

# Spindle axis ELGT-BS-90-400-20P

Part number: 8124425

FESTO



## Data sheet

Feature	Value
Working stroke	400 mm
Size	90
Stroke reserve	0 mm
Reversing backlash	$\leq 0.15 \mu\text{m}$
Spindle diameter	15 mm
Spindle pitch	20 mm/U
Assembly position	Any
Guide	Recirculating ball bearing guide
Design structure	Electromechanical linear axis with recirculating ball bearing spindle
Motor type	Stepper motor Servomotor
Spindle type	Ball screw actuator
Variants	Recommended for production facilities for the manufacture of lithium-ion batteries
Max. acceleration	15 m/s <sup>2</sup>
Max. speed	3,000 1/min 1 m/s
Repetition accuracy	$\pm 0.02 \text{ mm}$
Duty cycle	100 %
PWIS conformity	VDMA24364 zone III
RSBP classification to CD-0033	F1a
Cleanroom class	ISO class 6
Protection class	IP20
Ambient temperature	0 ... 50 °C
Permanent feed force	810 N
Area moment of inertia 2nd degree Iy	631E+03 mm <sup>4</sup>
Area moment of inertia 2nd degree Iz	1,948E+03 mm <sup>4</sup>
No-load torque at maximum travel speed	0.2 Nm
No-load torque at minimum travel speed	0.04 Nm
Max. force Fy	4,710 N
Max. force Fz	5,600 N
Fy with theoretical service life of 100 km (from a guide perspective only)	17,352 N
Fz with theoretical service life of 100 km (from a guide perspective only)	20,631 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 at drive shaft	290 N
Max. feed force Fx	810 N
Torsional mass moment of inertia It	151E+03 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 working load	0.1013 kgcm <sup>2</sup>
Mass moment of inertia, JO	0.2291 kgcm <sup>2</sup>

Feature	Value
Feed constant	20 mm/U
Moving mass	1,645 g
Product weight	8,446 g
Basic weight for 0 mm stroke	4,353 g
Additional weight per 10 mm stroke	104 g
Dynamic deflection (load moved)	0.05% of the axis length, max. 0.5 mm
Static deflection (load at standstill)	0.1% of the axis length
Interface code, actuator	T46
Material of end caps	Die-cast aluminium, painted
Material of profile	Anodised wrought aluminium alloy
Materials note	Conforms to RoHS
Material drive cover	Die-cast aluminium, painted
Material guide slide	Steel
Material guide rail	Steel
Material slide	Anodised wrought aluminium alloy
Material spindle nut	Steel
Material spindle	Steel