

# Toothed belt axis ELGC-TB-KF-45-300

Part number: 8062769

FESTO



## Data sheet

Feature	Value
Effective diameter of drive pinion	19.1 mm
Working stroke	300 mm
Size	45
Stroke reserve	0 mm
Toothed-belt stretch	0.187 %
Toothed-belt pitch	2 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	1.2 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	0.125 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	140E+03 mm <sup>4</sup>
Area moment of inertia 2nd degree Iz	170E+03 mm <sup>4</sup>
Max. drive torque	0.716 Nm
Max. force Fy	300 N
Max. force Fz	600 N
Fy for the guide calculation for a service life of 5000 km or 5 million cycles	880 N
Fz for the guide calculation for a service life of 5000 km or 5 million cycles	880 N
Fy with theoretical service life of 100 km (from a guide perspective only)	3,240 N
Fz with theoretical service life of 100 km (from a guide perspective only)	3,240 N
Max. idling displacement resistance	7.8 N
Max. torque Mx	5.5 Nm
Max. torque My	4.7 Nm
Max. torque Mz	4.7 Nm
Mx for the guide calculation for a service life of 5000 km or 5 million cycles	5.5 Nm
My for the guide calculation for a service life of 5000 km or 5 million cycles	4.7 Nm
Mz for the guide calculation for a service life of 5000 km or 5 million cycles	4.7 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	20 Nm
My with theoretical service life of 100 km (from a guide perspective only)	17 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	17 Nm
Distance between the slide surface and the centre of the guide	42.8 mm

Feature	Value
Max. feed force Fx	75 N
No-load driving torque	0.075 Nm
Torsional mass moment of inertia It	8.5E+03 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.0281 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of working load	0.9119 kgcm <sup>2</sup>
Mass moment of inertia, JO	0.1862 kgcm <sup>2</sup>
Feed constant	60 mm/U
Maintenance interval	Life-time lubrication
Moving mass	169 g
Moving mass with 0 mm stroke	169 g
Slide weight	55 g
Product weight	1,448 g
Basic weight for 0 mm stroke	760 g
Additional weight per 10 mm stroke	23 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	V32
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