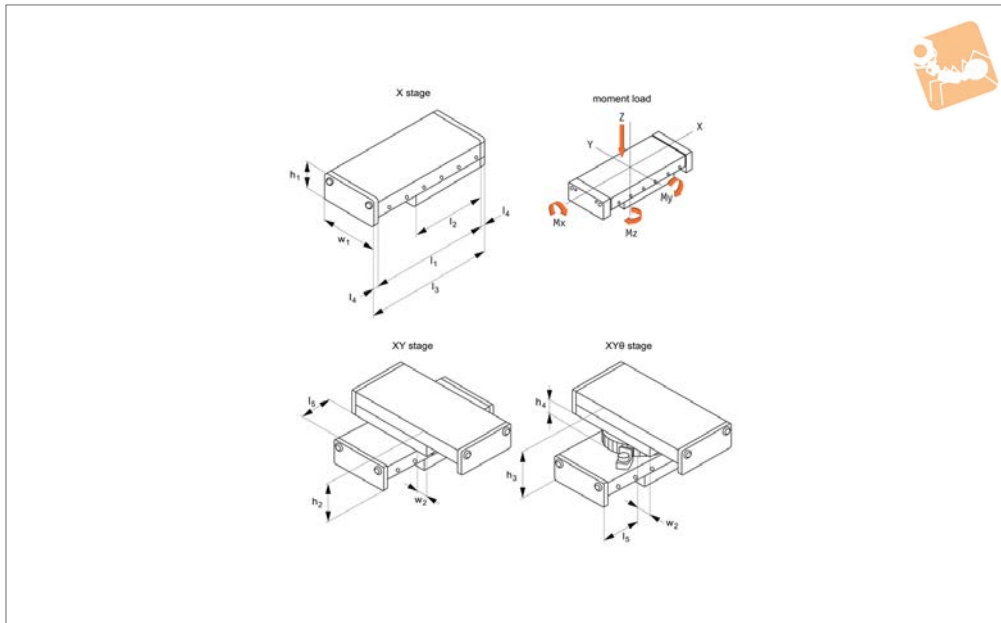




Plain Positioning Stages

cross roller

Manual Positioning Stages



L3170

MANUAL POSITIONING STAGES

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,θ stage

Centre mounting of compound slides is standard. Please advise dimensions w_2 and l_5 when off-centre mounting is required.

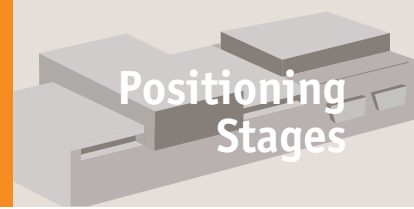
Important Notes

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.

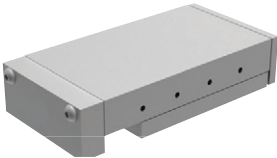




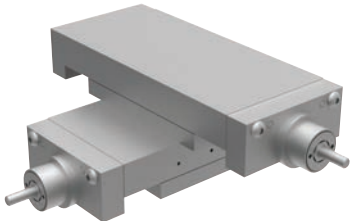
Order No.	w_1	Stroke	l_1	h_1	h_2	h_3	h_4	l_2	l_3	Weight kg
L3170.050-022-*	50	22	76	25	50	-	-	50	88	0.6
L3170.050-025-*	50	25	102	25	50	-	-	76	114	0.8
L3170.050-050-*	50	50	152	25	50	-	-	101	164	1.1
L3170.075-025-*	75	25	102	32	64	82	18	76	114	1.8
L3170.075-026-*	75	25	127	32	64	82	18	101	139	2.0
L3170.075-050-*	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



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



Heavy duty linear stages

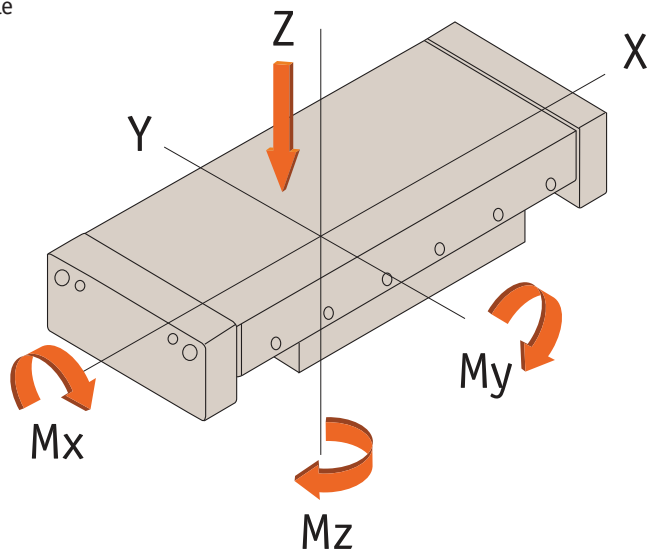
<p style="text-align: center;">Plain stages</p> 	<p style="text-align: center;">Lead screw & handle</p> 	<p style="text-align: center;">Lead screw & knob</p> 
<p style="text-align: center;">XYθ stage</p> 	<p style="text-align: center;">Motorised stage</p> 	<p style="text-align: center;">XY stage</p> 

Available with the following sliding elements:


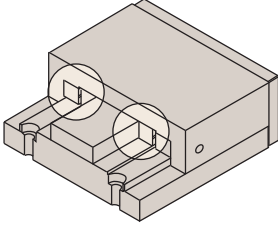
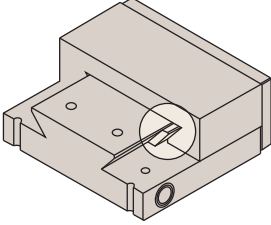
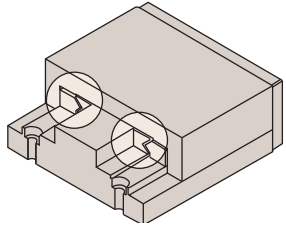
- Cross roller: For medium loads, low friction.
- Dovetail: Less expensive, higher friction, higher loads.
- Needle roller: Highest loads, low friction, more expensive.

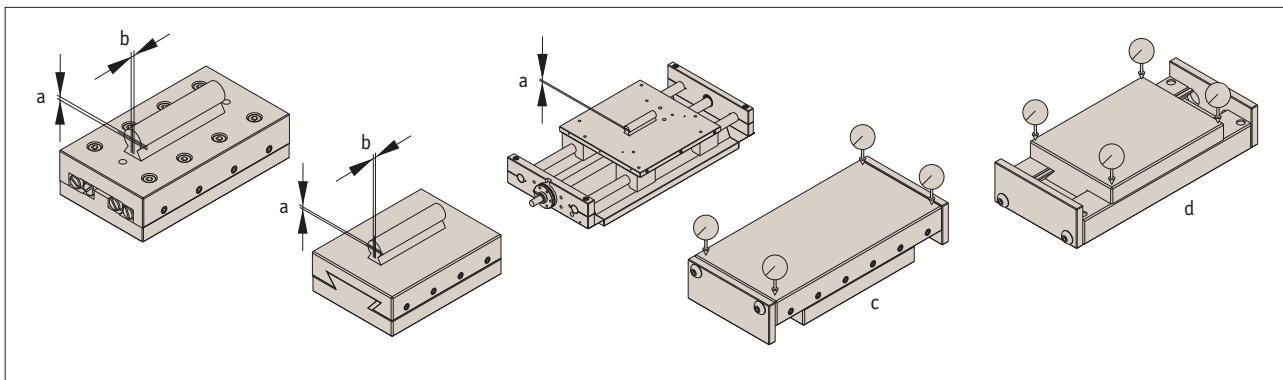
Moment loads

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

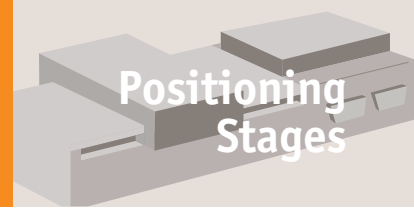
Height tolerance for roller and dovetail slides
 $\pm 0,01$ mm. DIN 7168 medium is the dimensional variations of the sliders. Closer tolerances upon request.

Rectangularity of XY-tables
 $\pm 0,005$ mm per 100mm slide length



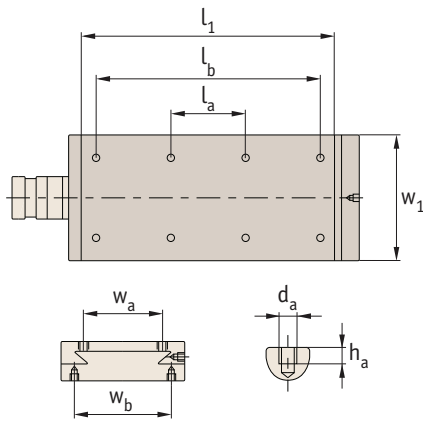
Heavy Duty Linear Stages

Standard mounting holes

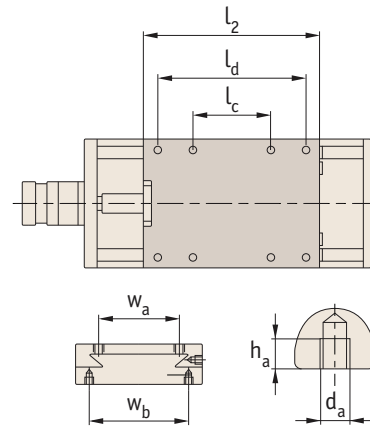
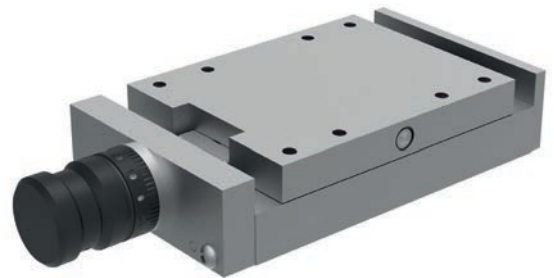


Positioning Stages

Carriage - Standard holes



Base - Standard holes



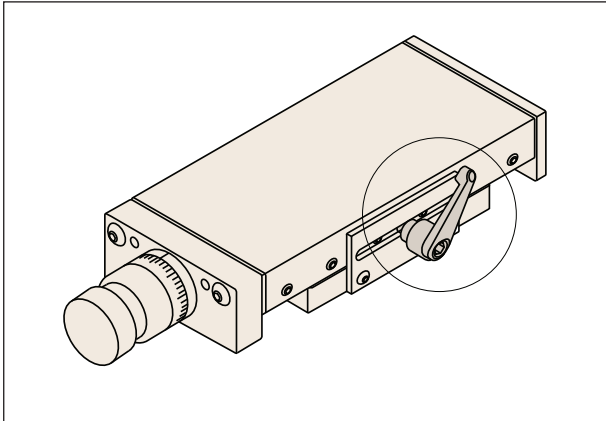
Carriage							Base					
w ₁	l ₁	l _a	l _b	h _a	d _a	w _a	l ₂	l _c	l _d	w _b	d _a	h _a
50	76	36	-	4	4xM4	24	50	20	-	37	4xM4	4
50	102	62	-	4	4xM4	24	76	36	-	37	4xM4	4
50	152	112	-	4	4xM4	24	101	61	-	37	4xM4	4
75	102	62	-	5	4xM5	34	76	36	-	56	4xM5	5
75	127	87	-	5	4xM5	34	101	61	-	56	4xM5	5
75	152	112	-	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

ov-standard-mounting-holes-rnh - Updated - 01-03-2023

MANUAL POSITIONING STAGES

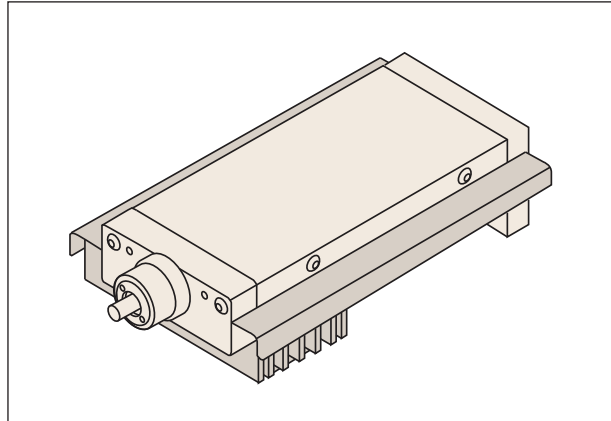


Locking device



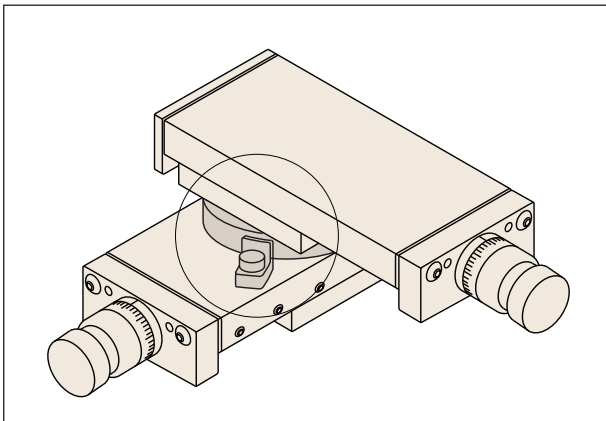
Either mounted on a side plate, a swivel rod or direct to slideway - dependent on stage type.

Bellows



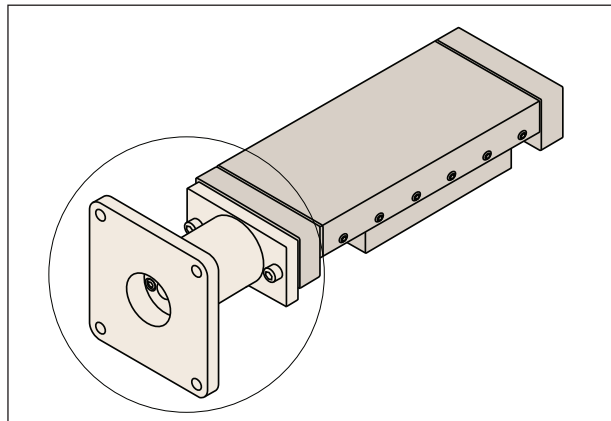
Recommended for general industrial applications. The installation of bellows affects the stroke, height and width of the slide. The bellows are made of PVC and can be used at temperatures up to 80° consult us for dimensions.

Swivelling plates



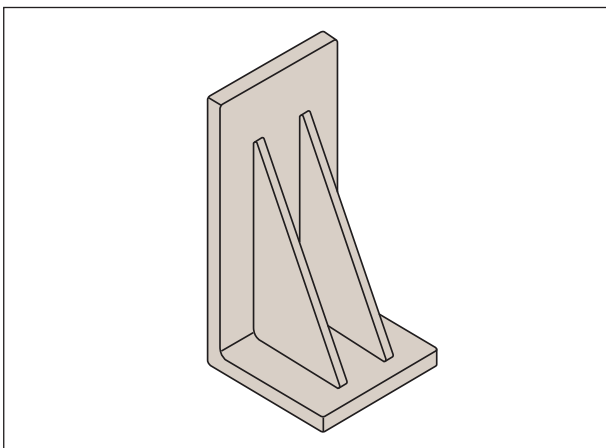
These can be rotated 360° in graduations of 10°. Graduations of 10° up to 90° clockwise and counter-clockwise.

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.