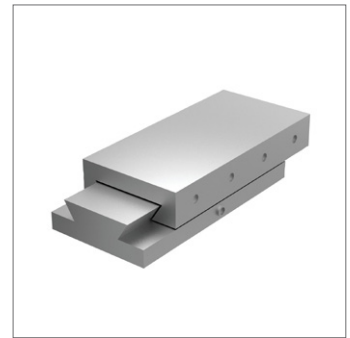
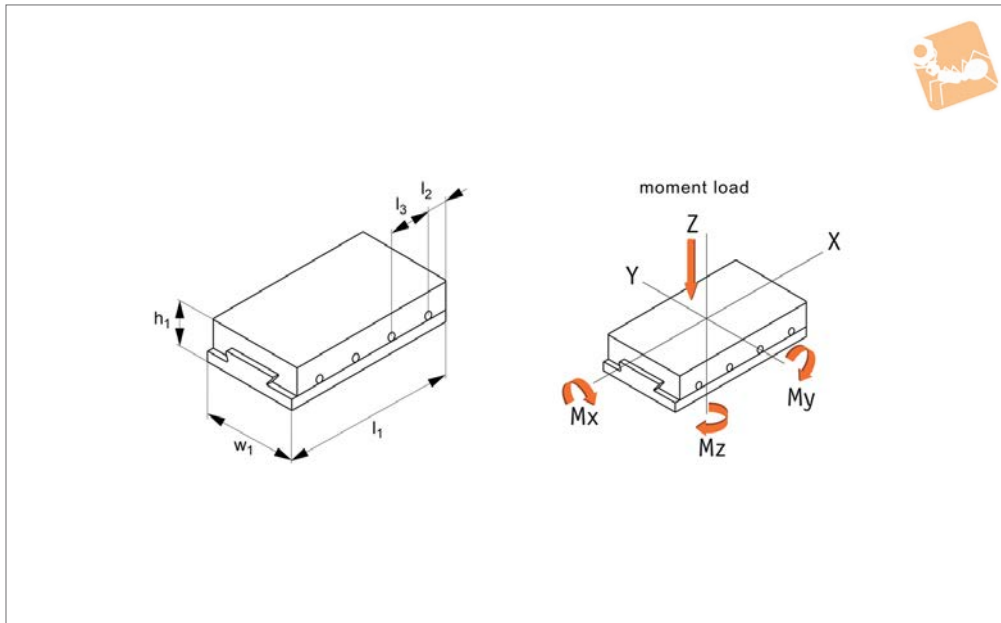
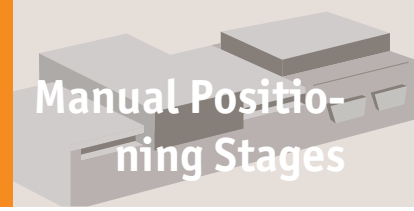




Plain Compact Stages

dovetail

Manual Positioning Stages



L3181

MANUAL POSITIONING STAGES

Material

Cast iron body (ENGJL-250), with dovetail slide system.

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.

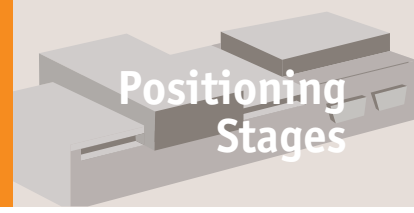
Important Notes

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.

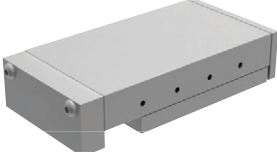



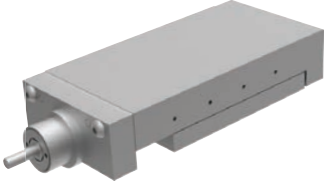
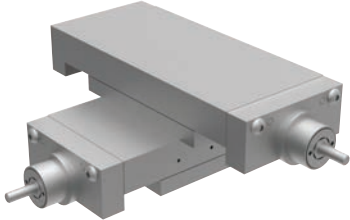
Order No.	Stroke	w ₁	Load kN max.	h ₁	l ₁	l ₂	l ₃	Moment M _x Nm max.	Moment M _y Nm max.	Moment M _z Nm max.	Weight kg
L3181.050-025	25	50	0.5	25	50	12.5	1 x25	3.4	1.8	2.1	0.5
L3181.050-050	50	50	1.0	25	101	13.0	3 x25	6.9	7.2	8.6	0.7
L3181.050-075	75	50	1.4	25	152	13.5	5 x25	10	16	19	1.4
L3181.050-100	100	50	1.9	25	202	13.5	7 x25	13	29	34	1.8
L3181.075-050	50	75	1.4	32	102	13.0	3 x25	14	9.2	11	1.8
L3181.075-075	75	75	2.1	32	152	13.5	5 x25	21	20	24	2.9
L3181.075-100	100	75	2.8	32	202	13.5	7 x25	28	36	43	3.9
L3181.075-125	125	75	3.5	32	252	13.5	9 x25	35	56	67	4.8
L3181.075-150	150	75	4.2	32	302	13.5	11x25	42	81	96	6.0
L3181.100-050	50	100	1.6	37	102	13.5	3 x25	27	13	15	8.4
L3181.100-075	75	100	2.3	37	152	13.5	5 x25	40	29	35	4.2
L3181.100-100	100	100	3.2	37	203	14.5	7 x25	54	52	63	5.9
L3181.100-125	125	100	3.9	37	254	14.5	9 x25	67	82	98	6.8
L3181.100-150	150	100	4.7	37	305	15.0	11x25	81	119	142	8.8
L3181.100-175	175	100	5.5	37	355	15.0	13x25	94	161	192	10.5
L3181.100-200	200	100	6.3	37	405	15.0	15x25	108	210	250	11.8
L3181.100-225	225	100	7.1	37	445	15.0	17x25	121	265	315	12.9
L3181.100-250	250	100	7.8	37	505	15.0	19x25	135	325	385	14.0
L3181.150-050	50	150	3.1	50	152	26.0	2 x50	77	30	36	11.0
L3181.150-075	75	150	3.1	50	152	26.0	2 x50	77	30	36	11.0
L3181.150-100	100	150	4.1	50	203	26.5	3 x50	103	54	65	13.8
L3181.150-125	125	150	5.1	50	253	26.5	4 x50	129	85	101	15.0
L3181.150-150	150	150	6.2	50	305	27.5	5 x50	155	123	147	16.0
L3181.150-200	200	150	8.2	50	406	28.0	7 x50	205	219	260	22.0
L3181.150-250	250	150	10.2	50	506	28.0	9 x50	255	340	405	27.5



Order No.	Stroke	w ₁	Load kN max.	h ₁	l ₁	l ₂	l ₃	Moment M _x Nm max.	Moment M _y Nm max.	Moment M _z Nm max.	Weight kg
L3181.150-300	300	150	12.3	50	606	28.0	11x50	305	485	580	32.5
L3181.200-050	50	200	5.8	58	203	26.5	3 x50	184	73	87	23.0
L3181.200-100	100	200	5.8	58	203	26.5	3 x50	184	73	87	23.0
L3181.200-150	150	200	8.7	58	304	27.0	5 x50	275	164	195	26.1
L3181.200-200	200	200	11.6	58	406	28.0	7 x50	365	290	345	34.4
L3181.200-250	250	200	14.6	58	510	30.0	9 x50	460	460	550	43.0
L3181.200-300	300	200	17.4	58	610	30.0	11x50	550	660	785	51.5
L3181.200-350	350	200	20.3	58	710	30.0	13x50	645	895	1065	60.0
L3181.200-400	400	200	23.1	58	810	30.0	15x50	735	1165	1385	67.0
L3181.200-500	500	200	23.1	58	810	30.0	15x50	735	1165	1385	67.0
L3181.200-600	600	200	23.1	58	810	30.	15x50	735	1165	1385	67.0



Heavy duty linear stages

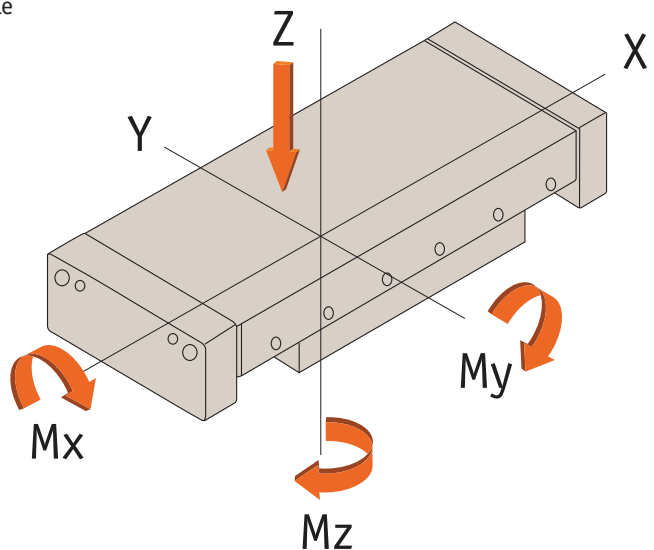
<p>Plain stages</p> 	<p>Lead screw & handle</p> 	<p>Lead screw & knob</p> 
<p>XYθ stage</p> 	<p>Motorised stage</p> 	<p>XY stage</p> 

Available with the following sliding elements:


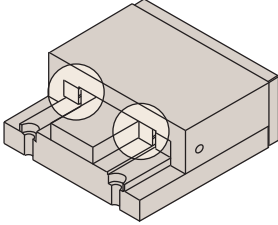
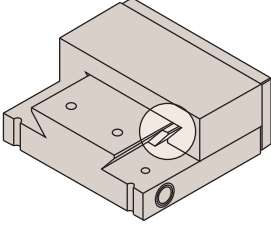
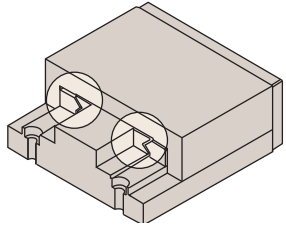
- Cross roller: For medium loads, low friction.
- Dovetail: Less expensive, higher friction, higher loads.
- Needle roller: Highest loads, low friction, more expensive.

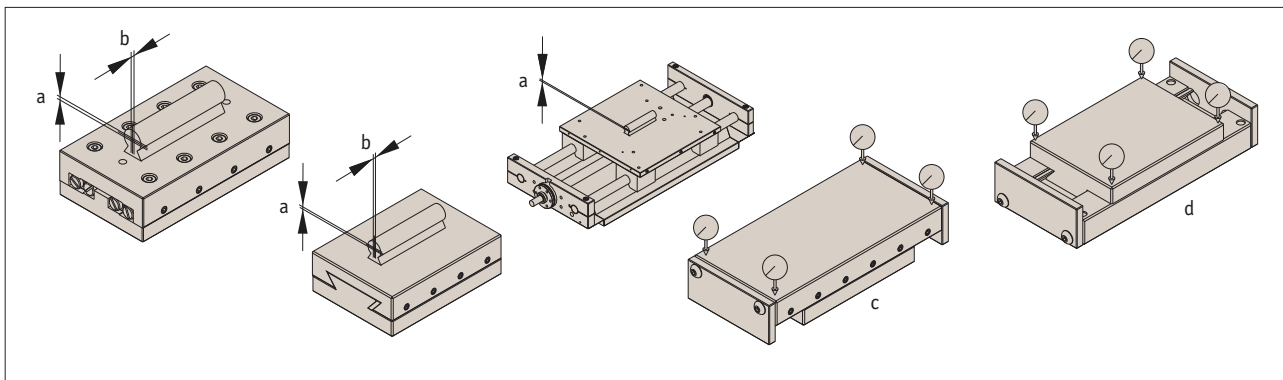
Moment loads

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

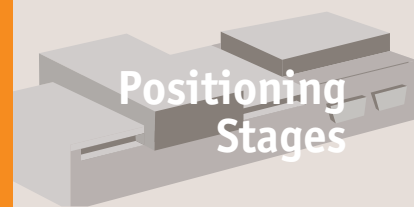
Height tolerance for roller and dovetail slides
 $\pm 0,01$ mm. DIN 7168 medium is the dimensional variations of the sliders. Closer tolerances upon request.

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



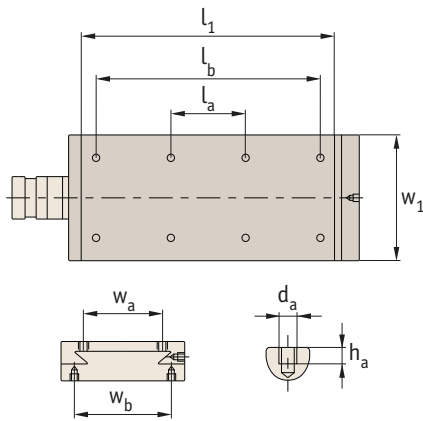
Heavy Duty Linear Stages

Standard mounting holes

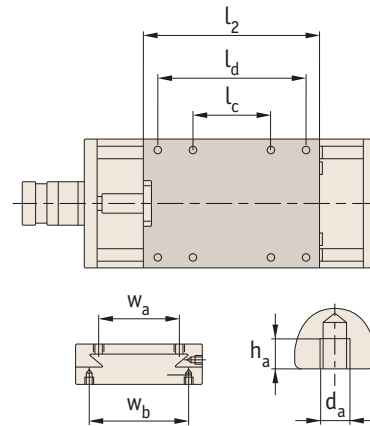
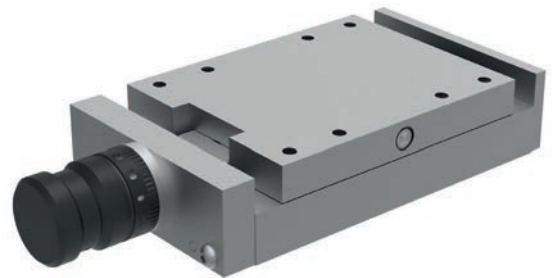


Positioning Stages

Carriage - Standard holes



Base - Standard holes



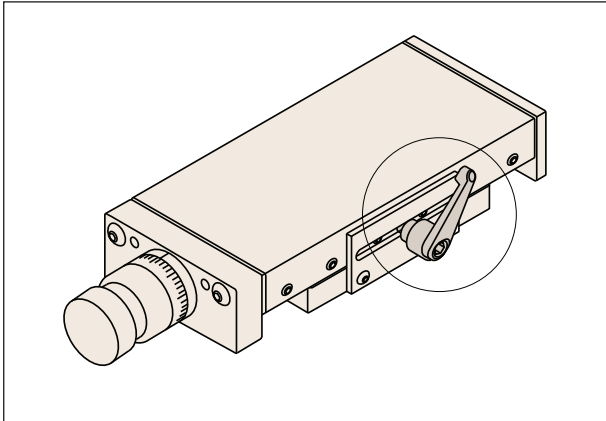
Carriage							Base					
w ₁	l ₁	l _a	l _b	h _a	d _a	w _a	l ₂	l _c	l _d	w _b	d _a	h _a
50	76	36	-	4	4xM4	24	50	20	-	37	4xM4	4
50	102	62	-	4	4xM4	24	76	36	-	37	4xM4	4
50	152	112	-	4	4xM4	24	101	61	-	37	4xM4	4
75	102	62	-	5	4xM5	34	76	36	-	56	4xM5	5
75	127	87	-	5	4xM5	34	101	61	-	56	4xM5	5
75	152	112	-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

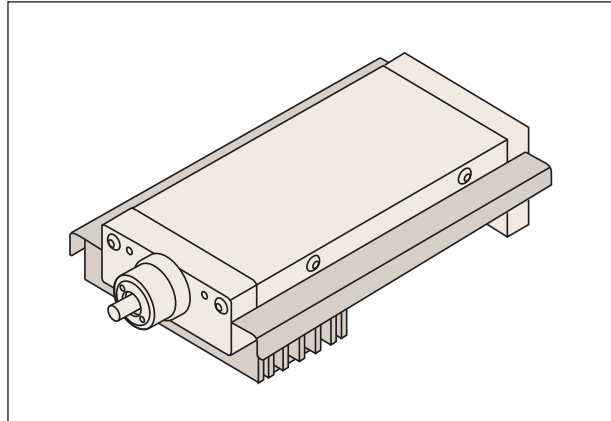


Locking device



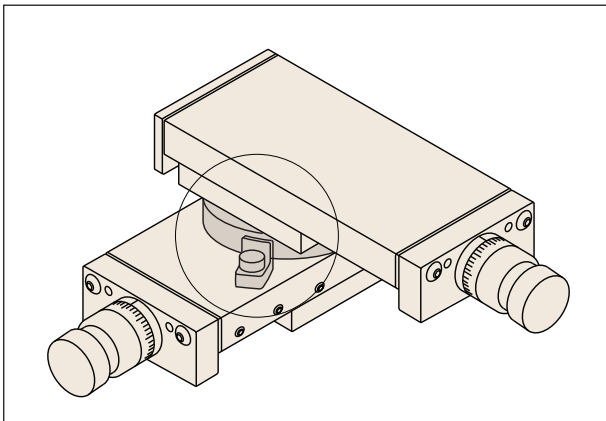
Either mounted on a side plate, a swivel rod or direct to slideway - dependent on stage type.

Bellows



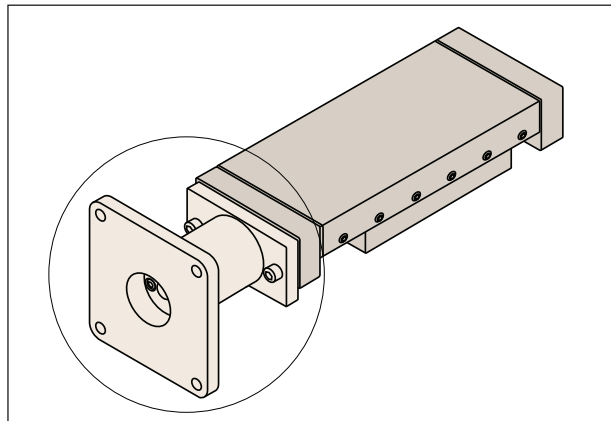
Recommended for general industrial applications. The installation of bellows affects the stroke, height and width of the slide. The bellows are made of PVC and can be used at temperatures up to 80° consult us for dimensions.

Swivelling plates



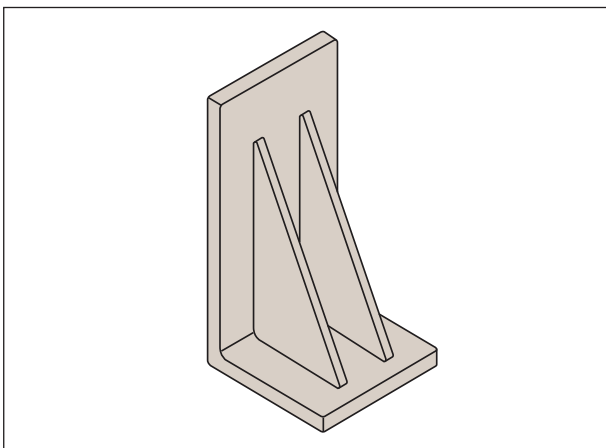
These can be rotated 360° in graduations of 10°. Graduations of 10° up to 90° clockwise and counter-clockwise.

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.