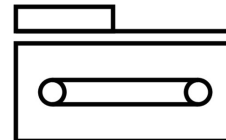
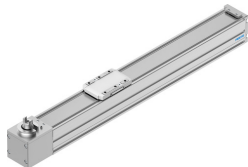


# Toothed belt axis ELGC-TB-KF-45-200

Part number: 8062768

FESTO



[PDF](#) General operating condition

## Data sheet

| Feature                                                           | Value                                                                                                                                                                                                                             |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Effective diameter of drive pinion                                | 19.1 mm                                                                                                                                                                                                                           |
| Working stroke                                                    | 200 mm                                                                                                                                                                                                                            |
| Size                                                              | 45                                                                                                                                                                                                                                |
| Stroke reserve                                                    | 0 mm                                                                                                                                                                                                                              |
| Toothed-belt pitch                                                | 2 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                                                        | 1.2 m/s                                                                                                                                                                                                                           |
| Repetition accuracy                                               | ±0.1 mm                                                                                                                                                                                                                           |
| Duty cycle                                                        | 100%                                                                                                                                                                                                                              |
| LABS (PWIS) conformity                                            | VDMA24364 zone III                                                                                                                                                                                                                |
| Suitability for the production of Li-ion batteries                | Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils |
| 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                                    | 1.3E-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                                             | 140000 mm <sup>4</sup>                                                                                                                                                                                                            |
| 2nd moment of area Iz                                             | 170000 mm <sup>4</sup>                                                                                                                                                                                                            |
| Max. drive torque                                                 | 0.716 Nm                                                                                                                                                                                                                          |
| Max. force Fy                                                     | 880 N                                                                                                                                                                                                                             |
| Max. force Fz                                                     | 880 N                                                                                                                                                                                                                             |
| Max. force Fy total axis                                          | 300 N                                                                                                                                                                                                                             |
| Max. force Fz total axis                                          | 600 N                                                                                                                                                                                                                             |
| Fy at theoretical life value of 100 km (only guide consideration) | 3240 N                                                                                                                                                                                                                            |

| Feature                                                           | Value                                 |
|-------------------------------------------------------------------|---------------------------------------|
| Fz at theoretical life value of 100 km (only guide consideration) | 3240 N                                |
| Max. idle running transfer resistance                             | 7.8 N                                 |
| Max. moment Mx                                                    | 5.5 Nm                                |
| Max. moment My                                                    | 4.7 Nm                                |
| Max. moment Mz                                                    | 4.7 Nm                                |
| Max. moment Mx total axis                                         | 5.5 Nm                                |
| Max. moment My total axis                                         | 4.7 Nm                                |
| Max. moment Mz total axis                                         | 4.7 Nm                                |
| Mx at theoretical life value of 100 km (only guide consideration) | 20 Nm                                 |
| My at theoretical life value of 100 km (only guide consideration) | 17 Nm                                 |
| Mz at theoretical life value of 100 km (only guide consideration) | 17 Nm                                 |
| Distance between slide surface and guide centre                   | 42.8 mm                               |
| Max. feed force Fx                                                | 75 N                                  |
| Frictional torque independent of load                             | 0.075 Nm                              |
| Torsional mass moment of inertia It                               | 8500 mm <sup>4</sup>                  |
| Mass moment of inertia JH per metre of stroke                     | 0.0281 kgcm <sup>2</sup>              |
| Mass moment of inertia JL per kg of working load                  | 0.9119 kgcm <sup>2</sup>              |
| Mass moment of inertia JO                                         | 0.1862 kgcm <sup>2</sup>              |
| Feed constant                                                     | 60 mm/U                               |
| Reference service life                                            | 5000 km                               |
| Maintenance interval                                              | Life-time lubrication                 |
| Moving mass                                                       | 169 g                                 |
| Weight of slide                                                   | 55 g                                  |
| Product weight                                                    | 1219 g                                |
| Basic weight for 0 mm stroke                                      | 760 g                                 |
| Additional weight per 10 mm stroke                                | 23 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                                          | V32                                   |
| 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 with glass fibre      |