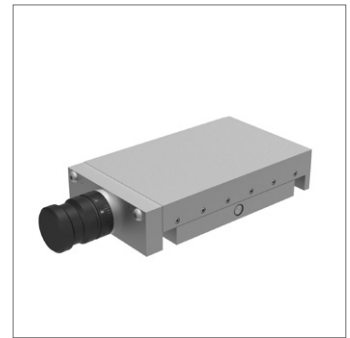
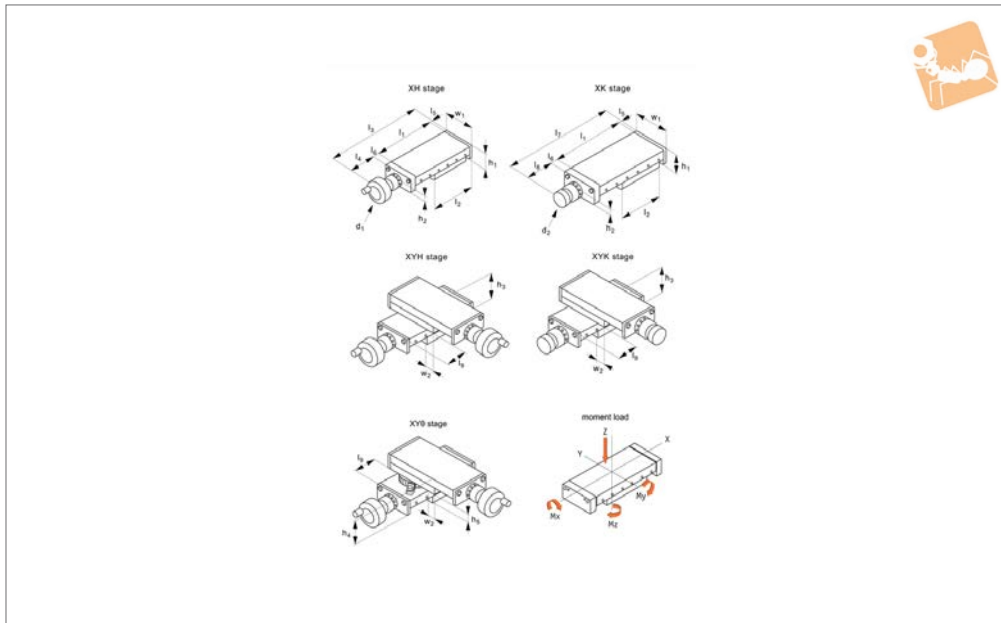




Manual Lead Screw Stages dovetail

Manual Positioning Stages



L3182

MANUAL POSITIONING STAGES

Material

Cast iron body (ENGJL-250), with dovetail slide system. Hardened and ground lead screw, pitch accuracy $\pm 0.02\text{mm}/300\text{mm}$. 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.

Tips

Replace -* with
-XH for X axis stage with handle

- XK for X axis stage with knob
- XYH for X,Y axes stage with handle
- XYK for X,Y axes stage with knob
- XYTH for X,Y,. stage with handle
- XYTK for X,Y,. stage with knob

Important Notes

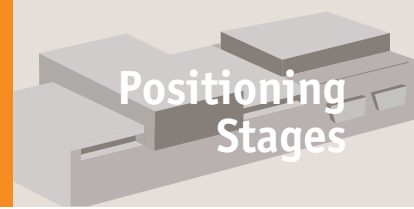
See technical pages for straightness and parallelism accuracy and standard carriage and base fixing holes - other fixing holes can be machined on request. 3D CAD models available.

Order No.	Stroke	w_1	Load kN max.	h_1	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	Weight kg
L3182.050-022-*	22	50	0.5	25	76	50	156	60.0	14	14	138	42.0	0.8
L3182.050-025-*	25	50	0.7	25	102	76	182	60.0	14	14	164	42.0	0.8
L3182.050-050-*	50	50	1.0	20	152	101	232	60.0	14	14	214	42.0	1.1
L3182.075-025-*	25	75	1.1	32	102	76	193	70.0	15	15	170	47.0	1.8
L3182.075-026-*	25	75	1.4	32	127	101	218	70.0	15	15	195	47.0	2.0
L3182.075-050-*	50	75	1.4	32	152	101	243	70.0	15	15	220	47.0	2.5
L3182.100-025-*	25	100	2.0	37	152	126	243	70.0	15	15	222	49.0	4.0
L3182.100-050-*	50	100	2.4	37	203	152	294	70.0	15	15	273	49.0	4.7
L3182.100-051-*	50	100	3.2	37	254	203	345	70.0	15	15	324	49.0	6.1
L3182.100-075-*	75	100	3.5	37	305	228	396	70.0	15	15	375	49.0	7.0
L3182.150-050-*	50	150	3.1	50	203	152	334	107.0	16	16	297	70.0	10.0
L3182.150-100-*	100	150	4.1	50	305	203	436	107.0	16	16	399	70.0	13.2
L3182.150-101-*	100	150	6.2	50	406	304	357	107.0	16	16	500	70.0	18.0
L3182.150-150-*	150	150	5.1	50	406	253	537	107.0	16	16	500	70.0	16.5
L3182.200-150-*	150	200	8.7	58	457	304	588	107.0	16	16	551	70.0	30.0
L3182.200-200-*	200	200	11.6	58	610	406	741	107.0	16	16	704	70.0	40.0
L3182.300-100-*	100	300	11.4	75	410	308	607	166.5	20	20	538	97.5	59.0
L3182.300-200-*	200	300	15.0	75	610	408	87	166.5	20	20	738	97.5	80.0
L3182.300-300-*	300	300	15.0	75	710	408	907	166.5	20	20	838	97.5	92.0
L3182.300-400-*	400	300	18.7	75	910	508	1107	166.5	20	20	1038	97.5	110.0
L3182.300-500-*	500	300	18.7	75	1010	508	1207	166.5	20	20	1138	97.5	125.0
L3182.300-600-*	600	300	22.4	75	1210	608	1407	166.5	20	20	1338	97.5	145.0

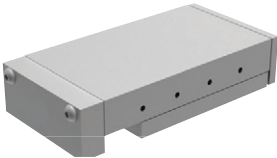




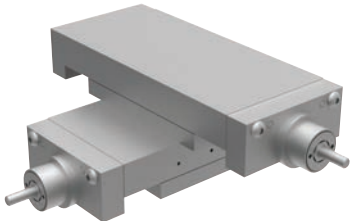


Order No.	Stroke	w ₁	Load kN max.	h ₁	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	Weight kg
L3182.400-200-*	200	400	23.3	102	610	408	868	208.0	30	30	783	123.0	169.0
L3182.400-300-*	300	400	23.3	102	710	408	968	208.0	30	30	883	123.0	182.0
L3182.400-400-*	400	400	23.3	102	810	408	1068	208.0	30	30	983	123.0	195.0
L3182.400-401-*	400	400	29.0	102	910	508	1168	208.0	30	30	1083	123.0	225.0
L3182.400-500-*	500	400	29.0	102	1010	508	1268	208.0	30	30	1183	123.0	238.0
L3182.400-600-*	600	400	29.0	102	1110	508	1368	208.0	30	30	1283	123.0	251.0
L3182.400-601-*	600	400	34.7	102	1210	608	1468	208.0	30	30	1383	123.0	270.0

Order No.	l ₉	w ₂	h ₂	h ₃	h ₄	h ₅	d ₁	d ₂	Moment M _x Nm max.	Moment M _y Nm max.	Moment M _z Nm max.	Lead screw
L3182.050-022-*	13.0	0.0	12.5	50	-	-	50	23.9	3.4	1.8	2.1	M 6x1
L3182.050-025-*	26.0	13.0	12.5	50	-	-	50	23.9	5.2	4.1	4.9	M 6x1
L3182.050-050-*	51.0	25.5	12.5	50	-	-	50	23.9	9.9	7.2	8.6	M 6x1
L3182.075-025-*	13.5	0.5	16.0	64	82	18	56	31.0	10	5.1	6.1	M 8x1
L3182.075-026-*	26.0	13.0	16.0	64	82	18	56	31.0	14	9.1	10	M 8x1
L3182.075-050-*	38.5	13.0	16.0	64	82	18	56	31.0	14	9.1	10	M 8x1
L3182.100-025-*	26.0	13.0	18.0	74	92	18	56	35.0	33	20	24	M12x1
L3182.100-050-*	51.5	26.0	18.0	74	92	18	56	35.0	40	29	35	M12x1
L3182.100-051-*	77.0	51.5	18.0	74	92	18	56	35.0	54	52	63	M12x1
L3182.100-075-*	102.5	64.0	18.0	74	92	18	56	35.0	61	66	79	M12x1
L3182.150-050-*	26.5	1.0	24.3	100	120	20	106	48.0	77	30	36	M20x1
L3182.150-100-*	77.5	26.5	24.3	100	120	20	106	48.0	103	54	65	M20x1
L3182.150-101-*	128.0	77.0	24.3	100	120	20	106	48.0	155	123	146	M20x1
L3182.150-150-*	128.0	51.5	24.3	100	120	20	106	48.0	129	85	101	M20x1
L3182.200-150-*	128.5	52.0	28.3	116	136	20	106	48.0	275	164	195	M20x1
L3182.200-200-*	205.0	103.0	28.3	116	136	20	106	48.0	365	290	245	M20x1
L3182.300-100-*	55.0	4.0	35.0	150	180	30	125	68.0	605	235	280	TR26x4
L3182.300-200-*	155.0	54.0	35.0	150	180	30	125	68.0	800	410	490	TR26x4
L3182.300-300-*	205.0	54.0	35.0	150	180	30	125	68.0	800	410	490	TR26x4
L3182.300-400-*	305.0	104.0	35.0	150	180	30	125	68.0	1000	640	760	TR26x4
L3182.300-500-*	355.0	104.0	35.0	150	180	30	125	68.0	1000	640	760	TR26x4
L3182.300-600-*	455.0	154.0	35.0	150	180	30	125	68.0	1195	915	1095	TR26x4
L3182.400-200-*	105.0	4.0	43.5	204	244	40	200	84.0	1360	470	560	TR32x4
L3182.400-300-*	155.0	4.0	43.5	204	244	40	200	84.0	1360	470	560	TR32x4
L3182.400-400-*	205.0	4.0	43.5	204	244	40	200	84.0	1360	470	560	TR32x4
L3182.400-401-*	255.0	54.0	43.5	204	244	40	200	84.0	1695	730	870	TR32x4
L3182.400-500-*	305.0	54.0	43.5	204	244	40	200	84.0	1685	730	870	TR32x4
L3182.400-600-*	355.0	54.0	43.5	204	244	40	200	84.0	1695	730	870	TR32x4
L3182.400-601-*	405.0	104.0	43.5	204	244	40	200	84.0	2025	1050	1250	TR32x4



Heavy duty linear stages

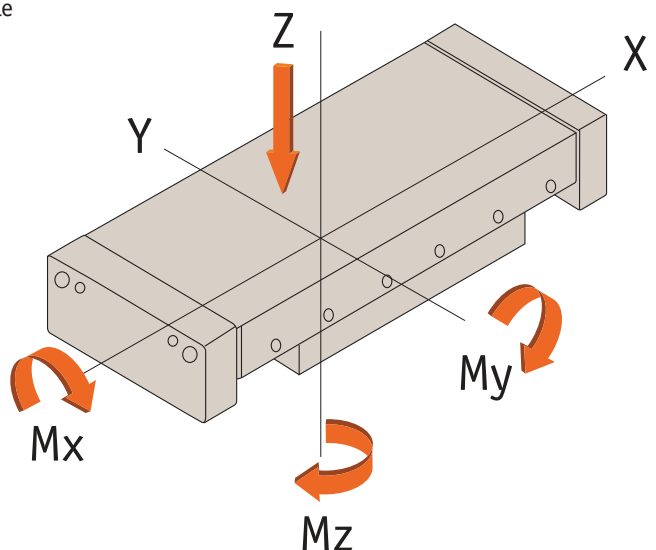
<p style="text-align: center;">Plain stages</p> 	<p style="text-align: center;">Lead screw & handle</p> 	<p style="text-align: center;">Lead screw & knob</p> 
<p style="text-align: center;">XYθ stage</p> 	<p style="text-align: center;">Motorised stage</p> 	<p style="text-align: center;">XY stage</p> 

Available with the following sliding elements:


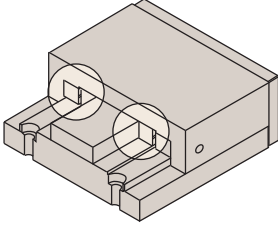
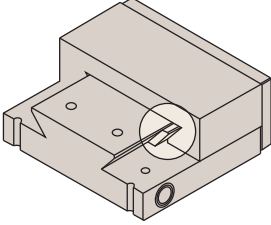
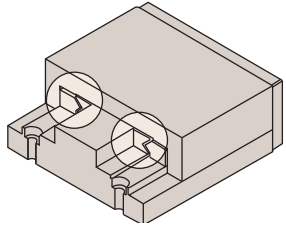
- Cross roller: For medium loads, low friction.
- Dovetail: Less expensive, higher friction, higher loads.
- Needle roller: Highest loads, low friction, more expensive.

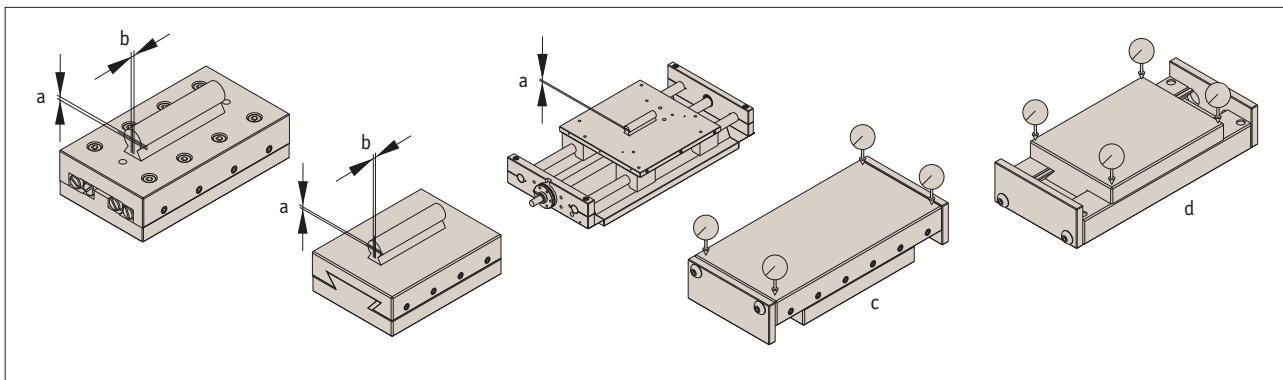
Moment loads

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

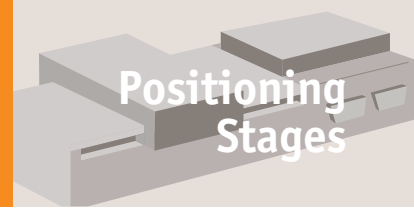
Height tolerance for roller and dovetail slides
 $\pm 0,01$ mm. DIN 7168 medium is the dimensional variations of the sliders. Closer tolerances upon request.

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



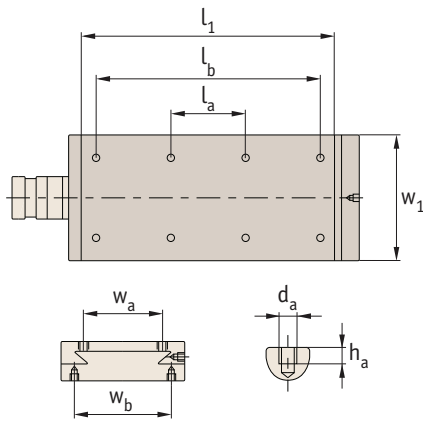
Heavy Duty Linear Stages

Standard mounting holes

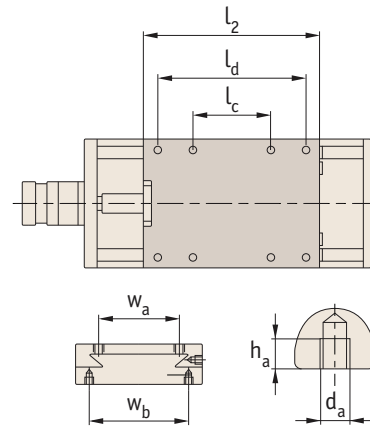
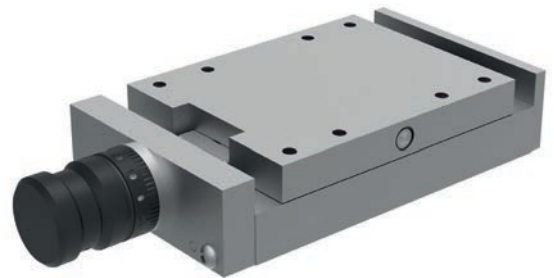


Positioning Stages

Carriage - Standard holes



Base - Standard holes



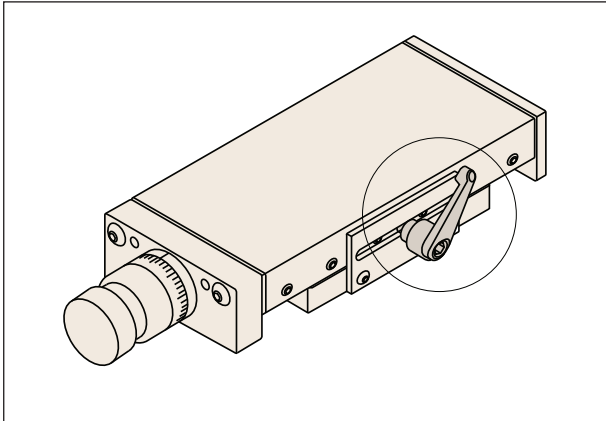
Carriage							Base					
w ₁	l ₁	l _a	l _b	h _a	d _a	w _a	l ₂	l _c	l _d	w _b	d _a	h _a
50	76	36	-	4	4xM4	24	50	20	-	37	4xM4	4
50	102	62	-	4	4xM4	24	76	36	-	37	4xM4	4
50	152	112	-	4	4xM4	24	101	61	-	37	4xM4	4
75	102	62	-	5	4xM5	34	76	36	-	56	4xM5	5
75	127	87	-	5	4xM5	34	101	61	-	56	4xM5	5
75	152	112	-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

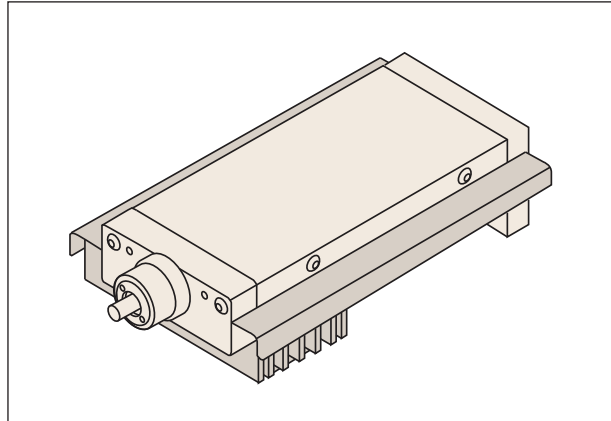


Locking device



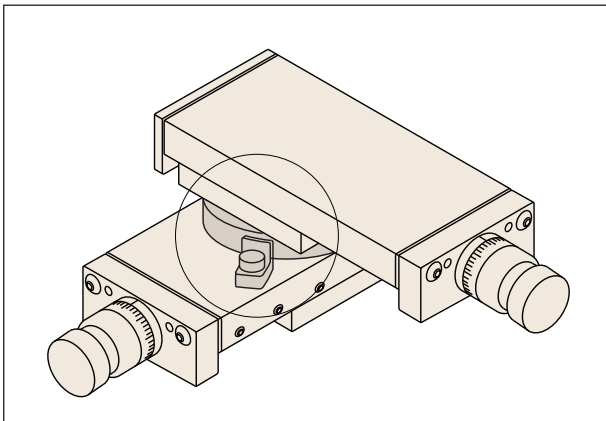
Either mounted on a side plate, a swivel rod or direct to slideway - dependent on stage type.

Bellows



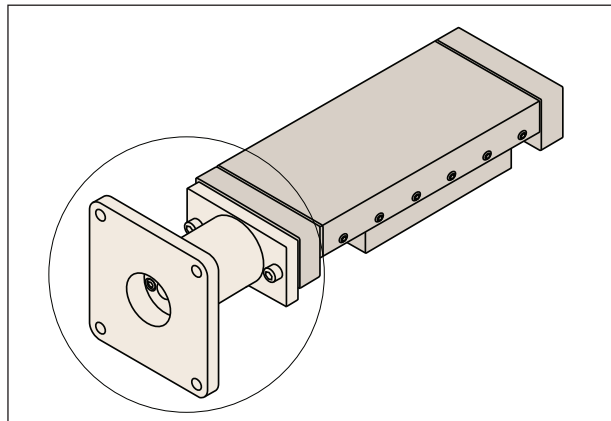
Recommended for general industrial applications. The installation of bellows affects the stroke, height and width of the slide. The bellows are made of PVC and can be used at temperatures up to 80° consult us for dimensions.

Swivelling plates



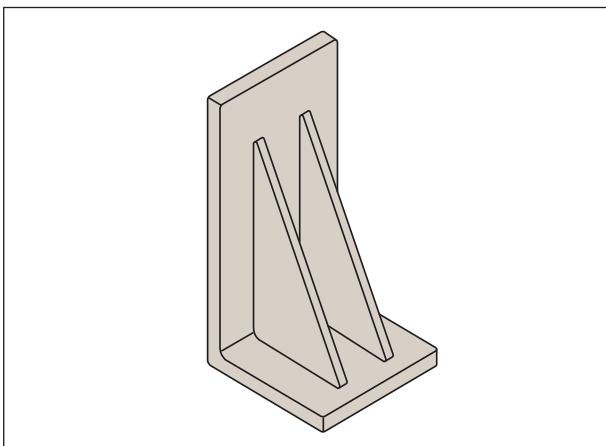
These can be rotated 360° in graduations of 10°. Graduations of 10° up to 90° clockwise and counter-clockwise.

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.