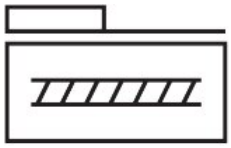
Ball screw axis
ELGA-BS-KF-120-300-0H-25P-ML

Part number: 8041845



Data sheet

Feature	Value
Working stroke	300 mm
Size	120
Stroke reserve	0 mm
Spindle diameter	25 mm
Spindle pitch	25 mm/U
Mounting position	optional
Guide	Recirculating ball bearing guide
Design	Electromechanical linear axis With ball screw
Type of motor	Stepper motor Servo motor
Spindle type	Ball screw
Functional principle of measuring system	Incremental
Max. acceleration	15 m/s²
Max. rotational speed	3600 rpm
Max. speed	1.5 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	1240000 mm⁴
2nd moment of area Iz	3800000 mm⁴
Idle torque at vmax	1.64 Nm
Idle torque at vmin	1 Nm
Max. force Fy	5500 N
Max. force Fz	6890 N
Max. force Fy total axis	5500 N
Max. force Fz total axis	6890 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)	25355 N
Max. moment Mx	104 Nm

Feature	Value
Max. moment My	680 Nm
Max. moment Mz	680 Nm
Max. moment Mx total axis	104 Nm
Max. moment My total axis	680 Nm
Max. moment Mz total axis	680 Nm
Mx at theoretical life value of 100 km (only guide consideration)	383 Nm
My at theoretical life value of 100 km (only guide consideration)	2502 Nm
Mz at theoretical life value of 100 km (only guide consideration)	2502 Nm
Distance between slide surface and guide centre	87 mm
Max. radial force at drive shaft	500 N
Max. feed force Fx	3400 N
Torsional mass moment of inertia It	247000 mm^4
Mass moment of inertia JH per metre of stroke	2.756 $kgcm^2$
Mass moment of inertia JL per kg of working load	0.1583 $kgcm^2$
Mass moment of inertia JO	1.038 $kgcm^2$
Feed constant	25 mm/U
Reference service life	5000 km
Moving mass	4459 g
Additional weight per 10 mm stroke	101 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