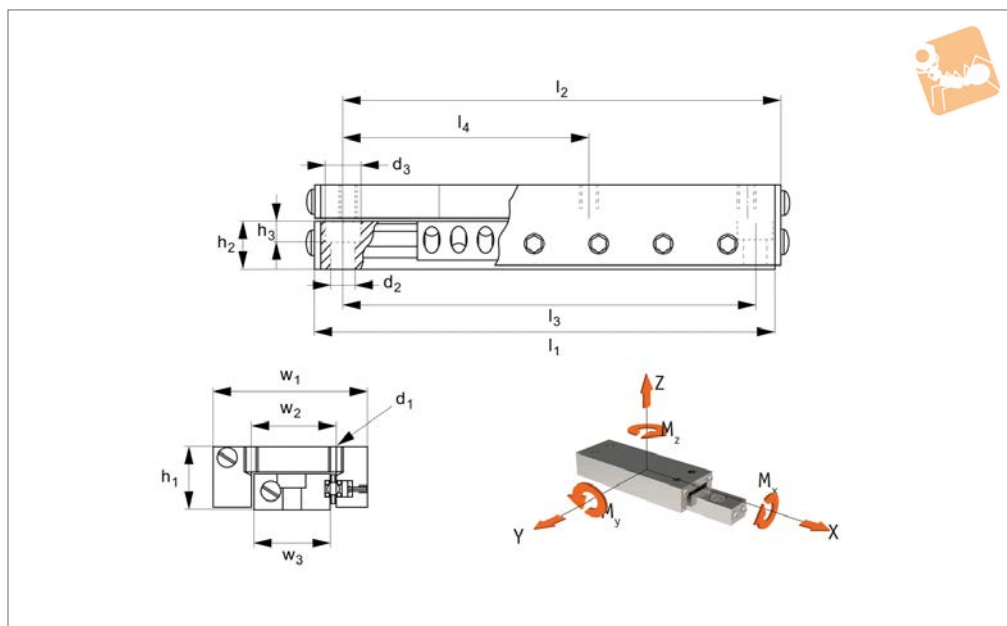




Crossed Roller Slides

precision

Linear Tables



L1029

LINEAR TABLES

Material

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

Positional repeatability: 1 μ .
Coefficient of friction: 0,002.

Tips

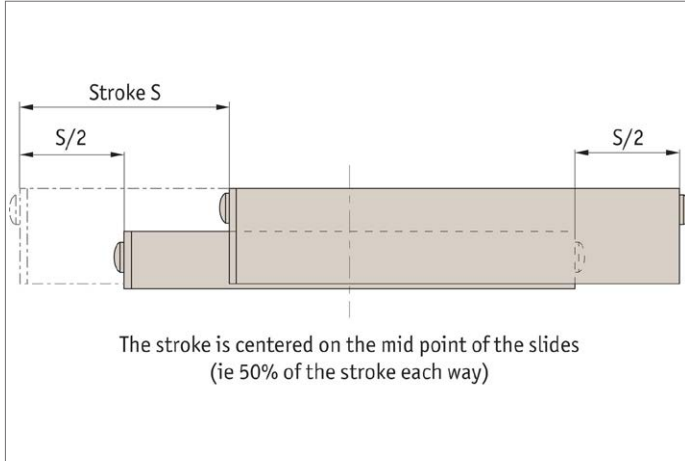
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

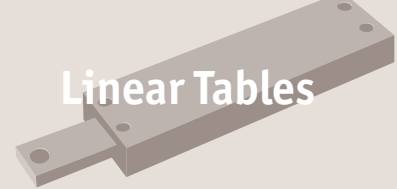
Technical Notes

Straight line accuracy: 3 μ /25mm of travel.

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
L1029.045-025	25	36	44.5	50.8	19.0	35	38	-	20	10.2	22.1	127
L1029.045-050	50	54	44.5	82.6	19.0	65	65	-	20	10.2	22.1	209
L1029.045-075	75	59	44.5	101.6	19.0	85	85	-	20	10.2	22.1	254
L1029.045-100	100	64	44.5	127.0	19.0	115	115	-	20	10.2	22.1	286
L1029.067-025	25	95	67	66.5	25.4	54	54	-	35	15.5	38.1	299
L1029.067-050	50	109	67	101.6	25.4	75	75	-	35	15.5	38.1	454
L1029.067-075	75	154	67	127.0	25.4	100	100	-	35	15.5	38.1	567
L1029.067-100	100	173	67	152.4	25.4	125	125	-	35	15.5	38.1	680
L1029.067-125	125	186	67	203.2	25.4	175	187	-	35	15.5	38.1	907
L1029.127-075	75	100	127	127.0	25.4	100	100	50	100	15.5	6.2	1021
L1029.127-125	125	109	127	177.8	25.4	150	150	75	100	15.5	6.2	1474
L1029.127-175	175	118	127	228.6	25.4	200	200	100	100	15.5	6.2	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.
L1029.045-025	4.6	M4	4.6	8.1	4.4	4.7	4.9
L1029.045-050	4.6	M4	4.6	8.1	5.9	9.4	9.8
L1029.045-075	4.6	M4	4.6	8.1	6.9	10.9	11.4
L1029.045-100	4.6	M4	4.6	8.1	7.7	12.1	12.7
L1029.067-025	5.3	M5	5.8	10	18.1	15.0	15.8
L1029.067-050	5.3	M5	5.8	10	24.1	30.1	31.6
L1029.067-075	5.3	M5	5.8	10	30.2	50.1	52.6
L1029.067-100	5.3	M5	5.8	10	45.9	62.6	65.8
L1029.067-125	5.3	M5	5.8	10	41.3	72.0	75.6
L1029.127-075	6.2	M6	7.1	11	19.3	72.2	73.8
L1029.127-125	6.2	M6	7.1	11	21.2	79.4	81.1
L1029.127-175	6.2	M6	7.1	11	23.0	92.8	97.4





Size + Weight

For light/medium loads

L1020-L1037

Ball roller versions



L1024 - L1038

Cross roller versions



L1020 - L1026

Stainless steel versions

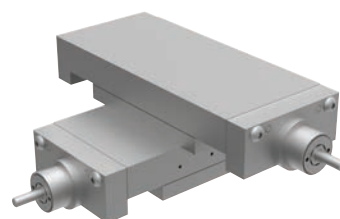


L1022 - L1023

For heavy duty loads and motorised

L3000-L3500

Needle roller & dovetail stage



L3170 - L3194

Motorised stages

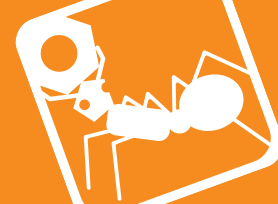


L3500 - L3510

Micrometer driven stages

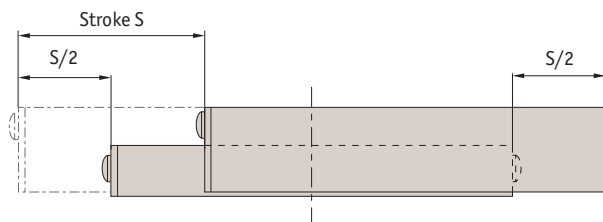


L3100 - L3123



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



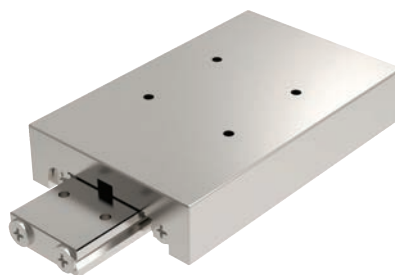
Aluminium - L1021

- Lower weight, lower profile
- Good for high accelerations



Stainless steel - L1022 + L1023

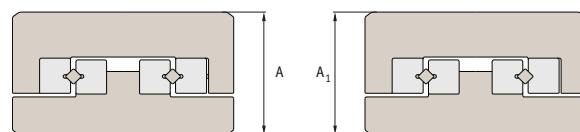
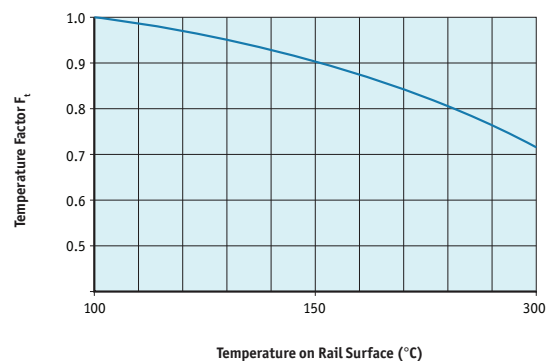
- Stainless steel (440C+Ni) corrosion resistant



Rated life

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

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



Height tolerance:

- Height $\pm 100\mu$
- Motorised parts $\pm 10\mu$
- 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



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

