

HTMKK · MKK86

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Read positioning, load and speed under the same lead and installation conditions. For vertical motion, include holding and brake requirements in the axis proposal.



MKK series illustration

Reviewed specifications

Parameter	Value	Applies to
Body width	86 mm	
Dynamic load	7144 / 6429 N	Lead 10 mm; MKK8610
Dynamic load	4645 / 4175 N	Lead 20 mm; MKK8620
Lead	10 mm	Lead 10 mm; MKK8610
Lead	20 mm	Lead 20 mm; MKK8620
Moment MP (A1/A2)	228 / 1309 Nm	Lead 10 mm; MKK8610
Moment MR (A1/A2)	622 / 3050 Nm	Lead 10 mm; MKK8610
Moment MR (A1/A2)	1507 / 3014 Nm	Lead 10 mm; MKK8610
Moment MR (S1/S2)	847 / 1694 Nm	Lead 10 mm; MKK8610
Screw outer diameter	16 mm	Lead 20 mm; MKK8620
Screw outer diameter	16 mm	Lead 10 mm; MKK8610
Slider A basic dynamic load rating	31458 N	Lead 10 mm; MKK8610
Slider A static load rating	50764 N	Lead 10 mm; MKK8610
Slider S basic dynamic load rating	21051 N	Lead 10 mm; MKK8610
Slider S static load rating	29475 N	Lead 10 mm; MKK8610
Static load	7655 / 6889 N	Lead 20 mm; MKK8620
Static load	12642 / 11387 N	Lead 10 mm; MKK8610
Maximum payload mass	95 kg	
Overview stroke	8.00mm (as printed in overview; not normalized to 800mm)	
Section height H	46	
Section area moment Ix	74450 mm ⁴	
Section area moment Iy	1134000 mm ⁴	

Engineering reference

Installation drawings are in the separate dimension atlas.

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Maximum-speed

Lead(mm)	Rail length L2(mm)	Precision P	General C
10	340	740 mm/s	520 mm/s
10	440	740 mm/s	520 mm/s
10	540	740 mm/s	520 mm/s
10	640	740 mm/s	520 mm/s
10	740	740 mm/s	520 mm/s
10	940	610 mm/s	430 mm/s
20	340	1480 mm/s	1050 mm/s
20	440	1480 mm/s	1050 mm/s
20	540	1480 mm/s	1050 mm/s
20	640	1480 mm/s	1050 mm/s
20	740	1480 mm/s	1050 mm/s
20	940	1220 mm/s	870 mm/s

Rail length L2 is distinct from carriage travel;
 source values remain tied to their rail length,lead and grade.

Accuracy class

Rail length(mm)	Grade	Position repeatability	Position accuracy	Travel parallelism	Starting torque
340/440/540/640	P	±0.003 mm	0.025 mm	0.015 mm	15 N-cm
340/440/540/640	C	±0.01 mm	- mm	- mm	10 N-cm
740	P	±0.003 mm	0.030 mm	0.020 mm	17 N-cm
740	C	±0.01 mm	- mm	- mm	10 N-cm
940	P	±0.003 mm	0.040 mm	0.030 mm	25 N-cm
940	C	±0.01 mm	- mm	- mm	10 N-cm

The source explicitly labels positional units mm and starting torque N-cm. A dash is retained without a numerical rating.

Ball-screw ratings, MKK8610

Parameter/grade	Current source value
Nominal screw diameter	16 mm
Lead	10 mm
P ball-screw dynamic rating	7144 N
P ball-screw static rating	12642 N
C ball-screw dynamic rating	6429 N
C ball-screw static rating	11387 N

Guide ratings, MKK8610

Slide type	Dynamic rating	Static rating
A	31458 N	50764 N
S	21051 N	29475 N

Permissible static moments, MKK8610

Slide	Pitch MP	Yaw MY	Roll MR
A1	622 N-m	622 N-m	1507 N-m
A2	3050 N-m	3050 N-m	3014 N-m
S1	228 N-m	228 N-m	847 N-m
S2	1309 N-m	1309 N-m	1694 N-m

Ball-screw ratings, MKK8620

Parameter/grade	Current source value
Nominal screw diameter	16 mm
Lead	20 mm
P ball-screw dynamic rating	4645 N
P ball-screw static rating	7655 N
C ball-screw dynamic rating	4175 N
C ball-screw static rating	6889 N

Guide ratings, MKK8620

Slide type	Dynamic rating	Static rating
A	31458 N	50764 N
S	21051 N	29475 N

Permissible static moments, MKK8620

Slide	Pitch MP	Yaw MY	Roll MR
A1	622 N-m	622 N-m	1507 N-m
A2	3050 N-m	3050 N-m	3014 N-m
S1	228 N-m	228 N-m	847 N-m
S2	1309 N-m	1309 N-m	1694 N-m

Application notes

Application reference: The source describes a modular steel-base linear module integrating a ball screw and linear guide for common-environment equipment, with four-direction load support and a U-section rail.

Installation reference: The source provides HR/HL right/left motor mounting, standard/light slide variants and cover/bellows options. Choose mounting dimensions for that exact variant.

Lubrication source reference: Source grease guidance: replenish after 100km travel for speed not exceeding 60m/min. Interval $T = 100 \times 1000 / (V_e \times 60)$ hours, V_e in m/min. Source grease-nipple layouts distinguish single and double slides.

Rated-life source reference: Source formulas: guide $L = ((f_t/f_w) \times (C/P_n))^3 \times 50 \text{ km}$; screw/bearing $L = ((1/f_w) \times (C_a/P_a, n))^3 \times 10^6 \text{ rev}$. Guide f_t : A1/S1=1.0, A2/S2=0.81. f_w : smooth/no impact, $V < 15 \text{ m/min}$: 1.0-1.5; normal $15 < V < 60$: 1.5-2.0; impact/vibration, $V > 60$: 2.0-3.5. Source module rated life takes the smaller guide/screw result.

Sensor ordering reference: S0:limit body only;

S1: SX671;

S2: SX674;

S3: GX-F12A;

S4: GX-F12A-P;

no mark: none.

Ordering reference: MKK sizes 50/60/86;

MKK86 ordering lead 10/20mm, body length 340/440/540/640/740/940mm;

P: precision/C: general;

A: standard/S: light slide;

quantity 1/2. E denotes special machining;

unmarked denotes standard. C: aluminum cover/B: bellows/unmarked: no cover. M: motor attached/unmarked: no motor.