

# Ball screw axis ELGT-BS-120-650-20P Part number: 8124503

FESTO



## Data sheet

Feature	Value
Working stroke	650 mm
Size	120
Stroke reserve	0 mm
Reversing backlash	150 µm
Screw diameter	15 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
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	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 8 according to ISO 14644-1
Degree of protection	IP20
Ambient temperature	0 °C...50 °C
Continuous feed force	805 N
2nd moment of area Iy	966000 mm <sup>4</sup>
2nd moment of area Iz	6011000 mm <sup>4</sup>

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 <sub>y</sub>	6800 N
Max. force F <sub>z</sub>	8090 N
F <sub>y</sub> with theoretical service life of 100 km (from a guide perspective only)	25051 N
F <sub>z</sub> with theoretical service life of 100 km (from a guide perspective only)	29804 N
Max. torque M <sub>x</sub>	300 Nm
Max. torque M <sub>y</sub>	310 Nm
Max. torque M <sub>z</sub>	310 Nm
M <sub>x</sub> with theoretical service life of 100 km (from a guide perspective only)	1105 Nm
M <sub>y</sub> with theoretical service life of 100 km (from a guide perspective only)	1142 Nm
M <sub>z</sub> with theoretical service life of 100 km (from a guide perspective only)	1142 Nm
Max. radial force on actuator shaft	290 N
Max. feed force F <sub>x</sub>	805 N
Torsion moment of inertia I <sub>t</sub>	506000 mm <sup>4</sup>
Mass moment of inertia J <sub>H</sub> per meter of stroke	0.2522 kgcm <sup>2</sup>
Mass moment of inertia J <sub>L</sub> per kg of payload	0.1013 kgcm <sup>2</sup>
Mass moment of inertia J <sub>O</sub>	0.2654 kgcm <sup>2</sup>
Feed constant	20 mm/U
Moving mass	2036 g
Product weight	13160 g
Basic weight with 0 mm stroke	5235 g
Additional weight per 10 mm stroke	124 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