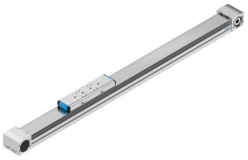
Toothed belt axis
ELGA-TB-KF-80-800-0H

Part number: 8041861



General operating condition

Data sheet

Feature	Value
Effective diameter of drive pinion	39.79 mm
Working stroke	800 mm
Size	80
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	257180 mm⁴
2nd moment of area Iz	913660 mm⁴
Max. drive torque	15.92 Nm
Max. force Fy	2500 N
Max. force Fz	3050 N
Max. force Fy total axis	2500 N
Max. force Fz total axis	3050 N
Fy at theoretical life value of 100 km (only guide consideration)	9200 N
Fz at theoretical life value of 100 km (only guide consideration)	11224 N
Max. idle running transfer resistance	50.3 N
Max. moment Mx	36 Nm
Max. moment My	228 Nm
Max. moment Mz	228 Nm
Max. moment Mx total axis	36 Nm
Max. moment My total axis	228 Nm
Max. moment Mz total axis	228 Nm
Mx at theoretical life value of 100 km (only guide consideration)	132 Nm

Feature	Value
My at theoretical life value of 100 km (only guide consideration)	839 Nm
Mz at theoretical life value of 100 km (only guide consideration)	839 Nm
Distance between slide surface and guide centre	50 mm
Max. feed force Fx	800 N
Frictional torque independent of load	1 Nm
Torsional mass moment of inertia It	159250 mm⁴
Mass moment of inertia JH per metre of stroke	0.93 kgcm²
Mass moment of inertia JL per kg of working load	3.96 kgcm²
Mass moment of inertia JO	9.82 kgcm²
Mass moment of inertia JW for additional slide	7.61 kgcm²
Feed constant	125 mm/U
Reference service life	5000 km
Weight of slide	1900 g
Weight of additional slide	1530 g
Basic weight for 0 mm stroke	4700 g
Additional weight per 10 mm stroke	51 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	Stainless steel casting
Material toothed belt	Polychloroprene or nitrile rubber (NBR) with glass cord and nylon coating