## electric cylinder ESBF-BS-50-100-20P Part number: 8022597 ☆ Core product range

With ball screw, electrically actuated spindle that converts the rotary motion of the motor into linear motion of the piston rod.







## **Data sheet**

Feature  Size  Stroke  100 mm  Piston rod thread  Reversing backlash  Spindle diameter  20 mm  Spindle pitch  Max. angular deflection of piston rod +/- Based on the standard  Any  Piston-rod end  Motor type  Stepper motor  Servomotor  Position detection  Design structure  Spindle type  Ball screw spindle  Protection against torque/guide  Max. acceleration  Max. speed  1.33 m/s  Repetition accuracy  Duty cycle  Corrosion resistance classification CRC  2 - Moderate corrosion stress  Step Supplementary material informate Relative air humidity  Protection class  IP40  Ambient temperature  16.3 Nm  Moder type  50 mm/U  Any  150 15552  Any  150 15552  Assembly position  Any  Male thread  Male thread  Male thread  Male thread  Stepper motor  Servomotor  For proximity sensor  Servomotor  For proximity sensor  Ball screw spindle  With plain-bearing guide  Mith plain-bearing guide  Max. acceleration  25 m/s2  Max. speed  1.33 m/s  Repetition accuracy  ±0,01 mm  Duty cycle  2 - Moderate corrosion stress  Storage temperature  -20 60 °C  See Supplementary material informate Relative air humidity  0 - 95 %  Protection class  IP40  Ambient temperature  0 60 °C  Max. drive torque  16.3 Nm	
Stroke 100 mm  Piston rod thread M16x1,5  Reversing backlash 40 µm  Spindle diameter 20 mm  Spindle pitch 20 mm/U  Max. angular deflection of piston rod +/-  Based on the standard ISO 15552  Assembly position Any  Piston-rod end Male thread  Motor type Stepper motor  Servomotor  Position detection For proximity sensor  Design structure Electro-cylinder with ball screw  Spindle type Ball screw spindle  Protection against torque/guide with plain-bearing guide  Max. acceleration 25 m/s2  Max. speed 1.33 m/s  Repetition accuracy ±0,01 mm  Duty cycle 100 %  Corrosion resistance classification CRC 2 - Moderate corrosion stress  Storage temperature -20 60 °C  Food-safe See Supplementary material informate Relative air humidity 0 - 95 %  Protection class IP40  Ambient temperature 0 60 °C  Max. drive torque 16.3 Nm	
Piston rod thread  Reversing backlash  40 µm  Spindle diameter  20 mm  Spindle pitch  20 mm/U  Max. angular deflection of piston rod +/-  Based on the standard  Any  Piston-rod end  Motor type  Stepper motor  Position detection  Position detection  Design structure  Spindle type  Ball screw spindle  Protection against torque/guide  Max. acceleration  Max. aspeed  1.33 m/s  Repetition accuracy  Duty cycle  Corrosion resistance classification CRC  Steroge temperature  See Supplementary material informate Relative air humidity  Protection class  IP40  Ambient temperature  0 60 °C  Max. drive torque  16.3 Nm	
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Spindle diameter  Spindle pitch  20 mm/U  Max. angular deflection of piston rod +/-  Based on the standard  ISO 15552  Assembly position  Any  Piston-rod end  Motor type  Stepper motor Servomotor  Position detection  Design structure  Spindle type  Ball screw spindle  Protection against torque/guide  Max. acceleration  Max. speed  Max. acceleration  Duty cycle  Corrosion resistance classification CRC  Storage temperature  Posed  Relative air humidity  Protection class  IP40  Ambient temperature  20 mm  20 mm/U  0.15 deg  180 mm/U  180 Hapte  180 Stepper motor Servomotor  For proximity sensor  Electro-cylinder with ball screw  Ball screw spindle  with plain-bearing guide  25 m/s2  1.33 m/s  4.0,01 mm  Duty cycle  100 %  Corrosion resistance classification CRC  2 - Moderate corrosion stress  Storage temperature  -20 60 °C  Food-safe  See Supplementary material informate of the protection class  IP40  Ambient temperature  0 60 °C  Max. drive torque  16.3 Nm	
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Design structure  Spindle type  Ball screw spindle  Protection against torque/guide  Max. acceleration  Max. speed  Spindle type  Max. speed  1.33 m/s  Repetition accuracy  #0,01 mm  Duty cycle  100 %  Corrosion resistance classification CRC  2 - Moderate corrosion stress  Storage temperature  -20 60 °C  Food-safe  Relative air humidity  Protection class  IP40  Ambient temperature  0 60 °C  Max. drive torque  Electro-cylinder with ball screw  Electro-cylinder with ball screw  Electro-cylinder with ball screw  Ball screw  Electro-cylinder with ball screw  Electro-cylinder with ball screw  Stinge with plain-bearing guide  1.33 m/s  #0,01 mm  100 %  2 - Moderate corrosion stress  See Supplementary material information of the plant	
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Max. radial force at drive shaft 300 N	
Max. feed force Fx 5,000 N	
No-load driving torque 0.3 Nm	
Reference value for working load, horizontal 500 kg	
Reference value for working load, vertical 500 kg	
Mass moment of inertia JH per metre of stroke 1.1387 kgcm2	
Mass moment of inertia JL per kg of working load 0.1013 kgcm2	
Mass moment of inertia, JO 0.3289 kgcm2	
Moving mass with 0 mm stroke 793 g	
Additional weight per 10 mm stroke 65 g	
Basic weight for 0 mm stroke 1,982 g	
Additional mass factor per 10 mm of stroke 35 g	
Mounting type with internal (female) thread	
or accessories	
Interface code, actuator D50	
Materials note Contains PWIS substances	



Feature	Value
	Conforms to RoHS
Material cover	Wrought Aluminium alloy
	Smooth anodised
Material piston rod	High alloy steel, non-corrosive
Material screws	Steel
	Galvanised
Material spindle nut	Roller bearing steel
Material spindle	Roller bearing steel
Material cylinder barrel	Wrought Aluminium alloy
	Smooth anodised