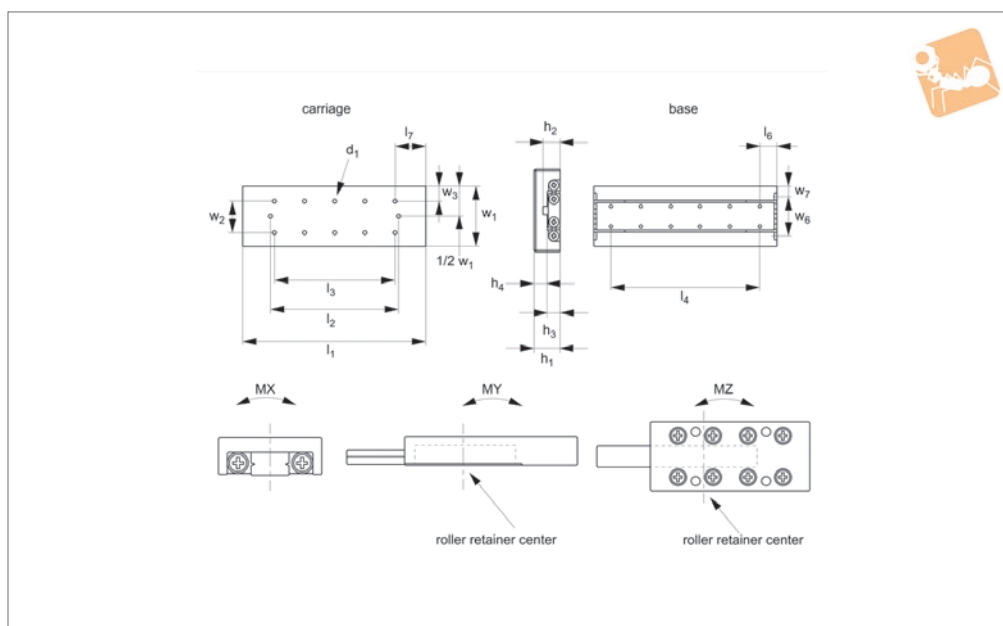




Stainless Cross Roller Slides

smaller sizes

Linear Tables



L1022.web

LINEAR TABLES

Material

Body stainless steel (440C), nickel plated apart from rail V groove. Retainer stainless

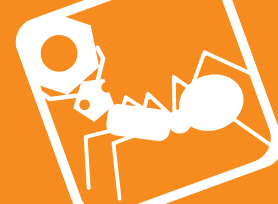
(304), rollers stainless (440C).

Carriage side parallelism 5 μ .

Technical Notes

Carriage top parallelism 3 μ .

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



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

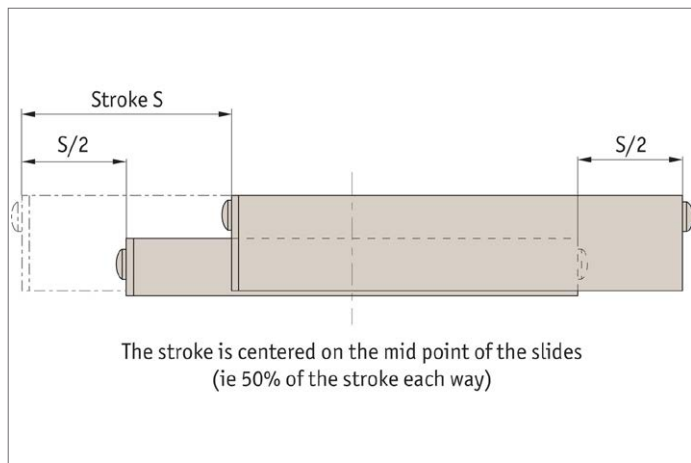
Order No.	w_4	w_5	w_6	w_7	h_2	h_3	h_4	d_1	Allowable load kN max.	Dyn. load C kN max.	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1022.030-012	12.8	8.6	-	15	11	7	4	M2	0.19	0.38	2.6	1.2	1.4
L1022.030-018	12.8	8.6	-	15	11	7	4	M2	0.28	0.52	3.9	2.6	3.0
L1022.030-025	12.8	8.6	-	15	11	7	4	M2	0.38	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



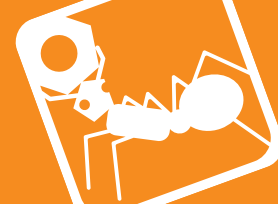
Stainless Cross Roller Slides

smaller sizes

Linear Tables



LINEAR TABLES



Size + Weight

For light/medium loads

L1020-L1037

Ball roller versions



L1024 - L1038

Cross roller versions



L1020 - L1026

Stainless steel versions

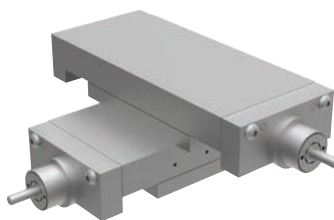


L1022 - L1023

For heavy duty loads and motorised

L3000-L3500

Needle roller & dovetail stage



L3170 - L3194

Motorised stages

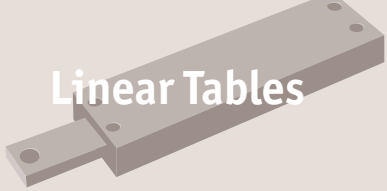


L3500 - L3510

Micrometer driven stages

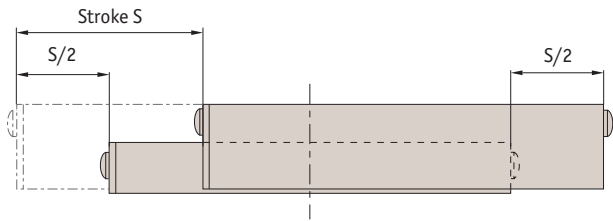


L3100 - L3123



Factors affecting stage selections...

- Size and weight of load
- Moment loads
- Stroke required
- Accuracy required
- Usage conditions of water, chemicals, shock loads etc.



Generally ball slides are less expensive but cross roller slides can carry 8 to 10 times the load of ball slides.

The stroke is centred on the mid point of the slides (i.e. 50% of the stroke each way).

A selection...		
L1020 Crossed roller tables  Steel and aluminium, accuracy typically 5µ.	L1022/23 Cross roller table  Stainless Steel, accuracy typically 3µ.	L1024 Ball slide tables  Aluminium, accuracy typically 12µ.
L1026 Crossed roller slide tables  Aluminium, accuracy typically 5µ.	L1028 Precision ball slide tables  Aluminium, accuracy typically 3µ.	L1029 Precision crossed roller tables  Aluminium, accuracy typically 3µ.
L1034 Flanged ball slide tables - precision  With flange accuracy to 1µ.	L1038 Anti-creep ball slide tables  Special anti-creep function prevents cage misalignment.	L1039 Non-magnetic ball slide  Non-magnetic accuracy typically 3µ.





Steel - L1020

- Standard steel / cast iron



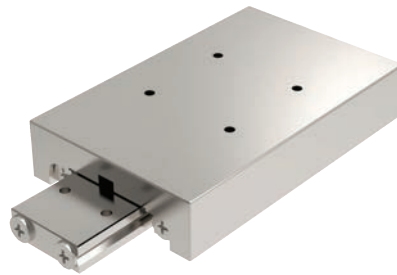
Aluminium - L1021

- Lower weight, lower profile
- Good for high accelerations



Stainless steel - L1022 + L1023

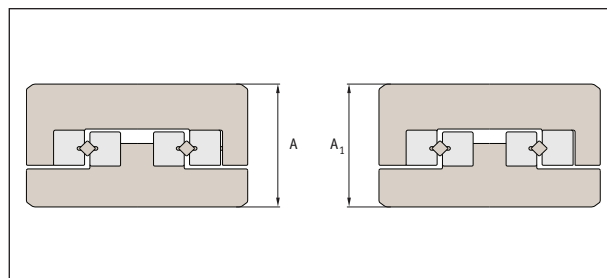
- Stainless steel (440C+Ni) corrosion resistant



Rated life

$$L \text{ (Km)} = \left(\frac{F_t \cdot C}{F_w \cdot P_c} \right)^{3.33} \times 100$$

- F_t = temperature factor
 F_w = load factor
 C = basic dynamic load (kN) see tables
 P_c = radial load (kN)

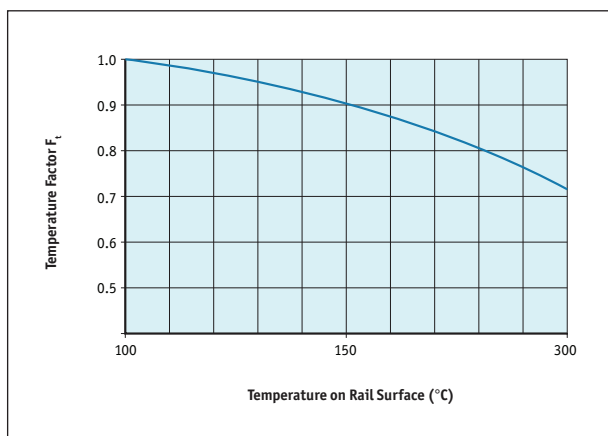


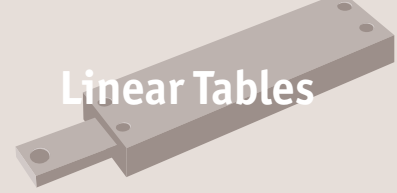
Height tolerance:

- Height $\pm 100\mu$
- Motorised parts $\pm 10\mu$
- 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





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	-15 -35	-30 -70	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			3
300-350	4	8			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

