

# Electric cylinder ESBF-BS-50-400-20P

Part number: 8022600

FESTO



 General operating condition

## Data sheet

| Feature                                    | Value                                  |
|--|--|
| Working stroke                             | 400 mm                                 |
| Size                                       | 50                                     |
| Stroke                                     | 400 mm                                 |
| Piston rod thread                          | M16x1.5                                |
| Reversing backlash theoretical             | 40 µm                                  |
| Spindle diameter                           | 20 mm                                  |
| Spindle pitch                              | 20 mm/U                                |
| Torsional backlash at piston rod +/-       | 0.15 deg                               |
| Based on standard                          | ISO 15552                              |
| Mounting position                          | optional                               |
| Piston-rod end                             | Male thread                            |
| Type of motor                              | Stepper motor<br>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                      | 3600 rpm                               |
| Max. speed                                 | 1.33 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                          | 16.3 Nm                                |
| Max. radial force at drive shaft           | 300 N                                  |
| Max. feed force F <sub>x</sub>             | 5000 N                                 |
| Frictional torque independent of load      | 0.3 Nm                                 |
| Reference value effective load, horizontal | 500 kg                                 |
| Reference value effective load, vertical   | 500 kg                                 |

| Feature  | Value                                    |
|--|--|
| Mass moment of inertia JH per metre of stroke    | 1.1387 kgcm <sup>2</sup>                 |
| Mass moment of inertia JL per kg of working load | 0.1013 kgcm <sup>2</sup>                 |
| Mass moment of inertia JO                        | 0.2203 kgcm <sup>2</sup>                 |
| Maintenance interval                             | Life-time lubrication                    |
| Moving mass for 0 mm stroke                      | 793 g                                    |
| Additional moving mass per 10 mm stroke          | 35 g                                     |
| Basic weight for 0 mm stroke                     | 1982 g                                   |
| Additional weight per 10 mm stroke               | 65 g                                     |
| Type of mounting                                 | Via female thread<br>Or accessories      |
| Interface code, actuator                         | D50                                      |
| Note on materials                                | RoHS-compliant                           |
| Material cover                                   | Wrought aluminium alloy, smooth anodised |
| 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  |