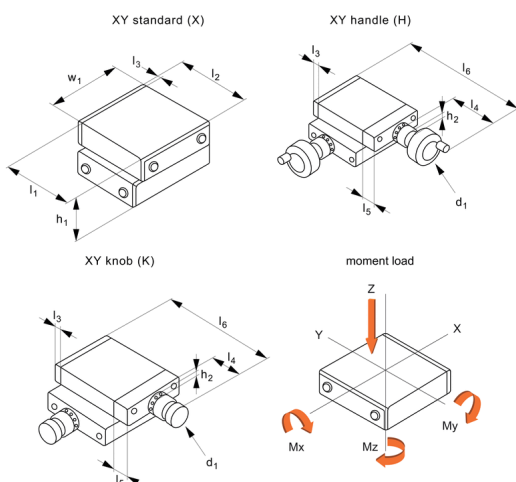




Miniature XY stages

cross roller

Manual Positioning Stages



L3177

MANUAL POSITIONING STAGES

Material

Cast iron body (ENGJL-250), with hardened cross roller linear rail set. Hardened and ground lead screw M6x1, pitch accuracy $\pm 0,02\text{mm}/300\text{mm}$.

Technical Notes

Suitable for horizontal applications requi-

ring 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

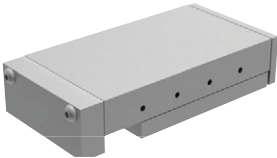
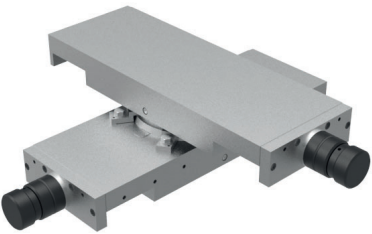
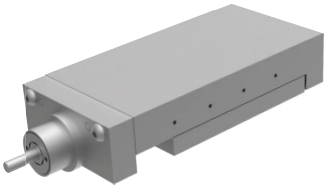
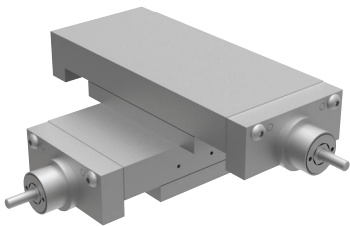
Order No.	l ₅	l ₆	Lead screw	Load kN max.	Moment M _x Nm max.	Moment M _y Nm max.	Moment M _z Nm max.
L3177.075-025-X	14	-	M6x1	0.3	18	5.7	6.1
L3177.100-025-X	14	-	M6x1	0.6	36	11	14
L3177.150-050-X	14	-	M6x1	0.7	64	18	21
L3177.200-050-X	14	-	M6x1	1.2	190	60	62
L3177.300-100-X	15	-	M8x1	3.2	1140	183	188
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



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



Heavy duty linear stages

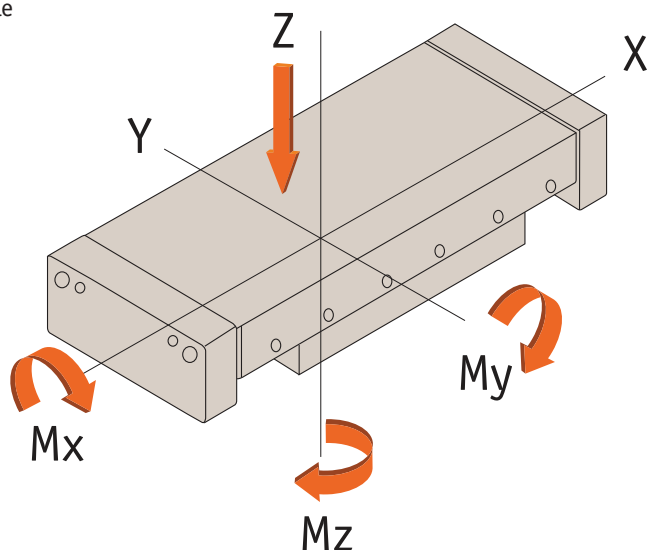
Plain stages 	Lead screw & handle 	Lead screw & knob 
XYθ stage 	Motorised stage 	XY stage 

Available with the following sliding elements:

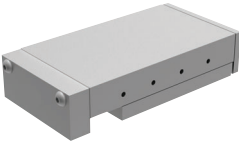
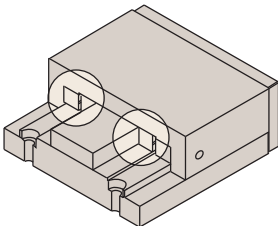
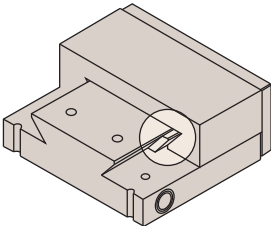
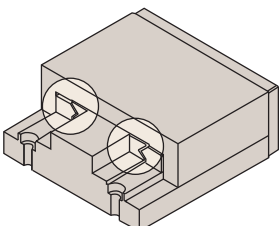
Cross roller:	For medium loads, low friction.
Dovetail:	Less expensive, higher friction, higher loads.
Needle roller:	Highest loads, low friction, more expensive.

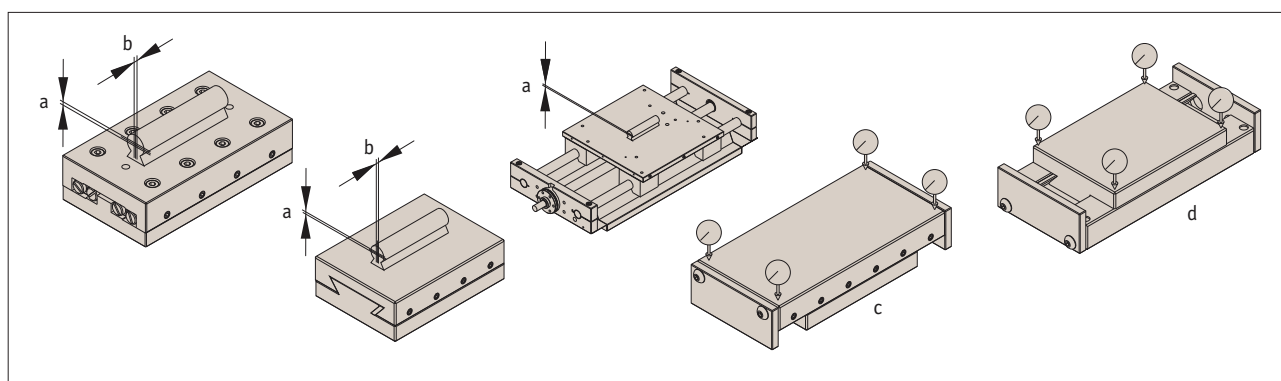
Moment loads

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





	• 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 friction	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

$\pm 0,01$ mm. DIN 7168 medium is the dimensional variations of the sliders. Closer tolerances upon request.

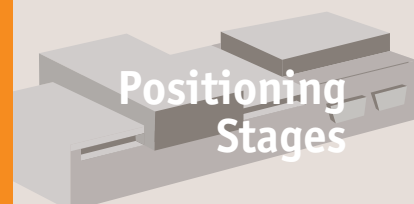
Rectangularity of XY-tables

$\pm 0,005$ mm per 100mm slide length



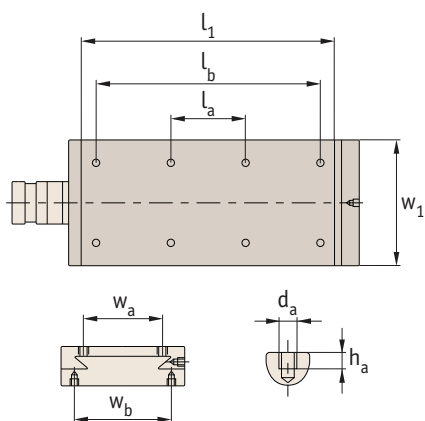
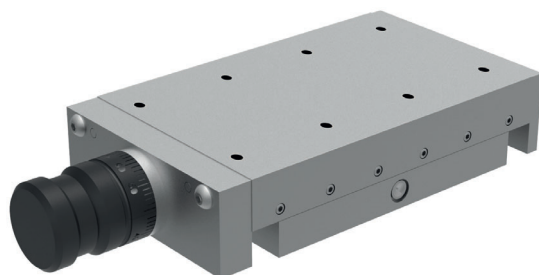
Heavy Duty Linear Stages

Standard mounting holes

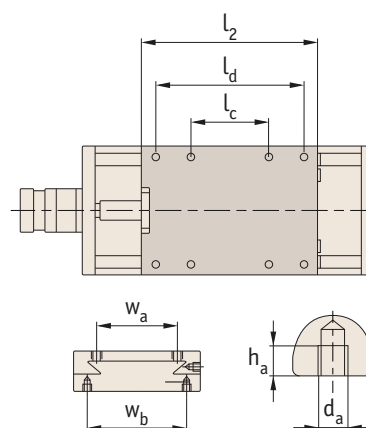
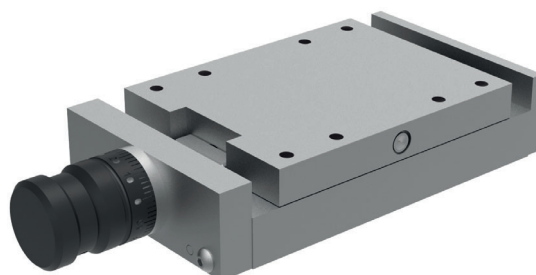


Positioning Stages

Carriage - Standard holes



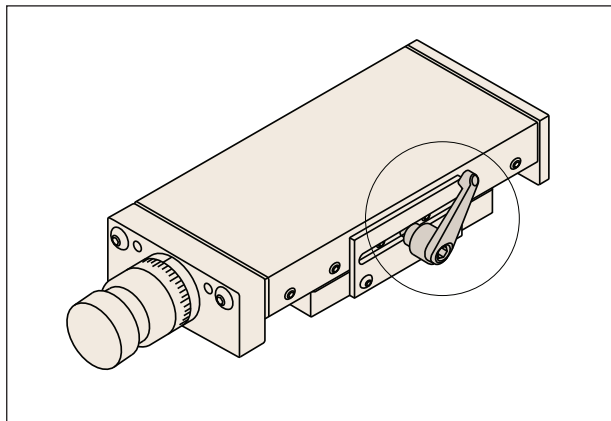
Base - Standard holes



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

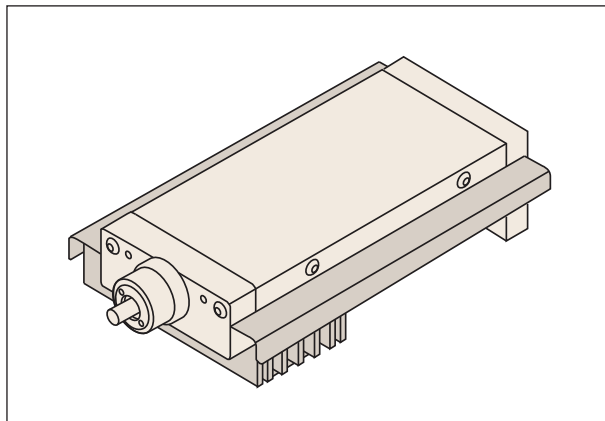


Locking device



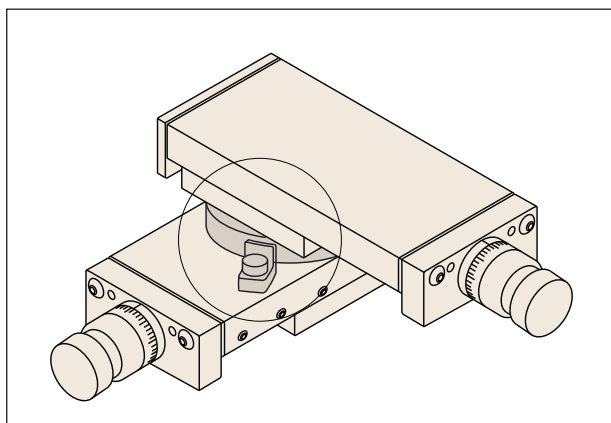
Either mounted on a side plate, a swivel rod or direct to slideway - dependent on stage type.

Bellows



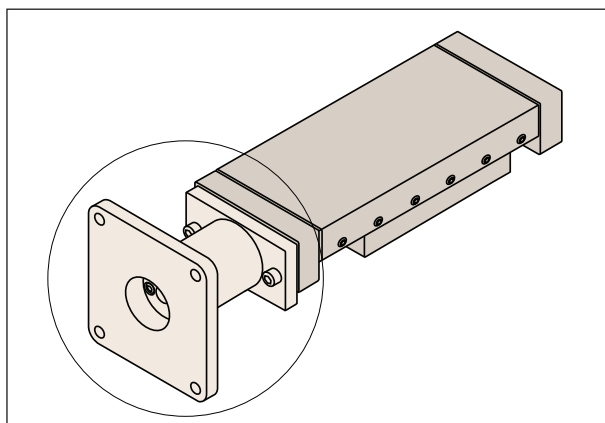
Recommended for general industrial applications. The installation of bellows affects the stroke, height and width of the slide. The bellows are made of PVC and can be used at temperatures up to 80° consult us for dimensions.

Swivelling plates



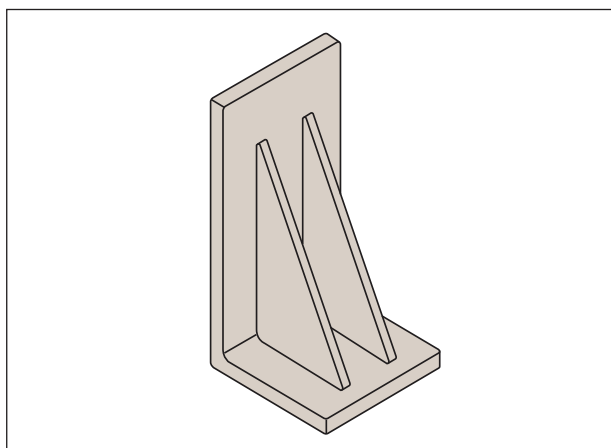
These can be rotated 360° in graduations of 10°. Graduations of 10° up to 90° clockwise and counter-clockwise.

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.