

# Electric cylinder ESBF-BS-100-400-5P

Part number: 574117

FESTO



## Data sheet

| Feature                              | Value                                  |
|--------------------------------------|--|
| Working stroke                       | 400 mm                                 |
| Size                                 | 100                                    |
| Stroke                               | 400 mm                                 |
| Piston rod thread                    | M20x1.5                                |
| Reversing backlash theoretical       | 30 µm                                  |
| Spindle diameter                     | 40 mm                                  |
| Spindle pitch                        | 5 mm/U                                 |
| Torsional backlash at piston rod +/- | 0.5 deg                                |
| Based on standard                    | ISO 15552                              |
| Mounting position                    | optional                               |
| Piston-rod end                       | Male thread                            |
| Type of motor                        | Servo motor                            |
| Position detection                   | Via proximity switch                   |
| Design                               | Electric cylinder with ball screw      |
| Spindle type                         | Ball screw                             |
| Protection against torque/guide      | With plain-bearing guide               |
| Max. acceleration                    | 5 m/s <sup>2</sup>                     |
| Max. rotational speed                | 2010 rpm                               |
| Max. speed                           | 0.17 m/s                               |
| Repetition accuracy                  | ±0.01 mm                               |
| Duty cycle                           | 100%                                   |
| Corrosion resistance class CRC       | 2 - Moderate corrosion stress          |
| LABS (PWIS) conformity               | VDMA24364 zone III                     |
| Storage temperature                  | -20 °C...60 °C                         |
| Suitable for use with food           | See supplementary material information |
| Relative air humidity                | 0 - 95%                                |
| Degree of protection                 | IP40                                   |
| Ambient temperature                  | 0 °C...60 °C                           |
| Max. drive torque                    | 16.9 Nm                                |
| Max. radial force at drive shaft     | 1100 N                                 |
| Max. feed force Fx                   | 17000 N                                |

| Feature  | Value                                   |
|--|---|
| Frictional torque independent of load            | 0.7 Nm                                  |
| Reference value effective load, horizontal       | 1700 kg                                 |
| Reference value effective load, vertical         | 1700 kg                                 |
| Mass moment of inertia JH per metre of stroke    | 18.978 kgcm <sup>2</sup>                |
| Mass moment of inertia JL per kg of working load | 0.00633 kgcm <sup>2</sup>               |
| Mass moment of inertia JO                        | 4.6963 kgcm <sup>2</sup>                |
| Maintenance interval                             | Life-time lubrication                   |
| Moving mass for 0 mm stroke                      | 8786 g                                  |
| Additional moving mass per 10 mm stroke          | 132 g                                   |
| Basic weight for 0 mm stroke                     | 11123 g                                 |
| Additional weight per 10 mm stroke               | 193 g                                   |
| Type of mounting                                 | Via female thread<br>Or accessories     |
| Interface code, actuator                         | D100                                    |
| Note on materials                                | RoHS-compliant                          |
| Material cover                                   | Cast aluminium, coated                  |
| Material piston rod                              | High-alloy stainless steel              |
| Material screws                                  | Galvanised steel                        |
| Material ball screw nut                          | Rolled steel                            |
| Material spindle                                 | Rolled steel                            |
| Material cylinder barrel                         | Smooth-anodised wrought aluminium alloy |