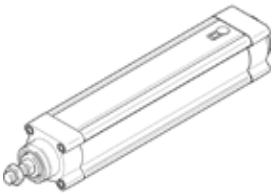
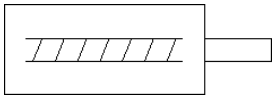
# Electro-cylinder
# ESBF-BS-50-400-20P

Part number: 8022600
★ 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 | Value |
|---|---|
| Size | 50 |
| Stroke | 400 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 +/- | 0.15 deg |
| Based on the standard | ISO 15552 |
| Assembly position | Any |
| Piston-rod end | Male thread |
| Motor type | Stepper motor<br>Servomotor |
| Position detection | For proximity sensor |
| Design structure | Electro-cylinder with ball screw |
| Spindle type | Ball screw actuator |
| 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 |
| PWIS conformity | VDMA24364 zone III |
| Storage temperature | -20 ... 60 °C |
| Food-safe | See Supplementary material information |
| Relative air humidity | 0 - 95 % |
| Protection class | IP40 |
| Ambient temperature | 0 ... 60 °C |
| Max. drive torque | 16.3 Nm |
| 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 meter 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 mass factor per 10 mm of stroke | 35 g |
| Basic weight for 0 mm stroke | 1,982 g |
| Additional weight per 10 mm stroke | 65 g |
| Mounting type | with internal (female) thread<br>or accessories |
| Interface code, actuator | D50 |

| Feature | Value |
|---|---|
| Materials note | Conforms to RoHS |
| Material cover | Smooth anodised wrought aluminium alloy |
| Material piston rod | High alloy steel, non-corrosive |
| Material screws | Galvanized steel |
| Material spindle nut | Roller bearing steel |
| Material spindle | Roller bearing steel |
| Material cylinder barrel | Smooth-anodised wrought aluminium alloy |