

# Ball screw axis ELGT-BS-120-550-20P

Part number: 8124501

FESTO



General operating condition

## Data sheet

Feature	Value
Working stroke	550 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	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	Suitable for battery production with reduced Cu/Zn/Ni values (F1a)
Cleanroom suitability, measured according to ISO 14644-14	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>
No-load torque at maximum travel speed	0.3 Nm
No-load torque at minimum travel speed	0.08 Nm
Max. force Fy	6800 N
Max. force Fz	8090 N
Fy with theoretical service life of 100 km (from a guide perspective only)	25051 N
Fz with theoretical service life of 100 km (from a guide perspective only)	29804 N

Feature	Value
Max. torque Mx	300 Nm
Max. torque My	310 Nm
Max. torque Mz	310 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	1105 Nm
My with theoretical service life of 100 km (from a guide perspective only)	1142 Nm
Mz 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 Fx	805 N
Torsion moment of inertia It	506000 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.2522 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	0.1013 kgcm <sup>2</sup>
Mass moment of inertia JO	0.2654 kgcm <sup>2</sup>
Feed constant	20 mm/U
Moving mass	2036 g
Product weight	11941 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
Ball screw nut material	Steel
Spindle material	Steel