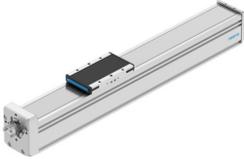


# Ball screw axis ELGD-BS-KF-80- -

Part number: 8176875

FESTO



## Data sheet

Feature	Value
Working stroke	50 mm...2000 mm
Size	80
Stroke reserve	0 mm
Reversing backlash	0.15 mm
Screw diameter	16 mm
Spindle pitch	5 mm/U...20 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	5000 rpm
Max. speed	0.42 m/s...1.67 m/s
Repetition accuracy	±0.01 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364 zone III
Suitability for the production of Li-ion batteries	Product corresponds to Festo's internal product definition for use in battery production: Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. The exceptions are nickel in steel, chemically nickel-plated surfaces, circuit boards, cables, electrical plug connectors and coils
Degree of protection	IP40
Ambient temperature	0 °C...60 °C
Impact energy in the end positions	2 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 Iy	1213000 mm <sup>4</sup>
2nd moment of area Iz	2052000 mm <sup>4</sup>
No-load torque at maximum travel speed	0.172 Nm...0.218 Nm
No-load torque at minimum travel speed	0.065 Nm...0.075 Nm

Feature	Value
Max. force Fy	3906 N...8236 N
Max. force Fz	3913 N...8256 N
Max. force Fy total axis	2291 N...4581 N
Max. force Fz total axis	2500 N...4000 N
Fy with theoretical service life of 100 km (from a guide perspective only)	17576 N...35153 N
Fz with theoretical service life of 100 km (from a guide perspective only)	17576 N...35153 N
Max. torque Mx	95 Nm...180 Nm
Max. torque My	42 Nm...390 Nm
Max. torque Mz	42 Nm...390 Nm
Max. moment Mx total axis	100 Nm...160 Nm
Max. moment My total axis	42 Nm...335 Nm
Max. moment Mz total axis	42 Nm...275 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	422 Nm...844 Nm
My with theoretical service life of 100 km (from a guide perspective only)	162 Nm...1356 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	162 Nm...1356 Nm
Distance between slide surface and guide center	62 mm
Max. radial force on actuator shaft	500 N
Max. feed force Fx	2650 N
Torsion moment of inertia It	405000 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.39016 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	0.00633 kgcm <sup>2</sup> ...0.101 kgcm <sup>2</sup>
Mass moment of inertia JO	0.10619 kgcm <sup>2</sup> ...0.13622 kgcm <sup>2</sup>
Feed constant	5 mm/U...20 mm/U
Reference service life	5000 km
Maintenance interval	Life-time lubrication
Moving mass	990 g...1671 g
Basic weight with 0 mm stroke	3147 g...4533 g
Additional weight per 10 mm stroke	90 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	T46
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