

Ball screw axis **ELGT-BS-90-500-10P** Part number: 8124409

FESTO



Data sheet

Feature	Value
Working stroke	500 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 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 ²
Max. rotational speed	3000 rpm
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	Product corresponds to Festo's internal product definition for use in battery production:Metals with more than 1% by mass of copper, zinc or nickel are excluded from use.The exceptions are nickel in steel, chemically nickel-plated surfaces, 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 ⁴
2nd moment of area Iz	1948000 mm ⁴

Feature	Value
No-load torque at maximum travel speed	0.3 Nm
No-load torque at minimum travel speed	0.08 Nm
Max. force F _y	4710 N
Max. force F _z	5600 N
F _y with theoretical service life of 100 km (from a guide perspective only)	17352 N
F _z with theoretical service life of 100 km (from a guide perspective only)	20631 N
Max. torque M _x	65 Nm
Max. torque M _y	51 Nm
Max. torque M _z	51 Nm
M _x with theoretical service life of 100 km (from a guide perspective only)	239 Nm
M _y with theoretical service life of 100 km (from a guide perspective only)	188 Nm
M _z 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 F _x	1054 N
Torsion moment of inertia I _t	151000 mm ⁴
Mass moment of inertia J _H per meter of stroke	0.3453 kgcm ²
Mass moment of inertia J _L per kg of payload	0.0253 kgcm ²
Mass moment of inertia J _O	0.1252 kgcm ²
Feed constant	10 mm/U
Moving mass	1628 g
Product weight	9591 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