

# Ball screw axis ELGA-BS-KF-150- -

Part number: 8024921

FESTO



## Data sheet

Feature	Value
Working stroke	50 mm...3000 mm
Size	150
Screw diameter	40 mm
Spindle pitch	40 mm/U
Mounting position	Any
Guide	Recirculating ball bearing guide
Structural design	Electromechanical linear axis with ball screw
Motor type	Stepper motor Servo motor
Spindle type	Ball screw
Measuring principle of linear potentiometer	Incremental
Max. acceleration	15 m/s <sup>2</sup>
Max. rotational speed	3000 rpm
Max. speed	2 m/s
Repetition accuracy	±0.02 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364 zone III
Degree of protection	IP40
Ambient temperature	-10 °C...60 °C
2nd moment of area Iy	4700000 mm <sup>4</sup>
2nd moment of area Iz	11800000 mm <sup>4</sup>
No-load torque at maximum travel speed	4.4 Nm
No-load torque at minimum travel speed	2.2 Nm
Max. force Fy	5500 N
Max. force Fz	11000 N
Max. force Fy total axis	5500 N
Max. force Fz total axis	11000 N
Fy with theoretical service life of 100 km (from a guide perspective only)	20240 N
Fz with theoretical service life of 100 km (from a guide perspective only)	40480 N
Max. torque Mx	167 Nm
Max. torque My	1150 Nm

Feature	Value
Max. torque Mz	1150 Nm
Max. moment Mx total axis	167 Nm
Max. moment My total axis	1150 Nm
Max. moment Mz total axis	1150 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	615 Nm
My with theoretical service life of 100 km (from a guide perspective only)	4232 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	4232 Nm
Distance between slide surface and guide center	111 mm
Max. radial force on actuator shaft	4000 N
Max. feed force Fx	6400 N
Torsion moment of inertia It	783000 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	18.031 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	0.4053 kgcm <sup>2</sup>
Mass moment of inertia JO	8.63 kgcm <sup>2</sup>
Feed constant	40 mm/U
Reference service life	5000 km
Moving mass	10514 g
Additional slide weight	5900 g
Basic weight with 0 mm stroke	25100 g
Additional weight per 10 mm stroke	213 g
Dynamic deflection (load moved)	0.05% of axis length, maximum 0.5 mm
Static deflection (load at standstill)	0.1 % of axis length
Material of end caps	Wrought aluminum alloy Anodized
Profile material	Wrought aluminum alloy Anodized
Note on materials	RoHS-compliant
Cover strip material	Stainless steel strip
Drive cover material	Wrought aluminum alloy Anodized
Slide carriage material	Steel
Guide rail material	Steel
Slide material	Wrought aluminum alloy Anodized
Spindle nut material	Steel
Spindle material	Steel