

L1029

LINEAR TABLES

Material

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

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

Tips

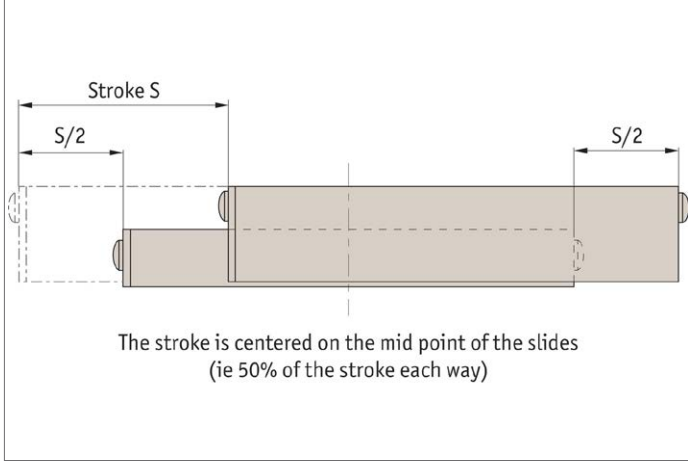
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

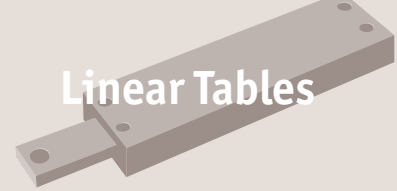
Technical Notes

Straight line accuracy: $3\mu/25\text{mm}$ 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

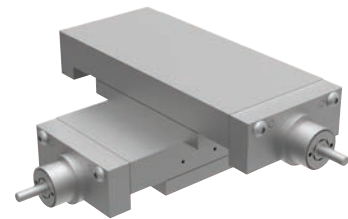


L1022 - L1023

For heavy duty loads and motorised

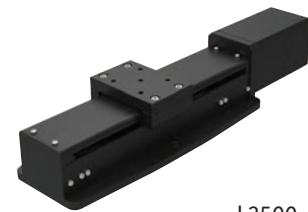
L3000-L3500

Needle roller & dovetail stage



L3170 - L3194

Motorised stages



L3500 - L3510

Micrometer driven stages

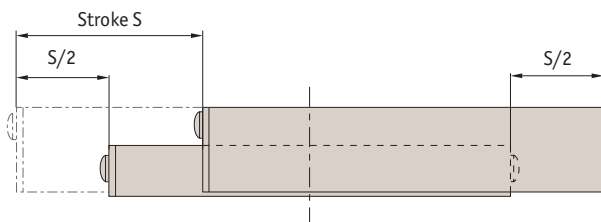


L3100 - L3123



Factors affecting stage selections...

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

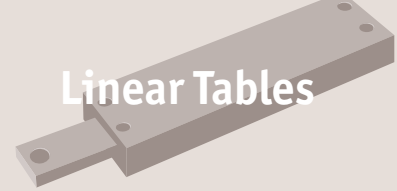


Generally ball slides are less expensive but cross roller slides can carry 8 to 10 times the load of ball slides.

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



Steel - L1020

- Standard steel / cast iron



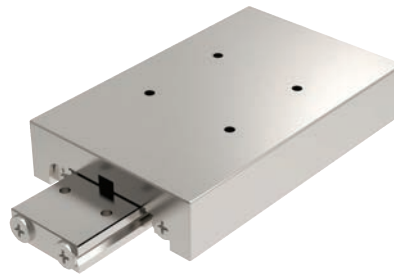
Aluminium - L1021

- Lower weight, lower profile
- Good for high accelerations



Stainless steel - L1022 + L1023

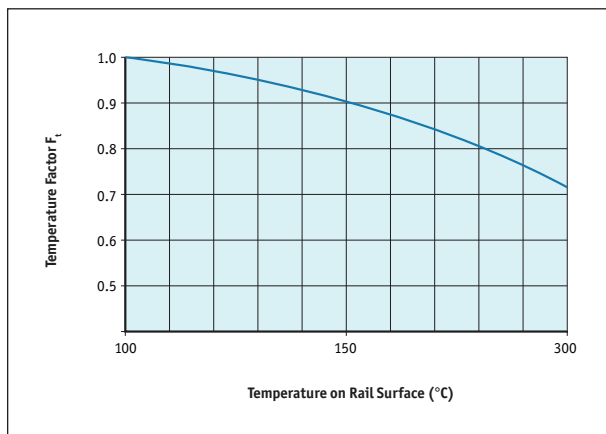
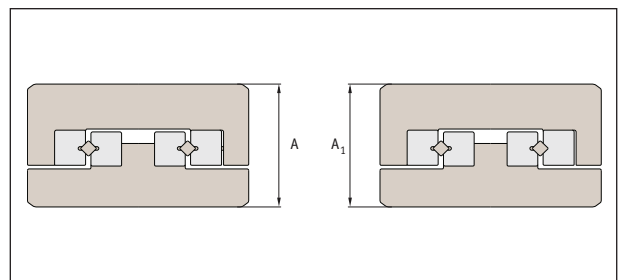
- Stainless steel (440C+Ni) corrosion resistant



Rated life

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

- 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 measurements

- 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.

LINEAR TABLES

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

