

spindle axis ELGT-BS-160-450-20P

Part number: 8124529

FESTO



Data sheet

| Feature | Value |
|--|--|
| Working stroke | 450 mm |
| Size | 160 |
| Stroke reserve | 0 mm |
| Reversing backlash | $\leq 0.15 \mu\text{m}$ |
| Spindle diameter | 20 mm |
| Spindle pitch | 20 mm/U |
| Assembly position | Any |
| Guide | Recirculating ball bearing guide |
| Design structure | Electromechanical linear axis with recirculating ball bearing spindle |
| Motor type | Stepper motor Servomotor |
| Spindle type | Ball screw spindle |
| Variants | Recommended for production facilities for the manufacture of lithium-ion batteries |
| Max. acceleration | 15 m/s ² |
| Max. speed | 3,000 1/min 1 m/s |
| Repetition accuracy | $\pm 0.02 \text{ mm}$ |
| Duty cycle | 100 % |
| PWIS conformity | VDMA24364 zone III |
| RSBP classification to CD-0033 | F1a |
| Cleanroom class | ISO class 8 |
| Protection class | IP20 |
| Ambient temperature | 0 ... 50 °C |
| Permanent feed force | 1,045 N |
| Area moment of inertia 2nd degree Iy | 1,411E+03 mm ⁴ |
| Area moment of inertia 2nd degree Iz | 15,257E+03 mm ⁴ |
| No-load torque at maximum travel speed | 0.4 Nm |
| No-load torque at minimum travel speed | 0.14 Nm |
| Max. force Fy | 9,550 N |
| Max. force Fz | 11,370 N |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 35,183 N |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 41,887 N |
| Max. torque Mx | 600 Nm |
| Max. torque My | 560 Nm |
| Max. torque Mz | 560 Nm |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 2,210 Nm |
| My with theoretical service life of 100 km (from a guide perspective only) | 2,063 Nm |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 2,063 Nm |
| Max. radial force at drive shaft | 290 N |
| Max. feed force Fx | 1,045 N |
| Torsional mass moment of inertia It | 726E+03 mm ⁴ |
| Mass moment of inertia JH per metre of stroke | 0.9027 kgcm ² |
| Mass moment of inertia JL per kg of working load | 0.1013 kgcm ² |
| Mass moment of inertia, JO | 0.6342 kgcm ² |

| Feature | Value |
|--|---------------------------------------|
| Feed constant | 20 mm/U |
| Moving mass | 3,842 g |
| Product weight | 18,091 g |
| Basic weight for 0 mm stroke | 9,601 g |
| Additional weight per 10 mm stroke | 188 g |
| Dynamic deflection (load moved) | 0.05% of the axis length, max. 0.5 mm |
| Static deflection (load at standstill) | 0.1% of the axis length |
| Interface code, actuator | T46 |
| Material of end caps | Die-cast aluminium, painted |
| Material of profile | Anodised wrought aluminium alloy |
| Materials note | Conforms to RoHS |
| Material drive cover | Die-cast aluminium, painted |
| Material guide slide | Steel |
| Material guide rail | Steel |
| Material slide | Anodised wrought aluminium alloy |
| Material spindle nut | Steel |
| Material spindle | Steel |