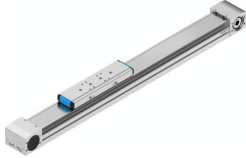


# Belt driven linear actuator ELGA-TB-KF-80-500-0H

Part number: 8041859

**FESTO**



## Data sheet

Feature	Value
Drive pinion effective diameter	39.79 mm
Working stroke	500 mm
Size	80
Stroke reserve	0 mm
Toothed belt pitch	5 mm
Mounting position	Any
Guide	Recirculating ball bearing guide
Structural design	Electromechanical linear axis with toothed belt
Motor type	Stepper motor Servo motor
Measuring principle of linear potentiometer	Incremental
Max. acceleration	50 m/s <sup>2</sup>
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 mm <sup>4</sup>
2nd moment of area Iz	913660 mm <sup>4</sup>
Max. driving 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 with theoretical service life of 100 km (from a guide perspective only)	9200 N
Fz with theoretical service life of 100 km (from a guide perspective only)	11224 N
Max. no-load resistance to shifting	50.3 N
Max. torque Mx	36 Nm
Max. torque My	228 Nm
Max. torque Mz	228 Nm

Feature	Value
Max. moment Mx total axis	36 Nm
Max. moment My total axis	228 Nm
Max. moment Mz total axis	228 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	132 Nm
My with theoretical service life of 100 km (from a guide perspective only)	839 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	839 Nm
Distance between slide surface and guide center	50 mm
Max. feed force Fx	800 N
No-load driving torque	1 Nm
Torsion moment of inertia It	159250 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.93 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	3.96 kgcm <sup>2</sup>
Mass moment of inertia JO	9.82 kgcm <sup>2</sup>
Mass moment of inertia JW for additional slide	7.61 kgcm <sup>2</sup>
Feed constant	125 mm/U
Reference service life	5000 km
Slide weight	1.9 kg
Additional slide weight	1.53 kg
Basic weight with 0 mm stroke	4.7 kg
Additional weight per 10 mm stroke	0.051 kg
Dynamic deflection (load moved)	0.05% of axis length, maximum 0.5 mm
Static deflection (load at standstill)	0.1 % of axis length
Profile material	Wrought aluminum alloy Anodized
Note on materials	RoHS-compliant
Cover strip material	Stainless steel strip
Drive cover material	Wrought aluminum alloy Anodized
Slide carriage material	Stainless steel
Guide rail material	Stainless steel
Belt pulley material	High-alloy stainless steel
Slide material	Wrought aluminum alloy Anodized
Toothed belt clamping component material	Cast stainless steel
Toothed belt material	Polychloroprene oder Nitrilkautschuk (NBR) mit Glascord und Nylonüberzug