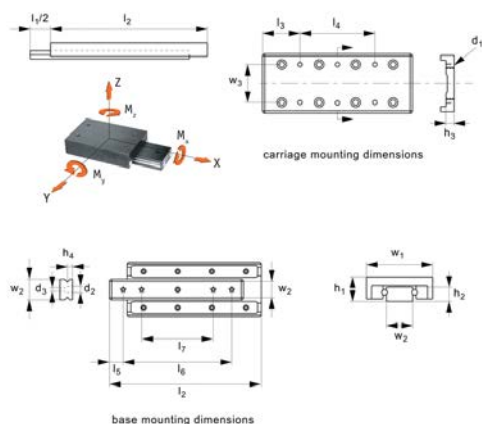




Low Profile Crossed Roller Table

anti-corrosion, nickel plated

Linear Tables



L1027.SS

LINEAR TABLES

Material

Steel body (S50C), nickel plated.
Nickel plated cross roller rails and fasteners, steel rollers, stainless steel roller cages.

Technical Notes

Straight line accuracy: $3\mu/25\text{mm}$ of travel.
Positional repeatability: 3μ .
Coefficient of friction: 0,003.

Tips

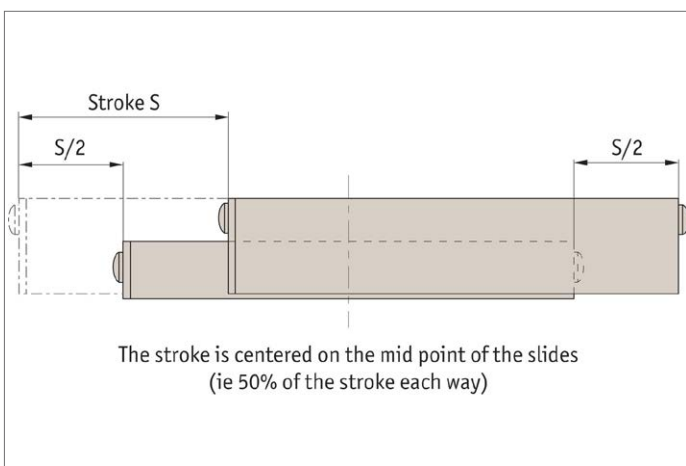
Stroke is centred on the mid-point of the slides (ie 50% of total stroke each way).

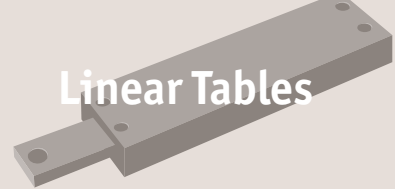
Order No.	Stroke l_1	Load kg max.	$w_1 \pm 0.1$	l_2	$h_1 \pm 0.1$	l_3	l_4	l_5	l_6	l_7	w_2	w_3
L1027.020-012-SS	12	23	20	25	8	3.5	1x18	3.5	18	-	6.6	14
L1027.020-018-SS	18	32	20	35	8	3.5	1x28	5.0	25	-	6.6	14
L1027.020-025-SS	25	47	20	45	8	12.5	1x20	3.5	38	25	6.6	14
L1027.020-032-SS	32	54	20	55	8	12.5	1x30	3.5	48	29	6.6	14
L1027.020-040-SS	40	60	20	65	8	12.5	2x20	5.0	55	31	6.6	14
L1027.020-045-SS	45	73	20	75	8	22.5	1x30	5.0	65	35	6.6	14
L1027.020-050-SS	50	79	20	85	8	12.5	2x30	5.0	75	40	6.6	14
L1027.030-018-SS	18	40	30	35	12	3.5	1x28	5.0	25	-	12.0	22
L1027.030-030-SS	30	63	30	50	12	3.5	1x43	7.5	35	-	12.0	22
L1027.030-040-SS	40	75	30	65	12	17.5	1x30	5.0	55	33	12.0	22
L1027.030-050-SS	50	95	30	80	12	17.5	1x45	5.0	70	40	12.0	22
L1027.030-060-SS	60	105	30	95	12	17.5	2x30	5.0	85	45	12.0	22
L1027.030-070-SS	70	120	30	110	12	32.5	1x45	7.5	95	50	12.0	22
L1027.030-080-SS	80	130	30	125	12	17.5	2x45	7.5	110	55	12.0	22
L1027.040-030-SS	30	126	40	55	16	7.5	1x40	7.5	40	-	16.0	30
L1027.040-045-SS	45	183	40	80	16	7.5	1x65	6.0	68	43	16.0	30
L1027.040-060-SS	60	220	40	105	16	27.5	1x50	7.5	90	55	16.0	30
L1027.040-075-SS	75	275	40	130	16	27.5	1x75	7.5	115	65	16.0	30
L1027.040-090-SS	90	310	40	155	16	27.5	2x50	7.5	140	95	16.0	30
L1027.040-105-SS	105	355	40	180	16	52.5	1x75	7.5	165	85	16.0	30
L1027.040-130-SS	130	375	40	205	16	27.5	2x75	7.5	190	90	16.0	30

Order No.	h_2	h_3	h_4	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	No. of base holes	No. of carr holes
L1027.020-012-SS	4	3.5	2.5	M2	3.9	2.6	0.80	1.29	1.33	2	4
L1027.020-018-SS	4	3.5	2.5	M2	3.9	2.6	1.04	2.59	2.71	2	4
L1027.020-025-SS	4	3.5	2.5	M2	3.9	2.6	1.51	4.55	4.79	4	4
L1027.020-032-SS	4	3.5	2.5	M2	3.9	2.6	1.74	5.36	5.63	4	4
L1027.020-040-SS	4	3.5	2.5	M2	3.9	2.6	1.94	8.16	8.33	4	6
L1027.020-045-SS	4	3.5	2.5	M2	3.9	2.6	2.27	11.5	12.1	4	4
L1027.020-050-SS	4	3.5	2.5	M2	3.9	2.6	2.55	13.9	14.6	4	6



Order No.	h_2	h_3	h_4	d_1	d_2	d_3	Moment M_x Nm max.	Moment M_y Nm max.	Moment M_z Nm max.	No. of base holes	No. of carr holes
L1027.030-018-SS	6	5.5	3.8	M4	6.1	4	2.35	3.06	3.21	2	4
L1027.030-030-SS	6	5.5	3.8	M4	6.1	4	3.71	6.49	6.80	2	4
L1027.030-040-SS	6	5.5	3.8	M4	6.1	4	4.41	9.92	10.4	4	4
L1027.030-050-SS	6	5.5	3.8	M4	6.1	4	5.58	15.3	16.1	4	4
L1027.030-060-SS	6	5.5	3.8	M4	6.1	4	6.17	20.0	21.0	4	6
L1027.030-070-SS	6	5.5	3.8	M4	6.1	4	7.05	26.4	27.7	4	4
L1027.030-080-SS	6	5.5	3.8	M4	6.1	4	7.64	32.4	34.1	4	6
L1027.040-030-SS	8	7.5	5.2	M5	8.3	5.2	9.87	14.8	15.5	2	4
L1027.040-045-SS	8	7.5	5.2	M5	8.3	5.2	14.4	31.0	32.6	4	4
L1027.040-060-SS	8	7.5	5.2	M5	8.3	5.2	17.2	48.5	50.9	4	4
L1027.040-075-SS	8	7.5	5.2	M5	8.3	5.2	21.5	74.7	78.4	4	4
L1027.040-090-SS	8	7.5	5.2	M5	8.3	5.2	24.2	100	105	4	6
L1027.040-105-SS	8	7.5	5.2	M5	8.3	5.2	27.8	136	142	4	4
L1027.040-130-SS	8	7.5	5.2	M5	8.3	5.2	29.4	158	166	4	6





Size + Weight

For light/medium
loads

L1020-L1037

Ball roller versions



L1024 - L1038

Cross roller versions



L1020 - L1026

Stainless steel versions

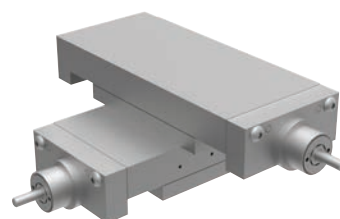


L1022 - L1023

For heavy
duty loads and
motorised

L3000-L3500

Needle roller & dovetail stage



L3170 - L3194

Motorised stages



L3500 - L3510

Micrometer driven stages

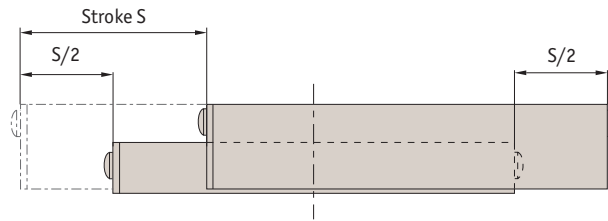


L3100 - L3123



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...

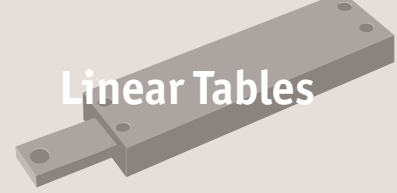
L1020 Crossed roller tables	L1022/23 Cross roller table	L1024 Ball slide tables
 Steel and aluminium, accuracy typically 5µ.	 Stainless Steel, accuracy typically 3µ.	 Aluminium, accuracy typically 12µ.
L1026 Crossed roller slide tables	L1028 Precision ball slide tables	L1029 Precision crossed roller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



Steel - L1020

- Standard steel / cast iron



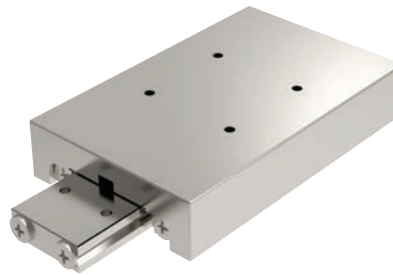
Aluminium - L1021

- Lower weight, lower profile
- Good for high accelerations



Stainless steel - L1022 + L1023

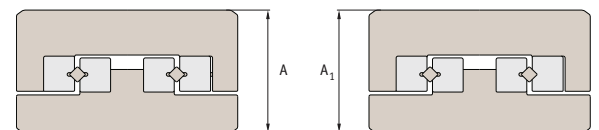
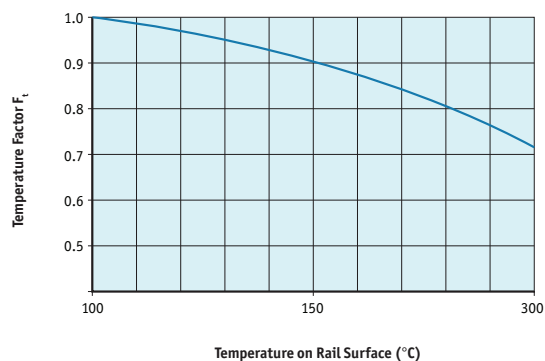
- Stainless steel (440C+Ni) corrosion resistant



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

