

Toothed belt axis ELGD-TB-KF-80- -

Part number: 8176885

FESTO



Data sheet

Feature	Value
Drive pinion effective diameter	42.97 mm
Working stroke	50 mm...2000 mm
Size	80
Stroke reserve	0 mm
Toothed belt pitch	5 mm
Mounting position	Any
Guide	Recirculating ball bearing guide
Structural design	Electromechanical linear axis with toothed belt
Motor type	Stepper motor Servo motor
Measuring principle of linear potentiometer	Incremental
Position sensing	For inductive proximity sensors
Max. acceleration	50 m/s ²
Max. speed	3 m/s
Repetition accuracy	±0.1 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	0,25 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 ⁴
2nd moment of area Iz	2052000 mm ⁴
Max. driving torque	17.2 Nm
Max. force Fy	4200 N...8433 N
Max. force Fz	4200 N...8400 N
Max. force Fy total axis	2291 N...4581 N
Max. force Fz total axis	3500 N...5600 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. no-load resistance to shifting	55.8 N

Feature	Value
Max. torque Mx	106 Nm...200 Nm
Max. torque My	42 Nm...390 Nm
Max. torque Mz	42 Nm...390 Nm
Max. moment Mx total axis	106 Nm...200 Nm
Max. moment My total axis	42 Nm...356 Nm
Max. moment Mz total axis	42 Nm...294 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. feed force Fx	800 N
Torsion moment of inertia It	405000 mm ⁴
Mass moment of inertia JH per meter of stroke	1.12563 kgcm ²
Mass moment of inertia JL per kg of payload	4.6161 kgcm ²
Mass moment of inertia JO	7.5216 kgcm ² ...10.5647 kgcm ²
Feed constant	135 mm/U
Reference service life	5000 km
Maintenance interval	Life-time lubrication
Moving mass	1110 g...1810 g
Product weight	4715 g...6030 g
Basic weight with 0 mm stroke	4715 g...6030 g
Additional weight per 10 mm stroke	79 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	L48
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
Belt pulley material	High-alloy stainless steel
Slide material	Wrought aluminum alloy
Toothed belt material	Polyurethane with steel cord