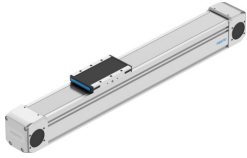


# Toothed belt axis ELGD-TB-KF-80-200-0H-PU2

Part number: 8192354

FESTO



 General operating condition

## Data sheet

| Feature   | Value   |
|---|---|
| Effective diameter of drive pinion                                | 42.97 mm  |
| Working stroke  | 200 mm  |
| Size  | 80  |
| 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  |
| Symbol  | 00991212  |
| 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)                            |
| Cleanroom suitability, measured according to ISO 14644-14         | Class 4 according to ISO 14644-1 (with vacuum extraction)<br>Class 6 according to ISO 14644-1 |
| Storage temperature   | -20 °C ... 60 °C  |
| Degree of protection  | IP40  |
| Ambient temperature   | 0 °C ... 60 °C  |
| Impact energy in end positions                                    | 2.5E-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   | 1213000 mm <sup>4</sup>   |
| 2nd moment of area Iz   | 2052000 mm <sup>4</sup>   |
| Max. drive torque   | 17.2 Nm   |
| Max. force Fy   | 4200 N  |
| Max. force Fz   | 4200 N  |
| Max. force Fy total axis  | 2800 N  |
| Max. force Fz total axis  | 3500 N  |
| Fy at theoretical life value of 100 km (only guide consideration) | 17576 N   |
| Fz at theoretical life value of 100 km (only guide consideration) | 17576 N   |

| Feature   | Value                                 |
|---|---------------------------------------|
| Max. idle running transfer resistance                             | 55.8 N                                |
| Max. moment Mx  | 106 Nm                                |
| Max. moment My  | 42 Nm                                 |
| Max. moment Mz  | 42 Nm                                 |
| Max. moment Mx total axis   | 106 Nm                                |
| Max. moment My total axis   | 80 Nm                                 |
| Max. moment Mz total axis   | 79 Nm                                 |
| Mx at theoretical life value of 100 km (only guide consideration) | 422 Nm                                |
| My at theoretical life value of 100 km (only guide consideration) | 162 Nm                                |
| Mz at theoretical life value of 100 km (only guide consideration) | 162 Nm                                |
| Distance between slide surface and guide centre                   | 62 mm                                 |
| Max. feed force Fx  | 800 N                                 |
| Frictional torque independent of load                             | 1.2 Nm                                |
| Torsional mass moment of inertia It                               | 405000 mm <sup>4</sup>                |
| Mass moment of inertia JH per metre of stroke                     | 1.12563 kgcm <sup>2</sup>             |
| Mass moment of inertia JL per kg of working load                  | 4.6161 kgcm <sup>2</sup>              |
| Mass moment of inertia JO   | 7.5216 kgcm <sup>2</sup>              |
| Feed constant   | 135 mm/U                              |
| Reference service life  | 5000 km                               |
| Maintenance interval  | Life-time lubrication                 |
| Moving mass   | 1110 g                                |
| Product weight  | 6295 g                                |
| Basic weight for 0 mm stroke                                      | 4715 g                                |
| Additional weight per 10 mm stroke                                | 79 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  | L48                                   |
| 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          |