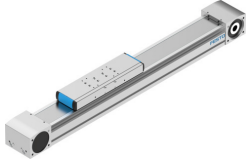


# Belt driven linear actuator ELGA-TB-KF-120-500-0H

Part number: 8041865

**FESTO**



## Data sheet

| Feature  | Value   |
|--|---|
| Drive pinion effective diameter  | 52.52 mm  |
| Working stroke   | 500 mm  |
| Size   | 120   |
| Stroke reserve   | 0 mm  |
| Toothed belt pitch   | 5 mm  |
| Mounting position  | Any   |
| Guide  | Recirculating ball bearing guide                |
| Structural design  | Electromechanical linear axis with toothed belt |
| Motor type   | Stepper motor<br>Servo motor                    |
| Measuring principle of linear potentiometer                                | Incremental                                     |
| Max. acceleration  | 50 m/s <sup>2</sup>                             |
| Max. speed   | 5 m/s   |
| Repetition accuracy  | ±0.08 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  | 1264580 mm <sup>4</sup>                         |
| 2nd moment of area Iz  | 4365790 mm <sup>4</sup>                         |
| Max. driving torque  | 34.1 Nm   |
| Max. force Fy  | 5500 N  |
| Max. force Fz  | 6890 N  |
| Max. force Fy total axis   | 5500 N  |
| Max. force Fz total axis   | 6890 N  |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 20240 N   |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 25355 N   |
| Max. no-load resistance to shifting  | 76.2 N  |
| Max. torque Mx   | 104 Nm  |
| Max. torque My   | 680 Nm  |
| Max. torque Mz   | 680 Nm  |

| Feature  | Value  |
|--|--|
| Max. moment Mx total axis  | 104 Nm   |
| Max. moment My total axis  | 680 Nm   |
| Max. moment Mz total axis  | 680 Nm   |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 383 Nm   |
| My with theoretical service life of 100 km (from a guide perspective only) | 2502 Nm  |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 2502 Nm  |
| Distance between slide surface and guide center                            | 70 mm  |
| Max. feed force Fx   | 1300 N   |
| No-load driving torque   | 2.8 Nm   |
| Torsion moment of inertia It   | 435680 mm <sup>4</sup>   |
| Mass moment of inertia JH per meter of stroke                              | 2.15 kgcm <sup>2</sup>   |
| Mass moment of inertia JL per kg of payload                                | 6.9 kgcm <sup>2</sup>  |
| Mass moment of inertia JO  | 40.99 kgcm <sup>2</sup>  |
| Mass moment of inertia JW for additional slide                             | 28.91 kgcm <sup>2</sup>  |
| Feed constant  | 165 mm/U   |
| Reference service life   | 5000 km  |
| Slide weight   | 4.19 kg  |
| Additional slide weight  | 3.24 kg  |
| Basic weight with 0 mm stroke  | 15.7 kg  |
| Additional weight per 10 mm stroke   | 0.106 kg   |
| Dynamic deflection (load moved)  | 0.05% of axis length, maximum 0.5 mm                                     |
| Static deflection (load at standstill)                                     | 0.1 % of axis length   |
| Profile material   | Wrought aluminum alloy<br>Anodized                                       |
| Note on materials  | RoHS-compliant   |
| Cover strip material   | Stainless steel strip  |
| Drive cover material   | Wrought aluminum alloy<br>Anodized                                       |
| Slide carriage material  | Tempered steel   |
| Guide rail material  | Tempered steel<br>Corrotect coated                                       |
| Belt pulley material   | High-alloy stainless steel   |
| Slide material   | Wrought aluminum alloy<br>Anodized                                       |
| Toothed belt clamping component material                                   | Cast stainless steel   |
| Toothed belt material  | Polychloroprene oder Nitrilkautschuk (NBR) mit Glascord und Nylonüberzug |