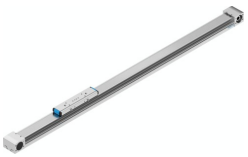
Toothed belt axis
ELGA-TB-KF-70-1000-0H

Part number: 8041856



General operating condition

Data sheet

Feature	Value
Effective diameter of drive pinion	28.65 mm
Working stroke	1000 mm
Size	70
Stroke reserve	0 mm
Toothed-belt pitch	3 mm
Mounting position	Any
Guide	Recirculating ball bearing guide
Design	Electromechanical linear axis With toothed belt
Type of motor	Stepper motor Servo motor
Functional principle of measuring system	Incremental
Max. acceleration	50 m/s²
Max. speed	5 m/s
Repetition accuracy	±0.08 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364 zone III
Degree of protection	IP40
Ambient temperature	-10 °C ... 60 °C
2nd moment of area Iy	146050 mm⁴
2nd moment of area Iz	459290 mm⁴
Max. drive torque	5.02 Nm
Max. force Fy	1500 N
Max. force Fz	1850 N
Max. force Fy total axis	1500 N
Max. force Fz total axis	1850 N
Fy at theoretical life value of 100 km (only guide consideration)	5520 N
Fz at theoretical life value of 100 km (only guide consideration)	6808 N
Max. idle running transfer resistance	41.9 N
Max. moment Mx	16 Nm
Max. moment My	132 Nm
Max. moment Mz	132 Nm
Max. moment Mx total axis	16 Nm
Max. moment My total axis	132 Nm
Max. moment Mz total axis	132 Nm
Mx at theoretical life value of 100 km (only guide consideration)	59 Nm

Feature	Value
My at theoretical life value of 100 km (only guide consideration)	486 Nm
Mz at theoretical life value of 100 km (only guide consideration)	486 Nm
Distance between slide surface and guide centre	37 mm
Max. feed force Fx	350 N
Frictional torque independent of load	0.6 Nm
Torsional mass moment of inertia It	103880 mm^4
Mass moment of inertia JH per metre of stroke	0.19 $kgcm^2$
Mass moment of inertia JL per kg of working load	2.05 $kgcm^2$
Mass moment of inertia JO	2.43 $kgcm^2$
Mass moment of inertia JW for additional slide	1.86 $kgcm^2$
Feed constant	90 mm/U
Reference service life	5000 km
Weight of slide	900 g
Weight of additional slide	740 g
Basic weight for 0 mm stroke	2970 g
Additional weight per 10 mm stroke	39 g
Dynamic deflection (moving load)	0.05% of the axis length, max. 0.5 mm
Static deflection (load in standstill)	0.1% of the axis length
Material profile	Wrought aluminium alloy anodised
Note on materials	RoHS compliant
Material cover tape	Stainless steel strip
Material drive cover	Wrought aluminium alloy anodised
Material guide slide	Stainless steel
Material guide rail	Stainless steel
Material pulleys	High-alloy stainless steel
Material slide	Wrought aluminium alloy anodised
Material toothed belt clamping piece	Cast stainless steel
Material toothed belt	Polychloroprene or nitrile rubber (NBR) with glass cord and nylon coating