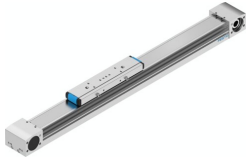


# Belt driven linear actuator ELGA-TB-KF-70-400-0H

Part number: 8041852

FESTO



 General operating condition

## Data sheet

Feature	Value
Drive pinion effective diameter	28.65 mm
Working stroke	400 mm
Size	70
Stroke reserve	0 mm
Toothed belt pitch	3 mm
Mounting position	Any
Guide	Recirculating ball bearing guide
Structural design	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	146050 mm <sup>4</sup>
2nd moment of area Iz	459290 mm <sup>4</sup>
Max. driving 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 with theoretical service life of 100 km (from a guide perspective only)	5520 N
Fz with theoretical service life of 100 km (from a guide perspective only)	6808 N
Max. no-load resistance to shifting	41.9 N
Max. torque Mx	16 Nm
Max. torque My	132 Nm
Max. torque 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 with theoretical service life of 100 km (from a guide perspective only)	59 Nm

Feature	Value
My with theoretical service life of 100 km (from a guide perspective only)	486 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	486 Nm
Distance between slide surface and guide center	37 mm
Max. feed force Fx	350 N
No-load driving torque	0.6 Nm
Torsion moment of inertia It	103880 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.19 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	2.05 kgcm <sup>2</sup>
Mass moment of inertia JO	2.43 kgcm <sup>2</sup>
Mass moment of inertia JW for additional slide	1.86 kgcm <sup>2</sup>
Feed constant	90 mm/U
Reference service life	5000 km
Slide weight	900 g
Additional slide weight	740 g
Basic weight with 0 mm stroke	2970 g
Additional weight per 10 mm stroke	39 g
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 or nitrile rubber (NBR) with glass cord and nylon coating