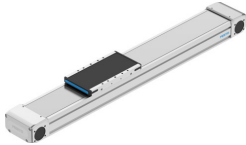


# Toothed belt axis ELGD-TB-KF-WD-100- -

Part number: 8176888

**FESTO**



## Data sheet

Feature	Value
Drive pinion effective diameter	26.74 mm
Working stroke	50 mm...8500 mm
Size	100
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	±0.04 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	0.75 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	347100 mm <sup>4</sup>
2nd moment of area Iz	2268000 mm <sup>4</sup>
Max. driving torque	3.2 Nm
Max. force Fy	4376 N
Max. force Fz	4286 N
Max. force Fy total axis	3236 N

Feature	Value
Max. force Fz total axis	2250 N
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. no-load resistance to shifting	29.9 N
Max. torque Mx	130 Nm
Max. torque My	200 Nm
Max. torque Mz	200 Nm
Max. moment Mx total axis	160 Nm
Max. moment My total axis	191 Nm
Max. moment Mz total axis	200 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. feed force Fx	240 N
Torsion moment of inertia It	108900 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.2252 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	1.7876 kgcm <sup>2</sup>
Mass moment of inertia JO	2.9542 kgcm <sup>2</sup>
Feed constant	84 mm/U
Reference service life	5000 km
Maintenance interval	Life-time lubrication
Moving mass	1360 g
Product weight	3864 g
Basic weight with 0 mm stroke	3864 g
Additional weight per 10 mm stroke	55 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	L38
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