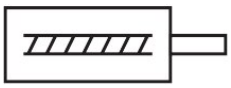
Electric cylinder
EPRF-BS-55-50-10P-F-M1

Part number: 8224148





Data sheet

Feature	Value
Size	55
Stroke	50 mm
Stroke reserve	0 mm
Piston rod thread	M8
Reversing backlash theoretical	100 µm
Spindle diameter	16 mm
Spindle pitch	10 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	3000 rpm
Max. acceleration	15 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	72 mJ
Max. drive torque	5.21 Nm
Max. moment Mx	0 Nm
Max. moment My	18.8 Nm
Max. moment Mz	18.8 Nm
Max. radial force at drive shaft	175 N
Max. feed force Fx	3000 N
Frictional torque independent of load	0.377 Nm
Reference value effective load, horizontal	300 kg
Reference value effective load, vertical	150 kg
Mass moment of inertia JH per metre of stroke	0.3386 kgcm²
Mass moment of inertia JL per kg of working load	0.0253 kgcm²
Mass moment of inertia JO	0.0576 kgcm²
Reference service life	5000 km
Maintenance interval	Lifetime lubrication
Moving mass for 0 mm stroke	529 g
Additional moving mass per 10 mm stroke	11.1 g
Basic weight for 0 mm stroke	1988 g
Additional weight per 10 mm stroke	51.4 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