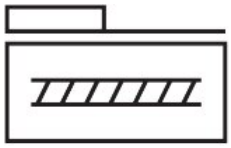
Ball screw axis
ELGA-BS-KF-150- -

Part number: 8024921



General operating condition

Data sheet

Overall data sheet – Individual values depend upon your configuration.

Feature	Value
Working stroke	50 mm ... 3000 mm
Size	150
Spindle diameter	40 mm
Spindle pitch	40 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
Functional principle of measuring system	Incremental
Max. acceleration	15 m/s²
Max. rotational speed	3000 rpm
Max. speed	2 m/s
Repetition accuracy	±0.02 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364 zone III
Degree of protection	IP40
Ambient temperature	-10 °C ... 60 °C
2nd moment of area Iy	4700000 mm⁴
2nd moment of area Iz	1.18E7 mm⁴
Idle torque at vmax	4.4 Nm
Idle torque at vmin	2.2 Nm
Max. force Fy	5500 N
Max. force Fz	11000 N
Max. force Fy total axis	5500 N
Max. force Fz total axis	11000 N
Fy at theoretical life value of 100 km (only guide consideration)	20240 N
Fz at theoretical life value of 100 km (only guide consideration)	40480 N
Max. moment Mx	167 Nm
Max. moment My	1150 Nm
Max. moment Mz	1150 Nm
Max. moment Mx total axis	167 Nm

Feature	Value
Max. moment My total axis	1150 Nm
Max. moment Mz total axis	1150 Nm
Mx at theoretical life value of 100 km (only guide consideration)	615 Nm
My at theoretical life value of 100 km (only guide consideration)	4232 Nm
Mz at theoretical life value of 100 km (only guide consideration)	4232 Nm
Distance between slide surface and guide centre	111 mm
Max. radial force at drive shaft	4000 N
Max. feed force Fx	6400 N
Torsional mass moment of inertia It	783000 mm^4
Mass moment of inertia JH per metre of stroke	18.031 $kgcm^2$
Mass moment of inertia JL per kg of working load	0.4053 $kgcm^2$
Mass moment of inertia JO	8.63 $kgcm^2$
Feed constant	40 mm/U
Reference service life	5000 km
Moving mass	10514 g
Weight of additional slide	5900 g
Basic weight for 0 mm stroke	25100 g
Additional weight per 10 mm stroke	213 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
Material end cap	Wrought aluminium alloy anodised
Material profile	Wrought aluminium alloy anodised
Note on materials	RoHS compliant
Material cover tape	Stainless steel strip
Material drive cover	Wrought aluminium alloy anodised
Material guide slide	Steel
Material guide rail	Steel
Material slide	Wrought aluminium alloy anodised
Material ball screw nut	Steel
Material spindle	Steel