

# Spindle axis

## ELGA-BS-KF-70-100-0H-10P-ML

Part number: 8041816

FESTO

With recirculating ball bearing guide



## Data sheet

Feature	Value
Working stroke	100 mm
Size	70
Stroke reserve	0 mm
Spindle diameter	12 mm
Spindle pitch	10 mm/U
Assembly position	Any
Guide	Recirculating ball bearing guide
Design structure	Electromechanical linear axis with recirculating ball bearing spindle
Motor type	Stepper motor Servomotor
Spindle type	Ball screw actuator
Measuring method: displacement encoder	Incremental
Max. acceleration	15 m/s <sup>2</sup>
Max. speed	3,000 1/min 0.5 m/s
Repetition accuracy	±0,02 mm
PWIS conformity	VDMA24364 zone III
Protection class	IP40
Ambient temperature	-10 ... 60 °C
Area moment of inertia 2nd degree Iy	165E+03 mm <sup>4</sup>
Area moment of inertia 2nd degree Iz	472E+03 mm <sup>4</sup>
No-load torque at maximum travel speed	0.24 Nm
No-load torque at minimum travel speed	0.17 Nm
Max. force Fy	1,500 N
Max. force Fz	1,850 N
Fy with theoretical service life of 100 km (from a guide perspective only)	5,520 N
Fz with theoretical service life of 100 km (from a guide perspective only)	6,808 N
Max. torque Mx	16 Nm
Max. torque My	132 Nm
Max. torque Mz	132 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	59 Nm
My with theoretical service life of 100 km (from a guide perspective only)	486 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	486 Nm
Max. radial force at drive shaft	220 N
Max. feed force Fx	650 N
Torsional mass moment of inertia It	28.3E+03 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.142 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of working load	0.0253 kgcm <sup>2</sup>
Mass moment of inertia, JO	0.038 kgcm <sup>2</sup>
Feed constant	10 mm/U
Moving mass	804 g
Additional slide weight	620 g
Additional weight per 10 mm stroke	33 g

Feature	Value
Dynamic deflection (load moved)	0.05% of the axis length, max. 0.5 mm
Static deflection (load at standstill)	0.1% of the axis length
Material of end caps	Wrought Aluminum alloy Anodized
Material of profile	Wrought Aluminum alloy Anodized
Materials note	Conforms to RoHS
Material drive cover	Wrought Aluminum alloy Anodized
Material guide slide	Steel
Material guide rail	Steel
Material slide	Wrought Aluminum alloy Anodized
Material spindle nut	Steel
Material spindle	Steel