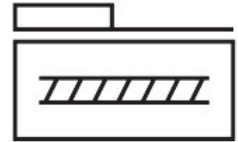


# Ball screw axis ELGT-BS-90-300-20P

Part number: 8124423

FESTO



## Data sheet

| Feature  | Value   |
|--|---|
| Working stroke                                     | 300 mm  |
| Size   | 90  |
| Stroke reserve                                     | 0 mm  |
| Reversing backlash                                 | 150 µm  |
| Screw diameter                                     | 15 mm   |
| Spindle pitch                                      | 20 mm/U   |
| Mounting position                                  | Any   |
| Guide  | Recirculating ball bearing guide  |
| Structural design                                  | Electromechanical linear axis with ball screw   |
| Motor type   | Stepper motor<br>Servo motor  |
| Spindle type                                       | Ball screw  |
| Variants   | Metals with copper, zinc or nickel by mass as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils.  |
| Max. acceleration                                  | 15 m/s <sup>2</sup>   |
| Max. rotational speed                              | 3000 rpm  |
| Max. speed   | 1 m/s   |
| Repetition accuracy                                | ±0.02 mm  |
| Duty cycle   | 100%  |
| LABS (PWIS) conformity                             | VDMA24364 zone III  |
| Suitability for the production of Li-ion batteries | Product corresponds to Festo's internal product definition for use in battery production: Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. The exceptions are nickel in steel, chemically nickel-plated surfaces, circuit boards, cables, electrical plug connectors and coils |
| Cleanroom class                                    | Class 6 according to ISO 14644-1  |
| Degree of protection                               | IP20  |
| Ambient temperature                                | 0 °C...50 °C  |
| Continuous feed force                              | 810 N   |
| 2nd moment of area Iy                              | 631000 mm <sup>4</sup>  |
| 2nd moment of area Iz                              | 1948000 mm <sup>4</sup>   |

| Feature  | Value                                |
|--|--------------------------------------|
| No-load torque at maximum travel speed                                     | 0.2 Nm                               |
| No-load torque at minimum travel speed                                     | 0.04 Nm                              |
| Max. force Fy  | 4710 N                               |
| Max. force Fz  | 5600 N                               |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 17352 N                              |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 20631 N                              |
| Max. torque Mx   | 65 Nm                                |
| Max. torque My   | 51 Nm                                |
| Max. torque Mz   | 51 Nm                                |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 239 Nm                               |
| My with theoretical service life of 100 km (from a guide perspective only) | 188 Nm                               |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 188 Nm                               |
| Max. radial force on actuator shaft  | 290 N                                |
| Max. feed force Fx   | 810 N                                |
| Torsion moment of inertia It   | 151000 mm <sup>4</sup>               |
| Mass moment of inertia JH per meter of stroke                              | 0.2522 kgcm <sup>2</sup>             |
| Mass moment of inertia JL per kg of payload                                | 0.1013 kgcm <sup>2</sup>             |
| Mass moment of inertia JO  | 0.2291 kgcm <sup>2</sup>             |
| Feed constant  | 20 mm/U                              |
| Moving mass  | 1645 g                               |
| Product weight   | 7423 g                               |
| Basic weight with 0 mm stroke  | 4353 g                               |
| Additional weight per 10 mm stroke   | 104 g                                |
| Dynamic deflection (load moved)  | 0.05% of axis length, maximum 0.5 mm |
| Static deflection (load at standstill)                                     | 0.1 % of axis length                 |
| Interface code, actuator   | T46                                  |
| Material of end caps   | Die cast aluminum, painted           |
| Profile material   | Wrought aluminum alloy, anodized     |
| Note on materials  | RoHS-compliant                       |
| Drive cover material   | Die cast aluminum, painted           |
| Slide carriage material  | Steel                                |
| Guide rail material  | Steel                                |
| Slide material   | Wrought aluminum alloy, anodized     |
| Spindle nut material   | Steel                                |
| Spindle material   | Steel                                |