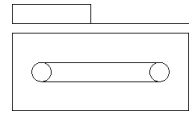
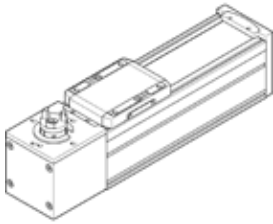


# toothed belt axis ELGC-TB-KF-80-500

Part number: 8062788

FESTO



## Data sheet

| Feature  | Value  |
|--|--|
| Effective diameter of drive pinion   | 33.42 mm   |
| Working stroke   | 500 mm   |
| Size   | 80   |
| Stroke reserve   | 0 mm   |
| Toothed-belt stretch   | 0.2 %  |
| Toothed-belt pitch   | 3 mm   |
| Assembly position  | Any  |
| Guide  | Recirculating ball bearing guide                   |
| Design structure   | Electromechanical linear axis<br>With toothed belt |
| Motor type   | Stepper motor<br>Servomotor                        |
| Measuring method: displacement encoder   | Incremental  |
| Position detection   | For proximity sensor<br>For inductive sensors      |
| Max. acceleration  | 15 m/s <sup>2</sup>                                |
| Max. speed   | 1.5 m/s  |
| Repetition accuracy  | ±0,1 mm  |
| Duty cycle   | 100 %  |
| PWIS conformity  | VDMA24364 zone III                                 |
| RSBP classification to CD-0033   | F1a  |
| Cleanroom class  | ISO class 7  |
| Protection class   | IP40   |
| Ambient temperature  | 0 ... 50 °C  |
| Impact energy in end positions   | 0.75 mJ  |
| Note on the impact energy it the end positions                                 | At maximum homing speed of 0.01 m/s                |
| Area moment of inertia 2nd degree Iy   | 1,370E+03 mm <sup>4</sup>                          |
| Area moment of inertia 2nd degree Iz   | 1,660E+03 mm <sup>4</sup>                          |
| Max. drive torque  | 4.178 Nm   |
| Max. force Fy  | 900 N  |
| Max. force Fz  | 2,700 N  |
| Fy for the guide calculation for a service life of 5000 km or 5 million cycles | 5,543 N  |
| Fz for the guide calculation for a service life of 5000 km or 5 million cycles | 5,543 N  |
| Fy with theoretical service life of 100 km (from a guide perspective only)     | 20,400 N   |
| Fz with theoretical service life of 100 km (from a guide perspective only)     | 20,400 N   |
| Max. idling displacement resistance  | 24.7 N   |
| Max. torque Mx   | 59.8 Nm  |
| Max. torque My   | 56.2 Nm  |
| Max. torque Mz   | 56.2 Nm  |
| Mx for the guide calculation for a service life of 5000 km or 5 million cycles | 59.8 Nm  |
| My for the guide calculation for a service life of 5000 km or 5 million cycles | 56.2 Nm  |
| Mz for the guide calculation for a service life of 5000 km or 5 million cycles | 56.2 Nm  |
| Mx with theoretical service life of 100 km (from a guide perspective only)     | 220 Nm   |
| My with theoretical service life of 100 km (from a guide perspective only)     | 207 Nm   |
| Mz with theoretical service life of 100 km (from a guide perspective only)     | 207 Nm   |
| Distance between the slide surface and the centre of the guide                 | 72.5 mm  |

| Feature  | Value                                 |
|--|---------------------------------------|
| Max. feed force Fx                               | 250 N                                 |
| No-load driving torque                           | 0.413 Nm                              |
| Torsional mass moment of inertia It              | 90.5E+03 mm <sup>4</sup>              |
| Mass moment of inertia JH per metre of stroke    | 0.1927 kgcm <sup>2</sup>              |
| Mass moment of inertia JL per kg of working load | 2.793 kgcm <sup>2</sup>               |
| Mass moment of inertia, JO                       | 2.912 kgcm <sup>2</sup>               |
| Feed constant                                    | 105 mm/U                              |
| Maintenance interval                             | Life-time lubrication                 |
| Moving mass                                      | 901 g                                 |
| Moving mass with 0 mm stroke                     | 901 g                                 |
| Slide weight                                     | 272 g                                 |
| Product weight                                   | 7,142 g                               |
| Basic weight for 0 mm stroke                     | 3,500 g                               |
| Additional weight per 10 mm stroke               | 73 g                                  |
| Dynamic deflection (load moved)                  | 0.05% of the axis length, max. 0.5 mm |
| Static deflection (load at standstill)           | 0.1% of the axis length               |
| Interface code, actuator                         | T46                                   |
| Material of end caps                             | Die-cast aluminium, painted           |
| Material of profile                              | Anodised wrought aluminium alloy      |
| Materials note                                   | Conforms to RoHS                      |
| Material cover tape                              | Stainless steel strip                 |
| Material drive cover                             | Die-cast aluminium, painted           |
| Material guide slide                             | Heat-treatment steel                  |
| Material guide rail                              | Heat-treatment steel                  |
| Material pulleys                                 | High alloy steel, non-corrosive       |
| Material slide                                   | Aluminium die cast                    |
| Material toothed belt                            | Polychloroprene with glass fibres     |