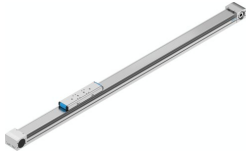


# Toothed belt axis ELGA-TB-KF-80-1200-0H

Part number: 8041863

FESTO



 General operating condition

## Data sheet

| Feature   | Value  |
|---|--|
| Effective diameter of drive pinion                                | 39.79 mm   |
| Working stroke  | 1200 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 Iy   | 257180 mm <sup>4</sup>                             |
| 2nd moment of area Iz   | 913660 mm <sup>4</sup>                             |
| Max. drive 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 at theoretical life value of 100 km (only guide consideration) | 9200 N   |
| Fz at theoretical life value of 100 km (only guide consideration) | 11224 N  |
| Max. idle running transfer resistance                             | 50.3 N   |
| Max. moment Mx  | 36 Nm  |
| Max. moment My  | 228 Nm   |
| Max. moment Mz  | 228 Nm   |
| 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   |

| Feature   | Value   |
|---|---|
| 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   | 1900 g  |
| Weight of additional slide  | 1530 g  |
| Basic weight for 0 mm stroke                                      | 4700 g  |
| Additional weight per 10 mm stroke                                | 51 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 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 or nitrile rubber (NBR) with glass cord and nylon coating |