

# Ball screw linear actuator ELGT-BS-160-450-20P

Part number: 8124529

FESTO



[PDF](#) General operating condition

## Data sheet

Feature	Value
Working stroke	450 mm
Size	160
Stroke reserve	0 mm
Reversing backlash	≤150 μm
Screw diameter	20 mm
Spindle pitch	20 mm/U
Mounting position	Any
Guide	Recirculating ball bearing guide
Structural design	Electromechanical linear axis with ball screw
Motor type	Stepper motor Servo motor
Spindle type	Ball screw
Symbol	00991211
Variants	Metals with copper, zinc or nickel by mass as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils.
Max. acceleration	15 m/s <sup>2</sup>
Max. rotational speed	3000 rpm
Max. speed	1 m/s
Repetition accuracy	±0.02 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364 zone III
Suitability for the production of Li-ion batteries	Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils
Cleanroom class	Class 8 according to ISO 14644-1
Degree of protection	IP20
Ambient temperature	0 °C ... 50 °C
Continuous feed force	1045 N
2nd moment of area Iy	1411000 mm <sup>4</sup>
2nd moment of area Iz	1.5257E7 mm <sup>4</sup>
No-load torque at maximum travel speed	0.4 Nm
No-load torque at minimum travel speed	0.14 Nm
Max. force Fy	9550 N

Feature	Value
Max. force Fz	11370 N
Fy with theoretical service life of 100 km (from a guide perspective only)	35183 N
Fz with theoretical service life of 100 km (from a guide perspective only)	41887 N
Max. torque Mx	600 Nm
Max. torque My	560 Nm
Max. torque Mz	560 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	2210 Nm
My with theoretical service life of 100 km (from a guide perspective only)	2063 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	2063 Nm
Max. radial force on actuator shaft	290 N
Max. feed force Fx	1045 N
Torsion moment of inertia It	726000 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.9027 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	0.1013 kgcm <sup>2</sup>
Mass moment of inertia JO	0.6342 kgcm <sup>2</sup>
Feed constant	20 mm/U
Moving mass	3842 g
Product weight	18091 g
Basic weight with 0 mm stroke	9601 g
Additional weight per 10 mm stroke	188 g
Dynamic deflection (load moved)	0.05% of axis length, maximum 0.5 mm
Static deflection (load at standstill)	0.1 % of axis length
Interface code, actuator	T46
Material of end caps	Die cast aluminum, painted
Profile material	Wrought aluminum alloy, anodized
Note on materials	RoHS-compliant
Drive cover material	Die cast aluminum, painted
Slide carriage material	Steel
Guide rail material	Steel
Slide material	Wrought aluminum alloy, anodized
Spindle nut material	Steel
Spindle material	Steel