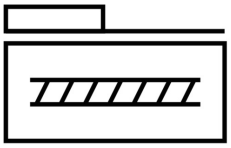
Ball screw linear actuator
ELGA-BS-KF-120-500-0H-10P-ML

Part number: 8041840



General operating condition

Data sheet

Feature	Value
Working stroke	500 mm
Size	120
Stroke reserve	0 mm
Screw diameter	25 mm
Spindle pitch	10 mm/U
Mounting position	Any
Guide	Recirculating ball bearing guide
Structural design	Electromechanical linear axis with ball screw
Motor type	Stepper motor Servo motor
Spindle type	Ball screw
Symbol	00991211
Measuring principle of linear potentiometer	Incremental
Max. acceleration	15 m/s²
Max. rotational speed	3600 rpm
Max. speed	0.6 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
No-load torque at maximum travel speed	1.33 Nm
No-load torque at minimum travel speed	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 with theoretical service life of 100 km (from a guide perspective only)	20240 N
Fz with theoretical service life of 100 km (from a guide perspective only)	25355 N
Max. torque Mx	104 Nm
Max. torque My	680 Nm
Max. torque Mz	680 Nm
Max. moment Mx total axis	104 Nm

Feature	Value
Max. moment My total axis	680 Nm
Max. moment Mz total axis	680 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	383 Nm
My with theoretical service life of 100 km (from a guide perspective only)	2502 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	2502 Nm
Distance between slide surface and guide center	87 mm
Max. radial force on actuator shaft	500 N
Max. feed force Fx	3400 N
Torsion moment of inertia It	247000 mm⁴
Mass moment of inertia JH per meter of stroke	2.756 kgcm²
Mass moment of inertia JL per kg of payload	0.0253 kgcm²
Mass moment of inertia JO	1.038 kgcm²
Feed constant	10 mm/U
Reference service life	5000 km
Moving mass	4459 g
Additional weight per 10 mm stroke	101 g
Dynamic deflection (load moved)	0.05% of axis length, maximum 0.5 mm
Static deflection (load at standstill)	0.1 % of axis length
Material of end caps	Wrought aluminum alloy Anodized
Profile material	Wrought aluminum alloy Anodized
Note on materials	RoHS-compliant
Cover strip material	Stainless steel strip
Drive cover material	Wrought aluminum alloy Anodized
Slide carriage material	Steel
Guide rail material	Steel
Slide material	Wrought aluminum alloy Anodized
Spindle nut material	Steel
Spindle material	Steel