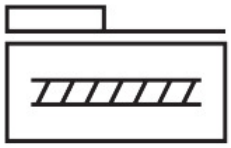
Ball screw axis
ELGA-BS-KF-80-400-0H-20P-ML

Part number: 8041832



General operating condition

Data sheet

Feature	Value
Working stroke	400 mm
Size	80
Stroke reserve	0 mm
Spindle diameter	15 mm
Spindle pitch	20 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
Symbol	00991211
Functional principle of measuring system	Incremental
Max. acceleration	15 m/s²
Max. rotational speed	3000 rpm
Max. speed	1 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	310000 mm⁴
2nd moment of area Iz	977000 mm⁴
Idle torque at vmax	0.6 Nm
Idle torque at vmin	0.35 Nm
Max. force Fy	2500 N
Max. force Fz	3050 N
Max. force Fy total axis	2500 N
Max. force Fz total axis	3050 N
Fy at theoretical life value of 100 km (only guide consideration)	9200 N
Fz at theoretical life value of 100 km (only guide consideration)	11224 N
Max. moment Mx	36 Nm
Max. moment My	228 Nm
Max. moment Mz	228 Nm
Max. moment Mx total axis	36 Nm

Feature	Value
Max. moment My total axis	228 Nm
Max. moment Mz total axis	228 Nm
Mx at theoretical life value of 100 km (only guide consideration)	132 Nm
My at theoretical life value of 100 km (only guide consideration)	839 Nm
Mz at theoretical life value of 100 km (only guide consideration)	839 Nm
Distance between slide surface and guide centre	60 mm
Max. radial force at drive shaft	250 N
Max. feed force Fx	1600 N
Torsional mass moment of inertia It	67300 mm⁴
Mass moment of inertia JH per metre of stroke	0.346 kgcm²
Mass moment of inertia JL per kg of working load	0.1013 kgcm²
Mass moment of inertia JO	0.097 kgcm²
Feed constant	20 mm/U
Reference service life	5000 km
Moving mass	1370 g
Additional weight per 10 mm stroke	46.5 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 spindle nut	Steel
Material spindle	Steel