

# Toothed belt axis ELGR-TB-45-200-0H

Part number: 8083777

FESTO



## Data sheet

| Feature                                                      | Value                                              |
|--------------------------------------------------------------|----------------------------------------------------|
| Effective diameter of drive pinion                           | 24.83 mm                                           |
| Working stroke                                               | 200 mm                                             |
| Size                                                         | 45                                                 |
| Toothed-belt stretch                                         | 0.08 %                                             |
| Toothed-belt pitch                                           | 3 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                       |
| 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 I <sub>y</sub>                            | 15700 mm <sup>4</sup>                              |
| 2nd moment of area I <sub>z</sub>                            | 17940 mm <sup>4</sup>                              |
| Max. drive torque                                            | 1.24 Nm                                            |
| Max. force F <sub>y</sub>                                    | 100 N                                              |
| Max. force F <sub>z</sub>                                    | 100 N                                              |
| Max. idle running transfer resistance                        | 16.1 N                                             |
| Max. feed force F <sub>x</sub>                               | 100 N                                              |
| Frictional torque independent of load                        | 0.2 Nm                                             |
| Mass moment of inertia J <sub>H</sub> per metre of stroke    | 0.11 kgcm <sup>2</sup>                             |
| Mass moment of inertia J <sub>L</sub> per kg of working load | 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                                               | 4230 g                                             |

| Feature                              | Value                                                                       |
|--------------------------------------|-----------------------------------------------------------------------------|
| Additional weight per 10 mm stroke   | 50 g                                                                        |
| Material profile                     | Wrought aluminium alloy<br>Anodised                                         |
| Note on materials                    | RoHS-compliant                                                              |
| Material drive cover                 | Wrought aluminium alloy<br>Anodised                                         |
| Material pulleys                     | High-alloy stainless steel                                                  |
| Material slide                       | Wrought aluminium alloy<br>Anodised                                         |
| Material toothed belt clamping piece | Beryllium bronze                                                            |
| Material toothed belt                | Polychloroprene oder Nitrilkautschuk (NBR) mit Glascord und<br>Nylonüberzug |