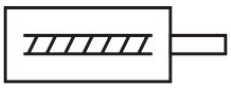
Electric cylinder
EPRF-BS-45-50-5P-F-M1

Part number: 8211883





Data sheet

Feature	Value
Size	45
Stroke	50 mm
Stroke reserve	0 mm
Piston rod thread	M6
Reversing backlash theoretical	100 µm
Spindle diameter	12 mm
Spindle pitch	5 mm/U
Torsional backlash at piston rod +/-	0.7 deg
Mounting position	Any
Piston-rod end	Female thread
Type of motor	Servo motor
Position detection	None
Design	Electric cylinder with ball screw
Spindle type	Ball screw
Protection against torque/guide	With plain-bearing guide
Max. drive speed	6000 rpm
Max. acceleration	5 m/s²
Max. speed	500 m/s
Max. homing speed	0.01 m/s
Repetition accuracy	±0.02 mm
Duty cycle	100%
Vibration resistance	Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27
Corrosion resistance class CRC	4 - Very high corrosion stress
LABS (PWIS) conformity	VDMA24364 zone III
Storage temperature	-20 °C...60 °C
Suitable for use with food	See declaration of conformity
Relative air humidity	0 - 95% Non-condensing
Degree of protection	IP69K
Ambient temperature	-10 °C...60 °C

Feature	Value
Impact energy in end positions	24 mJ
Max. drive torque	0.97 Nm
Max. moment Mx	0 Nm
Max. moment My	7 Nm
Max. moment Mz	7 Nm
Max. radial force at drive shaft	115 N
Max. feed force Fx	1000 N
Frictional torque independent of load	0.128 Nm
Reference value effective load, horizontal	120 kg
Reference value effective load, vertical	60 kg
Mass moment of inertia JH per metre of stroke	0.1142 kgcm²
Mass moment of inertia JL per kg of working load	0.0063 kgcm²
Mass moment of inertia JO	0.0171 kgcm²
Reference service life	5000 km
Maintenance interval	Lifetime lubrication
Moving mass for 0 mm stroke	230 g
Additional moving mass per 10 mm stroke	9.1 g
Basic weight for 0 mm stroke	1309 g
Additional weight per 10 mm stroke	37.7 g
Type of mounting	With female thread
Note on materials	RoHS compliant
Material cover cap	High-alloy stainless steel
Material cover	High-alloy stainless steel
Material seals	TPE-U(PU)
Material dynamic seals	TPE-U(PU)
Material housing	High-alloy stainless steel
Material piston rod	High-alloy stainless steel
Material ball screw nut	Steel
Material spindle	Bearing steel
Material cylinder barrel	High-alloy stainless steel