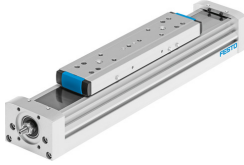


# Ball screw linear actuator ELGA-BS-KF-80-500-0H-20P-ML

FESTO

Part number: 8041833



## Data sheet

| Feature  | Value   |
|--|---|
| Working stroke   | 500 mm  |
| Size   | 80  |
| Stroke reserve   | 0 mm  |
| Screw diameter   | 15 mm   |
| Spindle pitch  | 20 mm/U                                       |
| Type code  | ELGA  |
| Mounting position  | Any   |
| Guide  | Recirculating ball bearing guide              |
| Structural design  | Electromechanical linear axis with ball screw |
| Motor type   | Stepper motor<br>Servo motor                  |
| Spindle type   | Ball screw                                    |
| Symbol   | 00991211                                      |
| Measuring principle of linear potentiometer                                | Incremental                                   |
| Max. acceleration  | 15 m/s <sup>2</sup>                           |
| Max. rotational speed  | 3000 1/min                                    |
| Max. speed   | 1 m/s   |
| Repetition accuracy  | ±0.02 mm                                      |
| Degree of protection   | IP40  |
| Ambient temperature  | -10 °C ... 60 °C                              |
| 2nd moment of area Iy  | 310000 mm <sup>4</sup>                        |
| 2nd moment of area Iz  | 977000 mm <sup>4</sup>                        |
| No-load torque at maximum travel speed                                     | 0.6 Nm  |
| No-load torque at minimum travel speed                                     | 0.35 Nm                                       |
| Max. force Fy  | 2500 N  |
| Max. force Fz  | 3050 N  |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 9200 N  |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 11224 N                                       |
| Max. torque Mx   | 36 Nm   |
| Max. torque My   | 228 Nm  |
| Max. torque Mz   | 228 Nm  |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 132 Nm  |
| My with theoretical service life of 100 km (from a guide perspective only) | 839 Nm  |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 839 Nm  |

| Feature                                       | Value  |
|---|--|
| Max. radial force on actuator shaft           | 250 N  |
| Max. feed force Fx                            | 1600 N   |
| Torsion moment of inertia It                  | 67300 mm <sup>4</sup>  |
| Mass moment of inertia JH per meter of stroke | 0.346 kgcm <sup>2</sup>  |
| Mass moment of inertia JL per kg of payload   | 0.1013 kgcm <sup>2</sup>                                       |
| Mass moment of inertia JO                     | 0.097 kgcm <sup>2</sup>  |
| Feed constant                                 | 20 mm/U  |
| Moving mass                                   | 1370 g   |
| Additional slide weight                       | 1110 g   |
| Additional weight per 10 mm stroke            | 46.5 g   |
| Dynamic deflection (load moved)               | 0.05% of axis length, maximum 0.5 mm                           |
| Static deflection (load at standstill)        | 0.1 % of axis length   |
| Material of end caps                          | Wrought aluminum alloy<br>Anodized                             |
| Profile material                              | Wrought aluminum alloy<br>Anodized                             |
| Note on materials                             | Contains paint-wetting impairment substances<br>RoHS-compliant |
| Drive cover material                          | Wrought aluminum alloy<br>Anodized                             |
| Slide carriage material                       | Steel  |
| Guide rail material                           | Steel  |
| Slide material                                | Wrought aluminum alloy<br>Anodized                             |
| Spindle nut material                          | Steel  |
| Spindle material                              | Steel  |