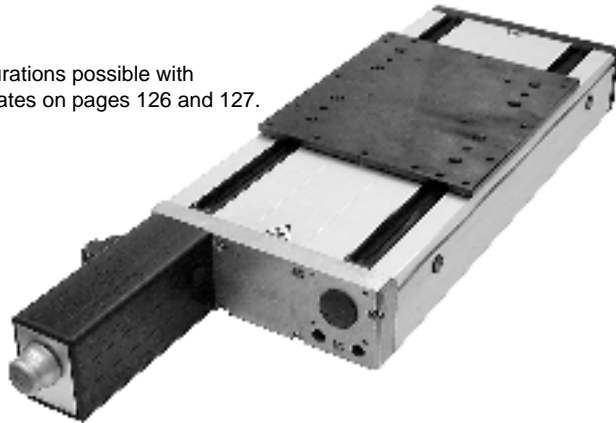


KG4 Slide for Heavy Loads

FEATURES

- ◆ Constructed from a **single rigid aluminum extrusion profile** with aluminum end plates and a fully enclosed motor assembly
- ◆ Compact, modular design with T-slotted extrusions for easy mounting
- ◆ Available with 150 oz•in stepper motor or 120W servo motor option
- ◆ Fitted with plastic seals to guard against contaminants
- ◆ Home reference and far end limit switch with a repeatability of ± 0.01 mm
- ◆ Four precision steel rails $\text{\O}12\text{h}6$ with four single piece steel bearing blocks all hardened to HRC 62 ± 2
- ◆ Anti-backlash $\text{\O}16$ mm ball screw drives with pitches of 2.5, 5, 10 and 20 mm available
- ◆ Linear carriage is capable of speed up to 5 m/sec.

XYZ configurations possible with mounting plates on pages 126 and 127.



(Carriage Plate Included)

CATALOG NUMBER

KO53KGPE

Pitch Code

Blank for no screw
24 2.5 mm
27 5 mm
32 10 mm
42 20 mm

Motor Drive

V Stepper, 150 oz•in
Y Servo, 120 W
A No motor

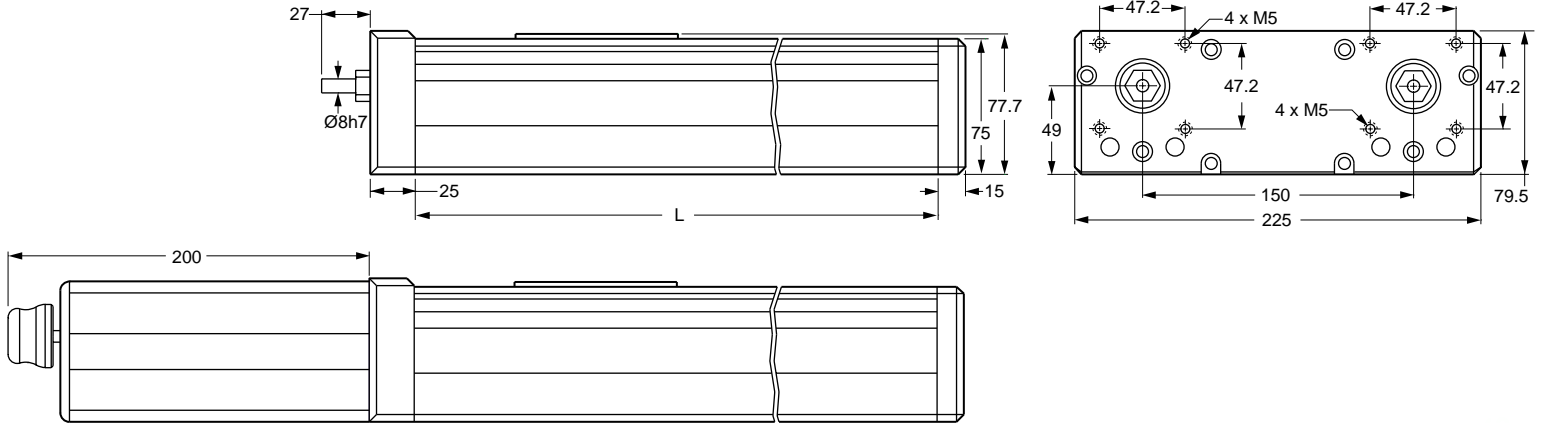
EXAMPLE: To order a KG4 with Servo Motor (Y), 10 mm pitch Ball Screw (32), and 390 mm length, the catalog number is **KO53KGPE251232Y**.

HEAVY-DUTY SLIDE SELECTION

Code	Length mm (in)	Travel mm (in)	Code	Length mm (in)	Travel mm (in)
2512	390 (15.4)	122 (4.8)	3312	1190 (46.9)	922 (36.3)
2612	490 (19.3)	222 (8.7)	3412	1290 (50.8)	1022 (40.2)
2712	590 (23.2)	322 (12.7)	3512	1390 (54.7)	1122 (44.2)
2812	690 (27.2)	422 (16.6)	3612	1490 (58.7)	1222 (48.1)
2912	790 (31.1)	522 (20.6)	3912	1790 (70.5)	1522 (59.9)
2012	890 (35.0)	622 (24.5)	3112	1990 (78.3)	1722 (68.0)
2112	990 (39.0)	722 (28.4)	4612	2490 (98.0)	2222 (87.5)
3212	1090 (42.9)	822 (32.4)	4112	2990 (117.7)	2722 (107.2)

Internal motor mount and two bearing block configurations available upon request.

KG4 Slide for Heavy Loads



STEPPER MOTOR MODULE

SPECIFICATIONS

Repeatability	± 0.01 mm ($\pm .0004$ in)
Accuracy	± 0.1 mm / 300 mm ($\pm .004$ in / 12 in)
Vertical Static Load Capacity	180 lb / bearing block

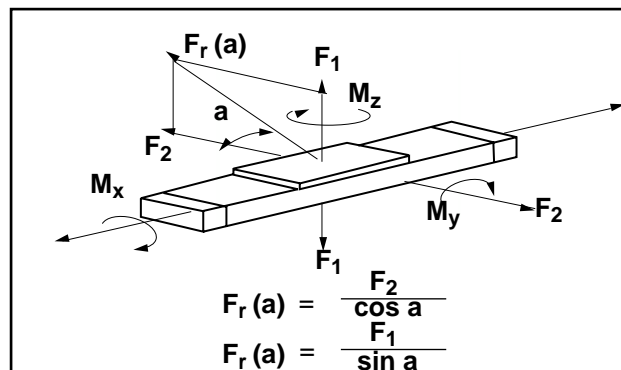
Motor Drive	Ball Screw Pitch mm	Thrust Force @ Low Speeds kg (lb)	No Load Speed mm/sec (in/sec)	Resolution mm (in)
Stepper Motor	2.5	182 (400)	64 (2.5)	0.0062 (.0002)
	5	91 (200)	127 (5)	0.0125 (.0005)
	10	45 (100)	254 (10)	0.0250 (.0098)
	20	23 (50)	508 (20)	0.0500 (.0197)
Servo Motor	2.5	226 (500)	77 (3)	0.0013 (.00005)
	5	113 (250)	152 (6)	0.0025 (.0001)
	10	57 (125)	305 (12)	0.0050 (.0002)
	20	28 (63)	610 (24)	0.0100 (.0004)

NOTES ON SPECIFICATIONS: Stepper motor is model KO4822P5101223, operating in half step mode, with 4.5A / phase, 40V chopper driver. Servo motor is model KC4822P2464823, operating with 6A / 80V chopper amplifier and 1000 line encoder operating in quadrature. These figures will, of course, vary with different loads, amplifiers and acceleration profiles provided by the controller.

Ball Screw Actuator Specifications

Load and Moment Data for Ball Screw Driven Slides

Model	Standard Duty	KG4 Slide	QS4 Slide
# of carriages	4 carriages	4 carriages	1 or 2 carriages
Carriage type	Series 1 Carriage 1	Bearing Carriage 4	Bearing Carriage 4
F1 stat [N]	430	800	800
F1 dyn [N]	400	500	500
F2 stat [N]	430	800	800
F2 dyn [N]	400	500	500
Mx stat [N·m]	7.3	12.6	12.6
My stat [N·m]	3.7	22	22
Mz stat [N·m]	3.7	12.6	12.6
Mx dyn [N·m]	7.3	7.4	7.4
My dyn [N·m]	3.7	13	13
Mz dyn [N·m]	3.7	7.4	7.4



No-Load Torque Charts

Standard-Duty Slides

No-Load Speed (rpm)	No-Load Torque (N • m) Screw Pitch		
	5	10	20
500	0.18	0.2	0.21
1500	0.22	0.24	0.25
3000	0.26	0.29	0.3

KG4 Slides

No-Load Speed (rpm)	No-Load Torque (N • m) Screw Pitch			
	2.5	5	10	20
500	0.18	0.2	0.21	0.22
1500	0.24	0.24	0.25	0.26
3000	0.26	0.29	0.3	0.32

QS4Slides

No-Load Speed (rpm)	No-Load Torque (N • m) Screw Pitch			
	2.5	5	10	20
500	0.15	0.16	0.17	0.18
1500	0.19	0.19	0.2	0.21
3000	0.23	0.24	0.25	0.26