

# Toothed belt axis ELGD-TB-KF-60- -

Part number: 8176884

FESTO



## Data sheet

Feature	Value
Drive pinion effective diameter	31.51 mm
Working stroke	50 mm...1500 mm
Size	60
Stroke reserve	0 mm
Toothed belt pitch	3 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 <sup>2</sup>
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	0,13 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	485200 mm <sup>4</sup>
2nd moment of area Iz	730600 mm <sup>4</sup>
Max. driving torque	5.5 Nm
Max. force Fy	2200 N...4400 N
Max. force Fz	2200 N...4400 N
Max. force Fy total axis	1513 N...3026 N
Max. force Fz total axis	2200 N...3200 N
Fy with theoretical service life of 100 km (from a guide perspective only)	9208 N...18415 N
Fz with theoretical service life of 100 km (from a guide perspective only)	9208 N...18415 N
Max. no-load resistance to shifting	29.8 N

Feature	Value
Max. torque Mx	38 Nm...75 Nm
Max. torque My	15 Nm...150 Nm
Max. torque Mz	15 Nm...140 Nm
Max. moment Mx total axis	38 Nm...75 Nm
Max. moment My total axis	15 Nm...128 Nm
Max. moment Mz total axis	15 Nm...133 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	157 Nm...314 Nm
My with theoretical service life of 100 km (from a guide perspective only)	60 Nm...500 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	60 Nm...500 Nm
Distance between slide surface and guide center	49 mm
Max. feed force Fx	350 N
Torsion moment of inertia It	192900 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.3128 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	2.4822 kgcm <sup>2</sup>
Mass moment of inertia JO	2.1016 kgcm <sup>2</sup> ...2.6749 kgcm <sup>2</sup>
Feed constant	99 mm/U
Reference service life	5000 km
Maintenance interval	Life-time lubrication
Moving mass	490 g...710 g
Product weight	2486 g...2909 g
Basic weight with 0 mm stroke	2486 g...2909 g
Additional weight per 10 mm stroke	49 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	N48
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