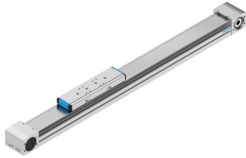


# Toothed belt axis ELGA-TB-KF-80-600-0H

Part number: 8041860

**FESTO**



## Data sheet

| Feature                                                                       | Value                                              |
|-------------------------------------------------------------------------------|----------------------------------------------------|
| Effective diameter of drive pinion                                            | 39.79 mm                                           |
| Working stroke                                                                | 600 mm                                             |
| Size                                                                          | 80                                                 |
| Stroke reserve                                                                | 0 mm                                               |
| Toothed-belt pitch                                                            | 5 mm                                               |
| Mounting position                                                             | optional                                           |
| Guide                                                                         | Recirculating ball bearing guide                   |
| Design                                                                        | Electromechanical linear axis<br>With toothed belt |
| Type of motor                                                                 | Stepper motor<br>Servo motor                       |
| Functional principle of measuring system                                      | 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 I <sub>y</sub>                                             | 257180 mm <sup>4</sup>                             |
| 2nd moment of area I <sub>z</sub>                                             | 913660 mm <sup>4</sup>                             |
| Max. drive torque                                                             | 15.92 Nm                                           |
| Max. force F <sub>y</sub>                                                     | 2500 N                                             |
| Max. force F <sub>z</sub>                                                     | 3050 N                                             |
| Max. force F <sub>y</sub> total axis                                          | 2500 N                                             |
| Max. force F <sub>z</sub> total axis                                          | 3050 N                                             |
| F <sub>y</sub> at theoretical life value of 100 km (only guide consideration) | 9200 N                                             |
| F <sub>z</sub> at theoretical life value of 100 km (only guide consideration) | 11224 N                                            |
| Max. idle running transfer resistance                                         | 50.3 N                                             |
| Max. moment M <sub>x</sub>                                                    | 36 Nm                                              |
| Max. moment M <sub>y</sub>                                                    | 228 Nm                                             |
| Max. moment M <sub>z</sub>                                                    | 228 Nm                                             |

| Feature                                                           | Value                                                                    |
|-------------------------------------------------------------------|--------------------------------------------------------------------------|
| Max. moment Mx total axis                                         | 36 Nm                                                                    |
| Max. moment My total axis                                         | 228 Nm                                                                   |
| Max. moment Mz total axis                                         | 228 Nm                                                                   |
| Mx at theoretical life value of 100 km (only guide consideration) | 132 Nm                                                                   |
| My at theoretical life value of 100 km (only guide consideration) | 839 Nm                                                                   |
| Mz at theoretical life value of 100 km (only guide consideration) | 839 Nm                                                                   |
| Distance between slide surface and guide centre                   | 50 mm                                                                    |
| Max. feed force Fx                                                | 800 N                                                                    |
| Frictional torque independent of load                             | 1 Nm                                                                     |
| Torsional mass moment of inertia It                               | 159250 mm <sup>4</sup>                                                   |
| Mass moment of inertia JH per metre of stroke                     | 0.93 kgcm <sup>2</sup>                                                   |
| Mass moment of inertia JL per kg of working load                  | 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                                                                  |
| Weight of slide                                                   | 1.9 kg                                                                   |
| Weight of additional slide                                        | 1.53 kg                                                                  |
| Basic weight for 0 mm stroke                                      | 4.7 kg                                                                   |
| Additional weight per 10 mm stroke                                | 0.051 kg                                                                 |
| 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 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                                              | Stainless steel                                                          |
| Material guide rail                                               | Stainless steel                                                          |
| Material pulleys                                                  | High-alloy stainless steel                                               |
| Material slide                                                    | Wrought aluminium alloy<br>Anodised                                      |
| Material toothed belt clamping piece                              | Stainless steel casting                                                  |
| Material toothed belt                                             | Polychloroprene oder Nitrilkautschuk (NBR) mit Glascord und Nylonüberzug |