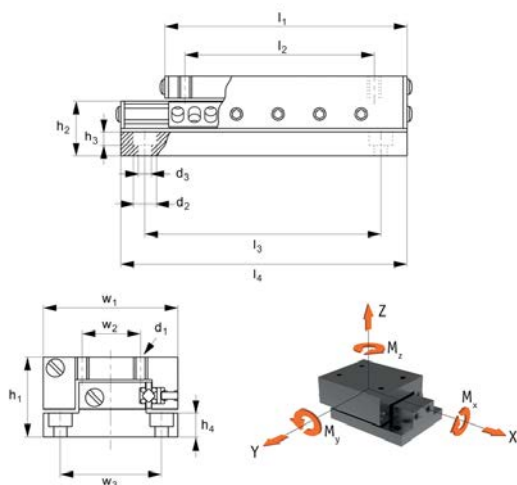
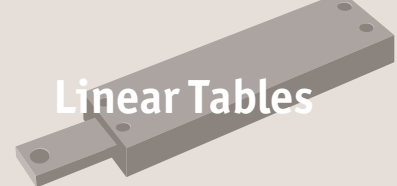




Flanged Crossed Roller Slides

wide base, high precision

Linear Tables



L1036

LINEAR TABLES

Material

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

Technical Notes

Flanged base with cross rollers offers the

ultimate in accuracy, capacity and stability.
Straight line accuracy: $1\mu/25\text{mm}$ of travel.
Positional repeatability: 0.5μ .
Coefficient of friction: 0,002.
Carriage surface flat to $3\mu/25\text{mm}$.

Carriage and base ground to optical flatness.

Tips

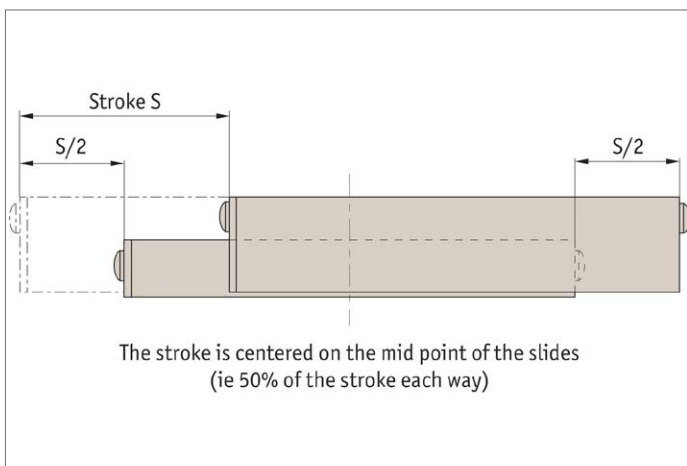
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

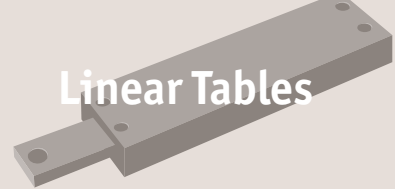
Order No.	Stroke	Load kg max.	w_1	l_1	h_1	l_2	l_3	l_4	w_2	h_2	Weight g
L1036.045-025	25	41	44.5	50.8	26.2	57.2	35	40	20	17.3	172
L1036.045-038	38	52	44.5	69.9	26.2	76.2	54	57	20	17.3	236
L1036.045-050	50	59	44.5	82.6	26.2	88.9	65	70	50	17.3	277
L1036.045-075	75	64	44.5	101.6	26.2	108.0	85	90	20	17.3	340
L1036.067-025	25	100	66.5	66.9	34.9	66.5	54	54	35	25.4	413
L1036.067-050	50	114	66.5	101.6	34.9	111.0	75	85	35	25.4	635
L1036.067-075	75	159	66.5	127.0	34.9	136.4	100	110	35	25.4	794
L1036.067-100	100	177	66.5	152.4	34.9	161.8	125	135	35	25.4	953
L1036.067-125	125	191	66.5	203.2	34.9	212.6	178	190	35	25.4	1270
L1036.089-050	50	118	88.9	101.6	44.5	114.3	50	65	50	25.0	1134
L1036.089-075	75	127	88.9	146.1	44.5	158.8	95	110	50	25.0	1628
L1036.089-125	125	145	88.9	203.2	44.5	215.9	150	175	50	25.0	2268
L1036.089-165	165	159	88.9	260.4	44.5	273.1	210	225	50	25.0	2908
L1036.089-225	225	182	88.9	355.6	44.5	368.3	305	320	50	25.0	3969
L1036.146-125	125	136	146.1	209.6	60.3	222.3	150	175	100	34.3	5443
L1036.146-175	175	163	146.1	304.8	60.3	317.5	250	275	100	34.3	7893
L1036.146-250	250	204	146.1	381.0	60.3	393.7	330	350	100	34.3	9870

Order No.	w_3	h_3	d_1	d_2	d_3	Moment M_x Nm max.	h_4	Moment M_y Nm max.	Moment M_z Nm max.
L1036.045-025	33	7.1	M4	4.6	8.1	5.04	4.6	5.31	5.58
L1036.045-038	33	7.1	M4	4.6	8.1	5.61	4.6	8.29	8.58
L1036.045-050	33	7.1	M4	4.6	8.1	6.73	4.6	10.6	11.1
L1036.045-075	33	7.1	M4	4.6	8.1	7.85	4.6	12.4	13.0
L1036.067-025	52	9.4	M5	5.8	10.0	17.9	5.3	14.9	15.6
L1036.067-050	52	9.4	M5	5.8	10.0	20.4	5.3	25.4	26.7
L1036.067-075	52	9.4	M5	5.8	10.0	28.4	5.3	47.1	49.5
L1036.067-100	52	9.4	M5	5.8	10.0	37.7	5.3	65.6	68.9
L1036.067-125	52	9.4	M5	5.8	10.0	43.3	5.3	75.5	79.2



Order No.	w_3	h_3	d_1	d_2	d_3	Moment M_x Nm max.	h_4	Moment M_y Nm max.	Moment M_z Nm max.
L1036.089-050	70	9.4	M5	5.8	10.0	19.5	5.3	56.1	58.9
L1036.089-075	70	9.4	M5	5.8	10.0	21.6	5.3	70.6	74.1
L1036.089-125	70	9.4	M5	5.8	10.0	24.6	5.3	92.0	94.0
L1036.089-165	70	9.4	M5	5.8	10.0	26.7	5.3	108	112
L1036.089-225	70	9.4	M5	5.8	10.0	29.6	5.3	142	158
L1036.146-125	127	9.4	M6	7.1	11.0	28.3	6.2	106	108
L1036.146-175	127	9.4	M6	7.1	11.0	30.7	6.2	124	130
L1036.146-250	127	9.4	M6	7.1	11.0	34.0	6.2	163	171





Size + Weight

For light/medium
loads

L1020-L1037

Ball roller versions



L1024 - L1038

Cross roller versions



L1020 - L1026

Stainless steel versions

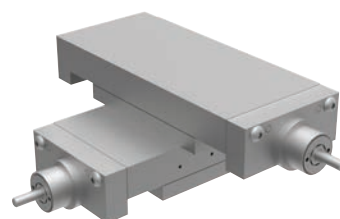


L1022 - L1023

For heavy
duty loads and
motorised

L3000-L3500

Needle roller & dovetail stage



L3170 - L3194

Motorised stages



L3500 - L3510

Micrometer driven stages

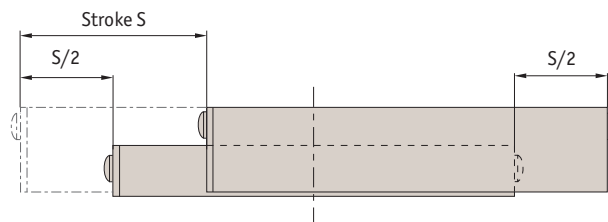


L3100 - L3123



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...

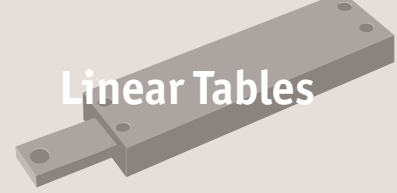
L1020 Crossed roller tables	L1022/23 Cross roller table	L1024 Ball slide tables
 Steel and aluminium, accuracy typically 5µ.	 Stainless Steel, accuracy typically 3µ.	 Aluminium, accuracy typically 12µ.
L1026 Crossed roller slide tables	L1028 Precision ball slide tables	L1029 Precision crossed roller 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.



Cross Roller Linear Tables

Overview

Linear Tables



LINEAR TABLES

Steel - L1020

- Standard steel / cast iron



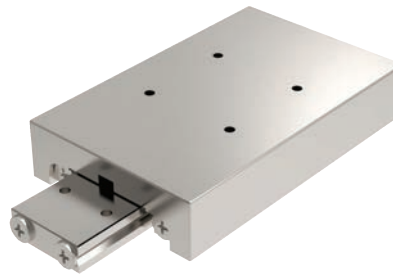
Aluminium - L1021

- Lower weight, lower profile
- Good for high accelerations



Stainless steel - L1022 + L1023

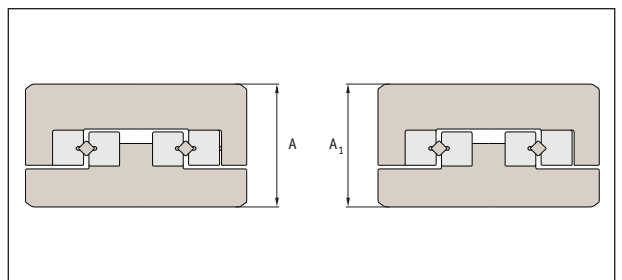
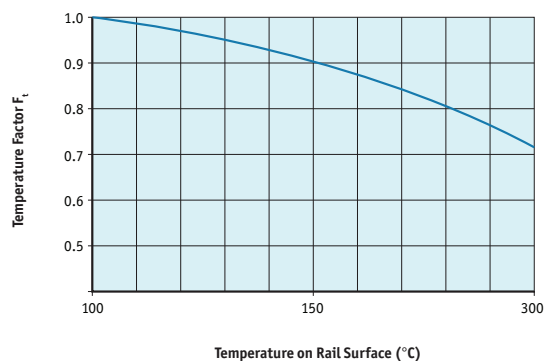
- Stainless steel (440C+Ni) corrosion resistant



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

