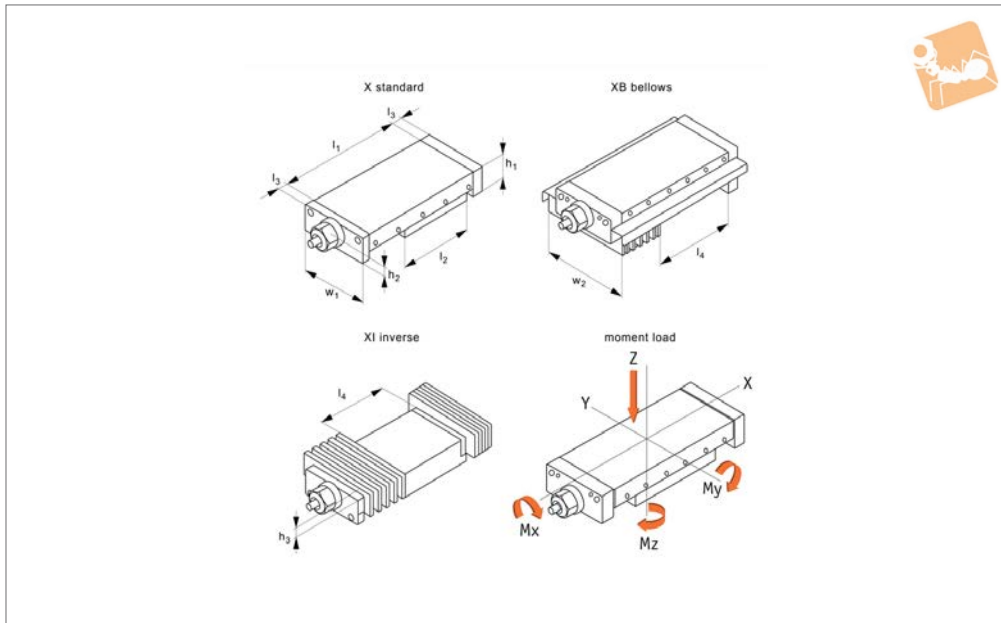




Motor Lead Screw X Stages dovetail

Manual Positioning Stages



L3184

MANUAL POSITIONING STAGES

Material

Cast iron body (ENGJL-250), with dovetail slide system. 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. 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 -X for X axis stage

-XB for X axis stage with bellows

-XI for inverse X axis stage with bellows

When limit switches are installed the stroke is reduced by approx. 20mm.

Important Notes

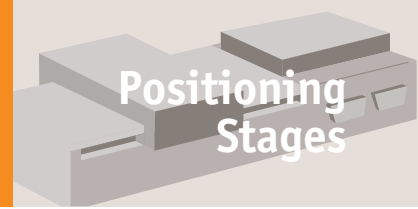
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request. 3D CAD models available.

Order No.	Stroke	w ₁	Load kN max.	h ₁	l ₁	l ₂	l ₃	l ₄	Weight kg
L3184.075-025-*	25	75	1.0	32	102	76	15	50	1.8
L3184.075-026-*	25	75	1.4	32	127	101	15	65	2.0
L3184.075-050-*	50	75	1.4	32	152	101	15	55	2.5
L3184.100-025-*	25	100	2.0	37	152	126	15	100	4.0
L3184.100-050-*	50	100	2.4	37	203	152	15	115	4.7
L3184.100-051-*	50	100	3.2	37	254	203	15	160	6.1
L3184.100-075-*	75	100	3.5	37	305	228	15	180	7.0
L3184.150-050-*	50	150	3.1	50	203	152	16	120	10.0
L3184.150-100-*	100	150	4.1	50	305	203	16	150	13.2
L3184.150-101-*	100	150	6.2	50	406	304	16	250	18.0
L3184.150-150-*	150	150	5.1	50	406	253	16	190	16.5
L3184.200-150-*	150	200	8.7	58	457	304	16	250	30.0
L3184.200-200-*	200	200	11.6	58	610	406	16	340	40.0
L3184.300-100-*	100	300	11.4	75	410	308	20	280	59.0
L3184.300-200-*	200	300	15.0	75	610	408	20	380	80.0
L3184.300-300-*	300	300	15.0	75	710	408	20	380	92.0
L3184.300-400-*	400	300	18.7	75	910	508	20	480	110.0
L3184.300-500-*	500	300	18.7	75	1010	508	20	480	125.0
L3184.300-600-*	600	300	22.4	75	1210	608	20	580	145.0
L3184.400-200-*	200	400	23.3	102	610	408	70	380	169.0
L3184.400-300-*	300	400	23.3	102	710	408	70	380	182.0

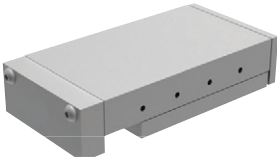




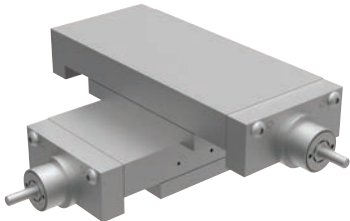


Order No.	Stroke	w ₁	Load kN max.	h ₁	l ₁	l ₂	l ₃	l ₄	Weight kg
L3184.400-400-*	400	400	23.3	102	810	408	90	380	195.0
L3184.400-401-*	400	400	29.0	102	910	508	90	480	225.0
L3184.400-500-*	500	400	29.0	102	1010	508	100	480	238.0
L3184.400-600-*	600	400	29.0	102	1110	508	100	480	251.0
L3184.400-601-*	600	400	34.7	102	1210	508	100	580	270.0

Order No.	w ₂	h ₂	h ₃	Moment M _x Nm max.	Moment M _y Nm max.	Moment M _z Nm max.	Lead screw
L3184.075-025-*	110	11.5	14	10	5.1	6.1	8 x1
L3184.075-026-*	110	11.5	14	14	9.1	10	8 x1
L3184.075-050-*	110	11.5	14	14	9.1	10	8 x1
L3184.100-025-*	135	13.5	14	33	20	24	8 x1
L3184.100-050-*	135	13.5	14	40	29	35	8 x1
L3184.100-051-*	135	13.5	14	54	52	63	8 x1
L3184.100-075-*	135	13.5	14	61	66	79	8 x1
L3184.150-050-*	205	19.0	24	77	30	36	15x2
L3184.150-100-*	205	19.0	24	103	54	65	15x2
L3184.150-101-*	205	19.0	24	155	123	146	15x2
L3184.150-150-*	205	19.0	24	129	85	101	15x2
L3184.200-150-*	255	21.5	24	275	164	195	15x2
L3184.200-200-*	255	21.5	24	365	290	345	15x2
L3184.300-100-*	375	26.0	32	605	235	280	23x4
L3184.300-200-*	375	26.0	32	800	410	490	23x4
L3184.300-300-*	375	26.0	32	800	410	490	23x4
L3184.300-400-*	375	26.0	32	1000	640	760	23x4
L3184.300-500-*	375	26.0	32	1000	640	760	23x4
L3184.300-600-*	375	26.0	32	1195	915	1095	23x4
L3184.400-200-*	480	34.0	37	1360	470	560	23x4
L3184.400-300-*	480	34.0	37	1360	470	560	23x4
L3184.400-400-*	480	34.0	37	1360	470	560	23x4
L3184.400-401-*	480	34.0	37	1695	730	870	23x4
L3184.400-500-*	480	34.0	37	1685	730	870	23x4
L3184.400-600-*	480	34.0	37	1695	730	870	23x4
L3184.400-601-*	480	34.0	37	2025	1050	1250	23x4



Heavy duty linear stages

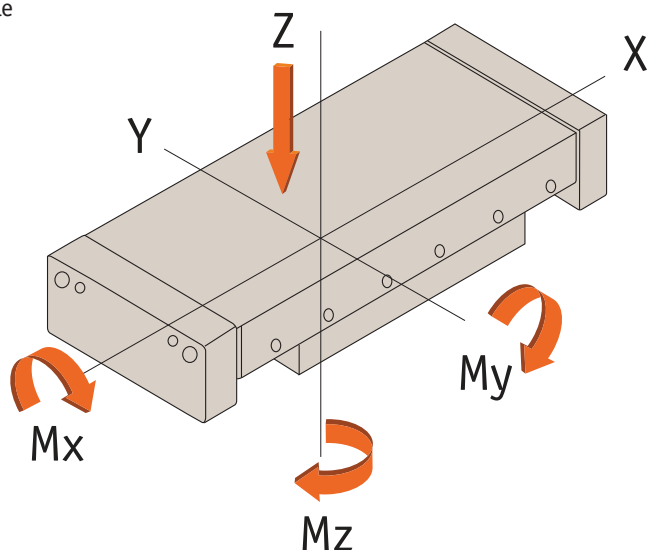
<p>Plain stages</p> 	<p>Lead screw & handle</p> 	<p>Lead screw & knob</p> 
<p>XYθ stage</p> 	<p>Motorised stage</p> 	<p>XY stage</p> 

Available with the following sliding elements:


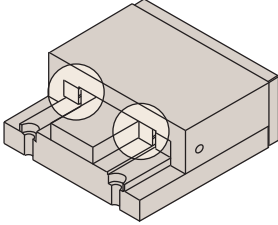
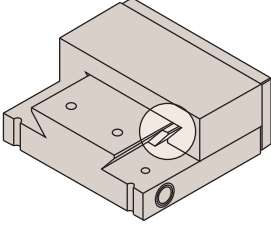
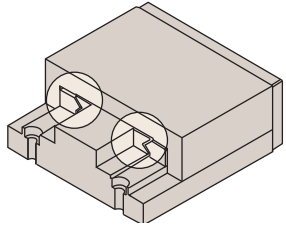
- Cross roller: For medium loads, low friction.
- Dovetail: Less expensive, higher friction, higher loads.
- Needle roller: Highest loads, low friction, more expensive.

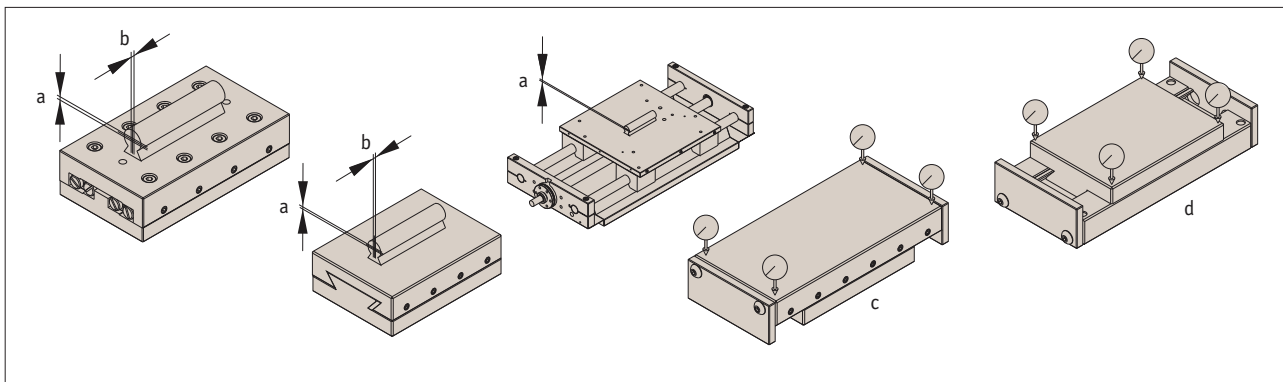
Moment loads

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

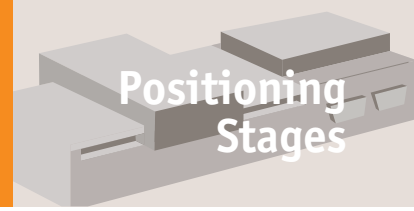
Height tolerance for roller and dovetail slides
 $\pm 0,01$ mm. DIN 7168 medium is the dimensional variations of the sliders. Closer tolerances upon request.

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



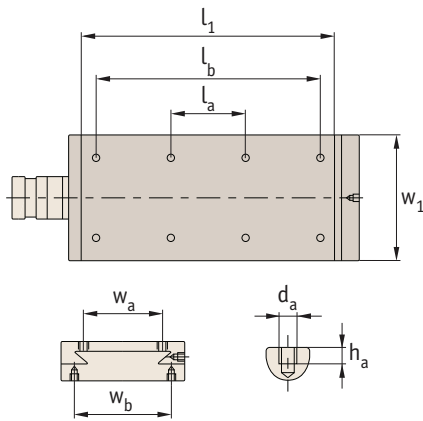
Heavy Duty Linear Stages

Standard mounting holes

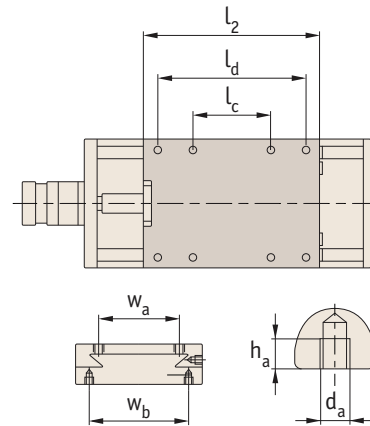
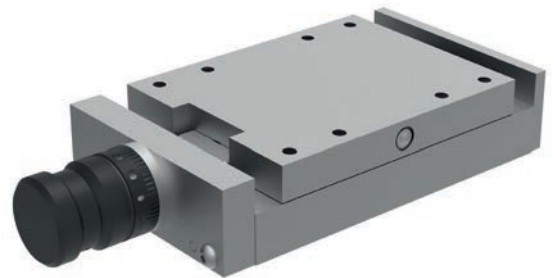


Positioning Stages

Carriage - Standard holes



Base - Standard holes



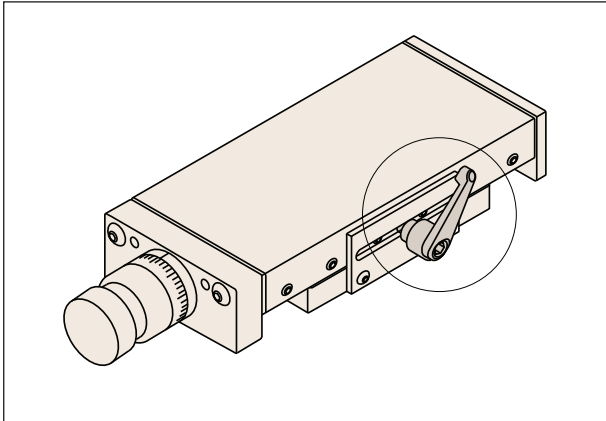
Carriage							Base					
w ₁	l ₁	l _a	l _b	h _a	d _a	w _a	l ₂	l _c	l _d	w _b	d _a	h _a
50	76	36	-	4	4xM4	24	50	20	-	37	4xM4	4
50	102	62	-	4	4xM4	24	76	36	-	37	4xM4	4
50	152	112	-	4	4xM4	24	101	61	-	37	4xM4	4
75	102	62	-	5	4xM5	34	76	36	-	56	4xM5	5
75	127	87	-	5	4xM5	34	101	61	-	56	4xM5	5
75	152	112	-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

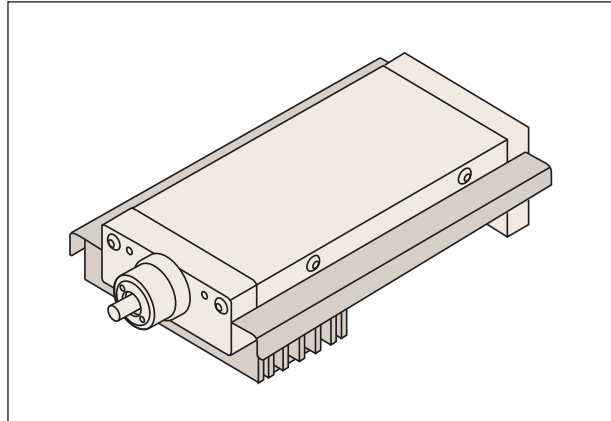


Locking device



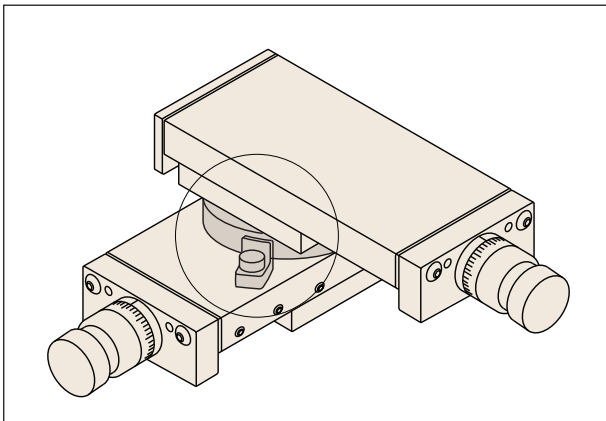
Either mounted on a side plate, a swivel rod or direct to slideway - dependent on stage type.

Bellows



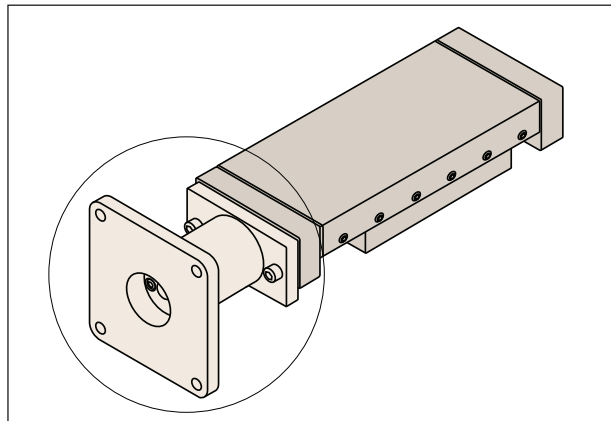
Recommended for general industrial applications. The installation of bellows affects the stroke, height and width of the slide. The bellows are made of PVC and can be used at temperatures up to 80° consult us for dimensions.

Swivelling plates



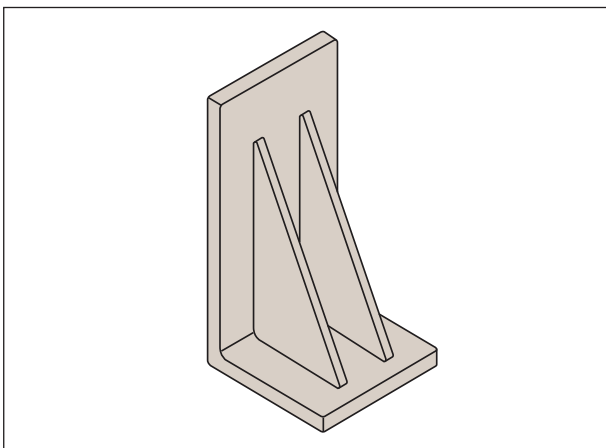
These can be rotated 360° in graduations of 10°. Graduations of 10° up to 90° clockwise and counter-clockwise.

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.