

# Spindle axis ELGC-BS-KF-45-500-10P

Part number: 8061488

FESTO



## Data sheet

Feature	Value
Working stroke	500 mm
Size	45
Stroke reserve	0 mm
Reversing backlash	0.15 mm
Spindle diameter	10 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
Position detection	For proximity sensor For inductive sensors
Max. acceleration	15 m/s <sup>2</sup>
Max. speed	3,600 1/min 0.6 m/s
Repetition accuracy	±0,015 mm
Duty cycle	100 %
PWIS conformity	VDMA24364 zone III
RSBP classification to CD-0033	F1a
Cleanroom class	ISO class 7
Protection class	IP40
Ambient temperature	0 ... 50 °C
Impact energy in end positions	0.5 mJ
Note on the impact energy in the end positions	At maximum homing speed of 0.01 m/s
Area moment of inertia 2nd degree Iy	140E+03 mm <sup>4</sup>
Area moment of inertia 2nd degree Iz	170E+03 mm <sup>4</sup>
No-load torque at maximum travel speed	0.12 Nm
No-load torque at minimum travel speed	0.032 Nm
Max. force Fy	300 N
Max. force Fz	600 N
Fy for the guide calculation for a service life of 5000 km or 5 million cycles	880 N
Fz for the guide calculation for a service life of 5000 km or 5 million cycles	880 N
Fy with theoretical service life of 100 km (from a guide perspective only)	3,240 N
Fz with theoretical service life of 100 km (from a guide perspective only)	3,240 N
Max. torque Mx	5.5 Nm
Max. torque My	4.7 Nm
Max. torque Mz	4.7 Nm
Mx for the guide calculation for a service life of 5000 km or 5 million cycles	5.5 Nm
My for the guide calculation for a service life of 5000 km or 5 million cycles	4.7 Nm
Mz for the guide calculation for a service life of 5000 km or 5 million cycles	4.7 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	20 Nm
My with theoretical service life of 100 km (from a guide perspective only)	17 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	17 Nm

Feature	Value
Distance between the slide surface and the centre of the guide	42.8 mm
Max. radial force at drive shaft	180 N
Max. feed force Fx	100 N
Torsional mass moment of inertia It	8.5E+03 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.05056 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of working load	0.02533 kgcm <sup>2</sup>
Mass moment of inertia, JO	0.0082 kgcm <sup>2</sup>
Feed constant	10 mm/U
Maintenance interval	Life-time lubrication
Moving mass	220 g
Additional weight per 10 mm stroke	36 g
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
Interface code, actuator	V32
Material of end caps	Die-cast aluminium, painted
Material of profile	Anodised wrought aluminium alloy
Materials note	Conforms to RoHS
Material cover tape	High alloy steel, non-corrosive
Material drive cover	Die-cast aluminium, painted
Material guide slide	Steel
Material guide rail	Steel
Material slide	Aluminum die cast
Material spindle nut	Steel
Material spindle	Steel