

# Ball screw linear actuator ELGT-BS-90-450-10P

Part number: 8124408

FESTO



## Data sheet

Feature	Value
Working stroke	450 mm
Size	90
Stroke reserve	0 mm
Reversing backlash	150 µm
Screw diameter	16 mm
Spindle pitch	10 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
Variants	Metals with copper, zinc or nickel 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 1/min
Max. speed	0.5 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% 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 6 according to ISO 14644-1
Degree of protection	IP20
Ambient temperature	0 °C...50 °C
Continuous feed force	1054 N
2nd moment of area Iy	631000 mm <sup>4</sup>
2nd moment of area Iz	1948000 mm <sup>4</sup>
No-load torque at maximum travel speed	0.3 Nm

Feature	Value
No-load torque at minimum travel speed	0.08 Nm
Max. force Fy	4710 N
Max. force Fz	5600 N
Fy with theoretical service life of 100 km (from a guide perspective only)	17352 N
Fz with theoretical service life of 100 km (from a guide perspective only)	20631 N
Max. torque Mx	65 Nm
Max. torque My	51 Nm
Max. torque Mz	51 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	239 Nm
My with theoretical service life of 100 km (from a guide perspective only)	188 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	188 Nm
Max. radial force on actuator shaft	290 N
Max. feed force Fx	1054 N
Torsion moment of inertia It	151000 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.3453 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	0.0253 kgcm <sup>2</sup>
Mass moment of inertia JO	0.1252 kgcm <sup>2</sup>
Feed constant	10 mm/U
Moving mass	1628 g
Product weight	9070 g
Basic weight with 0 mm stroke	4380 g
Additional weight per 10 mm stroke	104 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