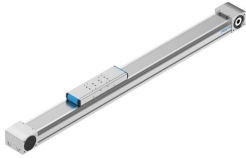


# Belt driven linear actuator ELGA-TB-KF-120-1000-0H

Part number: 8041868

**FESTO**



## Data sheet

| Feature                                                                    | Value                                              |
|----------------------------------------------------------------------------|----------------------------------------------------|
| Drive pinion effective diameter                                            | 52.52 mm                                           |
| Working stroke                                                             | 1000 mm                                            |
| Size                                                                       | 120                                                |
| Stroke reserve                                                             | 0 mm                                               |
| Toothed belt pitch                                                         | 5 mm                                               |
| Mounting position                                                          | Any                                                |
| Guide                                                                      | Recirculating ball bearing                         |
| Structural design                                                          | Electromechanical linear axis<br>With toothed belt |
| Motor type                                                                 | Stepper motor<br>Servo motor                       |
| Measuring principle of linear potentiometer                                | Incremental                                        |
| Max. acceleration                                                          | 50 m/s <sup>2</sup>                                |
| Max. speed                                                                 | 5 m/s                                              |
| Repetition accuracy                                                        | ±0.08 mm                                           |
| Duty cycle                                                                 | 100%                                               |
| LABS (PWIS) conformity                                                     | VDMA24364 Zone III                                 |
| Degree of protection                                                       | IP40                                               |
| Ambient temperature                                                        | -10 °C...60 °C                                     |
| 2nd moment of area Iy                                                      | 1264580 mm <sup>4</sup>                            |
| 2nd moment of area Iz                                                      | 4365790 mm <sup>4</sup>                            |
| Max. driving torque                                                        | 34.1 Nm                                            |
| Max. force Fy                                                              | 5500 N                                             |
| Max. force Fz                                                              | 6890 N                                             |
| Max. force Fy total axis                                                   | 5500 N                                             |
| Max. force Fz total axis                                                   | 6890 N                                             |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 20240 N                                            |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 25355 N                                            |
| Max. no-load resistance to shifting                                        | 76.2 N                                             |
| Max. torque Mx                                                             | 104 Nm                                             |
| Max. torque My                                                             | 680 Nm                                             |
| Max. torque Mz                                                             | 680 Nm                                             |

| Feature                                                                    | Value                                                                     |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Max. moment Mx total axis                                                  | 104 Nm                                                                    |
| Max. moment My total axis                                                  | 680 Nm                                                                    |
| Max. moment Mz total axis                                                  | 680 Nm                                                                    |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 383 Nm                                                                    |
| My with theoretical service life of 100 km (from a guide perspective only) | 2502 Nm                                                                   |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 2502 Nm                                                                   |
| Distance between slide surface and guide center                            | 70 mm                                                                     |
| Max. feed force Fx                                                         | 1300 N                                                                    |
| No-load driving torque                                                     | 2.8 Nm                                                                    |
| Torsion moment of inertia It                                               | 435680 mm <sup>4</sup>                                                    |
| Mass moment of inertia JH per meter of stroke                              | 2.15 kgcm <sup>2</sup>                                                    |
| Mass moment of inertia JL per kg of payload                                | 6.9 kgcm <sup>2</sup>                                                     |
| Mass moment of inertia JO                                                  | 40.99 kgcm <sup>2</sup>                                                   |
| Mass moment of inertia JW for additional slide                             | 28.91 kgcm <sup>2</sup>                                                   |
| Feed constant                                                              | 165 mm/U                                                                  |
| Reference service life                                                     | 5000 km                                                                   |
| Slide weight                                                               | 4.19 kg                                                                   |
| Additional slide weight                                                    | 3.24 kg                                                                   |
| Basic weight with 0 mm stroke                                              | 15.7 kg                                                                   |
| Additional weight per 10 mm stroke                                         | 0.106 kg                                                                  |
| Dynamic deflection (load moved)                                            | 0.05% of axis length, maximum 0.5 mm                                      |
| Static deflection (load at standstill)                                     | 0.1 % of axis length                                                      |
| Profile material                                                           | Wrought aluminum alloy<br>Anodized                                        |
| Note on materials                                                          | RoHS compliant                                                            |
| Cover strip material                                                       | Stainless strip steel                                                     |
| Drive cover material                                                       | Wrought aluminum alloy<br>Anodized                                        |
| Slide carriage material                                                    | Quenched and tempered steel                                               |
| Guide rail material                                                        | Quenched and tempered steel<br>Corrotect coated                           |
| Belt pulley material                                                       | high-alloy stainless steel                                                |
| Slide material                                                             | Wrought aluminum alloy<br>Anodized                                        |
| Toothed belt clamping component material                                   | Cast stainless steel                                                      |
| Toothed belt material                                                      | Polychloroprene or nitrile rubber (NBR) with glass cord and nylon coating |