

Ball screw axis ELGT-BS-90-50-20P

Part number: 8124418

FESTO



Data sheet

| Feature | Value |
|--|--|
| Working stroke | 50 mm |
| Size | 90 |
| Stroke reserve | 0 mm |
| Reversing backlash theoretical | 150 µm |
| Spindle diameter | 15 mm |
| Spindle pitch | 20 mm/U |
| Mounting position | optional |
| Guide | Recirculating ball bearing guide |
| Design | Electromechanical linear axis With ball screw |
| Type of motor | Stepper motor 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 ² |
| 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 the internal product definition from Festo 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, printed 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 ⁴ |
| 2nd moment of area Iz | 1948000 mm ⁴ |

| Feature | Value |
|---|---------------------------------------|
| Idle torque at v _{max} | 0.2 Nm |
| Idle torque at v _{min} | 0.04 Nm |
| Max. force F _y | 4710 N |
| Max. force F _z | 5600 N |
| F _y at theoretical life value of 100 km (only guide consideration) | 17352 N |
| F _z at theoretical life value of 100 km (only guide consideration) | 20631 N |
| Max. moment M _x | 65 Nm |
| Max. moment M _y | 51 Nm |
| Max. moment M _z | 51 Nm |
| M _x at theoretical life value of 100 km (only guide consideration) | 239 Nm |
| M _y at theoretical life value of 100 km (only guide consideration) | 188 Nm |
| M _z at theoretical life value of 100 km (only guide consideration) | 188 Nm |
| Max. radial force at drive shaft | 290 N |
| Max. feed force F _x | 810 N |
| Torsional mass moment of inertia I _t | 151000 mm ⁴ |
| Mass moment of inertia J _H per metre of stroke | 0.2522 kgcm ² |
| Mass moment of inertia J _L per kg of working load | 0.1013 kgcm ² |
| Mass moment of inertia J _O | 0.2291 kgcm ² |
| Feed constant | 20 mm/U |
| Moving mass | 1645 g |
| Product weight | 4865 g |
| Basic weight for 0 mm stroke | 4353 g |
| Additional weight per 10 mm stroke | 104 g |
| Dynamic deflection (moving load) | 0.05% of the axis length, max. 0.5 mm |
| Static deflection (load in standstill) | 0.1% of the axis length |
| Interface code, actuator | T46 |
| Material end cap | Painted die cast aluminium |
| Material profile | Anodised wrought aluminium alloy |
| Note on materials | RoHS-compliant |
| Material drive cover | Painted die cast aluminium |
| Material guide slide | Steel |
| Material guide rail | Steel |
| Material slide | Anodised wrought aluminium alloy |
| Material spindle nut | Steel |
| Material spindle | Steel |