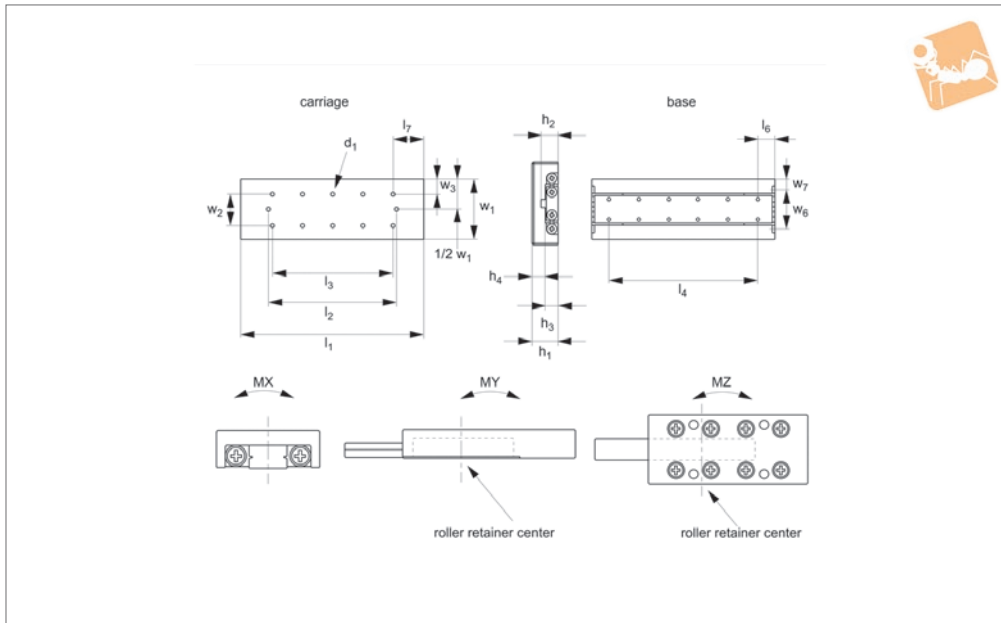




Stainless Cross Roller Slides

smaller sizes

Linear Tables



L1022.web

LINEAR TABLES

Material

Body stainless steel (440C), nickel plated apart from rail V groove. Retainer stainless

(304), rollers stainless (440C).

Carriage side parallelism 5µ.

Technical Notes

Carriage top parallelism 3µ.

Order No.	l_1	Stroke	Static load C_0 kN max.	w_1	l_2	h_1	Roller	l_3	l_4	l_5	l_6	w_2	w_3	Weight kg
L1022.030-012	25	12	0.57	30	2.5	8	1.5	-	10	20	7.5	10	10	0.09
L1022.030-018	35	18	0.86	30	4.5	8	1.5	10	10	26	7.5	10	10	0.12
L1022.030-025	45	25	1.1	30	6.0	8	1.5	10	10	33	7.5	10	10	0.16
L1022.030-032	55	32	1.4	30	7.5	8	1.5	10	10	40	7.5	10	10	0.19
L1022.030-040	65	40	1.7	30	8.5	8	1.5	10	10	48	7.5	10	10	0.23
L1022.030-045	75	45	2.3	30	11.0	8	1.5	10	10	53	7.5	10	10	0.26
L1022.030-050	85	50	2.6	30	13.5	8	1.5	10	10	58	7.5	10	10	0.30
L1022.040-018	35	18	1.1	40	3.0	15	3.0	-	15	29	10	15	12.5	0.20
L1022.040-030	50	30	4.5	40	4.5	15	3.0	15	15	41	10	15	12.5	0.29
L1022.040-040	65	40	4.5	40	7.0	15	3.0	15	15	51	17.5	15	12.5	0.36
L1022.040-050	80	50	7.6	40	9.5	15	3.0	15	15	61	10	15	12.5	0.46
L1022.040-060	95	60	6.0	40	12.0	15	3.0	15	15	71	17.5	15	12.5	0.52
L1022.040-070	110	70	9.1	40	14.5	15	3.0	15	15	81	17.5	15	12.5	0.63
L1022.040-080	125	80	9.1	40	17.0	15	3.0	15	15	91	25	15	12.5	0.69
L1022.060-030	55	30	4.5	60	5.5	18.5	3.0	-	25	44	15	25	17.5	0.65
L1022.060-045	80	45	7.6	60	10.8	18.5	3.0	25	25	59	15	25	17.5	0.95
L1022.060-060	105	60	10.6	60	15.5	18.5	3.0	25	25	74	15	25	17.5	1.25
L1022.060-075	130	75	12.1	60	20.8	18.5	3.0	25	25	89	15	25	17.5	1.55
L1022.060-090	155	90	15.2	60	25.5	18.5	3.0	25	25	104	15	25	17.5	1.85
L1022.060-105	180	105	18.2	60	30.5	18.5	3.0	25	25	119	15	25	17.5	2.15
L1022.060-130	205	130	19.7	60	30.5	18.5	3.0	25	25	144	15	25	17.5	2.45
L1022.080-050	85	50	9.3	80	10.5	24	4.0	-	40	64	22.5	40	20	1.14
L1022.080-075	125	75	14.0	80	18	24	4.0	40	40	89	22.5	40	20	1.68
L1022.080-105	165	105	16.3	80	23	24	4.0	40	40	119	22.5	40	20	2.22
L1022.080-135	205	135	21.0	80	28	24	4.0	40	40	149	22.5	40	20	2.76
L1022.080-155	245	155	25.7	80	38	24	4.0	40	40	169	22.5	40	20	3.30
L1022.080-185	285	185	30.4	80	43	24	4.0	40	40	199	22.5	40	20	3.84
L1022.080-215	325	215	35.0	80	48	24	4.0	40	40	229	22.5	40	20	4.38
L1022.100-060	110	60	21.0	100	16.5	31	6.0	-	50	77	30	50	25	2.33
L1022.100-095	160	95	26.3	100	23.5	31	6.0	50	50	113	30	50	25	3.42
L1022.100-130	210	130	36.8	100	31	31	6.0	50	50	148	30	50	25	4.51
L1022.100-165	260	165	47.3	100	38.5	31	6.0	50	50	183	30	50	25	5.57
L1022.100-200	310	200	57.9	100	46	31	6.0	50	50	218	30	50	25	6.66
L1022.100-235	360	235	68.4	100	53.5	31	6.0	50	50	253	30	50	25	7.75



Order No.	l ₁	Stroke	Static load C ₀ kN max.	w ₁	l ₂	h ₁	Roller	l ₃	l ₄	l ₅	l ₆	w ₂	w ₃	Weight kg
L1022.100-265	410	265	78.9	100	63.5	31	6.0	50	50	283	30	50	25	8.84
L1022.100-340	510	340	100.0	100	81	31	6.0	50	50	348	30	50	25	11.02
L1022.145-130	210	130	72741	145	27	42.5	9.0	-	100	156	55	85	30	9.08
L1022.145-180	310	180	101838	145	52	42.5	9.0	100	100	206	55	85	30	13.46
L1022.145-350	410	350	116386	145	12	42.5	9.0	100	100	376	55	85	30	17.74
L1022.145-450	510	450	145482	145	17	42.5	9.0	100	100	476	55	85	30	22.11
L1022.145-550	610	550	160031	145	17	42.5	9.0	100	100	576	5527	85	30	26.47

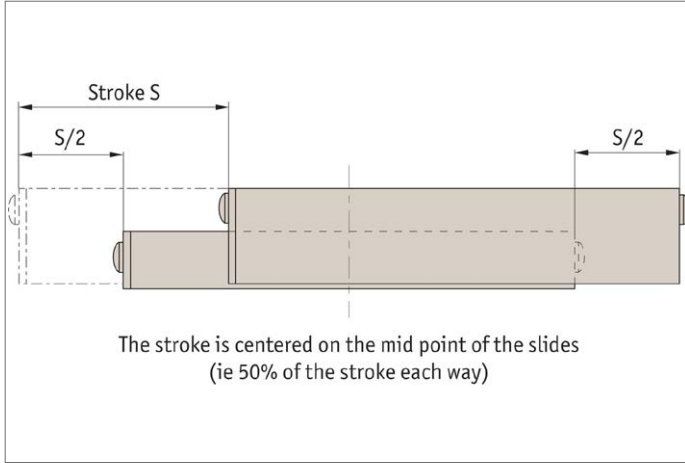
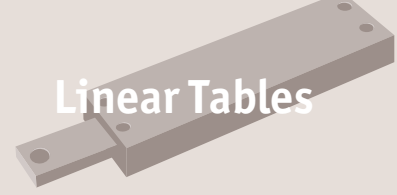
Order No.	w ₄	w ₅	w ₆	w ₇	h ₂	h ₃	h ₄	d ₁	Allowable load kN max.	Dyn. load C kN max.	Moment M _x Nm max.	Moment M _y Nm max.	Moment M _z Nm max.
L1022.030-012	12.8	8.6	-	15	11	7	4	M2	0.19	0.38	2.6	1.2	1.4
L1022.030-018	12.8	8.6	-	15	11	7	4	M2	0.28	0.52	3.9	2.6	3.0
L1022.030-025	12.8	8.6	-	15	11	7	4	M2	0.38	0.65	5.2	4.6	5.2
L1022.030-032	12.8	8.6	-	15	11	7	4	M2	0.48	0.78	6.5	7.2	7.9
L1022.030-040	12.8	8.6	-	15	11	7	4	M2	0.57	0.90	7.8	10.4	11.2
L1022.030-045	12.8	8.6	-	15	11	7	4	M2	0.77	1.1	10.4	18.4	17.3
L1022.030-050	12.8	8.6	-	15	11	7	4	M2	0.86	1.2	11.7	23.3	22.0
L1022.040-018	17	11.5	-	20	14	8	6	M3	0.39	0.89	7.0	3.1	3.9
L1022.040-030	13.1	13.5	-	20	15	7	8	M3	1.5	2.9	42.6	22.8	26.6
L1022.040-040	13.1	13.5	-	20	15	7	8	M3	1.5	2.9	42.6	22.8	19.0
L1022.040-050	13.1	13.5	-	20	15	7	8	M3	2.5	4.3	71.0	63.4	57.1
L1022.040-060	13.1	13.5	-	20	15	7	8	M3	2.0	3.6	56.8	40.6	45.7
L1022.040-070	13.1	13.5	-	20	15	7	8	M3	3.0	5.0	85.2	91.3	98.9
L1022.040-080	13.1	13.5	-	20	15	7	8	M3	3.0	5.0	85.2	91.3	83.7
L1022.060-030	26.6	16.7	17	21.5	18.5	10.5	8	M4	1.5	2.9	42.6	22.8	26.6
L1022.060-045	26.6	16.7	17	21.5	18.5	10.5	8	M4	2.5	4.3	71.0	63.4	57.1
L1022.060-060	26.6	16.7	17	21.5	18.5	10.5	8	M4	3.5	5.6	99.5	124	115
L1022.060-075	26.6	16.7	17	21.5	18.5	10.5	8	M4	4.0	6.2	113	162	172
L1022.060-090	26.6	16.7	17	21.5	18.5	10.5	8	M4	5.0	7.4	142	253	266
L1022.060-105	26.6	16.7	17	21.5	18.5	10.5	8	M4	6.0	8.6	170	365	350
L1022.060-130	26.6	16.7	17	21.5	18.5	10.5	8	M4	6.5	9.1	184	428	445
L1022.080-050	38	21	27	26.5	24	13	11	M5	3.1	6.6	124	87.3	76.4
L1022.080-075	38	21	27	26.5	24	13	11	M5	4.6	9.0	187	196	180
L1022.080-105	38	21	27	26.5	24	13	11	M5	5.4	10.2	218	267	286
L1022.080-135	38	21	27	26.5	24	13	11	M5	7.0	12.5	280	442	466
L1022.080-155	38	21	27	26.5	24	13	11	M5	8.5	14.6	343	660	690
L1022.080-185	38	21	27	26.5	24	13	11	M5	10.1	16.6	405	922	957
L1022.080-215	38	21	27	26.5	24	13	11	M5	11.6	18.6	467	1228	1187
L1022.100-060	42	29	26	37	31	16	15	M6	7.0	13.9	315	252	221
L1022.100-095	42	29	26	37	31	16	15	M6	8.7	16.6	394	394	434
L1022.100-130	42	29	26	37	31	16	15	M6	12.2	21.6	552	773	828
L1022.100-165	42	29	26	37	31	16	15	M6	15.7	26.2	710	1279	1207
L1022.100-200	42	29	26	37	31	16	15	M6	19.2	30.7	868	1910	1823
L1022.100-235	42	29	26	37	31	16	15	M6	22.8	35.0	1026	2668	2565
L1022.100-265	42	29	26	37	31	16	15	M6	26.3	39.1	1184	3552	3434
L1022.100-340	42	29	26	37	31	16	15	M6	33.3	47.5	1500	5194	5044
L1022.145-130	68.4	38.3	46	49.5	43	21	21	M8	24.2	46.9	1745	1697	1527
L1022.145-180	68.4	38.3	46	49.5	43	21	21	M8	33.9	61.1	2444	3326	3564
L1022.145-350	68.4	38.3	46	49.5	43	21	21	M8	38.7	67.9	2793	4345	4073
L1022.145-450	68.4	38.3	46	49.5	43	21	21	M8	48.4	80.8	3491	6789	6449
L1022.145-550	68.4	38.3	46	49.5	43	21	21	M8	53.3	87.0	3840	8214	8588



Stainless Cross Roller Slides

smaller sizes

Linear Tables





Size + Weight

For light/medium loads

L1020-L1037

Ball roller versions



L1024 - L1038

Cross roller versions



L1020 - L1026

Stainless steel versions

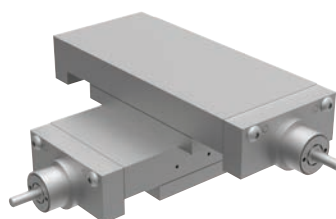


L1022 - L1023

For heavy duty loads and motorised

L3000-L3500

Needle roller & dovetail stage



L3170 - L3194

Motorised stages

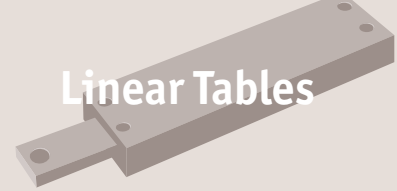


L3500 - L3510

Micrometer driven stages

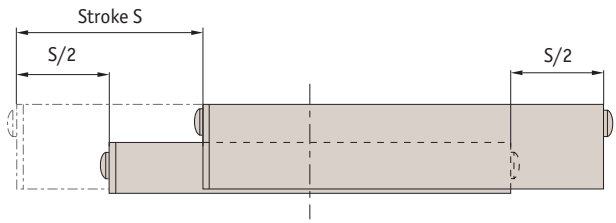


L3100 - L3123



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).

LINEAR TABLES

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



Steel - L1020

- Standard steel / cast iron



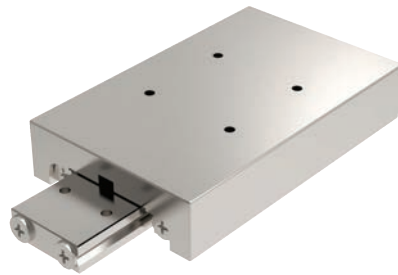
Aluminium - L1021

- Lower weight, lower profile
- Good for high accelerations



Stainless steel - L1022 + L1023

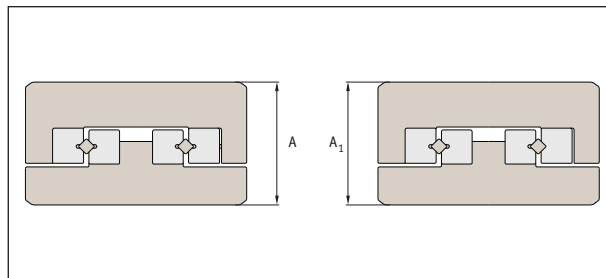
- Stainless steel (440C+Ni) corrosion resistant



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)

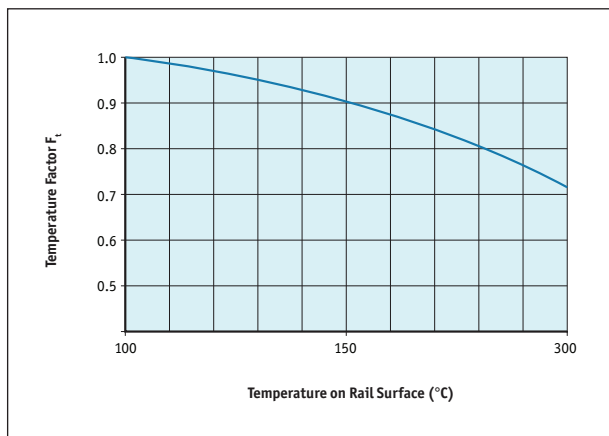


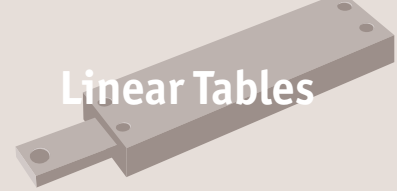
Height tolerance:

- 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.

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

