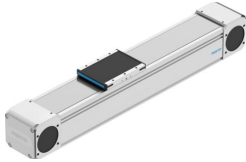


Toothed belt axis ELGD-TB-KF-120- -

Part number: 8176886

FESTO



Data sheet

Feature	Value
Drive pinion effective diameter	55.7 mm
Working stroke	50 mm...8500 mm
Size	120
Stroke reserve	0 mm
Toothed belt pitch	5 mm
Mounting position	Any
Guide	Recirculating ball bearing
Structural design	Electromechanical linear axis With toothed belt
Motor type	Stepper motor Servo motor
Measuring principle of linear potentiometer	Incremental
Position sensing	For inductive sensors
Max. acceleration	50 m/s ²
Max. speed	3 m/s
Repetition accuracy	±0.04 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364-C1-L
Suitability for the production of Li-ion batteries	Suitable for battery production with reduced Cu/Zn/Ni values (F1a)
Cleanroom suitability, measured according to ISO 14644-14	Class 4 according to ISO 14644-1 (with vacuum insert) Class 6 according to ISO 14644-1
Storage temperature	-20 °C...60 °C
For use in the food industry	See supplementary material information
Degree of protection	IP40
Ambient temperature	0 °C...60 °C
Impact energy in the end positions	0.001 J
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	3550000 mm ⁴
2nd moment of area Iz	8985000 mm ⁴
Max. driving torque	36.2 Nm
Max. force Fy	4300 N...8400 N
Max. force Fz	4300 N...8400 N

Feature	Value
Max. force Fy total axis	2957 N...5914 N
Max. force Fz total axis	6500 N...9000 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	71.8 N
Max. torque Mx	170 Nm...350 Nm
Max. torque My	50 Nm...620 Nm
Max. torque Mz	60 Nm...580 Nm
Max. moment Mx total axis	251 Nm...520 Nm
Max. moment My total axis	80 Nm...674 Nm
Max. moment Mz total axis	105 Nm...527 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	730 Nm...1459 Nm
My with theoretical service life of 100 km (from a guide perspective only)	162 Nm...1920 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	162 Nm...1920 Nm
Distance between slide surface and guide center	80 mm
Max. feed force Fx	1300 N
No-load driving torque	2 Nm
Torsion moment of inertia It	1433600 mm ⁴
Mass moment of inertia JH per meter of stroke	2.792 kgcm ²
Mass moment of inertia JL per kg of payload	7.7562 kgcm ²
Mass moment of inertia JO	30.2136 kgcm ² ...41.6324 kgcm ²
Feed constant	175 mm/U
Reference service life	5000 km
Maintenance interval	Lifetime lubrication
Moving mass	1708 g...3140 g
Product weight	11005 g...111675 g
Basic weight with 0 mm stroke	10425 g...13075 g
Additional weight per 10 mm stroke	116 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	N80
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