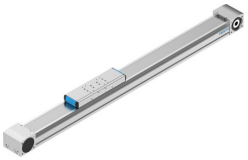
Toothed belt axis
ELGA-TB-KF-120-1000-0H

Part number: 8041868



General operating condition

Data sheet

Feature	Value
Effective diameter of drive pinion	52.52 mm
Working stroke	1000 mm
Size	120
Stroke reserve	0 mm
Toothed-belt pitch	5 mm
Mounting position	optional
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	1264580 mm⁴
2nd moment of area Iz	4365790 mm⁴
Max. drive torque	34.1 Nm
Max. force Fy	5500 N
Max. force Fz	6890 N
Max. force Fy total axis	5500 N
Max. force Fz total axis	6890 N
Fy at theoretical life value of 100 km (only guide consideration)	20240 N
Fz at theoretical life value of 100 km (only guide consideration)	25355 N
Max. idle running transfer resistance	76.2 N
Max. moment Mx	104 Nm
Max. moment My	680 Nm
Max. moment Mz	680 Nm
Max. moment Mx total axis	104 Nm
Max. moment My total axis	680 Nm
Max. moment Mz total axis	680 Nm
Mx at theoretical life value of 100 km (only guide consideration)	383 Nm

Feature	Value
My at theoretical life value of 100 km (only guide consideration)	2502 Nm
Mz at theoretical life value of 100 km (only guide consideration)	2502 Nm
Distance between slide surface and guide centre	70 mm
Max. feed force Fx	1300 N
Frictional torque independent of load	2.8 Nm
Torsional mass moment of inertia It	435680 mm⁴
Mass moment of inertia JH per metre of stroke	2.15 kgcm²
Mass moment of inertia JL per kg of working load	6.9 kgcm²
Mass moment of inertia JO	40.99 kgcm²
Mass moment of inertia JW for additional slide	28.91 kgcm²
Feed constant	165 mm/U
Reference service life	5000 km
Weight of slide	4190 g
Weight of additional slide	3240 g
Basic weight for 0 mm stroke	15680 g
Additional weight per 10 mm stroke	106 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	Tempered steel
Material guide rail	Tempered steel Corrotect coated
Material pulleys	High-alloy stainless steel
Material slide	Wrought aluminium alloy Anodised
Material toothed belt clamping piece	Stainless steel casting
Material toothed belt	Polychloroprene or nitrile rubber (NBR) with glass cord and nylon coating