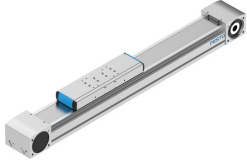


# Belt driven linear actuator ELGA-TB-KF-120-500-0H

Part number: 8041865

FESTO



 General operating condition

## Data sheet

Feature	Value
Drive pinion effective diameter	52.52 mm
Working stroke	500 mm
Size	120
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	1264580 mm <sup>4</sup>
2nd moment of area Iz	4365790 mm <sup>4</sup>
Max. driving 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 with theoretical service life of 100 km (from a guide perspective only)	20240 N
Fz with theoretical service life of 100 km (from a guide perspective only)	25355 N
Max. no-load resistance to shifting	76.2 N
Max. torque Mx	104 Nm
Max. torque My	680 Nm
Max. torque Mz	680 Nm
Max. moment Mx total axis	104 Nm
Max. moment My total axis	680 Nm
Max. moment Mz total axis	680 Nm

Feature	Value
Mx with theoretical service life of 100 km (from a guide perspective only)	383 Nm
My with theoretical service life of 100 km (from a guide perspective only)	2502 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	2502 Nm
Distance between slide surface and guide center	70 mm
Max. feed force Fx	1300 N
No-load driving torque	2.8 Nm
Torsion moment of inertia It	435680 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	2.15 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	6.9 kgcm <sup>2</sup>
Mass moment of inertia JO	40.99 kgcm <sup>2</sup>
Mass moment of inertia JW for additional slide	28.91 kgcm <sup>2</sup>
Feed constant	165 mm/U
Reference service life	5000 km
Slide weight	4190 g
Additional slide weight	3240 g
Basic weight with 0 mm stroke	15680 g
Additional weight per 10 mm stroke	106 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	Tempered steel
Guide rail material	Tempered steel Corrotect coated
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 with glass cord and nylon coating