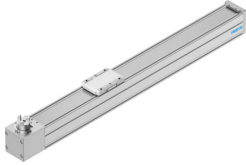


# Belt driven linear actuator ELGC-TB-KF-60-500

Part number: 8062778

**FESTO**



## Data sheet

| Feature                                                   | Value                                                              |
|-----------------------------------------------------------|--------------------------------------------------------------------|
| Drive pinion effective diameter                           | 24.83 mm                                                           |
| Working stroke                                            | 500 mm                                                             |
| Size                                                      | 60                                                                 |
| Stroke reserve                                            | 0 mm                                                               |
| Toothed belt pitch                                        | 3 mm                                                               |
| Mounting position                                         | Any                                                                |
| Guide                                                     | Recirculating ball bearing                                         |
| Structural design                                         | Electromechanical linear axis<br>With toothed belt                 |
| Motor type                                                | Stepper motor<br>Servo motor                                       |
| Position sensing                                          | Via proximity switch<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%                                                               |
| LABS (PWIS) conformity                                    | VDMA24364 Zone III                                                 |
| Suitability for the production of Li-ion batteries        | Suitable for battery production with reduced Cu/Zn/Ni values (F1a) |
| Cleanroom suitability, measured according to ISO 14644-14 | 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 the end positions                        | 0.25 mJ                                                            |
| Note on the impact energy in the end positions            | At maximum speed of the reference run of 0.01 m/s                  |
| 2nd moment of area Iy                                     | 441000 mm <sup>4</sup>                                             |
| 2nd moment of area Iz                                     | 542000 mm <sup>4</sup>                                             |
| Max. driving torque                                       | 1.49 Nm                                                            |
| Max. force Fy                                             | 3641 N                                                             |
| Max. force Fz                                             | 3641 N                                                             |
| Max. force Fy total axis                                  | 600 N                                                              |
| Max. force Fz total axis                                  | 1800 N                                                             |

| Feature                                                                    | Value                                                                     |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Fy with theoretical service life of 100 km (from a guide perspective only) | 13400 N                                                                   |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 13400 N                                                                   |
| Max. no-load resistance to shifting                                        | 15.6 N                                                                    |
| Max. torque Mx                                                             | 29.1 Nm                                                                   |
| Max. torque My                                                             | 31.8 Nm                                                                   |
| Max. torque Mz                                                             | 31.8 Nm                                                                   |
| Max. moment Mx total axis                                                  | 29.1 Nm                                                                   |
| Max. moment My total axis                                                  | 31.8 Nm                                                                   |
| Max. moment Mz total axis                                                  | 31.8 Nm                                                                   |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 107 Nm                                                                    |
| My with theoretical service life of 100 km (from a guide perspective only) | 117 Nm                                                                    |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 117 Nm                                                                    |
| Distance between slide surface and guide center                            | 54.6 mm                                                                   |
| Max. feed force Fx                                                         | 120 N                                                                     |
| No-load driving torque                                                     | 0.194 Nm                                                                  |
| Torsion moment of inertia It                                               | 29800 mm <sup>4</sup>                                                     |
| Mass moment of inertia JH per meter of stroke                              | 0.0851 kgcm <sup>2</sup>                                                  |
| Mass moment of inertia JL per kg of payload                                | 1.5411 kgcm <sup>2</sup>                                                  |
| Mass moment of inertia JO                                                  | 0.8804 kgcm <sup>2</sup>                                                  |
| Feed constant                                                              | 78 mm/U                                                                   |
| Reference service life                                                     | 5000 km                                                                   |
| Maintenance interval                                                       | Lifetime lubrication                                                      |
| Moving mass                                                                | 482 g                                                                     |
| Slide weight                                                               | 139 g                                                                     |
| Product weight                                                             | 3901 g                                                                    |
| Basic weight with 0 mm stroke                                              | 1775 g                                                                    |
| Additional weight per 10 mm stroke                                         | 43 g                                                                      |
| Dynamic deflection (load moved)                                            | 0.05% of axis length, maximum 0.5 mm                                      |
| Static deflection (load at standstill)                                     | 0.1 % of axis length                                                      |
| Interface code, actuator                                                   | T42                                                                       |
| Material of end caps                                                       | Die cast aluminum, painted                                                |
| Profile material                                                           | Wrought aluminum alloy, anodized                                          |
| Note on materials                                                          | RoHS compliant                                                            |
| Cover strip material                                                       | Stainless strip steel                                                     |
| Drive cover material                                                       | Die cast aluminum, painted                                                |
| Slide carriage material                                                    | Steel                                                                     |
| Guide rail material                                                        | Steel                                                                     |
| Belt pulley material                                                       | high-alloy stainless steel                                                |
| Slide material                                                             | Die-cast aluminum                                                         |
| Toothed belt material                                                      | Polychloroprene or nitrile rubber (NBR) with glass cord and nylon coating |