

## Spindle axes ELGA-BS

**FESTO**



## Selection aid

## Overview of toothed belt and spindle axes

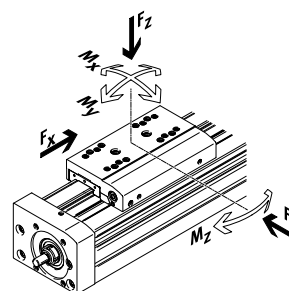
## Toothed belt axes

- Speeds of up to 10 m/s
- Acceleration of up to 50 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.08 mm
- Strokes of up to 8500 mm (longer strokes on request)
- Flexible motor mounting

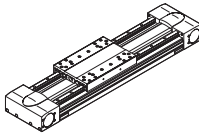
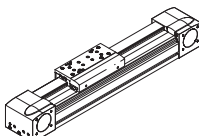
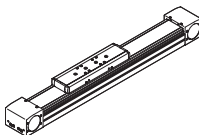
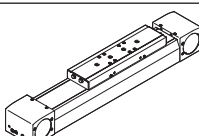
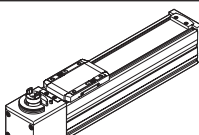
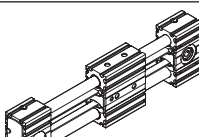
## Spindle axes

- Speeds of up to 2 m/s
- Acceleration of up to 20 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.003 mm
- Strokes of up to 3000 mm

## Coordinate system



## Toothed belt axes

| Type                                                                                | F <sub>x</sub><br>[N] | v<br>[m/s] | M <sub>x</sub><br>[Nm] | M <sub>y</sub><br>[Nm] | M <sub>z</sub><br>[Nm] | Characteristics                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------|-----------------------|------------|------------------------|------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Heavy-duty recirculating ball bearing guide                                         |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                       |
| EGC-HD-TB                                                                           |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                       |
|    | 450                   | 3          | 140                    | 275                    | 275                    | <ul style="list-style-type: none"><li>• Flat drive unit with rigid, closed profile</li><li>• Precision DUO guide rail with high load capacity</li><li>• Ideal as a base axis for linear gantries and cantilever axes</li></ul>                                                                        |
|                                                                                     | 1000                  | 5          | 300                    | 500                    | 500                    |                                                                                                                                                                                                                                                                                                       |
|                                                                                     | 1800                  | 5          | 900                    | 1450                   | 1450                   |                                                                                                                                                                                                                                                                                                       |
| Recirculating ball bearing guide                                                    |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                       |
| EGC-TB-KF                                                                           |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                       |
|  | 50                    | 3          | 3.5                    | 10                     | 10                     | <ul style="list-style-type: none"><li>• Rigid, closed profile</li><li>• Precision guide rail with high load capacity</li><li>• Small drive pinions reduce required driving torque</li><li>• Space-saving position sensing</li></ul>                                                                   |
|                                                                                     | 100                   | 5          | 16                     | 132                    | 132                    |                                                                                                                                                                                                                                                                                                       |
|                                                                                     | 350                   | 5          | 36                     | 228                    | 228                    |                                                                                                                                                                                                                                                                                                       |
|                                                                                     | 800                   | 5          | 144                    | 680                    | 680                    |                                                                                                                                                                                                                                                                                                       |
|                                                                                     | 2500                  | 5          | 529                    | 1820                   | 1820                   |                                                                                                                                                                                                                                                                                                       |
| ELGA-TB-KF                                                                          |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                       |
|  | 350                   | 5          | 16                     | 132                    | 132                    | <ul style="list-style-type: none"><li>• Internal guide and toothed belt</li><li>• Precision guide rail with high load capacity</li><li>• Guide and toothed belt protected by cover strip</li><li>• High feed forces</li></ul>                                                                         |
|                                                                                     | 800                   | 5          | 36                     | 228                    | 228                    |                                                                                                                                                                                                                                                                                                       |
|                                                                                     | 1300                  | 5          | 104                    | 680                    | 680                    |                                                                                                                                                                                                                                                                                                       |
|                                                                                     | 2000                  | 5          | 167                    | 1150                   | 1150                   |                                                                                                                                                                                                                                                                                                       |
| ELGA-TB-KF-F1                                                                       |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                       |
|  | 260                   | 5          | 16                     | 132                    | 132                    | <ul style="list-style-type: none"><li>• Suitable for use in the food zone</li><li>• "Clean look": smooth, easy-to-clean surfaces</li><li>• Internal guide and toothed belt</li><li>• Precision guide rail with high load capacity</li><li>• Guide and toothed belt protected by cover strip</li></ul> |
|                                                                                     | 600                   | 5          | 36                     | 228                    | 228                    |                                                                                                                                                                                                                                                                                                       |
|                                                                                     | 1000                  | 5          | 104                    | 680                    | 680                    |                                                                                                                                                                                                                                                                                                       |
| ELGC-TB-KF                                                                          |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                       |
|  | 75                    | 1.2        | 5.5                    | 4.7                    | 4.7                    | <ul style="list-style-type: none"><li>• Internal guide and toothed belt</li><li>• Precision guide rail with high load capacity</li><li>• Guide and toothed belt protected by cover strip</li></ul>                                                                                                    |
|                                                                                     | 120                   | 1.5        | 29.1                   | 31.8                   | 31.8                   |                                                                                                                                                                                                                                                                                                       |
|                                                                                     | 250                   | 1.5        | 59.8                   | 56.2                   | 56.2                   |                                                                                                                                                                                                                                                                                                       |
| ELGR-TB                                                                             |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                       |
|  | 50                    | 3          | 2.5                    | 20                     | 20                     | <ul style="list-style-type: none"><li>• Cost-optimised rod guide</li><li>• Ready-to-install unit</li><li>• Linear ball bearings with high load capacity for dynamic operation</li></ul>                                                                                                               |
|                                                                                     | 100                   | 3          | 5                      | 40                     | 40                     |                                                                                                                                                                                                                                                                                                       |
|                                                                                     | 350                   | 3          | 15                     | 124                    | 124                    |                                                                                                                                                                                                                                                                                                       |

## Selection aid

## Overview of toothed belt and spindle axes

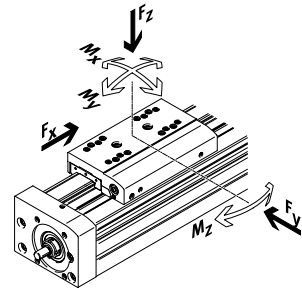
## Toothed belt axes

- Speeds of up to 10 m/s
- Acceleration of up to 50 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.08 mm
- Strokes of up to 8500 mm (longer strokes on request)
- Flexible motor mounting

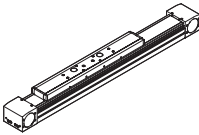
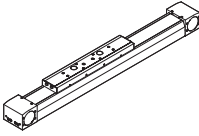
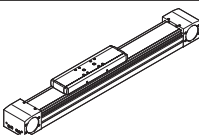
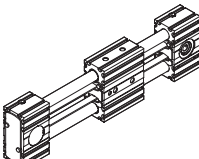
## Spindle axes

- Speeds of up to 2 m/s
- Acceleration of up to 20 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.003 mm
- Strokes of up to 3000 mm

## Coordinate system



## Toothed belt axes

| Type                                                                                | F <sub>x</sub><br>[N] | v<br>[m/s] | M <sub>x</sub><br>[Nm] | M <sub>y</sub><br>[Nm] | M <sub>z</sub><br>[Nm] | Characteristics                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------|-----------------------|------------|------------------------|------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roller bearing guide                                                                |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                  |
| ELGA-TB-RF                                                                          |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                  |
|    | 350                   | 10         | 11                     | 40                     | 40                     | <ul style="list-style-type: none"><li>• Heavy-duty roller bearing guide</li><li>• Guide and toothed belt protected by cover strip</li><li>• Speeds of up to 10 m/s</li><li>• Lower weight than axes with guide rails</li></ul>                                                                   |
|                                                                                     | 800                   | 10         | 30                     | 180                    | 180                    |                                                                                                                                                                                                                                                                                                  |
|                                                                                     | 1300                  | 10         | 100                    | 640                    | 640                    |                                                                                                                                                                                                                                                                                                  |
| ELGA-TB-RF-F1                                                                       |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                  |
|   | 260                   | 10         | 8.8                    | 32                     | 32                     | <ul style="list-style-type: none"><li>• Suitable for use in the food zone</li><li>• "Clean look": smooth, easy-to-clean surfaces</li><li>• Heavy-duty roller bearing guide</li><li>• Guide and toothed belt protected by cover strip</li><li>• Lower weight than axes with guide rails</li></ul> |
|                                                                                     | 600                   | 10         | 24                     | 144                    | 144                    |                                                                                                                                                                                                                                                                                                  |
|                                                                                     | 1000                  | 10         | 80                     | 512                    | 512                    |                                                                                                                                                                                                                                                                                                  |
| Plain-bearing guide                                                                 |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                  |
| ELGA-TB-G                                                                           |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                  |
|  | 350                   | 5          | 5                      | 30                     | 10                     | <ul style="list-style-type: none"><li>• Guide and toothed belt protected by cover strip</li><li>• For simple handling tasks</li><li>• As a drive component for external guides</li><li>• Insensitive to harsh ambient conditions</li></ul>                                                       |
|                                                                                     | 800                   | 5          | 10                     | 60                     | 20                     |                                                                                                                                                                                                                                                                                                  |
|                                                                                     | 1300                  | 5          | 120                    | 120                    | 40                     |                                                                                                                                                                                                                                                                                                  |
| ELGR-TB-GF                                                                          |                       |            |                        |                        |                        |                                                                                                                                                                                                                                                                                                  |
|  | 50                    | 1          | 1                      | 10                     | 10                     | <ul style="list-style-type: none"><li>• Cost-optimised rod guide</li><li>• Ready-to-install unit</li><li>• Heavy-duty plain bearings for use in harsh environmental conditions</li></ul>                                                                                                         |
|                                                                                     | 100                   | 1          | 2.5                    | 20                     | 20                     |                                                                                                                                                                                                                                                                                                  |
|                                                                                     | 350                   | 1          | 1                      | 40                     | 40                     |                                                                                                                                                                                                                                                                                                  |

## Selection aid

## Overview of toothed belt and spindle axes

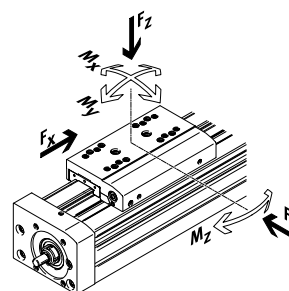
## Toothed belt axes

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- Acceleration of up to 50 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.08 mm
- Strokes of up to 8500 mm (longer strokes on request)
- Flexible motor mounting

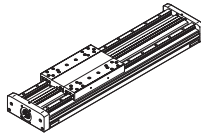
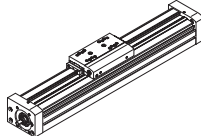
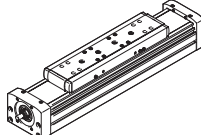
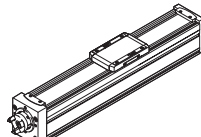
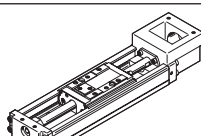
## Spindle axes

- Speeds of up to 2 m/s
- Acceleration of up to 20 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.003 mm
- Strokes of up to 3000 mm

## Coordinate system

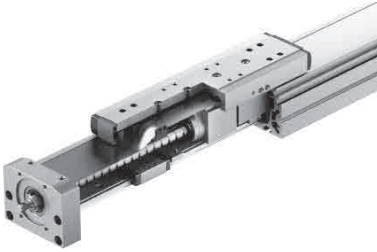


## Spindle axes

| Type                                                                                | $F_x$<br>[N] | $v$<br>[m/s] | $M_x$<br>[Nm] | $M_y$<br>[Nm] | $M_z$<br>[Nm] | Characteristics                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------|--------------|--------------|---------------|---------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Heavy-duty recirculating ball bearing guide                                         |              |              |               |               |               |                                                                                                                                                                                                                                                                                                                   |
| EGC-HD-BS                                                                           |              |              |               |               |               |                                                                                                                                                                                                                                                                                                                   |
|    | 400          | 0.5          | 140           | 275           | 275           | <ul style="list-style-type: none"><li>• Flat drive unit with rigid, closed profile</li><li>• Precision DUO guide rail with high load capacity</li><li>• Ideal as a base axis for linear gantries and cantilever axes</li></ul>                                                                                    |
|                                                                                     | 650          | 1.0          | 300           | 500           | 500           |                                                                                                                                                                                                                                                                                                                   |
|                                                                                     | 1500         | 1.5          | 900           | 1450          | 1450          |                                                                                                                                                                                                                                                                                                                   |
| Recirculating ball bearing guide                                                    |              |              |               |               |               |                                                                                                                                                                                                                                                                                                                   |
| EGC-BS-KF                                                                           |              |              |               |               |               |                                                                                                                                                                                                                                                                                                                   |
|  | 400          | 0.5          | 16            | 132           | 132           | <ul style="list-style-type: none"><li>• Rigid, closed profile</li><li>• Precision guide rail with high load capacity</li><li>• For the highest requirements in terms of feed force and accuracy</li><li>• Space-saving position sensing</li></ul>                                                                 |
|                                                                                     | 650          | 1.0          | 36            | 228           | 228           |                                                                                                                                                                                                                                                                                                                   |
|                                                                                     | 1500         | 1.5          | 144           | 680           | 680           |                                                                                                                                                                                                                                                                                                                   |
|                                                                                     | 3000         | 2.0          | 529           | 1820          | 1820          |                                                                                                                                                                                                                                                                                                                   |
| ELGA-BS-KF                                                                          |              |              |               |               |               |                                                                                                                                                                                                                                                                                                                   |
|  | 650          | 0.5          | 16            | 132           | 132           | <ul style="list-style-type: none"><li>• Internal guide and ball screw</li><li>• Precision guide rail with high load capacity</li><li>• For the highest requirements in terms of feed force and accuracy</li><li>• Guide and ball screw protected by cover strip</li><li>• Space-saving position sensing</li></ul> |
|                                                                                     | 1600         | 1.0          | 36            | 228           | 228           |                                                                                                                                                                                                                                                                                                                   |
|                                                                                     | 3400         | 1.5          | 104           | 680           | 680           |                                                                                                                                                                                                                                                                                                                   |
|                                                                                     | 6400         | 2.0          | 167           | 1150          | 1150          |                                                                                                                                                                                                                                                                                                                   |
| ELGC-BS-KF                                                                          |              |              |               |               |               |                                                                                                                                                                                                                                                                                                                   |
|  | 40           | 0.6          | 1.3           | 1.1           | 1.1           | <ul style="list-style-type: none"><li>• Internal guide and ball screw</li><li>• Guide and ball screw protected by cover strip</li><li>• Space-saving position sensing</li></ul>                                                                                                                                   |
|                                                                                     | 100          | 0.6          | 5.5           | 4.7           | 4.7           |                                                                                                                                                                                                                                                                                                                   |
|                                                                                     | 200          | 0.8          | 29.1          | 31.8          | 31.8          |                                                                                                                                                                                                                                                                                                                   |
|                                                                                     | 350          | 1.0          | 59.8          | 56.2          | 56.2          |                                                                                                                                                                                                                                                                                                                   |
| EGSK                                                                                |              |              |               |               |               |                                                                                                                                                                                                                                                                                                                   |
|  | 57           | 0.33         | 13            | 3.7           | 3.7           | <ul style="list-style-type: none"><li>• Spindle axes with maximum precision, compactness and rigidity</li><li>• Recirculating ball bearing guide and ball screw without caged ball bearings</li><li>• Standard designs in stock</li></ul>                                                                         |
|                                                                                     | 133          | 1.10         | 28.7          | 9.2           | 9.2           |                                                                                                                                                                                                                                                                                                                   |
|                                                                                     | 184          | 0.83         | 60            | 20.4          | 20.4          |                                                                                                                                                                                                                                                                                                                   |
|                                                                                     | 239          | 1.10         | 79.5          | 26            | 26            |                                                                                                                                                                                                                                                                                                                   |
|                                                                                     | 392          | 1.48         | 231           | 77.3          | 77.3          |                                                                                                                                                                                                                                                                                                                   |

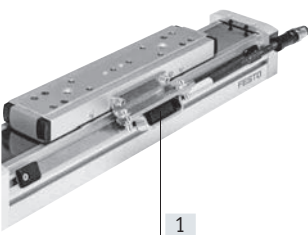
## Key features

### At a glance



- Stainless steel cover strip with magnetic seal provides basic protection for guide and spindle. This also makes it possible to reduce particulate emissions for use in clean environments
- The optional magnetic reversal in the slide guides the stainless steel cover strip through the slide and back onto the profile. The magnets ensure there is no friction on the visible surface of the cover strip
- The magnetic belt reversal minimises particulate emissions for use in clean rooms
- Internal, precision recirculating ball bearing guide with high load capacity for high torque loads
- Easy maintenance thanks to easily accessible lubrication connections

### Displacement encoder (optional)



[1] Displacement encoder (optional)  
The position of the slide can be sensed directly when using the incremental displacement encoder. This means that all elasticities of the drive train can be detected and can be adjusted by the motor controller (→ page 13)

### Sealing air connections



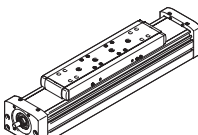
[1] Sealing air connections

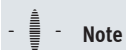
- Application of negative pressure minimises the dispersal of abraded particles into the environment
- Application of gauge pressure prevents dirt from getting into the axis

### Characteristic values of the axes

The specifications shown in the table are maximum values.

The precise values for each of the variants can be found in the relevant data sheet in the catalogue.

| Design                                                                              | Size | Working stroke | Speed | Repetition accuracy | Max. feed force | Guide characteristics |       |      |      |      |
|-------------------------------------------------------------------------------------|------|----------------|-------|---------------------|-----------------|-----------------------|-------|------|------|------|
|                                                                                     |      |                |       |                     |                 | Forces and torques    |       |      |      |      |
|                                                                                     |      |                |       |                     |                 | Fy                    | Fz    | Mx   | My   | Mz   |
|                                                                                     |      | [mm]           | [m/s] | [mm]                | [N]             | [N]                   | [N]   | [Nm] | [Nm] | [Nm] |
| Recirculating ball bearing guide                                                    |      |                |       |                     |                 |                       |       |      |      |      |
|  | 70   | 50 ... 900     | 0.5   | ±0.02               | 650             | 1500                  | 1850  | 16   | 132  | 132  |
|                                                                                     | 80   | 50 ... 1940    | 1.0   | ±0.02               | 1600            | 2500                  | 3050  | 36   | 228  | 228  |
|                                                                                     | 120  | 50 ... 2460    | 1.5   | ±0.02               | 3400            | 5500                  | 6890  | 104  | 680  | 680  |
|                                                                                     | 150  | 50 ... 3000    | 2.0   | ±0.02               | 6400            | 5500                  | 11000 | 167  | 1150 | 1150 |
|                                                                                     |      |                |       |                     |                 |                       |       |      |      |      |



### Note

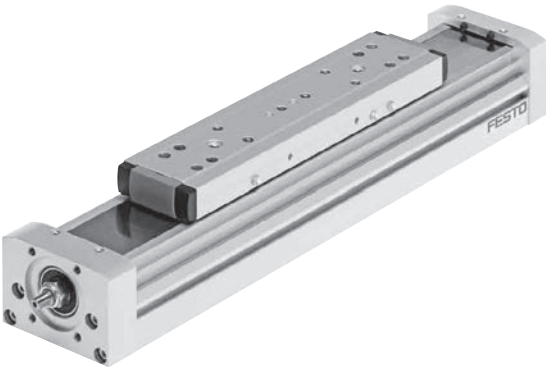
Engineering software

Electric Motion Sizing

[www.festo.com/x/electric-motion-sizing](http://www.festo.com/x/electric-motion-sizing)

Key features

Complete system comprising spindle axis, motor, motor controller and motor mounting kit



Motor → Page 32



Servo motor:  
EMMT-AS, EMME-AS  
Stepper motor:  
EMMS-ST

**Note**

A range of specially adapted complete solutions is available for the spindle axis ELGA and the motors.

Servo drive

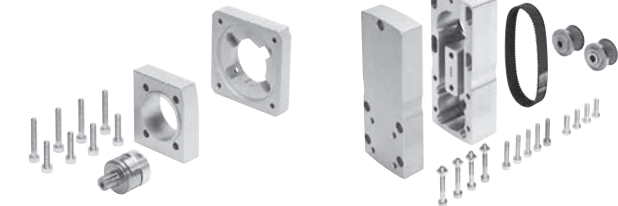


Servo drive:  
CMMT-AS  
Servo drive for extra-low voltage:  
CMMT-ST

Motor mounting kit

Axial kit → Page 32

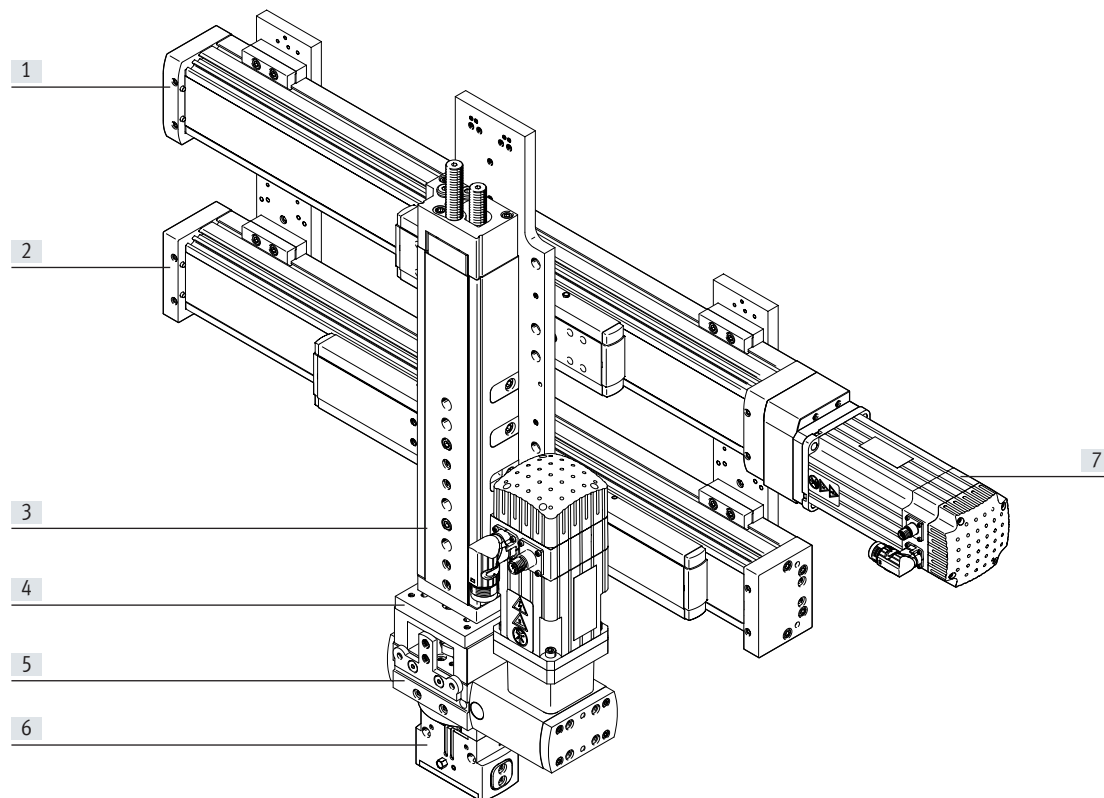
Parallel kit → Page 36



A range of complete kits is available for both parallel and axial motor mounting.

## Key features

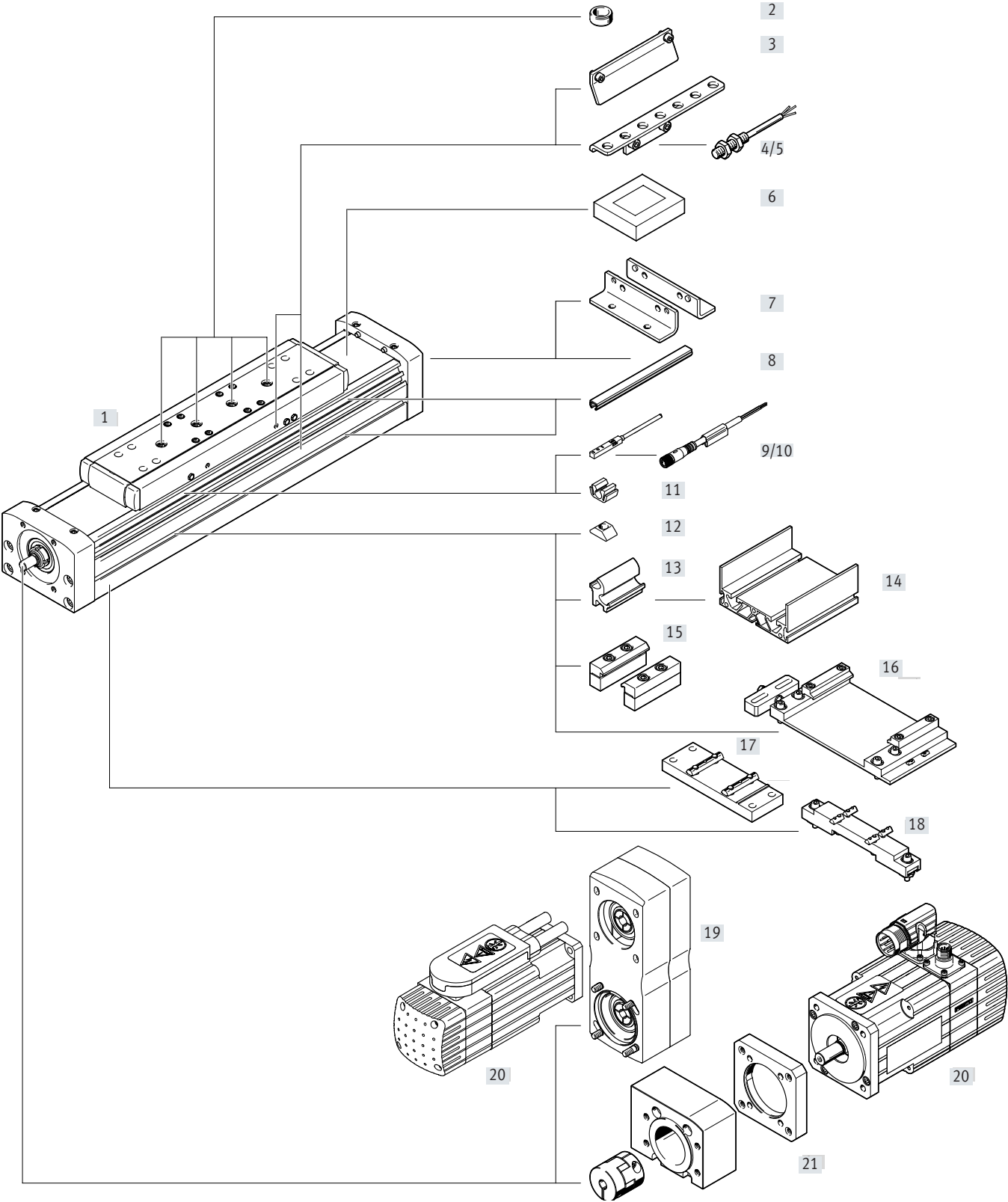
### System product for handling and assembly technology



### System components and accessories

|                        | Description                                                                 | → Internet        |
|------------------------|-----------------------------------------------------------------------------|-------------------|
| [1] Axes               | Wide range of combinations possible within handling and assembly technology | axis              |
| [2] Guide axes         | To support force and torque capacity in multi-axis applications             | guide axis        |
| [3] Drives             | Wide range of combinations possible within handling and assembly technology | drive             |
| [4] Adapters           | For drive/drive and drive/gripper connections                               | gripper           |
| [5] Semi-rotary drives | Wide range of variations possible within handling and assembly technology   | semi-rotary drive |
| [6] Grippers           | Wide range of variations possible within handling and assembly technology   | gripper           |
| [7] Motors             | Servo and stepper motors, with or without gear unit                         | motor             |

Peripherals overview



## Peripherals overview

| Accessories |                                     |                                                                                                                                                                                                                                                                   |                 |
|-------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
|             | Type                                | Description                                                                                                                                                                                                                                                       | → Page/Internet |
| [1]         | Spindle axis<br>ELGA-BS-KF          | Electric drive                                                                                                                                                                                                                                                    | 10              |
| [2]         | Centring pin/sleeve<br>ZBS, ZBH     | <ul style="list-style-type: none"> <li>For centring loads and attachments on the slide</li> <li>Included in the scope of delivery: <ul style="list-style-type: none"> <li>With size 70: 2x ZBS-5</li> <li>With size 80, 120, 150: 2x ZBH-9</li> </ul> </li> </ul> | 45              |
| [3]         | Switch lug<br>SF-EGC                | For sensing the slide position                                                                                                                                                                                                                                    | 43              |
| [4]         | Sensor bracket<br>HWS-EGC           | For mounting the inductive proximity sensors (round design) on the axis                                                                                                                                                                                           | 44              |
| [5]         | Proximity sensor, M8<br>SIEN-M8     | Inductive proximity sensor, round design                                                                                                                                                                                                                          | 47              |
| [6]         | Clamping element<br>EADT            | Tool for retensioning the cover strip                                                                                                                                                                                                                             | 45              |
| [7]         | Foot mounting<br>HPE                | <ul style="list-style-type: none"> <li>For mounting the axis on the end cap</li> <li>With higher forces and torques, the axis should be mounted using the profile</li> </ul>                                                                                      | 38              |
| [8]         | Slot cover<br>ABP                   | For protection against contamination                                                                                                                                                                                                                              | 45              |
| [9]         | Proximity sensor, T-slot<br>SIES-8M | Inductive proximity sensor, for T-slot                                                                                                                                                                                                                            | 46              |
| [10]        | Connecting cable<br>NEBU, SIM       | For proximity sensor                                                                                                                                                                                                                                              | 47              |
| [11]        | Clip<br>SMBK                        | For mounting the proximity sensor cable in the slot                                                                                                                                                                                                               | 45              |
| [12]        | Slot nut<br>NST                     | For mounting attachments                                                                                                                                                                                                                                          | 45              |
| [13]        | Adapter kit<br>DHAM                 | For mounting the support profile on the axis                                                                                                                                                                                                                      | 46              |
| [14]        | Support profile<br>HMIA             | For mounting and guiding an energy chain                                                                                                                                                                                                                          | 46              |
| [15]        | Profile mounting<br>MUE             | For mounting the axis on the side of the profile                                                                                                                                                                                                                  | 39              |
| [16]        | Adjusting kit<br>EADC-E16           | For mounting the axis on a vertical surface. Once mounted, the axis can be aligned horizontally                                                                                                                                                                   | 42              |
| [17]        | Central support<br>EAHF-L5          | For mounting the axis on the profile from underneath                                                                                                                                                                                                              | 40              |
| [18]        | Adjusting kit<br>EADC-E15           | Is height-adjustable. Can be used to easily compensate for any unevenness in the bearing surface                                                                                                                                                                  | 41              |
| [19]        | Parallel kit<br>EAMM-U              | For parallel motor mounting<br>(comprising: housing, clamping sleeve, toothed belt pulley, toothed belt)                                                                                                                                                          | 36              |
| [20]        | Motor<br>EMME, EMMT, EMMS           | Motors specially matched to the axis, with or without gear unit, with or without brake                                                                                                                                                                            | 32              |
| [21]        | Axial kit<br>EAMM-A                 | For axial motor mounting<br>(comprising: coupling, coupling housing and motor flange)                                                                                                                                                                             | 32              |

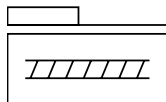
## Type codes

|             |                                  |  |
|-------------|----------------------------------|--|
| <b>001</b>  | <b>Series</b>                    |  |
| <b>ELGA</b> | Gantry axis                      |  |
| <b>002</b>  | <b>Drive system</b>              |  |
| <b>BS</b>   | Ball screw drive                 |  |
| <b>003</b>  | <b>Guide</b>                     |  |
| <b>KF</b>   | Recirculating ball bearing guide |  |
| <b>004</b>  | <b>Size</b>                      |  |
| <b>70</b>   | 70                               |  |
| <b>80</b>   | 80                               |  |
| <b>120</b>  | 120                              |  |
| <b>150</b>  | 150                              |  |
| <b>005</b>  | <b>Stroke range [mm]</b>         |  |
| <b>...</b>  | 50 ... 3000                      |  |
| <b>006</b>  | <b>Stroke reserve</b>            |  |
| <b>...H</b> | 0 ... 999 mm                     |  |
| <b>007</b>  | <b>Spindle pitch</b>             |  |
| <b>10P</b>  | 10 mm                            |  |
| <b>20P</b>  | 20 mm                            |  |
| <b>25P</b>  | 25 mm                            |  |
| <b>40P</b>  | 40 mm                            |  |

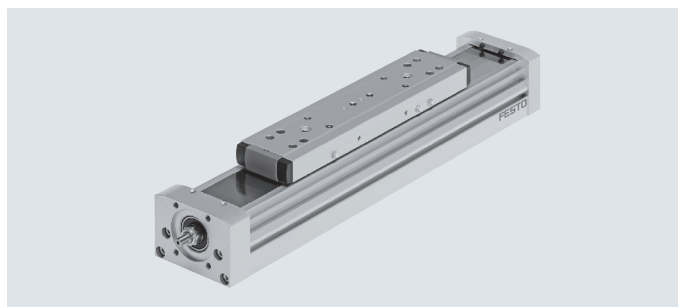
|            |                                                           |  |
|------------|-----------------------------------------------------------|--|
| <b>008</b> | <b>Motor attachment position</b>                          |  |
| <b>ML</b>  | Left                                                      |  |
| <b>MR</b>  | Right                                                     |  |
| <b>009</b> | <b>Additional slide</b>                                   |  |
|            | None                                                      |  |
| <b>ZL</b>  | 1 slide left                                              |  |
| <b>ZR</b>  | 1 slide right                                             |  |
| <b>010</b> | <b>Protection against particles</b>                       |  |
|            | Standard                                                  |  |
| <b>P11</b> | Cover strip with magnetic deflection                      |  |
| <b>011</b> | <b>Displacement encoder</b>                               |  |
|            | None                                                      |  |
| <b>M1</b>  | With displacement encoder, incremental, resolution 2.5 µm |  |
| <b>M2</b>  | With displacement encoder, incremental, resolution 10 µm  |  |
| <b>012</b> | <b>Displacement encoder attachment position</b>           |  |
|            | None                                                      |  |
| <b>F</b>   | Front                                                     |  |
| <b>B</b>   | Rear                                                      |  |

## Data sheet

## Function



-  Size  
70 ... 150
-  Stroke length  
50 ... 3000 mm
-  [www.festo.com](http://www.festo.com)



## General technical data

| Size                                      | 70                                     | 80          | 120         | 150         |
|-------------------------------------------|----------------------------------------|-------------|-------------|-------------|
| Spindle pitch [mm/rev]                    | 10                                     | 10 20       | 10 25       | 40          |
| Design                                    | Electromechanical axis with ball screw |             |             |             |
| Guide                                     | Recirculating ball bearing guide       |             |             |             |
| Mounting position                         | Any                                    |             |             |             |
| Working stroke [mm]                       | 50 ... 900                             | 50 ... 1940 | 50 ... 2460 | 50 ... 3000 |
| Max. feed force $F_x^{1)}$ [N]            | 650                                    | 1600        | 3400        | 6400        |
| No-load torque [Nm]                       | 0.17                                   | 0.3 0.35    | 1.0 1.0     | 2.2         |
| at min. travel speed [m/s]                | 0.05                                   | 0.1         | 0.2         | 0.2         |
| No-load torque [Nm]                       | 0.45                                   | 0.75 0.75   | 2.25 2.25   | 6.5         |
| at max. travel speed [m/s]                | 0.5                                    | 0.5 1       | 0.6 1.5     | 2           |
| Max. radial force <sup>2)</sup> [N]       | 220                                    | 250         | 500         | 4000        |
| Max. speed [m/s]                          | 0.5                                    | 0.5 1       | 0.6 1.5     | 2           |
| Max. rotational speed <sup>3)</sup> [rpm] | 3000                                   | 3000        | 3600        | 3000        |
| Max. acceleration [m/s <sup>2</sup> ]     | 15                                     |             |             |             |
| Repetition accuracy [mm]                  | ±0.02                                  |             |             |             |

1) The feed force affects the service life. (→ Page 16)

2) At the driving shaft

3) Rotational speed and speed are stroke-dependent

## Operating and environmental conditions

|                          |             |
|--------------------------|-------------|
| Ambient temperature [°C] | -10 ... +60 |
| Degree of protection     | IP40        |
| Duty cycle [%]           | 100         |

## Weight [g]

| Size                                        | 70   | 80   | 120   | 150   |
|---------------------------------------------|------|------|-------|-------|
| Basic weight with 0 mm stroke <sup>1)</sup> | 2160 | 3800 | 10500 | 25100 |
| Additional weight per 10 mm stroke          | 33   | 46   | 99    | 210   |
| Moving mass                                 |      |      |       |       |
| ELGA-...                                    | 804  | 1370 | 4459  | 10514 |
| ELGA-...-ZL/ZR                              | 620  | 1110 | 3600  | 5900  |

1) Including slide

## Spindle

| Size           | 70 | 80    | 120   | 150 |
|----------------|----|-------|-------|-----|
| Diameter [mm]  | 12 | 15    | 25    | 40  |
| Pitch [mm/rev] | 10 | 10 20 | 10 25 | 40  |

Data sheet

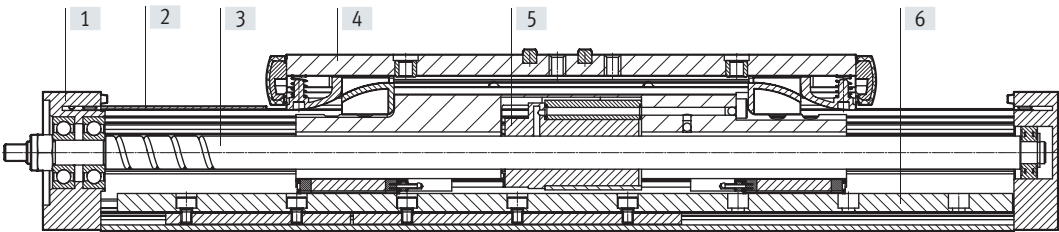
| Mass moment of inertia |                          |      |      |       |       |       |        |
|------------------------|--------------------------|------|------|-------|-------|-------|--------|
| Size                   |                          | 70   | 80   |       | 120   |       | 150    |
| Spindle pitch          | [mm/rev]                 | 10   | 10   | 20    | 10    | 25    | 40     |
| $J_0$                  | [kg mm <sup>2</sup> ]    | 3.8  | 9.7  | 9.7   | 103.8 | 103.8 | 863    |
| $J_S$ per metre stroke | [kg mm <sup>2</sup> /m]  | 14.2 | 34.6 | 34.6  | 275.6 | 275.6 | 1803.1 |
| $J_L$ per kg payload   | [kg mm <sup>2</sup> /kg] | 2.53 | 2.53 | 10.13 | 2.53  | 15.83 | 40.53  |

The mass moment of inertia  $J_{rot}$  of the rotating parts of the axis is calculated as follows:

$$J_{rot} = J_0 + J_S \times \text{working stroke [m]}$$

Materials

Sectional view



| Axis              |                               |                                              |
|-------------------|-------------------------------|----------------------------------------------|
| [1]               | Drive cover                   | Anodised wrought aluminium alloy             |
| [2]               | Cover strip                   | Stainless steel strip, non-corroding         |
| [3]               | Spindle                       | Steel                                        |
| [4]               | Slide                         | Anodised wrought aluminium alloy             |
| [5]               | Spindle nut                   | Steel                                        |
| [6]               | Profile with integrated guide | Anodised wrought aluminium alloy             |
| Note on materials |                               | RoHS-compliant                               |
|                   |                               | Contains paint-wetting impairment substances |

## Data sheet

| Technical data – Displacement encoder       |       |                                                                             | Dimensions → page 28 |
|---------------------------------------------|-------|-----------------------------------------------------------------------------|----------------------|
| Type                                        |       | ELGA-...-M1                                                                 | ELGA-...-M2          |
| Resolution                                  | [μm]  | 2.5                                                                         | 10                   |
| Max. travel speed with displacement encoder | [m/s] | 4                                                                           | 4                    |
| Encoder signal                              |       | 5 VTTL; A/A, B/B; reference signal (N/N) cyclically every 5 mm (zero pulse) |                      |
| Signal output                               |       | Line driver, alternating, resistant to sustained short circuit              |                      |
| Electrical connection                       |       | 8-pin plug, round design, M12                                               |                      |
| Cable length                                | [mm]  | 160                                                                         |                      |

| Operating and environmental conditions – Displacement encoder |      |                                   |
|---------------------------------------------------------------|------|-----------------------------------|
| Ambient temperature                                           | [°C] | –10 ... +70                       |
| Degree of protection                                          |      | IP64                              |
| CE marking (see declaration of conformity)                    |      | To EU EMC Directive <sup>1)</sup> |

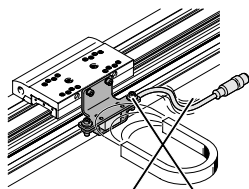
1) For information about the area of use, see the EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

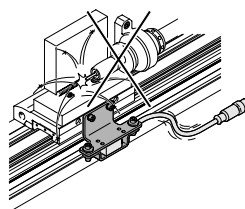
## Note regarding use

The spindle axis with displacement encoder is not designed for the following application examples:

- Magnetic field



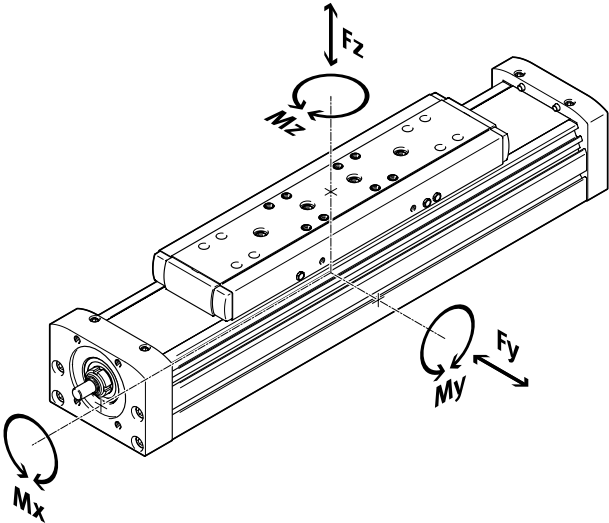
- Welding application



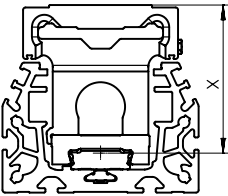
Data sheet

Characteristic load values

The indicated forces and torques refer to the centre of the guide. The point of application of force is the point where the centre of the guide and the longitudinal centre of the slide intersect. These values must not be exceeded during dynamic operation. Special attention must be paid to the deceleration phase.



Distance from the slide surface to the centre of the guide



| Distance from the slide surface to the centre of the guide |         |    |     |     |
|------------------------------------------------------------|---------|----|-----|-----|
| Size                                                       | 70      | 80 | 120 | 150 |
| Dimension x                                                | [mm] 51 | 60 | 87  | 111 |

| Max. permissible forces and torques for a service life of 5000 km |          |      |      |       |
|-------------------------------------------------------------------|----------|------|------|-------|
| Size                                                              | 70       | 80   | 120  | 150   |
| F <sub>y</sub> <sub>max.</sub>                                    | [N] 1500 | 2500 | 5500 | 5500  |
| F <sub>z</sub> <sub>max.</sub>                                    | [N] 1850 | 3050 | 6890 | 11000 |
| M <sub>x</sub> <sub>max.</sub>                                    | [Nm] 16  | 36   | 104  | 167   |
| M <sub>y</sub> <sub>max.</sub>                                    | [Nm] 132 | 228  | 680  | 1150  |
| M <sub>z</sub> <sub>max.</sub>                                    | [Nm] 132 | 228  | 680  | 1150  |

| Basic load ratings |             |       |       |     |
|--------------------|-------------|-------|-------|-----|
| Size               | 70          | 80    | 120   | 150 |
| Spindle pitch      | [mm/rev] 10 | 10 20 | 10 25 | 40  |

| Ball screw                   |          |           |             |       |
|------------------------------|----------|-----------|-------------|-------|
| Dynamic c <sub>dyn,BSD</sub> | [N] 4000 | 6800 5700 | 14100 12700 | 25000 |

 **Note**

For a guide system to have a service life of 5000 km, the load comparison factor must have a value of  $f_v \leq 1$ , based on the maximum permissible forces and torques for a service life of 5000 km.

If the axis is subjected to two or more of the indicated forces and torques simultaneously, the following equation must be satisfied in addition to the indicated maximum loads:

Calculating the load comparison factor:

$$f_v = \frac{|F_{y1}|}{F_{y\max}} + \frac{|F_{z1}|}{F_{z\max}} + \frac{|M_{x1}|}{M_{x\max}} + \frac{|M_{y1}|}{M_{y\max}} + \frac{|M_{z1}|}{M_{z\max}} \leq 1$$

F<sub>1</sub>/M<sub>1</sub> = dynamic value

F<sub>2</sub>/M<sub>2</sub> = maximum value

## Data sheet

### Service life of the guide

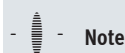
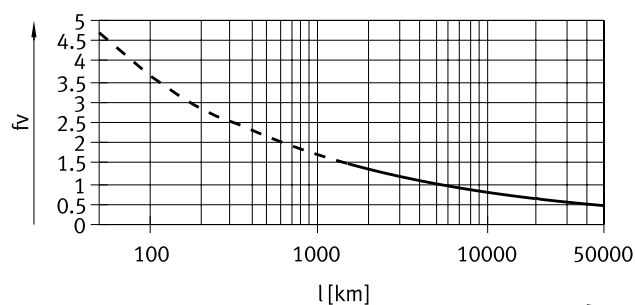
The service life of the guide depends on the load. To be able to make a statement as to the service life of the guide, the graph below plots the load comparison factor  $f_v$  against the service life.

These values are only theoretical. You must consult your local Festo contact for a load comparison factor  $f_v$  greater than 1.5.

#### Load comparison factor $f_v$ as a function of service life

Example:

A user wants to move an  $x$  kg load. Using the formula (→ page 14) gives a value of 1.5 for the load comparison factor  $f_v$ . According to the graph, the guide would have a service life of approx. 1500 km. Reducing the acceleration reduces the  $M_y$  and  $M_z$  values. A load comparison factor  $f_v$  of 1 now gives a service life of 5000 km.



#### Note

Engineering software  
Electric Motion Sizing  
[www.festo.com/x/electric-motion-sizing](http://www.festo.com/x/electric-motion-sizing)

The engineering software can be used to calculate the guide workload for a service life of 5000 km.

$f_v > 1.5$  are only theoretical comparison values for the recirculating ball bearing guide.

### Comparison of the characteristic load values for 5000 km with dynamic forces and torques of recirculating ball bearing guides

The characteristic load values of bearing guides are standardised to ISO and JIS using dynamic and static forces and torques. These forces and torques are based on an expected guide system service life of 100 km to ISO or 50 km to JIS. As the characteristic load values are dependent on the service life, the maximum permissible forces and torques for a 5000 km service life cannot be compared with the dynamic forces and torques of bearing guides to ISO/JIS.

To make it easier to compare the guide capacity of linear axes ELGA with bearing guides, the table below lists the theoretically permissible forces and torques for a calculated service life of 100 km. This corresponds to the dynamic forces and torques to ISO.

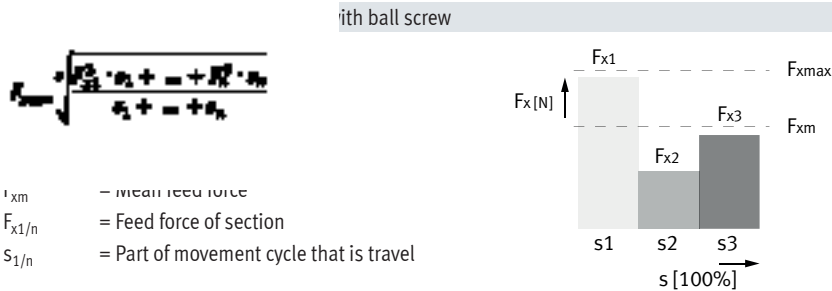
These 100 km values have been calculated mathematically and are only to be used for comparing with dynamic forces and torques to ISO. The drives must not be loaded with these characteristic values as this could damage the axes.

| Max. permissible forces and torques for a theoretical service life of 100 km (from a guide perspective only) |      |      |       |       |       |
|--------------------------------------------------------------------------------------------------------------|------|------|-------|-------|-------|
| Size                                                                                                         |      | 70   | 80    | 120   | 150   |
| $F_{y_{max}}$                                                                                                | [N]  | 5520 | 9200  | 20240 | 20240 |
| $F_{z_{max}}$                                                                                                | [N]  | 6808 | 11224 | 25355 | 40480 |
| $M_{x_{max}}$                                                                                                | [Nm] | 59   | 132   | 383   | 615   |
| $M_{y_{max}}$                                                                                                | [Nm] | 486  | 839   | 2502  | 4232  |
| $M_{z_{max}}$                                                                                                | [Nm] | 486  | 839   | 2502  | 4232  |

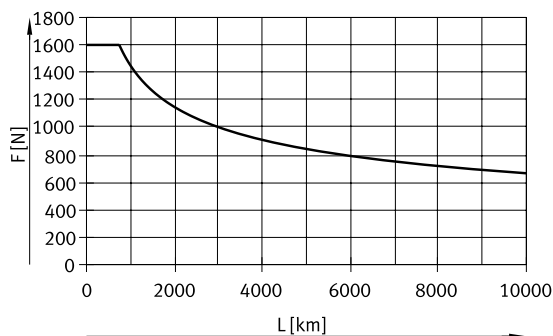
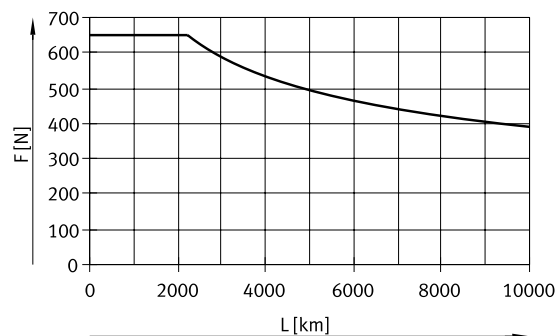
Data sheet

Service life of the spindle

- The service life of the spindle axis depends on the service life of the guide (→ page 15) and of the ball screw.  
The operating coefficient plays a considerable role in determining the possible service life. It can be determined with the help of the table (→ page 17)
- The service life ends when the maximum number of switching cycles or maximum running performance has been reached:
  - 5 million switching cycles or 5000 km running performance
- The distance between the furthestmost and rearmost positions must be at least 2.5 times the spindle pitch per travel cycle
- The specifications for running performance are based on experimentally determined and theoretically calculated data (at room temperature).  
The running performance that can be achieved in practice can deviate considerably from the specified curves under different parameters



Mean feed force  $F_{xm}$  as a function of running performance  $L$ , with an operating coefficient  $f_B$  of 1.0, at room temperature

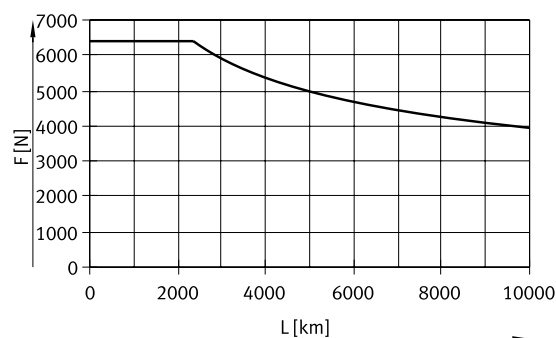
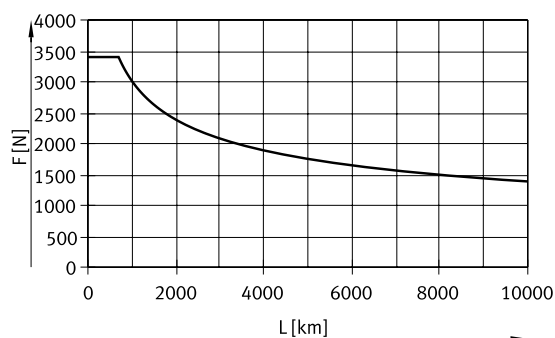


## Data sheet

Mean feed force  $F_{xm}$  as a function of running performance  $L$ , with an operating coefficient  $f_B$  of 1.0, at room temperature

Size 120

Size 150



Service life taking into account the operating coefficient

$$L_{act} = \frac{L}{f_B}$$

$L_{act}$  = Actual service life

$L$  = Target service life

(→ graphs)

$f_B$  = Operating coefficient

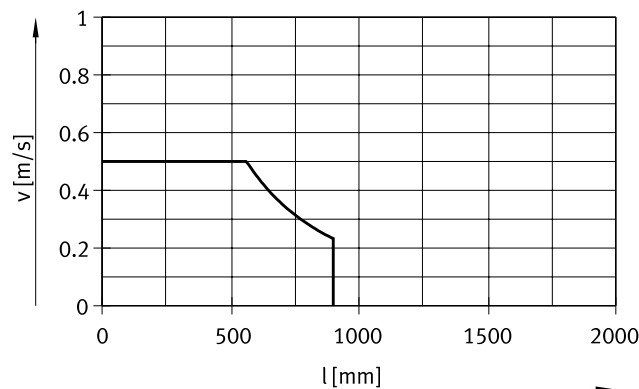
| Load <sup>1)</sup> | Operating coefficient $f_B$ | Application example       |
|--------------------|-----------------------------|---------------------------|
| None               | 1.0 ... 1.2                 | Measuring machine         |
| Light              | 1.2 ... 1.4                 | Handling, robotics        |
| Medium             | 1.4 ... 1.6                 | Press-in operations       |
| High               | 1.6 ... 2.0                 | Construction, agriculture |

1) Loads caused by impact, temperature, contamination, shock and vibrations

Data sheet

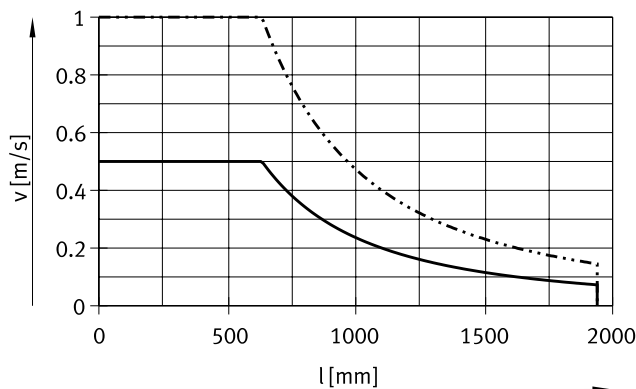
Speed  $v$  as a function of working stroke  $l$

Size 70



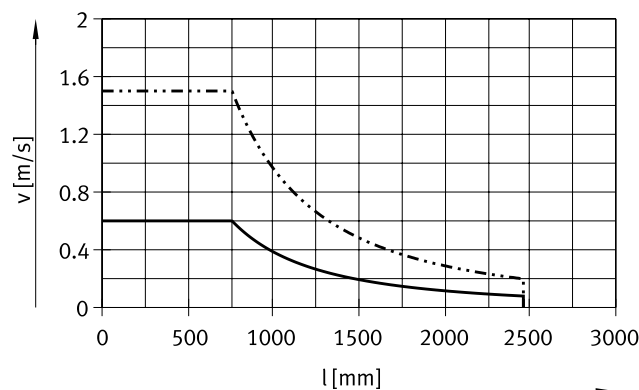
— ELGA-70-10P

Size 80



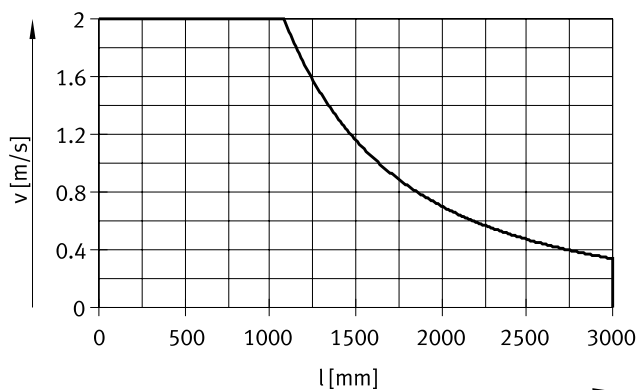
— ELGA-80-10P  
- . - ELGA-80-20P

Size 120



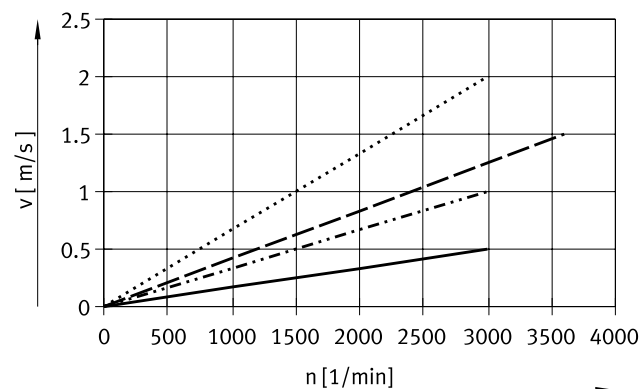
— ELGA-120-10P  
- . - ELGA-120-25P

Size 150



— ELGA-150-40P

Velocity  $v$  as a function of rotational speed  $n$



Note

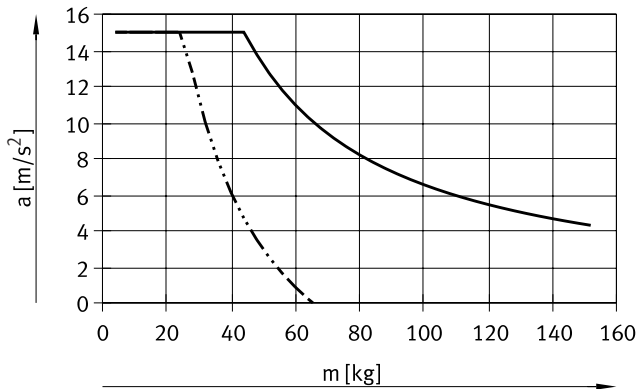
Rotational speed is stroke-dependent. Note maximum rotational speed.

— ELGA-70-10P/-80-10P/-120-10P  
- . - ELGA-80-20P  
- - - ELGA-120-25P  
... ELGA-150-40P

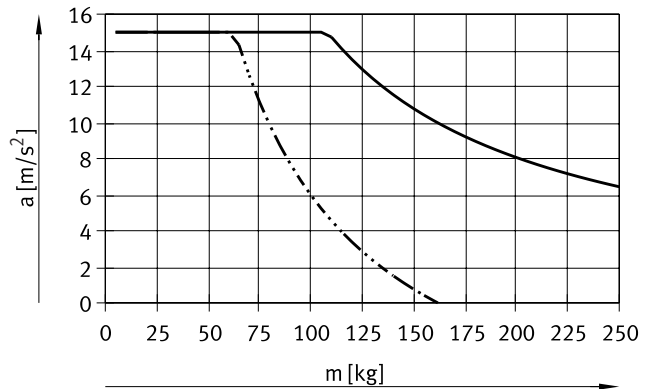
# Data sheet

## Max. acceleration $a$ as a function of payload $m$

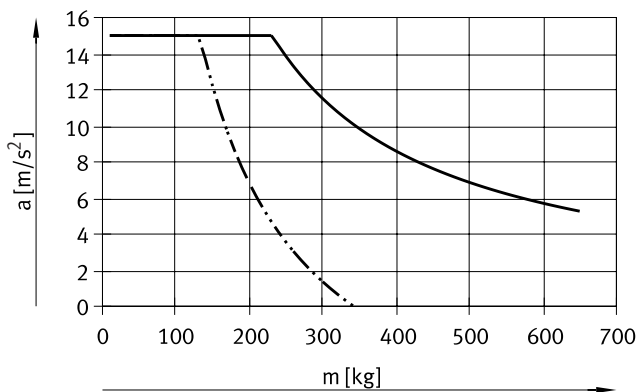
Size 70



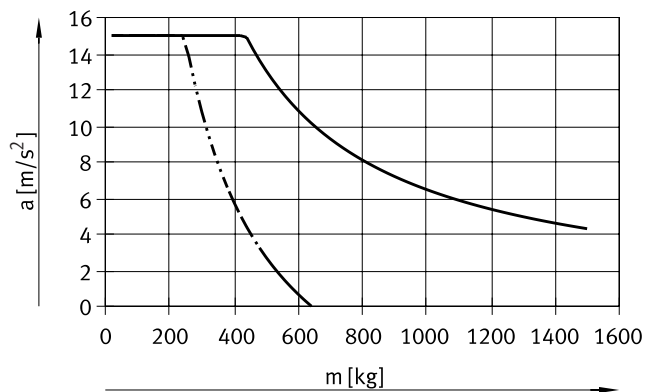
Size 80



Size 120

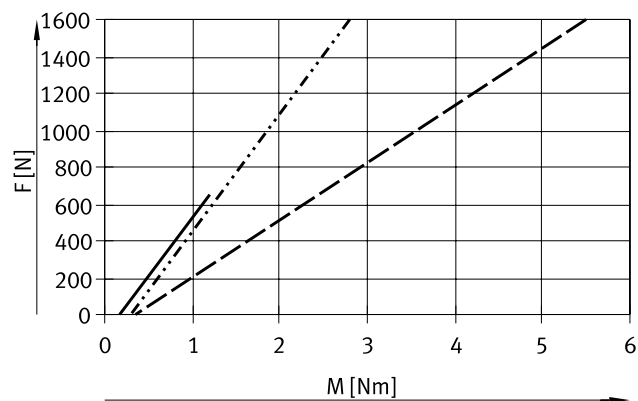


Size 150

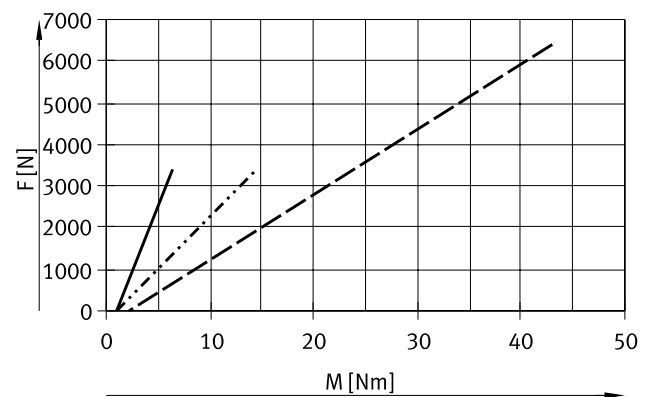


— Horizontal mounting position  
 - - - Vertical mounting position

## Theoretical feed force $F$ as a function of input torque $M$



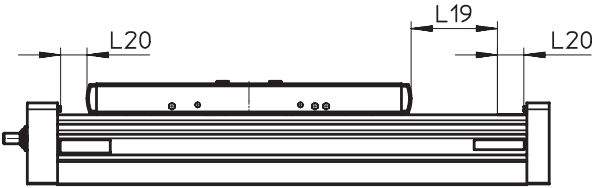
— ELGA-70-10P  
 - - - ELGA-80-10P  
 - . - ELGA-80-20P



— ELGA-120-10P  
 - - - ELGA-120-25P  
 - . - ELGA-150-40P

Data sheet

Stroke reserve



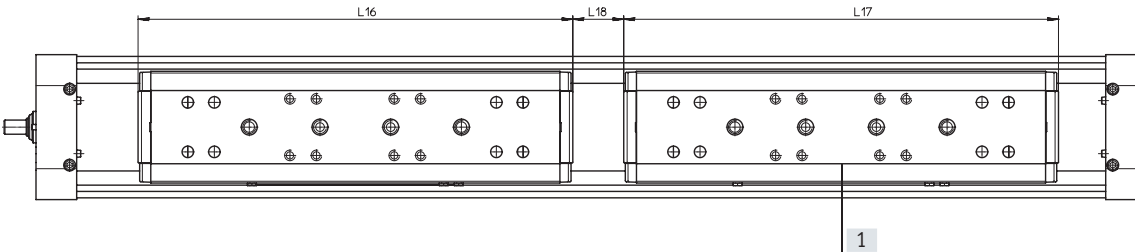
L19 = Nominal stroke  
L20 = Stroke reserve

- The stroke reserve is a safety distance from the mechanical end position and is not used in normal operation
- The sum of the nominal stroke and 2x stroke reserve must not exceed the maximum permissible working stroke
- The length can be freely selected
- The stroke reserve is defined via the "stroke reserve" characteristic in the modular product system

**Example:**  
Type ELGA-BS-KF-70-500-20H-...  
Nominal stroke = 500 mm  
2x stroke reserve = 40 mm  
Working stroke = 540 mm  
(540 mm = 500 mm + 2x 20 mm)

Working stroke reduction  
With axis ELGA with additional slide ZL/ZR

For a spindle axis with additional slide, the working stroke is reduced by the length of the additional slide and the distance between both slides



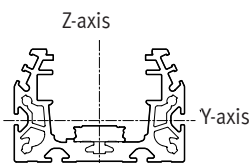
L16 = Slide length  
L17 = Additional slide length  
L18 = Distance between the two slides  
[1] Additional slide

**Example:**  
Type ELGA-BS-KF-70-500-...-ZR  
Working stroke without additional slide = 500 mm  
L18 = 50 mm  
L16, L17 = 221 mm  
Working stroke with additional slide = 229 mm  
(500 mm – 50 mm – 221 mm)

| Dimensions – Additional slide             |      |      |      |       |
|-------------------------------------------|------|------|------|-------|
| Size                                      | 70   | 80   | 120  | 150   |
| Length L17 [mm]                           | 221  | 246  | 335  | 378.4 |
| Min. distance between the slides L18 [mm] | ≥ 50 | ≥ 50 | ≥ 50 | ≥ 50  |

## Data sheet

## 2nd moments of area

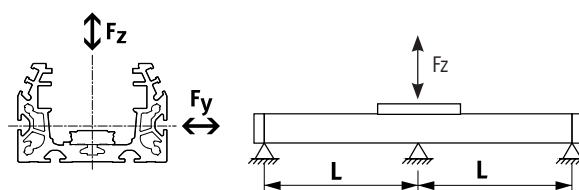
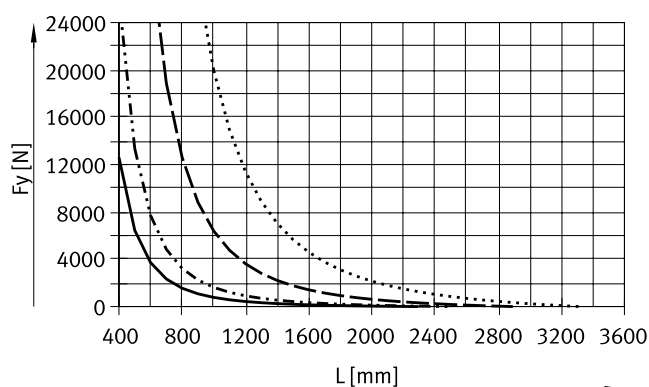


| Size  |                    | 70                | 80                | 120                | 150                 |
|-------|--------------------|-------------------|-------------------|--------------------|---------------------|
| $I_y$ | [mm <sup>4</sup> ] | $165 \times 10^3$ | $310 \times 10^3$ | $1.24 \times 10^6$ | $4.70 \times 10^6$  |
| $I_z$ | [mm <sup>4</sup> ] | $472 \times 10^3$ | $977 \times 10^3$ | $3.80 \times 10^6$ | $11.81 \times 10^6$ |

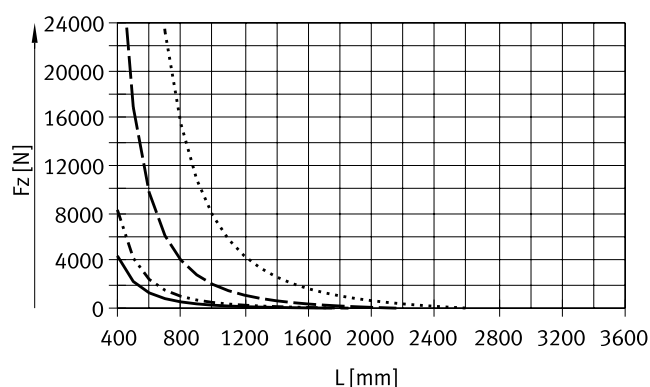
## Maximum permissible support spacing L (without profile mounting MUE/central support EAHF) as a function of force F

In order to limit deflection in the case of large strokes, the axis may need to be supported.

The following graphs can be used to determine the maximum permissible support spacing L as a function of force F acting on the axis. The deflection is  $f = 0.5$  mm.

Force  $F_y$ 

— ELGA-70  
 - - - ELGA-80  
 - · - ELGA-120  
 · · · ELGA-150

Force  $F_z$ 

## Recommended deflection limits

Adherence to the following deflection limits is recommended so as not to impair the functionality of the axes.

Greater deformation can result in increased friction, greater wear and reduced service life.

| Size       | Dynamic deflection<br>(moving mass)   | Static deflection<br>(stationary load) |
|------------|---------------------------------------|----------------------------------------|
| 70 ... 150 | 0.05% of the axis length, max. 0.5 mm | 0.1% of the axis length                |

## Data sheet

### Central lubrication

The lubrication connections enable the guide and the ball screw of the spindle axis ELGA-BS-KF to be permanently lubricated in applications in humid or wet ambient conditions using semi- or fully automatic relubrication devices.

- The axes are suitable for oils and greases
- The connection option is already available in the standard design of the axes
- There is a dedicated lubrication connection for the spindle nut and the two ball cassettes

Slide dimensions

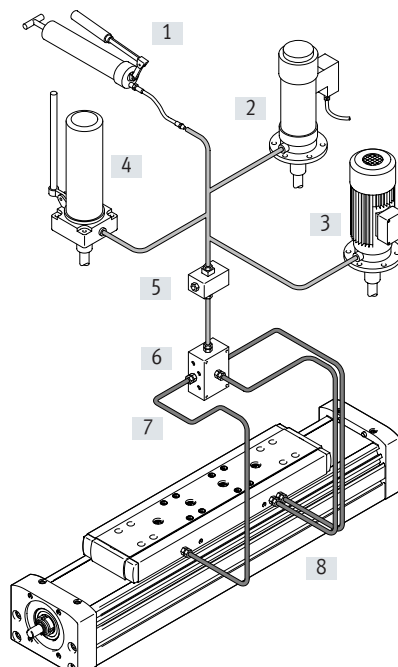
→ page 23

### Structure of a central lubrication system

A central lubrication system requires various additional components. The illustration shows different options (using a hand pump, pneumatic container pump or electric container pump) required as a minimum for designing a central lubrication system. Festo does not sell these additional components; however, they can be obtained from the following companies:

- Lincoln
- Bielomatik
- SKF (Vogel)

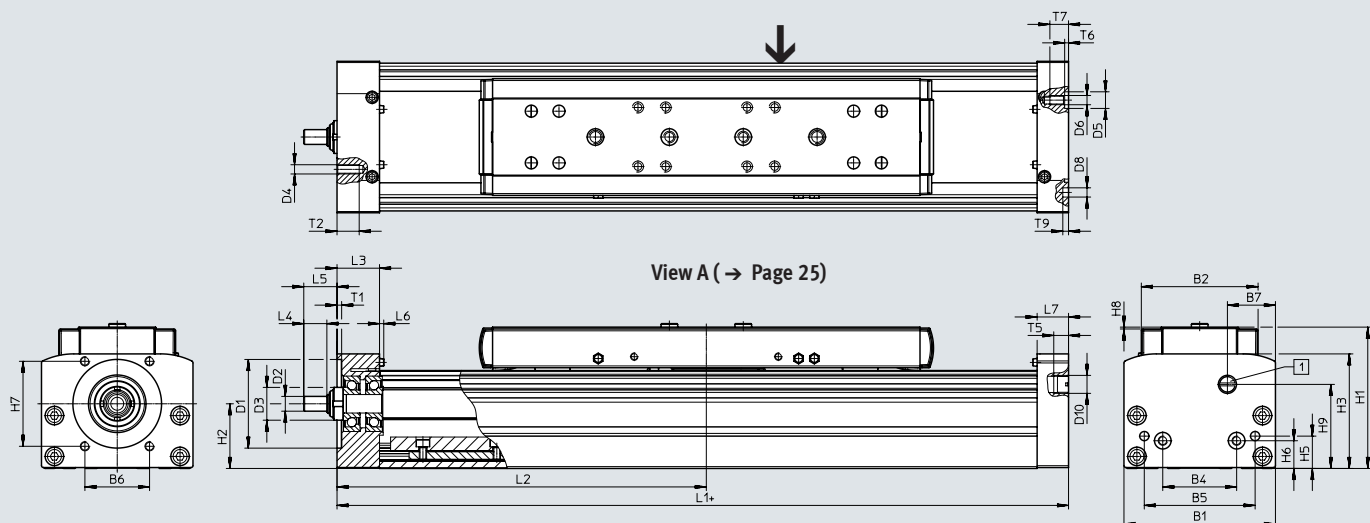
Festo recommends these companies because they can supply all the necessary components.



- [1] Hand pump
- [2] Pneumatic container pump
- [3] Electric container pump
- [4] Manually operated container pump
- [5] Nipple block
- [6] Distributor block
- [7] Tubing or piping
- [8] Fittings

# Data sheet

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)


+ = plus stroke length + 2x stroke reserve

[1] Sealing air connection

| Size | B1  | B2   | B4 | B5 | B6 | B7   | D1<br>ø | D2<br>ø | D3<br>ø   | D4 | D5<br>ø<br>H7 |
|------|-----|------|----|----|----|------|---------|---------|-----------|----|---------------|
| 70   | 69  | 48.2 | 30 | 45 | 29 | 21.5 | 38      | 6       | A/F 13 mm | M5 | –             |
| 80   | 82  | 63.2 | 40 | 60 | 35 | 26   | 48      | 8       | 18        | M5 | 9             |
| 120  | 120 | 95   | 80 | 40 | 64 | 35   | 62      | 12      | 28        | M6 | –             |
| 150  | 154 | 125  | 40 | 80 | 80 | 42   | 95      | 25      | 44        | M8 | –             |

| Size | D6 | D8<br>ø<br>H7 | D10  | H1    | H2   | H3   | H5   | H6   | H7 | H8 | H9   | L1  |
|------|----|---------------|------|-------|------|------|------|------|----|----|------|-----|
| 70   | M5 | 5             | G1/8 | 64    | 28.5 | 50.5 | 13   | 13   | 36 | 1  | 37.5 | 268 |
| 80   | M5 | 5             | G1/8 | 76.5  | 35   | 62   | 17.5 | 15   | 46 | 1  | 45.5 | 296 |
| 120  | M8 | 9             | G1/8 | 111.5 | 54   | 89   | 22   | 22   | 54 | 1  | 65.5 | 409 |
| 150  | M8 | 9             | G1/8 | 141.5 | 72.5 | 122  | 26.5 | 26.5 | 80 | 1  | 91   | 512 |

| Size | L2<br>min. | L3 | L4   | L5   | L6  | L7 | T1  | T2 | T5 | T6  | T7   | T9  |
|------|------------|----|------|------|-----|----|-----|----|----|-----|------|-----|
| 70   | 133.5      | 21 | 8    | 14   | 2.3 | 16 | 2.5 | 12 | 8  | –   | 10   | 3.1 |
| 80   | 148.2      | 23 | 12.5 | 18   | 2.3 | 17 | 2.5 | 12 | 8  | 2.1 | 10.1 | 3.1 |
| 120  | 202.3      | 33 | 17.5 | 25.5 | 1.8 | 30 | 3   | 15 | 8  | –   | 16   | 2.1 |
| 150  | 235.7      | 43 | 23   | 30.5 | 3.5 | 37 | 3   | 20 | 8  | –   | 16   | 2.1 |

Data sheet

Dimensions

Profile

Download CAD data → [www.festo.com](http://www.festo.com)

Size 70

Size 80

Size 120

Size 150

[1]

[2]

[1]

[2]

[1]

[2]

[1]

[2]

[1]

[2]

With size 70, 80: slot nut NST-5-M5

With size 120, 150: slot nut NST-8-M6

- -

Note

Requirements for the evenness of the bearing surface and of attachments as well as for use in parallel structures

→ [www.festo.com/sp](http://www.festo.com/sp) User documentation.

| Size | B10 | B11 | H10 |
|------|-----|-----|-----|
| 70   | 67  | 40  | 20  |
| 80   | 80  | 40  | 20  |
| 120  | 116 | 80  | 20  |
| 150  | 150 | 80  | 20  |

# Data sheet

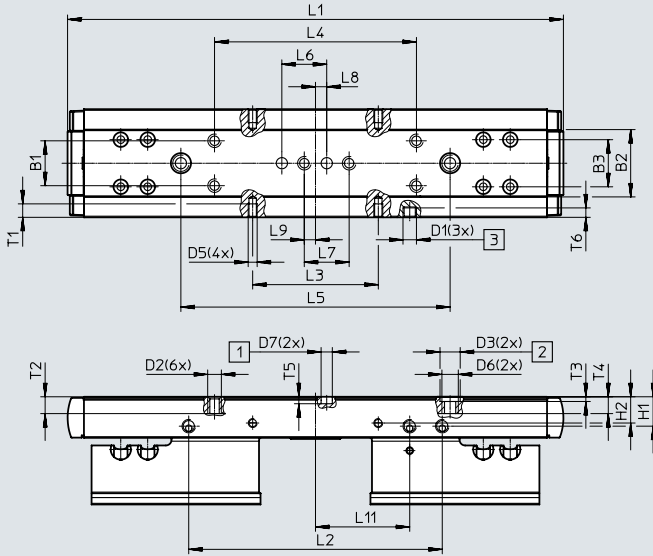
## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Slide

Size 70

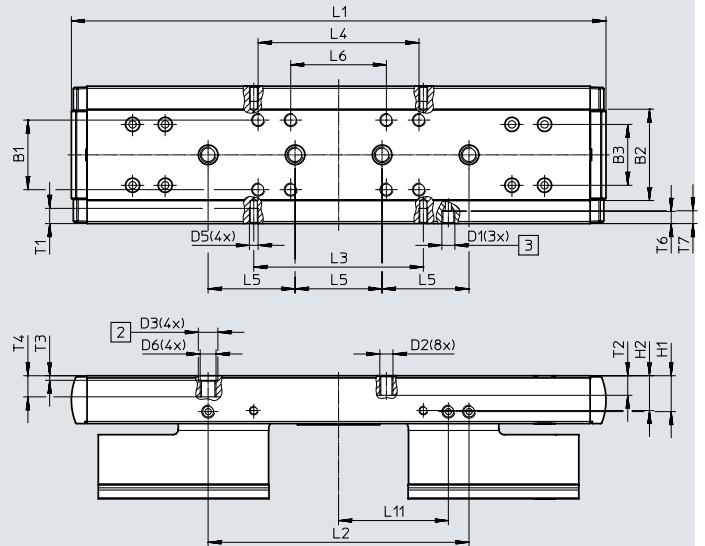
View A



- [1] Drilled hole for centring pin ZBS
- [2] Drilled hole for centring sleeve ZBH
- [3] Lubrication connections

Size 80

View A



| Size | B1   | B2   | B3   | D1 | D2 | D3<br>ø<br>H7 | D5 | D6 | D7<br>ø<br>H7 |
|------|------|------|------|----|----|---------------|----|----|---------------|
|      | ±0.1 | ±0.2 | ±0.1 |    |    |               |    |    |               |
| 70   | 20   | 30   | 21   | M6 | M5 | 9             | M4 | M6 | 5             |
| 80   | 32   | 42   | 28   | M6 | M5 | 9             | M4 | M6 | –             |

| Size | H1   | H2   | L1  | L2   | L3   | L4   | L5    | L6   | L7    | L8 |
|------|------|------|-----|------|------|------|-------|------|-------|----|
|      | ±0.1 |      |     | ±0.1 | ±0.1 | ±0.1 | ±0.03 | ±0.1 | ±0.03 |    |
| 70   | 13.1 | 11.7 | 221 | 113  | 56   | 90   | 120   | 20   | 20    | 5  |
| 80   | 16.5 | 16   | 246 | 120  | 78   | 74   | 40    | 44   | –     | –  |

| Size | L9 | L11  | T1 | T2  | T3   | T4  | T5   | T6   |                     | T7   |
|------|----|------|----|-----|------|-----|------|------|---------------------|------|
|      |    |      |    |     | +0.1 |     | +0.1 | min. | max.                | –0.1 |
| 70   | 5  | 42   | 6  | 7.5 | 2.1  | 7.5 | 3.1  | 4.2  | 4.6 <sub>–0.1</sub> | –    |
| 80   | –  | 50.5 | 8  | 9   | 2.1  | 9.7 | –    | 5.6  | 5.9 <sub>–0.1</sub> | 5.9  |

# Data sheet

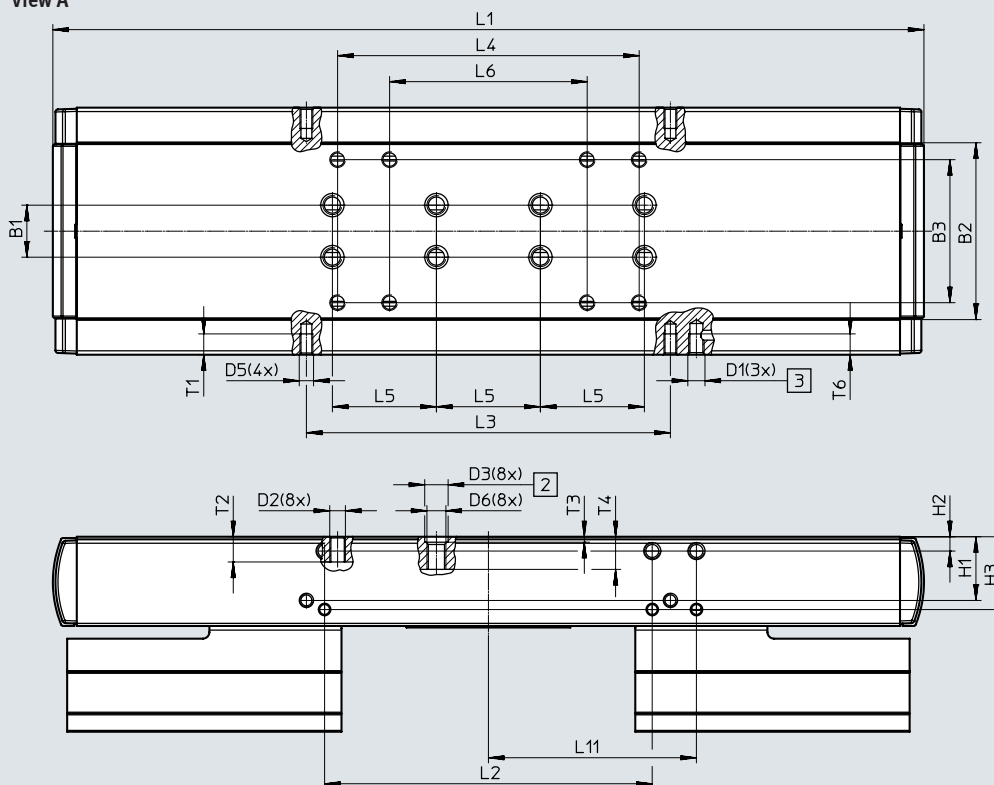
## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Slide

Size 120

View A



[2] Drilled hole for centring sleeve ZBH

[3] Lubrication connections

| Size | B1          | B2         | B3         | D1 | D2 | D3<br>Ø<br>H7 | D5 | D6 | H1   | H2  | H3 | L1  |
|------|-------------|------------|------------|----|----|---------------|----|----|------|-----|----|-----|
| 120  | ±0.03<br>20 | ±0.2<br>68 | ±0.1<br>55 | M6 | M5 | 9             | M5 | M6 | 24.5 | 5.5 | 28 | 335 |

| Size | L2          | L3          | L4          | L5          | L6         | L11 | T1 | T2  | T3          | T4    | T6 |
|------|-------------|-------------|-------------|-------------|------------|-----|----|-----|-------------|-------|----|
| 120  | ±0.1<br>126 | ±0.1<br>140 | ±0.2<br>116 | ±0.03<br>40 | ±0.2<br>76 | 80  | 8  | 9.7 | +0.1<br>2.1 | 12.55 | 8  |

## Data sheet

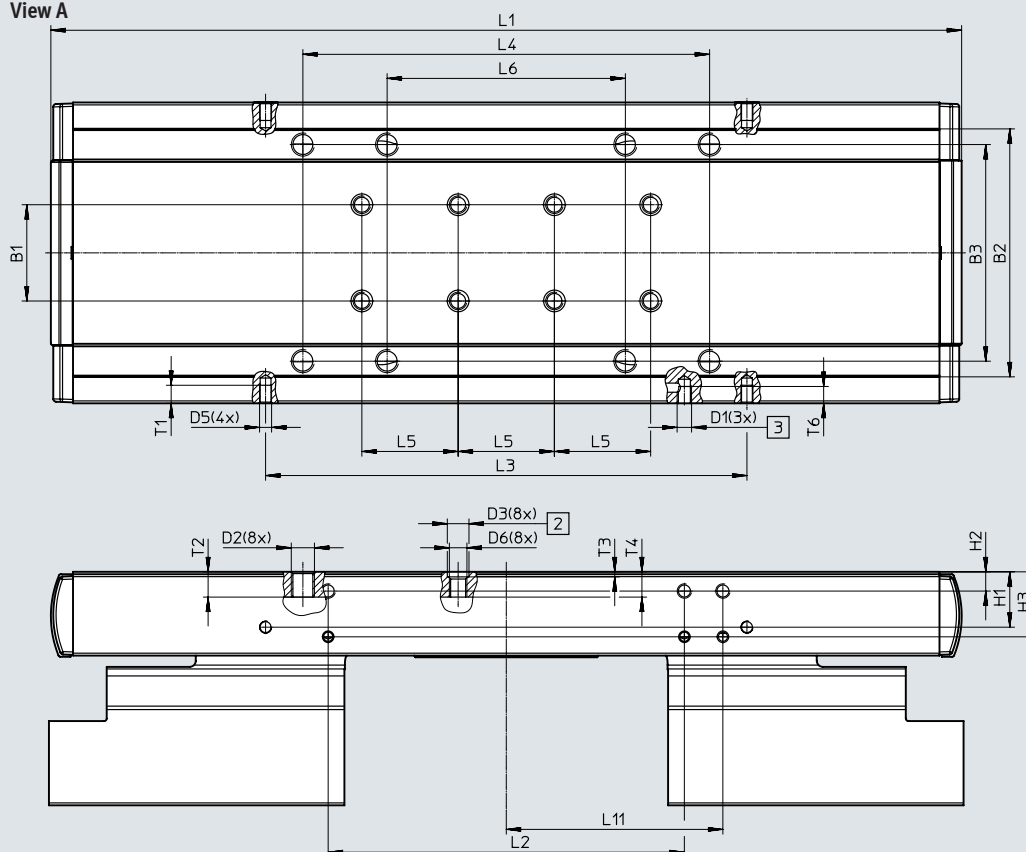
## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Slide

Size 150

View A



[2] Drilled hole for centring sleeve ZBH

[3] Lubrication connections

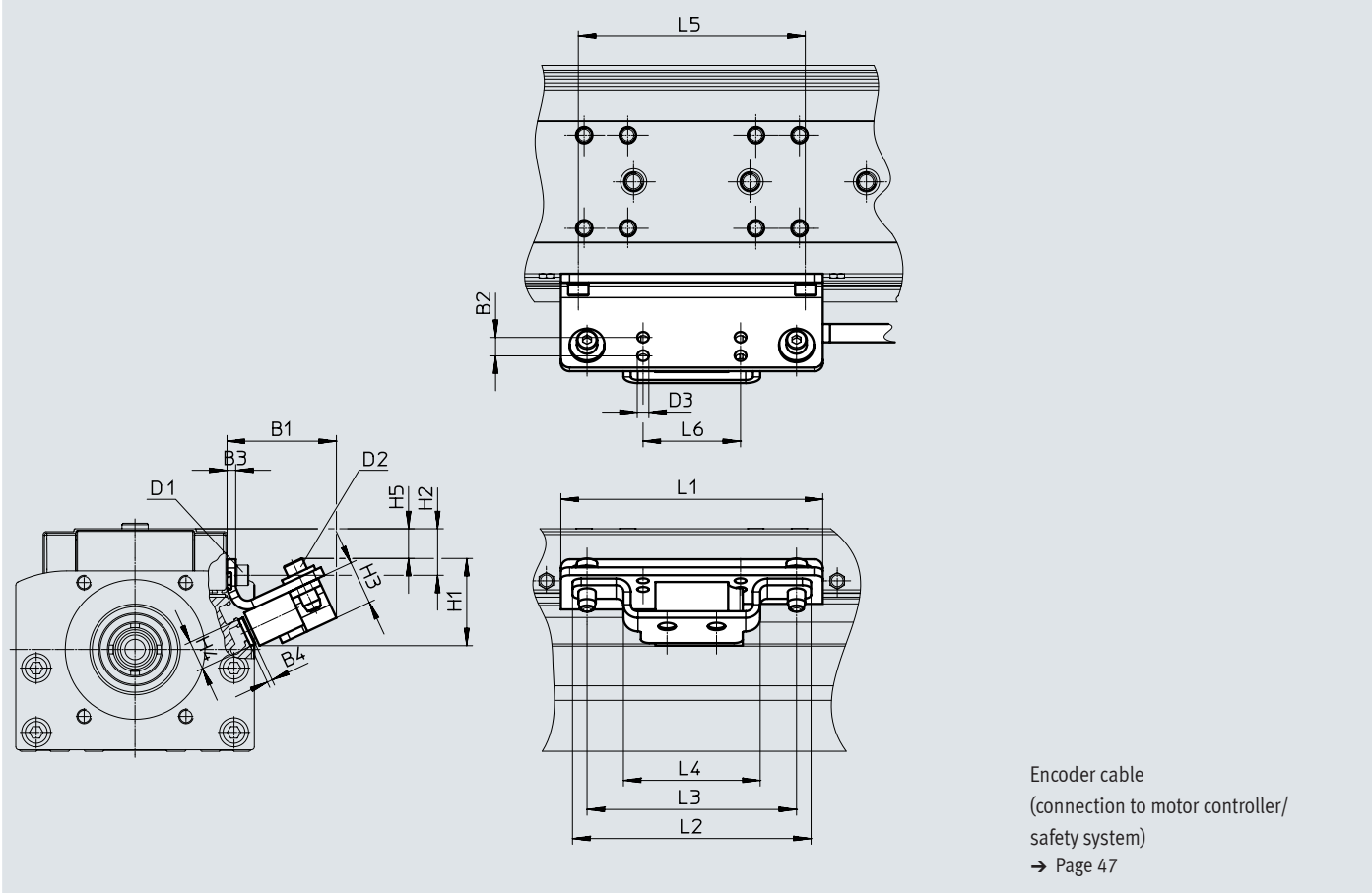
| Size | B1          | B2          | B3         | D1 | D2 | D3<br>Ø<br>H7 | D5 | D6 | H1 | H2 | H3 | L1    |
|------|-------------|-------------|------------|----|----|---------------|----|----|----|----|----|-------|
| 150  | ±0.03<br>40 | ±0.2<br>103 | ±0.1<br>90 | M6 | M8 | 9             | M5 | M6 | 23 | 8  | 27 | 378.4 |

| Size | L2   | L3   | L4   | L5    | L6   | L11 | T1  | T2   | T3   | T4 | T6 |
|------|------|------|------|-------|------|-----|-----|------|------|----|----|
|      | ±0.1 | ±0.1 | ±0.2 | ±0.03 | ±0.2 |     |     |      | +0.1 |    |    |
| 150  | 148  | 200  | 169  | 40    | 99   | 90  | 7.5 | 10.7 | 2.1  | 14 | 7  |

Data sheet

**Dimensions** Download CAD data → [www.festo.com](http://www.festo.com)

ELGA-...-M1/M2 – With incremental displacement encoder



| Size | B1 | B2 | B3 | B4  | D1    | D2    | D3<br>Ø | H1 | H2   |
|------|----|----|----|-----|-------|-------|---------|----|------|
| 70   | 40 | 7  | 3  | 1.8 | M4x8  | M4x14 | 4       | 35 | 11.7 |
| 80   | 40 | 7  | 3  | 1.8 | M4x14 | M4x14 | 4       | 35 | 16   |
| 120  | 41 | 7  | 3  | 1.8 | M4x14 | M4x14 | 4       | 35 | 24.5 |
| 150  | 42 | 7  | 3  | 1.8 | M5x10 | M4x14 | 4       | 35 | 23   |

| Size | H3 | H4 | H5   | L1  | L2 | L3 | L4 | L5  | L6   |
|------|----|----|------|-----|----|----|----|-----|------|
| 70   | 15 | 10 | 3.5  | 86  | 82 | 72 | 47 | 56  | 33.5 |
| 80   | 15 | 10 | 9    | 90  | 82 | 72 | 47 | 78  | 33.5 |
| 120  | 15 | 10 | 21   | 170 | 82 | 72 | 47 | 140 | 33.5 |
| 150  | 15 | 10 | 22.4 | 220 | 82 | 72 | 47 | 200 | 33.5 |

## Data sheet

## Ordering data – Standard design

Key features:

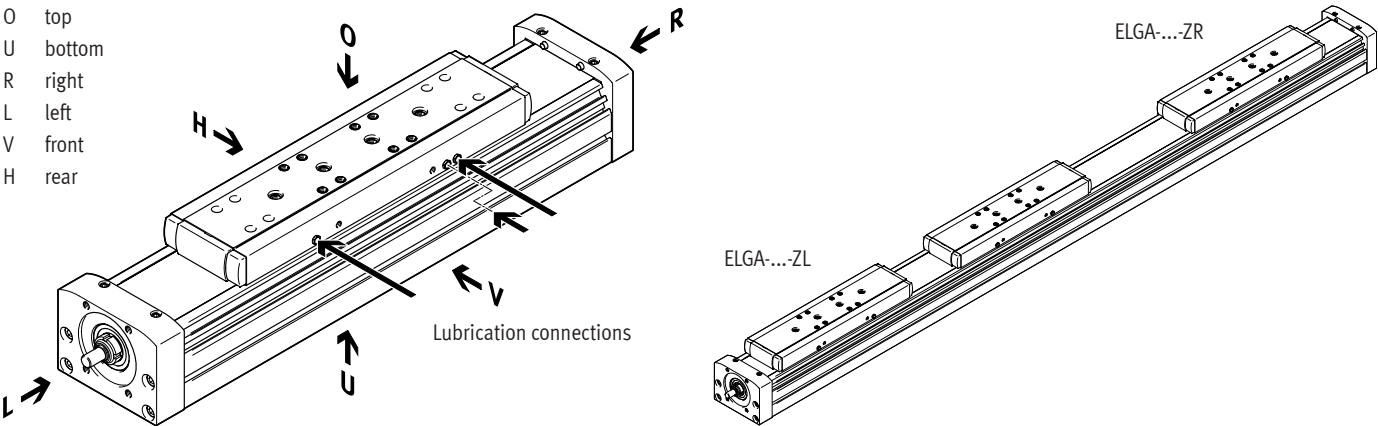
- Stroke reserve: 0 mm
- Motor attachment position: left

| Size | Pitch<br>[mm/rev] | Stroke<br>[mm] | Part no. | Type                         |
|------|-------------------|----------------|----------|------------------------------|
| 70   | 10                | 100            | 8041816  | ELGA-BS-KF-70-100-0H-10P-ML  |
|      |                   | 200            | 8041817  | ELGA-BS-KF-70-200-0H-10P-ML  |
|      |                   | 300            | 8041818  | ELGA-BS-KF-70-300-0H-10P-ML  |
|      |                   | 400            | 8041819  | ELGA-BS-KF-70-400-0H-10P-ML  |
|      |                   | 500            | 8041820  | ELGA-BS-KF-70-500-0H-10P-ML  |
|      |                   | 600            | 8041821  | ELGA-BS-KF-70-600-0H-10P-ML  |
| 80   | 10                | 100            | 8041822  | ELGA-BS-KF-80-100-0H-10P-ML  |
|      |                   | 200            | 8041823  | ELGA-BS-KF-80-200-0H-10P-ML  |
|      |                   | 300            | 8041824  | ELGA-BS-KF-80-300-0H-10P-ML  |
|      |                   | 400            | 8041825  | ELGA-BS-KF-80-400-0H-10P-ML  |
|      |                   | 500            | 8041826  | ELGA-BS-KF-80-500-0H-10P-ML  |
|      |                   | 600            | 8041827  | ELGA-BS-KF-80-600-0H-10P-ML  |
|      |                   | 800            | 8041828  | ELGA-BS-KF-80-800-0H-10P-ML  |
|      | 20                | 100            | 8041829  | ELGA-BS-KF-80-100-0H-20P-ML  |
|      |                   | 200            | 8041830  | ELGA-BS-KF-80-200-0H-20P-ML  |
|      |                   | 300            | 8041831  | ELGA-BS-KF-80-300-0H-20P-ML  |
|      |                   | 400            | 8041832  | ELGA-BS-KF-80-400-0H-20P-ML  |
|      |                   | 500            | 8041833  | ELGA-BS-KF-80-500-0H-20P-ML  |
|      |                   | 600            | 8041834  | ELGA-BS-KF-80-600-0H-20P-ML  |
| 120  | 10                | 100            | 8041836  | ELGA-BS-KF-120-100-0H-10P-ML |
|      |                   | 200            | 8041837  | ELGA-BS-KF-120-200-0H-10P-ML |
|      |                   | 300            | 8041838  | ELGA-BS-KF-120-300-0H-10P-ML |
|      |                   | 400            | 8041839  | ELGA-BS-KF-120-400-0H-10P-ML |
|      |                   | 500            | 8041840  | ELGA-BS-KF-120-500-0H-10P-ML |
|      |                   | 600            | 8041841  | ELGA-BS-KF-120-600-0H-10P-ML |
|      |                   | 800            | 8041842  | ELGA-BS-KF-120-800-0H-10P-ML |
|      | 25                | 100            | 8041843  | ELGA-BS-KF-120-100-0H-25P-ML |
|      |                   | 200            | 8041844  | ELGA-BS-KF-120-200-0H-25P-ML |
|      |                   | 300            | 8041845  | ELGA-BS-KF-120-300-0H-25P-ML |
|      |                   | 400            | 8041846  | ELGA-BS-KF-120-400-0H-25P-ML |
|      |                   | 500            | 8041847  | ELGA-BS-KF-120-500-0H-25P-ML |
|      |                   | 600            | 8041848  | ELGA-BS-KF-120-600-0H-25P-ML |
|      |                   | 800            | 8041849  | ELGA-BS-KF-120-800-0H-25P-ML |

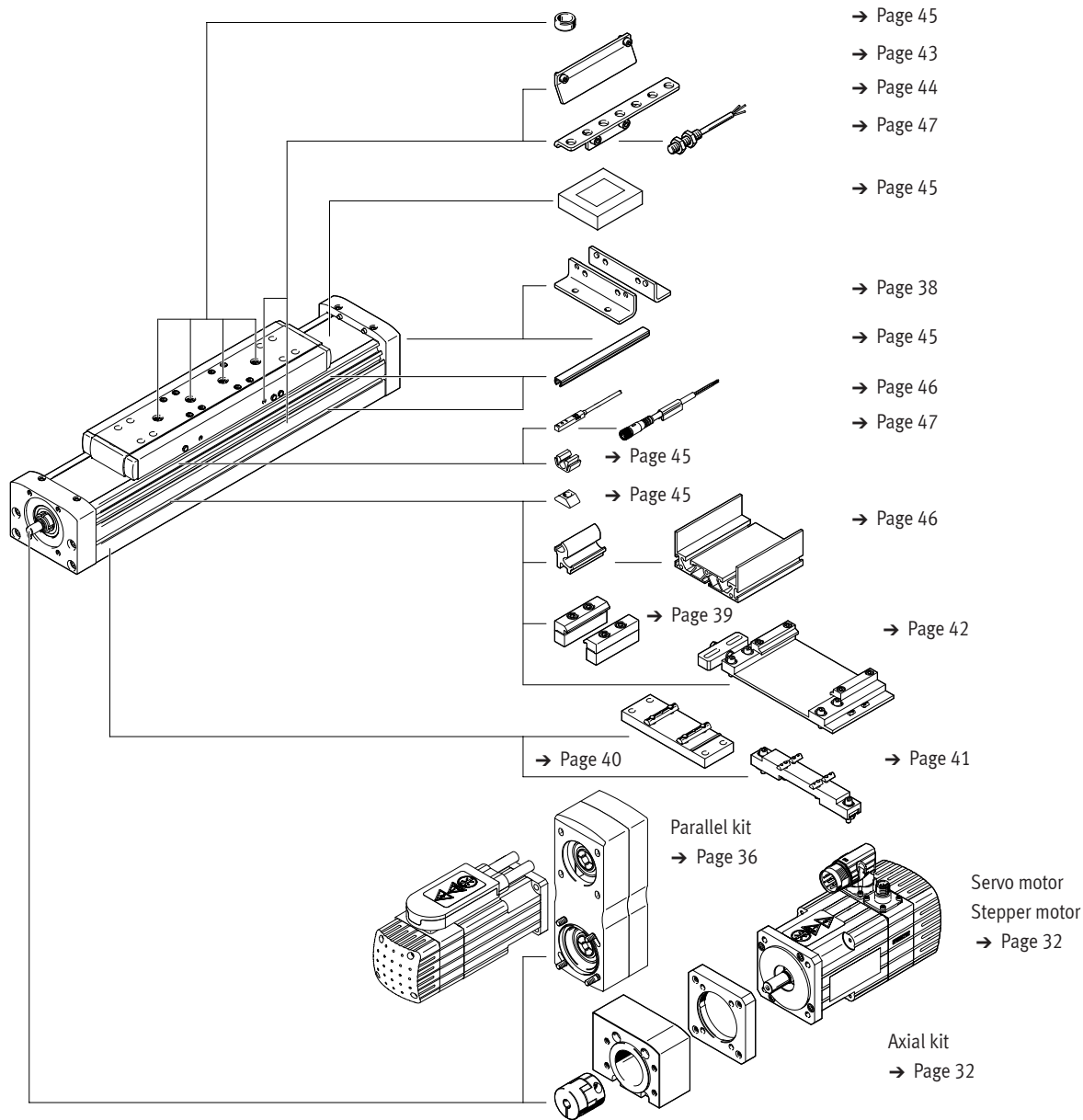
Ordering data – Modular product system

Orientation guide

- O top
- U bottom
- R right
- L left
- V front
- H rear



Accessories



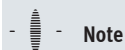
## Ordering data – Modular product system

| Ordering table                                       |                                        |                                                                     |                                                                     |                                            |                 |              |            |  |
|------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------|-----------------|--------------|------------|--|
| Size                                                 | 70                                     | 80                                                                  | 120                                                                 | 150                                        | Condi-<br>tions | Code         | Enter code |  |
| Module no.                                           | <b>8024918</b>                         | <b>8024919</b>                                                      | <b>8024920</b>                                                      | <b>8024921</b>                             |                 |              |            |  |
| Design                                               | Linear axis                            |                                                                     |                                                                     |                                            |                 | <b>ELGA</b>  | ELGA       |  |
| Function                                             | Ball screw                             |                                                                     |                                                                     |                                            |                 | <b>-BS</b>   | -BS        |  |
| Guide                                                | Recirculating ball bearing guide       |                                                                     |                                                                     |                                            |                 | <b>-KF</b>   | -KF        |  |
| Size [mm]                                            | 70                                     | 80                                                                  | 120                                                                 | 150                                        |                 | <b>-...</b>  |            |  |
| Stroke length (without stroke reserve) Standard [mm] | 100, 200, 300, 400, 500, 600, 700, 900 | 100, 200, 300, 400, 500, 600, 700, 800, 900, 1300, 1440, 1740, 1940 | 100, 200, 300, 400, 500, 600, 700, 800, 900, 1300, 1400, 1960, 2460 | 200, 400, 500, 900, 1400, 1900, 2500, 3000 |                 |              |            |  |
| Variable [mm]                                        | 50 ... 880                             | 50 ... 1920                                                         | 50 ... 2440                                                         | 50 ... 2980                                |                 | <b>-...</b>  |            |  |
| Stroke reserve [mm]                                  | 0 ... 999 (0 = no stroke reserve)      |                                                                     |                                                                     |                                            | [1]             | <b>-...H</b> |            |  |
| Spindle pitch                                        | 10                                     | 10                                                                  | 10                                                                  | –                                          |                 | <b>-10P</b>  |            |  |
|                                                      | –                                      | 20                                                                  | –                                                                   | –                                          |                 | <b>-20P</b>  |            |  |
|                                                      | –                                      | –                                                                   | 25                                                                  | –                                          |                 | <b>-25P</b>  |            |  |
|                                                      | –                                      | –                                                                   | –                                                                   | 40                                         |                 | <b>-40P</b>  |            |  |
| Motor attachment position                            | Left                                   |                                                                     |                                                                     |                                            |                 | <b>-ML</b>   |            |  |
|                                                      | Right                                  |                                                                     |                                                                     |                                            |                 | <b>-MR</b>   |            |  |
| Additional slide                                     | Without                                |                                                                     |                                                                     |                                            |                 |              |            |  |
|                                                      | 1 slide on left                        |                                                                     |                                                                     |                                            |                 | <b>-ZL</b>   |            |  |
|                                                      | 1 slide on right                       |                                                                     |                                                                     |                                            |                 | <b>-ZR</b>   |            |  |
| Protection against particles                         | Standard                               |                                                                     |                                                                     |                                            |                 |              |            |  |
|                                                      | Cover strip with magnetic deflection   |                                                                     |                                                                     |                                            |                 | <b>P11</b>   |            |  |
| Displacement encoder, incremental                    | Without                                |                                                                     |                                                                     |                                            |                 |              |            |  |
|                                                      | Resolution 2.5 µm                      |                                                                     |                                                                     |                                            |                 | <b>-M1</b>   |            |  |
|                                                      | Resolution 10 µm                       |                                                                     |                                                                     |                                            |                 | <b>-M2</b>   |            |  |
| Displacement encoder attachment position             | Without                                |                                                                     |                                                                     |                                            |                 |              |            |  |
|                                                      | Rear                                   |                                                                     |                                                                     |                                            | [2]             | <b>B</b>     |            |  |
|                                                      | Front                                  |                                                                     |                                                                     |                                            | [2]             | <b>F</b>     |            |  |

[1] ... H The sum of nominal stroke and 2x stroke reserve must not exceed the maximum stroke length

[2] B, F Only with displacement encoder M1, M2

## Accessories

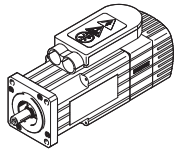
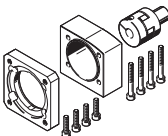


## Note

Depending on the combination of motor and drive, it may not be possible to reach the maximum feed force of the drive.

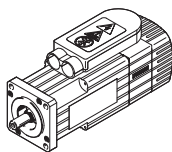
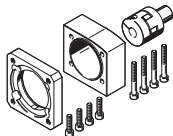
When using parallel kits, the no-load driving torque of the particular kit must be taken into consideration.

## Permissible axis/motor combinations with axial kit

| Motor/gear unit <sup>1)</sup>                                                     | Axial kit                                                                         |                   | Data sheets → Internet: eamm-a                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------|--------------------------------------------------|
|  |  |                   | • Kits for third-party motors → Internet: eamm-a |
| Type                                                                              | Part no.                                                                          | Type              |                                                  |
| <b>ELGA-BS-...-70</b>                                                             |                                                                                   |                   |                                                  |
| <b>With servo motor</b>                                                           |                                                                                   |                   |                                                  |
| EMME-AS-40-...                                                                    | 3637972                                                                           | EAMM-A-S38-40P-G2 |                                                  |
| EMMT-AS-60-..., EMME-AS-60-...                                                    | 3637958                                                                           | EAMM-A-S38-60P-G2 |                                                  |
| <b>With servo motor and gear unit</b>                                             |                                                                                   |                   |                                                  |
| EMME-AS-40-...                                                                    | 1456647                                                                           | EAMM-A-S38-40G-G2 |                                                  |
| EMGA-40-P-G-...-EAS-40                                                            |                                                                                   |                   |                                                  |
| <b>With stepper motor</b>                                                         |                                                                                   |                   |                                                  |
| EMMS-ST-42-...                                                                    | 3637965                                                                           | EAMM-A-S38-42A-G2 |                                                  |
| EMMS-ST-57-...                                                                    | 3637956                                                                           | EAMM-A-S38-57A-G2 |                                                  |
| <b>With stepper motor and gear unit</b>                                           |                                                                                   |                   |                                                  |
| EMMS-ST-42-...                                                                    | 1456647                                                                           | EAMM-A-S38-40G-G2 |                                                  |
| EMGA-40-P-G-...-SST-42                                                            |                                                                                   |                   |                                                  |
| <b>With integrated drive</b>                                                      |                                                                                   |                   |                                                  |
| EMCA-EC-67-...                                                                    | 1456638                                                                           | EAMM-A-S38-67A-G2 |                                                  |
| <b>With integrated drive and gear unit</b>                                        |                                                                                   |                   |                                                  |
| EMCA-EC-67-...                                                                    | 1456647                                                                           | EAMM-A-S38-40G-G2 |                                                  |
| EMGC-40-...                                                                       |                                                                                   |                   |                                                  |
| <b>ELGA-BS-...-80</b>                                                             |                                                                                   |                   |                                                  |
| <b>With servo motor</b>                                                           |                                                                                   |                   |                                                  |
| EMMT-AS-60-..., EMME-AS-60-...                                                    | 3637964                                                                           | EAMM-A-S48-60P-G2 |                                                  |
| <b>With servo motor and gear unit</b>                                             |                                                                                   |                   |                                                  |
| EMME-AS-40-...                                                                    | 1456650                                                                           | EAMM-A-S48-40G-G2 |                                                  |
| EMGA-40-P-G-...-EAS-40                                                            |                                                                                   |                   |                                                  |
| EMMT-AS-60-..., EMME-AS-60-...                                                    | 1456652                                                                           | EAMM-A-S48-60H-G2 |                                                  |
| EMGA-60-P-G-...-EAS-60                                                            |                                                                                   |                   |                                                  |
| <b>With stepper motor</b>                                                         |                                                                                   |                   |                                                  |
| EMMS-ST-57-...                                                                    | 3637963                                                                           | EAMM-A-S48-57A-G2 |                                                  |
| EMMS-ST-87-...                                                                    | 3637962                                                                           | EAMM-A-S48-87A-G2 |                                                  |
| <b>With stepper motor and gear unit</b>                                           |                                                                                   |                   |                                                  |
| EMMS-ST-42-...                                                                    | 1456650                                                                           | EAMM-A-S48-40G-G2 |                                                  |
| EMGA-40-P-G-...-SST-42                                                            |                                                                                   |                   |                                                  |
| EMMS-ST-57-...                                                                    | 2256701                                                                           | EAMM-A-S48-60G-G2 |                                                  |
| EMGA-60-P-G-...-SST-57                                                            |                                                                                   |                   |                                                  |
| <b>With integrated drive and gear unit</b>                                        |                                                                                   |                   |                                                  |
| EMCA-EC-67-...                                                                    | 1456650                                                                           | EAMM-A-S48-40G-G2 |                                                  |
| EMGC-40                                                                           |                                                                                   |                   |                                                  |
| EMCA-EC-67-...                                                                    | 1456652                                                                           | EAMM-A-S48-60H-G2 |                                                  |
| EMGC-60-...                                                                       |                                                                                   |                   |                                                  |

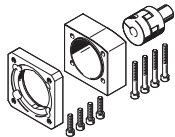
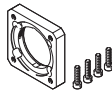
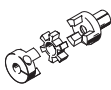
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.

## Accessories

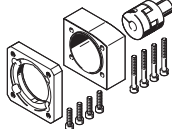
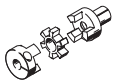
| Permissible axis/motor combinations with axial kit                                |                                                                                   |                                                                                        |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Motor/gear unit <sup>1)</sup>                                                     | Axial kit                                                                         |                                                                                        |
|  |  | Data sheets → Internet: eamm-a<br><br>• Kits for third-party motors → Internet: eamm-a |
|                                                                                   | Type                                                                              | Part no.    Type                                                                       |
| <b>ELGA-BS-...-120</b>                                                            |                                                                                   |                                                                                        |
| <b>With servo motor</b>                                                           |                                                                                   |                                                                                        |
| EMMT-AS-80-..., EMME-AS-80-...                                                    | 3637970                                                                           | EAMM-A-S62-80P-G2                                                                      |
| EMMT-AS-100-..., EMME-AS-100-...                                                  | 3637960                                                                           | EAMM-A-S62-100A-G2                                                                     |
| EMMT-AS-150-...                                                                   | 8157272                                                                           | EAMM-A-S62-150A-G2                                                                     |
| <b>With servo motor and gear unit</b>                                             |                                                                                   |                                                                                        |
| EMMT-AS-60-..., EMME-AS-60-...                                                    | 1456654                                                                           | EAMM-A-S62-60H-G2                                                                      |
| EMGA-60-P-G-...-EAS-60                                                            |                                                                                   |                                                                                        |
| EMMT-AS-80-..., EMME-AS-80-...                                                    | 1972530                                                                           | EAMM-A-S62-80G-G2                                                                      |
| EMGA-80-P-G-...-EAS-80                                                            |                                                                                   |                                                                                        |
| EMMT-AS-100-..., EMME-AS-100-...                                                  | 1972530                                                                           | EAMM-A-S62-80G-G2                                                                      |
| EMGA-80-P-G-...-SAS-100                                                           |                                                                                   |                                                                                        |
| <b>With stepper motor</b>                                                         |                                                                                   |                                                                                        |
| EMMS-ST-87-...                                                                    | 3637966                                                                           | EAMM-A-S62-87A-G2                                                                      |
| <b>With stepper motor and gear unit</b>                                           |                                                                                   |                                                                                        |
| EMMS-ST-57-...                                                                    | 2297649                                                                           | EAMM-A-S62-60G-G2                                                                      |
| EMGA-60-P-G-...-SST-57                                                            |                                                                                   |                                                                                        |
| EMMS-ST-87-...                                                                    | 1972530                                                                           | EAMM-A-S62-80G-G2                                                                      |
| EMGA-80-P-G-...-SST-87                                                            |                                                                                   |                                                                                        |
| <b>With integrated drive and gear unit</b>                                        |                                                                                   |                                                                                        |
| EMCA-EC-67-...                                                                    | 1456654                                                                           | EAMM-A-S62-60H-G2                                                                      |
| EMGC-60-...                                                                       |                                                                                   |                                                                                        |
| <b>ELGA-BS-...-150</b>                                                            |                                                                                   |                                                                                        |
| <b>With servo motor</b>                                                           |                                                                                   |                                                                                        |
| EMMT-AS-100-..., EMME-AS-100-...                                                  | 3637955                                                                           | EAMM-A-S95-100A-G2                                                                     |
| EMMT-AS-150-...                                                                   | 8157279                                                                           | EAMM-A-S95-150A-G2                                                                     |

1) The input torque must not exceed the max. permissible transferable torque of the axial kit.

## Accessories

| Individual components of the axial kit                                            |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Axial kit                                                                         | Comprising:                                                                       |                                                                                   |                                                                                     |                                                                                     |
|                                                                                   | Motor flange                                                                      | Coupling                                                                          | Coupling housing                                                                    | Screw kit                                                                           |
|  |  |  |  |  |
| Part no.<br>Type                                                                  | Part no.<br>Type                                                                  | Part no.<br>Type                                                                  | Part no.<br>Type                                                                    | Part no.<br>Type                                                                    |
| <b>ELGA-BS-....-70</b>                                                            |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
| 3637971<br>EAMM-A-S38-40A-G2                                                      | 558175<br>EAMF-A-38B-40A                                                          | 558312<br>EAMC-30-32-6-6                                                          | 3637942<br>EAMK-A-S38-38A/B-G2                                                      | –                                                                                   |
| 1456647<br>EAMM-A-S38-40G-G2                                                      | 1460097<br>EAMF-A-38A-40G                                                         | 562681<br>EAMC-30-32-6-10                                                         | 3637942<br>EAMK-A-S38-38A/B-G2                                                      | 567488<br>EAHM-L2-M5-50                                                             |
| 3637972<br>EAMM-A-S38-40P-G2                                                      | 2219077<br>EAMF-A-38B-40P                                                         | 533708<br>EAMC-30-32-6-8                                                          | 3637942<br>EAMK-A-S38-38A/B-G2                                                      | –                                                                                   |
| 3637965<br>EAMM-A-S38-42A-G2                                                      | 560691<br>EAMF-A-38B-42A                                                          | 561333<br>EAMC-30-32-5-6                                                          | 3637942<br>EAMK-A-S38-38A/B-G2                                                      | –                                                                                   |
| 3637967<br>EAMM-A-S38-55A-G2                                                      | 558176<br>EAMF-A-38A-55A                                                          | 551003<br>EAMC-30-32-6-9                                                          | 3637942<br>EAMK-A-S38-38A/B-G2                                                      | 567488<br>EAHM-L2-M5-50                                                             |
| 3637956<br>EAMM-A-S38-57A-G2                                                      | 560692<br>EAMF-A-38A-57A                                                          | 551002<br>EAMC-30-32-6-6.35                                                       | 3637942<br>EAMK-A-S38-38A/B-G2                                                      | 567488<br>EAHM-L2-M5-50                                                             |
| 3637958<br>EAMM-A-S38-60P-G2                                                      | 1987412<br>EAMF-A-38A-60P                                                         | 1233256<br>EAMC-30-32-6-14                                                        | 3637942<br>EAMK-A-S38-38A/B-G2                                                      | 567489<br>EAHM-L2-M5-55                                                             |
| 1456638<br>EAMM-A-S38-67A-G2                                                      | 1490100<br>EAMF-A-38A-67A                                                         | 551003<br>EAMC-30-32-6-9                                                          | 3637942<br>EAMK-A-S38-38A/B-G2                                                      | 567489<br>EAHM-L2-M5-55                                                             |
| <b>ELGA-BS-....-80</b>                                                            |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
| 1456650<br>EAMM-A-S48-40G-G2                                                      | 4067069<br>EAMF-A-48B-40G                                                         | 558029<br>EAMC-30-32-8-10                                                         | 3637941<br>EAMK-A-S48-48A/B-G2                                                      | –                                                                                   |
| 3637961<br>EAMM-A-S48-55A-G2                                                      | 558177<br>EAMF-A-48B-55A                                                          | 543423<br>EAMC-30-32-8-9                                                          | 3637941<br>EAMK-A-S48-48A/B-G2                                                      | –                                                                                   |
| 3637963<br>EAMM-A-S48-57A-G2                                                      | 560694<br>EAMF-A-48B-57A                                                          | 543421<br>EAMC-30-32-6.35-8                                                       | 3637941<br>EAMK-A-S48-48A/B-G2                                                      | –                                                                                   |
| 2256701<br>EAMM-A-S48-60G-G2                                                      | 558019<br>EAMF-A-48A-60G/H                                                        | 551004<br>EAMC-30-32-8-11                                                         | 3637941<br>EAMK-A-S48-48A/B-G2                                                      | 567489<br>EAHM-L2-M5-55                                                             |
| 1456652<br>EAMM-A-S48-60H-G2                                                      | 558019<br>EAMF-A-48A-60G/H                                                        | 562682<br>EAMC-30-32-8-14                                                         | 3637941<br>EAMK-A-S48-48A/B-G2                                                      | 567489<br>EAHM-L2-M5-55                                                             |
| 3637964<br>EAMM-A-S48-60P-G2                                                      | 2220620<br>EAMF-A-48A-60P                                                         | 562682<br>EAMC-30-32-8-14                                                         | 3637941<br>EAMK-A-S48-48A/B-G2                                                      | 567489<br>EAHM-L2-M5-55                                                             |
| 3637957<br>EAMM-A-S48-70A-G2                                                      | 558025<br>EAMF-A-48A-70A                                                          | 551004<br>EAMC-30-32-8-11                                                         | 3637941<br>EAMK-A-S48-48A/B-G2                                                      | 567488<br>EAHM-L2-M5-50                                                             |
| 3637962<br>EAMM-A-S48-87A-G2                                                      | 560695<br>EAMF-A-48A-87A                                                          | 551004<br>EAMC-30-32-8-11                                                         | 3637941<br>EAMK-A-S48-48A/B-G2                                                      | 567489<br>EAHM-L2-M5-55                                                             |

## Accessories

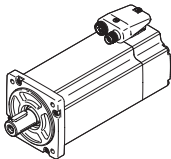
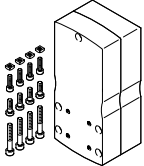
| Individual components of the axial kit                                            |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Axial kit                                                                         | Comprising:                                                                       |                                                                                   |                                                                                     |                                                                                     |
|                                                                                   | Motor flange                                                                      | Coupling                                                                          | Coupling housing                                                                    | Screw kit                                                                           |
|  |  |  |  |  |
| Part no.<br>Type                                                                  | Part no.<br>Type                                                                  | Part no.<br>Type                                                                  | Part no.<br>Type                                                                    | Part no.<br>Type                                                                    |
| <b>ELGA-BS-....-120</b>                                                           |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
| 2297649<br>EAMM-A-S62-60G-G2                                                      | 1460112<br>EAMF-A-62A-60G/H                                                       | 525864<br>EAMC-40-66-11-12                                                        | 3637940<br>EAMK-A-S62-62A/B-G2                                                      | 567495<br>EAHM-L2-M6-90                                                             |
| 1456654<br>EAMM-A-S62-60H-G2                                                      | 1460112<br>EAMF-A-62A-60G/H                                                       | 1452803<br>EAMC-40-66-12-14                                                       | 3637940<br>EAMK-A-S62-62A/B-G2                                                      | 567495<br>EAHM-L2-M6-90                                                             |
| 3637959<br>EAMM-A-S62-70A-G2                                                      | 558179<br>EAMF-A-62B-70A                                                          | 558313<br>EAMC-42-66-11-12                                                        | 3637940<br>EAMK-A-S62-62A/B-G2                                                      | –                                                                                   |
| 1972530<br>EAMM-A-S62-80G-G2                                                      | 2116672<br>EAMF-A-62B-80G                                                         | 2138701<br>EAMC-42-50-12-20                                                       | 3637940<br>EAMK-A-S62-62A/B-G2                                                      | –                                                                                   |
| 3637970<br>EAMM-A-S62-80P-G2                                                      | 2222624<br>EAMF-A-62B-80P                                                         | 551005<br>EAMC-42-50-12-19                                                        | 3637940<br>EAMK-A-S62-62A/B-G2                                                      | –                                                                                   |
| 3637966<br>EAMM-A-S62-87A-G2                                                      | 560696<br>EAMF-A-62B-87A                                                          | 558313<br>EAMC-42-66-11-12                                                        | 3637940<br>EAMK-A-S62-62A/B-G2                                                      | –                                                                                   |
| 3637960<br>EAMM-A-S62-100A-G2                                                     | 558026<br>EAMF-A-62A-100A                                                         | 551005<br>EAMC-42-50-12-19                                                        | 3637940<br>EAMK-A-S62-62A/B-G2                                                      | 567494<br>EAHM-L2-M6-80                                                             |
| 3637969<br>EAMM-A-S62-140A-G2                                                     | 558022<br>EAMF-A-62A-140A                                                         | 558314<br>EAMC-42-50-12-24                                                        | 3637940<br>EAMK-A-S62-62A/B-G2                                                      | 567495<br>EAHM-L2-M6-90                                                             |
| <b>ELGA-BS-....-150</b>                                                           |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
| 3637955<br>EAMM-A-S95-100A-G2                                                     | 558182<br>EAMF-A-95B-100A                                                         | 558315<br>EAMC-56-58-19-25                                                        | 3637939<br>EAMK-A-S95-95A/B-G2                                                      | –                                                                                   |
| 3637954<br>EAMM-A-S95-140A-G2                                                     | 558023<br>EAMF-A-95A-140A                                                         | 558316<br>EAMC-56-58-24-25                                                        | 3637939<br>EAMK-A-S95-95A/B-G2                                                      | 567498<br>EAHM-L2-M8-100                                                            |

**Note**

For the optimum selection of axis/  
motor combinations

→ Engineering software  
Electric Motion Sizing  
[www.festo.com/x/electric-motion-sizing](http://www.festo.com/x/electric-motion-sizing)

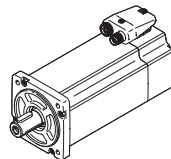
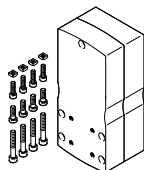
## Accessories

| Permissible axis/motor combinations with parallel kit                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Data sheets → Internet: eamm-u                |  |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|
| Motor/gear unit <sup>1)</sup>                                                     | Parallel kit                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                               |  |
|  | <div></div> <ul style="list-style-type: none"><li>• The kit can be mounted in all directions</li><li>• To support the axis shaft, a counter bearing EAMG and a clamping sleeve EAMH-...-P with integrated trunnion are included in the scope of delivery for the parallel kit. Additional information → eamm-u</li><li>• Kits for third-party motors → Internet: eamm-u</li></ul> |                                               |  |
| Type                                                                              | Part no.                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Type                                          |  |
| ELGA-BS-KF-70                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| With servo motor                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| EMME-AS-40-...                                                                    | 2155239                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-50-S38-40P-78                          |  |
| EMMS-AS-55-...                                                                    | 1218538                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-60-S38-55A-91                          |  |
| With stepper motor                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| EMMS-ST-42-...                                                                    | 1217945                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-50-S38-42A-78                          |  |
| EMMS-ST-57-...                                                                    | 1218568                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-60-S38-57A-91                          |  |
| Servo motor with gear unit                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| EMME-AS-40-...<br>EMGA-40-P-...                                                   | 2283732                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-60-S38-40G-91                          |  |
| Stepper motor with gear unit                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| EMMS-ST-42-...<br>EMGA-40-P-...                                                   | 2283732                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-60-S38-40G-91                          |  |
| With integrated drive and gear unit                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| EMCA-EC-67-...<br>EMGC-40-P-...                                                   | 2283732                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-60-S38-40G-91                          |  |
| ELGA-BS-KF-80                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| With servo motor                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| EMMT-AS-60-..., EMME-AS-60-...                                                    | 2629253                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-70-S48-60P-96                          |  |
| With stepper motor                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| EMMS-ST-57-...                                                                    | 1219379                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-60-S48-57A-91                          |  |
| EMMS-ST-87-...                                                                    | 1217604                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-86-S48-87A-177                         |  |
| Servo motor with gear unit                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| EMME-AS-40-...<br>EMGA-40-P-...                                                   | 2283760                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-60-S48-40G-91                          |  |
| EMMT-AS-60-..., EMME-AS-60-...<br>EMGA-60-P-...-EAS <sup>2)</sup>                 | 2801715<br>1587338                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-70-S48-60H-96<br>EAMM-U-86-S48-60H-102 |  |
| Stepper motor with gear unit                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| EMMS-ST-57-...<br>EMGA-60-P-...-SST <sup>2)</sup>                                 | 2801627<br>1587251                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-70-S48-60G-96<br>EAMM-U-86-S48-60G-102 |  |
| With integrated drive and gear unit                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |  |
| EMCA-EC-67-...<br>EMGC-40-P-...                                                   | 2283760                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EAMM-U-60-S48-40G-91                          |  |
| EMCA-EC-67-...<br>EMGC-60-P-... <sup>2)</sup>                                     | 2801715<br>1587338                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-70-S48-60H-96<br>EAMM-U-86-S48-60H-102 |  |

1) The input torque must not exceed the max. permissible transferable torque of the parallel kit.

2) Gear unit output shaft diameter: EMGA-60-P-...SAS/SST: 11 mm; EMGA-60-P-...EAS, EMGC-60-P: 14 mm

## Accessories

| Permissible axis/motor combinations with parallel kit                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         | Data sheets → Internet: eamm-u |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------|
| Motor/gear unit <sup>1)</sup>                                                       | Parallel kit                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |                                |
|    |  <ul style="list-style-type: none"><li>• The kit can be mounted in all directions</li><li>• To support the axis shaft, a counter bearing EAMG and a clamping sleeve EAMH-...-P with integrated trunnion are included in the scope of delivery for the parallel kit. Additional information → eamm-u</li><li>• Kits for third-party motors → Internet: eamm-u</li></ul> |                         |                                |
| Type                                                                                | Part no.                                                                                                                                                                                                                                                                                                                                                                                                                                                | Type                    |                                |
| <b>ELGA-BS-KF-120</b>                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                                |
| <b>With servo motor</b>                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                                |
| EMMT-AS-80-..., EMME-AS-80-...                                                      | 2157004                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-86-S62-80P-177   |                                |
| EMMT-AS-100-..., EMME-AS-100-...                                                    | 1217381                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-110-S62-100A-207 |                                |
| EMMT-AS-150-...                                                                     | 8157287                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-145-S62-150A-288 |                                |
| <b>With stepper motor</b>                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                                |
| EMMS-ST-87-...                                                                      | 1217373                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-86-S62-87A-177   |                                |
| <b>Servo motor with gear unit</b>                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                                |
| EMMT-AS-60-..., EMME-AS-60-...<br>EMGA-60-P-...-EAS <sup>2)</sup>                   | 1587453                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-86-S62-60H-177   |                                |
| <b>Stepper motor with gear unit</b>                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                                |
| EMMS-ST-57-...<br>EMGA-60-P-...-SST <sup>2)</sup>                                   | 1587411                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-86-S62-60G-177   |                                |
| <b>With integrated drive and gear unit</b>                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                                |
| EMCA-EC-67-...<br>EMGC-60-P-... <sup>2)</sup>                                       | 1587453                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-86-S62-60H-177   |                                |
| <b>ELGA-BS-KF-150</b>                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                                |
| <b>With servo motor</b>                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                                |
| EMMT-AS-100-..., EMME-AS-100-...                                                    | 1220656                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-110-S95-100A-207 |                                |
| <b>Servo motor with gear unit</b>                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                                |
| EMMT-AS-80-..., EMTT-AS-100-...<br>EMME-AS-80-..., EMME-AS-100-...<br>EMGA-80-P-... | 1589544                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-110-S95-80G-207  |                                |
| <b>Stepper motor with gear unit</b>                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                                |
| EMMS-ST-87-...<br>EMGA-80-P-...                                                     | 1589544                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EAMM-U-110-S95-80G-207  |                                |

1) The input torque must not exceed the max. permissible transferable torque of the parallel kit.

2) Gear unit output shaft diameter: EMGA-60-P-...SAS/SST: 11 mm; EMGA-60-P-...EAS, EMGC-60-P: 14 mm

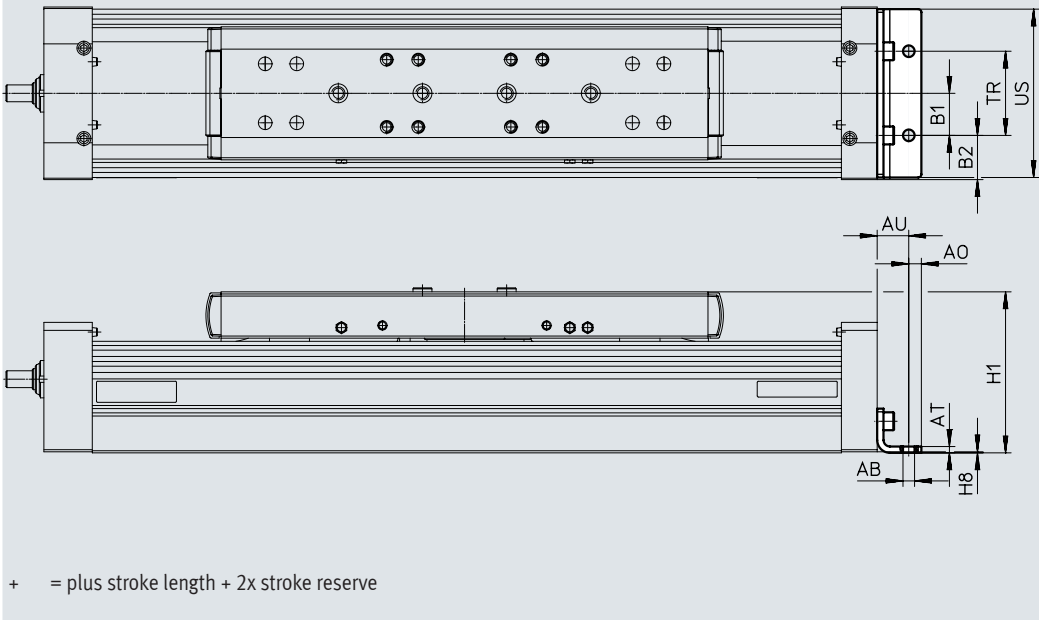
**Note**

The clamping element EADT is required to adjust the toothed belt pretensioning for EAMM-U-110 and EAMM-U-145.

Accessories

Foot mounting HPE

Material:  
Galvanised steel  
RoHS-compliant



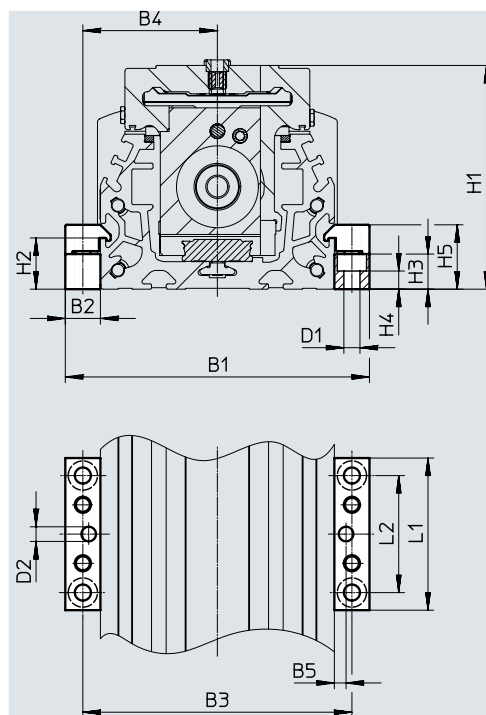
| Dimensions and ordering data |         |    |    |    |    |      |       |     |
|------------------------------|---------|----|----|----|----|------|-------|-----|
| For size                     | AB<br>Ø | A0 | AT | AU | B1 | B2   | H1    | H8  |
| 70                           | 5.5     | 6  | 3  | 13 | 20 | 14.5 | 64    | 0.5 |
| 80                           | 5.5     | 6  | 3  | 15 | 20 | 21   | 76.5  | 0.5 |
| 120                          | 9       | 8  | 6  | 22 | 40 | 20   | 111.5 | 1   |
| 150                          | 9       | 12 | 8  | 25 | 40 | 35   | 141.5 | 1   |

| For size | TR | US  | Weight<br>[g] | Part no. | Type    |
|----------|----|-----|---------------|----------|---------|
| 70       | 40 | 67  | 115           | 558321   | HPE-70  |
| 80       | 40 | 80  | 150           | 558322   | HPE-80  |
| 120      | 80 | 116 | 578           | 558323   | HPE-120 |
| 150      | 80 | 150 | 1181          | 3002636  | HPE-150 |

## Accessories

### Profile mounting MUE

Material:  
Anodised aluminium  
RoHS-compliant



#### Dimensions and ordering data

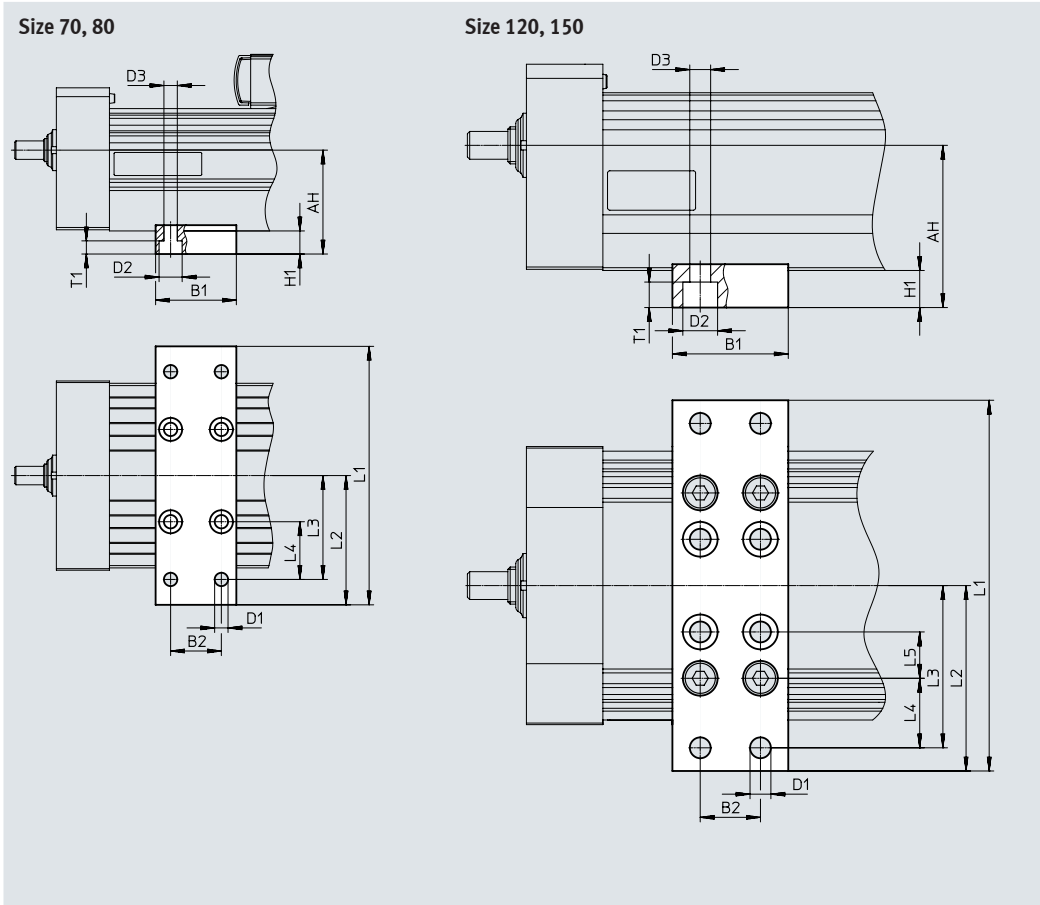
| For size | B1  | B2 | B3  | B4   | B5 | D1<br>Ø | D2<br>Ø<br>H7 | H1    | H2   |
|----------|-----|----|-----|------|----|---------|---------------|-------|------|
| 70       | 91  | 12 | 79  | 39.5 | 4  | 5.5     | 5             | 64    | 17.5 |
| 80       | 104 | 12 | 92  | 46   | 4  | 5.5     | 5             | 76.5  | 17.5 |
| 120      | 154 | 19 | 135 | 67.5 | 4  | 9       | 5             | 111.5 | 16   |
| 150      | 188 | 19 | 169 | 84.5 | 4  | 9       | 5             | 141.5 | 16   |

| For size | H3 | H4  | H5   | L1 | L2 | Weight<br>[g] | Part no. | Type        |
|----------|----|-----|------|----|----|---------------|----------|-------------|
| 70       | 12 | 6.2 | 22   | 52 | 40 | 80            | 558043   | MUE-70/80   |
| 80       | 12 | 6.2 | 22   | 52 | 40 | 80            | 558043   | MUE-70/80   |
| 120      | 14 | 5.5 | 29.5 | 90 | 40 | 290           | 558044   | MUE-120/185 |
| 150      | 14 | 5.5 | 29.5 | 90 | 40 | 290           | 558044   | MUE-120/185 |

Accessories

Central support EAHF

Material:  
Anodised aluminium  
RoHS-compliant



| Dimensions and ordering data |      |    |    |         |         |         |    |     |
|------------------------------|------|----|----|---------|---------|---------|----|-----|
| For size                     | AH   | B1 | B2 | D1<br>ø | D2<br>ø | D3<br>ø | H1 | L1  |
| 70                           | 38.5 | 35 | 22 | 5.8     | 10      | 5.8     | 10 | 102 |
| 80                           | 45   |    |    |         |         |         |    | 112 |
| 120                          | 70   | 50 | 26 | 9       | 15      | 9       | 16 | 160 |
| 150                          | 88.5 |    |    |         |         |         |    | 200 |

| For size | L2  | L3 | L4 | L5 | T1  | Weight<br>[g] | Part no. | Type          |
|----------|-----|----|----|----|-----|---------------|----------|---------------|
| 70       | 51  | 45 | 25 | –  | 5.7 | 113           | 2349256  | EAHF-L5-70-P  |
| 80       | 62  | 50 |    | –  |     | 123           | 3535188  | EAHF-L5-80-P  |
| 120      | 80  | 70 | 30 | 20 | 11  | 384           | 2410274  | EAHF-L5-120-P |
| 150      | 100 | 90 | 50 | –  |     | 495           | 3535189  | EAHF-L5-150-P |

## Accessories

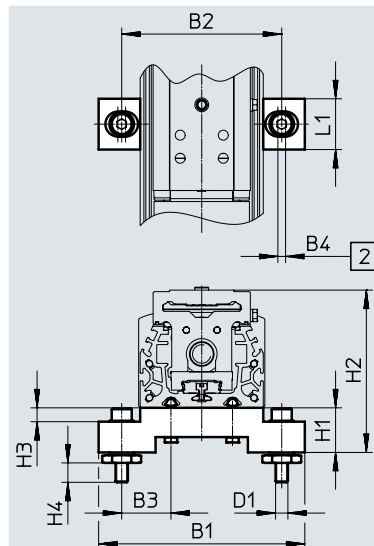
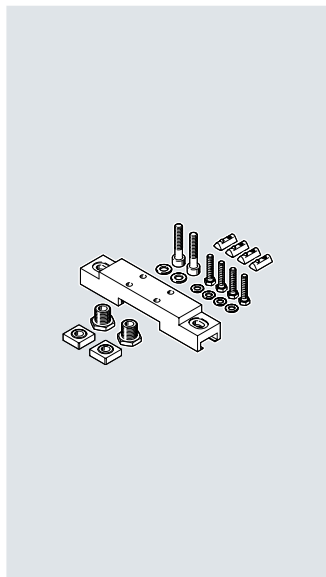
## Adjusting kit EADC-E15

Material:

EADC-E15-80: wrought aluminium alloy

EADC-E15-185: steel

RoHS-compliant



[2] Width of elongated hole

## Dimensions and ordering data

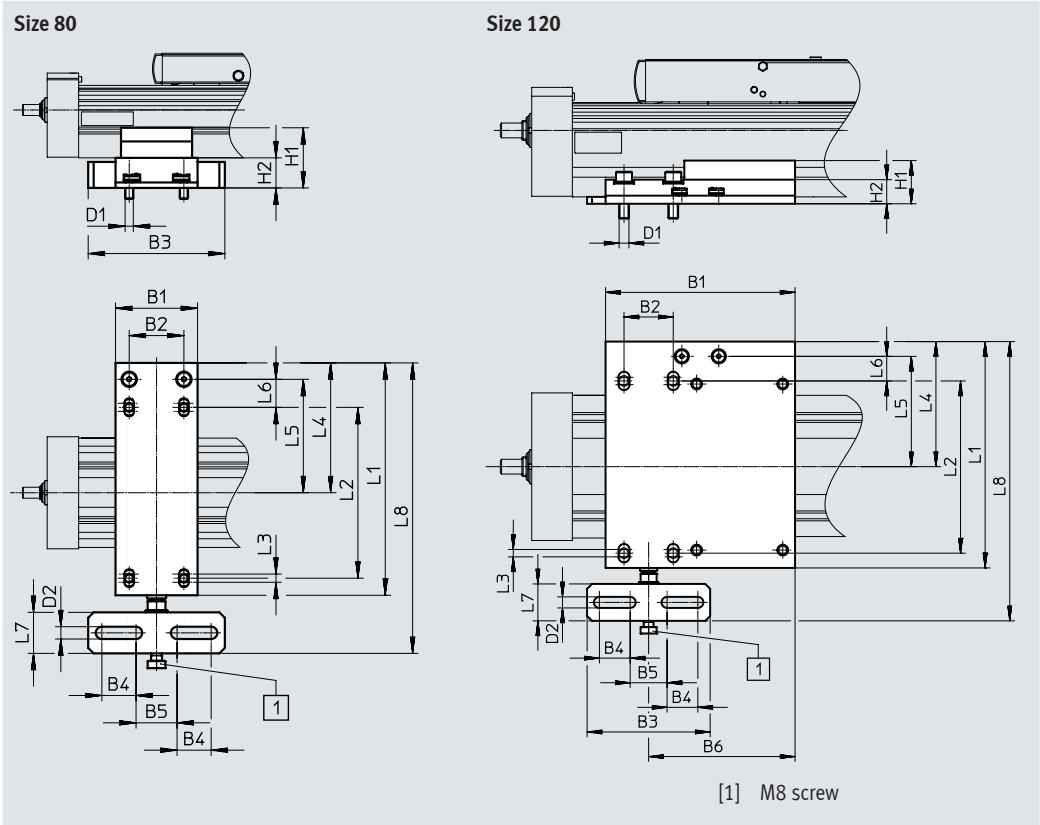
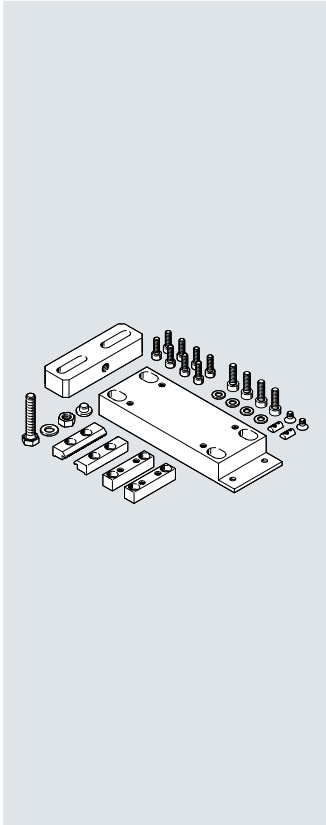
| For size | B1  | B2  | B3   | B4 | D1 | H1 |
|----------|-----|-----|------|----|----|----|
| 70       | 134 | 104 | 32   | 5  | M8 | 29 |
| 80       | 134 | 104 | 32   | 5  | M8 | 29 |
| 120      | 236 | 209 | 64.5 | 5  | M8 | 29 |
| 150      | 236 | 209 | 64.5 | 5  | M8 | 29 |

| For size | H2    | H3 | H4   | L1 | Weight<br>[g] | Part no. | Type            |
|----------|-------|----|------|----|---------------|----------|-----------------|
| 70       | 93    | 9  | 12.6 | 33 | 386           | 8047566  | EADC-E15-80-E7  |
| 80       | 105.5 | 9  | 12.6 | 33 | 386           | 8047566  | EADC-E15-80-E7  |
| 120      | 140.5 | 9  | 12.6 | 33 | 569           | 8047568  | EADC-E15-185-E7 |
| 150      | 170.5 | 9  | 12.6 | 33 | 569           | 8047568  | EADC-E15-185-E7 |

Accessories

Adjusting kit EADC-E16

Material:  
Wrought aluminium alloy  
RoHS-compliant



| Dimensions and ordering data |     |    |     |    |    |     |    |    |      |      |     |     |
|------------------------------|-----|----|-----|----|----|-----|----|----|------|------|-----|-----|
| For size                     | B1  | B2 | B3  | B4 | B5 | B6  | D1 | D2 | H1   | H2   | L1  | L2  |
| 80                           | 60  | 40 | 100 | 25 | 30 | –   | M6 | 9  | 44   | 22   | 170 | 125 |
| 120                          | 154 | 40 | 100 | 25 | 30 | 119 | M8 | 9  | 35.1 | 19.6 | 184 | 140 |

| For size | L3 | L4    | L5   | L6   | L7 | L8    | Weight<br>[g] | Part no. | Type            |
|----------|----|-------|------|------|----|-------|---------------|----------|-----------------|
| 80       | 6  | 95    | 83   | 20.5 | 30 | 212.5 | 828           | 8047577  | EADC-E16-80-E7  |
| 120      | 6  | 101.7 | 89.7 | 20   | 30 | 227   | 1134          | 8047578  | EADC-E16-120-E7 |

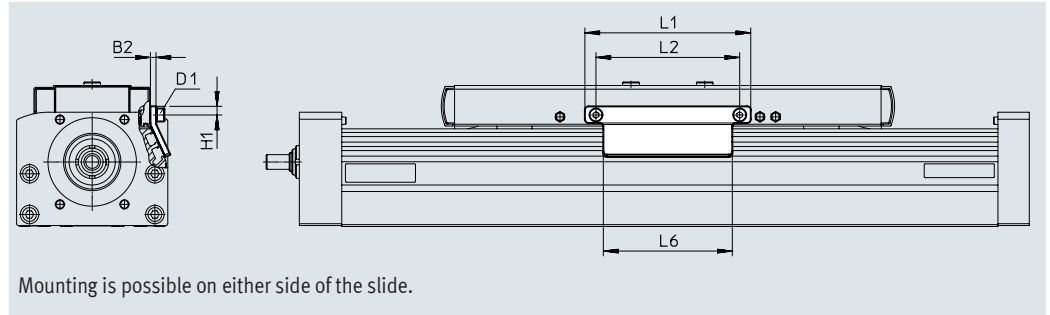
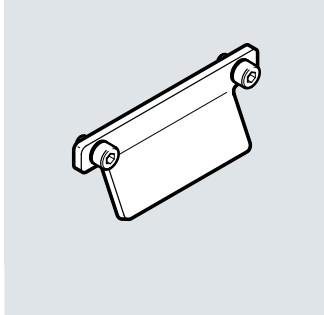
## Accessories

### Switch lug SF-EGC-1

Material:

Galvanised steel

RoHS-compliant



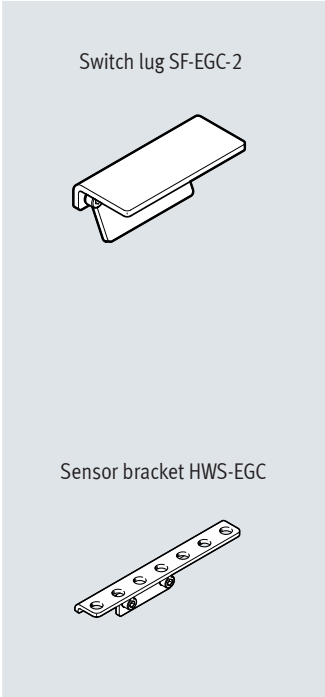
#### Dimensions and ordering data

| For size | B2 | D1 | H1   | L1  | L2  | L6  | Weight<br>[g] | Part no. | Type         |
|----------|----|----|------|-----|-----|-----|---------------|----------|--------------|
| 70       | 3  | M4 | 4.65 | 70  | 56  | 50  | 50            | 558047   | SF-EGC-1-70  |
| 80       | 3  | M4 | 4.65 | 90  | 78  | 70  | 63            | 558048   | SF-EGC-1-80  |
| 120      | 3  | M5 | 8    | 170 | 140 | 170 | 147           | 558049   | SF-EGC-1-120 |
| 150      | 3  | M5 | 10   | 230 | 200 | 230 | 246           | 558051   | SF-EGC-1-185 |

Accessories

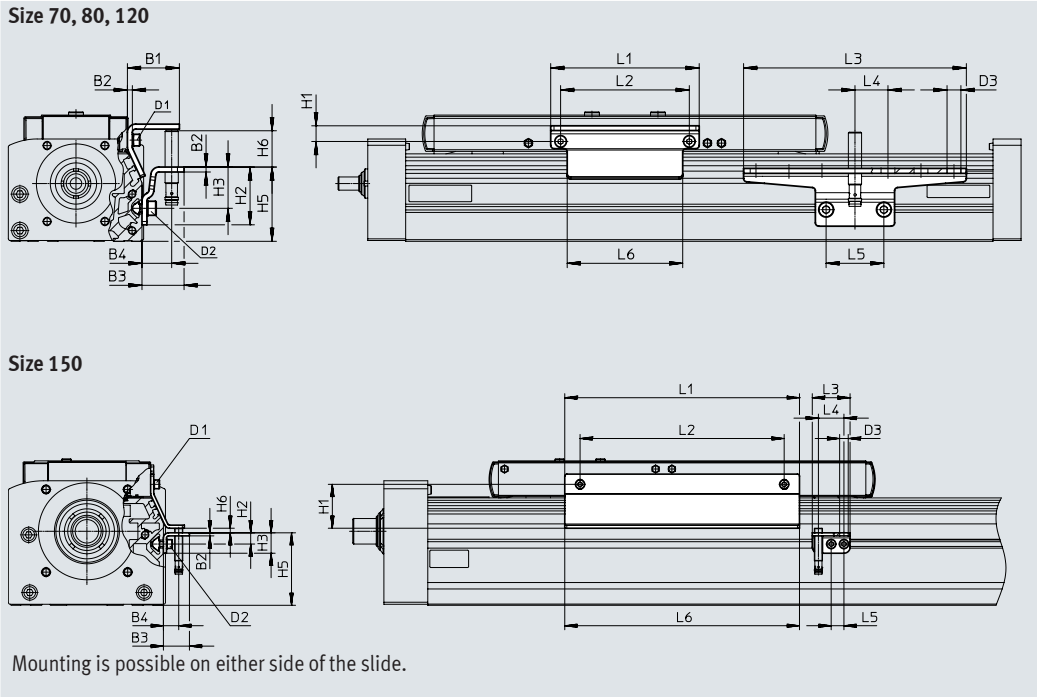
**Switch lug SF-EGC-2**  
for sensing with proximity sensor  
SIEN-M8B or SIES-8M

Material:  
Galvanised steel  
RoHS-compliant



**Sensor bracket HWS-EGC**  
for proximity sensor SIEN-M8B

Material:  
Galvanised steel  
RoHS-compliant



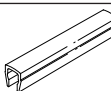
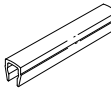
| Dimensions and ordering data |      |    |      |    |    |    |         |      |    |
|------------------------------|------|----|------|----|----|----|---------|------|----|
| For size                     | B1   | B2 | B3   | B4 | D1 | D2 | D3<br>Ø | H1   | H2 |
| 70                           | 31.5 | 3  | 25.5 | 18 | M4 | M5 | 8.4     | 9.5  | 35 |
| 80                           | 31.5 | 3  | 25.5 | 18 | M4 | M5 | 8.4     | 9.5  | 35 |
| 120                          | 32   | 3  | 25.5 | 18 | M5 | M5 | 8.4     | 13.2 | 65 |
| 150                          | 33   | 3  | 25.5 | 15 | M5 | M5 | 8.4     | 43   | 20 |

| For size | H3 | H5 | H6<br>max. | L1  | L2  | L3  | L4 | L5   | L6  |
|----------|----|----|------------|-----|-----|-----|----|------|-----|
| 70       | 25 | 45 | 13.5       | 70  | 56  | 135 | 20 | 35   | 50  |
| 80       | 25 | 45 | 23.5       | 90  | 78  | 135 | 20 | 35   | 70  |
| 120      | 55 | 75 | 24         | 170 | 140 | 215 | 20 | 35   | 170 |
| 150      | 11 | 71 | 4.5        | 230 | 200 | 37  | 25 | 12.5 | 230 |

| For size   | Weight<br>[g] | Part no. | Type         |
|------------|---------------|----------|--------------|
| Switch lug |               |          |              |
| 70         | 100           | 558052   | SF-EGC-2-70  |
| 80         | 130           | 558053   | SF-EGC-2-80  |
| 120        | 277           | 558054   | SF-EGC-2-120 |
| 150        | 390           | 558056   | SF-EGC-2-185 |

| For size       | Weight<br>[g] | Part no. | Type                     |
|----------------|---------------|----------|--------------------------|
| Sensor bracket |               |          |                          |
| 70             | 110           | 558057   | HWS-EGC-M5               |
| 80             | 110           | 558057   | HWS-EGC-M5               |
| 120            | 217           | 570365   | HWS-EGC-M8-B             |
| 150            | 58            | 560517   | HWS-EGC-M8: KURZ (SHORT) |

## Accessories

| Ordering data                                                                       |                  |                                                                                      |          |               |                  |
|-------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------|----------|---------------|------------------|
|                                                                                     | For size         | Description                                                                          | Part no. | Type          | PU <sup>1)</sup> |
| Slot nut NST                                                                        |                  |                                                                                      |          |               |                  |
|    | 70, 80           | For mounting slot                                                                    | 150914   | NST-5-M5      | 1                |
|                                                                                     |                  |                                                                                      | 8047843  | NST-5-M5-10   | 10               |
|                                                                                     |                  |                                                                                      | 8047878  | NST-5-M5-50   | 50               |
|                                                                                     | 120, 150         | For mounting slot                                                                    | 150915   | NST-8-M6      | 1                |
|                                                                                     |                  |                                                                                      | 8047868  | NST-8-M6-10   | 10               |
|                                                                                     |                  |                                                                                      | 8047869  | NST-8-M6-50   | 50               |
| Centring pin/sleeve ZBS/ZBH                                                         |                  |                                                                                      |          |               |                  |
|    | 70               | For slide                                                                            | 150928   | ZBS-5         | 10               |
|                                                                                     | 70, 80, 120, 150 |                                                                                      | 8137184  | ZBH-9-B       |                  |
| Slot cover ABP                                                                      |                  |                                                                                      |          |               |                  |
|    | 70, 80           | <ul style="list-style-type: none"><li>For mounting slot</li><li>Each 0.5 m</li></ul> | 151681   | ABP-5         | 2                |
|                                                                                     | 120, 150         |                                                                                      | 151682   | ABP-8         |                  |
|                                                                                     |                  |                                                                                      |          |               |                  |
| Slot cover ABP-S                                                                    |                  |                                                                                      |          |               |                  |
|    | 70 ... 150       | <ul style="list-style-type: none"><li>For sensor slot</li><li>Each 0.5 m</li></ul>   | 563360   | ABP-5-S1      | 2                |
|                                                                                     |                  |                                                                                      |          |               |                  |
| Clip SMBK                                                                           |                  |                                                                                      |          |               |                  |
|  | 70 ... 150       | For sensor slot, for mounting the proximity sensor cables                            | 534254   | SMBK-8        | 10               |
| Clamping element EADT                                                               |                  |                                                                                      |          |               |                  |
|  | 70, 80           | Tool for retensioning the cover strip                                                | 8058451  | EADT-S-L5-70  | 1                |
|                                                                                     | 120, 150         |                                                                                      | 8058450  | EADT-S-L5-120 |                  |

1) Packaging unit

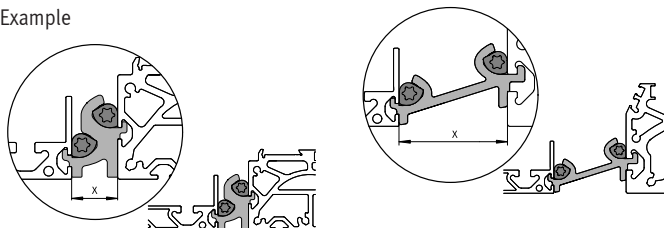
## Accessories

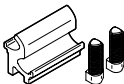
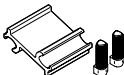
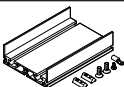
### Mounting options between axis and support profile

Depending on the adapter kit, the spacing between the axis and the support profile is:  
x = 20 mm or 50 mm

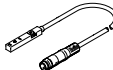
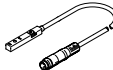
The support profile must be mounted using at least 2 adapter kits. For longer strokes, an adapter kit must be used every 500 mm.

Example



| Ordering data                                                                      |            |                                                                                                                                                |          |                  |                  |
|------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------|------------------|
|                                                                                    | For size   | Description                                                                                                                                    | Part no. | Type             | PU <sup>1)</sup> |
| Adapter kit DHAM                                                                   |            |                                                                                                                                                |          |                  |                  |
|    | 80         | <ul style="list-style-type: none"><li>For mounting the support profile on the axis</li><li>Spacing between axis and profile is 20 mm</li></ul> | 562241   | DHAM-ME-N1-CL    | 1                |
|                                                                                    | 120, 150   |                                                                                                                                                | 562242   | DHAM-ME-N2-CL    |                  |
|    | 70, 80     | <ul style="list-style-type: none"><li>For mounting the support profile on the axis</li><li>Spacing between axis and profile is 50 mm</li></ul> | 574560   | DHAM-ME-N1-50-CL |                  |
|    | 120, 150   |                                                                                                                                                | 574561   | DHAM-ME-N2-50-CL |                  |
| Support profile HMIA                                                               |            |                                                                                                                                                |          |                  |                  |
|  | 70 ... 150 | <ul style="list-style-type: none"><li>For guiding an energy chain</li></ul>                                                                    | 539379   | HMIA-E07-        | 1                |

1) Packaging unit

| Ordering data – Proximity sensors for T-slot, inductive                            |                                                                    |                       |                  |                  |          | Data sheets → Internet: <a href="#">sies</a> |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------|-----------------------|------------------|------------------|----------|----------------------------------------------|
|                                                                                    | Type of mounting                                                   | Electrical connection | Switching output | Cable length [m] | Part no. | Type                                         |
| N/O contact                                                                        |                                                                    |                       |                  |                  |          |                                              |
|  | Insertable in the slot from above, flush with the cylinder profile | Cable, 3-wire         | PNP              | 7.5              | 551386   | SIES-8M-PS-24V-K-7.5-OE                      |
|                                                                                    |                                                                    | Plug M8x1, 3-pin      |                  | 0.3              | 551387   | SIES-8M-PS-24V-K-0.3-M8D                     |
|                                                                                    |                                                                    | Cable, 3-wire         | NPN              | 7.5              | 551396   | SIES-8M-NS-24V-K-7.5-OE                      |
|                                                                                    |                                                                    | Plug M8x1, 3-pin      |                  | 0.3              | 551397   | SIES-8M-NS-24V-K-0.3-M8D                     |
| N/C contact                                                                        |                                                                    |                       |                  |                  |          |                                              |
|  | Insertable in the slot from above, flush with the cylinder profile | Cable, 3-wire         | PNP              | 7.5              | 551391   | SIES-8M-PO-24V-K-7.5-OE                      |
|                                                                                    |                                                                    | Plug M8x1, 3-pin      |                  | 0.3              | 551392   | SIES-8M-PO-24V-K-0.3-M8D                     |
|                                                                                    |                                                                    | Cable, 3-wire         | NPN              | 7.5              | 551401   | SIES-8M-NO-24V-K-7.5-OE                      |
|                                                                                    |                                                                    | Plug M8x1, 3-pin      |                  | 0.3              | 551402   | SIES-8M-NO-24V-K-0.3-M8D                     |

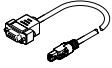
## Accessories

| Ordering data – Proximity sensors M8 (round design), inductive                    |                       |     |                  |                  |          | Data sheets → Internet: sien |
|-----------------------------------------------------------------------------------|-----------------------|-----|------------------|------------------|----------|------------------------------|
|                                                                                   | Electrical connection | LED | Switching output | Cable length [m] | Part no. | Type                         |
| N/O contact                                                                       |                       |     |                  |                  |          |                              |
|  | Cable, 3-wire         | ■   | PNP              | 2.5              | 150386   | SIEN-M8B-PS-K-L              |
|                                                                                   |                       |     | NPN              | 2.5              | 150384   | SIEN-M8B-NS-K-L              |
|  | Plug M8x1, 3-pin      | ■   | PNP              | –                | 150387   | SIEN-M8B-PS-S-L              |
|                                                                                   |                       |     | NPN              | –                | 150385   | SIEN-M8B-NS-S-L              |
| N/C contact                                                                       |                       |     |                  |                  |          |                              |
|  | Cable, 3-wire         | ■   | PNP              | 2.5              | 150390   | SIEN-M8B-PO-K-L              |
|                                                                                   |                       |     | NPN              | 2.5              | 150388   | SIEN-M8B-NO-K-L              |
|  | Plug M8x1, 3-pin      | ■   | PNP              | –                | 150391   | SIEN-M8B-PO-S-L              |
|                                                                                   |                       |     | NPN              | –                | 150389   | SIEN-M8B-NO-S-L              |

| Ordering data – Connecting cables                                                  |                              |                              |                  |          |                     | Data sheets → Internet: nebu |
|------------------------------------------------------------------------------------|------------------------------|------------------------------|------------------|----------|---------------------|------------------------------|
|                                                                                    | Electrical connection, left  | Electrical connection, right | Cable length [m] | Part no. | Type                |                              |
|   | Straight socket, M8x1, 3-pin | Cable, open end, 3-wire      | 2.5              | 159420   | SIM-M8-3GD-2.5-PU   |                              |
|                                                                                    |                              |                              | 2.5              | 541333   | NEBU-M8G3-K-2.5-LE3 |                              |
|                                                                                    |                              |                              | 5                | 541334   | NEBU-M8G3-K-5-LE3   |                              |
|                                                                                    |                              |                              | 2.5              | 541338   | NEBU-M8W3-K-2.5-LE3 |                              |
|  | Angled socket, M8x1, 3-pin   | Cable, open end, 3-wire      | 5                | 541341   | NEBU-M8W3-K-5-LE3   |                              |

| Ordering data – Encoder cables for displacement encoder, ELGA-...-M1/-M2            |                                      |                                      |                  |          |                          | Data sheets → Internet: nebm |
|-------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------|------------------|----------|--------------------------|------------------------------|
|                                                                                     | Electrical connection, left          | Electrical connection, right         | Cable length [m] | Part no. | Type                     |                              |
|  | Displacement encoder ELGA-...-M1/-M2 | Motor controller CMMP-AS and CMMT-AS | 5                | 1599105  | NEBM-M12G8-E-5-S1G9-V3   |                              |
|                                                                                     |                                      |                                      | 10               | 1599106  | NEBM-M12G8-E-10-S1G9-V3  |                              |
|                                                                                     |                                      |                                      | 15               | 1599107  | NEBM-M12G8-E-15-S1G9-V3  |                              |
|                                                                                     |                                      |                                      | X <sup>1)</sup>  | 1599108  | NEBM-M12G8-E-...-S1G9-V3 |                              |

1) Max. cable length 25 m.

| Ordering data – Adapter                                                             |                                                                                                                                               |          |                      |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                     | Description                                                                                                                                   | Part no. | Type                 |
|  | Required in combination with the servo drive CMMT-AS as adapter between encoder cable NEBM-M12G8-...-V3 and interface X3 (position encoder 2) | 8106112  | NEFM-S1G9-K-0.5-R3G8 |

# Festo - Your Partner in Automation



**1 Festo Inc.**  
5300 Explorer Drive  
Mississauga, ON L4W 5G4  
Canada

**Festo Customer Interaction Center**  
Tel: 1 877 463 3786  
Fax: 1 877 393 3786  
Email: [customer.service.ca@festo.com](mailto:customer.service.ca@festo.com)



**2 Festo Pneumatic**  
Av. Ceylán 3,  
Col. Tequesquináhuac  
54020 Tlalnepantla,  
Estado de México

**Multinational Contact Center**  
01 800 337 8669  
[ventas.mexico@festo.com](mailto:ventas.mexico@festo.com)



**3 Festo Corporation**  
1377 Motor Parkway  
Suite 310  
Islandia, NY 11749

**Festo Customer Interaction Center**  
1 800 993 3786  
1 800 963 3786  
[customer.service.us@festo.com](mailto:customer.service.us@festo.com)



**4 Regional Service Center**  
7777 Columbia Road  
Mason, OH 45040

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