

# Belt driven linear actuator ELGR-TB-45-300-0H

Part number: 8083778

FESTO



## Data sheet

| Feature                                       | Value                                           |
|-----------------------------------------------|-------------------------------------------------|
| Drive pinion effective diameter               | 24.83 mm                                        |
| Working stroke                                | 300 mm                                          |
| Size                                          | 45                                              |
| Toothed belt elongation                       | 0.08 %                                          |
| Toothed belt pitch                            | 3 mm                                            |
| Mounting position                             | Any                                             |
| Guide                                         | Recirculating ball bearing guide                |
| Structural design                             | Electromechanical linear axis with toothed belt |
| Motor type                                    | Stepper motor<br>Servo motor                    |
| Max. acceleration                             | 50 m/s <sup>2</sup>                             |
| Max. speed                                    | 1 m/s...3 m/s                                   |
| Repetition accuracy                           | ±0.1 mm                                         |
| Duty cycle                                    | 100%                                            |
| LABS (PWIS) conformity                        | VDMA24364 zone III                              |
| Degree of protection                          | IP20                                            |
| Ambient temperature                           | -10 °C...50 °C                                  |
| 2nd moment of area Iy                         | 15700 mm <sup>4</sup>                           |
| 2nd moment of area Iz                         | 17940 mm <sup>4</sup>                           |
| Max. driving torque                           | 1.24 Nm                                         |
| Max. force Fy                                 | 100 N                                           |
| Max. force Fz                                 | 100 N                                           |
| Max. no-load resistance to shifting           | 16.1 N                                          |
| Max. feed force Fx                            | 100 N                                           |
| No-load driving torque                        | 0.2 Nm                                          |
| Mass moment of inertia JH per meter of stroke | 0.11 kgcm <sup>2</sup>                          |
| Mass moment of inertia JL per kg of payload   | 1.54 kgcm <sup>2</sup>                          |
| Feed constant                                 | 78 mm/U                                         |
| Reference service life                        | 5000 km                                         |
| Additional moving mass per 10 mm stroke       | 0.69 g                                          |
| Product weight                                | 4730 g                                          |

| Feature                                  | Value                                                                       |
|------------------------------------------|-----------------------------------------------------------------------------|
| Additional weight per 10 mm stroke       | 50 g                                                                        |
| Profile material                         | Wrought aluminum alloy<br>Anodized                                          |
| Note on materials                        | RoHS-compliant                                                              |
| Drive cover material                     | Wrought aluminum alloy<br>Anodized                                          |
| Belt pulley material                     | High-alloy stainless steel                                                  |
| Slide material                           | Wrought aluminum alloy<br>Anodized                                          |
| Toothed belt clamping component material | Beryllium bronze                                                            |
| Toothed belt material                    | Polychloroprene oder Nitrilkautschuk (NBR) mit Glascord und<br>Nylonüberzug |