

# Spindle axis ELGD-BS-KF-WD-100- -

Part number: 8176878

FESTO



## Data sheet

Feature	Value
Working stroke	100 mm...1000 mm
Size	100
Stroke reserve	0 mm
Reversing backlash	0,15 mm
Screw diameter	10 mm
Spindle pitch	10 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 drive
Position sensing	For inductive proximity sensors
Max. acceleration	15 m/s <sup>2</sup>
Max. rotational speed	8000 1/min
Max. speed	1.33 m/s
Repetition accuracy	±0.01 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364 zone III
Degree of protection	IP30
Ambient temperature	0 °C...60 °C
Impact energy in the end positions	1 mJ
Note on the impact energy in the end positions	At maximum speed of the reference run of 0.01 m/s
2nd moment of area ly	347100 mm <sup>4</sup>
2nd moment of area lz	2268000 mm <sup>4</sup>
No-load torque at maximum travel speed	0.083 Nm
No-load torque at minimum travel speed	0.026 Nm
Max. force Fy	4400 N
Max. force Fz	4400 N
Max. force Fy total axis	3236 N
Max. force Fz total axis	2250 N

Feature	Value
Fy with theoretical service life of 100 km (from a guide perspective only)	18415 N
Fz with theoretical service life of 100 km (from a guide perspective only)	18415 N
Max. torque Mx	140 Nm
Max. torque My	230 Nm
Max. torque Mz	220 Nm
Max. moment Mx total axis	160 Nm
Max. moment My total axis	230 Nm
Max. moment Mz total axis	191 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	645 Nm
My with theoretical service life of 100 km (from a guide perspective only)	720 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	720 Nm
Distance between slide surface and guide center	47 mm
Max. radial force on actuator shaft	180 N
Max. feed force Fx	1100 N
Torsion moment of inertia It	108900 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.07554 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	0.02533 kgcm <sup>2</sup>
Mass moment of inertia JO	0.05632 kgcm <sup>2</sup>
Feed constant	10 mm/U
Reference service life	5000 km
Maintenance interval	Life-time lubrication
Moving mass	1185 g
Basic weight with 0 mm stroke	2979 g
Additional weight per 10 mm stroke	59 g
Dynamic deflection (load moved)	0.05% of axis length, maximum 0.5 mm
Static deflection (load at standstill)	0.1 % of axis length
Interface code, actuator	T42
Material of end caps	Aluminum gravity die-cast, painted
Profile material	Wrought aluminum alloy, anodized
Note on materials	RoHS-compliant
Cover strip material	High-alloy stainless steel
Drive cover material	Aluminum gravity die-cast, painted
Slide carriage material	Steel
Guide rail material	Steel
Slide material	Wrought aluminum alloy
Spindle nut material	Steel
Spindle material	Steel