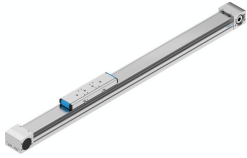


# Belt driven linear actuator ELGA-TB-KF-80-800-0H

Part number: 8041861

FESTO



 General operating condition

## Data sheet

| Feature  | Value   |
|--|---|
| Drive pinion effective diameter  | 39.79 mm  |
| Working stroke   | 800 mm  |
| Size   | 80  |
| 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  | 257180 mm <sup>4</sup>                          |
| 2nd moment of area Iz  | 913660 mm <sup>4</sup>                          |
| Max. driving torque  | 15.92 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. no-load resistance to shifting  | 50.3 N  |
| Max. torque Mx   | 36 Nm   |
| Max. torque My   | 228 Nm  |
| Max. torque Mz   | 228 Nm  |
| Max. moment Mx total axis  | 36 Nm   |
| Max. moment My total axis  | 228 Nm  |
| Max. moment Mz total axis  | 228 Nm  |

| Feature  | Value   |
|--|---|
| 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                            | 50 mm   |
| Max. feed force Fx   | 800 N   |
| No-load driving torque   | 1 Nm  |
| Torsion moment of inertia It   | 159250 mm <sup>4</sup>                            |
| Mass moment of inertia JH per meter of stroke                              | 0.93 kgcm <sup>2</sup>                            |
| Mass moment of inertia JL per kg of payload                                | 3.96 kgcm <sup>2</sup>                            |
| Mass moment of inertia JO  | 9.82 kgcm <sup>2</sup>                            |
| Mass moment of inertia JW for additional slide                             | 7.61 kgcm <sup>2</sup>                            |
| Feed constant  | 125 mm/U  |
| Reference service life   | 5000 km   |
| Slide weight   | 1900 g  |
| Additional slide weight  | 1530 g  |
| Basic weight with 0 mm stroke  | 4700 g  |
| Additional weight per 10 mm stroke   | 51 g  |
| 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  | Stainless steel                                   |
| Guide rail material  | Stainless steel                                   |
| 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 with glass cord and nylon coating |