

Ball screw axis ELGA-BS-KF-80-500-0H-20P-ML

Part number: 8041833

FESTO



General operating condition

Data sheet

| Feature | Value |
|--|----------------------------------|
| Working stroke | 500 mm |
| Size | 80 |
| Stroke reserve | 0 mm |
| Screw diameter | 15 mm |
| Spindle pitch | 20 mm/U |
| Mounting position | Any |
| Guide | Recirculating ball bearing guide |
| Structural design | with ball screw |
| Motor type | Stepper motor Servo motor |
| Spindle type | Ball screw |
| Symbol | 00991211 |
| Measuring principle of linear potentiometer | Incremental |
| 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 |
| Degree of protection | IP40 |
| Ambient temperature | -10 °C ... 60 °C |
| 2nd moment of area Iy | 310000 mm ⁴ |
| 2nd moment of area Iz | 977000 mm ⁴ |
| No-load torque at maximum travel speed | 0.6 Nm |
| No-load torque at minimum travel speed | 0.35 Nm |
| Max. force Fy | 2500 N |
| Max. force Fz | 3050 N |
| Max. force Fy total axis | 2500 N |
| Max. force Fz total axis | 3050 N |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 9200 N |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 11224 N |
| Max. torque Mx | 36 Nm |
| Max. torque My | 228 Nm |
| Max. torque Mz | 228 Nm |
| Max. moment Mx total axis | 36 Nm |

| Feature | Value |
|--|--------------------------------------|
| Max. moment My total axis | 228 Nm |
| Max. moment Mz total axis | 228 Nm |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 132 Nm |
| My with theoretical service life of 100 km (from a guide perspective only) | 839 Nm |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 839 Nm |
| Distance between slide surface and guide center | 60 mm |
| Max. radial force on actuator shaft | 250 N |
| Max. feed force Fx | 1600 N |
| Torsion moment of inertia It | 67300 mm ⁴ |
| Mass moment of inertia JH per meter of stroke | 0.346 kgcm ² |
| Mass moment of inertia JL per kg of payload | 0.1013 kgcm ² |
| Mass moment of inertia JO | 0.097 kgcm ² |
| Feed constant | 20 mm/U |
| Reference service life | 5000 km |
| Moving mass | 1370 g |
| Additional weight per 10 mm stroke | 46.5 g |
| Dynamic deflection (load moved) | 0.05% of axis length, maximum 0.5 mm |
| Static deflection (load at standstill) | 0.1 % of axis length |
| Material of end caps | Wrought aluminum alloy Anodized |
| Profile material | Wrought aluminum alloy Anodized |
| Note on materials | RoHS-compliant |
| Cover strip material | Stainless steel strip |
| Drive cover material | Wrought aluminum alloy Anodized |
| Slide carriage material | Steel |
| Guide rail material | Steel |
| Slide material | Wrought aluminum alloy Anodized |
| Ball screw nut material | Steel |
| Spindle material | Steel |