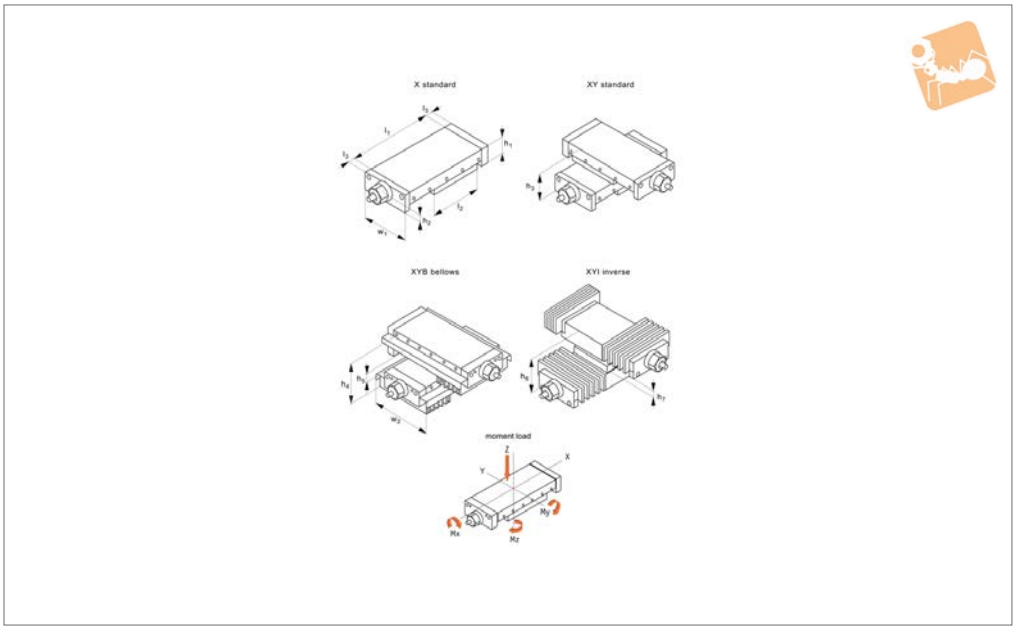
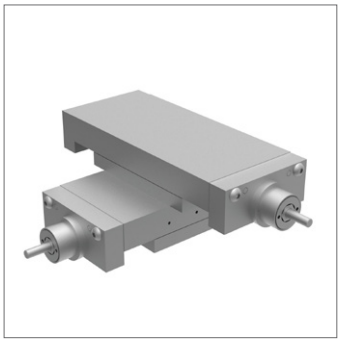




L3185

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

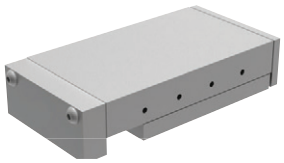
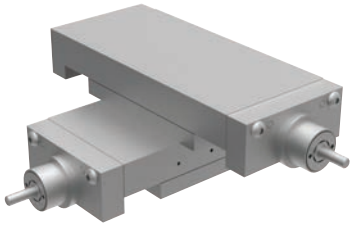
Motor Lead Screw XY Stages

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

Heavy duty linear stages

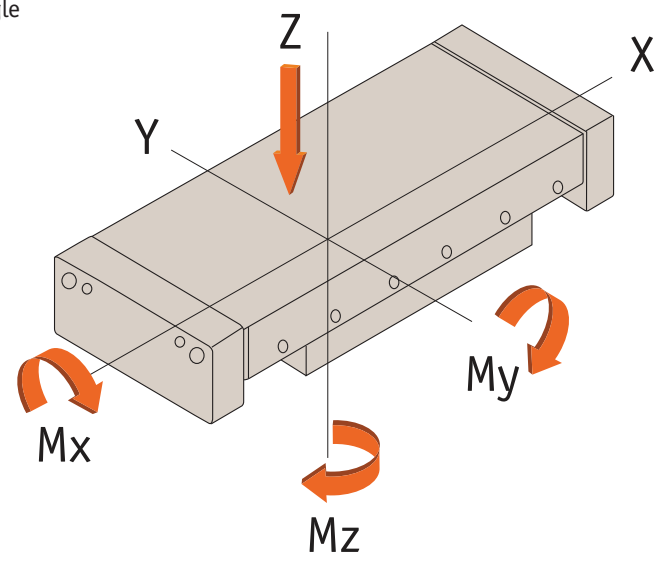
Plain stages	Lead screw & handle	Lead screw & knob
		
XYθ stage	**Motorised stage**	**XY stage**
		

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.

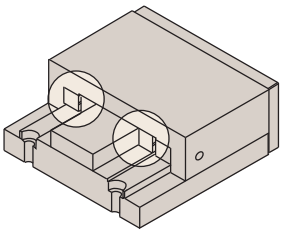
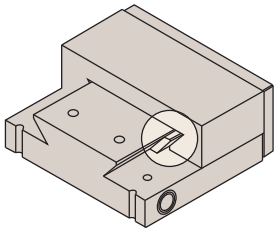
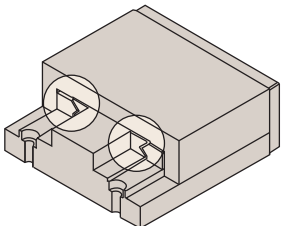
Moment loads

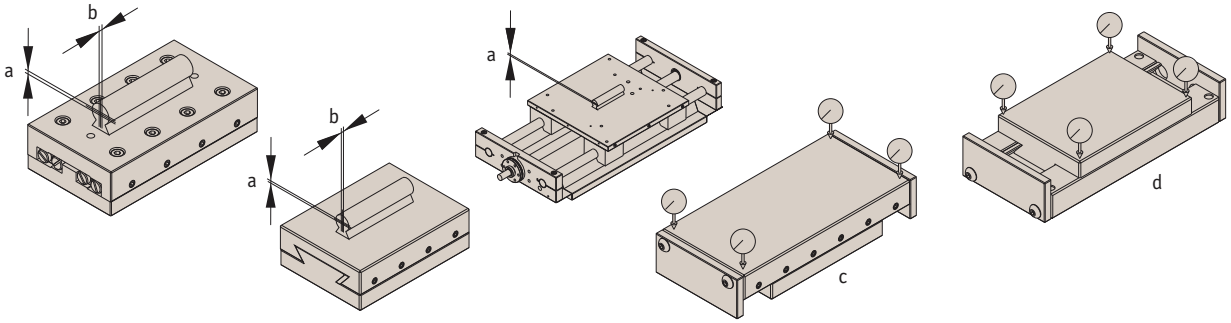
All loads shown in tables are based upon an evenly distributed load with slide in centre position. All loads apply to a single slide.



Precision Linear Stages

Overview

	• Crossed roller	• Dovetail	• Needle roller
			
Width	30-300mm	30-400mm	100-400mm
Stroke	12-950mm	10-600mm	50-800mm
Load capacity	29 kN	33 kN	59 kN
Max speed	20 m/min	15 m/min	20 m/min
Coefficient of fiction	0,003	0,1	0,003

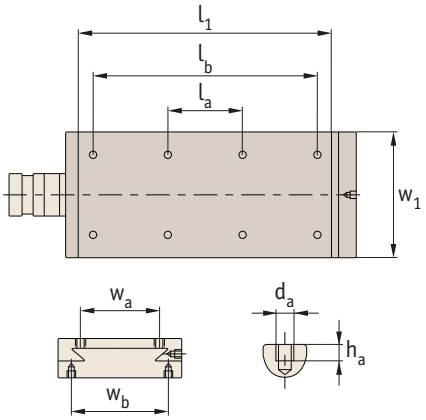


Straightness of travel (µ)		Stroke up to	Slide type	Slide length up to	Parallelism (µ)	
a	b				c	d
2	3	50	Cross roller & Needle roller	100	12	10
3	4	100	Cross roller & Needle roller	200	18	15
5	6	200	Cross roller & Needle roller	300	21	18
6	8	300	Cross roller & Needle roller	400	25	22
8	10	400	Cross roller & Needle roller	600	32	30
10	14	500	Cross roller & Needle roller	800	45	40
12	17	600	Cross roller & Needle roller	1000	60	50
15	20	700	Cross roller & Needle roller	1210	80	60
18	25	800	Cross roller & Needle roller			
3	5	50	Dovetail	100	15	12
5	8	100	Dovetail	200	22	18
8	12	200	Dovetail	300	28	25
10	15	300	Dovetail	400	35	30
14	20	400	Dovetail	600	50	40
18	25	500	Dovetail	800	60	50
20	30	600	Dovetail	1000	80	65
20	30	600	Dovetail	1210	100	80

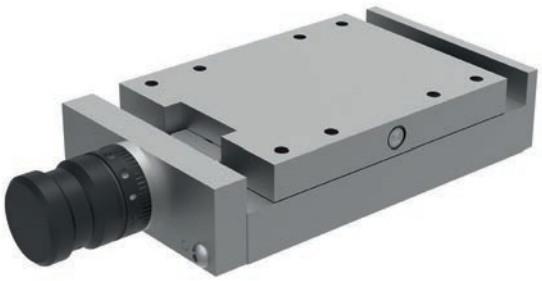
Height tolerance for roller and dovetail slides
± 0,01mm. DIN 7168 medium is the dimensional variations of the sliders. Closer tolerances upon request.

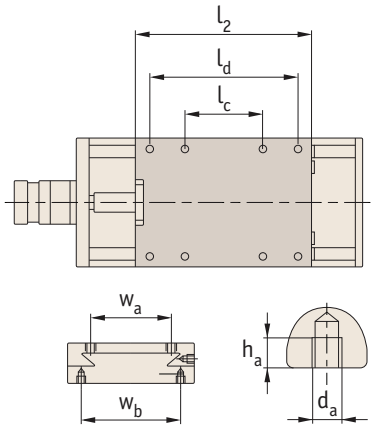
Rectangularity of XY-tables
± 0,005mm per 100mm slide length

Carriage - Standard holes



Base - Standard holes



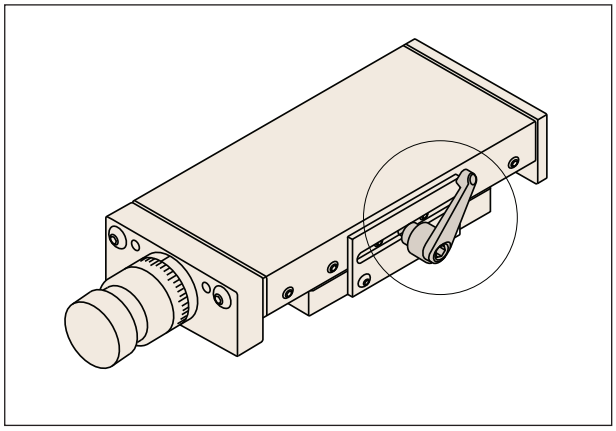


Carriage							Base					
w_1	l_1	l_a	l_b	h_a	d_a	w_a	l_2	l_c	l_d	w_b	d_a	h_a
50	76	36	-	4	4xM4	24	50	20	-	37	4xM4	4
50	102	62	-	4	4xM4	24	76	36	-	37	4xM4	4
50	152	112	-	4	4xM4	24	101	61	-	37	4xM4	4
75	102	62	-	5	4xM5	34	76	36	-	56	4xM5	5
75	127	87	-	5	4xM5	34	101	61	-	56	4xM5	5
75	152	112	-	5	4xM5	34	101	61	-	56	4xM5	5
100	152	112	-	6	4xM6	52	126	86	-	74	4xM6	8
100	203	163	-	6	4xM6	52	152	112	-	74	4xM6	8
100	254	214	-	6	4xM6	52	203	163	-	74	4xM6	8
100	305	90	265	6	8xM6	52	228	188	-	74	8xM6	8
150	203	163	-	6	4xM8	95	152	112	-	120	4xM8	12
150	305	90	265	6	8xM8	95	203	163	-	120	8xM8	12
150	406	240	366	6	8xM8	95	304	90	264	120	8xM8	12
150	406	240	366	6	8xM8	95	253	213	-	120	8xM8	12
200	457	240	417	8	8xM10	120	304	90	264	155	8xM10	8
200	610	190	570	8	8xM10	120	406	190	366	155	8xM10	8
300	410	190	370	15	8xM10	200	308	90	268	255	8xM10	15
300	610	190	570	15	8xM12	200	408	190	368	255	8xM12	15
300	710	290	670	15	8xM12	200	408	190	368	255	8xM12	15
300	910	290	870	15	8xM12	200	508	290	468	255	8xM12	15
300	1010	490	970	15	8xM12	200	508	290	468	255	8xM12	15
300	1210	490	1170	15	8xM12	200	608	190	568	255	8xM12	15

Positioning Stages

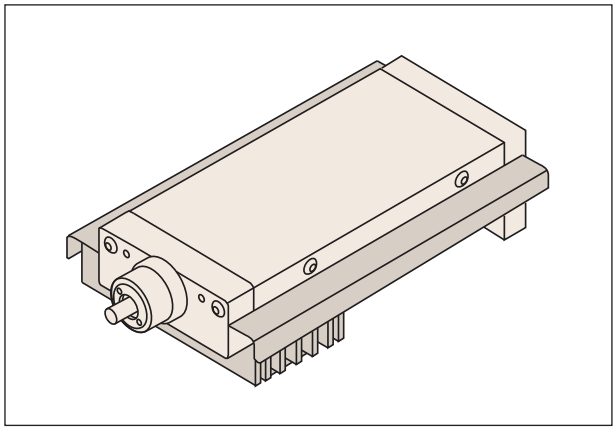
Medium - heavy duty accessories

Locking device



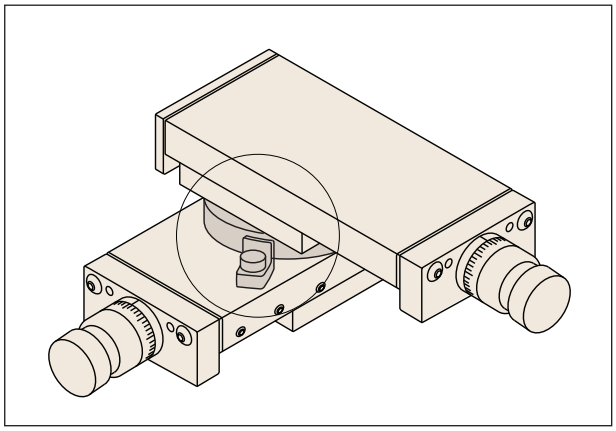
Either mounted on a side plate, a swivel rod or direct to slideway - dependent on stage type.

Bellows



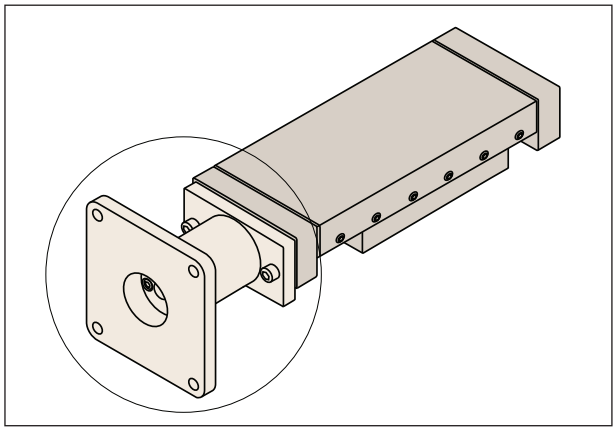
Recommended for general industrial applications. The installation of bellows affects the stroke, height and width of the slide. The bellows are made of PVC and can be used at temperatures up to 80° consult us for dimensions.

Swivelling plates



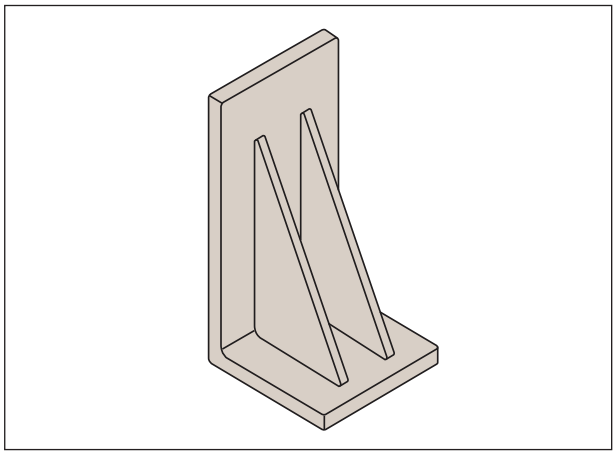
These can be rotated 360° in graduations of 10°. Graduations of 10° up to 90° clockwise and counter-clockwise.

Motor adaptors



For slides with a width greater than 75mm, a flanged motor adaptor with coupling can be provided. Please advise motor size.

Mounting brackets



From cast iron or on request aluminium.