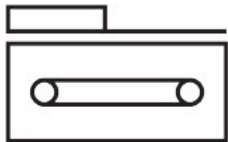
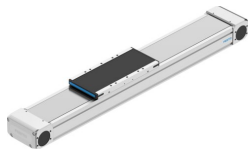


# Toothed belt axis

## ELGD-TB-KF-WD-120-800-0H-L-PU2

Part number: 8192388

FESTO



### Data sheet

| Feature                                                                    | Value                                                              |
|----------------------------------------------------------------------------|--------------------------------------------------------------------|
| Drive pinion effective diameter                                            | 38.2 mm                                                            |
| Working stroke                                                             | 800 mm                                                             |
| Size                                                                       | 120                                                                |
| Stroke reserve                                                             | 0 mm                                                               |
| Toothed belt pitch                                                         | 5 mm                                                               |
| Mounting position                                                          | Any                                                                |
| Guide                                                                      | Recirculating ball bearing guide                                   |
| Structural design                                                          | Electromechanical linear axis with toothed belt                    |
| Motor type                                                                 | Stepper motor<br>Servo motor                                       |
| Measuring principle of linear potentiometer                                | Incremental                                                        |
| Position sensing                                                           | For inductive proximity 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 the end positions                                         | 1 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                                                      | 77090000 mm <sup>4</sup>                                           |
| 2nd moment of area Iz                                                      | 5801000 mm <sup>4</sup>                                            |
| Max. driving 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 with theoretical service life of 100 km (from a guide perspective only) | 35153 N                                                            |

| Feature                                                                    | Value                                |
|----------------------------------------------------------------------------|--------------------------------------|
| Fz with theoretical service life of 100 km (from a guide perspective only) | 35153 N                              |
| Max. no-load resistance to shifting                                        | 72.1 N                               |
| Max. torque Mx                                                             | 330 Nm                               |
| Max. torque My                                                             | 600 Nm                               |
| Max. torque 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 with theoretical service life of 100 km (from a guide perspective only) | 1459 Nm                              |
| My with theoretical service life of 100 km (from a guide perspective only) | 1920 Nm                              |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 1920 Nm                              |
| Distance between slide surface and guide center                            | 51 mm                                |
| Max. feed force Fx                                                         | 500 N                                |
| No-load driving torque                                                     | 1.38 Nm                              |
| Torsion moment of inertia It                                               | 383100 mm <sup>4</sup>               |
| Mass moment of inertia JH per meter of stroke                              | 0.876 kgcm <sup>2</sup>              |
| Mass moment of inertia JL per kg of payload                                | 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                                                             | 12735 g                              |
| Basic weight with 0 mm stroke                                              | 6495 g                               |
| Additional weight per 10 mm stroke                                         | 78 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                                                   | N48                                  |
| Material of end caps                                                       | Aluminum gravity die-cast, painted   |
| Profile material                                                           | Wrought aluminum alloy, anodized     |
| Note on materials                                                          | RoHS-compliant                       |
| Cover strip material                                                       | High-alloy stainless steel           |
| Drive cover material                                                       | Aluminum gravity die-cast, painted   |
| Slide carriage material                                                    | Steel                                |
| Guide rail material                                                        | Steel                                |
| Belt pulley material                                                       | High-alloy stainless steel           |
| Slide material                                                             | Wrought aluminum alloy               |
| Toothed belt material                                                      | Polyurethane with steel cord         |