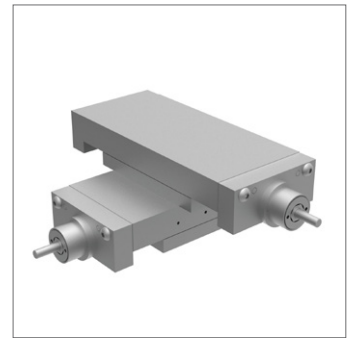
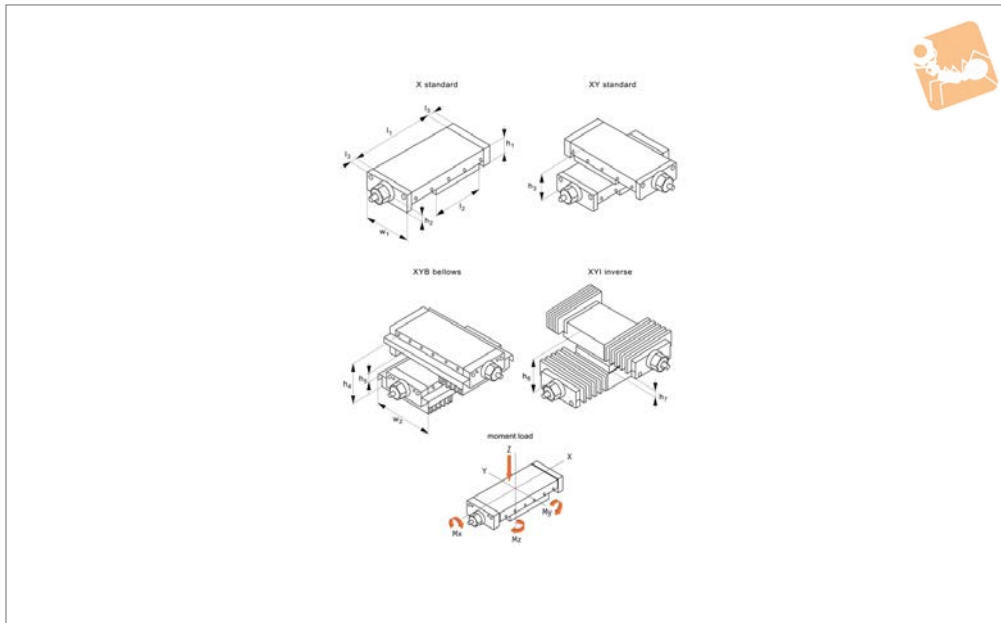




Motor Lead Screw XY Stages

needle roller

Manual Positioning Stages



L3195

MANUAL POSITIONING STAGES

Material

Cast iron body (ENGJL-250), with hardened needle roller linear rail set. Hardened and ground lead screw, pitch accuracy $\pm 0.015\text{mm}/300\text{mm}$. 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_3 when off-centre mounting is required. When limit switches are installed the stroke is reduced by approx. 20mm.

Important Notes

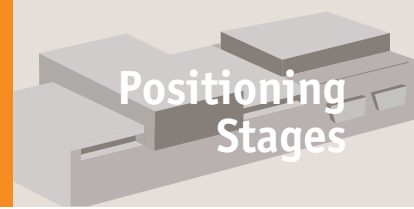
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request. 3D CAD models available.

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

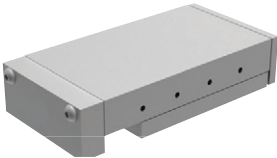




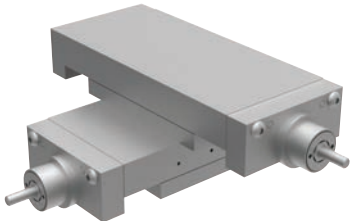


Order No.	w ₁	Stroke	Load kN max.	l ₁	h ₁	l ₂	h ₂	h ₃	h ₄	h ₅	Weight kg
L3195.300-703-*	400	700	44.3	1110	102	408	34	284	244	40	240
L3195.300-803-*	400	800	44.3	1210	102	408	34	284	244	40	254
L3195.300-304-*	400	300	58.2	810	102	508	34	244	204	-	215
L3195.300-404-*	400	400	58.2	910	102	508	34	244	204	-	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



Heavy duty linear stages

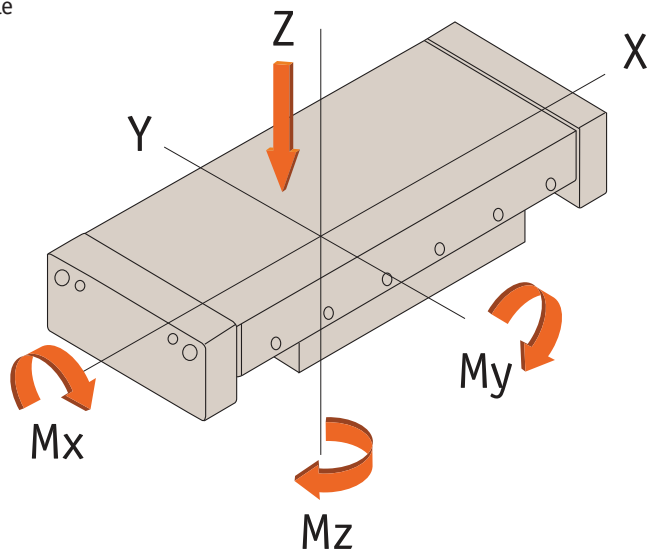
<p>Plain stages</p> 	<p>Lead screw & handle</p> 	<p>Lead screw & knob</p> 
<p>XYθ stage</p> 	<p>Motorised stage</p> 	<p>XY stage</p> 

Available with the following sliding elements:


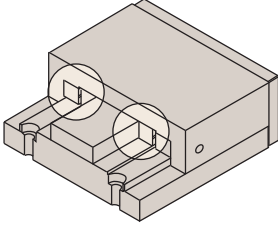
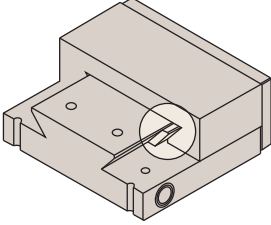
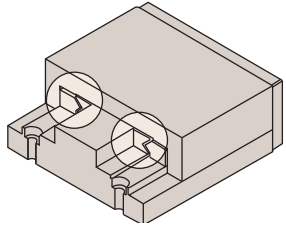
- Cross roller: For medium loads, low friction.
- Dovetail: Less expensive, higher friction, higher loads.
- Needle roller: Highest loads, low friction, more expensive.

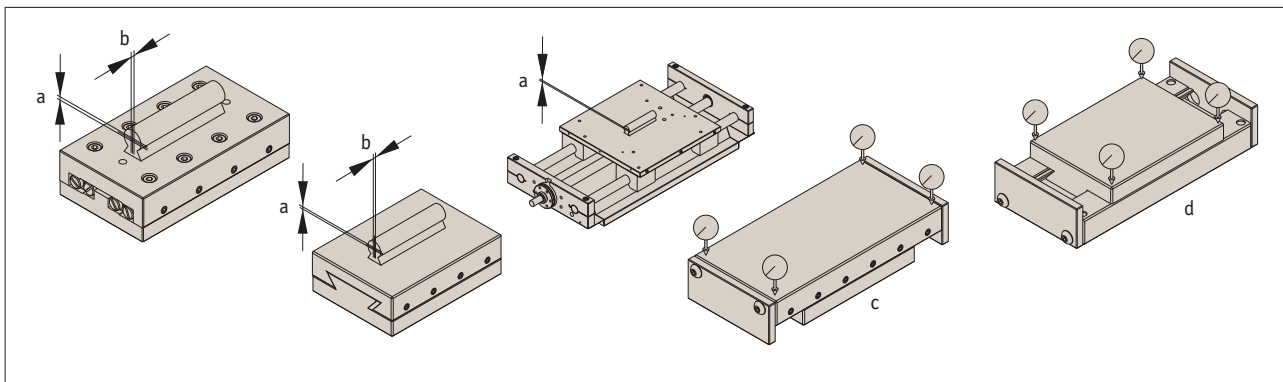
Moment loads

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

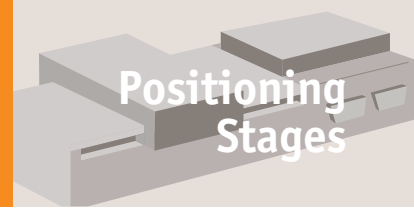
Height tolerance for roller and dovetail slides
 $\pm 0,01$ mm. DIN 7168 medium is the dimensional variations of the sliders. Closer tolerances upon request.

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



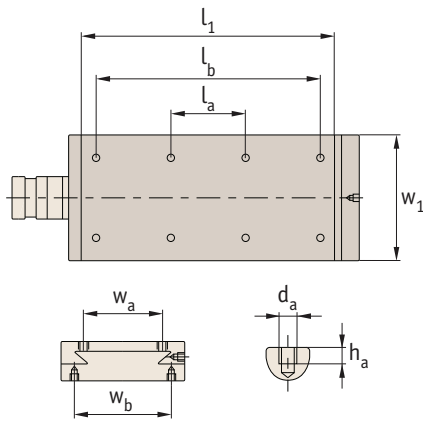
Heavy Duty Linear Stages

Standard mounting holes

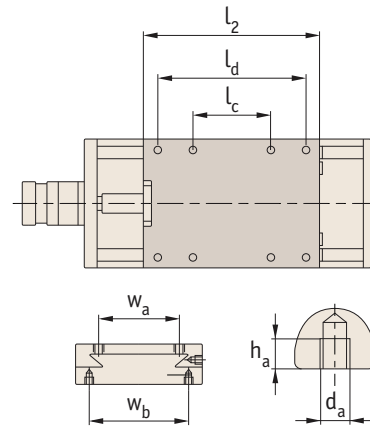
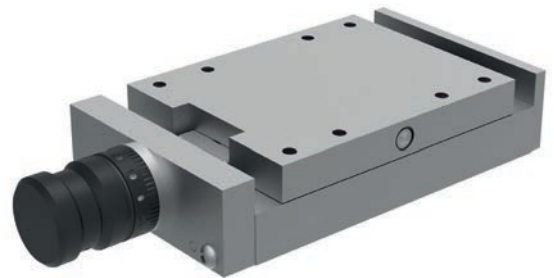


Positioning Stages

Carriage - Standard holes



Base - Standard holes



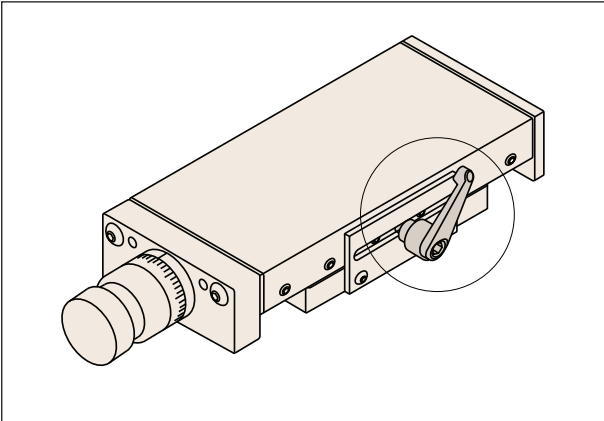
Carriage							Base					
w ₁	l ₁	l _a	l _b	h _a	d _a	w _a	l ₂	l _c	l _d	w _b	d _a	h _a
50	76	36	-	4	4xM4	24	50	20	-	37	4xM4	4
50	102	62	-	4	4xM4	24	76	36	-	37	4xM4	4
50	152	112	-	4	4xM4	24	101	61	-	37	4xM4	4
75	102	62	-	5	4xM5	34	76	36	-	56	4xM5	5
75	127	87	-	5	4xM5	34	101	61	-	56	4xM5	5
75	152	112	-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

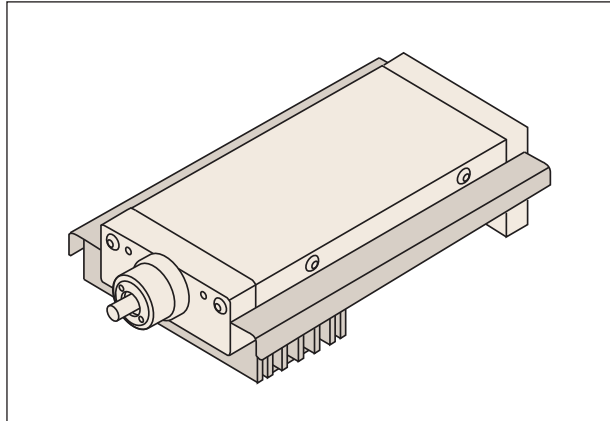


Locking device



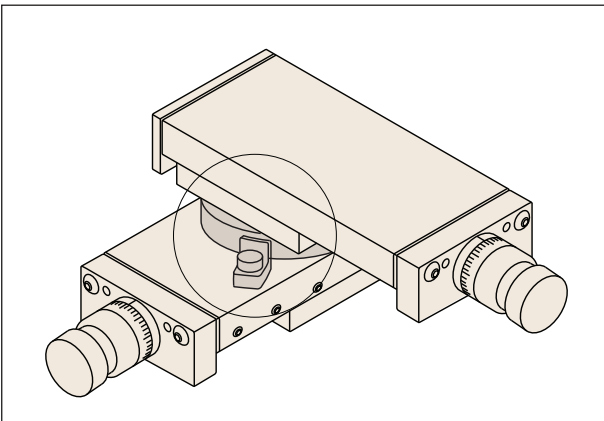
Either mounted on a side plate, a swivel rod or direct to slideway - dependent on stage type.

Bellows



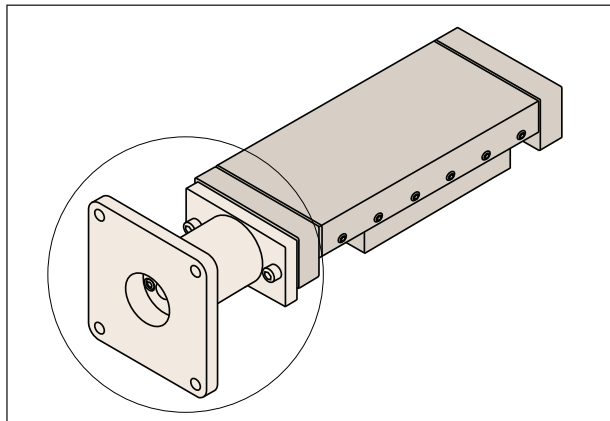
Recommended for general industrial applications. The installation of bellows affects the stroke, height and width of the slide. The bellows are made of PVC and can be used at temperatures up to 80° consult us for dimensions.

Swivelling plates



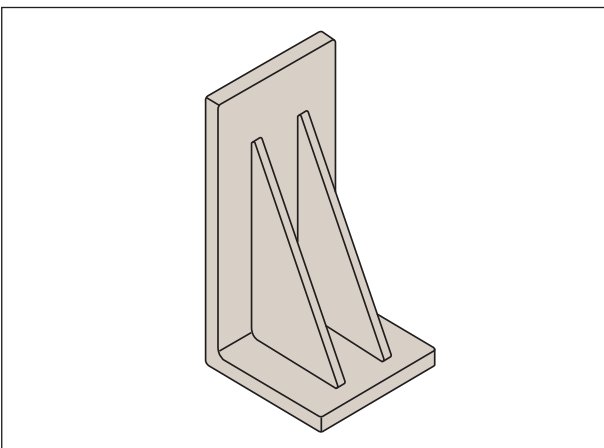
These can be rotated 360° in graduations of 10°. Graduations of 10° up to 90° clockwise and counter-clockwise.

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.