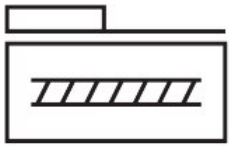
# Ball screw axis
# ELGA-BS-KF-70-500-0H-10P-ML

Part number: 8041820





## Data sheet

| Feature | Value |
|---|---|
| Working stroke | 500 mm |
| Size | 70 |
| Stroke reserve | 0 mm |
| Spindle diameter | 12 mm |
| Spindle pitch | 10 mm/U |
| Mounting position | optional |
| Guide | Recirculating ball bearing guide |
| Design | Electromechanical linear axis<br>With ball screw |
| Type of motor | Stepper motor<br>Servo motor |
| Spindle type | Ball screw |
| Functional principle of measuring system | Incremental |
| Max. acceleration | 15 m/s² |
| Max. rotational speed | 3000 rpm |
| Max. speed | 0.5 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 | 165000 mm⁴ |
| 2nd moment of area Iz | 472000 mm⁴ |
| Idle torque at vmax | 0.24 Nm |
| Idle torque at vmin | 0.17 Nm |
| Max. force Fy | 1500 N |
| Max. force Fz | 1850 N |
| Max. force Fy total axis | 1500 N |
| Max. force Fz total axis | 1850 N |
| Fy at theoretical life value of 100 km (only guide consideration) | 5520 N |
| Fz at theoretical life value of 100 km (only guide consideration) | 6808 N |
| Max. moment Mx | 16 Nm |

| Feature | Value |
|---|---|
| Max. moment My | 132 Nm |
| Max. moment Mz | 132 Nm |
| Max. moment Mx total axis | 16 Nm |
| Max. moment My total axis | 132 Nm |
| Max. moment Mz total axis | 132 Nm |
| Mx at theoretical life value of 100 km (only guide consideration) | 59 Nm |
| My at theoretical life value of 100 km (only guide consideration) | 486 Nm |
| Mz at theoretical life value of 100 km (only guide consideration) | 486 Nm |
| Distance between slide surface and guide centre | 51 mm |
| Max. radial force at drive shaft | 220 N |
| Max. feed force Fx | 650 N |
| Torsional mass moment of inertia It | 28300 $mm^4$ |
| Mass moment of inertia JH per metre of stroke | 0.142 $kgcm^2$ |
| Mass moment of inertia JL per kg of working load | 0.0253 $kgcm^2$ |
| Mass moment of inertia JO | 0.038 $kgcm^2$ |
| Feed constant | 10 mm/U |
| Reference service life | 5000 km |
| Moving mass | 804 g |
| Additional weight per 10 mm stroke | 33 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 |
| Material end cap | Wrought aluminium alloy<br>Anodised |
| Material profile | Wrought aluminium alloy<br>Anodised |
| Note on materials | RoHS-compliant |
| Material cover tape | Stainless steel strip |
| Material drive cover | Wrought aluminium alloy<br>Anodised |
| Material guide slide | Steel |
| Material guide rail | Steel |
| Material slide | Wrought aluminium alloy<br>Anodised |
| Material ball screw nut | Steel |
| Material spindle | Steel |