

# Electric cylinder ESBF-BS-100-400-40P

Part number: 574125

FESTO



 General operating condition

## Data sheet

| Feature   | Value                                  |
|---|--|
| Working stroke  | 400 mm                                 |
| Size  | 100                                    |
| Stroke  | 400 mm                                 |
| Piston rod thread   | M20x1.5                                |
| Reversing backlash theoretical                            | 40 µm                                  |
| Spindle diameter  | 40 mm                                  |
| Spindle pitch   | 40 mm/U                                |
| Torsional backlash at piston rod +/-                      | 0.5 deg                                |
| Based on standard   | ISO 15552                              |
| Mounting position   | Any                                    |
| 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                             |
| Symbol  | 00991941                               |
| Protection against torque/guide                           | With plain-bearing guide               |
| Max. acceleration   | 25 m/s <sup>2</sup>                    |
| Max. rotational speed                                     | 2010 rpm                               |
| Max. speed  | 1.34 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   | 102.6 Nm                               |
| Max. radial force at drive shaft                          | 1100 N                                 |
| Max. feed force F <sub>x</sub>                            | 14500 N                                |
| Frictional torque independent of load                     | 1 Nm                                   |
| Reference value effective load, horizontal                | 1400 kg                                |
| Reference value effective load, vertical                  | 1400 kg                                |
| Mass moment of inertia J <sub>H</sub> per metre of stroke | 20.372 kgcm <sup>2</sup>               |

| <b>Feature</b>                                   | <b>Value</b>                            |
|--|---|
| Mass moment of inertia JL per kg of working load | 0.40528 kgcm <sup>2</sup>               |
| Mass moment of inertia JO                        | 6.1704 kgcm <sup>2</sup>                |
| Maintenance interval                             | Lifetime 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                                 | With 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                          | Bearing steel                           |
| Material spindle                                 | Bearing steel                           |
| Material cylinder barrel                         | Smooth-anodised wrought aluminium alloy |