

# Ball screw axis ELGA-BS-KF-80-400-0H-20P-ML

Part number: 8041832

FESTO



General operating condition

## Data sheet

Feature	Value
Working stroke	400 mm
Size	80
Stroke reserve	0 mm
Spindle diameter	15 mm
Spindle pitch	20 mm/U
Mounting position	Any
Guide	Recirculating ball bearing guide
Design	Electromechanical linear axis With ball screw
Type of motor	Stepper motor Servo motor
Spindle type	Ball screw
Symbol	00991211
Functional principle of measuring system	Incremental
Max. acceleration	15 m/s <sup>2</sup>
Max. rotational speed	3000 rpm
Max. speed	1 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 ly	310000 mm <sup>4</sup>
2nd moment of area lz	977000 mm <sup>4</sup>
Idle torque at v <sub>max</sub>	0.6 Nm
Idle torque at v <sub>min</sub>	0.35 Nm
Max. force F <sub>y</sub>	2500 N
Max. force F <sub>z</sub>	3050 N
Max. force F <sub>y</sub> total axis	2500 N
Max. force F <sub>z</sub> total axis	3050 N
F <sub>y</sub> at theoretical life value of 100 km (only guide consideration)	9200 N
F <sub>z</sub> at theoretical life value of 100 km (only guide consideration)	11224 N
Max. moment M <sub>x</sub>	36 Nm
Max. moment M <sub>y</sub>	228 Nm
Max. moment M <sub>z</sub>	228 Nm
Max. moment M <sub>x</sub> total axis	36 Nm

Feature	Value
Max. moment My total axis	228 Nm
Max. moment Mz total axis	228 Nm
Mx at theoretical life value of 100 km (only guide consideration)	132 Nm
My at theoretical life value of 100 km (only guide consideration)	839 Nm
Mz at theoretical life value of 100 km (only guide consideration)	839 Nm
Distance between slide surface and guide centre	60 mm
Max. radial force at drive shaft	250 N
Max. feed force Fx	1600 N
Torsional mass moment of inertia It	67300 mm <sup>4</sup>
Mass moment of inertia JH per metre of stroke	0.346 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of working load	0.1013 kgcm <sup>2</sup>
Mass moment of inertia JO	0.097 kgcm <sup>2</sup>
Feed constant	20 mm/U
Reference service life	5000 km
Moving mass	1370 g
Additional weight per 10 mm stroke	46.5 g
Dynamic deflection (moving load)	0.05% of the axis length, max. 0.5 mm
Static deflection (load in standstill)	0.1% of the axis length
Material end cap	Wrought aluminium alloy anodised
Material profile	Wrought aluminium alloy anodised
Note on materials	RoHS compliant
Material cover tape	Stainless steel strip
Material drive cover	Wrought aluminium alloy anodised
Material guide slide	Steel
Material guide rail	Steel
Material slide	Wrought aluminium alloy anodised
Material ball screw nut	Steel
Material spindle	Steel