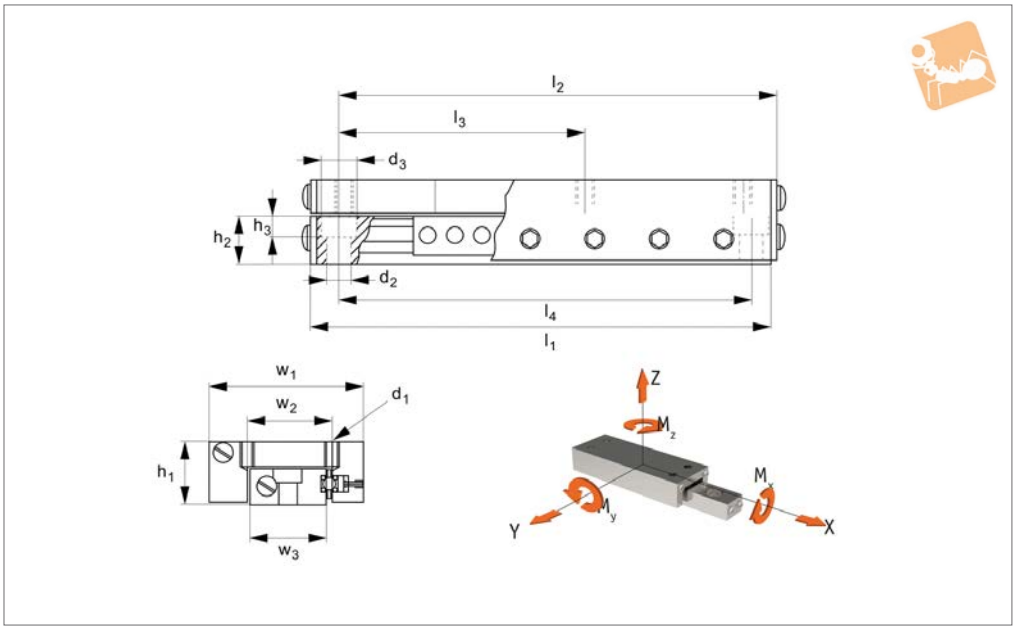


L1028

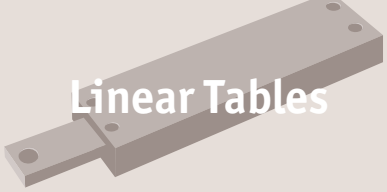
Material
Aluminium carriage and base.
Hardened stainless steel balls, shafts and preload gibs.

Technical Notes
Straight line accuracy: 3µ/25mm of travel.
Positional repeatability: 1µ.
Coefficient of friction: 0,002.

Tips
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

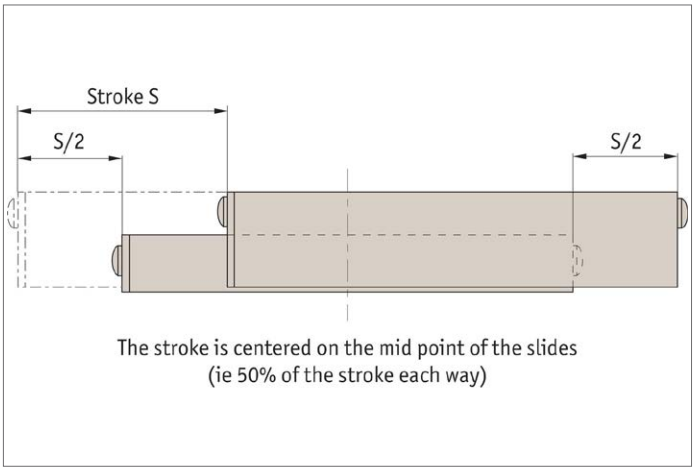
Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	l_3	l_4	w_2	h_2	w_3	Weight g
L1028.025-025	25	5.4	25.4	65.0	12.7	57	-	57	10	6.4	10.2	57
L1028.025-050	50	9.1	25.4	90.4	12.7	83	-	83	10	6.4	10.2	79
L1028.025-075	75	10.0	25.4	115.8	12.7	108	-	108	10	6.4	10.2	102
L1028.045-025	25	9.1	44.5	50.8	19.0	35	-	38	20	10.2	22.1	113
L1028.045-038	38	15.0	44.5	69.9	19.0	54	-	54	20	10.2	22.1	154
L1028.045-050	50	20.0	44.5	82.6	19.0	65	-	65	20	10.2	22.1	186
L1028.045-075	75	25.0	44.5	101.6	19.0	85	-	85	20	10.2	22.1	227
L1028.045-100	100	28.0	44.5	127.0	19.0	115	-	115	20	10.2	22.1	286
L1028.067-025	25	16.0	66.5	66.5	25.4	54	-	54	35	15.5	38.1	295
L1028.067-050	50	29.0	66.5	101.6	25.4	75	-	75	35	15.5	38.1	453
L1028.067-075	75	42.0	66.5	127.0	25.4	100	-	100	35	15.5	38.1	567
L1028.067-100	100	55.0	66.5	152.4	25.4	125	-	125	35	15.5	38.1	680
L1028.067-125	125	63.0	66.5	203.2	25.4	175	-	187	35	15.5	38.1	794
L1028.067-150	150	70.0	66.5	228.6	25.4	150	75	178	35	15.5	38.1	1021
L1028.127-075	75	42.0	127.0	127.0	25.4	100	50	100	100	15.5	98.3	1021
L1028.127-125	125	64.0	127.0	177.8	25.4	150	75	150	100	15.5	98.3	1474
L1028.127-175	175	77.0	127.0	228.6	25.4	200	100	200	100	15.5	98.3	1928

Order No.	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1028.025-025	3.4	3.5	6.1	M4	0.3	1.0	1.0
L1028.025-050	3.4	3.5	6.1	M4	0.6	2.0	2.7
L1028.025-075	3.4	3.5	6.1	M4	0.8	3.2	3.7
L1028.045-025	4.4	4.6	8.1	M4	1.0	0.9	0.9
L1028.045-038	4.4	4.6	8.1	M4	1.4	2.0	2.1
L1028.045-050	4.4	4.6	8.1	M4	2.0	3.3	3.5
L1028.045-075	4.4	4.6	8.1	M4	2.5	4.7	4.9
L1028.045-100	4.4	4.6	8.1	M4	2.9	9.5	10.0
L1028.067-025	5.3	5.8	10	M5	2.5	1.9	2.0



Ball Slide Assemblies
precision

Order No.	h_3	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.
L1028.067-050	5.3	5.8	10	M5	5.1	6.9	7.2
L1028.067-075	5.3	5.8	10	M5	7.2	12.5	13.1
L1028.067-100	5.3	5.8	10	M5	9.7	20.5	21.5
L1028.067-125	5.3	5.8	10	M5	11.1	32.0	33.6
L1028.067-150	5.3	5.8	10	M5	12.3	40.3	42.3
L1028.127-075	6.2	7.1	11	M6	8.3	14.4	15.1
L1028.127-125	6.2	7.1	11	M6	16.4	61.0	61.8
L1028.127-175	6.2	7.1	11	M6	17.8	71.0	74.5



The stroke is centered on the mid point of the slides
(ie 50% of the stroke each way)

Size + Weight

For light/medium loads

L1020-L1037

For heavy duty loads and motorised

L3000-L3500

Ball roller versions

L1024 - L1038

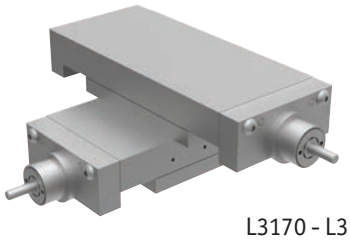
Cross roller versions

L1020 - L1026

Stainless steel versions

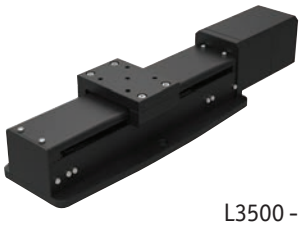
L1022 - L1023

Needle roller & dovetail stage



L3170 - L3194

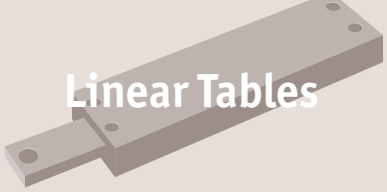
Motorised stages



L3500 - L3510

Micrometer driven stages

L3100 - L3123



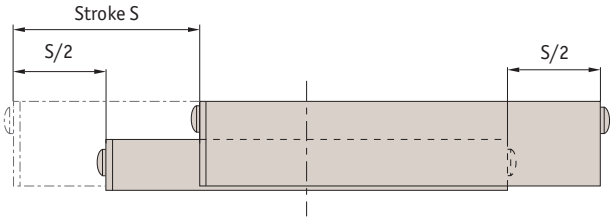
Linear Tables

Overview

Factors affecting stage selections...

- Size and weight of load
- Moment loads
- Stroke required
- Accuracy required
- Usage conditions of water, chemicals, shock loads etc.

Generally ball slides are less expensive but cross roller slides can carry 8 to 10 times the load of ball slides.



The stroke is centred on the mid point of the slides (i.e. 50% of the stroke each way).

A selection...

L1020 Crossed roller tables	L1022/23 Cross roller table	L1024 Ball slide tables
 Steel and aluminium, accuracy typically 5µ.	 Stainless Steel, accuracy typically 3µ.	 Aluminium, accuracy typically 12µ.
L1026 Crossed roller slide tables	**L1028 Precision ball slide tables**	**L1029 Precision crossed roller tables**
 Aluminium, accuracy typically 5µ.	 Aluminium, accuracy typically 3µ.	 Aluminium, accuracy typically 3µ.
L1034 Flanged ball slide tables - precision	**L1038 Anti-creep ball slide tables**	**L1039 Non-magnetic ball slide**
 With flange accuracy to 1µ.	 Special anti-creep function prevents cage misalignment.	 Non-magnetic accuracy typically 3µ.

Steel - L1020

- Standard steel / cast iron

Aluminium - L1021

- Lower weight, lower profile
- Good for high accelerations

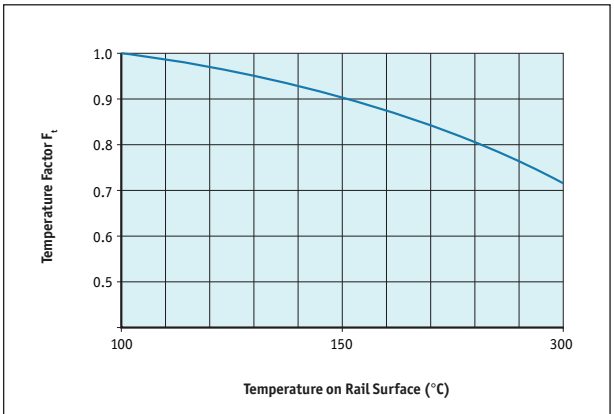
Stainless steel - L1022 + L1023

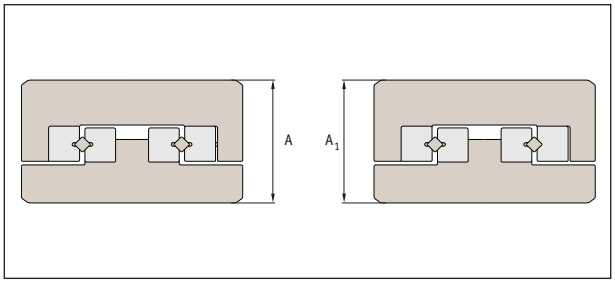
- Stainless steel (440C+Ni) corrosion resistant

Rated life

$$L\,(Km) = \left(\frac{F_t \cdot C}{F_w P_c}\right)^{3.33} \times 100$$

F_t = temperature factor
F_w = load factor
C = basic dynamic load (kN) see tables
P_c = radial load (kN)



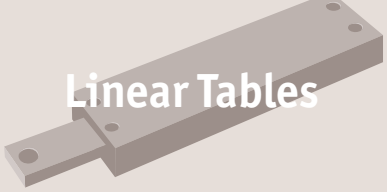


Height tolerance:

- Height ±100µ
- Motorised parts ±10µ
- Strokes from 10 to 950mm
- Loads to 48kN

Load factor F_w

Shock	Speed	F_w
None	Very slow	1.0 - 1.2
Small	Slow	1.2 - 1.5



Cross Roller Linear Tables

Technical

Technical accuracy measurments

- High accuracy.
- Low friction: virtually frictionless. Providing stable performance at lower high speeds.
- Rigid: incorporating cross roller linear rails to provide high load capacity as well as high moment load capacity.
- Installation: easy to install with pre-drilled holes in carriage and base. Ensure mounting surface faces are accurately machined.

Table accuracy (µ)			Rail accuracy (µ)		
Table length	Carriage top parallelism	Carriage side parallelism	N tolerance	M tolerance	Straightness
0-50	2	4	-15 -35	-30 -70	2
50-100	2	5			2
100-150	3	6			3
150-200	3	7			3
200-250	3	7			3
250-300	3	7			3
300-350	4	8			4
350-400	4	8			4
400-450	4	8			4
450-500	4	8			4
500-550	4	9			4
550-600	4	9			4