

# Toothed belt axis ELGC-TB-KF-80-500

Part number: 8062788

FESTO



## Data sheet

Feature	Value
Effective diameter of drive pinion	33.42 mm
Working stroke	500 mm
Size	80
Stroke reserve	0 mm
Toothed-belt stretch	0.2 %
Toothed-belt pitch	3 mm
Assembly position	Any
Guide	Recirculating ball bearing guide
Design structure	Electromechanical linear axis With toothed belt
Motor type	Stepper motor Servomotor
Measuring method: displacement encoder	Incremental
Position detection	For proximity sensor For inductive sensors
Max. acceleration	15 m/s <sup>2</sup>
Max. speed	1.5 m/s
Repetition accuracy	±0,1 mm
Duty cycle	100 %
PWIS conformity	VDMA24364 zone III
RSBP classification to CD-0033	F1a
Cleanroom class	ISO class 7
Protection class	IP40
Ambient temperature	0 ... 50 °C
Impact energy in end positions	0.75 mJ
Note on the impact energy in the end positions	At maximum homing speed of 0.01 m/s
Area moment of inertia 2nd degree Iy	1,370E+03 mm <sup>4</sup>
Area moment of inertia 2nd degree Iz	1,660E+03 mm <sup>4</sup>
Max. drive torque	4.178 Nm
Max. force Fy	900 N
Max. force Fz	2,700 N
Fy for the guide calculation for a service life of 5000 km or 5 million cycles	5,543 N
Fz for the guide calculation for a service life of 5000 km or 5 million cycles	5,543 N
Fy with theoretical service life of 100 km (from a guide perspective only)	20,400 N
Fz with theoretical service life of 100 km (from a guide perspective only)	20,400 N
Max. idling displacement resistance	24.7 N
Max. torque Mx	59.8 Nm
Max. torque My	56.2 Nm
Max. torque Mz	56.2 Nm
Mx for the guide calculation for a service life of 5000 km or 5 million cycles	59.8 Nm
My for the guide calculation for a service life of 5000 km or 5 million cycles	56.2 Nm
Mz for the guide calculation for a service life of 5000 km or 5 million cycles	56.2 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	220 Nm
My with theoretical service life of 100 km (from a guide perspective only)	207 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	207 Nm
Distance between the slide surface and the centre of the guide	72.5 mm

Feature	Value
Max. feed force Fx	250 N
No-load driving torque	0.413 Nm
Torsional mass moment of inertia It	90.5E+03 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.1927 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of working load	2.793 kgcm <sup>2</sup>
Mass moment of inertia, JO	2.912 kgcm <sup>2</sup>
Feed constant	105 mm/U
Maintenance interval	Life-time lubrication
Moving mass	901 g
Moving mass with 0 mm stroke	901 g
Slide weight	272 g
Product weight	7,142 g
Basic weight for 0 mm stroke	3,500 g
Additional weight per 10 mm stroke	73 g
Dynamic deflection (load moved)	0.05% of the axis length, max. 0.5 mm
Static deflection (load at standstill)	0.1% of the axis length
Interface code, actuator	T46
Material of end caps	Die-cast aluminium, painted
Material of profile	Anodised wrought aluminium alloy
Materials note	Conforms to RoHS
Material cover tape	Stainless steel strip
Material drive cover	Die-cast aluminium, painted
Material guide slide	Heat-treatment steel
Material guide rail	Heat-treatment steel
Material pulleys	High alloy steel, non-corrosive
Material slide	Aluminum die cast
Material toothed belt	Polychloroprene with glass fibers