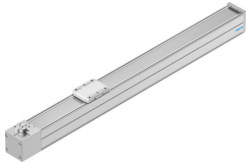


# Toothed belt axis ELGC-TB-KF-80-1000

Part number: 8062791

FESTO



[PDF](#) General operating condition

## Data sheet

| Feature                                                           | Value                                                                                                                                                    |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Effective diameter of drive pinion                                | 33.42 mm                                                                                                                                                 |
| Working stroke                                                    | 1000 mm                                                                                                                                                  |
| Size                                                              | 80                                                                                                                                                       |
| Stroke reserve                                                    | 0 mm                                                                                                                                                     |
| Toothed-belt pitch                                                | 3 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                                                                                                                             |
| Symbol                                                            | 00991212                                                                                                                                                 |
| Position detection                                                | Via proximity switch<br>Via inductive sensors                                                                                                            |
| Max. acceleration                                                 | 15 m/s <sup>2</sup>                                                                                                                                      |
| Max. speed                                                        | 1.5 m/s                                                                                                                                                  |
| Repetition accuracy                                               | ±0.1 mm                                                                                                                                                  |
| Duty cycle                                                        | 100%                                                                                                                                                     |
| LABS (PWIS) conformity                                            | VDMA24364 zone III                                                                                                                                       |
| Suitability for the production of Li-ion batteries                | Suitable for battery production according to the Festo internal definition of the degree of severity F1A with restrictions regarding the use of Cu/Zn/Ni |
| Cleanroom class                                                   | Class 7 according to ISO 14644-1                                                                                                                         |
| Storage temperature                                               | -20 °C ... 60 °C                                                                                                                                         |
| Degree of protection                                              | IP40                                                                                                                                                     |
| Ambient temperature                                               | 0 °C ... 50 °C                                                                                                                                           |
| Impact energy in end positions                                    | 7.5E-4 J                                                                                                                                                 |
| Note on the impact energy in the end positions                    | At maximum homing speed of 0.01 m/s                                                                                                                      |
| 2nd moment of area Iy                                             | 1370000 mm <sup>4</sup>                                                                                                                                  |
| 2nd moment of area Iz                                             | 1660000 mm <sup>4</sup>                                                                                                                                  |
| Max. drive torque                                                 | 4.178 Nm                                                                                                                                                 |
| Max. force Fy                                                     | 5543 N                                                                                                                                                   |
| Max. force Fz                                                     | 5543 N                                                                                                                                                   |
| Max. force Fy total axis                                          | 900 N                                                                                                                                                    |
| Max. force Fz total axis                                          | 2700 N                                                                                                                                                   |
| Fy at theoretical life value of 100 km (only guide consideration) | 20400 N                                                                                                                                                  |
| Fz at theoretical life value of 100 km (only guide consideration) | 20400 N                                                                                                                                                  |

| Feature                                                           | Value                                                                     |
|-------------------------------------------------------------------|---------------------------------------------------------------------------|
| Max. idle running transfer resistance                             | 24.7 N                                                                    |
| Max. moment Mx                                                    | 59.8 Nm                                                                   |
| Max. moment My                                                    | 56.2 Nm                                                                   |
| Max. moment Mz                                                    | 56.2 Nm                                                                   |
| Max. moment Mx total axis                                         | 59.8 Nm                                                                   |
| Max. moment My total axis                                         | 56.2 Nm                                                                   |
| Max. moment Mz total axis                                         | 56.2 Nm                                                                   |
| Mx at theoretical life value of 100 km (only guide consideration) | 220 Nm                                                                    |
| My at theoretical life value of 100 km (only guide consideration) | 207 Nm                                                                    |
| Mz at theoretical life value of 100 km (only guide consideration) | 207 Nm                                                                    |
| Distance between slide surface and guide centre                   | 72.5 mm                                                                   |
| Max. feed force Fx                                                | 250 N                                                                     |
| Frictional torque independent of load                             | 0.413 Nm                                                                  |
| Torsional mass moment of inertia It                               | 90500 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                                                                  |
| Reference service life                                            | 5000 km                                                                   |
| Maintenance interval                                              | Life-time lubrication                                                     |
| Moving mass                                                       | 901 g                                                                     |
| Weight of slide                                                   | 272 g                                                                     |
| Product weight                                                    | 10784 g                                                                   |
| Basic weight for 0 mm stroke                                      | 3500 g                                                                    |
| Additional weight per 10 mm stroke                                | 73 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                                                   |
| Interface code, actuator                                          | T46                                                                       |
| Material end cap                                                  | Painted die cast aluminium                                                |
| Material profile                                                  | Anodised wrought aluminium alloy                                          |
| Note on materials                                                 | RoHS-compliant                                                            |
| Material cover tape                                               | Stainless steel strip                                                     |
| Material drive cover                                              | Painted die cast aluminium                                                |
| Material guide slide                                              | Steel                                                                     |
| Material guide rail                                               | Steel                                                                     |
| Material pulleys                                                  | High-alloy stainless steel                                                |
| Material slide                                                    | Die-cast aluminium                                                        |
| Material toothed belt                                             | Polychloroprene or nitrile rubber (NBR) with glass cord and nylon coating |