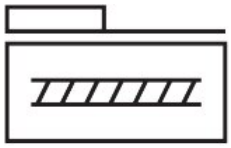
Ball screw axis
ELGT-BS-120- -

Part number: 8121225



General operating condition

Data sheet

Overall data sheet – Individual values depend upon your configuration.

Feature	Value
Working stroke	100 mm ... 1100 mm
Size	120
Stroke reserve	0 mm
Reversing backlash theoretical	≤150 µm
Spindle diameter	15 mm ... 16 mm
Spindle pitch	10 mm/U ... 20 mm/U
Mounting position	Any
Guide	Recirculating ball bearing guide
Design	Electromechanical linear axis With ball screw
Type of motor	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/s²
Max. rotational speed	3000 rpm
Max. speed	0.5 m/s ... 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 ... 1265 N
2nd moment of area Iy	966000 mm⁴
2nd moment of area Iz	6011000 mm⁴
Idle torque at vmax	0.3 Nm
Idle torque at vmin	0.08 Nm
Max. force Fy	6800 N
Max. force Fz	8090 N
Fy at theoretical life value of 100 km (only guide consideration)	25051 N

Feature	Value
Fz at theoretical life value of 100 km (only guide consideration)	29804 N
Max. moment Mx	300 Nm
Max. moment My	310 Nm
Max. moment Mz	310 Nm
Mx at theoretical life value of 100 km (only guide consideration)	1105 Nm
My at theoretical life value of 100 km (only guide consideration)	1142 Nm
Mz at theoretical life value of 100 km (only guide consideration)	1142 Nm
Max. radial force at drive shaft	290 N
Max. feed force Fx	805 N ... 1265 N
Torsional mass moment of inertia It	506000 mm^4
Mass moment of inertia JH per metre of stroke	0.2522 $kgcm^2$ ... 0.3453 $kgcm^2$
Mass moment of inertia JL per kg of working load	0.0253 $kgcm^2$ ... 0.1013 $kgcm^2$
Mass moment of inertia JO	0.1306 $kgcm^2$ ... 0.2654 $kgcm^2$
Mass moment of inertia JW for additional slide	0.0448 $kgcm^2$ ... 0.1793 $kgcm^2$
Feed constant	10 mm/U ... 20 mm/U
Moving mass	2019 g ... 2036 g
Product weight	6454 g ... 18880 g
Weight of additional slide	1770 g
Basic weight for 0 mm stroke	5235 g ... 5259 g
Additional weight per 10 mm stroke	124 g
Dynamic deflection (moving load)	0.05% of the axis length, max. 0.5 mm
Static deflection (load in standstill)	0.1% of the axis length
Interface code, actuator	T46
Material end cap	Painted die cast aluminium
Material profile	Anodised wrought aluminium alloy
Note on materials	RoHS compliant
Material drive cover	Painted die cast aluminium
Material guide slide	Steel
Material guide rail	Steel
Material slide	Anodised wrought aluminium alloy
Material ball screw nut	Steel
Material spindle	Steel