4.2	7	400	1	3.2	94
L1007.030-0500	3	4.2	7	500	1	3.2	118
L1007.030-0600	3	4.2	7	600	1	3.2	142
L1007.030-0700	3	4.2	7	700	1	3.2	165
L1007.030-0800	3	4.2	7	800	1	3.2	189
L1007.030-0900	3	4.2	7	900	1	3.2	213
L1007.030-1000	3	4.2	7	1000	1	3.2	237





L1007.040

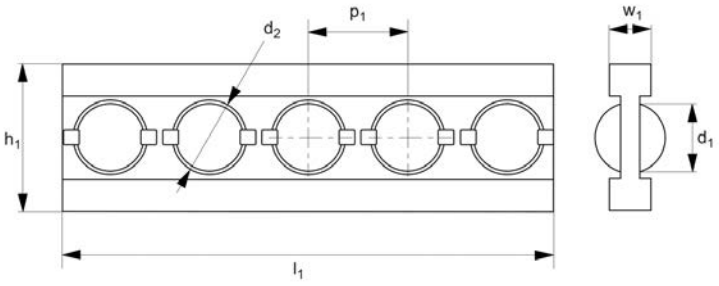
Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.040-0100	4	5.8	6.3	100	1.3	4.2	18
L1007.040-0200	4	5.8	6.3	200	1.3	4.2	35
L1007.040-0300	4	5.8	6.3	300	1.3	4.2	52
L1007.040-0400	4	5.8	6.3	400	1.3	4.2	69
L1007.040-0500	4	5.8	6.3	500	1.3	4.2	86
L1007.040-0600	4	5.8	6.3	600	1.3	4.2	103
L1007.040-0700	4	5.8	6.3	700	1.3	4.2	120
L1007.040-0800	4	5.8	6.3	800	1.3	4.2	137
L1007.040-0900	4	5.8	6.3	900	1.3	4.2	154
L1007.040-1000	4	5.8	6.3	1000	1.3	4.2	172



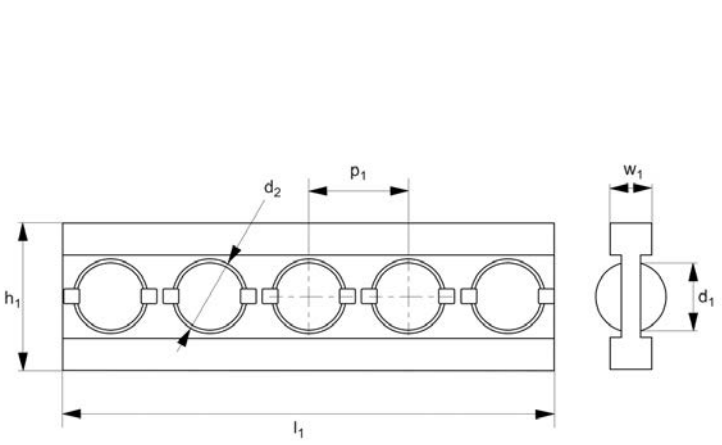
L1007.050



Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.050-0100	5	6.8	8	100	1.5	5.2	15
L1007.050-0200	5	6.8	8	200	1.5	5.2	29
L1007.050-0300	5	6.8	8	300	1.5	5.2	43
L1007.050-0400	5	6.8	8	400	1.5	5.2	58
L1007.050-0500	5	6.8	8	500	1.5	5.2	73
L1007.050-0600	5	6.8	8	600	1.5	5.2	87
L1007.050-0700	5	6.8	8	700	1.5	5.2	102
L1007.050-0800	5	6.8	8	800	1.5	5.2	116
L1007.050-0900	5	6.8	8	900	1.5	5.2	131
L1007.050-1000	5	6.8	8	1000	1.5	5.2	146





L1007.060

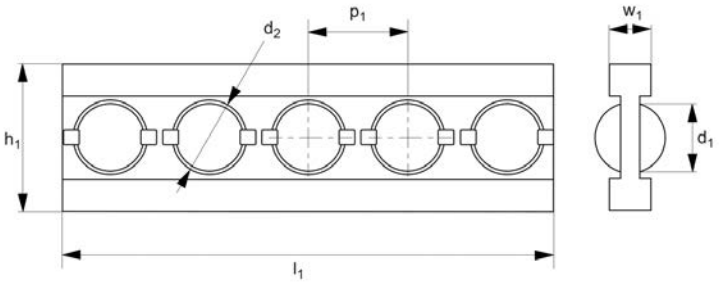
Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.060-0100	6	7.8	9	100	1.6	6.2	13
L1007.060-0200	6	7.8	9	200	1.6	6.2	25
L1007.060-0300	6	7.8	9	300	1.6	6.2	38
L1007.060-0400	6	7.8	9	400	1.6	6.2	50
L1007.060-0500	6	7.8	9	500	1.6	6.2	63
L1007.060-0600	6	7.8	9	600	1.6	6.2	76
L1007.060-0700	6	7.8	9	700	1.6	6.2	88
L1007.060-0800	6	7.8	9	800	1.6	6.2	101
L1007.060-0900	6	7.8	9	900	1.6	6.2	114
L1007.060-1000	6	7.8	9	1000	1.6	6.2	127



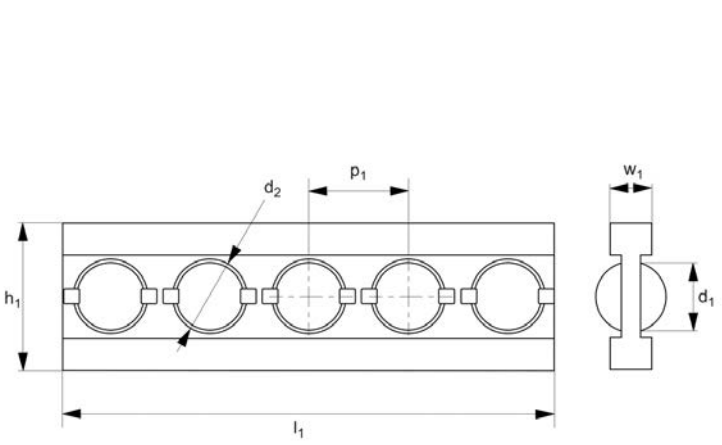
L1007.080



Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.080-0100	8	12	12	100	2	8.2	9
L1007.080-0200	8	12	12	200	2	8.2	17
L1007.080-0300	8	12	12	300	2	8.2	25
L1007.080-0400	8	12	12	400	2	8.2	33
L1007.080-0500	8	12	12	500	2	8.2	41
L1007.080-0600	8	12	12	600	2	8.2	49
L1007.080-0700	8	12	12	700	2	8.2	57
L1007.080-0800	8	12	12	800	2	8.2	65
L1007.080-0900	8	12	12	900	2	8.2	73
L1007.080-1000	8	12	12	1000	2	8.2	82





L1007.090

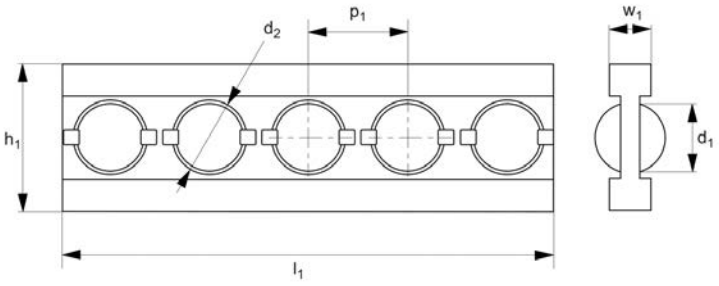
Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.090-0100	9	11.5	15	100	2	9.2	9
L1007.090-0200	9	11.5	15	200	2	9.2	17
L1007.090-0300	9	11.5	15	300	2	9.2	25
L1007.090-0400	9	11.5	15	400	2	9.2	34
L1007.090-0500	9	11.5	15	500	2	9.2	43
L1007.090-0600	9	11.5	15	600	2	9.2	51
L1007.090-0700	9	11.5	15	700	2	9.2	60
L1007.090-0800	9	11.5	15	800	2	9.2	68
L1007.090-0900	9	11.5	15	900	2	9.2	77
L1007.090-1000	9	11.5	15	1000	2	9.2	86



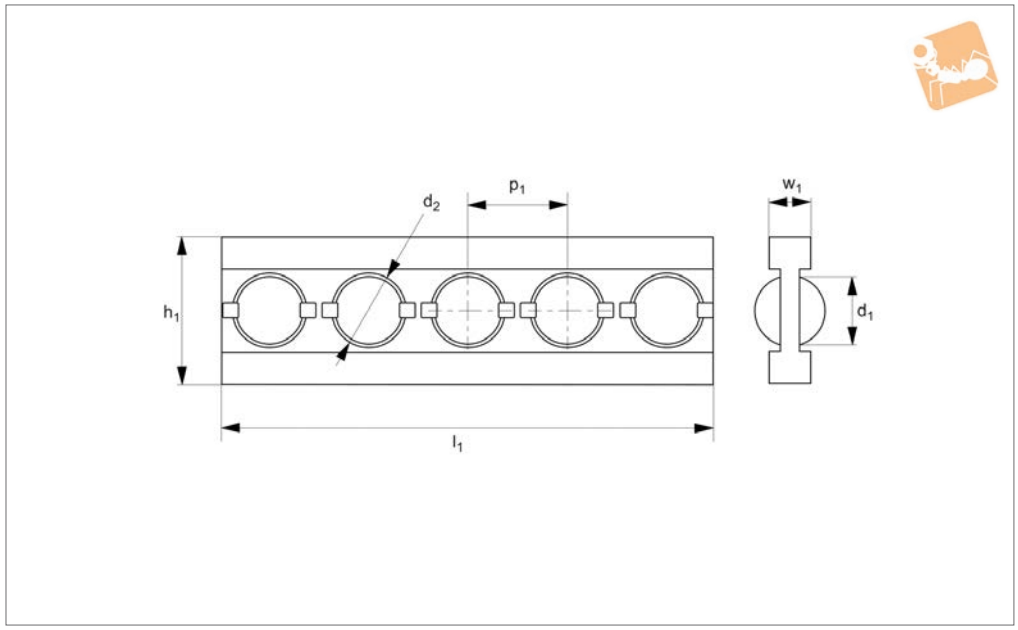
L1007.100



Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.100-0100	10	12.5	13.2	100	2.5	10.2	8
L1007.100-0200	10	12.5	13.2	200	2.5	10.2	15
L1007.100-0300	10	12.5	13.2	300	2.5	10.2	23
L1007.100-0400	10	12.5	13.2	400	2.5	10.2	31
L1007.100-0500	10	12.5	13.2	500	2.5	10.2	39
L1007.100-0600	10	12.5	13.2	600	2.5	10.2	47
L1007.100-0700	10	12.5	13.2	700	2.5	10.2	55
L1007.100-0800	10	12.5	13.2	800	2.5	10.2	63
L1007.100-0900	10	12.5	13.2	900	2.5	10.2	71
L1007.100-1000	10	12.5	13.2	1000	2.5	10.2	79





L1007.110

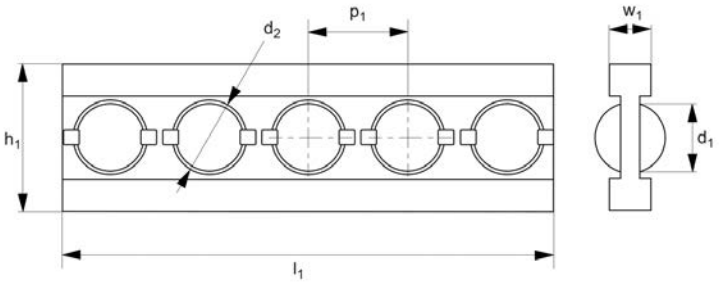
Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.110-0100	11	14	13.7	100	2.5	11.2	7
L1007.110-0200	11	14	13.7	200	2.5	11.2	14
L1007.110-0300	11	14	13.7	300	2.5	11.2	21
L1007.110-0400	11	14	13.7	400	2.5	11.2	28
L1007.110-0500	11	14	13.7	500	2.5	11.2	35
L1007.110-0600	11	14	13.7	600	2.5	11.2	42
L1007.110-0700	11	14	13.7	700	2.5	11.2	49
L1007.110-0800	11	14	13.7	800	2.5	11.2	56
L1007.110-0900	11	14	13.7	900	2.5	11.2	63
L1007.110-1000	11	14	13.7	1000	2.5	11.2	70



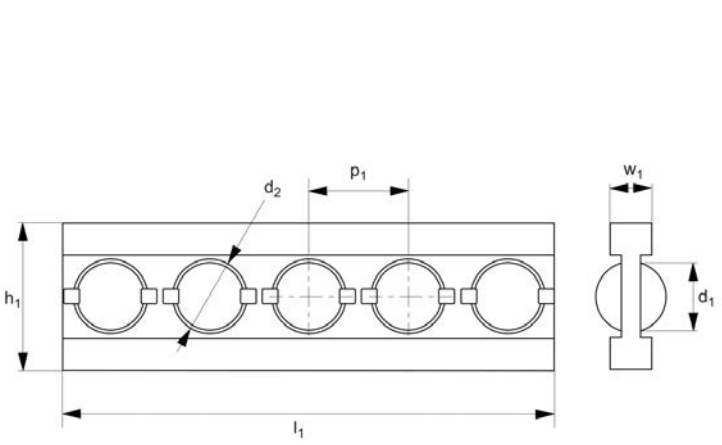
L1007.120



Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.120-0100	12	15	15	100	2.5	12.2	7
L1007.120-0200	12	15	15	200	2.5	12.2	13
L1007.120-0300	12	15	15	300	2.5	12.2	19
L1007.120-0400	12	15	15	400	2.5	12.2	26
L1007.120-0500	12	15	15	500	2.5	12.2	32
L1007.120-0600	12	15	15	600	2.5	12.2	39
L1007.120-0700	12	15	15	700	2.5	12.2	45
L1007.120-0800	12	15	15	800	2.5	12.2	52
L1007.120-0900	12	15	15	900	2.5	12.2	58
L1007.120-1000	12	15	15	1000	2.5	12.2	65





L1007.160

Material
Ball steel (100Cr6 to DIN 5401, class 3), ball cage plastic (PA 12).

Can also be supplied with corrosion resistant stainless (AISI 304), plastic (POM) or ceramic balls.

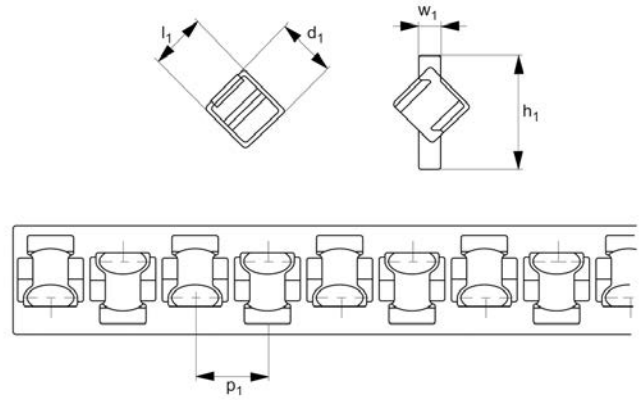
Order No.	d_1	p_1	h_1	l_1	w_1	d_2	No. of rollers
L1007.160-0100	16	20	20	100	3.5	16.2	5
L1007.160-0200	16	20	20	200	3.5	16.2	9
L1007.160-0300	16	20	20	300	3.5	16.2	14
L1007.160-0400	16	20	20	400	3.5	16.2	19
L1007.160-0500	16	20	20	500	3.5	16.2	24
L1007.160-0600	16	20	20	600	3.5	16.2	29
L1007.160-0700	16	20	20	700	3.5	16.2	34
L1007.160-0800	16	20	20	800	3.5	16.2	39
L1007.160-0900	16	20	20	900	3.5	16.2	44
L1007.160-1000	16	20	20	1000	3.5	16.2	49

Linear Cage - Crossed Roller

plastic or steel cage



L1008



Material

Steel rollers (100Cr6, class 3, hardened to 60 HRC) retaining cage plastic (PA 12) or steel.
Stainless version - stainless rollers (440C), stainless cage (AISI 304).

Technical Notes

When ordering please specify the length required (must be a multiple of pitch, p). Supplied in max. 1 metre lengths.

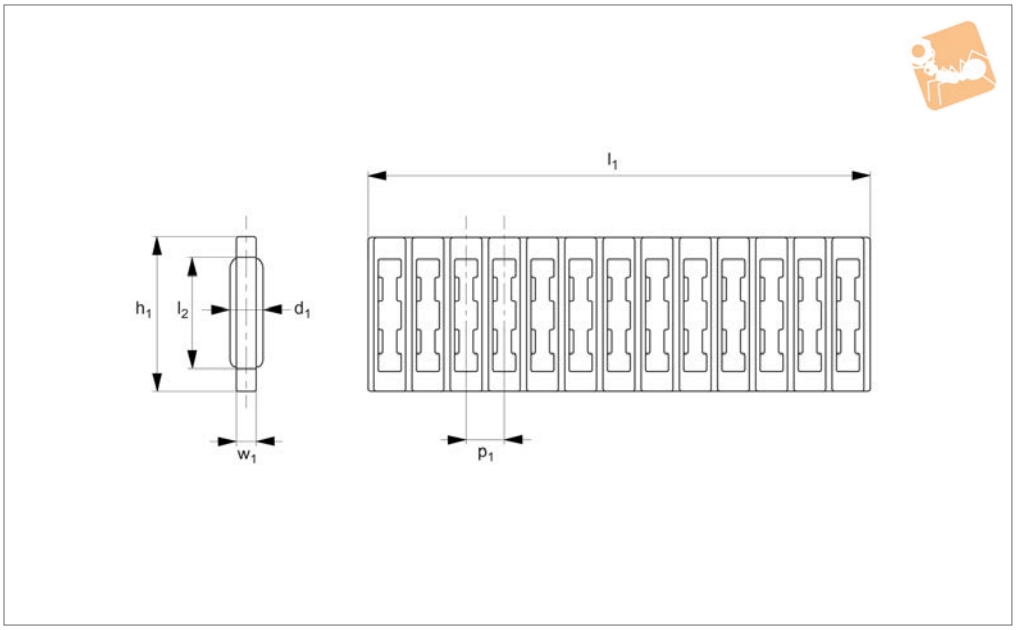
Tips

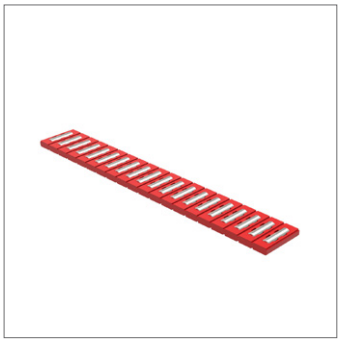
Ordering example:
L1008.030-PR-010 is a 3mm diameter roller strip 50mm long with 10 rollers (as 10xp = 50mm).

Important Notes

For load ratings calculations the maximum recommended load is 1/3 of the max. static load.

Order No.	d_1	p_1	h_1	w_1	Dyn. load C N max.	Static load C N max.	Cage material
L1008.020-PR-xxx	2	3.9	5	0.75	290	295	Plastic
L1008.030-PR-xxx	3	5.0	7	1.00	630	760	Plastic
L1008.060-PR-xxx	6	8.5	14	2.00	2500	2600	Plastic
L1008.090-PR-xxx	9	14.0	20	3.00	7100	7200	Plastic
L1008.015-AA-xxx	1.5	3	3.75	0.2	125	144	Steel
L1008.020-AA-xxx	2.0	4	5.50	0.3	290	295	Steel
L1008.030-AA-xxx	3.0	5	7.50	0.4	630	760	Steel
L1008.060-AA-xxx	6.0	9	14.00	0.8	2500	2600	Steel
L1008.090-AA-xxx	9.0	14	20.50	1.0	7100	7274	Steel
L1008.120-AA-xxx	12.0	18	26.50	1.2	12700	13200	Steel
L1008.015-SS-xxx	1.5	3	3.75	0.2	125	144	Stainless
L1008.020-SS-xxx	2.0	4	5.50	0.3	290	295	Stainless
L1008.030-SS-xxx	3.0	5	7.50	0.4	630	760	Stainless
L1008.060-SS-xxx	6.0	9	14.00	0.8	2500	2600	Stainless
L1008.090-SS-xxx	9.0	14	20.50	1.0	7100	7274	Stainless

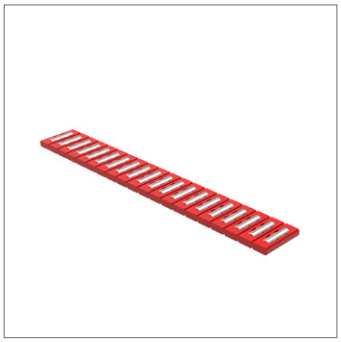




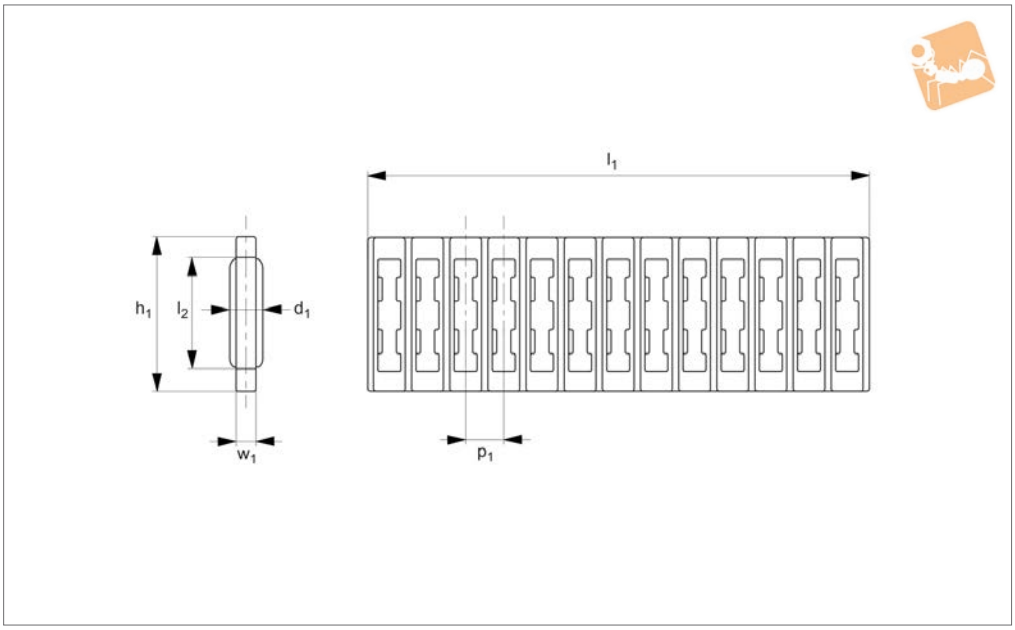
L1009.015

Material
Needle roller, steel (100Cr6 to DIN5401, grade 28, class 3), retaining cage plastic (PA 12).

Order No.	d_1	l_2	p_1	h_1	l_1	w_1	No. of rollers
L1009.015-0100	1.5	7.8	2.9	10	100	1.1	34
L1009.015-0200	1.5	7.8	2.9	10	200	1.1	68
L1009.015-0300	1.5	7.8	2.9	10	300	1.1	103
L1009.015-0400	1.5	7.8	2.9	10	400	1.1	137
L1009.015-0500	1.5	7.8	2.9	10	500	1.1	172
L1009.015-0600	1.5	7.8	2.9	10	600	1.1	206
L1009.015-0700	1.5	7.8	2.9	10	700	1.1	240
L1009.015-0800	1.5	7.8	2.9	10	800	1.1	275
L1009.015-0900	1.5	7.8	2.9	10	900	1.1	309
L1009.015-1000	1.5	7.8	2.9	10	1000	1.1	344

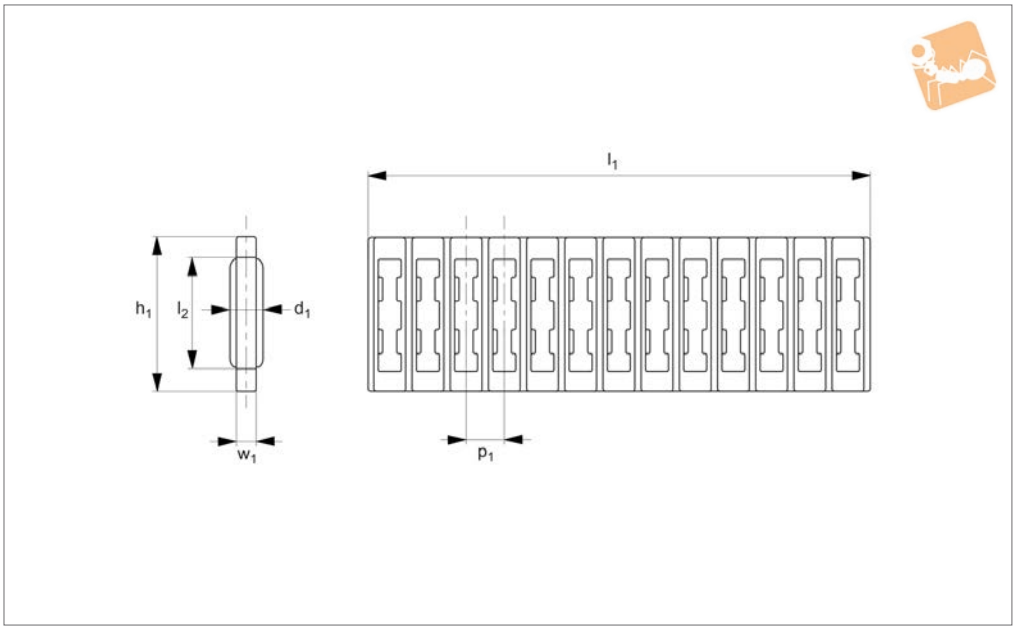


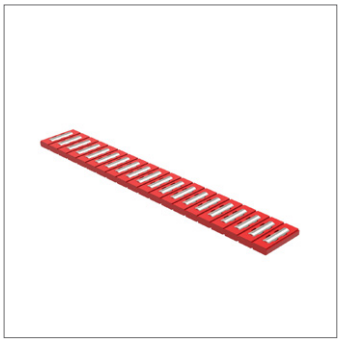
L1009.025



Material
Needle roller, steel (100Cr6 to DIN5401, grade 28, class 3), retaining cage plastic (PA 12).

Order No.	d_1	l_2	p_1	h_1	l_1	w_1	No. of rollers
L1009.025-0100	2.5	13.8	4.8	18	100	2	20
L1009.025-0200	2.5	13.8	4.8	18	200	2	41
L1009.025-0300	2.5	13.8	4.8	18	300	2	62
L1009.025-0400	2.5	13.8	4.8	18	400	2	82
L1009.025-0500	2.5	13.8	4.8	18	500	2	103
L1009.025-0600	2.5	13.8	4.8	18	600	2	124
L1009.025-0700	2.5	13.8	4.8	18	700	2	144
L1009.025-0800	2.5	13.8	4.8	18	800	2	165
L1009.025-0900	2.5	13.8	4.8	18	900	2	186
L1009.025-1000	2.5	13.8	4.8	18	1000	2	207

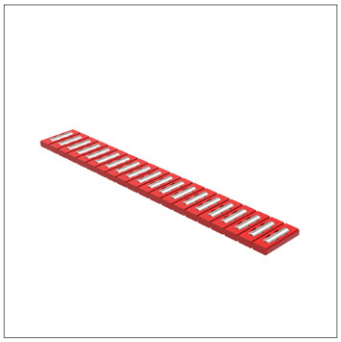




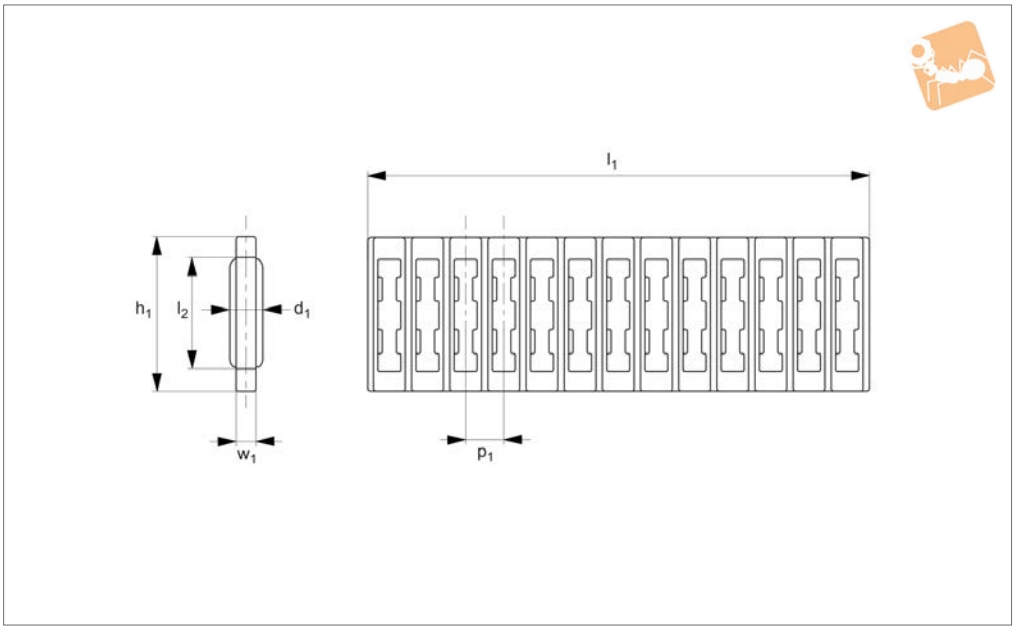
L1009.030

Material
Needle roller, steel (100Cr6 to DIN5401, grade 28, class 3), retaining cage plastic (PA 12).

Order No.	d_1	l_2	p_1	h_1	l_1	w_1	No. of rollers
L1009.030-0100	3	15.8	5.2	20	100	2.5	19
L1009.030-0200	3	15.8	5.2	20	200	2.5	38
L1009.030-0300	3	15.8	5.2	20	300	2.5	57
L1009.030-0400	3	15.8	5.2	20	400	2.5	76
L1009.030-0500	3	15.8	5.2	20	500	2.5	95
L1009.030-0600	3	15.8	5.2	20	600	2.5	114
L1009.030-0700	3	15.8	5.2	20	700	2.5	133
L1009.030-0800	3	15.8	5.2	20	800	2.5	152
L1009.030-0900	3	15.8	5.2	20	900	2.5	171
L1009.030-1000	3	15.8	5.2	20	1000	2.5	191

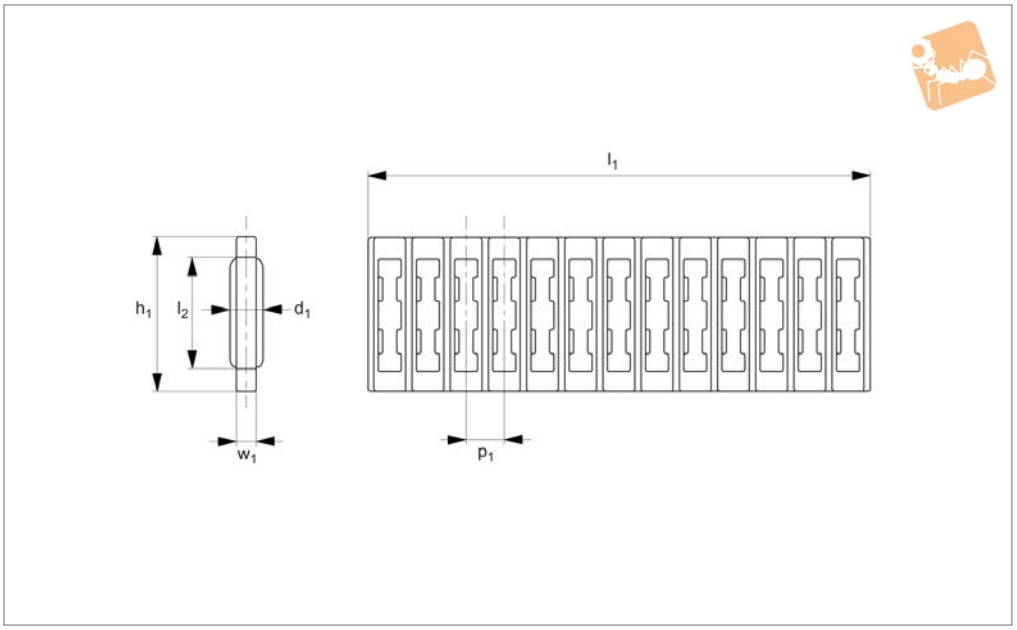


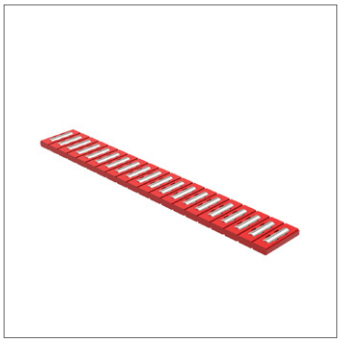
L1009.040



Material
Needle roller, steel (100Cr6 to DIN5401, grade 28, class 3), retaining cage plastic (PA 12).

Order No.	d_1	l_2	p_1	h_1	l_1	w_1	No. of rollers
L1009.040-0100	4	23.8	7	30	100	3	14
L1009.040-0200	4	23.8	7	30	200	3	28
L1009.040-0300	4	23.8	7	30	300	3	42
L1009.040-0400	4	23.8	7	30	400	3	56
L1009.040-0500	4	23.8	7	30	500	3	70
L1009.040-0600	4	23.8	7	30	600	3	84
L1009.040-0700	4	23.8	7	30	700	3	98
L1009.040-0800	4	23.8	7	30	800	3	112
L1009.040-0900	4	23.8	7	30	900	3	126
L1009.040-1000	4	23.8	7	30	1000	3	141

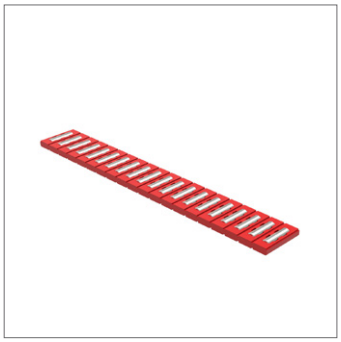




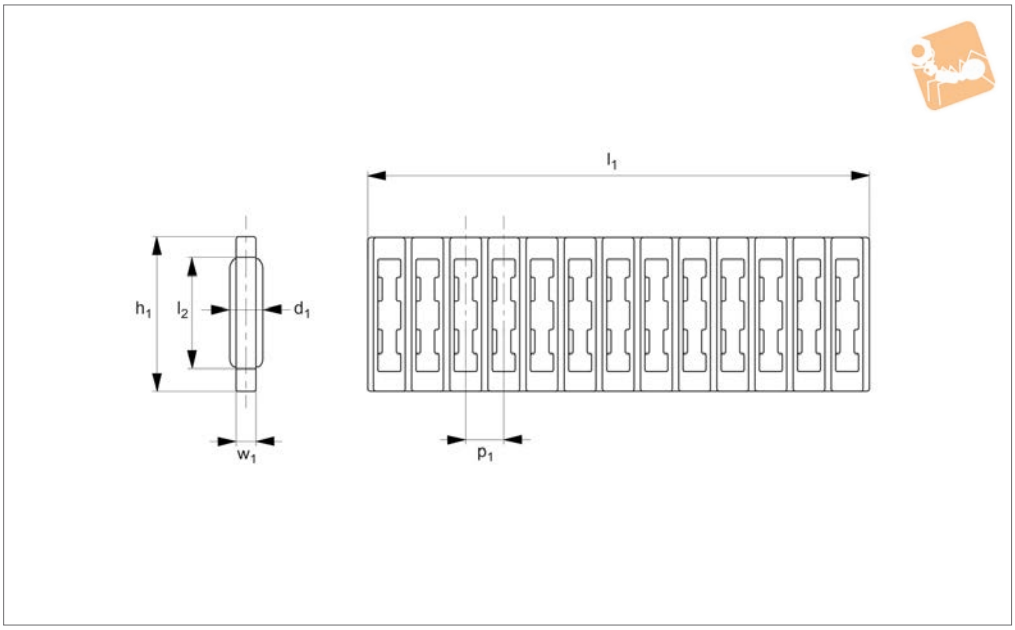
L1009.050

Material
Needle roller, steel (100Cr6 to DIN5401, grade 28, class 3), retaining cage plastic (PA 12).

Order No.	d_1	l_2	p_1	h_1	l_1	w_1	No. of rollers
L1009.050-0100	5	5	7.5	10	100	2.5	13
L1009.050-0200	5	5	7.5	10	200	2.5	26
L1009.050-0300	5	5	7.5	10	300	2.5	39
L1009.050-0400	5	5	7.5	10	400	2.5	52
L1009.050-0500	5	5	7.5	10	500	2.5	66
L1009.050-0600	5	5	7.5	10	600	2.5	79
L1009.050-0700	5	5	7.5	10	700	2.5	92
L1009.050-0800	5	5	7.5	10	800	2.5	105
L1009.050-0900	5	5	7.5	10	900	2.5	118
L1009.050-1000	5	5	7.5	10	1000	2.5	132

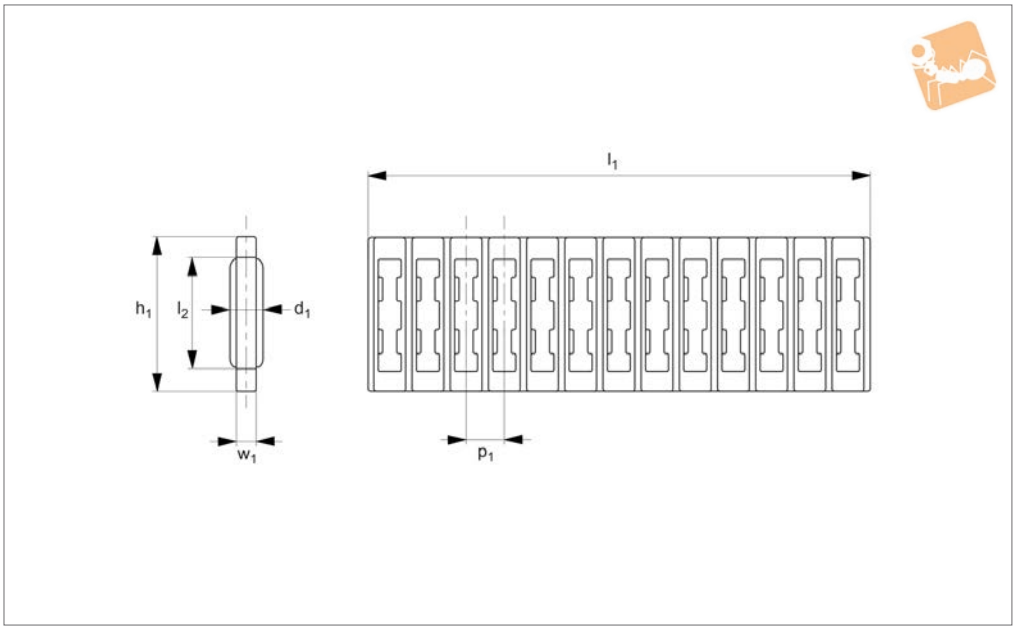


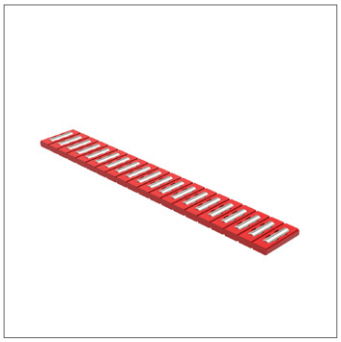
L1009.051



Material
Needle roller, steel (100Cr6 to DIN5401, grade 28, class 3), retaining cage plastic (PA 12).

Order No.	d_1	l_2	p_1	h_1	l_1	w_1	No. of rollers
L1009.051-0100	5	15	8	23	100	3.5	12
L1009.051-0200	5	15	8	23	200	3.5	24
L1009.051-0300	5	15	8	23	300	3.5	37
L1009.051-0400	5	15	8	23	400	3.5	49
L1009.051-0500	5	15	8	23	500	3.5	62
L1009.051-0600	5	15	8	23	600	3.5	74
L1009.051-0700	5	15	8	23	700	3.5	86
L1009.051-0800	5	15	8	23	800	3.5	99
L1009.051-0900	5	15	8	23	900	3.5	111
L1009.051-1000	5	15	8	23	1000	3.5	124

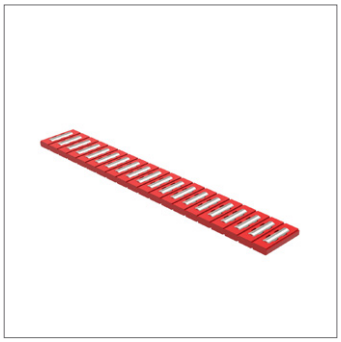




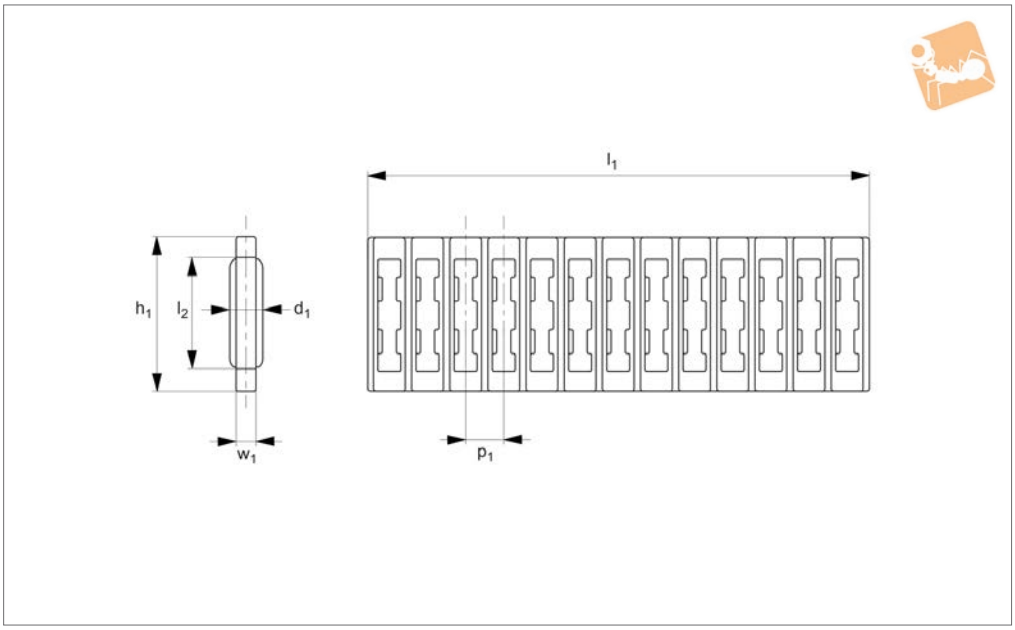
L1009.052

Material
Needle roller, steel (100Cr6 to DIN5401, grade 28, class 3), retaining cage plastic (PA 12).

Order No.	d_1	l_2	p_1	h_1	l_1	w_1	No. of rollers
L1009.052-0100	5	27.8	9	35	100	3.5	11
L1009.052-0200	5	27.8	9	35	200	3.5	22
L1009.052-0300	5	27.8	9	35	300	3.5	33
L1009.052-0400	5	27.8	9	35	400	3.5	44
L1009.052-0500	5	27.8	9	35	500	3.5	55
L1009.052-0600	5	27.8	9	35	600	3.5	66
L1009.052-0700	5	27.8	9	35	700	3.5	77
L1009.052-0800	5	27.8	9	35	800	3.5	88
L1009.052-0900	5	27.8	9	35	900	3.5	99
L1009.052-1000	5	27.8	9	35	1000	3.5	110

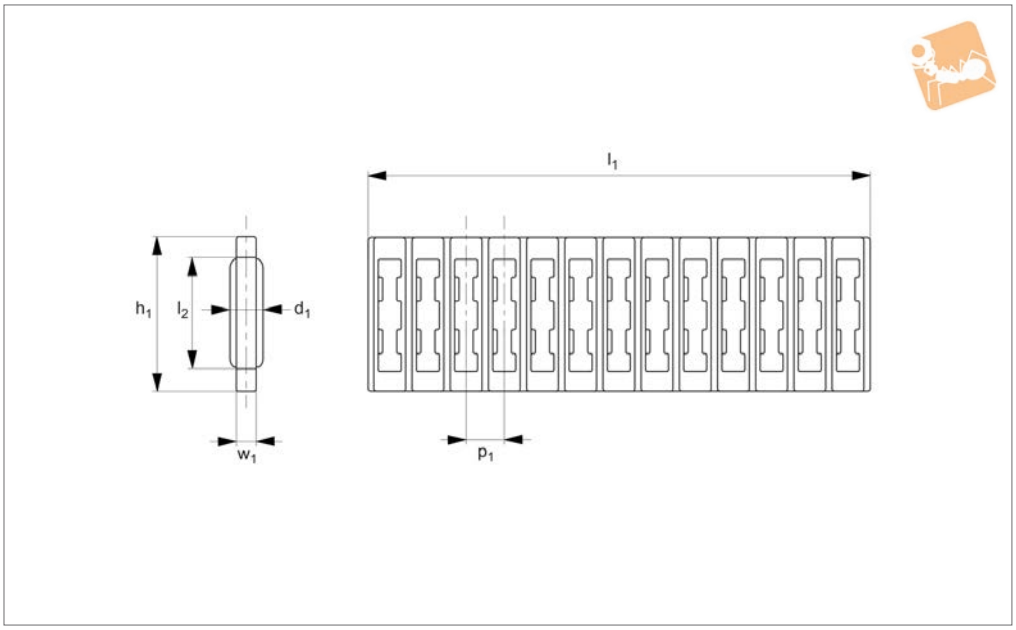


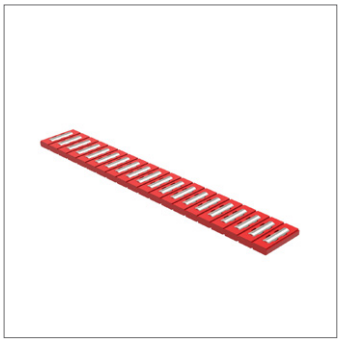
L1009.100



Material
Needle roller, steel (100Cr6 to DIN5401, grade 28, class 3), retaining cage plastic (PA 12).

Order No.	d_1	l_2	p_1	h_1	l_1	w_1	No. of rollers
L1009.100-0100	10	10	13	16	100	2.5	7
L1009.100-0200	10	10	13	16	200	2.5	15
L1009.100-0300	10	10	13	16	300	2.5	22
L1009.100-0400	10	10	13	16	400	2.5	30
L1009.100-0500	10	10	13	16	500	2.5	38
L1009.100-0600	10	10	13	16	600	2.5	45
L1009.100-0700	10	10	13	16	700	2.5	53
L1009.100-0800	10	10	13	16	800	2.5	60
L1009.100-0900	10	10	13	16	900	2.5	68
L1009.100-1000	10	10	13	16	1000	2.5	76

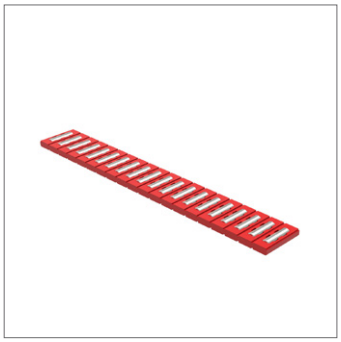




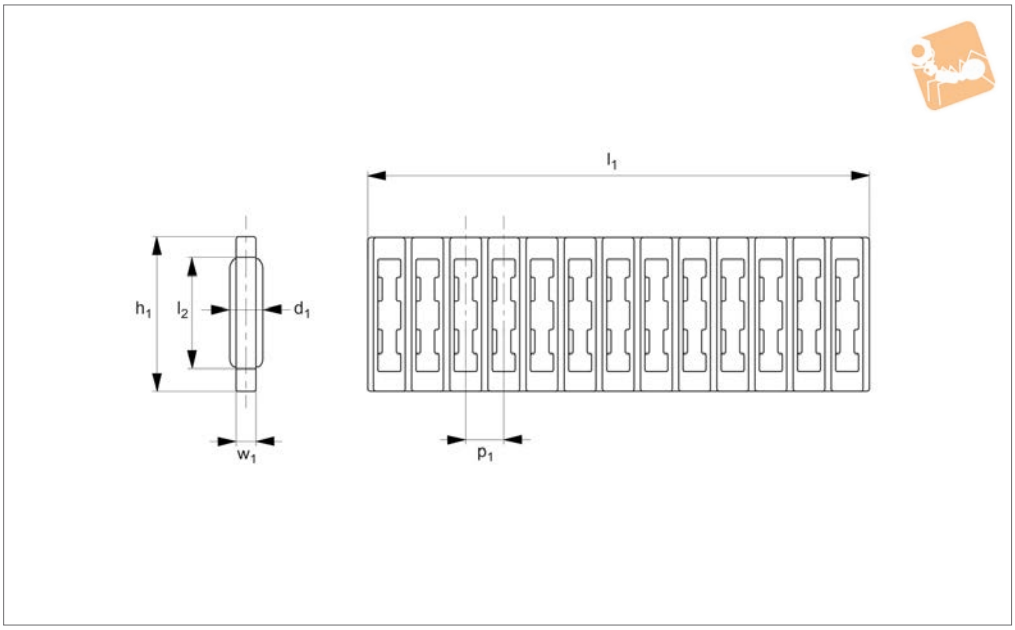
L1009.120

Material
Needle roller, steel (100Cr6 to DIN5401, grade 28, class 3), retaining cage plastic (PA 12).

Order No.	d_1	l_2	p_1	h_1	l_1	w_1	No. of rollers
L1009.120-0100	12	30	16	40	100	5	6
L1009.120-0200	12	30	16	40	200	5	12
L1009.120-0300	12	30	16	40	300	5	18
L1009.120-0400	12	30	16	40	400	5	24
L1009.120-0500	12	30	16	40	500	5	30
L1009.120-0600	12	30	16	40	600	5	36
L1009.120-0700	12	30	16	40	700	5	42
L1009.120-0800	12	30	16	40	800	5	48
L1009.120-0900	12	30	16	40	900	5	54
L1009.120-1000	12	30	16	40	1000	5	61

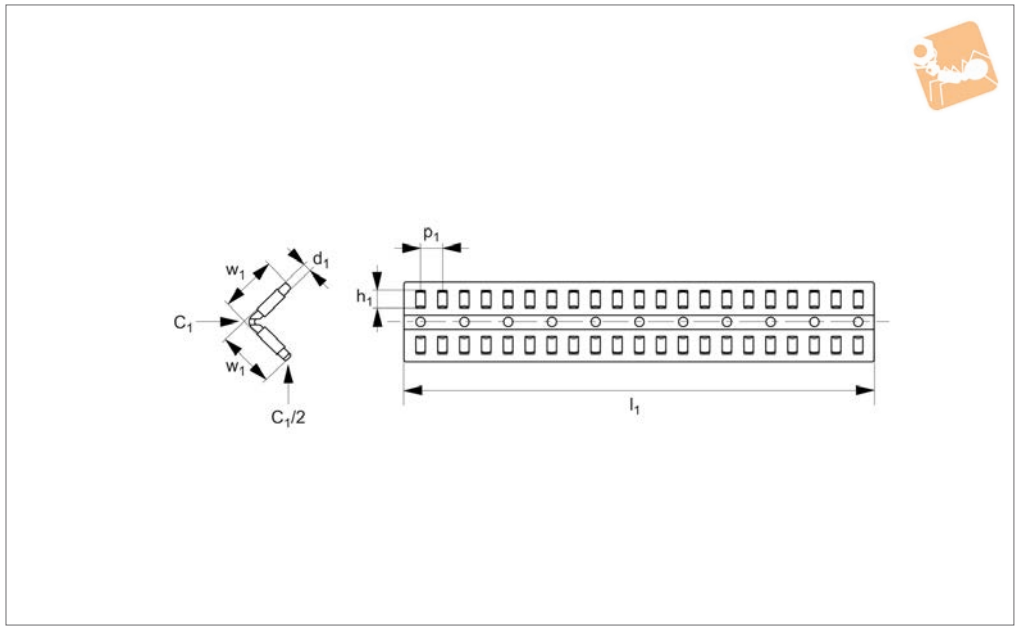


L1009.160



Material
Needle roller, steel (100Cr6 to DIN5401, grade 28, class 3), retaining cage plastic (PA 12).

Order No.	d_1	l_2	p_1	h_1	l_1	w_1	No. of rollers
L1009.160-0100	16	16	22	28	100	4	4
L1009.160-0200	16	16	22	28	200	4	8
L1009.160-0300	16	16	22	28	300	4	13
L1009.160-0400	16	16	22	28	400	4	17
L1009.160-0500	16	16	22	28	500	4	22
L1009.160-0600	16	16	22	28	600	4	26
L1009.160-0700	16	16	22	28	700	4	30
L1009.160-0800	16	16	22	28	800	4	35
L1009.160-0900	16	16	22	28	900	4	39
L1009.160-1000	16	16	22	28	1000	4	44





L1004.HW10

Material
Steel rollers (100Cr6, hardened to 60 HRC), steel retaining cage.

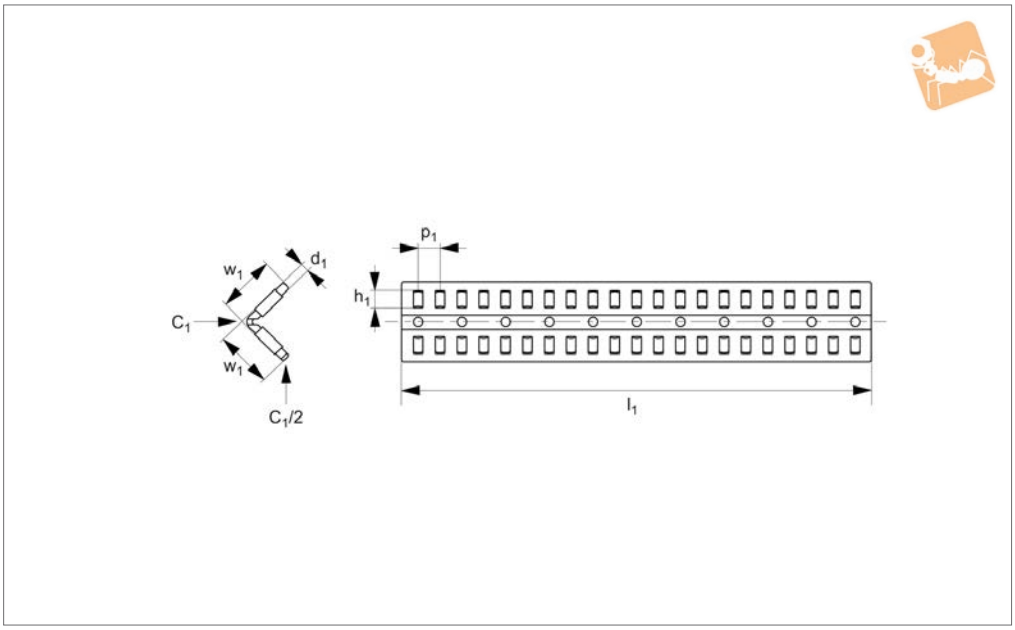
Technical Notes
Supplied in max. 1 metre lengths.

Tips
See technical pages for load rating calculations - based on rail size and number of rollers in the system cages.

Order No.	d_1 ±0.001	p_1	h_1	l_1	w_1	No. of rollers (pairs)	Dyn. load C /pair of rollers N max.	To suit rail
L1004.HW10-0100	2	4	4.8	100	10	24	250	L1004.22
L1004.HW10-0200	2	4	4.8	200	10	48	500	L1004.22
L1004.HW10-0300	2	4	4.8	300	10	72	750	L1004.22
L1004.HW10-0400	2	4	4.8	400	10	96	1000	L1004.22
L1004.HW10-0500	2	4	4.8	500	10	120	1250	L1004.22
L1004.HW10-0600	2	4	4.8	600	10	144	1500	L1004.22
L1004.HW10-0700	2	4	4.8	700	10	168	1750	L1004.22
L1004.HW10-0800	2	4	4.8	800	10	192	2000	L1004.22
L1004.HW10-0900	2	4	4.8	900	10	216	2250	L1004.22
L1004.HW10-1000	2	4	4.8	1000	10	240	2500	L1004.22



L1004.HW15

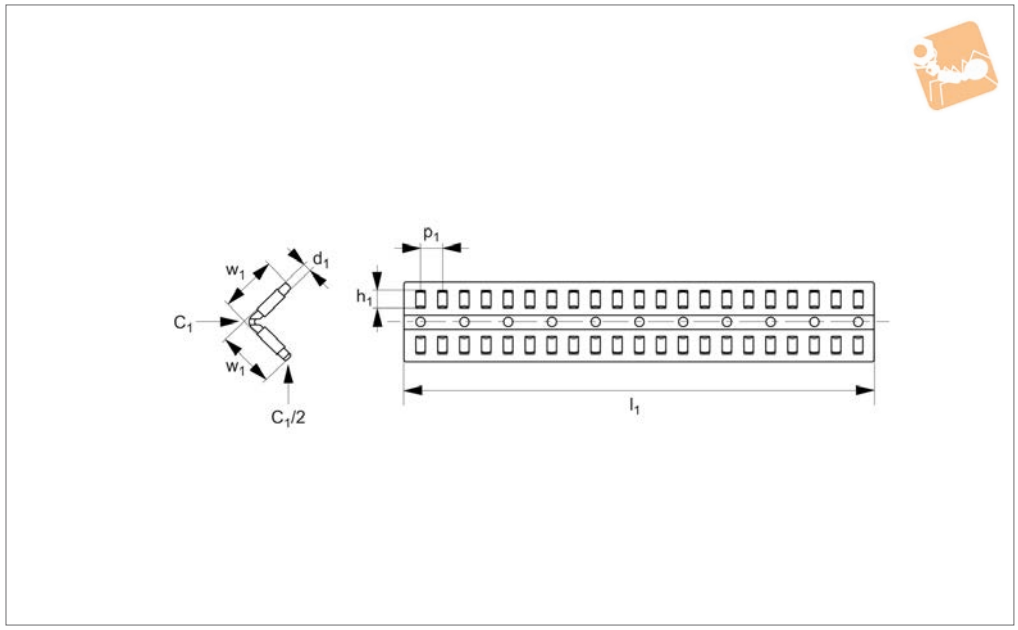


Material
Steel rollers (100Cr6, hardened to 60 HRC), aluminium retaining cage.

Technical Notes
Supplied in max. 1 metre lengths.

Tips
See technical pages for load rating calculations - based on rail size and number of rollers in the system cage.

Order No.	d_1 ±0.001	p_1	h_1	l_1	w_1	No. of rollers (pairs)	Dyn. load C /pair of rollers N max.	To suit rail
L1004.HW15-0100	2	4.5	6.8	100	15	21	400	L1004.25
L1004.HW15-0200	2	4.5	6.8	200	15	42	800	L1004.25
L1004.HW15-0300	2	4.5	6.8	300	15	63	1200	L1004.25
L1004.HW15-0400	2	4.5	6.8	400	15	84	1600	L1004.25
L1004.HW15-0500	2	4.5	6.8	500	15	105	2000	L1004.25
L1004.HW15-0600	2	4.5	6.8	600	15	126	2400	L1004.25
L1004.HW15-0700	2	4.5	6.8	700	15	147	2800	L1004.25
L1004.HW15-0800	2	4.5	6.8	800	15	168	3280	L1004.25
L1004.HW15-0900	2	4.5	6.8	900	15	189	3600	L1004.25
L1004.HW15-1000	2	4.5	6.8	1000	15	210	4000	L1004.25





L1004.HW20

Material
Steel rollers (100Cr6, hardened to 60 HRC), aluminium retaining cage.

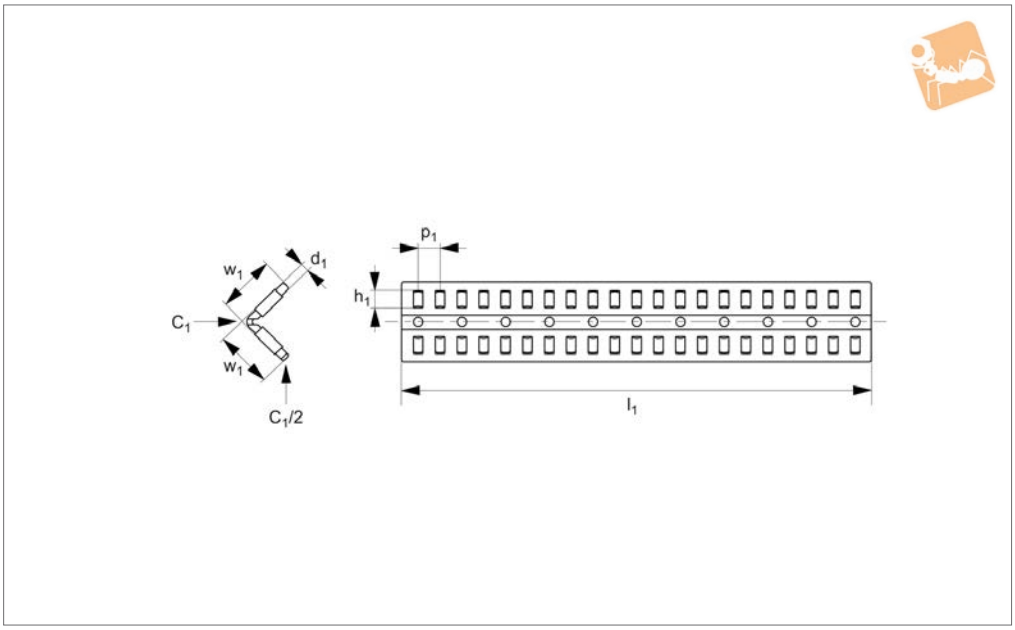
Technical Notes
Supplied in max. 1 metre lengths.

Tips
See technical pages for load rating calculations - based on rail size and number of rollers in the system cages.

Order No.	d_1 ±0.001	p_1	h_1	l_1	w_1	No. of rollers (pairs)	Dyn. load C /pair of rollers N max.	To suit rail
L1004.HW20-0100	2.5	5.5	9.8	100	20	17	730	L1004.30
L1004.HW20-0200	2.5	5.5	9.8	200	20	34	1460	L1004.30
L1004.HW20-0300	2.5	5.5	9.8	300	20	51	2190	L1004.30
L1004.HW20-0400	2.5	5.5	9.8	400	20	68	2920	L1004.30
L1004.HW20-0500	2.5	5.5	9.8	500	20	85	3650	L1004.30
L1004.HW20-0600	2.5	5.5	9.8	600	20	102	4380	L1004.30
L1004.HW20-0700	2.5	5.5	9.8	700	20	119	5110	L1004.30
L1004.HW20-0800	2.5	5.5	9.8	800	20	136	5840	L1004.30
L1004.HW20-0900	2.5	5.5	9.8	900	20	153	6570	L1004.30
L1004.HW20-1000	2.5	5.5	9.8	1000	20	170	7300	L1004.30



L1004.HW25

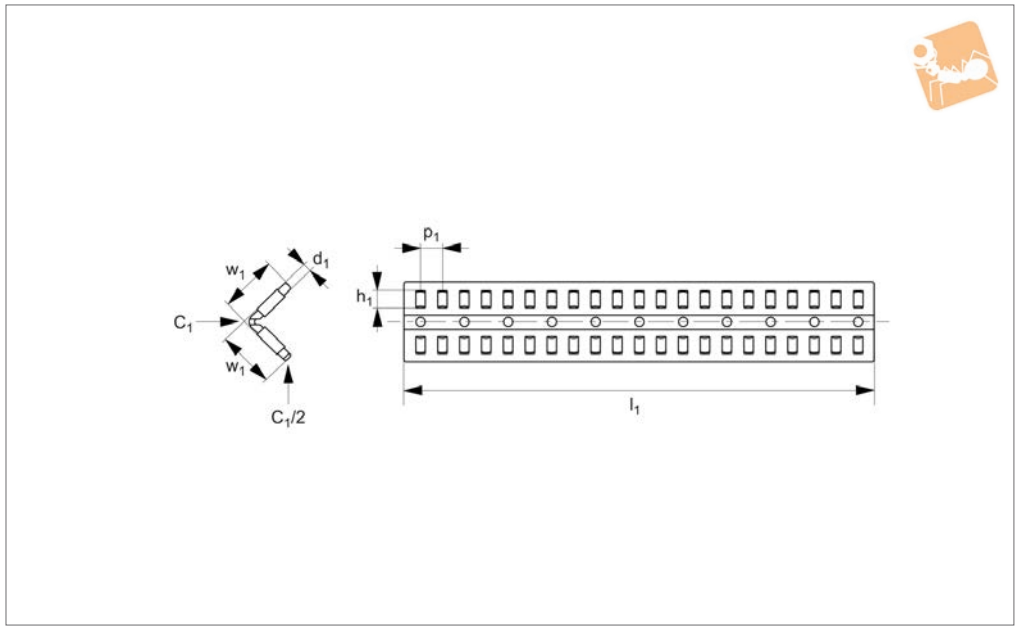


Material
Steel rollers (100Cr6, hardened to 60 HRC), aluminium retaining cage.

Technical Notes
Supplied in max. 1 metre lengths.

Tips
See technical pages for load rating calculations - based on rail size and number of rollers in the system cages.

Order No.	d_1 ±0.001	p_1	h_1	l_1	w_1	No. of rollers (pairs)	Dyn. load C /pair of rollers N max.	To suit rail
L1004.HW25-0100	3	6	13.8	100	25	16	1250	L1004.35
L1004.HW25-0200	3	6	13.8	200	25	32	2500	L1004.35
L1004.HW25-0300	3	6	13.8	300	25	48	3750	L1004.35
L1004.HW25-0400	3	6	13.8	400	25	64	5000	L1004.35
L1004.HW25-0500	3	6	13.8	400	25	80	6250	L1004.35
L1004.HW25-0600	3	6	13.8	600	25	96	7500	L1004.35
L1004.HW25-0700	3	6	13.8	700	25	112	8750	L1004.35
L1004.HW25-0800	3	6	13.8	800	25	128	10000	L1004.35
L1004.HW25-0900	3	6	13.8	900	25	144	11250	L1004.35
L1004.HW25-1000	3	6	13.8	1000	25	160	12500	L1004.35





L1004.HW30

Material
Steel rollers (100Cr6, hardened to 60 HRC), aluminium retaining cage.

Technical Notes
Supplied in max. 1 metre lengths.

Tips
See technical pages for load rating calculations - based on rail size and number of rollers in the system cages.

Order No.	d_1 ±0.001	p_1	h_1	l_1	w_1	No. of rollers (pairs)	Dyn. load C /pair of rollers N max.	To suit rail
L1004.HW30-0100	3.5	7	17.8	100	30	13	1850	L1004.45
L1004.HW30-0200	3.5	7	17.8	200	30	26	3700	L1004.45
L1004.HW30-0300	3.5	7	17.8	300	30	39	5500	L1004.45
L1004.HW30-0400	3.5	7	17.8	400	30	52	7400	L1004.45
L1004.HW30-0500	3.5	7	17.8	400	30	65	9250	L1004.45
L1004.HW30-0600	3.5	7	17.8	600	30	78	11100	L1004.45
L1004.HW30-0700	3.5	7	17.8	700	30	91	12950	L1004.45
L1004.HW30-0800	3.5	7	17.8	800	30	104	14800	L1004.45
L1004.HW30-0900	3.5	7	17.8	900	30	117	16650	L1004.45
L1004.HW30-1000	3.5	7	17.8	1000	30	130	18500	L1004.45

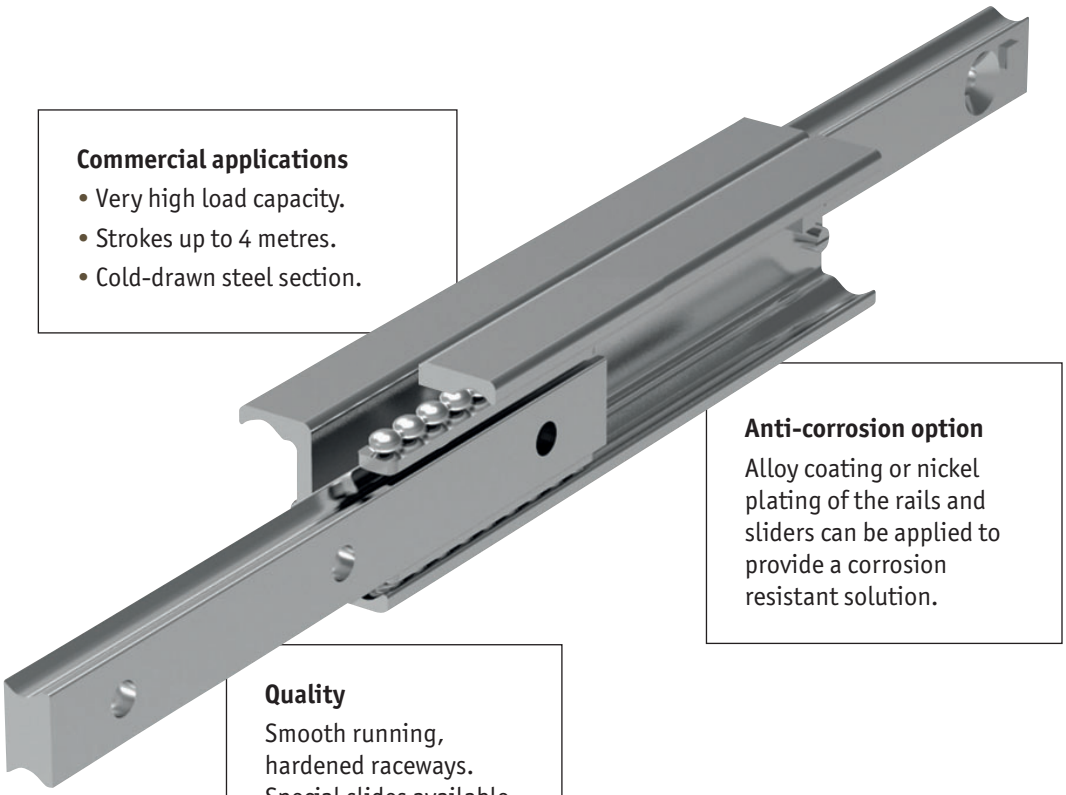
Telescopic Rail

Introduction

If you are looking for heavy duty, quality telescopic rails for industrial or commercial applications then these are the rails for you!

The best heavy duty telescopic slides on the market

These are unique rails that are not made from pressed steel but from cold-drawn steel section. The rails can take high loads, with very long strokes, with repeated use, low deflection and minimal play.



Commercial applications

- Very high load capacity.
- Strokes up to 4 metres.
- Cold-drawn steel section.

Anti-corrosion option

Alloy coating or nickel plating of the rails and sliders can be applied to provide a corrosion resistant solution.

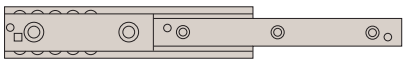
Quality

Smooth running, hardened raceways. Special slides available.

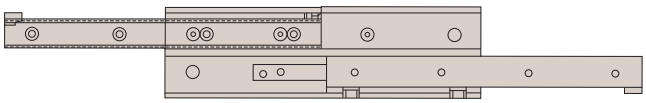
Rail types

Our range of telescopic rails covers partial, full stroke and over-extension.

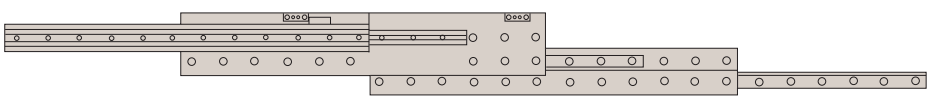
For more information refer to our product specifications pages or call our technical department.



Partial Stroke (~60%)



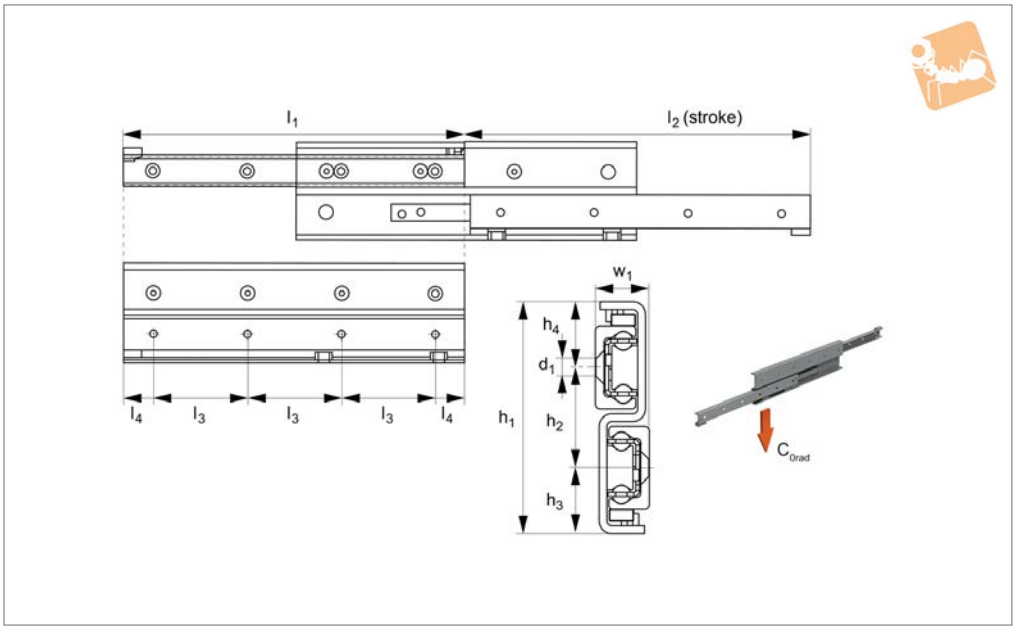
Full Stroke (~100%)



Over-extension (150%)

ov-telescopic-rail-introduction-lmh - Updated - 03-03-2023

Fully Telescopic Slides, size 28
single direction stroke





L1984.28S

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid telescopic slides with high load capacities and have very low deflection characteristics.
Temperature range: -30°C to +110°C.
This is the single direction stroke version - the moving member can extend out of only one side of the slide.
Moving rail must be lower rail (unless technical department consulted).
C_{0rad} is the load rating for a single telescopic slide.

Tips
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Special strokes up to 130% of the closed length can be provided on request.
Only to be used for horizontal movements.

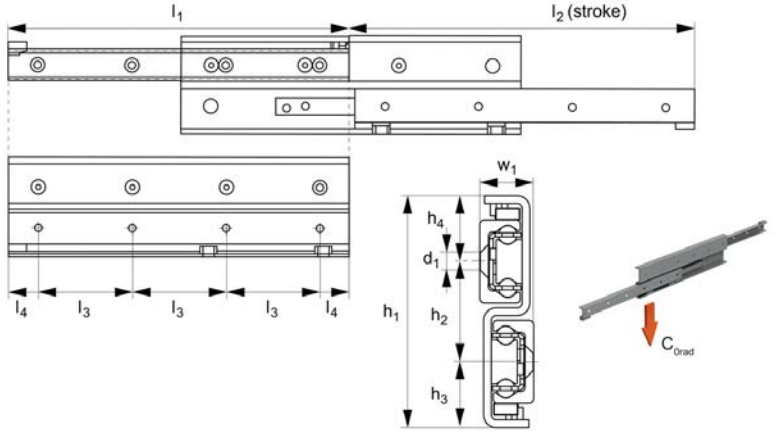
Order No.	h_1	h_2	h_3	h_4	l_1	l_2 stroke	l_3	l_4	w_1	For screws d_1	Accessible holes/total	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1984.28S-0290	84	35	24,5	24,5	290	296	80	25	17	M5	3/4	570	1,9
L1984.28S-0370	84	35	24,5	24,5	370	380	80	25	17	M5	4/5	769	2,4
L1984.28S-0450	84	35	24,5	24,5	450	464	80	25	17	M5	4/6	969	2,9
L1984.28S-0530	84	35	24,5	24,5	530	548	80	25	17	M5	6/7	1170	3,4
L1984.28S-0610	84	35	24,5	24,5	610	630	80	25	17	M5	6/8	1376	3,9
L1984.28S-0690	84	35	24,5	24,5	690	714	80	25	17	M5	7/9	1577	4,4
L1984.28S-0770	84	35	24,5	24,5	770	798	80	25	17	M5	7/10	1778	4,9
L1984.28S-0850	84	35	24,5	24,5	850	864	80	25	17	M5	9/11	2111	5,4
L1984.28S-0930	84	35	24,5	24,5	930	950	80	25	17	M5	9/12	2240	5,6
L1984.28S-1010	84	35	24,5	24,5	1010	1034	80	25	17	M5	10/13	2054	6,4
L1984.28S-1090	84	35	24,5	24,5	1090	1118	80	25	17	M5	10/14	1896	7,0
L1984.28S-1170	84	35	24,5	24,5	1170	1202	80	25	17	M5	12/15	1761	7,4
L1984.28S-1250	84	35	24,5	24,5	1250	1266	80	25	17	M5	12/16	1695	8,0
L1984.28S-1330	84	35	24,5	24,5	1330	1350	80	25	17	M5	13/17	1586	8,5
L1984.28S-1410	84	35	24,5	24,5	1410	1434	80	25	17	M5	13/18	1490	9,0
L1984.28S-1490	84	35	24,5	24,5	1490	1518	80	25	17	M5	15/19	1405	9,5

Fully Telescopic Slides, size 35

single direction stroke



L1984.35S



Material

Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes

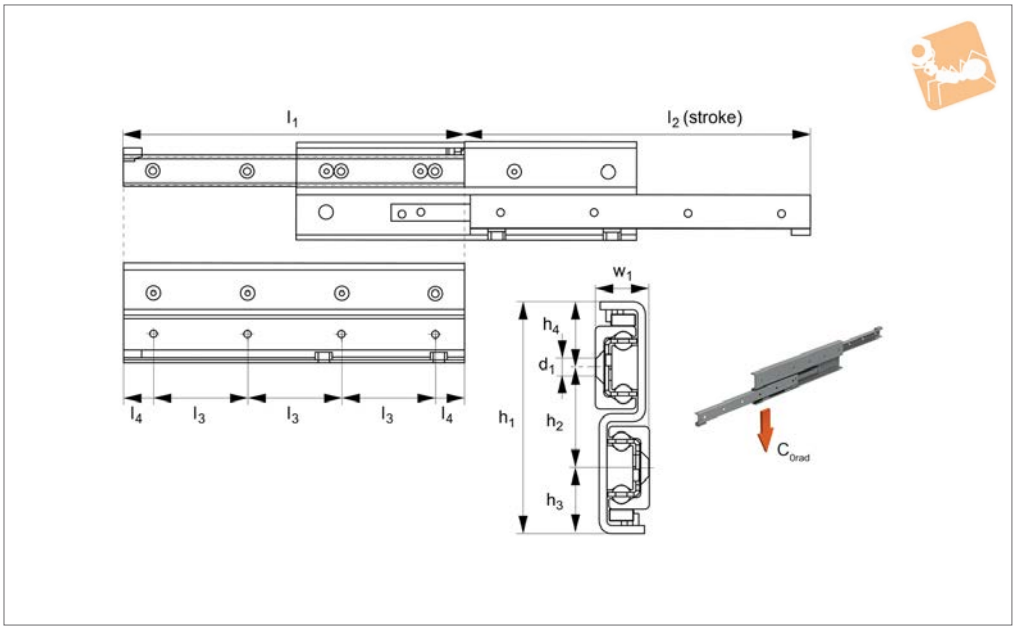
These are extremely strong and rigid telescopic slides with high load capacities and have very low deflection characteristics.
Temperature range: -30°C to +110°C.
This is the single direction stroke version - the moving member can extend out of only one side of the slide.
Moving rail must be lower rail (unless technical department consulted).
C_{0rad} is the load rating for a single telescopic slide.

Tips

The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Special strokes up to 130% of the closed length can be provided on request.
Only to be used for horizontal movements.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2 stroke	l_3	l_4	w_1	For screws d_1	Accessible holes/total	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1984.35S-0450	104	43	30,5	30,5	450	494	80	25	22,5	M6	5/6	1250	4,5
L1984.35S-0530	104	43	30,5	30,5	530	558	80	25	22,5	M6	6/7	1685	5,4
L1984.35S-0610	104	43	30,5	30,5	610	646	80	25	22,5	M6	6/8	1908	6,2
L1984.35S-0690	104	43	30,5	30,5	690	734	80	25	22,5	M6	7/9	2132	9,9
L1984.35S-0770	104	43	30,5	30,5	770	798	80	25	22,5	M6	8/10	2579	7,7
L1984.35S-0850	104	43	30,5	30,5	850	886	80	25	22,5	M6	9/11	2801	8,9
L1984.35S-0930	104	43	30,5	30,5	930	974	80	25	22,5	M6	9/12	3024	9,4
L1984.35S-1010	104	43	30,5	30,5	1010	1038	80	25	22,5	M6	10/13	3476	10,2
L1984.35S-1090	104	43	30,5	30,5	1090	1126	80	25	22,5	M6	11/14	3508	11,0
L1984.35S-1170	104	43	30,5	30,5	1170	1214	80	25	22,5	M6	12/15	3240	11,8
L1984.35S-1250	104	43	30,5	30,5	1250	1278	80	25	22,5	M6	12/16	3121	12,6
L1984.35S-1330	104	43	30,5	30,5	1330	1366	80	25	22,5	M6	13/17	2907	13,4
L1984.35S-1410	104	43	30,5	30,5	1410	1454	80	25	22,5	M6	14/18	2721	14,2
L1984.35S-1490	104	43	30,5	30,5	1490	1518	80	25	22,5	M6	15/19	2636	15,0
L1984.35S-1570	104	43	30,5	30,5	1570	1606	80	25	22,5	M6	15/20	2482	15,9
L1984.35S-1650	104	43	30,5	30,5	1650	1694	80	25	22,5	M6	16/21	2345	16,6
L1984.35S-1730	104	43	30,5	30,5	1730	1758	80	30,5	22,5	M6	17/22	2282	17,5

Fully Telescopic Slides, size 43
single direction stroke





L1984.43S

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid telescopic slides with high load capacities and have very low deflection characteristics.
Temperature range: -30°C to +110°C.
This is the single direction stroke version - the moving member can extend out of only one side of the slide.
Moving rail must be lower rail (unless technical department consulted).
C_{0rad} is the load rating for a single telescopic slide.

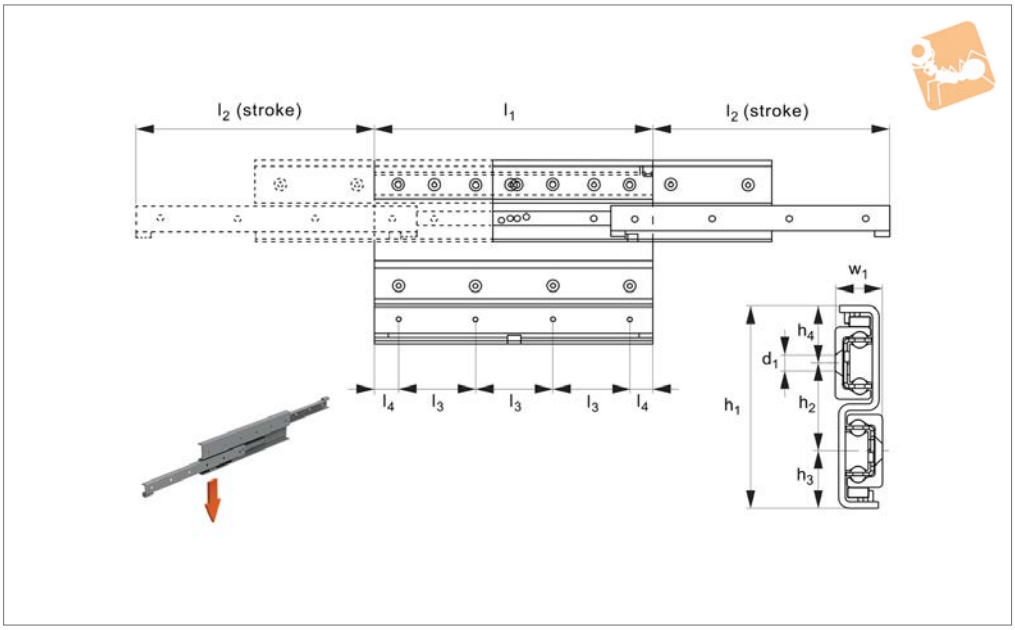
Tips
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Special strokes up to 130% of the closed length can be provided on request.
Only to be used for horizontal movements.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2 stroke	l_3	l_4	w_1	For screws d_1	Accessible holes/ total	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1984.43S-0530	120	52	34	34	530	556	80	25	28	M8	6/7	2061	7,7
L1984.43S-0610	120	52	34	34	610	626	80	25	28	M8	6/8	2603	8,9
L1984.43S-0690	120	52	34	34	690	726	80	25	28	M8	7/9	2775	10,1
L1984.43S-0770	120	52	34	34	770	796	80	25	28	M8	7/10	3319	11,2
L1984.43S-0850	120	52	34	34	850	866	80	25	28	M8	9/11	3873	12,4
L1984.43S-0930	120	52	34	34	930	966	80	25	28	M8	9/12	4036	13,6
L1984.43S-1010	120	52	34	34	1010	1036	80	25	28	M8	10/13	4590	14,8
L1984.43S-1090	120	52	34	34	1090	1106	80	25	28	M8	11/14	4908	15,9
L1984.43S-1170	120	52	34	34	1170	1206	80	25	28	M8	12/15	4610	17,1
L1984.43S-1250	120	52	34	34	1250	1276	80	25	28	M8	12/16	4398	18,3
L1984.43S-1330	120	52	34	34	1330	1376	80	25	28	M8	13/17	4027	19,4
L1984.43S-1410	120	52	34	34	1410	1446	80	25	28	M8	13/18	3864	20,6
L1984.43S-1490	120	52	34	34	1490	1516	80	25	28	M8	15/19	3713	21,8
L1984.43S-1570	120	52	34	34	1570	1616	80	25	28	M8	15/20	3445	22,9
L1984.43S-1650	120	52	34	34	1650	1686	80	25	28	M8	16/21	3325	24,1
L1984.43S-1730	120	52	34	34	1730	1756	80	25	28	M8	16/22	3213	25,3
L1984.43S-1810	120	52	34	34	1810	1856	80	25	28	M8	18/23	3011	26,4
L1984.43S-1890	120	52	34	34	1890	1926	80	25	28	M8	18/24	2919	27,6
L1984.43S-1970	120	52	34	34	1970	2026	80	25	28	M8	19/25	2750	28,8

Fully Telescopic Slides, size 28
double direction stroke



L1984.28D

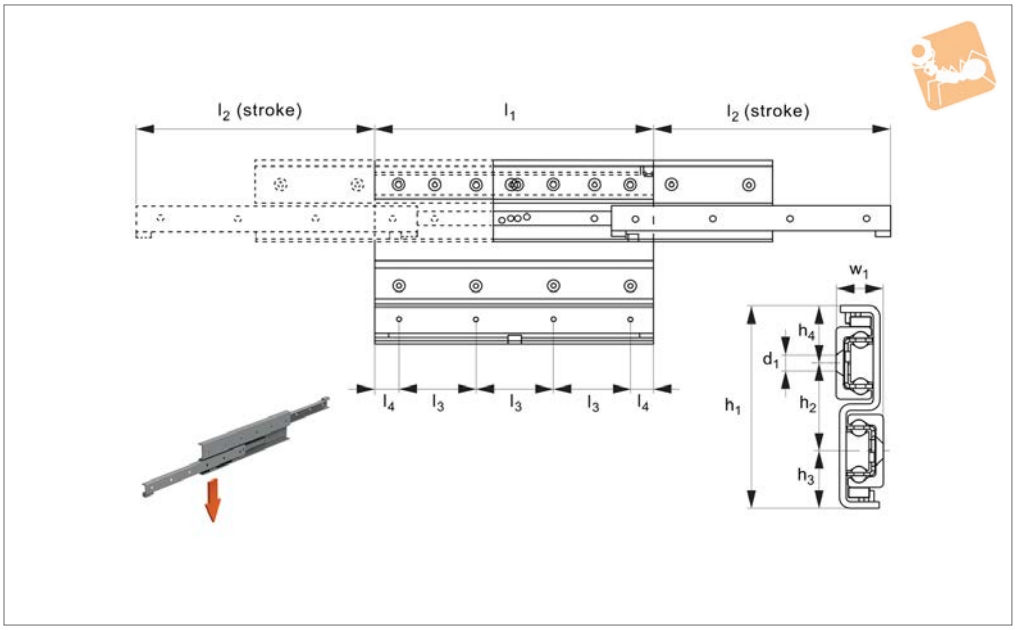


Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid telescopic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide. They have very low deflection characteristics.
Temperature range: -30°C to +110°C.
This is the double direction stroke version - the moving member can extend out of both sides of the slide.
Moving rail must be lower rail (unless technical department consulted).

Tips
When closing a D version slide, the return of the intermediate member is not automatic. When the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2	l_3	l_4	w_1	For screws d_1	No. of holes	Load (per rail) $C_{0\ rad}$ N max.	Weight kg
L1984.28D-0290	84	35	24.5	24.5	290	246	80	25	17	M5	4	895	1.9
L1984.28D-0370	84	35	24.5	24.5	370	326	80	25	17	M5	5	1105	2.4
L1984.28D-0450	84	35	24.5	24.5	450	406	80	25	17	M5	6	1317	2.9
L1984.28D-0530	84	35	24.5	24.5	530	486	80	25	17	M5	7	1626	3.4
L1984.28D-0610	84	35	24.5	24.5	610	566	80	25	17	M5	8	1837	3.9
L1984.28D-0690	84	35	24.5	24.5	690	646	80	25	17	M5	9	2050	4.4
L1984.28D-0770	84	35	24.5	24.5	770	726	80	25	17	M5	10	2262	4.9
L1984.28D-0850	84	35	24.5	24.5	850	806	80	25	17	M5	11	2475	5.4
L1984.28D-0930	84	35	24.5	24.5	930	886	80	25	17	M5	12	2581	5.6
L1984.28D-1010	84	35	24.5	24.5	1010	966	80	25	17	M5	13	2357	6.4
L1984.28D-1090	84	35	24.5	24.5	1090	1046	80	25	17	M5	14	2168	7.0
L1984.28D-1170	84	35	24.5	24.5	1170	1126	80	25	17	M5	15	2008	7.4
L1984.28D-1250	84	35	24.5	24.5	1250	1206	80	25	17	M5	16	1870	8.0
L1984.28D-1330	84	35	24.5	24.5	1330	1286	80	25	17	M5	17	1749	8.5
L1984.28D-1410	84	35	24.5	24.5	1410	1366	80	25	17	M5	18	1644	9.0
L1984.28D-1490	84	35	24.5	24.5	1490	1446	80	25	17	M5	19	1550	9.5





L1984.35D

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

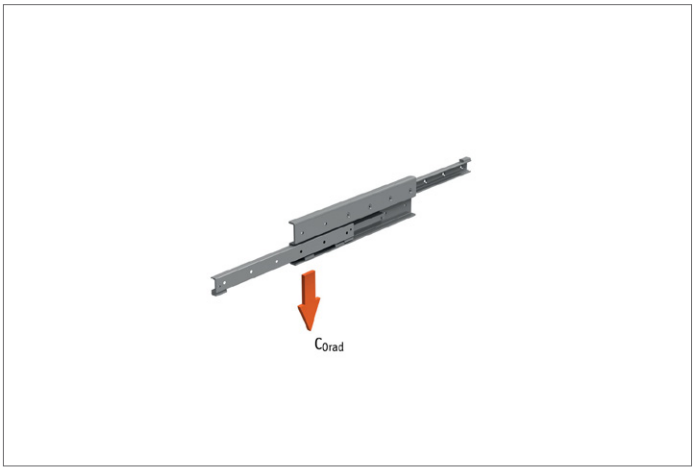
Technical Notes
These are extremely strong and rigid telescopic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide. They have very low deflection characteristics.
Temperature range: -30°C to +110°C.
This is the double direction stroke version - the moving member can extend out of both sides of the slide.
Moving rail must be lower rail (unless technical department consulted).

Tips
When closing a D version slide, the return of the intermediate member is not automatic. When the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.

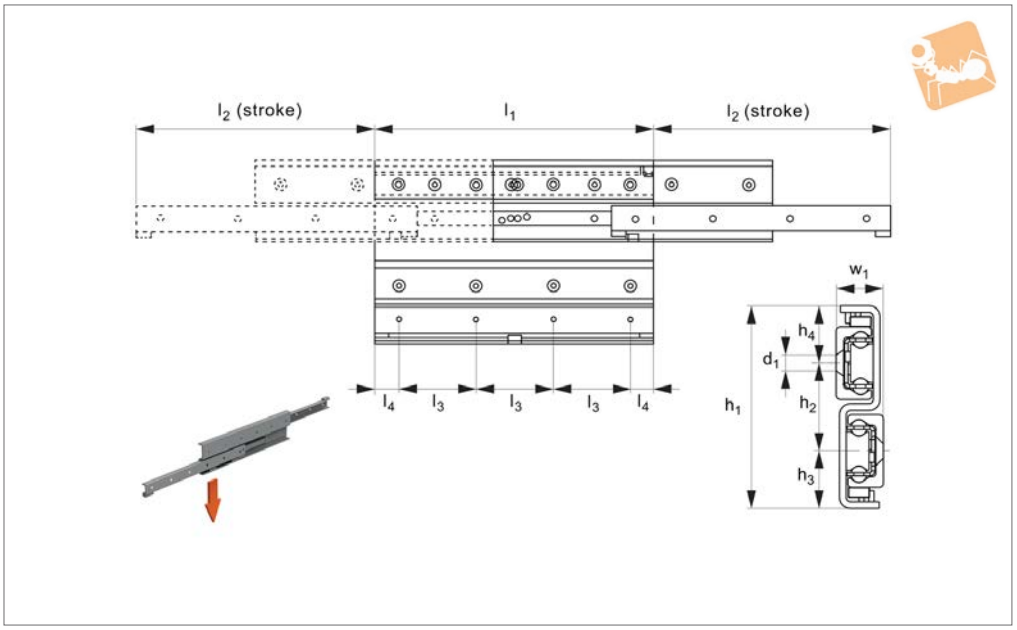
Order No.	h_1	h_2	h_3	h_4	l_1	l_2	l_3	l_4	w_1	For screws d_1	No. of holes	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1984.35D-0450	104	43	30.5	30.5	450	350	80	25	22.5	M6	6	1500	4.5
L1984.35D-0530	104	43	30.5	30.5	530	430	80	25	22.5	M6	7	2022	5.4
L1984.35D-0610	104	43	30.5	30.5	610	510	80	25	22.5	M6	8	2290	6.2
L1984.35D-0690	104	43	30.5	30.5	690	590	80	25	22.5	M6	9	2558	9.9
L1984.35D-0770	104	43	30.5	30.5	770	670	80	25	22.5	M6	10	3095	7.7
L1984.35D-0850	104	43	30.5	30.5	850	750	80	25	22.5	M6	11	3361	8.9
L1984.35D-0930	104	43	30.5	30.5	930	830	80	25	22.5	M6	12	3629	9.4
L1984.35D-1010	104	43	30.5	30.5	1010	910	80	25	22.5	M6	13	4171	10.2
L1984.35D-1090	104	43	30.5	30.5	1090	990	80	25	22.5	M6	14	3859	11.0
L1984.35D-1170	104	43	30.5	30.5	1170	1070	80	25	22.5	M6	15	3564	11.8
L1984.35D-1250	104	43	30.5	30.5	1250	1150	80	25	22.5	M6	16	3433	12.6
L1984.35D-1330	104	43	30.5	30.5	1330	1230	80	25	22.5	M6	17	3198	13.4
L1984.35D-1410	104	43	30.5	30.5	1410	1310	80	25	22.5	M6	18	2993	14.2
L1984.35D-1490	104	43	30.5	30.5	1490	1390	80	25	22.5	M6	19	2900	15.0
L1984.35D-1570	104	43	30.5	30.5	1570	1470	80	25	22.5	M6	20	2730	15.9
L1984.35D-1650	104	43	30.5	30.5	1650	1550	80	25	22.5	M6	21	2580	16.6
L1984.35D-1730	104	43	30.5	30.5	1730	1630	80	30.5	22.5	M6	22	2510	17.5

Fully Telescopic Slides, size 35

double direction stroke



Fully Telescopic Slides, size 43
double direction stroke





L1984.43D

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid telescopic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide. They have very low deflection characteristics.
Temperature range: -30°C to +110°C.
This is the double direction stroke version - the moving member can extend out of both sides of the slide.
Moving rail must be lower rail (unless technical department consulted).

Tips
When closing a D version slide, the return of the intermediate member is not automatic. When the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.

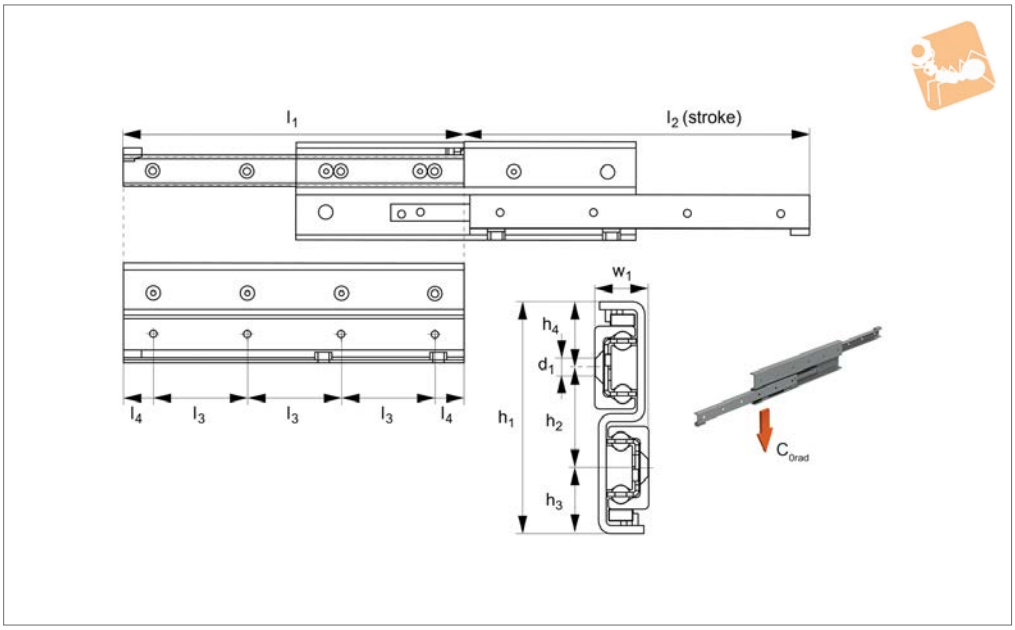
Order No.	h_1	h_2	h_3	h_4	l_1	l_2	l_3	l_4	w_1	For screws d_1	No. of holes	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1984.43D-0530	120	52	34	34	530	476	80	25	28	M8	7	3018	7.7
L1984.43D-0610	120	52	34	34	610	556	80	25	28	M8	8	3265	8.9
L1984.43D-0690	120	52	34	34	690	636	80	25	28	M8	9	3781	10.1
L1984.43D-0770	120	52	34	34	770	716	80	25	28	M8	10	4297	11.2
L1984.43D-0850	120	52	34	34	850	796	80	25	28	M8	11	4547	12.4
L1984.43D-0930	120	52	34	34	930	876	80	25	28	M8	12	5063	13.6
L1984.43D-1010	120	52	34	34	1010	956	80	25	28	M8	13	5578	14.8
L1984.43D-1090	120	52	34	34	1090	1036	80	25	28	M8	14	5830	15.9
L1984.43D-1170	120	52	34	34	1170	1116	80	25	28	M8	15	5392	17.1
L1984.43D-1250	120	52	34	34	1250	1196	80	25	28	M8	16	5014	18.3
L1984.43D-1330	120	52	34	34	1330	1276	80	25	28	M8	17	4686	19.4
L1984.43D-1410	120	52	34	34	1410	1356	80	25	28	M8	18	4398	20.6
L1984.43D-1490	120	52	34	34	1490	1436	80	25	28	M8	19	4143	21.8
L1984.43D-1570	120	52	34	34	1570	1516	80	25	28	M8	20	3917	22.9
L1984.43D-1650	120	52	34	34	1650	1596	80	25	28	M8	21	3713	24.1
L1984.43D-1730	120	52	34	34	1730	1676	80	25	28	M8	22	3530	25.3
L1984.43D-1810	120	52	34	34	1810	1756	80	25	28	M8	23	3364	26.4
L1984.43D-1890	120	52	34	34	1890	1836	80	25	28	M8	24	3213	27.6
L1984.43D-1970	120	52	34	34	1970	1916	80	25	28	M8	25	3075	28.8

Fully Telescopic Slides, size 63

single direction stroke



L1984.63S



Material

Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

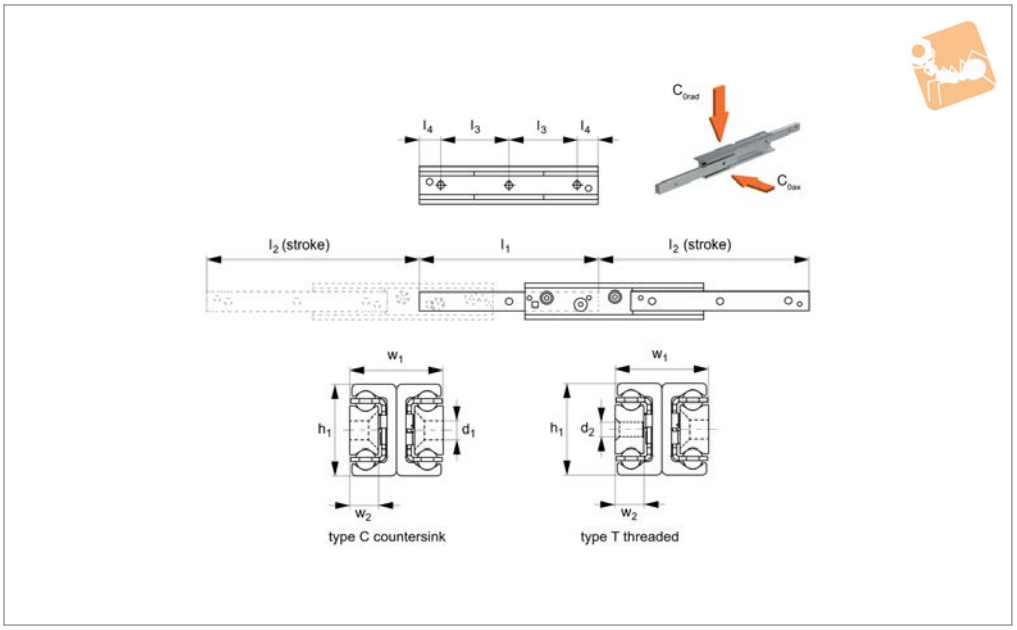
Technical Notes

These are extremely strong and rigid telescopic slides with high load capacities and have very low deflection characteristics.
Temperature range: -30°C to +110°C.
This is the single direction stroke version - the moving member can extend out of only one side of the slide.
Moving rail must be lower rail (unless technical department consulted).
C_{0rad} is the load rating for a single telescopic slide.

Tips

The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Special strokes up to 130% of the closed length can be provided on request.
Only to be used for horizontal movements.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2	l_3	l_4	w_1	For screws d_1	Accessible holes/total	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1984.63S-0610	208	80	64	64	610	666	80	25	40	M10	6/8	3502	19.9
L1984.63S-0690	208	80	64	64	690	746	80	25	40	M10	8/9	4252	22.5
L1984.63S-0770	208	80	64	64	770	826	80	25	40	M10	8/10	5012	25.1
L1984.63S-0850	208	80	64	64	850	906	80	25	40	M10	9/11	5780	27.7
L1984.63S-0930	208	80	64	64	930	986	80	25	40	M10	9/12	6552	30.3
L1984.63S-1010	208	80	64	64	1010	1066	80	25	40	M10	11/13	7329	32.9
L1984.63S-1090	208	80	64	64	1090	1146	80	25	40	M10	11/14	8109	35.5
L1984.63S-1170	208	80	64	64	1170	1226	80	25	40	M10	12/15	8892	38.1
L1984.63S-1250	208	80	64	64	1250	1306	80	25	40	M10	12/16	9677	40.8
L1984.63S-1330	208	80	64	64	1330	1386	80	25	40	M10	14/17	10464	43.4
L1984.63S-1410	208	80	64	64	1410	1466	80	25	40	M10	14/18	11252	46.0
L1984.63S-1490	208	80	64	64	1490	1546	80	25	40	M10	15/19	12041	48.6
L1984.63S-1570	208	80	64	64	1570	1626	80	25	40	M10	15/20	12832	51.2
L1984.63S-1650	208	80	64	64	1650	1706	80	25	40	M10	17/21	12364	53.8
L1984.63S-1730	208	80	64	64	1730	1786	80	25	40	M10	17/22	11827	56.4
L1984.63S-1810	208	80	64	64	1810	1866	80	25	40	M10	18/23	11334	59.0
L1984.63S-1890	208	80	64	64	1890	1946	80	25	40	M10	18/24	10881	61.6
L1984.63S-1970	208	80	64	64	1970	2026	80	25	40	M10	20/25	10463	64.2





L1986.22

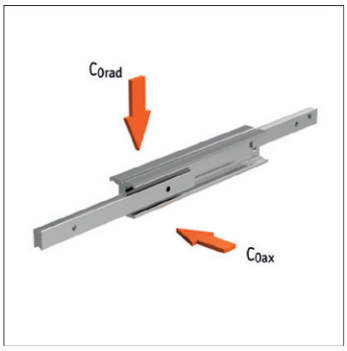
Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

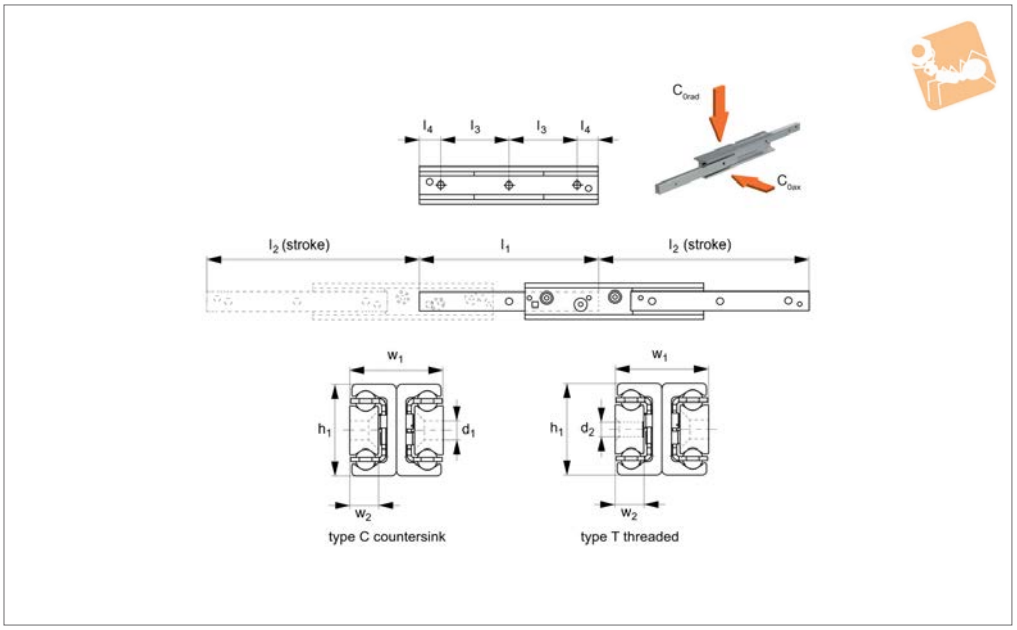
Technical Notes
These are extremely strong and rigid teles-copic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide.
Temperature range: -30°C to +170°C.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.
Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2	l_3	l_4	w_1	w_2	For screws d_1 & d_2	No. of holes	Hole type	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1986.22C-0130	22	130	152	80	25	22	6,5	M4	2	C'sunk	83	119	0,32
L1986.22C-0210	22	210	222	80	25	22	6,5	M4	3	C'sunk	196	281	0,52
L1986.22C-0290	22	290	308	80	25	22	6,5	M4	4	C'sunk	273	390	0,72
L1986.22C-0370	22	370	392	80	25	22	6,5	M4	5	C'sunk	263	501	0,92
L1986.22C-0450	22	450	462	80	25	22	6,5	M4	6	C'sunk	230	674	1,12
L1986.22C-0530	22	530	548	80	25	22	6,5	M4	7	C'sunk	193	571	1,32
L1986.22C-0610	22	610	632	80	25	22	6,5	M4	8	C'sunk	167	494	1,52
L1986.22C-0690	22	690	702	80	25	22	6,5	M4	9	C'sunk	153	453	1,72
L1986.22C-0770	22	770	788	80	25	22	6,5	M4	10	C'sunk	135	401	1,92
L1986.22T-0130	22	130	152	80	25	22	6,5	M4	2	Thread	83	119	0,32
L1986.22T-0210	22	210	222	80	25	22	6,5	M4	3	Thread	196	281	0,52
L1986.22T-0290	22	290	308	80	25	22	6,5	M4	4	Thread	273	390	0,72
L1986.22T-0370	22	370	392	80	25	22	6,5	M4	5	Thread	263	501	0,92
L1986.22T-0450	22	450	462	80	25	22	6,5	M4	6	Thread	230	674	1,12
L1986.22T-0530	22	530	548	80	25	22	6,5	M4	7	Thread	193	571	1,32
L1986.22T-0610	22	610	632	80	25	22	6,5	M4	8	Thread	167	494	1,52
L1986.22T-0690	22	690	702	80	25	22	6,5	M4	9	Thread	153	453	1,72
L1986.22T-0770	22	770	788	80	25	22	6,5	M4	10	Thread	135	401	1,92

Fully Telescopic Slides
size 22







L1986.28

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid teles-copic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide.
Temperature range: -30°C to +170°C.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.
Special strokes up to 130% of the closed length can be provided on request.

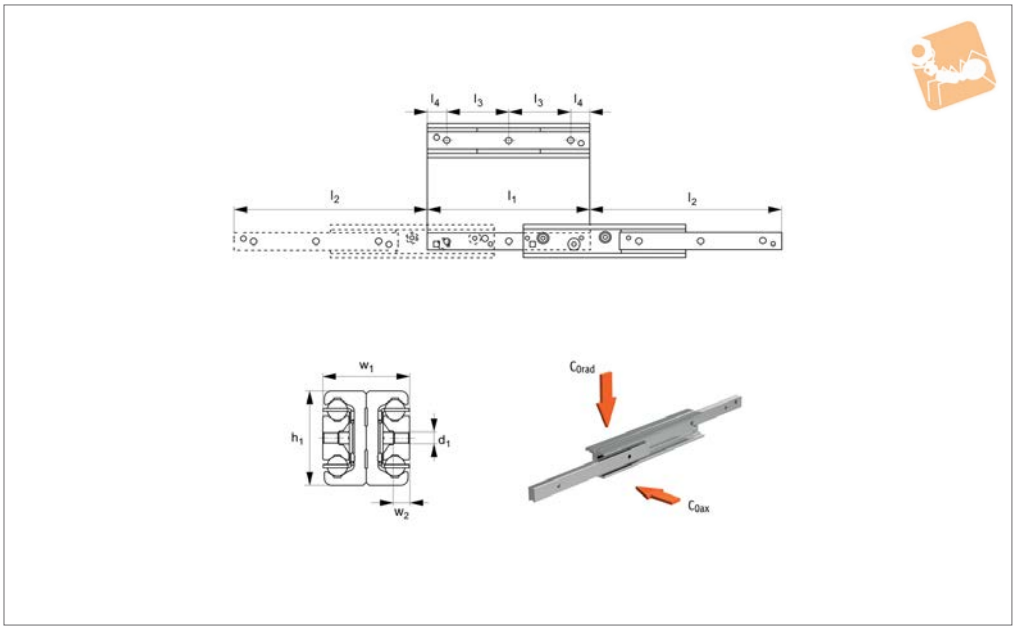
Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	w_2	For screws d_1 & d_2	No. of holes	Hole type	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1986.28C-0130	28	130	148	80	25	26	7,5	5,5	2	C'sunk	164	235	0,52
L1986.28C-0210	28	210	232	80	25	26	7,5	5,5	3	C'sunk	302	432	0,84
L1986.28C-0290	28	290	296	80	25	26	7,5	5,5	4	C'sunk	537	767	1,16
L1986.28C-0370	28	370	380	80	25	26	7,5	5,5	5	C'sunk	471	968	1,48
L1986.28C-0450	28	450	464	80	25	26	7,5	5,5	6	C'sunk	385	1169	1,80
L1986.28C-0530	28	530	548	80	25	26	7,5	5,5	7	C'sunk	325	1107	2,12
L1986.28C-0610	28	610	633	80	25	26	7,5	5,5	8	C'sunk	280	964	2,44
L1986.28C-0690	28	690	717	80	25	26	7,5	5,5	9	C'sunk	247	849	2,76
L1986.28C-0770	28	770	801	80	25	26	7,5	5,5	10	C'sunk	221	758	3,08
L1986.28C-0850	28	850	866	80	25	26	7,5	5,5	11	C'sunk	208	713	3,40
L1986.28C-0930	28	930	950	80	25	26	7,5	5,5	12	C'sunk	189	646	3,72
L1986.28C-1010	28	1010	1034	80	25	26	7,5	5,5	13	C'sunk	174	592	4,04
L1986.28C-1090	28	1090	1118	80	25	26	7,5	5,5	14	C'sunk	160	547	4,36
L1986.28C-1170	28	1170	1202	80	25	26	7,5	5,5	15	C'sunk	149	508	4,68
L1986.28T-0130	28	130	148	80	25	26	7,5	5,5	2	Thread	164	235	0,52
L1986.28T-0210	28	210	232	80	25	26	7,5	5,5	3	Thread	302	432	0,84
L1986.28T-0290	28	290	296	80	25	26	7,5	5,5	4	Thread	537	767	1,16
L1986.28T-0370	28	370	380	80	25	26	7,5	5,5	5	Thread	471	968	1,48
L1986.28T-0450	28	450	464	80	25	26	7,5	5,5	6	Thread	385	1169	1,80
L1986.28T-0530	28	530	548	80	25	26	7,5	5,5	7	Thread	325	1107	2,12
L1986.28T-0610	28	610	633	80	25	26	7,5	5,5	8	Thread	280	964	2,44
L1986.28T-0690	28	690	717	80	25	26	7,5	5,5	9	Thread	247	849	2,76
L1986.28T-0770	28	770	801	80	25	26	7,5	5,5	10	Thread	221	758	3,08
L1986.28T-0850	28	850	866	80	25	26	7,5	5,5	11	Thread	208	713	3,40
L1986.28T-0930	28	930	950	80	25	26	7,5	5,5	12	Thread	189	646	3,72



Fully Telescopic Slides

size 28

Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	w_2	For screws d_1 & d_2	No. of holes	Hole type	Load (per rail) $C_{0\ ax}$ N max.	Load (per rail) $C_{0\ rad}$ N max.	Weight kg
L1986.28T-1010	28	1010	1034	80	25	26	7,5	5,5	13	Thread	174	592	4,04
L1986.28T-1090	28	1090	1118	80	25	26	7,5	5,5	14	Thread	160	547	4,36
L1986.28T-1170	28	1170	1202	80	25	26	7,5	5,5	15	Thread	149	508	4,68





L1986.63

Material

Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes

These are extremely strong and rigid teles-copic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide.
Temperature range: -30°C to +170°C.

Tips

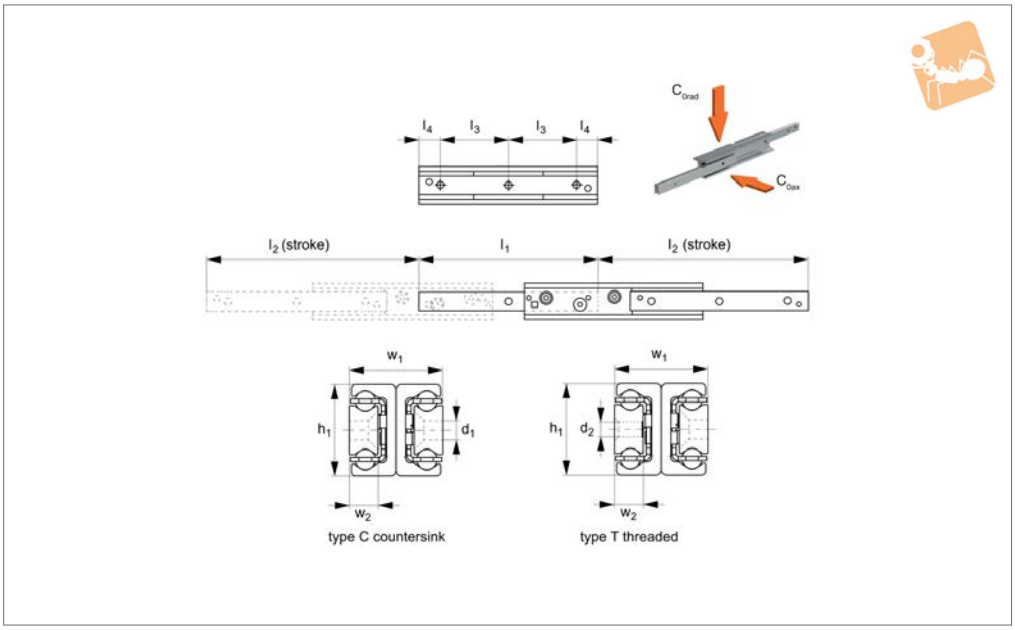
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For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.
Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2	l_3	l_4	w_1	w_2	For screws d_1	No. of holes	Hole type	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1986.63T-0610	63	610	666	80	25	58	10,5	M8	8	Thread	2863	4090	12,56
L1986.63T-0690	63	690	746	80	25	58	10,5	M8	9	Thread	3062	4859	14,21
L1986.63T-0770	63	770	826	80	25	58	10,5	M8	10	Thread	2784	5635	15,86
L1986.63T-0850	63	850	906	80	25	58	10,5	M8	11	Thread	2553	6415	17,51
L1986.63T-0930	63	930	986	80	25	58	10,5	M8	12	Thread	2357	7198	19,15
L1986.63T-1010	63	1010	1066	80	25	58	10,5	M8	13	Thread	2189	6885	20,80
L1986.63T-1090	63	1090	1146	80	25	58	10,5	M8	14	Thread	2043	6427	22,45
L1986.63T-1170	63	1170	1226	80	25	58	10,5	M8	15	Thread	1916	6026	24,10
L1986.63T-1250	63	1250	1306	80	25	58	10,5	M8	16	Thread	1803	5672	25,75
L1986.63T-1330	63	1330	1386	80	25	58	10,5	M8	17	Thread	1703	5357	27,39
L1986.63T-1410	63	1410	1466	80	25	58	10,5	M8	18	Thread	1614	5076	29,04
L1986.63T-1490	63	1490	1546	80	25	58	10,5	M8	19	Thread	1533	4822	30,69
L1986.63T-1570	63	1570	1626	80	25	58	10,5	M8	20	Thread	1460	4593	32,34
L1986.63T-1650	63	1650	1706	80	25	58	10,5	M8	21	Thread	1394	4384	33,39
L1986.63T-1730	63	1730	1786	80	25	58	10,5	M8	22	Thread	1333	4194	35,63
L1986.63T-1810	63	1810	1866	80	25	58	10,5	M8	23	Thread	1278	4019	37,28
L1986.63T-1890	63	1890	1946	80	25	58	10,5	M8	24	Thread	1227	3859	38,93
L1986.63T-1970	63	1970	2026	80	25	58	10,5	M8	25	Thread	1180	3710	40,58

Fully Telescopic Slides
size 35



L1986.35



Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid teles-copic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide.
Temperature range: -30°C to +170°C.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.
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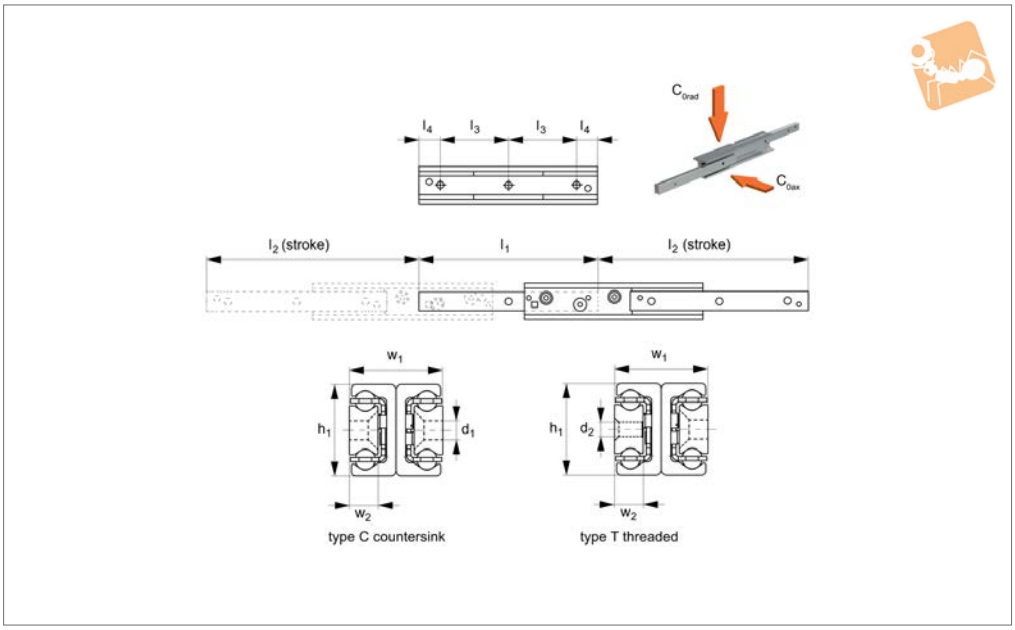
Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	w_2	For screws d_1 & d_2	No. of holes	Hole type	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1986.35C-0210	35	210	254	80	25	33	10	6,5	3	C'sunk	281	402	1,28
L1986.35C-0290	35	290	318	80	25	33	10	6,5	4	C'sunk	560	800	1,76
L1986.35C-0370	35	370	406	80	25	33	10	6,5	5	C'sunk	718	1025	2,25
L1986.35C-0450	35	450	494	80	25	33	10	6,5	6	C'sunk	793	1250	2,74
L1986.35C-0530	35	530	558	80	25	33	10	6,5	7	C'sunk	728	1685	3,23
L1986.35C-0610	35	610	646	80	25	33	10	6,5	8	C'sunk	626	1908	3,72
L1986.35C-0690	35	690	734	80	25	33	10	6,5	9	C'sunk	548	1689	4,20
L1986.35C-0770	35	770	798	80	25	33	10	6,5	10	C'sunk	516	1591	4,69
L1986.35C-0850	35	850	886	80	25	33	10	6,5	11	C'sunk	463	1425	5,18
L1986.35C-0930	35	930	974	80	25	33	10	6,5	12	C'sunk	419	1291	5,67
L1986.35C-1010	35	1010	1038	80	25	33	10	6,5	13	C'sunk	400	1233	6,16
L1986.35C-1090	35	1090	1126	80	25	33	10	6,5	14	C'sunk	367	1131	6,64
L1986.35C-1170	35	1170	1214	80	25	33	10	6,5	15	C'sunk	339	1045	7,13
L1986.35C-1250	35	1250	1278	80	25	33	10	6,5	16	C'sunk	327	1006	7,62
L1986.35C-1330	35	1330	1366	80	25	33	10	6,5	17	C'sunk	308	937	8,11
L1986.35C-1410	35	1410	1454	80	25	33	10	6,5	18	C'sunk	285	877	8,60
L1986.35C-1490	35	1490	1518	80	25	33	10	6,5	19	C'sunk	276	850	9,08
L1986.35T-0210	35	210	254	80	25	33	10	6,5	3	Thread	281	402	1,28
L1986.35T-0290	35	290	318	80	25	33	10	6,5	4	Thread	560	800	1,76
L1986.35T-0370	35	370	406	80	25	33	10	6,5	5	Thread	718	1025	2,25
L1986.35T-0450	35	450	494	80	25	33	10	6,5	6	Thread	793	1250	2,74
L1986.35T-0530	35	530	558	80	25	33	10	6,5	7	Thread	728	1685	3,23
L1986.35T-0610	35	610	646	80	25	33	10	6,5	8	Thread	626	1908	3,72
L1986.35T-0690	35	690	734	80	25	33	10	6,5	9	Thread	548	1689	4,20
L1986.35T-0770	35	770	798	80	25	33	10	6,5	10	Thread	516	1591	4,69

Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	w_2	For screws d_1 & d_2	No. of holes	Hole type	Load (per rail) $C_{0\ ax}$ N max.	Load (per rail) $C_{0\ rad}$ N max.	Weight kg
L1986.35T-0850	35	850	886	80	25	33	10	6,5	11	Thread	463	1425	5,18
L1986.35T-0930	35	930	974	80	25	33	10	6,5	12	Thread	419	1291	5,67
L1986.35T-1010	35	1010	1038	80	25	33	10	6,5	13	Thread	400	1233	6,16
L1986.35T-1090	35	1090	1126	80	25	33	10	6,5	14	Thread	367	1131	6,64
L1986.35T-1170	35	1170	1214	80	25	33	10	6,5	15	Thread	339	1045	7,13
L1986.35T-1250	35	1250	1278	80	25	33	10	6,5	16	Thread	327	1006	7,62
L1986.35T-1330	35	1330	1366	80	25	33	10	6,5	17	Thread	308	937	8,11
L1986.35T-1410	35	1410	1454	80	25	33	10	6,5	18	Thread	285	877	8,60
L1986.35T-1490	35	1490	1518	80	25	33	10	6,5	19	Thread	276	850	9,08

Fully Telescopic Slides
size 43



L1986.43



Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid teles-copic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide.
Temperature range: -30°C to +170°C.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
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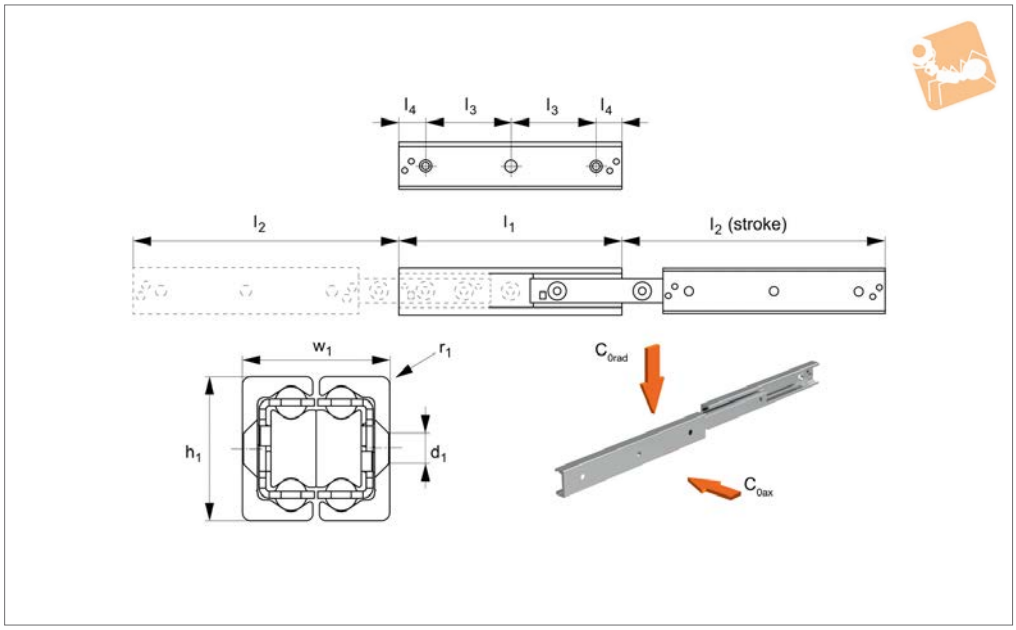
Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	w_2	For screws d_1 & d_2	No. of holes	Hole type	Load (per rail) C_0 ^{ax} N max.	Load (per rail) C_0 ^{rad} N max.	Weight kg
L1986.43C-0210	43	210	246	80	25	44	13,5	8,5	3	C'sunk	424	605	2,20
L1986.43C-0290	43	290	316	80	25	44	13,5	8,5	4	C'sunk	780	1114	3,04
L1986.43C-0370	43	370	416	80	25	44	13,5	8,5	5	C'sunk	910	1300	3,88
L1986.43C-0450	43	450	486	80	25	44	13,5	8,5	6	C'sunk	1279	1828	4,72
L1986.43C-0530	43	530	556	80	25	44	13,5	8,5	7	C'sunk	1434	2375	5,56
L1986.43C-0610	43	610	626	80	25	44	13,5	8,5	8	C'sunk	1300	2934	6,40
L1986.43C-0690	43	690	726	80	25	44	13,5	8,5	9	C'sunk	1096	3091	7,24
L1986.43C-0770	43	770	796	80	25	44	13,5	8,5	10	C'sunk	1016	3055	8,08
L1986.43C-0850	43	850	866	80	25	44	13,5	8,5	11	C'sunk	946	2847	8,92
L1986.43C-0930	43	930	966	80	25	44	13,5	8,5	12	C'sunk	833	2506	9,97
L1986.43C-1010	43	1010	1036	80	25	44	13,5	8,5	13	C'sunk	786	2364	10,60
L1986.43C-1090	43	1090	1106	80	25	44	13,5	8,5	14	C'sunk	744	2238	11,44
L1986.43C-1170	43	1170	1206	80	25	44	13,5	8,5	15	C'sunk	672	2022	12,28
L1986.43C-1250	43	1250	1276	80	25	44	13,5	8,5	16	C'sunk	641	1928	13,12
L1986.43C-1330	43	1330	1376	80	25	44	13,5	8,5	17	C'sunk	587	1766	13,96
L1986.43C-1410	43	1410	1446	80	25	44	13,5	8,5	18	C'sunk	563	1694	14,80
L1986.43C-1490	43	1490	1516	80	25	44	13,5	8,5	19	C'sunk	541	1628	15,64
L1986.43C-1570	43	1570	1586	80	52	44	13,5	8,5	20	C'sunk	521	1567	16,48
L1986.43C-1650	43	1650	1686	80	25	44	13,5	8,5	21	C'sunk	485	1458	17,32
L1986.43C-1730	43	1730	1756	80	25	44	13,5	8,5	22	C'sunk	468	1409	18,16
L1986.43C-1810	43	1810	1856	80	25	44	13,5	8,5	23	C'sunk	439	1320	19,00
L1986.43C-1890	43	1890	1926	80	25	44	13,5	8,5	24	C'sunk	425	1280	19,84
L1986.43C-1970	43	1970	2026	80	25	44	13,5	8,5	25	C'sunk	401	1206	20,68
L1986.43T-0210	43	210	246	80	25	44	13,5	8,5	3	Thread	424	605	2,20
L1986.43T-0290	43	290	316	80	25	44	13,5	8,5	4	Thread	780	1114	3,04

Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	w_2	For screws d_1 & d_2	No. of holes	Hole type	Load (per rail) C_0 ^{ax} N max.	Load (per rail) C_0 ^{rad} N max.	Weight kg
L1986.43T-0370	43	370	416	80	25	44	13,5	8,5	5	Thread	910	1300	3,88
L1986.43T-0450	43	450	486	80	25	44	13,5	8,5	6	Thread	1279	1828	4,72
L1986.43T-0530	43	530	556	80	25	44	13,5	8,5	7	Thread	1434	2375	5,56
L1986.43T-0610	43	610	626	80	25	44	13,5	8,5	8	Thread	1300	2934	6,40
L1986.43T-0690	43	690	726	80	25	44	13,5	8,5	9	Thread	1096	3091	7,24
L1986.43T-0770	43	770	796	80	25	44	13,5	8,5	10	Thread	1016	3055	8,08
L1986.43T-0850	43	850	866	80	25	44	13,5	8,5	11	Thread	946	2847	8,92
L1986.43T-0930	43	930	966	80	25	44	13,5	8,5	12	Thread	833	2506	9,97
L1986.43T-1010	43	1010	1036	80	25	44	13,5	8,5	13	Thread	786	2364	10,60
L1986.43T-1090	43	1090	1106	80	25	44	13,5	8,5	14	Thread	744	2238	11,44
L1986.43T-1170	43	1170	1206	80	25	44	13,5	8,5	15	Thread	672	2022	12,28
L1986.43T-1250	43	1250	1276	80	25	44	13,5	8,5	16	Thread	641	1928	13,12
L1986.43T-1330	43	1330	1376	80	25	44	13,5	8,5	17	Thread	587	1766	13,96
L1986.43T-1410	43	1410	1446	80	25	44	13,5	8,5	18	Thread	563	1694	14,80
L1986.43T-1490	43	1490	1516	80	25	44	13,5	8,5	19	Thread	541	1628	15,64
L1986.43T-1570	43	1570	1586	80	25	44	13,5	8,5	20	Thread	521	1567	16,48
L1986.43T-1650	43	1650	1686	80	25	44	13,5	8,5	21	Thread	485	1458	17,32
L1986.43T-1730	43	1730	1756	80	25	44	13,5	8,5	22	Thread	468	1409	18,16
L1986.43T-1810	43	1810	1856	80	25	44	13,5	8,5	23	Thread	439	1320	19,00
L1986.43T-1890	43	1890	1926	80	25	44	13,5	8,5	24	Thread	425	1280	19,84
L1986.43T-1970	43	1970	2026	80	25	44	13,5	8,5	25	Thread	401	1206	20,68

Fully Telescopic Slides
size 22



L1988.22

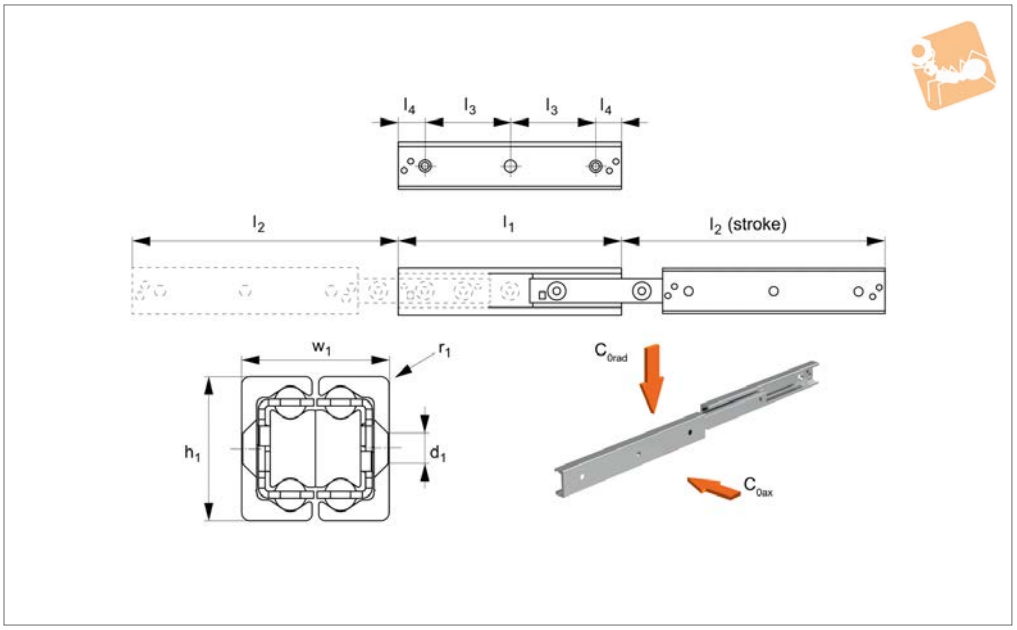


Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid teles-copic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide.
Temperature range: -30°C to +170°C.
The strong intermediate member allows the rail to be mounted with the load acting radially or axially wth nearly the same load capacity.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.
Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2	l_3	l_4	w_1	r_1	For screws d_1	No. of holes	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1988.22-0130	22	130	152	80	25	22	3	M4	2	83	119	0.32
L1988.22-0210	22	210	222	80	25	22	3	M4	3	196	281	0.52
L1988.22-0290	22	290	308	80	25	22	3	M4	4	236	236	0.72
L1988.22-0370	22	370	392	80	25	22	3	M4	5	186	186	0.92
L1988.22-0450	22	450	462	80	25	22	3	M4	6	162	162	1.12
L1988.22-0530	22	530	548	80	25	22	3	M4	7	136	136	1.32
L1988.22-0610	22	610	632	80	25	22	3	M4	8	117	117	1.52
L1988.22-0690	22	690	702	80	25	22	3	M4	9	108	108	1.72
L1988.22-0770	22	770	788	80	25	22	3	M4	10	95	95	1.92





L1988.28

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid teles-copic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide.
Temperature range: -30°C to +170°C.
The strong intermediate member allows the rail to be mounted with the load acting radially or axially with nearly the same load capacity.

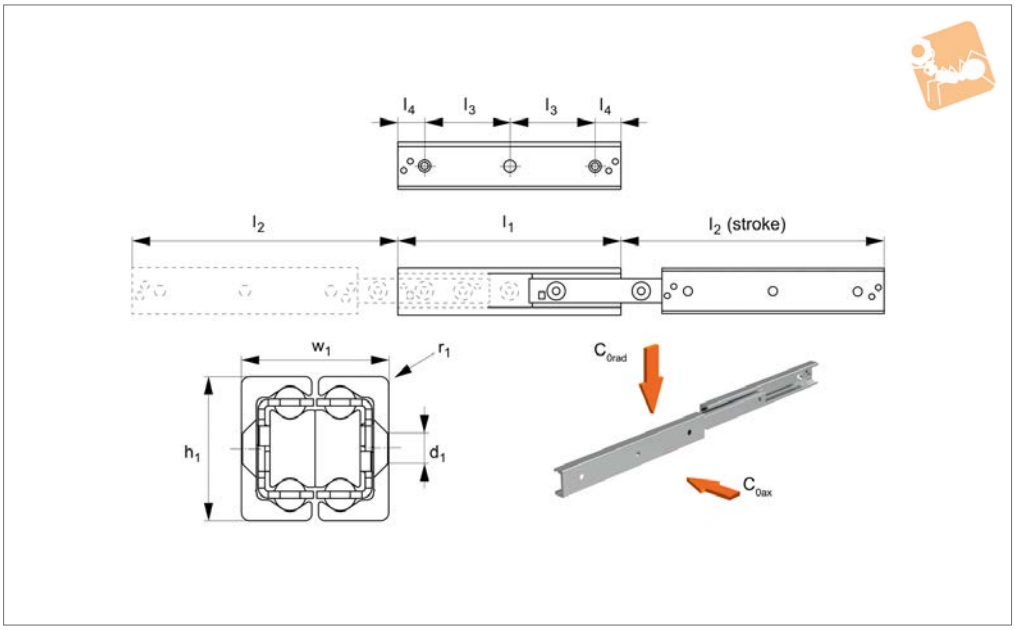
Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.
Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	r_1	For screws d_1	No. of holes	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1988.28-0130	28	130	148	80	25	26	1	M5	2	172	244	0.47
L1988.28-0210	28	210	232	80	25	26	1	M5	3	313	444	0.92
L1988.28-0290	28	290	296	80	25	26	1	M5	4	545	632	1.28
L1988.28-0370	28	370	380	80	25	26	1	M5	5	490	496	1.63
L1988.28-0450	28	450	464	80	25	26	1	M5	6	405	405	1.98
L1988.28-0530	28	530	548	80	25	26	1	M5	7	342	342	2.33
L1988.28-0610	28	610	633	80	25	26	1	M5	8	298	298	2.68
L1988.28-0690	28	690	717	80	25	26	1	M5	9	263	263	3.04
L1988.28-0770	28	770	801	80	25	26	1	M5	10	234	234	3.39
L1988.28-0850	28	850	866	80	25	26	1	M5	11	220	230	3.74
L1988.28-0930	28	930	950	80	25	26	1	M5	12	200	200	4.09
L1988.28-1010	28	1010	1034	80	25	26	1	M5	13	183	183	4.44
L1988.28-1090	28	1090	1118	80	25	26	1	M5	14	170	170	4.80
L1988.28-1170	28	1170	1202	80	25	26	1	M5	15	157	157	5.15

Fully Telescopic Slides
size 35



L1988.35

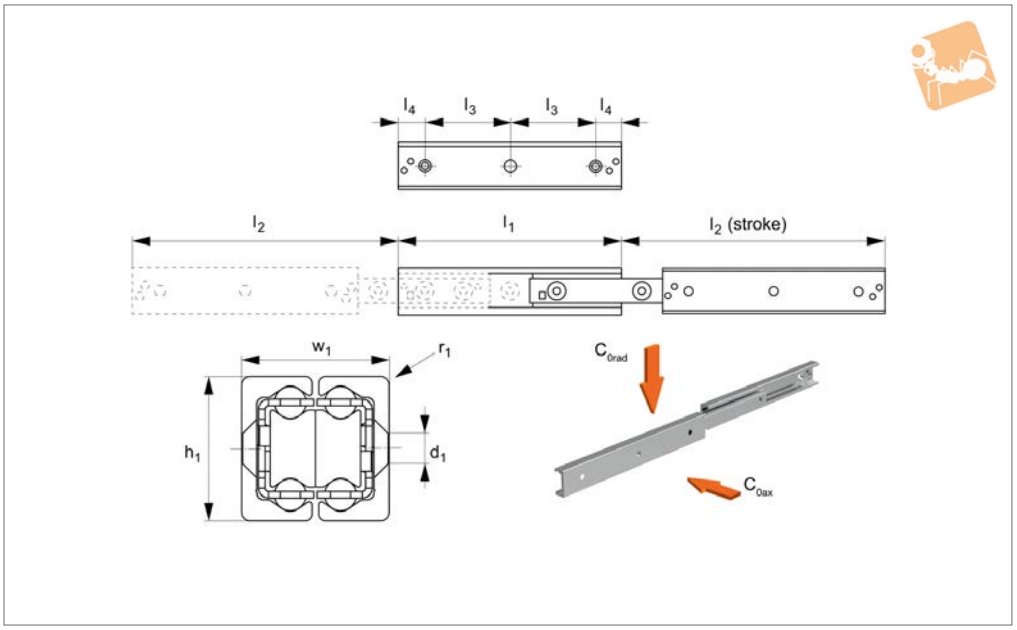


Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid teles-copic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide.
Temperature range: -30°C to +170°C.
The strong intermediate member allows the rail to be mounted with the load acting radially or axially with nearly the same load capacity.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.
Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	r_1	For screws d_1	No. of holes	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1988.35-0210	34	210	254	80	25	35	2	M6	3	286	409	1.15
L1988.35-0290	34	290	318	80	25	35	2	M6	4	569	684	1.60
L1988.35-0370	34	370	406	80	25	35	2	M6	5	534	534	2.05
L1988.35-0450	34	450	494	80	25	35	2	M6	6	439	439	2.55
L1988.35-0530	34	530	558	80	25	35	2	M6	7	403	403	3.00
L1988.35-0610	34	610	646	80	25	35	2	M6	8	346	346	3.55
L1988.35-0690	34	690	734	80	25	35	2	M6	9	304	304	3.90
L1988.35-0770	34	770	798	80	25	35	2	M6	10	286	286	4.45
L1988.35-0850	34	850	886	80	25	35	2	M6	11	256	256	4.90
L1988.35-0930	34	930	974	80	25	35	2	M6	12	232	232	5.30
L1988.35-1010	34	1010	1038	80	25	35	2	M6	13	221	221	5.80
L1988.35-1090	34	1090	1126	80	25	35	2	M6	14	205	205	6.25
L1988.35-1170	34	1170	1214	80	25	35	2	M6	15	187	187	6.70
L1988.35-1250	34	1250	1278	80	25	35	2	M6	16	181	181	7.15
L1988.35-1330	34	1330	1366	80	25	35	2	M6	17	169	169	7.60
L1988.35-1410	34	1410	1454	80	25	35	2	M6	18	160	160	8.10
L1988.35-1490	34	1490	1518	80	25	35	2	M6	19	153	153	8.65





L1988.43

Material

Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes

These are extremely strong and rigid teles-copic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide.
Temperature range: -30°C to +170°C.
The strong intermediate member allows the rail to be mounted with the load acting radially or axially with nearly the same load capacity.

Tips

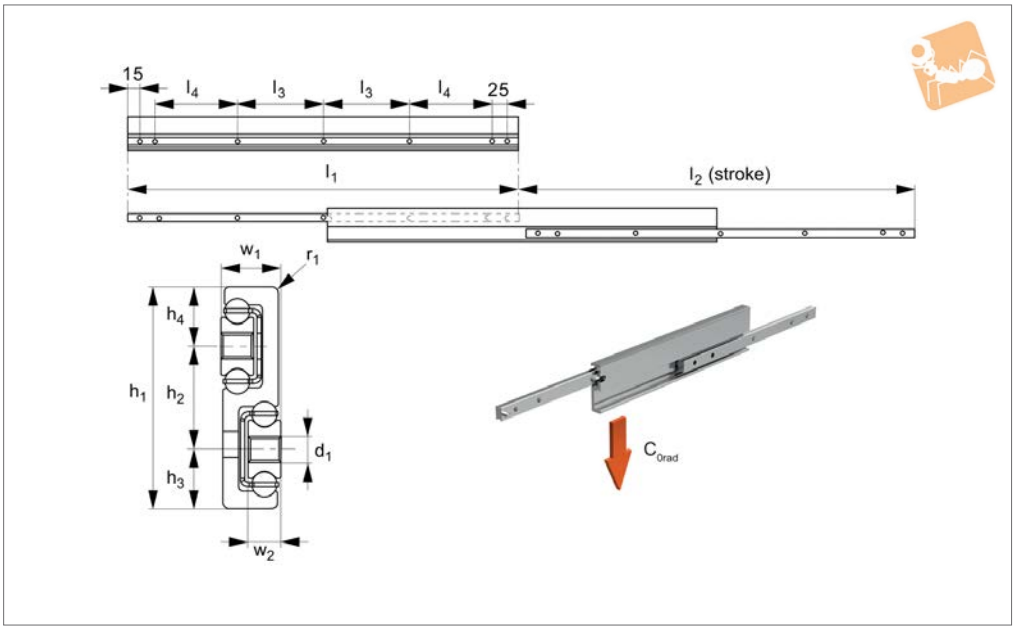
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.
Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	r_1	For screws d_1	No. of holes	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1988.43-0210	43	210	246	80	25	44	2.5	M8	3	449	631	2.33
L1988.43-0290	43	290	316	80	25	44	2.5	M8	4	819	1158	3.212
L1988.43-0370	43	370	316	80	25	44	2.5	M8	5	954	1349	4.11
L1988.43-0450	43	450	486	80	25	44	2.5	M8	6	1298	1370	5.00
L1988.43-0530	43	530	556	80	25	44	2.5	M8	7	1229	1229	5.88
L1988.43-0610	43	610	626	80	25	44	2.5	M8	8	1115	1115	6.77
L1988.43-0690	43	690	726	80	25	44	2.5	M8	9	939	939	7.66
L1988.43-0770	43	770	796	80	25	44	2.5	M8	10	870	870	8.55
L1988.43-0850	43	850	866	80	25	44	2.5	M8	11	812	812	9.44
L1988.43-0930	43	930	966	80	25	44	2.5	M8	12	714	714	10.32
L1988.43-1010	43	1010	1036	80	25	44	2.5	M8	13	674	674	11.21
L1988.43-1090	43	1090	1106	80	25	44	2.5	M8	14	629	629	12.10
L1988.43-1170	43	1170	1206	80	25	44	2.5	M8	16	576	576	12.99
L1988.43-1250	43	1250	1276	80	25	44	2.5	M8	17	546	546	13.88
L1988.43-1330	43	1330	1376	80	25	44	2.5	M8	18	503	503	14.76
L1988.43-1410	43	1410	1446	80	25	44	2.5	M8	19	473	473	15.65
L1988.43-1490	43	1490	1516	80	25	44	2.5	M8	20	464	464	16.54
L1988.43-1570	43	1570	1586	80	25	44	2.5	M8	21	443	443	17.43
L1988.43-1650	43	1650	1686	80	25	44	2.5	M8	23	415	415	18.32
L1988.43-1730	43	1730	1756	80	25	44	2.5	M8	24	397	397	19.20
L1988.43-1810	43	1810	1856	80	25	44	2.5	M8	25	376	376	20.09
L1988.43-1890	43	1890	1926	80	25	44	2.5	M8	26	364	364	21.00
L1988.43-1970	43	1970	2026	80	25	44	2.5	M8	27	344	344	21.87

Fully Telescopic Slides LTF



L1992

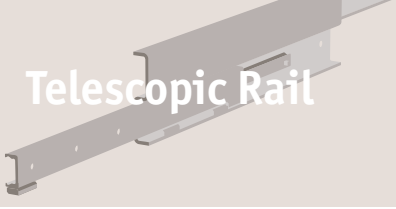


Material
Cold drawn bearing steel, raceways are not hardened. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings on request.

Technical Notes
This is a lower cost slide with non-hardened raceways but still providing high load capacity.
Temperature range: -30°C to +170°C.
More suited for less frequent opening applications.
Only to be used for horizontal movements.
C_{0rad} is the load rating for a single teles-copic slide.

Tips
The fixed top member must be mounted to the fixed structure and the moving member to the mobile structure - using all of the threaded holes.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2 stroke	l_3	l_4	w_1	w_2	r_1	For screws d_1	No. of holes	Load (per rail) C_0 $_{rad}$ N max.	Weight kg
L1992.44-0200	43	20	11,5	11,5	200	210		60	12	6,5	1,5	M5	5	114	0,54
L1992.44-0225	43	20	11,5	11,5	225	235		72,5	12	6,5	1,5	M5	5	130	0,59
L1992.44-0250	43	20	11,5	11,5	250	260		85	12	6,5	1,5	M5	5	144	0,67
L1992.44-0275	43	20	11,5	11,5	275	285		97,5	12	6,5	1,5	M5	5	162	0,74
L1992.44-0300	43	20	11,5	11,5	300	310		110	12	6,5	1,5	M5	5	180	0,81
L1992.44-0325	43	20	11,5	11,5	325	335		122,5	12	6,5	1,5	M5	5	196	0,87
L1992.44-0350	43	20	11,5	11,5	350	360		135	12	6,5	1,5	M5	5	210	0,94
L1992.44-0375	43	20	11,5	11,5	375	385		147,5	12	6,5	1,5	M5	5	226	1,01
L1992.44-0400	43	20	11,5	11,5	400	410		160	12	6,5	1,5	M5	5	246	1,08
L1992.44-0425	43	20	11,5	11,5	425	435		172,5	12	6,5	1,5	M5	5	262	1,14
L1992.44-0450	43	20	11,5	11,5	450	460		185	12	6,5	1,5	M5	7	276	1,21
L1992.44-0500	43	20	11,5	11,5	500	510	110	100	12	6,5	1,5	M5	7	312	1,35
L1992.44-0550	43	20	11,5	11,5	550	560	135	100	12	6,5	1,5	M5	7	342	1,48
L1992.44-0600	43	20	11,5	11,5	600	610	160	100	12	6,5	1,5	M5	7	384	1,62
L1992.44-0650	43	20	11,5	11,5	650	660	185	100	12	6,5	1,5	M5	7	408	1,75
L1992.44-0700	43	20	11,5	11,5	700	710	160	150	12	6,5	1,5	M5	7	444	1,89
L1992.44-0750	43	20	11,5	11,5	750	760	185	150	12	6,5	1,5	M5	7	474	2,02
L1992.44-0800	43	20	11,5	11,5	800	810	210	150	12	6,5	1,5	M5	7	510	2,16
L1992.44-0850	43	20	11,5	11,5	850	860	235	150	12	6,5	1,5	M5	7	540	2,29
L1992.44-0900	43	20	11,5	11,5	900	910	260	150	12	6,5	1,5	M5	7	576	2,43
L1992.44-0950	43	20	11,5	11,5	950	960	285	150	12	6,5	1,5	M5	7	612	2,56
L1992.44-1000	43	20	11,5	11,5	1000	1010	310	150	12	6,5	1,5	M5	7	648	2,70



Specifications

- Generally all our telescopic rails have induction hardened raceways.
- Cold drawn roller bearing steel.
- Maximum operating speed 0,8 m/s.
- Temperature range (mainly -30°C to +170°C).
- Electrolytic galvanised to ISO 2081, other anti-corrosion finishes on request.
- High load ratings with low deflection characteristics.
- Minimum play (even at maximum load ratings).
- Smooth, free running movement.
- Long strokes and heavy load ratings.
- Can be used in horizontal applications only (due to the use of a ball cage), with the exception of part number L1985 which uses roller bearings.
- Light duty "cage stops" are included on the telescopic rails to prevent damage to the ball cage. External end stops must be designed into your application (to protect the rails from high forces and possible damage on opening and closing).
- For telescopic rails with an "upper" and "lower" rail, the moving rail should be the lower one. Using the upper rail as the moving element effects the smooth running and the load capacity of the telescopic sliders.
- All load capacity figures are given for a single rail, and based on continuous use.
- Fix to structures using screws of strength class 10,9.
- Anti-corrosion option. We have a highly effective anti-corrosive coating option, and we utilise stainless steel ball bearings in this version.

Applications



Special purpose & packaging machines
Precision positioning systems
handling units
robotic systems • cutting machines



Seating
Sliding seats
disability ramps
seat extensions



Safety guarding
Extending protective systems
sliding gates
automatic pick & place



Logistics solutions
Container extensions
heavy duty extending systems
sliding doors



Disability vehicles
Sliding seats
extension ramps



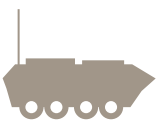
Transport (naval)
Sliding hatches
pull-out storage



Transport (rail)
Seat adjustment
sliding doors
battery removal units



Transport (automotive)
Ambulance sliding systems
fire fighting vehicles
sliding panels



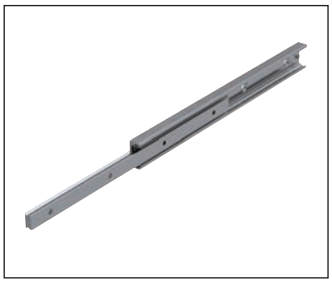
Transport (military)
Sliding seats
protective hatches
stretcher extensions

Technical Information

Product overview

Partial extension telescopic slides

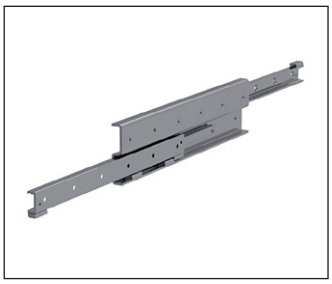
L1994 - these are extremely compact rails with a simple design and very high load ratings. They have high radial and axial load capacity as well as the ability to take considerable moment loads.



Standard extension	50%
Special extension range	up to 65% (on request)
Single & double direction?	Yes (remove end stop)
Number of rail sizes	5
Maximum extension (at 50%)	1010 mm
Maximum load (per rail)	4500 Kg

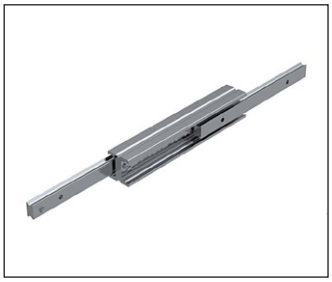
Full extension telescopic slides

L1984 - these are very thin rails with high levels of rigidity and load capacity. Very low deflection even when fully loaded and in an open position.



Standard extension	100%
Special extension range	up to 130% (on request)
Single & double direction?	Yes (specify on ordering)
Number of rail sizes	4
Maximum extension (at 100%)	2020 mm
Maximum load (per rail)	1200 Kg

L1986 - a very low height rail gives the slide very rigid capabilities. The double T cross section allows a compact size with low radial loading deflection and axial load capability too.



Standard extension	100%
Special extension range	up to 130% (on request)
Single & double direction?	Yes (remove end stop)
Number of rail sizes	5
Maximum extension (at 100%)	2020 mm
Maximum load (per rail)	700 Kg

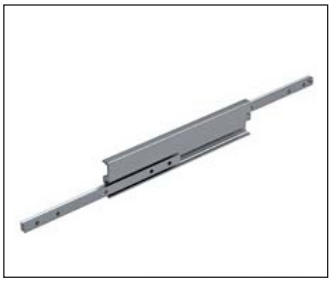
L1988 - the compact, low profile, square shaped configuration gives the slides similar load capacities for radial and axial loads.



Standard extension	100%
Special extension range	up to 130% (on request)
Single & double direction?	Yes (remove end stop)
Number of rail sizes	4
Maximum extension (at 100%)	2020 mm
Maximum load (per rail)	1250 Kg

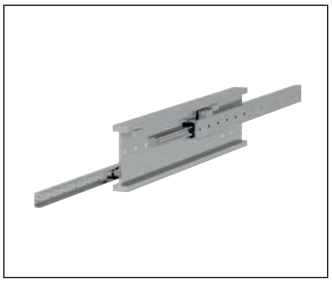
L1992 - our lightest duty telescopic slides. Still from cold-drawn steel but with unhardended raceways making these parts robust but less expensive than our other telescopic rails.

Standard extension	100%
Special extension range	No
Single & double direction?	No
Number of rail sizes	1
Maximum extension (at 100%)	1010 mm
Maximum load (per rail)	60 Kg



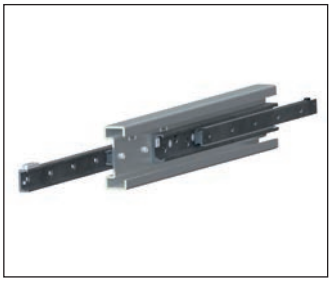
L1996 - these are ultra heavy-duty telescopic slides, for very heavy loads. An extremely rigid double T profile acts as an intermediate element providing a high load capacity and minimum deflection.

Standard extension	100%
Special extension range	up to 130% (on request)
Single & double direction?	On request
Number of rail sizes	1
Maximum extension (at 100%)	2250 mm
Maximum load (per rail)	1900 Kg



L1995 - these are compact design, heavy duty full stroke telescopic rails. They have a relatively light weight, and have induction hardened raceways for long-life.

Standard extension	100%
Special extension range	up to 130% (on request)
Single & double direction?	Yes (remove end stop)
Number of rail sizes	4
Maximum extension (at 100%)	2020 mm
Maximum load (per rail)	550 Kg



L1985 - these are full extension slides to be used where dirt or other contaminants might be present. The ball bearings are replaced with large roller bearings (with wipers to clear the rail). Based on our compact rail system.

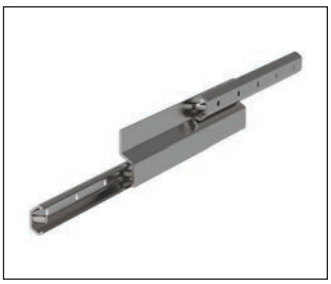
Standard extension	100%
Special extension range	No
Single & double direction?	No
Number of rail sizes	1
Maximum extension (at 100%)	1980 mm
Maximum load (per rail)	275 Kg



Technical Information

Product overview

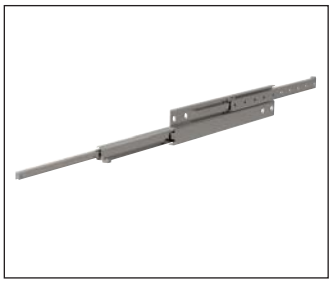
L1989 - these are full extension slides made from 316L stainless steel. For use in applications where corrosion may be a problem.



Standard extension	100%
Special extension range	No
Single & double direction?	No
Number of rail sizes	1
Maximum extension (at 100%)	1120 mm
Maximum load (per rail)	35 Kg

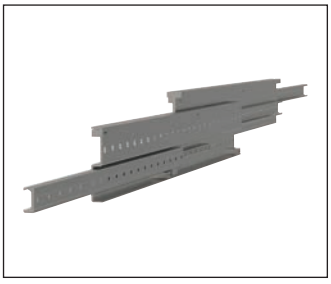
Extended stroke telescopic rails

L1997 - these are extended stroke (150%), heavy duty telescopic rails, with high load capacity and stiffness.



Standard extension	150%
Special extension range	On request
Single & double direction?	No
Number of rail sizes	1
Maximum extension (at 150%)	3030 mm
Maximum load (per rail)	240 Kg

L1998 - these are extended stroke (150%), heavy duty telescopic rails. They have a solid steel intermediate element. They are our heaviest duty extended stroke units.



Standard extension	150%
Special extension range	On request
Single & double direction?	No
Number of rail sizes	1
Maximum extension (at 150%)	3020 mm
Maximum load (per rail)	480 Kg

How to select a telescopic rail

Firstly, these telescopic rails are for heavy duty applications, they are not made from pressed steel but from cold-drawn steel, with hardened raceways.

As a result they can be used in demanding applications and for repetitive applications or for applications where a high degree of product reliability is required as well as smooth and consistent operation. They have smooth movement, minimal play and a low coefficient of friction. There are no better telescopic rails available!

Stroke required

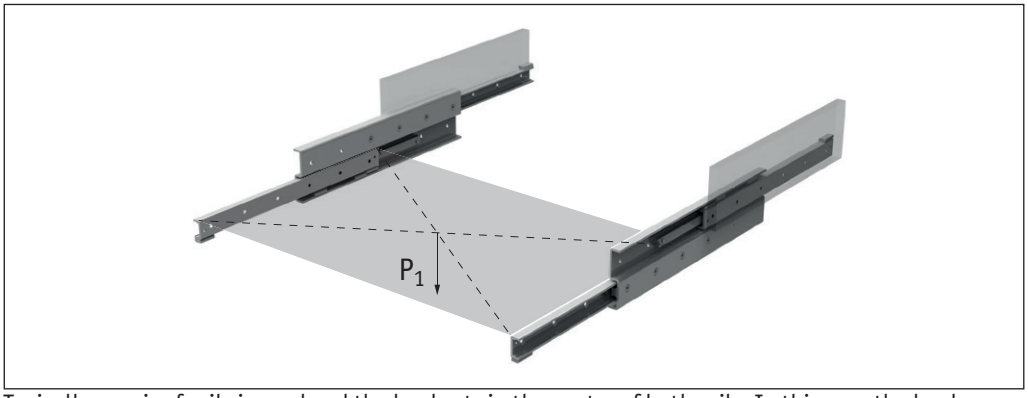
In general the partial extension (strokes of 50% of overall rail length) telescopic rails are less expensive than the full extension rails and over-extension rails.

Where possible the use of a double direction rail (i.e. can stroke forward and backwards) can be very cost-effective, allowing twice the stroke for the same rail length, but this may not suit many applications.

Load capacity

The next consideration is based on the load to be carried. All loads given are for a single rail and assume the load is centred in the mid-point of the moveable rail, in its extended position.

Important: In cases where the rail has an upper and lower rail, the receiving rail should be the lower one.



Typically, a pair of rails is used and the load acts in the centre of both rails. In this case the load capacity of the pair of rails is calculated as follows:

$$P_1 = 2 \cdot C_{0rad}$$

Some rails are more suited to axial loads and moment loads than others, dependent on their cross sectional form.

Rail shape

The different rail profiles and sizes allow rails to be chosen to suit various applications e.g.

L1984 - thin section.
L1992 - thin section (but lighter duty).
L1986 - low height.
L1988 - low height.
L1995 - very heavy duty.
L1996 - very heavy duty.

Technical Information

Anti-corrosion treatments

Anti-corrosion treatments

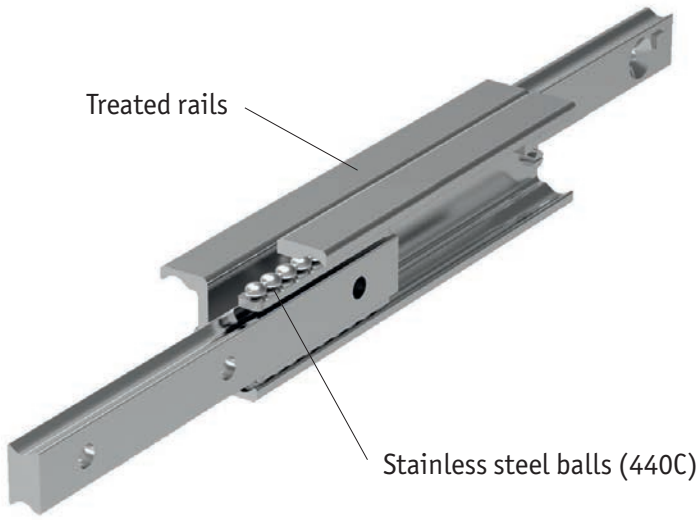
The telescopic slides have a standard electrolytic zinc plate coating (to ISO 2081).

We offer a number of alternatives to increase the anti-corrosion protection including nickel plating.

However, our preferred and most effective solution to inhibit corrosion is to apply a special corrosion resistant (Lanthane) plating to the rails and sliders and to combine this with stainless steel ball bearings.

This coating is applied after the zinc plating process and is a special trivalent chromium passivation that is approximately 15 microns thick (and is free of Chromium VI).

This applies a nano-particle coating and has extremely good results of 200 hours in salt spray tests before any signs of white rust.



Use with stainless steel fixing screws, strength class 10,9

Salt Spray Test (to DIN EN ISO 9227 NSS)



Coating after 720 hours salt spray



Chemical nickel plating after 360 hours

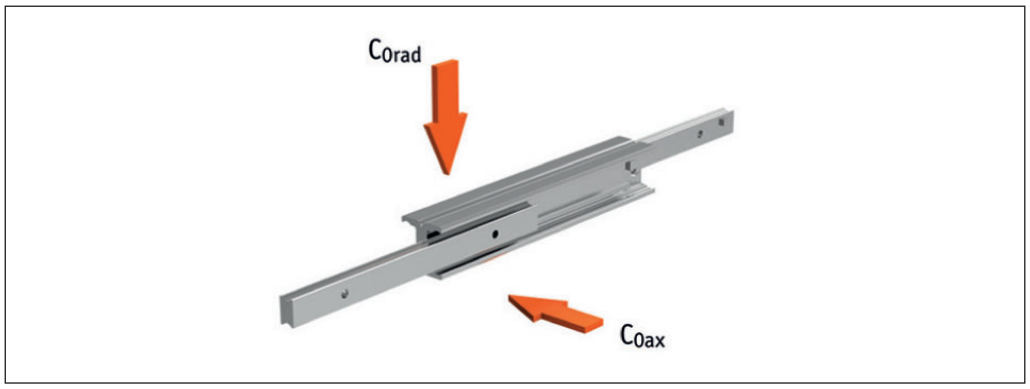
Testing conducted by independent institute

The coating on the telescopic slides is a soft coating and will (over time) wear off the raceways (which are subject to loads from the ball bearings) – this can be seen sometimes by a thin line on the raceways.

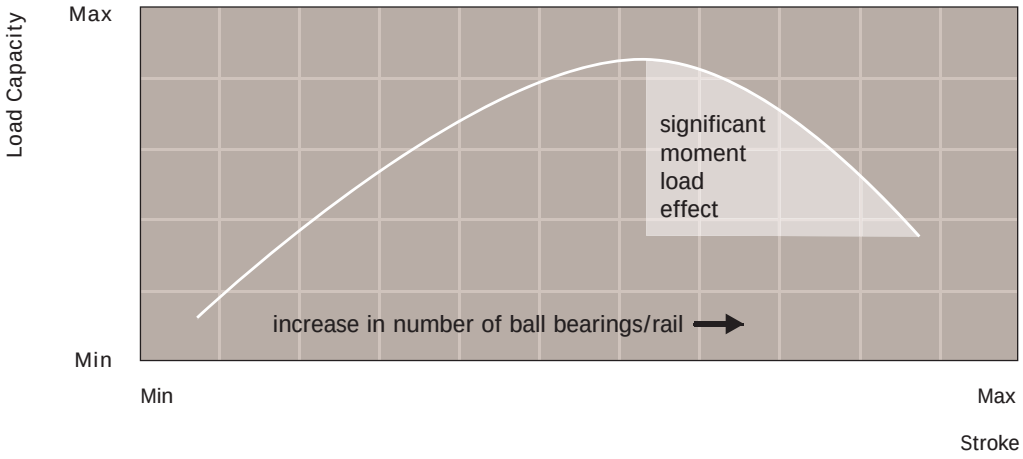
However lubricating the raceways with grease (as recommended) ensures, as far as possible, the good corrosion properties of the overall coating.

Wherever possible the telescopic rails should be used so that the main load applied is a radial load on the telescopic rail. Only certain types of our telescopic rails can accept axial loads.

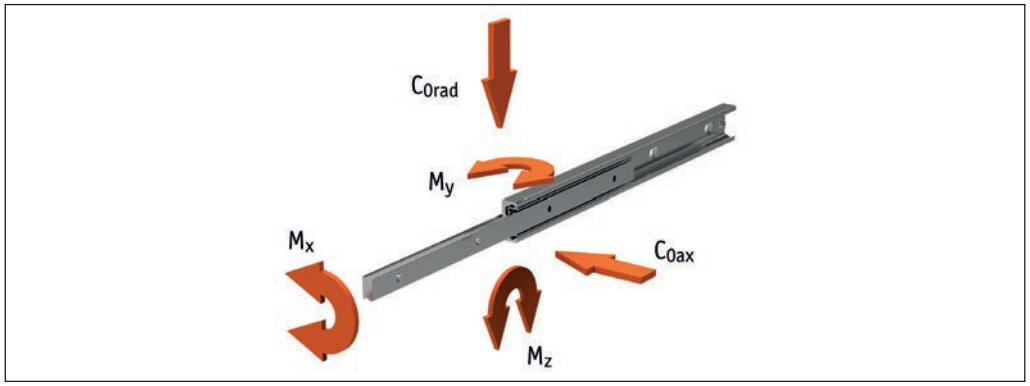
Typically the radial load is around an extra 60% to 100% of the axial load. All our load figures are shown per rail and assume that the load is centred about the mid-extended position of the rails.



For telescopic rails with an upper and lower element, the moving element should be the lower element. A typical telescopic rail size will have then following load capacity profile:-



Partially telescopic rails will have a considerably higher load capacity than fully telescopic rails, so if you have space to fit a partially telescopic rail (say 50% extension) then choosing this type can allow a smaller profile size rail to be chosen, reducing the cost. Partially telescopic rails can also accept some moment loads.



For the load ratings to apply the structure to which they are mounted must be rigid and not distorted, and all the fixing holes for the mounting screws should be used.

Increasing the stroke

The stroke of many of the rails can be increased slightly from the standard.

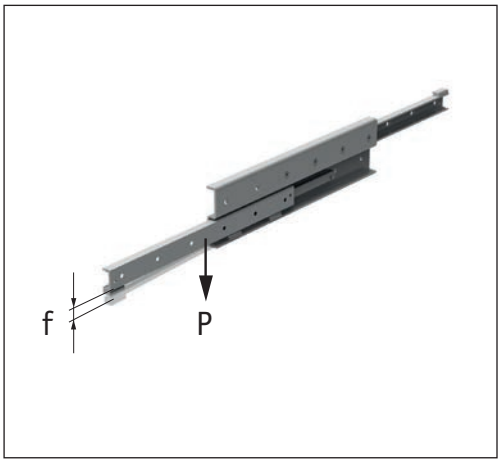
This is achieved by reducing the length of the ball cage in the rail. This will have the effect of reducing the load capacity of the rail - in this case for a correct load rating please consult our Technical Department.

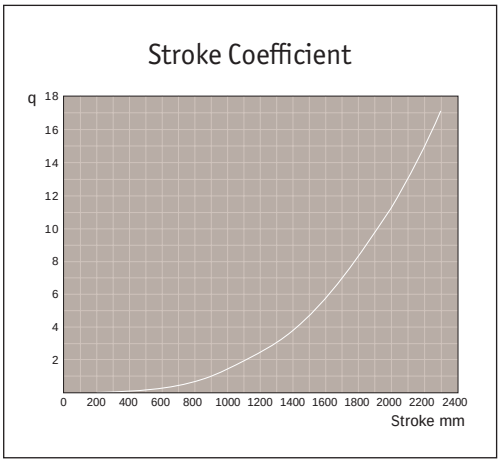
Typically a 100% stroke rail can be increased to a maximum stroke of 130% (of the closed length of the rail) and a partial extension stroke rail (50% extension) can be increased to a maximum of 65%.

Please see the table in the technical pages which shows how special stroke rails can be specified.

Deflection

The maximum deflection allowed should also be considered.





If the load P acts vertically on the rail, then the expected elastic deflection of the individual telescopic rail in the extended state can be found by:

$$f = \frac{q}{t} \cdot P$$

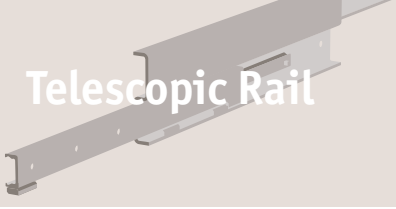
f = expected elastic deflection (in mm)
q = stroke coefficient (see graph)
t = factor depending on the model of the telescopic rail (see below)
P = actual load acting on the centre of a rail, in N

L1984.28	t = 180	L1986.63	t = 540
L1984.35	t = 470	L1988.22	t = 3
L1984.43	t = 800	L1988.28	t = 8
L1984.43	t = 4000	L1988.35	t = 13
L1986.22	t = 8	L1988.43	t = 56
L1986.28	t = 17	L1992.LTF44	t = 25
L1986.35	t = 54	L1985.43	t = 3500
L1986.43	t = 120	L1985.43	t = 800

Note: This formula applies to a single rail. When using a rail pair, the load of the single rail is $P = P_1/2$. This estimated value assumes an absolutely rigid adjacent construction. If this rigidity is not present, the actual deflection will deviate from the calculation.

Important: With the partial extensions series, the deflection is almost completely determined by the rigidity (i.e. by the moment of inertia) of the adjacent construction.

ov-telescopic-rail-prod-spec-b-lnh - Updated - 07-03-2023



Example of a special stroke

Product series	Maximum stroke as % of closed length
L1984	130%
L1986	130%
L1988	130%
L1994	65%

E.g. a standard stroke for L1984.435-0070 is 796mm.

This can be increased to 130% of 770 i.e. 1001 mm, but is limited by the factor in the table below (in this example the stroke modification is 30mm):

Standard stroke: 796mm

Stroke modification: 30mm (ball spacing)

e.g. extra ... 826, 856, 886, 916... 976

Therefore the part number for the maximum stroke would be:

Special strokes

Special strokes are defined as deviations from standard stroke l_2. Increasing the stroke involves reducing the length of the ball cage and number of balls. This in turn reduces the rail load capacity. To confirm the reduced rail load capacity figures, please contact our Technical Department.

These values are dependent on the spacing of the ball cage (i.e. by reducing the number of balls the stroke can be increased).

Type	Size	Stroke modification mm
L1984 L1986 L1988	28	19
	35	24
	43	30
L1994	28	9,5
	35	12
	43	15

No stroke modification is possible for series L1984 and L1985. Each stroke modification influences the load capabilities stated in the catalogue. It can happen that after a stroke modification, important fastening holes are no longer accessible. For more infomation, please consult our Technical Department. Stroke modification of series L1996 on request.

Technical Information

Product specification

External stops

On many of our rails, light duty end stops are built into the rail. These are only to stop movement when not loaded - they are not designed to stop a moving, loaded slide.

External end stops must be designed into systems to prevent any damage to the telescopic rails (some examples are shown below).



Rubber bumper stop

Shock absorber stop

Fixed stop with spring plunger

Locking systems

For the L1984 series telescopic rails, there is an optional locking system unit (for locking in the closed position). This would be used for example in transport sector applications (military, rail etc.) where there is often a need to have the slide locked off during vehicle movement.

For locking in the up position (if required) customers design their own locking system (in built in their designed structure).

Rigidity and alignment of structure

To get the best life, minimum rail deflection, and smoothness of movement, it is very important that the slides are installed (using all the accessible mounting holes) onto a rigid, parallel, plane structure.

The fixed and moving part of the slides assume the rigidity of the mounting structure.

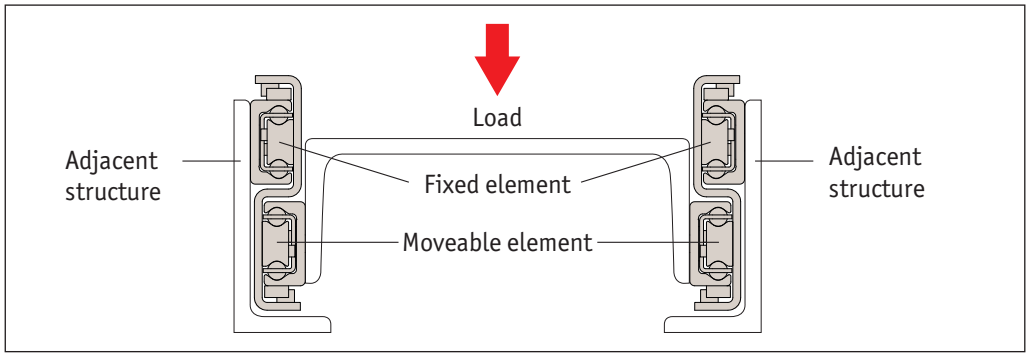
Lubrication

Recommended lubrication intervals are heavily dependent upon the ambient conditions, speed and temperature. Under normal conditions, lubrication is recommended after 100 Km of operational performance or after an operating period of six months. In critical application cases the interval should be shorter.

Please clean the raceways carefully before lubrication. Raceways and spaces of the ball cage are lubricated with a lithium lubricant of average consistency (roller bearing lubricant).

Different lubricants for special applications are available upon request, e.g. lubricant with FDA approval is available for use in the food industry.

Installation instructions



General

- Internal stops are used to stop the unloaded slider and the ball cage. Please use external stops as end stops for a loaded system.
- To achieve optimum running properties, high service life and rigidity, it is necessary to fix the telescopic rails with all accessible holes onto a rigid and level surface. When using two telescopic rails, please observe the parallelism of the installation surfaces. The fixed and moveable rails fit to the rigid assembly construction.
- Our telescopic rails are suitable for continuous use in automatic systems. For this, the stroke should remain constant in all moving cycles and the operating speed must be checked.
  The movement of the telescopic rails is enabled by internal ballcages, which may experience an offset from the original position with differing strokes. This phase offset can have a negative effect on the running properties or limit the stroke. If differing strokes occur in an application, the drive force must be sufficient to appropriately synchronise the ball cage offset. Otherwise, an additional maximum stroke must be planned regularly to ensure the correct position of the ballcage.

L1994

- The L1994 series accepts radial and axial loads as well as moment loads in all principle directions.
- Horizontal preferred (vertical application is possible, but prior to vertical installation, we recommend you consult our Technical Department).
- The installation of two partial extensions on a single profile provides a very high load capacity full extension, please consult our Technical Department.

L1986 and L1988

- The L1986 and L1988 series accept radial and axial loads.
- Horizontal preferred (vertical application is possible, but prior to vertical installation, we recommend you consult our Technical Department).

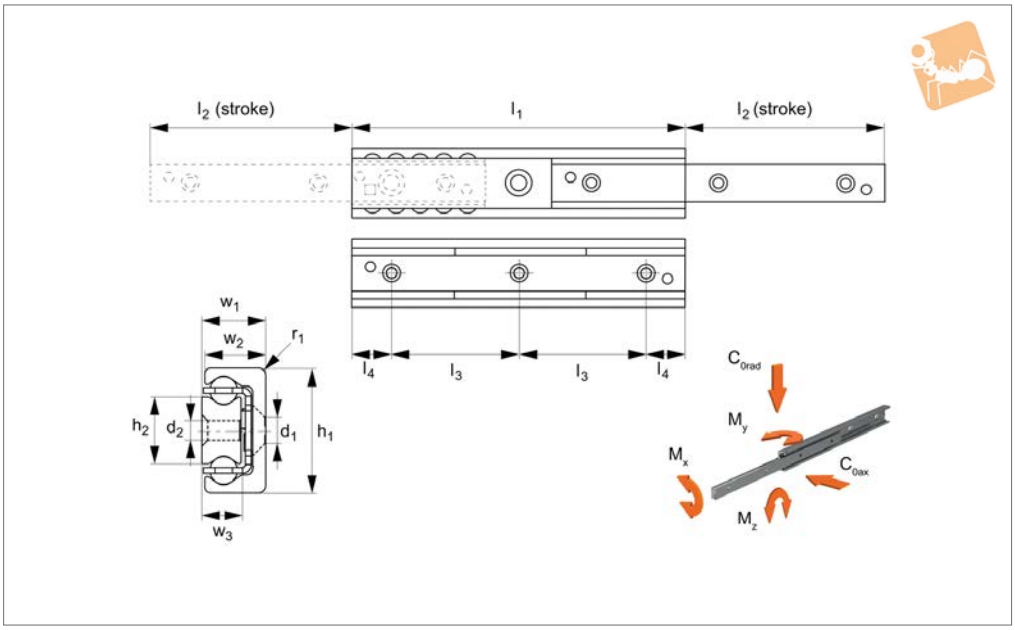
L1984, L1992, L1996, L1985 and L1989

- The L1984, L1992, L1996, L1995 and L1989 series accept radial loads. This should act in the vertical cross-sectional axis on the moveable rails.
- Horizontal preferred (vertical application is possible, but prior to vertical installation, we recommend you consult our Technical Department).
- When installing make sure that the load is placed on the moveable element (the lower rail). The opposite assembly negatively affects smooth movement and load capacity of the telescopic stroke.
- Installation must be done on a rigid, adjacent construction using all accessible fixing holes.
- Pay attention to the parallel alignment during assembly with a paired application.

Partially Telescopic Slides
size 22



L1994.22



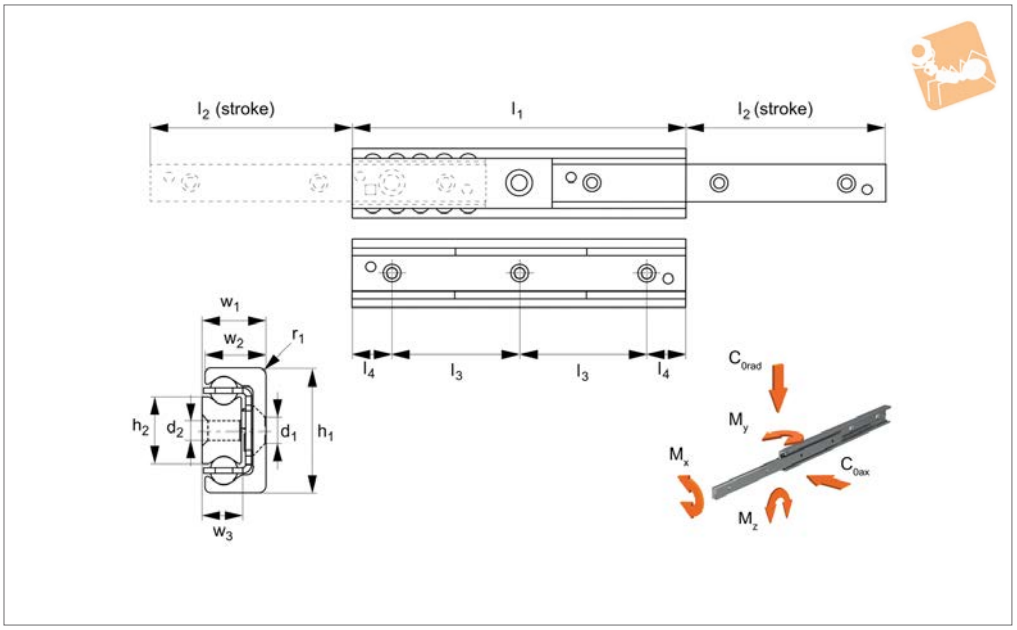
Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid telescopic slides with high load capacities, offering a semi-telescopic movement. C_{0rad} is the load rating for a single telescopic slide. They have very low deflection characteristics.
Weight 1,32 Kg/m.
Temperature range: -30°C to +170°C.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Special strokes up to 65% of the closed length can be provided on request.

Important Notes
d_1 and d_2 for M4 threads.
r = 3.

Order No.	l_1	l_2	h_1	w_1	l_3	l_4	h_2	w_2	w_3	No. of holes	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	M_x Nm	M_y Nm	M_z Nm
L1994.22-0130	130	76	22	11	80	25	11,3	10,25	6,5	2	219	313	5,7	10	15
L1994.22-0210	210	111	22	11	80	25	11,3	10,25	6,5	3	501	715	10,7	36	51
L1994.22-0290	290	154	22	11	80	25	11,3	10,25	6,5	4	696	994	14,9	69	99
L1994.22-0370	370	196	22	11	80	25	11,3	10,25	6,5	5	895	1278	19	113	162
L1994.22-0450	450	231	22	11	80	25	11,3	10,25	6,5	6	1190	1701	24	180	258
L1994.22-0530	530	274	22	11	80	25	11,3	10,25	6,5	7	1385	1979	28,2	248	355
L1994.22-0610	610	316	22	11	80	25	11,3	10,25	6,5	8	1584	2262	32,3	327	467
L1994.22-0690	690	351	22	11	80	25	11,3	10,25	6,5	9	1882	2689	37,3	436	623
L1994.22-0770	770	394	22	11	80	25	11,3	10,25	6,5	10	2077	2967	41,5	539	769





L1994.28

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid telescopic slides with high load capacities, offering a semi-telescopic movement. C_{0rad} is the load rating for a single telescopic slide. They have very low deflection characteristics.
Weight 2,02 Kg/m.
Temperature range: -30°C to +170°C.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Special strokes up to 65% of the closed length can be provided on request.

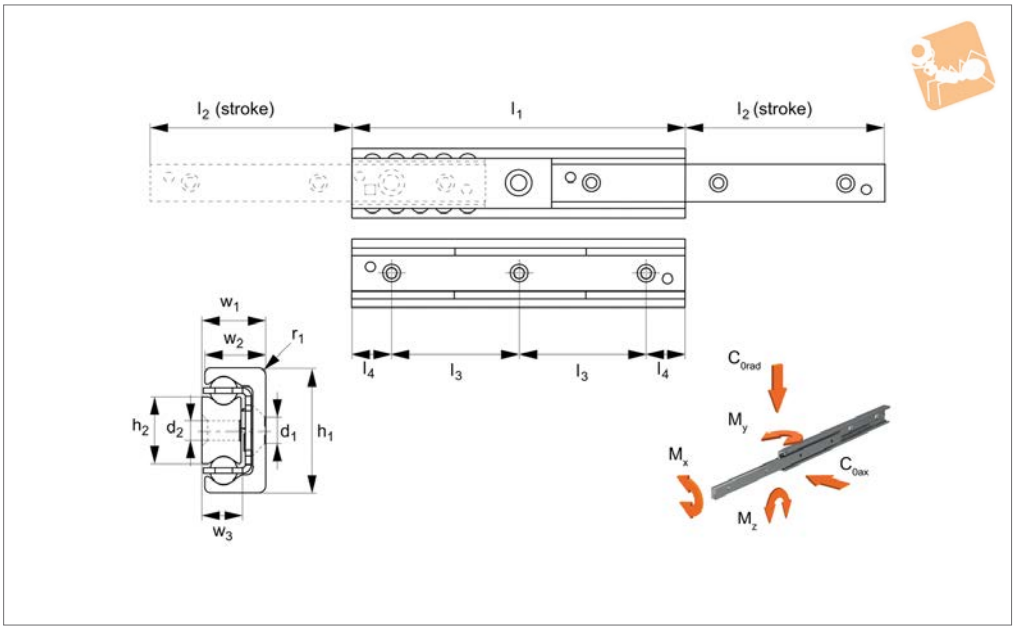
Important Notes
d_1=Ø5.5 and d_2=M5.
r=1.

Order No.	l_1	l_2 stroke	h_1	w_1	l_3	l_4	h_2	w_2	w_3	No. of holes	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	M_x Nm max.	M_y Nm max.	M_z Nm max.
L1994.28-0130	130	74	28	13	80	25	15	12,3	7,5	2	452	645	17	23	30
L1994.28-0210	210	116	28	13	80	25	15	12,3	7,5	3	816	1165	27,5	60	86
L1994.28-0290	290	148	28	13	80	25	15	12,3	7,5	4	1413	2019	41	135	190
L1994.28-0370	370	190	28	13	80	25	15	12,3	7,5	5	1780	2543	52	215	309
L1994.28-0450	450	232	28	13	80	25	15	12,3	7,5	6	2148	3069	64	316	450
L1994.28-0530	530	274	28	13	80	25	15	12,3	7,5	7	2517	3595	74	438	625
L1994.28-0610	610	316	28	13	80	25	15	12,3	7,5	9	2906	4151	83,5	579	822
L1994.28-0690	690	358	28	13	80	25	15	12,3	7,5	9	3266	4666	95	738	1055
L1994.28-0770	770	400	28	13	80	25	15	12,3	7,5	10	3634	5192	107	916	1310
L1994.28-0850	850	433	28	13	80	25	15	12,3	7,5	11	4232	6045	120	1166	1667
L1994.28-0930	930	475	28	13	80	25	15	12,3	7,5	12	4584	6549	129	1392	1991
L1994.28-1010	1010	517	28	13	80	25	15	12,3	7,5	13	4952	7074	141	1637	2333
L1994.28-1090	1090	559	28	13	80	25	15	12,3	7,5	14	5267	7709	151	1896	2709
L1994.28-1170	1170	601	28	13	80	25	15	12,3	7,5	15	5688	8125	162	2178	3111

Partially Telescopic Slides
size 35



L1994.35



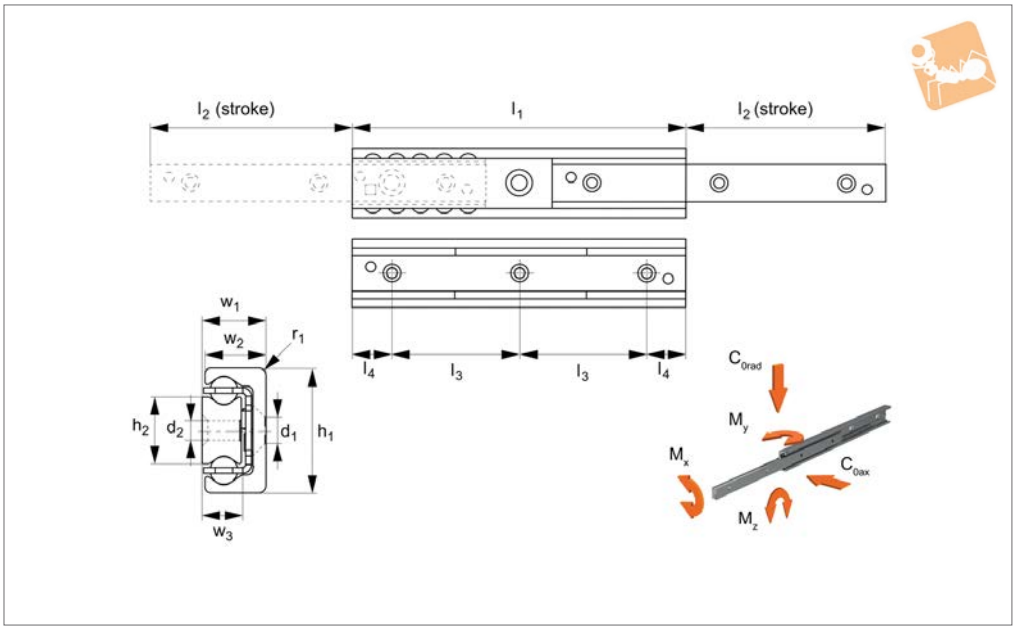
Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid teles-copic slides with high load capacities, offe-ring a semi-telescopic movement. C_{0rad} is the load rating for a single telescopic slide. They have very low deflection characteristics.
Weight 3,05 Kg/m.
Temperature range: -30°C to +170°C.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Special strokes up to 65% of the closed length can be provided on request.

Important Notes
d_1=Ø6.5 and d_2=M6
r=2.

Order No.	l_1	l_2 stroke	h_1	w_1	l_3	l_4	h_2	w_2	w_3	No. of holes	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	M_x Nm max.	M_y Nm max.	M_z Nm max.	Weight kg
L1994.35-0210	210	127	35	17	80	25	15,8	16,5	10	3	763	1090	37	63	90	0,63
L1994.35-0290	290	159	35	17	80	25	15,8	16,5	10	4	1471	2101	56	155	218	0,87
L1994.35-0370	370	203	35	17	80	25	15,8	16,5	10	5	1880	2686	69	247	348	1,11
L1994.35-0450	450	247	35	17	80	25	15,8	16,5	10	6	2289	3271	80,5	365	515	1,35
L1994.35-0530	530	279	35	17	80	25	15,8	16,5	10	7	3045	4350	101	553	787	1,59
L1994.35-0610	610	323	35	17	80	25	15,8	16,5	10	8	3452	4932	113	722	1027	1,85
L1994.35-0690	690	367	35	17	80	25	15,8	16,5	10	9	3860	5514	125	914	1296	2,07
L1994.35-0770	770	399	35	17	80	25	15,8	16,5	10	10	4629	6614	143,5	1203	1711	2,31
L1994.35-0850	850	443	35	17	80	25	15,8	16,5	10	11	5035	7192	157	1446	2063	2,55
L1994.35-0930	930	487	35	17	80	25	15,8	16,5	10	12	5440	7773	170	1713	2441	2,79
L1994.35-1010	1010	519	35	17	80	25	15,8	16,5	10	13	6218	8882	186	2104	3002	3,03
L1994.35-1090	1090	563	35	17	80	25	15,8	16,5	10	14	6609	9504	201	24122	3457	3,27
L1994.35-1170	1170	607	35	17	80	25	15,8	16,5	10	15	7026	10037	215	2764	3946	3,51
L1994.35-1250	1250	639	35	17	80	25	15,8	16,5	10	16	7798	11288	232	3256	4648	3,75
L1994.35-1330	1330	683	35	17	80	25	15,8	16,5	10	17	8209	11728	244,5	3652	5211	3,99
L1994.35-1410	1410	727	35	17	80	25	15,8	16,5	10	18	8726	12338	257	4070	5809	3,99
L1994.35-1490	1490	759	35	17	80	25	15,8	16,5	10	19	9396	13423	273	4663	6654	4,47





L1994.43

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid telescopic slides with high load capacities, offering a semi-telescopic movement. C_{0rad} is the load rating for a single telescopic slide. They have very low deflection characteristics.
Weight 5,25 Kg/m.
Temperature range: -30°C to +170°C.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Special strokes up to 65% of the closed length can be provided on request.

Important Notes
d_1=Ø8.5 and d_2=M8.
r=2,5.

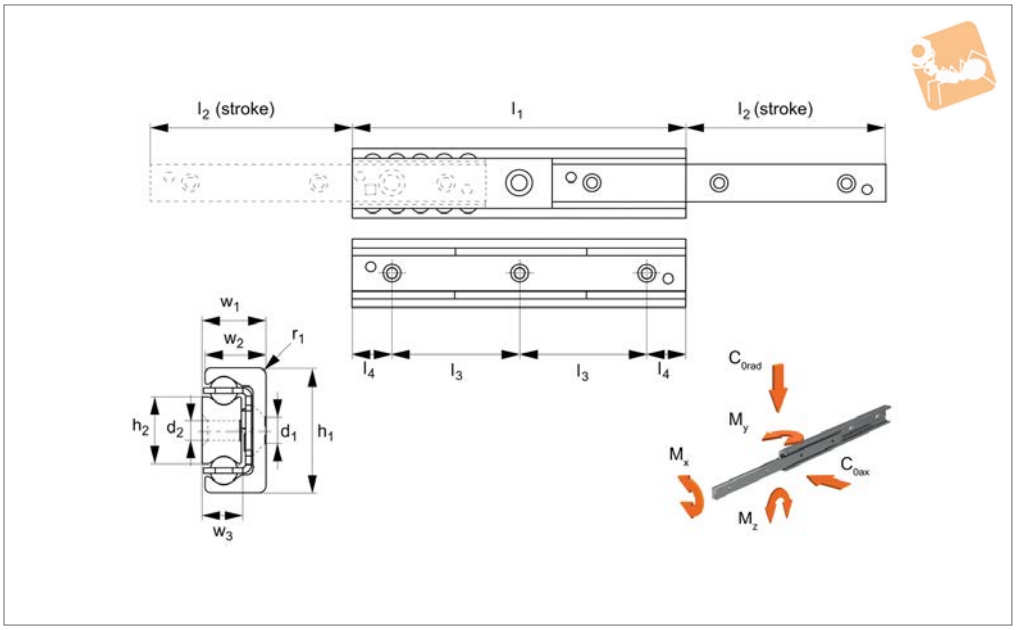
Order No.	l_1	l_2 stroke	h_1	w_1	l_3	l_4	h_2	w_2	w_3	No. of holes	Load (per rail) C_{0ax} N max.	Load (per rail) C_{0rad} N max.	M_x Nm max.	M_y Nm max.	M_z Nm max.
L1994.43-0210	210	123	43	22	80	25	23	21	13,5	3	1190	1700	62	89	123
L1994.43-0290	290	158	43	22	80	25	23	21	13,5	4	2123	3033	96,5	204	294
L1994.43-0370	370	208	43	22	80	25	23	21	13,5	5	2482	3546	119	313	444
L1994.43-0450	450	243	43	22	80	25	23	21	13,5	6	3436	4909	151	514	735
L1994.43-0530	530	278	43	22	80	25	23	21	13,5	7	4415	6308	184	766	1092
L1994.43-0610	610	313	43	22	80	25	23	21	13,5	8	5410	7728	210	1069	1525
L1994.43-0690	690	363	43	22	80	25	23	21	13,5	9	5730	8185	240	1297	1853
L1994.43-0770	770	398	43	22	80	25	23	21	13,5	10	6533	9490	273	1687	2405
L1994.43-0850	850	433	43	22	80	25	23	21	13,5	11	7432	10617	305	2120	3030
L1994.43-0930	930	483	43	22	80	25	23	21	13,5	12	8034	11477	331	2442	3489
L1994.43-1010	1010	518	43	22	80	25	23	21	13,5	13	9031	12902	362,5	2964	4233
L1994.43-1090	1090	568	43	22	80	25	23	21	13,5	14	9904	13360	384	3343	4775
L1994.43-1170	1170	603	43	22	80	25	23	21	13,5	15	10342	14774	417	3945	5636
L1994.43-1250	1250	638	43	22	80	25	23	21	13,5	16	11198	16048	450	4602	6575
L1994.43-1330	1330	688	43	22	80	25	23	21	13,5	17	11654	16649	470,5	5067	7237
L1994.43-1410	1410	723	43	22	80	25	23	21	13,5	18	12618	17963	505	5809	8300
L1994.43-1490	1490	758	43	22	80	25	23	21	13,5	19	13366	19094	538	6601	9427
L1994.43-1570	1570	793	43	22	80	25	23	21	13,5	20	14532	20704	572	7442	10630
L1994.43-1650	1650	843	43	22	80	25	23	21	13,5	21	14964	21378	593,5	8032	11476
L1994.43-1730	1730	878	43	22	80	25	23	21	13,5	22	15962	22796	626	8961	12799
L1994.43-1810	1810	928	43	22	80	25	23	21	13,5	23	16274	23249	650	9603	13722
L1994.43-1890	1890	963	43	22	80	25	23	21	13,5	24	17142	24213	684	10619	15170

Partially Telescopic Slides

size 43



Order No.	l_1	l_2 stroke	h_1	w_1	l_3	l_4	h_2	w_2	w_3	No. of holes	Load (per rail) C_0 ^{ax} N max.	Load (per rail) C_0 ^{rad} N max.	M_x Nm max.	M_y Nm max.	M_z Nm max.
L1994.43-1970	1970	1013	43	22	80	25	23	21	13,5	25	17585	25122	709	11320	16169





L1994.63

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid telescopic slides with high load capacities, offering a semi-telescopic movement. C_{0rad} is the load rating for a single telescopic slide. They have very low deflection characteristics.
Weight 10,3 Kg/m.
Temperature range: -30°C to +170°C.

Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Special strokes up to 65% of the closed length can be provided on request.

Important Notes
d_1 (for DIN7984 cap screws) and d_2 for M8 threads.
h_3 = 2 x 45°.

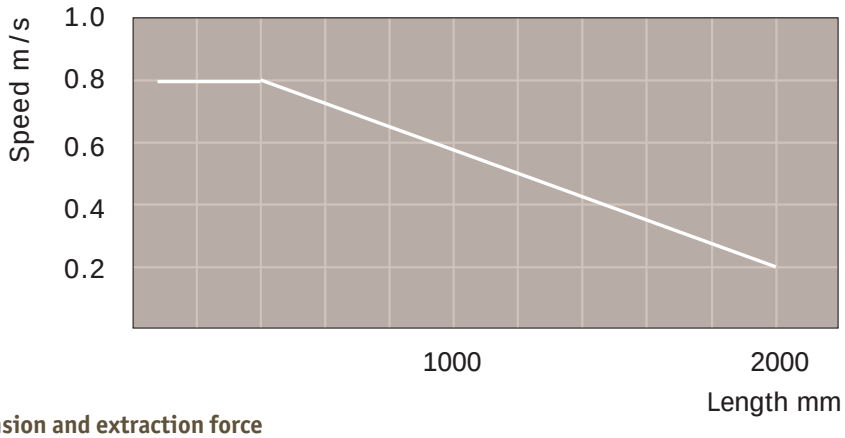
Order No.	l_1	l_2	h_1	w_1	l_3	l_4	h_2	w_2	w_3	No. of holes	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	M_x Nm max.	M_y Nm max.	M_z Nm max.
L1994.63-0610	610	333	63	29	80	25	29,3	28	10,5	8	7414	10591	474	1553	2219
L1994.63-0690	690	373	63	29	80	25	29,3	28	10,5	9	8774	12534	547	2072	2960
L1994.63-0770	770	413	63	29	80	25	29,3	28	10,5	10	10142	14489	621	2666	3808
L1994.63-0850	850	453	63	29	80	25	29,3	28	10,5	11	11516	16452	694	3334	4763
L1994.63-0930	930	493	63	29	80	25	29,3	28	10,5	12	12985	18421	768	4077	5824
L1994.63-1010	1010	533	63	29	80	25	29,3	28	10,5	13	14277	20395	841	4894	6992
L1994.63-1090	1090	573	63	29	80	25	29,3	28	10,5	14	15661	22373	914	5787	8267
L1994.63-1170	1170	613	63	29	80	25	29,3	28	10,5	15	17048	24354	988	6754	9648
L1994.63-1250	1250	653	63	29	80	25	29,3	28	10,5	16	18436	26337	1061	7795	11136
L1994.63-1330	1330	693	63	29	80	25	29,3	28	10,5	17	19825	28322	1135	8912	12731
L1994.63-1410	1410	733	63	29	80	25	29,3	28	10,5	18	21216	30309	1208	10102	14432
L1994.63-1490	1490	773	63	29	80	25	29,3	28	10,5	19	22608	32297	1282	11368	16240
L1994.63-1570	1570	813	63	29	80	25	29,3	28	10,5	20	24001	34287	1355	12708	18155
L1994.63-1650	1650	853	63	29	80	25	29,3	28	10,5	21	25394	36277	1429	14123	20176
L1994.63-1730	1730	893	63	29	80	25	29,3	28	10,5	22	26788	38268	1502	15631	22304
L1994.63-1810	1810	933	63	29	80	25	29,3	28	10,5	23	28182	40261	1576	17177	24539
L1994.63-1890	1890	973	63	29	80	25	29,3	28	10,5	24	29577	42253	16479	18816	26880
L1994.63-1970	1970	1013	63	29	80	25	29,3	28	10,5	25	30973	44247	1723	20530	29328

Technical Information

Operating details

Speed

The maximum operating speed is determined by the mass of the intermediate element, which moves with the movable rail. This reduces the maximum permissible operating speed with the increasing length.



Extension and extraction force

The required actuation forces of a telescopic rail depend on the acting load and the deflection in the extended state. The force required for opening is principally determined by the coefficient of friction of the linear bearing, with correct assembly and lubrication, this is 0,01.

During the extension, the force is reduced with the elastic deflection of the loaded telescopic rail. A higher force is required to close a telescopic extension, since, based on the elastic deflection, even if it is minimal, the moveable rail must move against an inclined plane.

Double-sided stroke

For all designs allowing double-sided stroke, it must be carefully noted that the position of the intermediate element is defined only in the extended state.

In the extracted state, the intermediate element may protrude by half of its length on each side (with the exception of both the L1994 series, (which comes out as a partial extension without the intermediate element) and the custom design of series L1986 which can be supplied with special driving disc on request.

The double-sided stroke in series L1994, L1986 and L1988 is achieved by removing the set screw.

For series L1984 version D, the double-sided stroke is achieved with a special set-up so that two types of rails are shown in the catalogue L1986 (single extension) and L1986 (double extension).

The double-sided stroke for series DMS is available on request. Series L1984.DSB (locking version), L1985 and L1992 are not available with double-sided stroke.

Temperature range

- Series L1994, L1986, L1988 and L1992 can be used up to an ambient temperature of +170°C. A lithium lubricant for high operating temperature is recommended for temperatures above 130°C.
- Series L1984 and L1985 have a useable range of -30°C to +110°C due to the rubber stop.

Service life

The service life is defined as the time span between commissioning and the first fatigue or wear indications on the raceway. The service life of a telescopic rail is dependent on several factors, such as the effective load, the installation precision, occurring shocks and vibrations, the operating temperature, the ambient conditions and the lubrication.
Calculation of the service life is based exclusively on the loaded rows of balls.

In practice, the decommissioning of the bearing, due to its destruction or extreme wear of a component, represents the end of service life.

This is taken into account by an application coefficient (f_i), so the service life consists of:

$$L_{Km} = 100 \cdot \left(\frac{\delta}{W} \cdot \frac{1}{f_i} \right)^3$$

L = calculated service life in Km
δ = load capacity factor in N (see tables on following pages)
W = equivalent load in N
f_i = application coefficient

Application coefficient f_i

Operating conditions	Safety factor (.fi)
Neither shocks or vibrations, smooth and low-frequency direction change, clean environment	1,3 - 1,8
Light vibrations and average direction change	1,8 - 2,3
Shocks and vibrations, high-frequency direction change, very dirty environment	2,3 - 3,5

If the external load, P, is the same as the dynamic load capacity, C_{0rad} (which of course must never be exceeded), the service life at ideal operating conditions ($f_i = 1$) is 100Km.

For a single load P, the following applies: W = P.

If several external loads occur simultaneously, the equivalent load is calculated as follows:

$$W = P_{rad} + \left(\frac{P_{ax}}{C_{0ax}} + \frac{M_1}{M_x} + \frac{M_2}{M_y} + \frac{M_3}{M_z} \right) \cdot C_{0rad}$$



Static load

The telescopic extension of the various series accept different forces and moments loads.

During the static tests the radial load capacity, C_{0rad}, the axial load capacity, C_{0ax}, and the moments M_x, M_y and M_z indicate the maximum permissible values of the loads; higher loads negatively effect the running properties and the mechanical strength.

A safety factor, z, is used to check the static load, which takes into account the basic parameters of the application and is defined in more detail in the following table.

Safety factor Z

Basic parameters of the application	Safety factor, z
Neither shocks or vibrations, smooth and low-frequency reverse, high assembly accuracy, no elastic deformations	1 - 1,5
Normal installation conditions	1,5 - 2
Shocks and vibrations, high-frequency, significant elastic deformation	2 - 3,5

The ratio of the actual load to maximum permissible load may be as large as the reciprocal of the accepted safety factor, z, at the most.

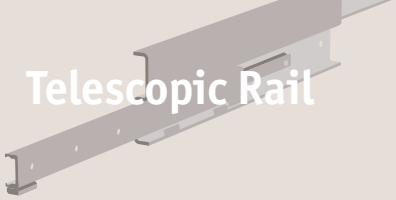
$$\frac{P_{0rad}}{C_{0rad}} \leq \frac{1}{z} \quad \left| \quad \frac{P_{0ax}}{C_{0ax}} \leq \frac{1}{z} \right. \quad \left| \quad \frac{M_1}{M_x} \leq \frac{1}{z} \right. \quad \left| \quad \frac{M_2}{M_y} \leq \frac{1}{z} \right. \quad \left| \quad \frac{M_3}{M_z} \leq \frac{1}{z} \right.$$

The above formulae are valid for a single load case. If two or more of the described forces act simultaneously, the following check must be made:

$$\frac{P_{0rad}}{C_{0rad}} + \frac{P_{0ax}}{C_{0ax}} + \frac{M_1}{M_x} + \frac{M_2}{M_y} + \frac{M_3}{M_z} \leq \frac{1}{z}$$

P_{0rad} = effective radial load
C_{0rad} = permissible radial load
P_{0ax} = effective axial load
C_{0ax} = permissible axial load
M_1 = effective moment in the X direction
M_x = permissible moment in the X direction
M_2 = effective moment in the Y direction
M_y = permissible moment in the Y direction
M_3 = effective moment in the Z direction
M_z = permissible moment in the Z direction

ov-telescopic-rail-load-capacity-a-lnh - Updated - 07-03-2023



Length mm	L1984		
	28	35	43
	δ N		
290	863		
370	1164	1533	2288
450	1466	1892	4055
530	1768	2540	3120
610	2078	2878	3929
690	2381	3217	4197
770	2684	3881	5010
850	3180	4218	5836
930	3474	4555	6090
1010	3778	5226	6916
1090	4081	5561	7750
1170	4384	5897	7646
1250	4896	6573	8829
1330	5193	6907	9077
1410	5496	7242	9909
1490	5806	7920	10746
1570		8253	10988
1650		8588	11825
1730		9268	12665
1810			12904
1890			13743
1970			13983

Data to be used for service life (L_{Km}) calculations.

Telescopic Rail from Automotion Components

Technical Information

Load capacity factor δ



Length mm	L1986 and L1988		
	28	35	43
	δ N		
130	357		
210	655	614	923
290	1153	1211	1687
370	1456	1552	1974
450	1759	1892	2764
530	2063	2540	3580
610	2372	2878	4414
690	2675	3217	4661
770	2979	3881	5493
850	3487	4218	6335
930	3783	4555	6572
1010	4086	5226	7411
1090	4388	5561	8257
1170	4691	5897	8489
1250		6573	9332
1330		6907	9568
1410		7242	10409
1490		7920	11255
1570			12105
1650			12330
1730			13178
1810			13406
1890			14252
1970			14483

Data to be used for service life (L_{Km}) calculations.

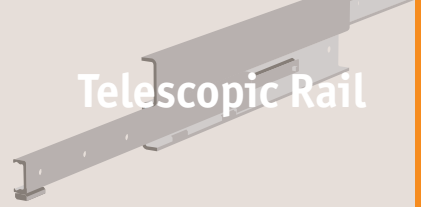
Length mm	L1992
	43
	δ N
200	163
225	191
250	215
275	243
300	267
325	295
350	319
375	347
400	372
425	400
450	424
500	476
550	529
600	581
650	633
700	686
750	738
800	791
850	843
900	896
950	948
1000	1000

Data to be used for service life (L_{Km}) calculations.

Length mm	L1985
	43
	δ N
770	5160
850	5306
930	5424
1010	5522
1090	5605
1170	5675
1250	5736
1330	5789
1410	5836
1490	5878
1570	5915
1650	5948
1730	5978
1810	6005
1890	6030
1970	6053
2050	29341
2130	28763
2210	30595

Data to be used for service life (L_{Km}) calculations.

Telescopic Rail from Automotion Components



Technical Information

Load capacity factor δ



Length mm	L1994		
	28	35	43
	δ N		
130	872		
210	1577	1533	2288
290	2692	2906	4055
370	3405	3721	4794
450	4119	4537	6602
530	4832	5990	8451
610	5557	6803	10325
690	6271	7617	11005
770	6984	9093	12877
850	8111	9903	14762
930	8811	10714	15429
1010	9524	12201	17310
1090	10237	13009	17981
1170	10950	13818	19860
1250		15311	21747
1330		16118	22411
1410		16925	24295
1490		18423	26186
1570			28083
1650			28733
1730			30626
1810			31281
1890			33172
1970			33829

Data to be used for service life (L_{Km}) calculations.

Telescopic Rail from Automotion Components

Tightening torques of the standard fixing screws to be used

Property class	Size	Tightening torque Nm
10,9	28	8,5
	35	14,6
	43	34,7

L1985.43 roller telescopic slides

Size	Screw type	d_1	d_2	l_1	l_2	s
43	M8 x 16	M8 x 1,25	16	16	3	T40

The L1985.43 telescopic slide must be fixed with a custom design of Torx® screws with low cap head. The screws are included.

All other rails are fixed with countersunk or cap head screws as per DIN 7991 or 7984.
In size 63 of the ASN and DMS series, Torx® screws with low head cap screws are available on request.

Technical support

We have a team of experienced technical support staff. It is often the case that we can provide a more cost-effective solution than customers could do simply by selecting parts from the catalogue. Please don't hesitate to ask for advice which we will be happy to provide.

CAD models

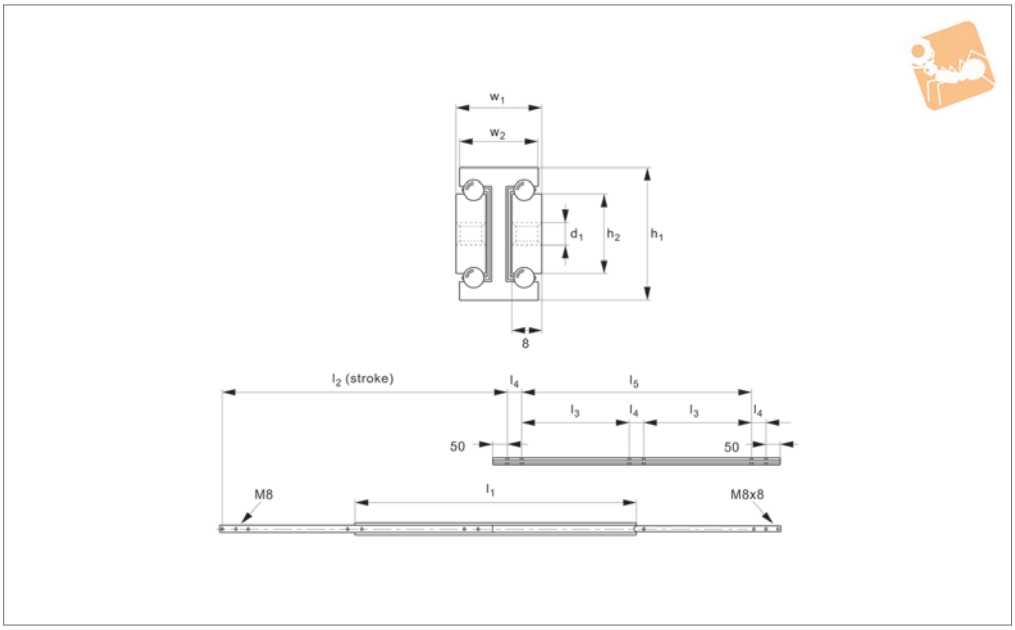
To speed up your design process, most of our telescopic rails have corresponding 3D CAD files directly downloadable from our website in a full range of CAD formats.

Aluminium Telescopic Slides

fully telescopic, size 40



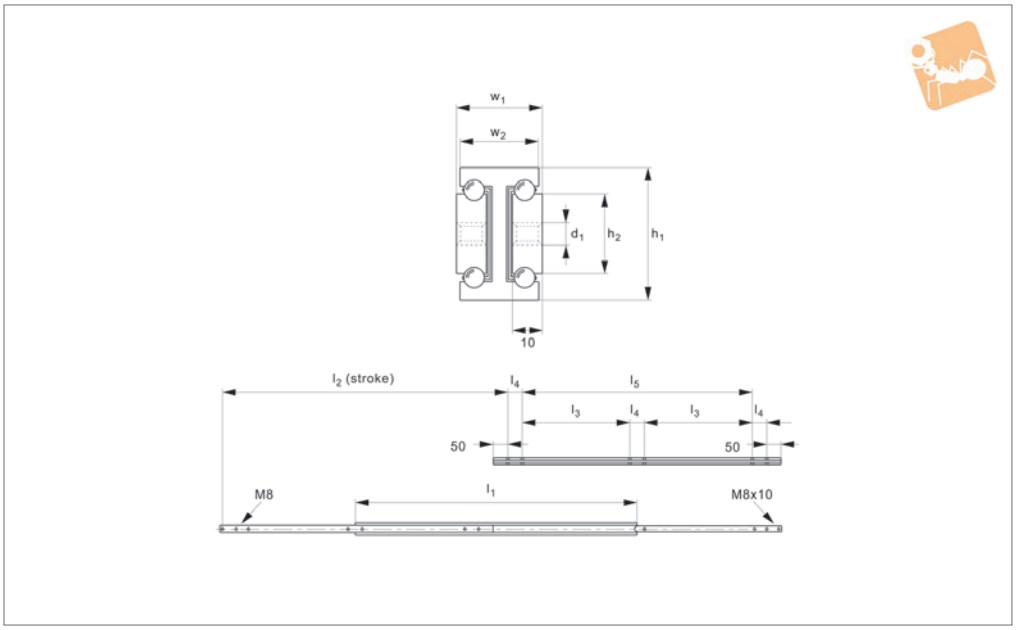
L2041



Material
High quality grade aluminium (EN-AW-6082 T6, anodised), with steel ball bearings and cage.

Technical Notes
Ideal for applications requiring lightweight yet robust telescopic slides (eg. aircraft seating).
Total length: = Installation length (l_1) + extension length (l_2).
The maximum safe load is given for a fully extended pair of slides, mounted on the major axis, with a load spread uniformly along the inner beam.

Order No.	l_1	l_2 stroke	h_1	h_2	d_1	l_3	l_4	l_5	w_1	w_2	Load/pair kg max.
L2041.0200	200	200	40	25	M8	-	-	50	24	22	70
L2041.0250	250	250	40	25	M8	-	50	50	24	22	75
L2041.0300	300	300	40	25	M8	-	100	50	24	22	80
L2041.0350	350	350	40	25	M8	-	150	50	24	22	85
L2041.0400	400	400	40	25	M8	-	200	50	24	22	90
L2041.0450	450	450	40	25	M8	-	250	50	24	22	95
L2041.0500	500	500	40	25	M8	-	300	50	24	22	100
L2041.0550	550	550	40	25	M8	150	-	50	24	22	105
L2041.0600	600	600	40	25	M8	175	-	50	24	22	110
L2041.0650	650	650	40	25	M8	200	-	50	24	22	105
L2041.0700	700	700	40	25	M8	225	-	50	24	22	100
L2041.0750	750	750	40	25	M8	250	-	50	24	22	95
L2041.0800	800	800	40	25	M8	275	-	50	24	22	90
L2041.0850	850	850	40	25	M8	300	-	50	24	22	85
L2041.0900	900	900	40	25	M8	325	-	50	24	22	80
L2041.0950	950	950	40	25	M8	350	-	50	24	22	75
L2041.1000	1000	1000	40	25	M8	375	-	50	24	22	70





L2042

Material
High quality grade aluminium (EN-AW-6082 T6, anodised), with steel ball bearings and cage.

Technical Notes
Ideal for applications requiring lightweight yet robust telescopic slides (eg. aircraft seating).
Total length: = Installation length (l_1) + extension length (l_2).
The maximum safe load is given for a fully extended pair of slides, mounted on the major axis, with a load spread uniformly along the inner beam.

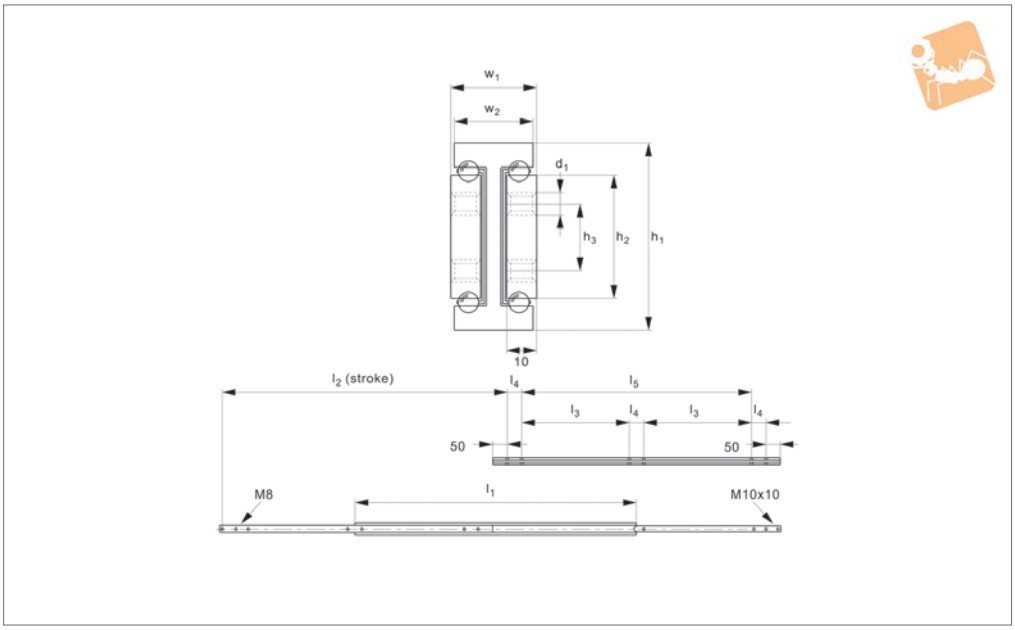
Order No.	l_1	l_2 stroke	h_1	h_2	d_1	l_3	l_4	l_5	w_1	w_2	Load/pair kg max.
L2042.0200	200	200	50	30	M8	-	-	50	30	25	100
L2042.0250	250	250	50	30	M8	-	50	50	30	25	105
L2042.0350	350	350	50	30	M8	-	150	50	30	25	115
L2042.0400	400	400	50	30	M8	-	200	50	30	25	120
L2042.0450	450	450	50	30	M8	-	250	50	30	25	125
L2042.0500	500	500	50	30	M8	-	300	50	30	25	130
L2042.0550	550	550	50	30	M8	150	-	50	30	25	135
L2042.0600	600	600	50	30	M8	175	-	50	30	25	140
L2042.0650	650	650	50	30	M8	200	-	50	30	25	135
L2042.0700	700	700	50	30	M8	225	-	50	30	25	130
L2042.0750	750	750	50	30	M8	250	-	50	30	25	125
L2042.0800	800	800	50	30	M8	275	-	50	30	25	120
L2042.0850	850	850	50	30	M8	300	-	50	30	25	115
L2042.0900	900	900	50	30	M8	325	-	50	30	25	110
L2042.0950	950	950	50	30	M8	350	-	50	30	25	105
L2042.1000	1000	1000	50	30	M8	375	-	50	30	25	100
L2042.1050	1050	1050	50	30	M8	400	-	50	30	25	95
L2042.1100	1100	1100	50	30	M8	425	-	50	30	25	90
L2042.1150	1150	1150	50	30	M8	450	-	50	30	25	85
L2042.1200	1200	1200	50	30	M8	475	-	50	30	25	80
L2042.1250	1250	1250	50	30	M8	500	-	50	30	25	75
L2042.1300	1300	1300	50	30	M8	525	-	50	30	25	70
L2042.1350	1350	1350	50	30	M8	550	-	50	30	25	65
L2042.1400	1400	1400	50	30	M8	575	-	50	30	25	60

Aluminium Telescopic Slides

fully telescopic, size 70



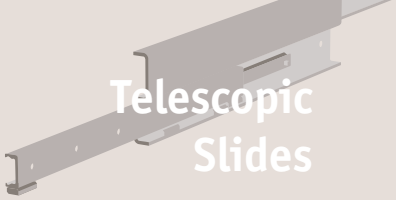
L2044



Material
High quality grade aluminium (EN-AW-6082 T6, anodised), with steel ball bearings and cage.

Technical Notes
Ideal for applications requiring lightweight yet robust telescopic slides (eg. aircraft seating).
Total length: = Installation length (l_1) + extension length (l_2).
The maximum safe load is given for a fully extended pair of slides, mounted on the major axis, with a load spread uniformly along the inner beam.

Order No.	l_1	l_2 stroke	h_1	h_2	h_3	d_1	l_3	l_4	l_5	w_1	w_2	Load/pair kg max.
L2044.0400	400	400	70	45	25	M8	-	200	50	32	30	200
L2044.0450	450	450	70	45	25	M8	-	250	50	32	30	205
L2044.0500	500	500	70	45	25	M8	-	300	50	32	30	210
L2044.0550	550	550	70	45	25	M8	-	350	50	32	30	215
L2044.0600	600	600	70	45	25	M8	-	400	50	32	30	220
L2044.0650	650	650	70	45	25	M8	200	-	50	32	30	225
L2044.0700	700	700	70	45	25	M8	225	-	50	32	30	250
L2044.0750	750	750	70	45	25	M8	250	-	50	32	30	265
L2044.0800	800	800	70	45	25	M8	275	-	50	32	30	280
L2044.0850	850	850	70	45	25	M8	300	-	50	32	30	290
L2044.0900	900	900	70	45	25	M8	325	-	50	32	30	300
L2044.0950	950	950	70	45	25	M8	350	-	50	32	30	310
L2044.1000	1000	1000	70	45	25	M8	375	-	50	32	30	320
L2044.1050	1050	1050	70	45	25	M8	400	-	50	32	30	330
L2044.1100	1100	1100	70	45	25	M8	425	-	50	32	30	330
L2044.1150	1150	1150	70	45	25	M8	450	-	50	32	30	330
L2044.1200	1200	1200	70	45	25	M8	475	-	50	32	30	320
L2044.1250	1250	1250	70	45	25	M8	500	-	50	32	30	310
L2044.1300	1300	1300	70	45	25	M8	525	-	50	32	30	300
L2044.1350	1350	1350	70	45	25	M8	550	-	50	32	30	290
L2044.1400	1400	1400	70	45	25	M8	575	-	50	32	30	280
L2044.1450	1450	1450	70	45	25	M8	600	-	50	32	30	270
L2044.1500	1500	1500	70	45	25	M8	625	-	50	32	30	260
L2044.1550	1550	1550	70	45	25	M8	650	-	50	32	30	250
L2044.1600	1600	1600	70	45	25	M8	675	-	50	32	30	240
L2044.1650	1650	1650	70	45	25	M8	700	-	50	32	30	230
L2044.1700	1700	1700	70	45	25	M8	650	-	100	32	30	220
L2044.1750	1750	1750	70	45	25	M8	675	-	100	32	30	210
L2044.1800	1800	1800	70	45	25	M8	700	-	100	32	30	200
L2044.1850	1850	1850	70	45	25	M8	725	-	100	32	30	190



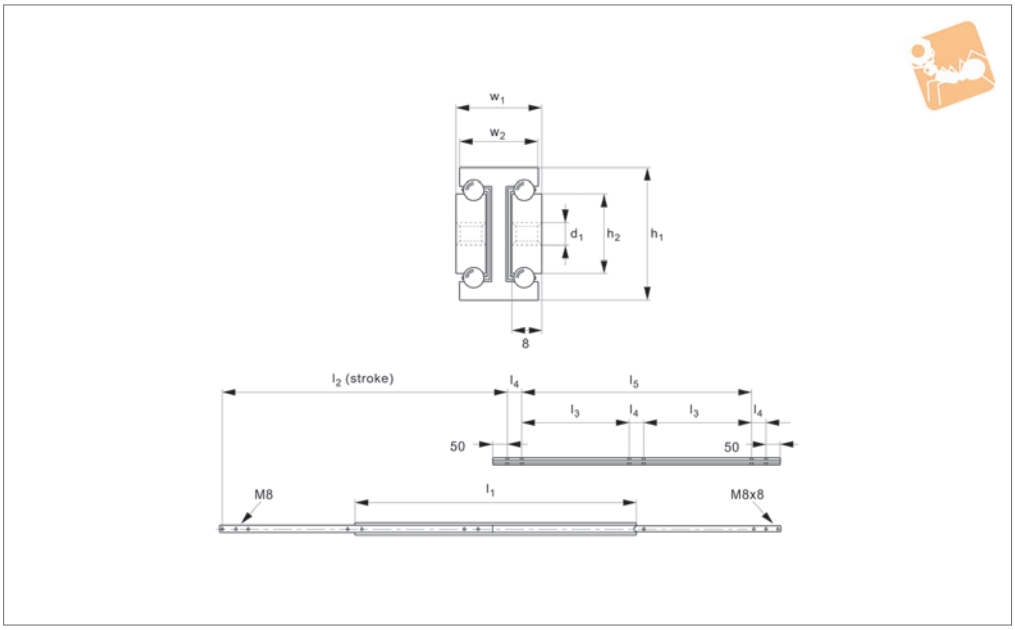
Order No.	l_1	l_2 stroke	h_1	h_2	h_3	d_1	l_3	l_4	l_5	w_1	w_2	Load/pair kg max.
L2044.1900	1900	1900	70	45	25	M8	750	-	100	32	30	180
L2044.1950	1950	1950	70	45	25	M8	775	-	100	32	30	170
L2044.2000	2000	2000	70	45	25	M8	800	-	100	32	30	160

Stainless AISI 316 Slides

fully telescopic, size 40



L2051



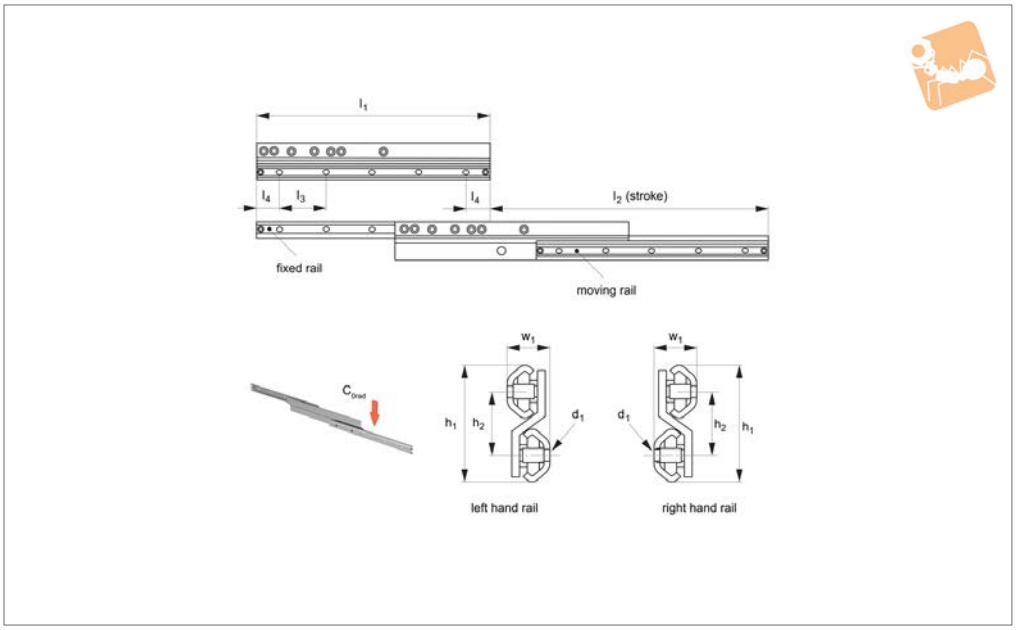
Material
Stainless steel (A4, AISI 316) - rail, balls and ball cage.

Technical Notes
Full extension. Load ratings are based on an evenly distributed load centred around the mid extension point of the slide. Other sizes on request.
Ideal for applications requiring a high degree of corrosion resistance.

Order No.	l_1	l_2 stroke	h_1	h_2	d_1	l_3	l_4	l_5	w_1	w_2	Load/pair kg max.
L2051.0200	200	200	40	25	M8	-	-	50	24	22	250
L2051.0250	250	250	40	25	M8	-	50	50	24	22	245
L2051.0300	300	300	40	25	M8	-	100	50	24	22	240
L2051.0350	350	350	40	25	M8	-	150	50	24	22	235
L2051.0400	400	400	40	25	M8	-	200	50	24	22	230
L2051.0450	450	450	40	25	M8	-	250	50	24	22	225
L2051.0500	500	500	40	25	M8	-	300	50	24	22	220
L2051.0550	550	550	40	25	M8	150	-	50	24	22	210
L2051.0600	600	600	40	25	M8	175	-	50	24	22	205
L2051.0650	650	650	40	25	M8	200	-	50	24	22	200
L2051.0700	700	700	40	25	M8	225	-	50	24	22	195
L2051.0750	750	750	40	25	M8	250	-	50	24	22	190
L2051.0800	800	800	40	25	M8	275	-	50	24	22	180
L2051.0850	850	850	40	25	M8	300	-	50	24	22	170
L2051.0900	900	900	40	25	M8	325	-	50	24	22	160
L2051.0950	950	950	40	25	M8	350	-	50	24	22	150
L2051.1000	1000	1000	40	25	M8	375	-	50	24	22	140

Stainless Medium Duty Full Extension

316 stainless





L1989

Material

Stainless steel (AISI 316L), bearings stainless steel (AISI 440). Bearings seals, type 2RS (splash-proof).

Technical Notes

Full stainless steel rails for washdown, pharmaceutical, medical and other applications.
Fixing screw - low height ISO 7380 or Torx screws on request.
Temperature range from -30° to +100°C.

Tips

The bearings and wiper arrangement (rather than small ball bearings) provide a robust defence to dirt and other contaminants.

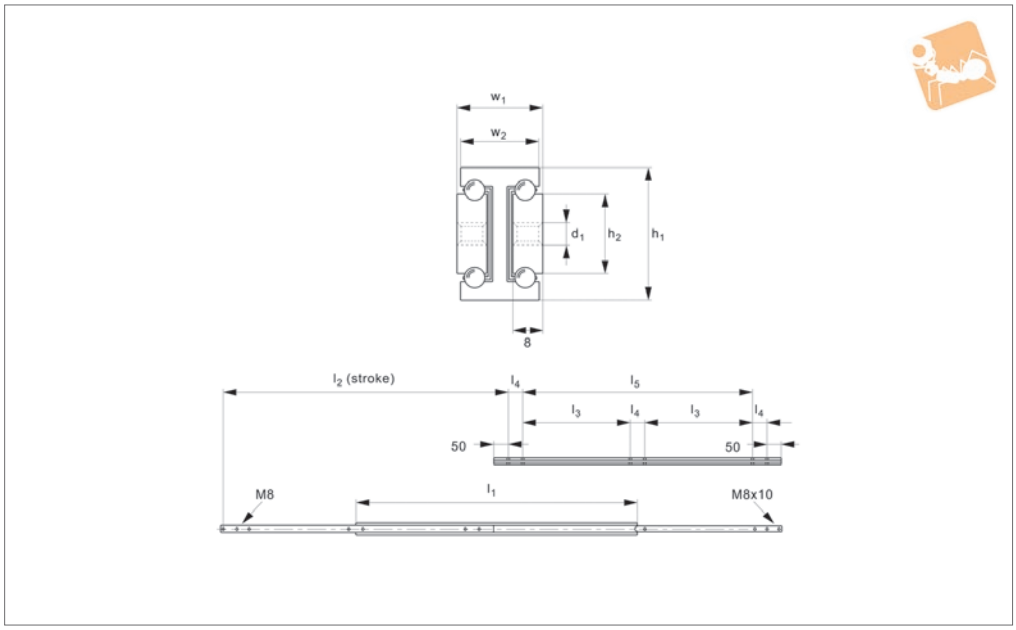
Order No.	Type	l_1	l_2 stroke	h_1	h_2	l_3	l_4	w_1	For screws d_1	No. of fixing holes (2 rails)	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L1989.30-0400L	Left	400	480	65,5	36	80	40	24,3	M5	10	150	1,36
L1989.30-0480L	Left	480	560	65,5	36	80	40	24,3	M5	12	200	1,63
L1989.30-0560L	Left	560	640	65,5	36	80	40	24,3	M5	14	240	1,90
L1989.30-0640L	Left	640	720	65,5	280	80	40	24,3	M5	16	280	2,18
L1989.30-0720L	Left	720	800	65,5	36	80	40	24,3	M5	18	320	2,45
L1989.30-0800L	Left	800	880	65,5	36	80	40	24,3	M5	20	360	2,72
L1989.30-0880L	Left	880	960	65,5	36	80	40	24,3	M5	22	350	2,99
L1989.30-0960L	Left	960	1040	65,5	36	80	40	24,3	M5	24	310	3,26
L1989.30-1040L	Left	1040	1120	65,5	36	80	40	24,3	M5	26	250	3,54
L1989.30-0400R	Right	400	480	65,5	36	80	40	24,3	M5	10	150	1,36
L1989.30-0480R	Right	480	560	65,5	36	80	40	24,3	M5	12	200	1,63
L1989.30-0560R	Right	560	640	65,5	36	80	40	24,3	M5	14	240	1,90
L1989.30-0640R	Right	640	720	65,5	36	80	40	24,3	M5	16	280	2,18
L1989.30-0720R	Right	720	800	65,5	36	80	40	24,3	M5	18	320	2,45
L1989.30-0800R	Right	800	880	65,5	36	80	40	24,3	M5	20	360	2,72
L1989.30-0880R	Right	880	960	65,5	36	80	40	24,3	M5	22	350	2,99
L1989.30-0960R	Right	960	1040	65,5	36	80	40	24,3	M5	24	310	3,26
L1989.30-1040R	Right	1040	1120	65,5	36	80	40	24,3	M5	26	250	3,54

Stainless AISI 316 Slides

fully telescopic, size 50



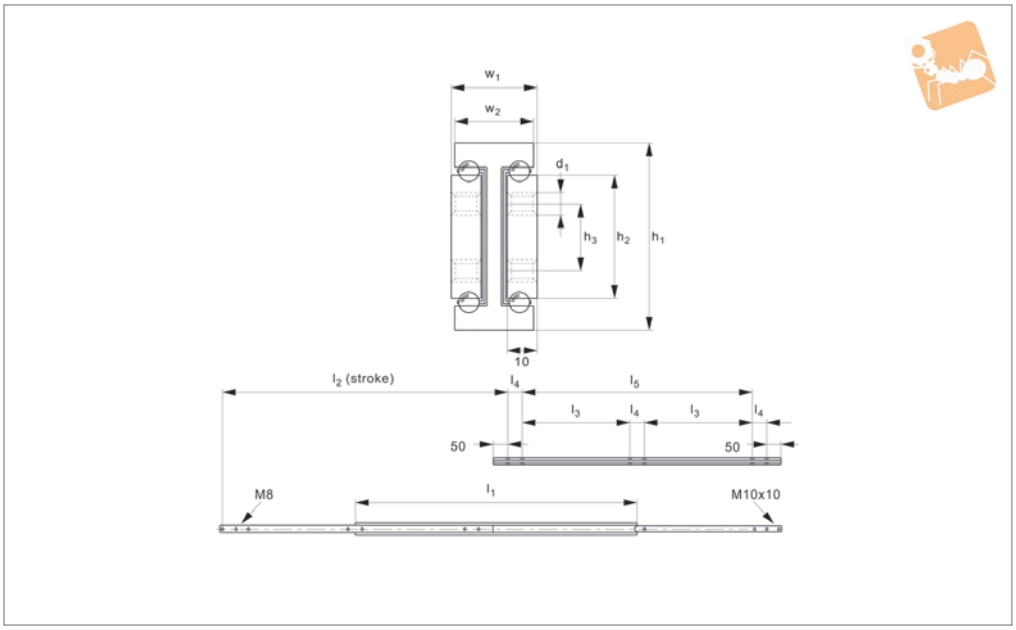
L2052



Material
Stainless steel (A4, AISI 316) - rail, balls and ball cage.

Technical Notes
Full extension. Load ratings are based on an evenly distributed load centred around the mid extension point of the slide. Other sizes on request.
Ideal for applications requiring a high degree of corrosion resistance.

Order No.	l_1	l_2 stroke	h_1	h_2	d_1	l_3	l_4	l_5	w_1	w_2	Load/pair kg max.
L2052.0200	200	200	50	30	M8	-	-	50	30	25	390
L2052.0250	250	250	50	30	M8	-	50	50	30	25	380
L2052.0350	350	350	50	30	M8	-	150	50	30	25	360
L2052.0400	400	400	50	30	M8	-	200	50	30	25	350
L2052.0450	450	450	50	30	M8	-	250	50	30	25	340
L2052.0500	500	500	50	30	M8	-	300	50	30	25	330
L2052.0550	550	550	50	30	M8	150	-	50	30	25	320
L2052.0600	600	600	50	30	M8	175	-	50	30	25	310
L2052.0650	650	650	50	30	M8	200	-	50	30	25	300
L2052.0700	700	700	50	30	M8	225	-	50	30	25	290
L2052.0750	750	750	50	30	M8	250	-	50	30	25	280
L2052.0800	800	800	50	30	M8	275	-	50	30	25	270
L2052.0850	850	850	50	30	M8	300	-	50	30	25	260
L2052.0900	900	900	50	30	M8	325	-	50	30	25	250
L2052.0950	950	950	50	30	M8	350	-	50	30	25	240
L2052.1000	1000	1000	50	30	M8	375	-	50	30	25	230
L2052.1050	1050	1050	50	30	M8	400	-	50	30	25	220
L2052.1100	1100	1100	50	30	M8	425	-	50	30	25	210
L2052.1150	1150	1150	50	30	M8	450	-	50	30	25	205
L2052.1200	1200	1200	50	30	M8	475	-	50	30	25	200
L2052.1250	1250	1250	50	30	M8	500	-	50	30	25	195
L2052.1300	1300	1300	50	30	M8	525	-	50	30	25	190
L2052.1350	1350	1350	50	30	M8	550	-	50	30	25	185
L2052.1400	1400	1400	50	30	M8	575	-	50	30	25	180





L2054

Material
Stainless steel (A4, AISI 316) - rail, balls and ball cage.

Technical Notes
Full extension. Load ratings are based on an evenly distributed load centred around the mid extension point of the slide. Other sizes on request.
Ideal for applications requiring a high degree of corrosion resistance.

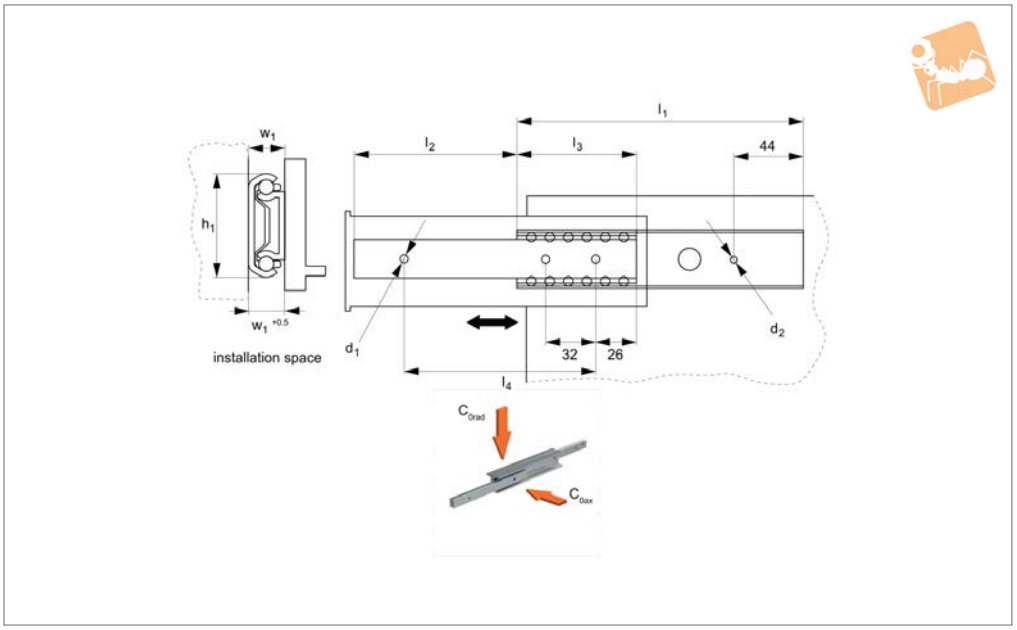
Order No.	l_1	l_2 stroke	h_1	h_2	h_3	d_1	l_3	l_4	l_5	w_1	w_2	Load/pair kg max.
L2054.0400	400	400	70	45	25	M8	-	200	50	32	30	470
L2054.0450	450	450	70	45	25	M8	-	250	50	32	30	460
L2054.0500	500	500	70	45	25	M8	-	300	50	32	30	450
L2054.0550	550	550	70	45	25	M8	-	350	50	32	30	440
L2054.0600	600	600	70	45	25	M8	-	400	50	32	30	430
L2054.0650	650	650	70	45	25	M8	200	-	50	32	30	420
L2054.0700	700	700	70	45	25	M8	225	-	50	32	30	410
L2054.0750	750	750	70	45	25	M8	250	-	50	32	30	400
L2054.0800	800	800	70	45	25	M8	275	-	50	32	30	390
L2054.0850	850	850	70	45	25	M8	300	-	50	32	30	380
L2054.0900	900	900	70	45	25	M8	325	-	50	32	30	370
L2054.0950	950	950	70	45	25	M8	350	-	50	32	30	360
L2054.1000	1000	1000	70	45	25	M8	375	-	50	32	30	350
L2054.1050	1050	1050	70	45	25	M8	400	-	50	32	30	340
L2054.1100	1100	1100	70	45	25	M8	425	-	50	32	30	330
L2054.1150	1150	1150	70	45	25	M8	450	-	50	32	30	320
L2054.1200	1200	1200	70	45	25	M8	475	-	50	32	30	310
L2054.1250	1250	1250	70	45	25	M8	500	-	50	32	30	300
L2054.1300	1300	1300	70	45	25	M8	525	-	50	32	30	290
L2054.1350	1350	1350	70	45	25	M8	550	-	50	32	30	280
L2054.1400	1400	1400	70	45	25	M8	575	-	50	32	30	270
L2054.1450	1450	1450	70	45	25	M8	600	-	50	32	30	260
L2054.1500	1500	1500	70	45	25	M8	625	-	50	32	30	250
L2054.1550	1550	1550	70	45	25	M8	650	-	50	32	30	240
L2054.1600	1600	1600	70	45	25	M8	675	-	50	32	30	230
L2054.1650	1650	1650	70	45	25	M8	700	-	50	32	30	220
L2054.1700	1700	1700	70	45	25	M8	650	-	100	32	30	210
L2054.1750	1750	1750	70	45	25	M8	675	-	100	32	30	200
L2054.1800	1800	1800	70	45	25	M8	700	-	100	32	30	190
L2054.1850	1850	1850	70	45	25	M8	725	-	100	32	30	180
L2054.1900	1900	1900	70	45	25	M8	750	-	100	32	30	170



Stainless AISI 316 Slides

fully telescopic, size 70

Order No.	l_1	l_2 stroke	h_1	h_2	h_3	d_1	l_3	l_4	l_5	w_1	w_2	Load/pair kg max.
L2054.1950	1950	1950	70	45	25	M8	775	-	100	32	30	160
L2054.2000	2000	2000	70	45	25	M8	800	-	100	32	30	150





L2000

Material
Galvanized steel. Hardened steel balls with plastic ball cage.

Technical Notes
C_{0rad} is the load rating for a single drawer slide and based on 100,000 cycles, uniform load distribution and use of all fixing holes to mount the slide.

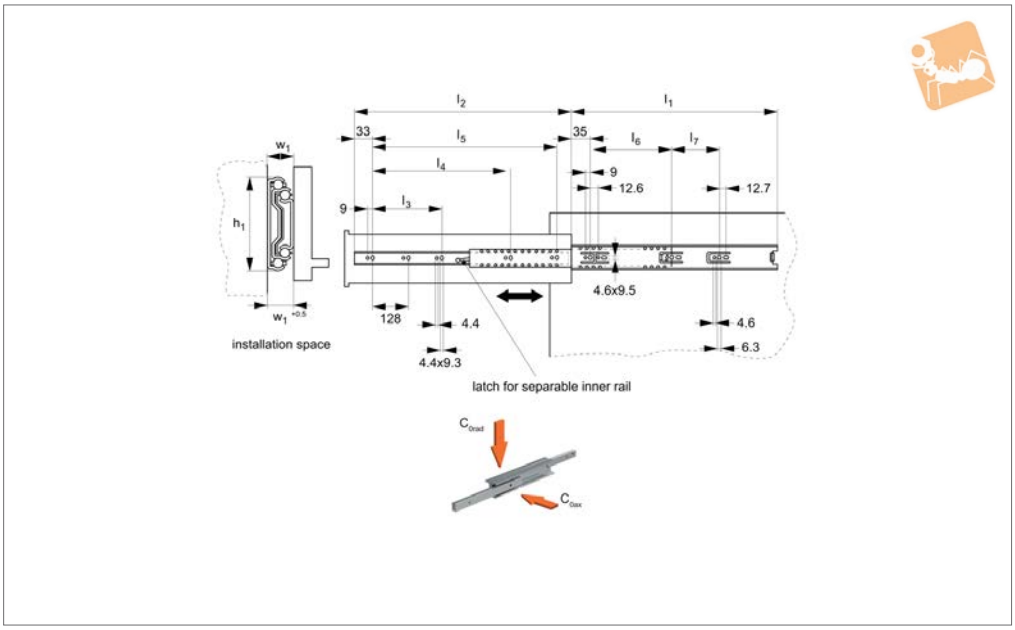
Tips
Fix with M5 countersunk screws (head height 2,5 mm).

Order No.	l_1	l_2 stroke	h_1	d_1 for	d_2 for	w_1	l_3	l_4	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L2000.0150	242	154	37.5	M5	M4	13.0	88	192	50	175	0.3
L2000.0230	317	229	37.5	M5	M4	13.0	88	256	50	175	0.4
L2000.0300	398	298	37.5	M5	M4	13.0	100	352	50	175	0.5
L2000.0370	473	373	37.5	M5	M4	13.0	100	416	50	175	0.6

Fully Telescopic Drawer Slides



L2010



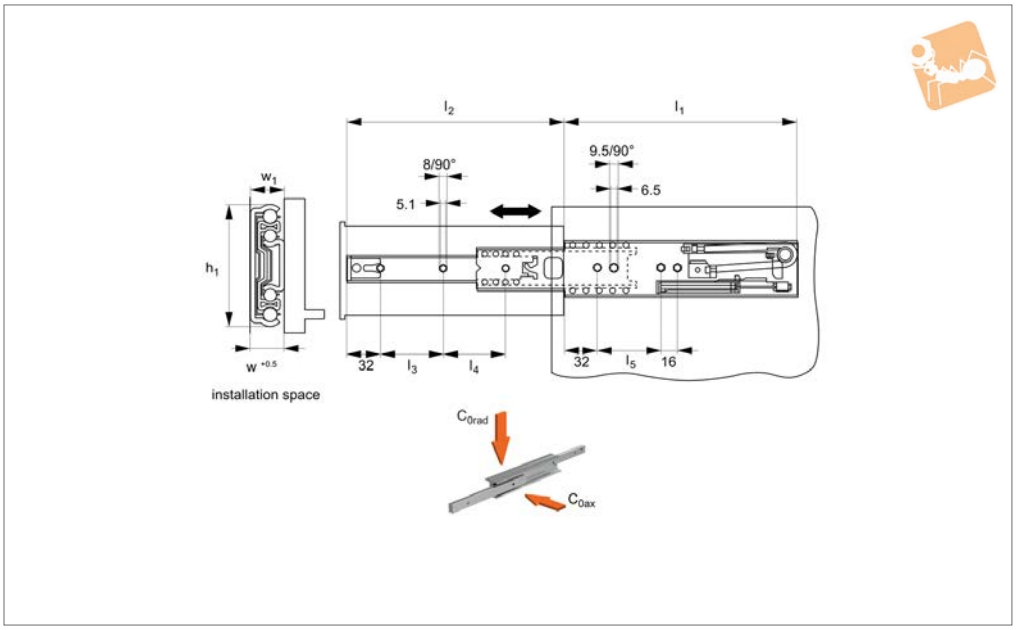
Material
Steel, zinc-plated. Hardened steel balls with steel and plastic ball cage.

Technical Notes
With separable inner rail.

C_{0rad} is the load rating for a single drawer slide and based on 50,000 cycles, uniform load distribution and use of all fixing holes to mount the slide.

Tips
Friction locked in closed position.
Fix with M4 countersunk screws (head height 2,2 mm).

Order No.	l_1	l_2 stroke	h_1	w_1	l_3	l_4	l_5	l_6	l_7	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L2010.0300	300	305	45.5	12.7	-	-	242	192	-	50	150	0.48
L2010.0400	400	406	45.5	12.7	-	256	342	160	96	50	175	0.64
L2010.0450	450	457	45.5	12.7	-	256	392	160	160	50	175	0.71
L2010.0500	500	508	45.5	12.7	-	352	442	224	128	50	175	0.79
L2010.0550	550	559	45.5	12.7	224	416	492	224	192	50	200	0.88
L2010.0600	600	610	45.5	12.7	224	416	542	224	224	50	200	0.95





L2011

TELESCOPIC SLIDES

Material

Galvanized steel. Hardened steel balls with zinc-plated cage.

Technical Notes

C_{0rad} is the load rating for a single drawer slide and based on 100,000 cycles, uniform load distribution and use of all fixing holes to mount the slide.
Flat installation not suited due to the soft-close damping system.

Tips

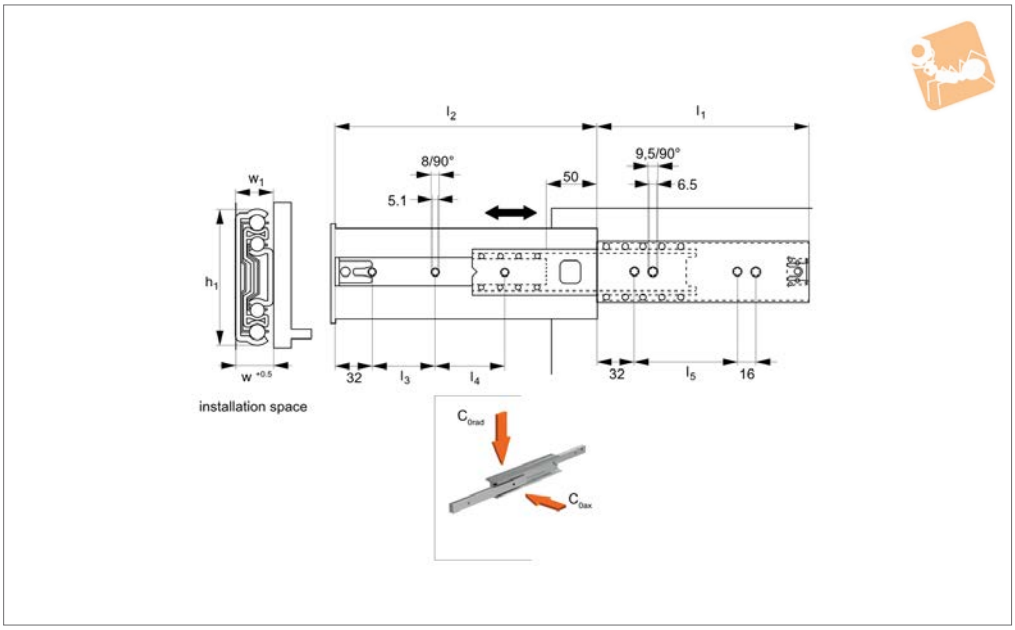
Soft close over last 50mm, for smooth full retraction to closed position.
Fix inner rail with M4 countersunk screws (head height 2,2 mm).
Fix outer rail with M5 countersunk screws (head height 2,5 mm).

Order No.	l_1	l_2 stroke	h_1	w_1	l_3	l_4	l_5	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L2011.0400	400	434	57.5	16.0	128	128	224	200	1.10
L2011.0450	450	484	57.5	16.0	160	160	256	250	1.25
L2011.0500	500	534	57.5	16.0	160	192	320	275	1.40
L2011.0550	550	584	57.5	16.0	192	192	320	300	1.55

Fully Telescopic Drawer Slide



L2012



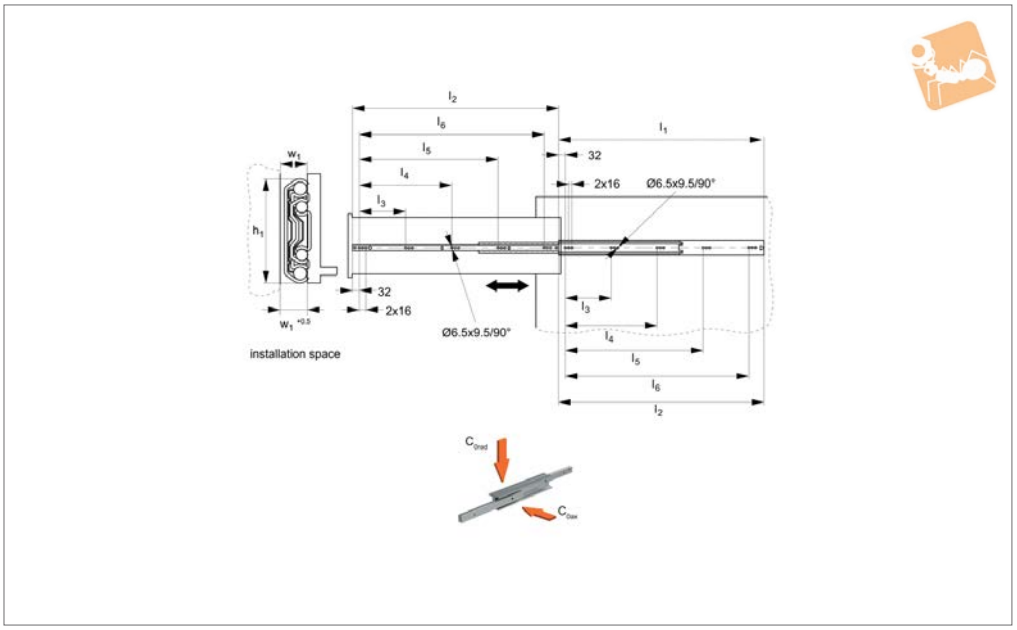
Material
Galvanized steel. Hardened steel balls with zinc-plated ball cage.

Technical Notes
C_{0rad} is the load rating for a single drawer slide and based on 100,000 cycles, uniform load distribution and use of all fixing holes to mount the slide.

Tips
Friction locked in closed position.

Fix inner rail with M4 countersunk screws (head height 2,2 mm).
Fix outer rail with M5 countersunk screws (head height 2,5 mm).

Order No.	l_1	l_2 stroke	h_1	w_1	l_3	l_4	l_5	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L2012.0350	300	350	57.4	17.5	128	104	160	80	250	0.84
L2012.0400	350	400	57.4	17.5	128	152	256	80	300	0.98
L2012.0450	400	450	57.4	17.5	160	168	256	80	325	1.13
L2012.0500	450	500	57.4	17.5	160	224	256	80	350	1.27
L2012.0550	500	550	57.4	17.5	224	208	384	80	375	1.42
L2012.0600	550	600	57.4	17.5	224	256	384	80	375	1.57
L2012.0650	600	650	57.4	17.5	288	240	384	80	400	1.71
L2012.0700	650	700	57.4	17.5	288	288	384	80	400	1.86
L2012.0750	700	750	57.4	17.5	320	312	384	80	400	2.01
L2012.0800	750	800	57.4	17.5	320	360	384	80	400	2.16





L2013

Material
Galvanized steel. Hardened steel balls with zinc-plated cage.

Technical Notes
C_{0rad} is the load rating for a single drawer slide and based on 100,000 cycles, uniform load distribution and use of all fixing holes to mount the slide.

Tips
Friction locked in closed position.

Fix rail with M5 countersunk screws (head height 2,5 mm).

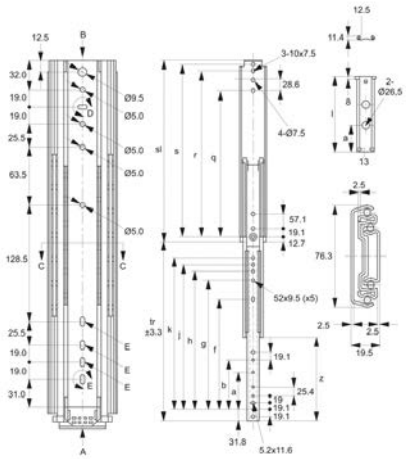
Order No.	l_1	l_2 stroke	h_1	w_1	l_3	l_4	l_5	l_6	Load (per rail) $C_{0\,ax}$ N max.	Load (per rail) $C_{0\,rad}$ N max.	Weight kg
L2013.0400	400	400	70.0	18.0	-	-	-	288	150	525	1.55
L2013.0450	450	450	70.0	18.0	-	-	160	320	150	575	1.74
L2013.0500	500	500	70.0	18.0	-	-	192	384	150	650	1.94
L2013.0550	550	550	70.0	18.0	-	-	224	448	150	650	2.13
L2013.0600	600	600	70.0	18.0	-	-	224	448	150	650	2.32
L2013.0700	700	700	70.0	18.0	-	192	384	576	150	650	2.70
L2013.0800	800	800	70.0	18.0	-	224	448	672	150	600	3.10
L2013.1100	1100	1100	70.0	18.0	224	448	672	896	100	450	4.25

Drawer Slide - Full Extension

200 Kg load per pair



L2060

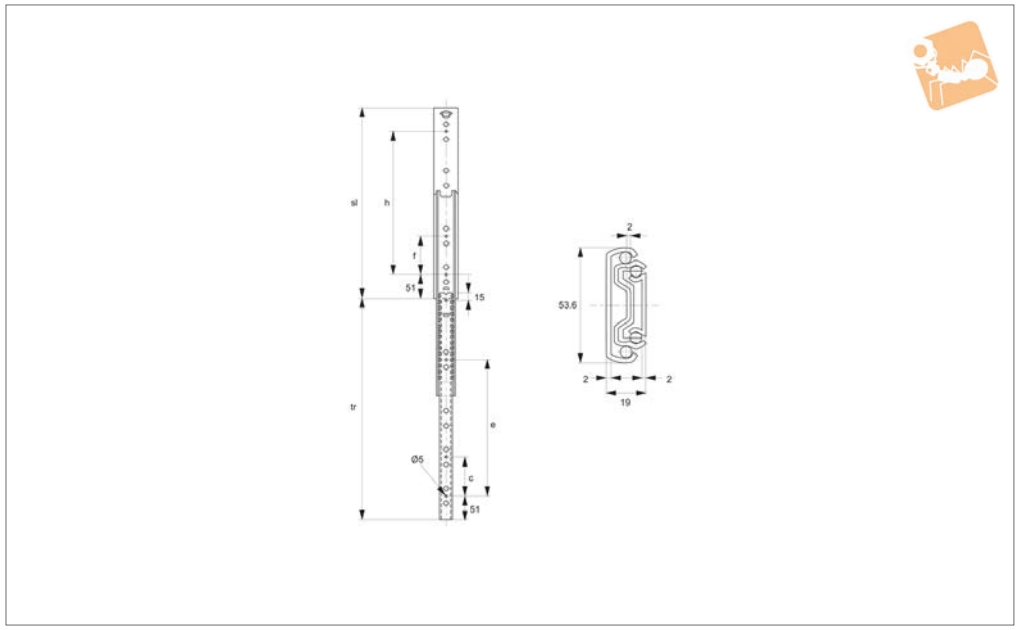


Material
Cold rolled steel, zinc plated.

Technical Notes
Positive stop. These slides have been tested to 40,000 usage cycles.

Important Notes
Load capacity is static load per pair, at the centre of the rails using all mounting holes. **Sold individually as single slides.**

Order No.	Slide length sl	Slide travel tr ±3.3	a	b	f	g	h	j	k	q	R	s	Load/pair kg max.	Weight g
L2060.AC0025	254	254	-	-	-	103	128	147	166	152	209	228	200	1275
L2060.AC0030	304	304	-	-	-	153	179	198	217	203	260	279	200	1525
L2060.AC0035	355	355	-	-	-	204	230	249	268	254	311	330	200	1775
L2060.AC0040	406	406	127	-	-	255	280	299	319	304	361	381	200	2025
L2060.AC0047	457	457	127	-	246	306	331	350	369	355	412	431	200	2275
L2060.AC0050	508	508	127	190	296	357	382	401	420	406	463	482	200	2525
L2060.AC0055	558	558	127	190	347	407	433	452	471	457	514	533	200	2775
L2060.AC0060	608	608	127	190	398	458	484	503	522	508	565	584	200	3025
L2060.AC0066	660	660	127	190	449	509	534	553	573	558	615	635	200	3275
L2060.AC0071	711	711	127	190	500	560	585	604	623	609	666	685	200	3525





L2062

Material
Cold rolled steel, zinc plated.

Technical Notes
Hold-in detent when slide closed. Positive stop. These slides have been tested to 80,000 usage cycles.

Important Notes
Load capacity is static load per pair, at the centre of the rails using all mounting holes. **Sold individually as single slides.**

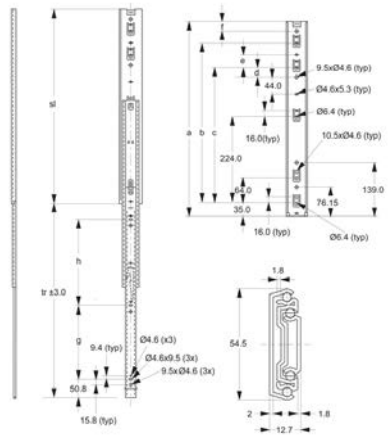
Order No.	Slide length sl	Slide travel tr	c	e	f	h	Load/pair kg max.	Weight g
L2062.AC0030	300	328	-	160	-	160	80	900
L2062.AC0035	350	375	-	224	-	224	80	1000
L2062.AC0040	400	425	128	256	128	256	80	1100
L2062.AC0045	450	475	160	320	160	320	80	1250
L2062.AC0050	500	525	192	352	160	352	80	1400
L2062.AC0055	550	574	192	416	224	416	80	1500
L2062.AC0060	600	610	256	480	256	480	80	1650
L2062.AC0065	650	674	256	512	256	512	80	1950
L2062.AC0070	700	720	288	576	288	574	80	2100

Drawer Slide - Full Extension

60 Kg load per pair



L2064



Material

Cold rolled steel, zinc plated.

Technical Notes

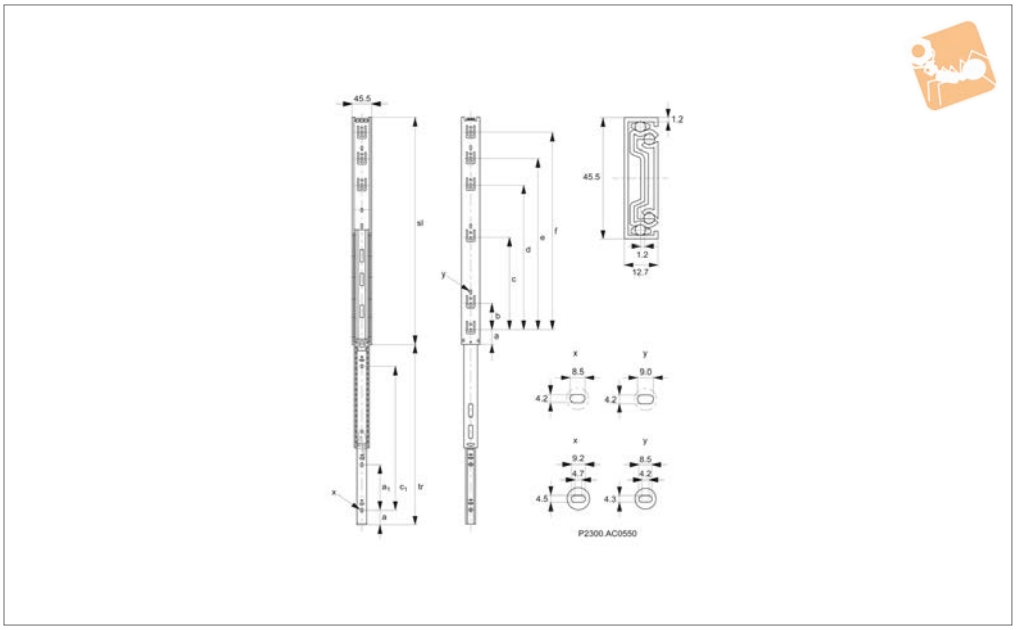
Hold-in detent when slide closed. Positive stop. Rails can be disconnected via pressing disconnect lever.
These slides have been tested to 80,000 usage cycles.

Important Notes

Load capacity is static load per pair, at the centre of the rails using all mounting holes. **Sold individually as single slides.**

Order No.	Slide length sl	Slide travel tr ±3.0	b	c	d	e	f	g	h	Load/pair kg max.	Weight g
L2064.AC0304	304.8	304.8	-	-	-	-	-	96.0	128.0	60	740
L2064.AC0355	335.6	335.6	-	-	-	-	46.6	128.0	128.0	60	860
L2064.AC0406	406.4	406.4	288.0	-	-	-	33.4	160.0	160.0	60	985
L2064.AC0457	457.2	457.2	352.0	-	25.45	32.15	-	160.0	192.0	60	1110
L2064.AC0508	508.0	508.0	352.0	416.0	25.45	32.15	-	192.0	224.0	60	1250
L2064.AC0558	558.8	558.8	352.0	416.0	25.45	32.15	57.8	224.0	256.0	60	1380
L2064.AC0609	609.6	609.6	352.0	480.0	25.45	32.15	44.8	256.0	256.0	60	1500
L2064.AC0660	660.4	660.4	352.0	544.0	25.45	32.15	-	256.0	320.0	60	1620
L2064.AC0711	711.2	711.2	352.0	544.0	25.45	32.15	82.2	256.0	352.0	60	1750







L2066

Material
Cold rolled steel, zinc plated.

Technical Notes
Hold-in detent when slide closed. Positive stop. Rails can be disconnected via pressing disconnect lever.
These slides have been tested to 60,000 usage cycles.

Important Notes
Load capacity is static load per pair, at the centre of the rails using all mounting holes. **Sold individually as single slides.**

Order No.	Slide length sl	Slide travel tr	a	b	b_1	c	c_1	d	e	f	Load/pair kg max.	Weight g
L2066.AC0250	250	250	35	160	160	-	-	-	-	-	45	390
L2066.AC0300	300	300	35	64	96	224	192	-	-	-	45	470
L2066.AC0350	350	350	35	64	128	224	256	-	-	-	45	555
L2066.AC0400	400	400	35	64	128	224	320	288	-	-	45	635
L2066.AC0450	450	450	35	64	160	224	352	352	-	-	45	745
L2066.AC0500	500	500	35	64	192	224	416	352	416	-	45	795
L2066.AC0550	550	550	35	64	224	224	448	352	416	-	45	880
L2066.AC0600	600	600	35	64	224	224	512	352	480	-	45	970
L2066.AC0650	650	650	35	64	256	224	544	352	512	-	45	1050
L2066.AC0700	700	700	35	64	288	224	608	352	480	608	45	1130

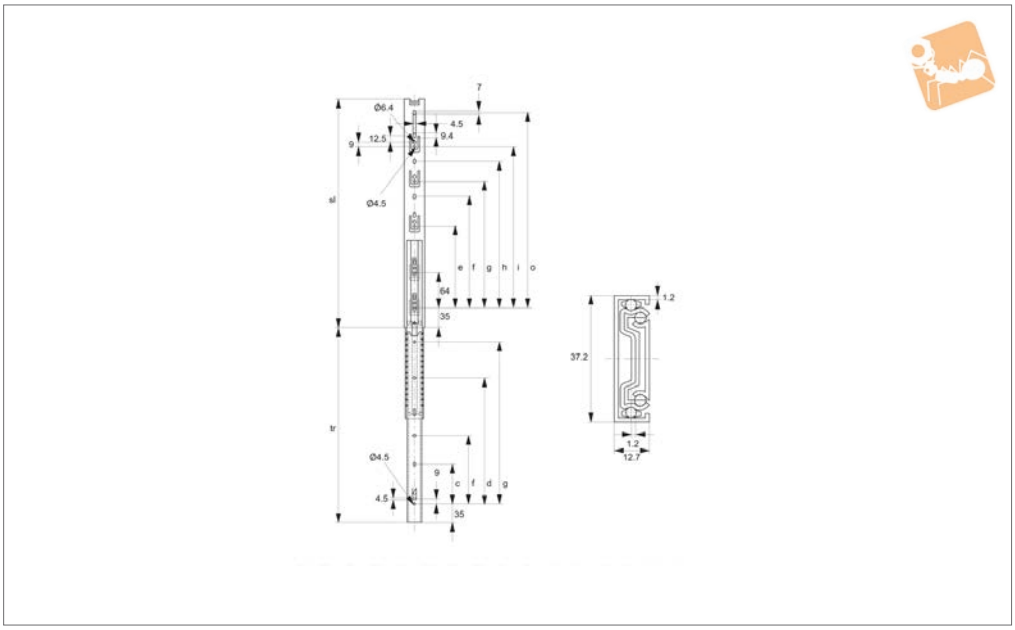


Drawer Slide - Full Extension

30 Kg load per pair



L2068



Material

Cold rolled steel, zinc plated.

Technical Notes

Hold-in detent when slide closed. Positive stop. Rails can be disconnected via pressing disconnect lever.
These slides have been tested to 60,000 usage cycles.

Important Notes

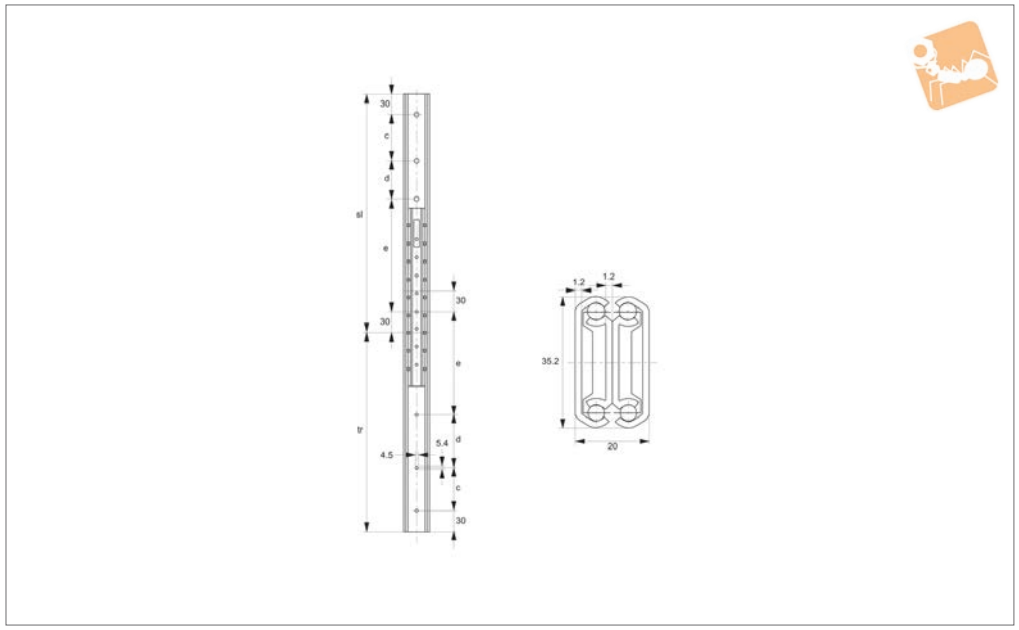
Load capacity is static load per pair, at the centre of the rails using all mounting holes. **Sold individually as single slides.**

Order No.	Slide length sl	Slide travel tr	c	d	e	f	g	h	i	o	Load/pair kg max.	Weight g
L2068.AC0250	250	254	160	-	-	-	-	-	160	-	30	300
L2068.AC0300	300	305	96	192	160	-	-	-	224	-	30	400
L2068.AC0350	350	356	128	256	150	-	-	-	224	-	30	450
L2068.AC0400	400	406	128	320	150	-	-	224	288	-	30	500
L2068.AC0450	450	457	160	352	150	-	-	224	352	-	30	510
L2068.AC0500	500	508	192	416	160	224	288	352	416	-	30	650
L2068.AC0550	550	552	224	448	160	224	288	352	416	480	30	700



Drawer Slide - Full Extension

60 Kg load per pair





L2070

Material
Cold rolled steel, zinc plated.

Technical Notes
Positive stop.

These slides have been tested to 60,000 usage cycles.

Important Notes
Load capacity is static load per pair, at the centre of the rails using all mounting holes. **Sold individually as single slides.**

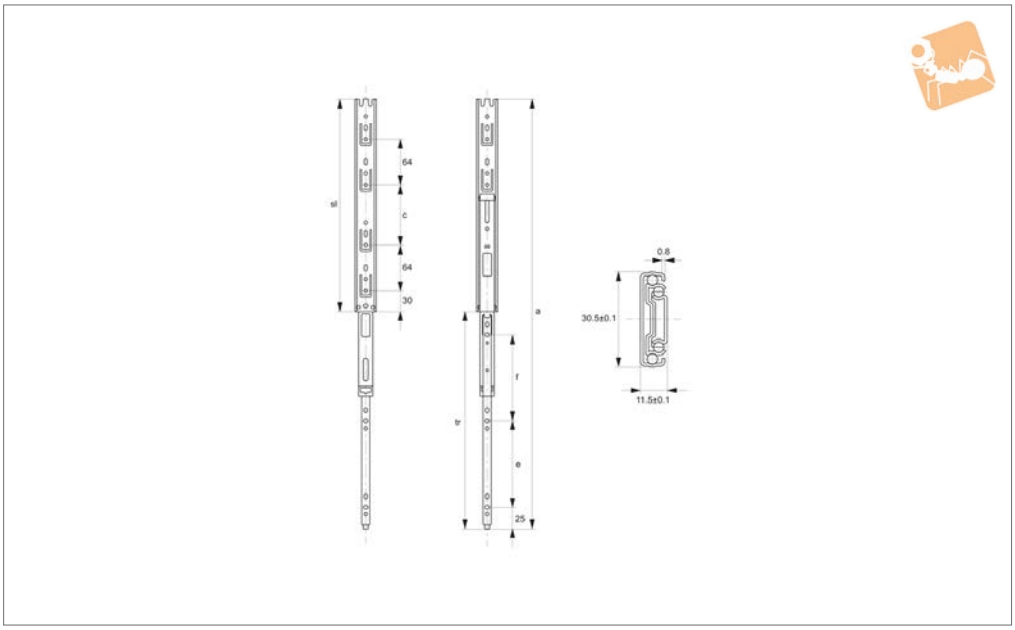
Order No.	Slide length sl	Slide travel tr	c	d	e	Load/pair kg max.	Weight g
L2070.AC0300	300	300	98	49	98	60	600
L2070.AC0350	350	350	98	98	98	60	700
L2070.AC0400	400	400	127	84	126	60	800
L2070.AC0450	450	450	127	135	127	60	900
L2070.AC0500	500	500	160	120	160	60	1000

Drawer Slide - Full Extension

lever disconnect - 20 Kg load per pair



L2072



Material

Cold rolled steel. Finishing: black

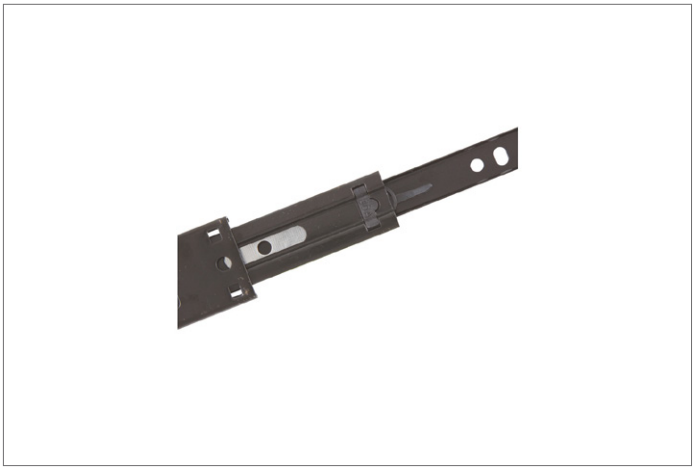
Technical Notes

Hold-in detent when slide closed. Positive stop. Rails can be disconnected via pressing disconnect lever.
These slides have been tested to 60,000 usage cycles.

Important Notes

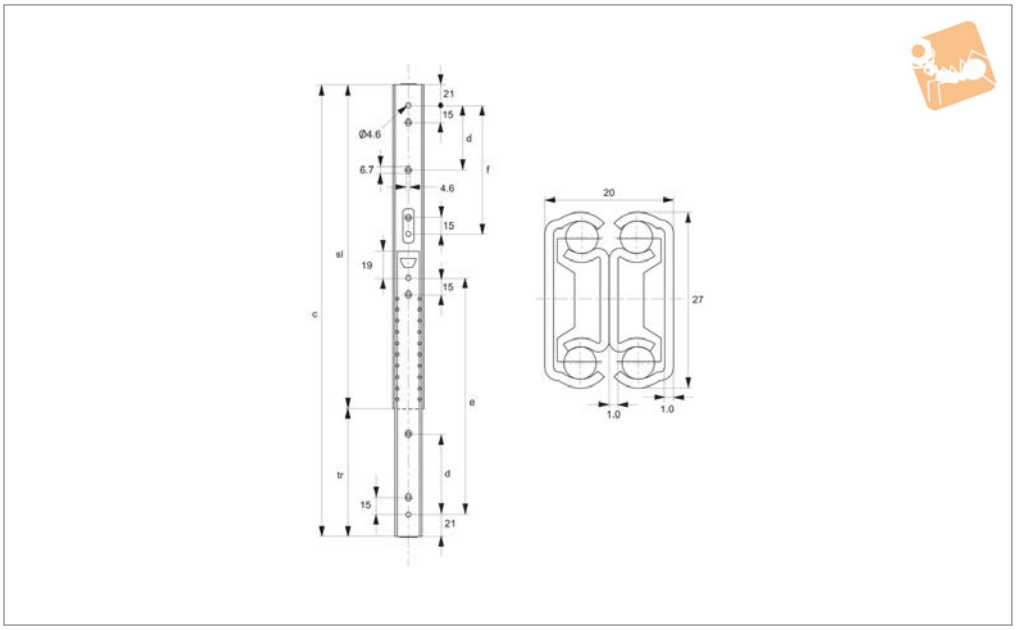
Load capacity is static load per pair, at the centre of the rails using all mounting holes. **Sold individually as single slides.**

Order No.	Slide length sl	Slide travel tr	a	c	e	f	Load/pair kg max.	Weight g
L2072.AC0200	200	200	400	71	71	71	20	257
L2072.AC0250	250	250	500	99	96	96	20	315
L2072.AC0300	300	300	600	85	121	121	20	370
L2072.AC0350	350	350	700	135	146	146	20	425
L2072.AC0400	400	400	800	185	171	171	20	480
L2072.AC0450	450	450	900	235	191	191	20	532



Drawer Slide - Full Extension

30 Kg load per pair - stainless





L2080

Material
Stainless steel AISI 304. Bright finish.

Technical Notes
Positive stop.

These slides have been tested to 60,000 usage cycles.

Important Notes
Load capacity is static load per pair, at the centre of the rails using all mounting holes. **Sold individually as single slides.**

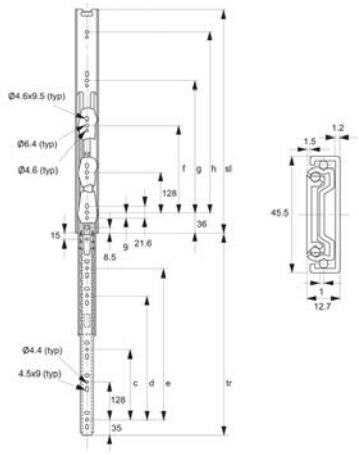
Order No.	Slide length sl	Slide travel tr	c	d	e	f	Load/pair kg max.	Weight g
L2080.AC0200	200	210	415	-	-	-	30	280
L2080.AC0250	250	260	515	85	210	-	30	345
L2080.AC0300	300	310	615	160	260	260	30	415
L2080.AC0350	350	360	715	210	310	310	30	500
L2080.AC0400	400	410	815	180	360	360	30	590
L2080.AC0450	450	460	915	230	410	410	30	645
L2080.AC0500	500	510	1015	280	460	460	30	705
L2080.AC0550	550	560	1100	230	352	352	30	740

Drawer Slide - Full Extension

lever disconnect - 45 Kg load per pair - stainless



L2082

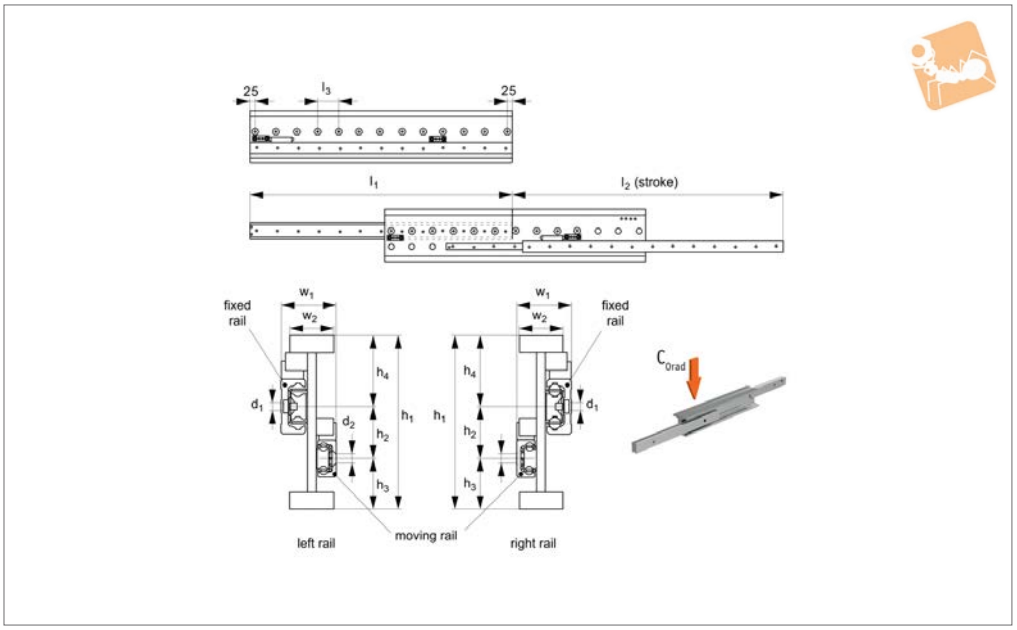


Material
Stainless steel AISI 304. Bright finish.

Technical Notes
Hold-in detent when slide closed. Positive stop. Rails can be disconnected via pressing disconnect lever.
These slides have been tested to 60,000 usage cycles.

Important Notes
Load capacity is static load per pair, at the centre of the rails using all mounting holes. **Sold individually as single slides.**

Order No.	Slide length sl	Slide travel tr	c	d	e	f	g	h	Load/pair kg max.	Weight g
L2082.AC0300	300	312	128	-	-	-	-	-	45	500
L2082.AC0350	350	362	128	-	-	-	-	-	45	590
L2082.AC0400	400	412	128	224	-	-	-	-	45	670
L2082.AC0450	450	462	128	224	-	-	-	-	45	775
L2082.AC0500	500	512	128	224	320	-	320	-	45	830
L2082.AC0550	550	562	128	224	352	-	352	-	45	910
L2082.AC0600	600	612	128	224	352	416	352	-	45	990
L2082.AC0700	700	705	320	514	630	255	450	630	45	1100





L1996

Material

Cold drawn bearing steel, raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO 2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes

These are ultra-heavy load capacity. They can support heavy loads with continuous movements 24 hours per day, 7 days a week - even with vibration and high stroke frequency.
Weight: 43 Kg/metre.
C_{0rad} is the load rating for a single telescopic slide.
Moving rail must be lower rail (unless technical department consulted).

Tips

d_1 for low head socket cap screws (DIN 7984), d_2 for countersunk head screws (DIN 7991).
Double direction stroke versions can be provided on request.

Order No.	Type	l_1	l_2 stroke	h_1	h_2	h_3	h_4	l_3	w_1	w_2	d_1 for	d_2 for	Fixed part acc. holes /total	Moving part acc. holes /total	Load (per rail) $C_{0\,rad}$ N max.
L1996.63-1010R	Right	1010	1051	200	60	58,5	81,5	80	63	50	M8	M8	10/13	10/13	8052
L1996.63-1090R	Right	1090	1141	200	60	58,5	81,5	80	63	50	M8	M8	10/14	11/14	8748
L1996.63-1170R	Right	1170	1216	200	60	58,5	81,5	80	63	50	M8	M8	11/15	11/15	9584
L1996.63-1250R	Right	1250	1291	200	60	58,5	81,5	80	63	50	M8	M8	12/16	13/16	10424
L1996.63-1330R	Right	1330	1381	200	60	58,5	81,5	80	63	50	M8	M8	13/17	13/17	11119
L1996.63-1410R	Right	1410	1456	200	60	58,5	81,5	80	63	50	M8	M8	13/18	14/18	11960
L1996.63-1490R	Right	1490	1531	200	60	58,5	81,5	80	63	50	M8	M8	14/19	14/19	12804
L1996.63-1570R	Right	1570	1621	200	60	58,5	81,5	80	63	50	M8	M8	14/20	15/20	13498
L1996.63-1650R	Right	1650	1696	200	60	58,5	81,5	80	63	50	M8	M8	16/21	16/21	14343
L1996.63-1730R	Right	1730	1771	200	60	58,5	81,5	80	63	50	M8	M8	16/22	17/22	15190
L1996.63-1810R	Right	1810	1861	200	60	58,5	81,5	80	63	50	M8	M8	17/23	17/23	15883
L1996.63-1890R	Right	1890	1936	200	60	58,5	81,5	80	63	50	M8	M8	18/24	19/24	16730
L1996.63-1970R	Right	1970	2026	200	60	58,5	81,5	80	63	50	M8	M8	19/25	19/25	17423
L1996.63-2050R	Right	2050	2101	200	60	58,5	81,5	80	63	50	M8	M8	19/26	20/26	18271
L1996.63-2130R	Right	2130	2176	200	60	58,5	81,5	80	63	50	M8	M8	20/27	20/27	19120
L1996.63-2210R	Right	2210	2266	200	60	58,5	81,5	80	63	50	M8	M8	21/28	22/28	19812
L1996.63-1010L	Left	1010	1051	200	60	58,5	81,5	80	63	50	M8	M8	10/13	10/13	8052
L1996.63-1090L	Left	1090	1141	200	60	58,5	81,5	80	63	50	M8	M8	10/14	11/14	8748
L1996.63-1170L	Left	1170	1216	200	60	58,5	81,5	80	63	50	M8	M8	11/15	11/15	9584
L1996.63-1250L	Left	1250	1291	200	60	58,5	81,5	80	63	50	M8	M8	12/16	13/16	10424
L1996.63-1330L	Left	1330	1381	200	60	58,5	81,5	80	63	50	M8	M8	13/17	13/17	11119
L1996.63-1410L	Left	1410	1456	200	60	58,5	81,5	80	63	50	M8	M8	13/18	14/18	11960
L1996.63-1490L	Left	1490	1531	200	60	58,5	81,5	80	63	50	M8	M8	14/19	14/19	12804
L1996.63-1570L	Left	1570	1621	200	60	58,5	81,5	80	63	50	M8	M8	14/20	15/20	13498
L1996.63-1650L	Left	1650	1696	200	60	58,5	81,5	80	63	50	M8	M8	16/21	16/21	14343
L1996.63-1730L	Left	1730	1771	200	60	58,5	81,5	80	63	50	M8	M8	16/22	17/22	15190

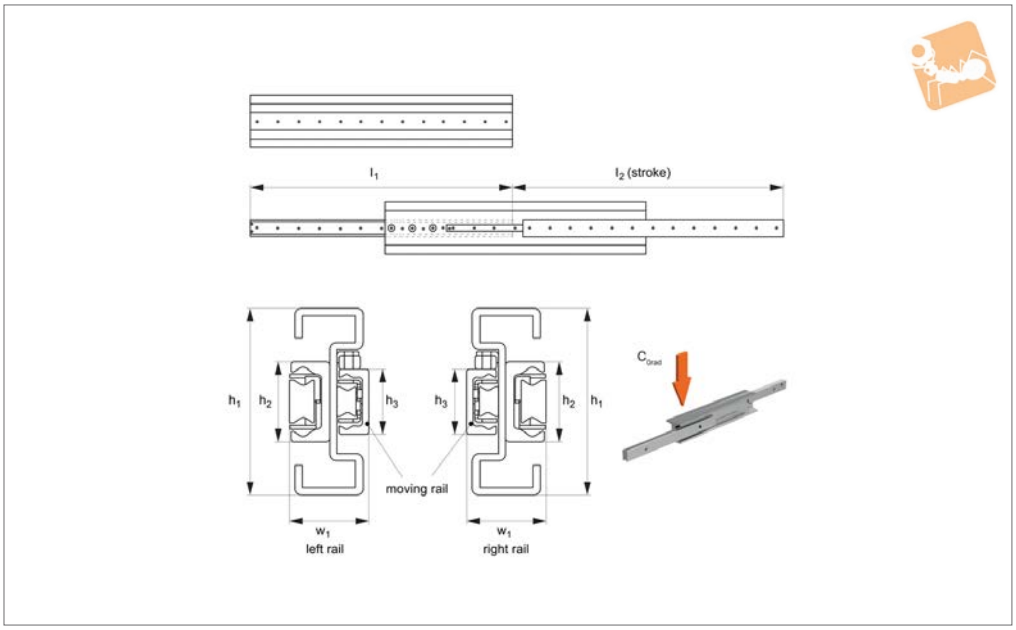


Fully Telescopic Slides

ultra heavy-duty



Order No.	Type	l_1	l_2 stroke	h_1	h_2	h_3	h_4	l_3	w_1	w_2	d_1 for	d_2 for	Fixed part acc. holes /total	Moving part acc. holes /total	Load (per rail) $C_{0\,rad}$ N max.
L1996.63-1810L	Left	1810	1861	200	60	58,5	81,5	80	63	50	M8	M8	17/23	17/23	15883
L1996.63-1890L	Left	1890	1936	200	60	58,5	81,5	80	63	50	M8	M8	18/24	19/24	16730
L1996.63-1970L	Left	1970	2026	200	60	58,5	81,5	80	63	50	M8	M8	19/25	19/25	17423
L1996.63-2050L	Left	2050	2101	200	60	58,5	81,5	80	63	50	M8	M8	19/26	20/26	18271
L1996.63-2130L	Left	2130	2176	200	60	58,5	81,5	80	63	50	M8	M8	20/27	20/27	19120
L1996.63-2210L	Left	2210	2266	200	60	58,5	81,5	80	63	50	M8	M8	21/28	22/28	19812





L1995

Material

Cold drawn bearing steel, raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO 2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes

These are ultra heavy load capacity. They can support heavy loads with continuous movements 24 hours per day, 7 days a week - even with vibration and high stroke frequency.
Optimal balance between high performance and light-weight.
C_{0rad} is the load rating for a single telescopic slide.
Moving rail must be lower rail (unless technical department consulted).

Tips

Moving element smaller than the fixed one.
These are handed rails - ie left and right hands to be specified.

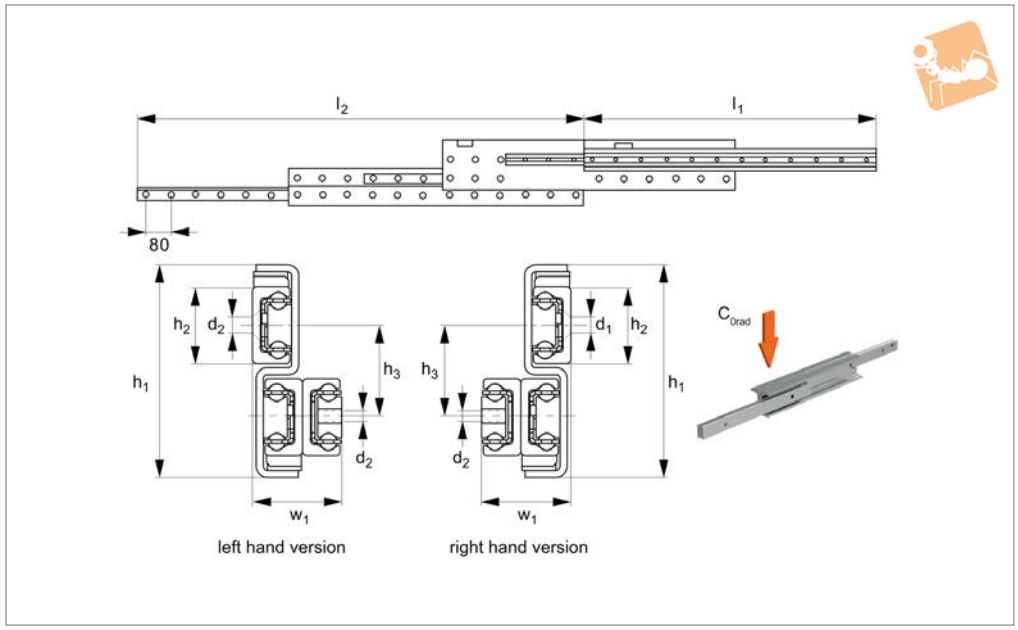
Order No.	Type	l_1	l_2 stroke	h_1	h_2	h_3	w_1	Load (per rail) $C_{0\,rad}$ N max.
L1995.43-0530R	Right	530	552	100	43	35	43	2389
L1995.43-0610R	Right	610	620	100	43	35	43	2960
L1995.43-0690R	Right	690	726	100	43	35	43	3091
L1995.43-0770R	Right	770	793	100	43	35	43	3662
L1995.43-0850R	Right	850	860	100	43	35	43	4242
L1995.43-0930R	Right	930	966	100	43	35	43	4365
L1995.43-1010R	Right	1010	1033	100	43	35	43	4942
L1995.43-1090R	Right	1090	1100	100	43	35	43	5524
L1995.43-1170R	Right	1170	1206	100	43	35	43	5144
L1995.43-1250R	Right	1250	1273	100	43	35	43	4930
L1995.43-1330R	Right	1330	1379	100	43	35	43	4474
L1995.43-1440R	Right	1446	1446	100	43	35	43	4311
L1995.43-1490R	Right	1490	1513	100	43	35	43	4159
L1995.43-1570R	Right	1570	1607	100	43	35	43	4886
L1995.43-1650R	Right	1650	1686	100	43	35	43	3710
L1995.43-1730R	Right	1730	1753	100	43	35	43	3597
L1995.43-1810R	Right	1810	1847	100	43	35	43	3391
L1995.43-1890R	Right	1890	1926	100	43	35	43	3256
L1995.43-1970R	Right	1790	2020	100	43	35	43	3086
L1995.43-0530L	Left	530	552	100	43	35	43	2389
L1995.43-0610L	Left	610	620	100	43	35	43	2960
L1995.43-0690L	Left	690	726	100	43	35	43	3091
L1995.43-0770L	Left	770	793	100	43	35	43	3662
L1995.43-0850L	Left	850	860	100	43	35	43	4242
L1995.43-0930L	Left	930	966	100	43	35	43	4365
L1995.43-1010L	Left	1010	1033	100	43	35	43	4942
L1995.43-1090L	Left	1090	1100	100	43	35	43	5524



Fully Telescopic Slides
ultra heavy-duty



Order No.	Type	l_1	l_2 stroke	h_1	h_2	h_3	w_1	Load (per rail) $C_{0\ rad}$ N max.
L1995.43-1170L	Left	1170	1206	100	43	35	43	5144
L1995.43-1250L	Left	1250	1273	100	43	35	43	4930
L1995.43-1330L	Left	1330	1379	100	43	35	43	4474
L1995.43-1440L	Left	1446	1446	100	43	35	43	4311
L1995.43-1490L	Left	1490	1513	100	43	35	43	4159
L1995.43-1570L	Left	1570	1607	100	43	35	43	4886
L1995.43-1650L	Left	1650	1686	100	43	35	43	3710
L1995.43-1730L	Left	1730	1753	100	43	35	43	3597
L1995.43-1810L	Left	1810	1847	100	43	35	43	3391
L1995.43-1890L	Left	1890	1926	100	43	35	43	3256
L1995.43-1970L	Left	1790	2020	100	43	35	43	3086





L1997

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes
These are very heavy duty telescopic rails with strokes of over 150% of closed length.
C_{0rad} is the load rating for a single telescopic slide.
Moving rail must be lower rail (unless technical department consulted).

Tips
These are handed rails - i.e. left and right hands to be specified.

Order No.	Type	l_1	l_2	h_1	w_1	h_2	h_3	d_1	d_2	Load (per rail) $C_{0\ rad}$ N max.
L1997.43-0530R	Right	530	834	120	50	43	52	8.5	M8	1291
L1997.43-0610R	Right	610	939	120	50	43	52	8.5	M8	1632
L1997.43-0690R	Right	690	1089	120	50	43	52	8.5	M8	1735
L1997.43-0770R	Right	770	1194	120	50	43	52	8.5	M8	2077
L1997.43-0850R	Right	850	1299	120	50	43	52	8.5	M8	2426
L1997.43-0930R	Right	930	1449	120	50	43	52	8.5	M8	2506
L1997.43-1010R	Right	1010	1554	120	50	43	52	8.5	M8	2364
L1997.43-1090R	Right	1090	1659	120	50	43	52	8.5	M8	2238
L1997.43-1170R	Right	1170	1809	120	50	43	52	8.5	M8	2022
L1997.43-1250R	Right	1250	1914	120	50	43	52	8.5	M8	1928
L1997.43-1330R	Right	1330	2064	120	50	43	52	8.5	M8	1766
L1997.43-1410R	Right	1410	2169	120	50	43	52	8.5	M8	1694
L1997.43-1490R	Right	1490	2274	120	50	43	52	8.5	M8	1628
L1997.43-1570R	Right	1570	2409	120	50	43	52	8.5	M8	1567
L1997.43-1650R	Right	1650	2529	120	50	43	52	8.5	M8	1458
L1997.43-1730R	Right	1730	2634	120	50	43	52	8.5	M8	1409
L1997.43-1810R	Right	1810	2784	120	50	43	52	8.5	M8	1320
L1997.43-1890R	Right	1890	2889	120	50	43	52	8.5	M8	1280
L1997.43-1970R	Right	1970	3039	120	50	43	52	8.5	M8	1206
L1997.43-0530L	Left	530	834	120	50	43	52	8.5	M8	1291
L1997.43-0610L	Left	610	939	120	50	43	52	8.5	M8	1632
L1997.43-0690L	Left	690	1089	120	50	43	52	8.5	M8	1735
L1997.43-0770L	Left	770	1194	120	50	43	52	8.5	M8	2077
L1997.43-0850L	Left	850	1299	120	50	43	52	8.5	M8	2426
L1997.43-0930L	Left	930	1449	120	50	43	52	8.5	M8	2506
L1997.43-1010L	Left	1010	1554	120	50	43	52	8.5	M8	2364
L1997.43-1090L	Left	1090	1659	120	50	43	52	8.5	M8	2238
L1997.43-1170L	Left	1170	1809	120	50	43	52	8.5	M8	2022
L1997.43-1250L	Left	1250	1914	120	50	43	52	8.5	M8	1928
L1997.43-1330L	Left	1330	2064	120	50	43	52	8.5	M8	1766

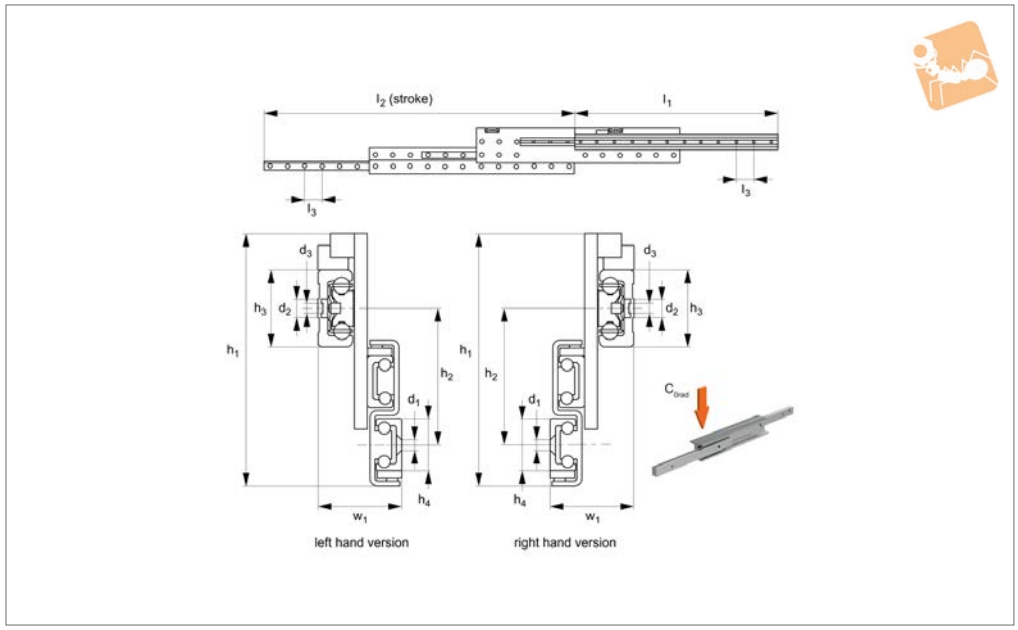


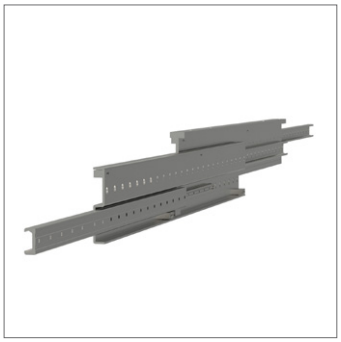
Extended Stroke Telescopic Slides

heavy duty



Order No.	Type	l_1	l_2	h_1	w_1	h_2	h_3	d_1	d_2	Load (per rail) $C_{0\ rad}$ N max.
L1997.43-1410L	Left	1410	2169	120	50	43	52	8.5	M8	1694
L1997.43-1490L	Left	1490	2274	120	50	43	52	8.5	M8	1628
L1997.43-1570L	Left	1570	2409	120	50	43	52	8.5	M8	1567
L1997.43-1650L	Left	1650	2529	120	50	43	52	8.5	M8	1458
L1997.43-1730L	Left	1730	2634	120	50	43	52	8.5	M8	1409
L1997.43-1810L	Left	1810	2784	120	50	43	52	8.5	M8	1320
L1997.43-1890L	Left	1890	2889	120	50	43	52	8.5	M8	1280
L1997.43-1970L	Left	1970	3039	120	50	43	52	8.5	M8	1206





L1998

Material

Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes

These are very heavy duty telescopic rails with strokes of over 150% of closed length.
C_{0rad} is the load rating for a single telescopic slide.
Moving rail must be lower rail (unless technical department consulted).

Tips

These are handed rails - i.e. left and right hands to be specified.

Order No.	Type	l_1	l_2 stroke	l_3	h_1	w_1	h_2	h_3	h_4	d_1	d_2	d_3	Load (per rail) $C_{0\ rad}$ N max.
L1998.63-0930R	Right	930	1444	80	207.5	68	112	63	43	8.5	15	9	4036
L1998.63-1010R	Right	1010	1554	80	207.5	68	112	63	43	8.5	15	9	4590
L1998.63-1090R	Right	1090	1664	80	207.5	68	112	63	43	8.5	15	9	4908
L1998.63-1170R	Right	1170	1804	80	207.5	68	112	63	43	8.5	15	9	4610
L1998.63-1250R	Right	1250	1914	80	207.5	68	112	63	43	8.5	15	9	4398
L1998.63-1330R	Right	1330	2054	80	207.5	68	112	63	43	8.5	15	9	4027
L1998.63-1410R	Right	1410	2164	80	207.5	68	112	63	43	8.5	15	9	3864
L1998.63-1490R	Right	1490	2274	80	207.5	68	112	63	43	8.5	15	9	3713
L1998.63-1570R	Right	1570	2414	80	207.5	68	112	63	43	8.5	15	9	3445
L1998.63-1650R	Right	1650	2524	80	207.5	68	112	63	43	8.5	15	9	3325
L1998.63-1730R	Right	1730	2634	80	207.5	68	112	63	43	8.5	15	9	3213
L1998.63-1810R	Right	1810	2774	80	207.5	68	112	63	43	8.5	15	9	3011
L1998.63-1890R	Right	1890	2884	80	207.5	68	112	63	43	8.5	15	9	2919
L1998.63-1970R	Right	1970	3024	80	207.5	68	112	63	43	8.5	15	9	2750
L1998.63-0930L	Left	930	1444	80	207.5	68	112	63	43	8.5	15	9	4036
L1998.63-1010L	Left	1010	1554	80	207.5	68	112	63	43	8.5	15	9	4590
L1998.63-1090L	Left	1090	1664	80	207.5	68	112	63	43	8.5	15	9	4908
L1998.63-1170L	Left	1170	1804	80	207.5	68	112	63	43	8.5	15	9	4610
L1998.63-1250L	Left	1250	1914	80	207.5	68	112	63	43	8.5	15	9	4398
L1998.63-1330L	Left	1330	2054	80	207.5	68	112	63	43	8.5	15	9	4027
L1998.63-1410L	Left	1410	2164	80	207.5	68	112	63	43	8.5	15	9	3864
L1998.63-1490L	Left	1490	2274	80	207.5	68	112	63	43	8.5	15	9	3713
L1998.63-1570L	Left	1570	2414	80	207.5	68	112	63	43	8.5	15	9	3445
L1998.63-1650L	Left	1650	2524	80	207.5	68	112	63	43	8.5	15	9	3325
L1998.63-1730L	Left	1730	2634	80	207.5	68	112	63	43	8.5	15	9	3213
L1998.63-1810L	Left	1810	2774	80	207.5	68	112	63	43	8.5	15	9	3011
L1998.63-1890L	Left	1890	2884	80	207.5	68	112	63	43	8.5	15	9	2919
L1998.63-1970L	Left	1970	3024	80	207.5	68	112	63	43	8.5	15	9	2750

Extended Stroke Telescopic Slides

ultra heavy duty

