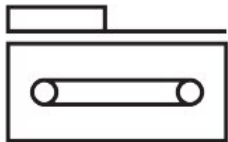


# Toothed belt axis

## ELGD-TB-KF-WD-120-300-0H-L-PU2

Part number: 8192385

FESTO



### Data sheet

| Feature                                                           | Value                                                              |
|-------------------------------------------------------------------|--------------------------------------------------------------------|
| Effective diameter of drive pinion                                | 38.2 mm                                                            |
| Working stroke                                                    | 300 mm                                                             |
| Size                                                              | 120                                                                |
| 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                                                        |
| Position detection                                                | Via inductive sensors                                              |
| Max. acceleration                                                 | 50 m/s <sup>2</sup>                                                |
| Max. speed                                                        | 3 m/s                                                              |
| Repetition accuracy                                               | ±0.04 mm                                                           |
| Duty cycle                                                        | 100%                                                               |
| LABS (PWIS) conformity                                            | VDMA24364-C1-L                                                     |
| Suitability for the production of Li-ion batteries                | Suitable for battery production with reduced Cu/Zn/Ni values (F1a) |
| Storage temperature                                               | -20 °C...60 °C                                                     |
| Degree of protection                                              | IP40                                                               |
| Ambient temperature                                               | 0 °C...60 °C                                                       |
| Impact energy in end positions                                    | 1 mJ                                                               |
| Note on the impact energy in the end positions                    | At maximum homing speed of 0.01 m/s                                |
| 2nd moment of area Iy                                             | 77090000 mm <sup>4</sup>                                           |
| 2nd moment of area Iz                                             | 5801000 mm <sup>4</sup>                                            |
| Max. drive torque                                                 | 9.55 Nm                                                            |
| Max. force Fy                                                     | 8000 N                                                             |
| Max. force Fz                                                     | 7200 N                                                             |
| Max. force Fy total axis                                          | 5914 N                                                             |
| Max. force Fz total axis                                          | 9071 N                                                             |
| Fy at theoretical life value of 100 km (only guide consideration) | 35153 N                                                            |

| Feature                                                           | Value                                 |
|-------------------------------------------------------------------|---------------------------------------|
| Fz at theoretical life value of 100 km (only guide consideration) | 35153 N                               |
| Max. idle running transfer resistance                             | 72.1 N                                |
| Max. moment Mx                                                    | 330 Nm                                |
| Max. moment My                                                    | 600 Nm                                |
| Max. moment Mz                                                    | 540 Nm                                |
| Max. moment Mx total axis                                         | 356 Nm                                |
| Max. moment My total axis                                         | 563 Nm                                |
| Max. moment Mz total axis                                         | 527 Nm                                |
| Mx at theoretical life value of 100 km (only guide consideration) | 1459 Nm                               |
| My at theoretical life value of 100 km (only guide consideration) | 1920 Nm                               |
| Mz at theoretical life value of 100 km (only guide consideration) | 1920 Nm                               |
| Distance between slide surface and guide centre                   | 51 mm                                 |
| Max. feed force Fx                                                | 500 N                                 |
| Frictional torque independent of load                             | 1.38 Nm                               |
| Torsional mass moment of inertia It                               | 383100 mm <sup>4</sup>                |
| Mass moment of inertia JH per metre of stroke                     | 0.876 kgcm <sup>2</sup>               |
| Mass moment of inertia JL per kg of working load                  | 3.648 kgcm <sup>2</sup>               |
| Mass moment of inertia JO                                         | 9.1687 kgcm <sup>2</sup>              |
| Feed constant                                                     | 120 mm/U                              |
| Reference service life                                            | 5000 km                               |
| Maintenance interval                                              | Life-time lubrication                 |
| Moving mass                                                       | 1957 g                                |
| Product weight                                                    | 8835 g                                |
| Basic weight for 0 mm stroke                                      | 6495 g                                |
| Additional weight per 10 mm stroke                                | 78 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                                          | N48                                   |
| Material end cap                                                  | Aluminium gravity die-cast, painted   |
| Material profile                                                  | Anodised wrought aluminium alloy      |
| Note on materials                                                 | RoHS-compliant                        |
| Material cover tape                                               | High-alloy stainless steel            |
| Material drive cover                                              | Aluminium gravity die-cast, painted   |
| Material guide slide                                              | Steel                                 |
| Material guide rail                                               | Steel                                 |
| Material pulleys                                                  | High-alloy stainless steel            |
| Material slide                                                    | Wrought aluminium alloy               |
| Material toothed belt                                             | Polyurethane with steel cord          |