

## Mini slides EGSC-BS

FESTO



## Key features

### At a glance



- Four very compact sizes for precision positioning at speeds up to 600 mm/s and a max. length of 200 mm
- Recirculating ball bearing guide for yoke slide with high load bearing capacity
- Integrated coupling for a compact design
- Very high-quality ball screw with low internal friction
- Rigid, high load-bearing and precise linear guide for absorbing lateral forces and for increased protection against rotation
- Ring magnet for position sensing. For simple and low-cost position sensing
- Suitable for the production of lithium-ion batteries

### Compact

Optimum dimensions thanks to the integrated compact coupling and a very short slide

### Flexible

Adapterless combination of ELGC and EGSC using the innovative "one size down" assembly system

### Integrated

Simple position sensing with proximity switch SMT-8M and integrated positioning magnet

### Protected

The optional sealing air connection protects against particles penetrating or being emitted.

### Modular and flexible with motor, motor mounting kit and servo drive

#### Motor

#### Servo motor



#### Stepper motor



#### Servo drive

#### Servo drive



#### Motor controller for stepper motor



#### Motor mounting kit

#### Axial kit



#### Parallel kit



### Simplicity in one unit

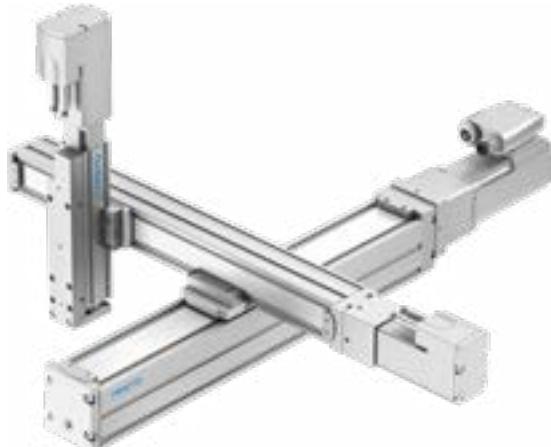
This product is also available as a product unit as part of the Simplified Motion Series:



- The Simplified Motion Series combines the simplicity of pneumatics with the benefits of electric automation. The perfect solution for all users who are looking for an electric alternative for very simple movement and positioning tasks, but don't want the commissioning process for traditional electric drive systems that can often be quite complex.
- Simplified functionality for simple movements between two end positions
- A variety of movements with different mechanical systems
- Integrated products eliminate the need for a control cabinet
- Quick and easy commissioning without software and special expertise
- Digital I/O and IO-Link integrated as standard

## Key features

### From the individual axis to the complete handling system



- The toothed belt and spindle axes ELGC and the mini slides EGSC form a scalable modular system for compact automation
- The shared platform architecture creates a consistent range with matching interfaces. A large number of systems can be realised entirely without adapter plates
- Powerful drive and guide components ensure a long service life, as well as excellent load capacity and reliability
- The uniform and universal range of accessories reduces warehousing and design costs
- Two position sensing functions can be selected:
  - With magneto-resistive proximity switches (detection via integrated magnets)
  - With inductive proximity switches (detection via switch lug)

### The products for the handling system

Spindle axis

ELGC-BS



Toothed belt axis

ELGC-TB



Guide axis

ELFC



Mini slide

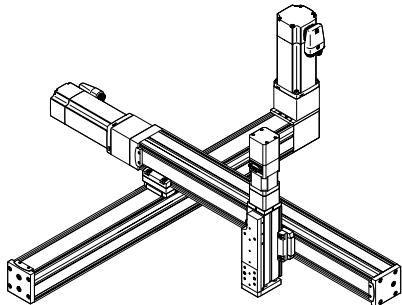
EGSC



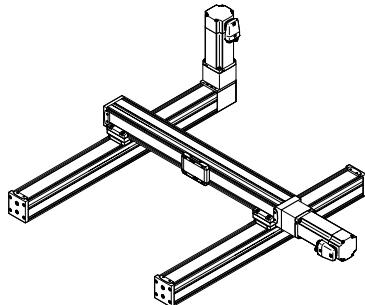
### Typical handling systems

For applications where compact dimensions are essential, the axes ELGC can be combined into very space-saving handling systems that are suitable for assembly systems, test and inspection systems, small parts handling, the electronics industry and desktop applications. Combining the very compact linear axes ELGC, Mini slides EGSC and electric cylinder EPCC offers an optimum ratio of installation space to working space. These feature a common system approach and platform architecture and the connections are largely adapterless.

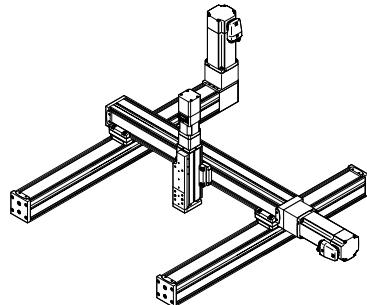
Cantilever system



Planar surface gantry



Three-dimensional gantry



## Mini slides EGSC-BS

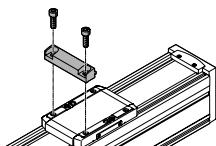
### Key features

#### Combination matrix between axis ELGC/ELGS-TB, ELGC/ELGS-BS, Mini slides EGSC/EGSS-BS, electric cylinder EPCC/EPCS-BS and guide axis ELFC

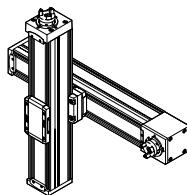
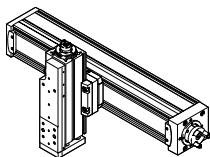
Mounting options with profile mounting and with angle kit

|  | Size | Assembly axis ELGC-BS/-TB; ELFC; EGSC-BS; EPCC-BS; ELGS-BS/-TB; EGSS-BS, EPCS-BS |    |    |   |
|--|------|--|----|----|---|
|  | 25   | 32   | 45 | 60 |   |
| Base axis<br>ELGC-BS/-TB; ELFC;<br>ELGS-BS/-TB | 32   | ■  | -  | -  | - |
|  | 45   | -  | ■  | -  | - |
|  | 60   | -  | -  | ■  | - |
|  | 80   | -  | -  | -  | ■ |

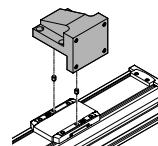
With profile mounting EAHF-L2-...-P-D...



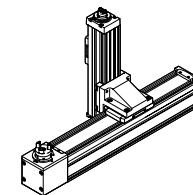
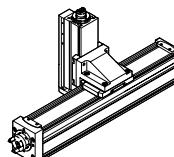
- Mounting option: base axis with one-size-down assembly axis



With angle kit EHAA-D-L2-...-AP



- Mounting option: base axis rotated through 90° with one-size-down assembly axis



#### Combination matrix between axis ELGC/ELGS-TB, ELGC/ELGS-BS, Mini slides EGSC/EGSS-BS, electric cylinder EPCC/EPCS-BS and guide axis ELFC

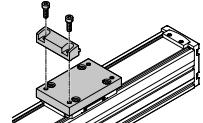
Mounting options with adapter kit or direct fastening

|  | Assembly axis ELGC-BS/-TB; ELFC; EGSC-BS; EPCC-BS;<br>ELGS-BS/-TB; EGSS-BS, EPCS-BS |    |    |    |    |    |
|--|---|----|----|----|----|----|
|  | Size  | 25 | 32 | 45 | 60 | 80 |
| Base axis<br>ELGC-BS/-TB; ELFC;<br>ELGS-BS/-TB | 32  | ■  | -  | -  | -  | -  |
|  | 45  | -  | ■  | -  | -  | -  |
|  | 60  | -  | -  | ■  | -  | -  |
|  | 80  | -  | -  | -  | -  | ■  |

|                                  | Assembly axis EGSC-BS; EGSS-BS |    |    |    |    |
|----------------------------------|--------------------------------|----|----|----|----|
|                                  | Size                           | 25 | 32 | 45 | 60 |
| Base axis<br>EGSC-BS;<br>EGSS-BS | 25                             | ■  | -  | -  | -  |
|                                  | 32                             | -  | ■  | -  | -  |
|                                  | 45                             | -  | -  | ■  | -  |
|                                  | 60                             | -  | -  | -  | ■  |

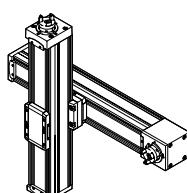
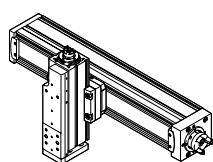
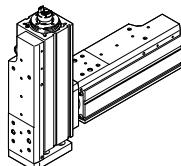
With adapter kit EHAA-D-L2

- Mounting option: base axis with the same size assembly axis
- Mounting option: base axis with height compensation for one-size-down assembly axis
- When motors are mounted using parallel kits, this may lead to interfering contours. In this case, the adapter plate is required for height compensation



With direct mounting

- Mounting option: base axis with the same size assembly axis



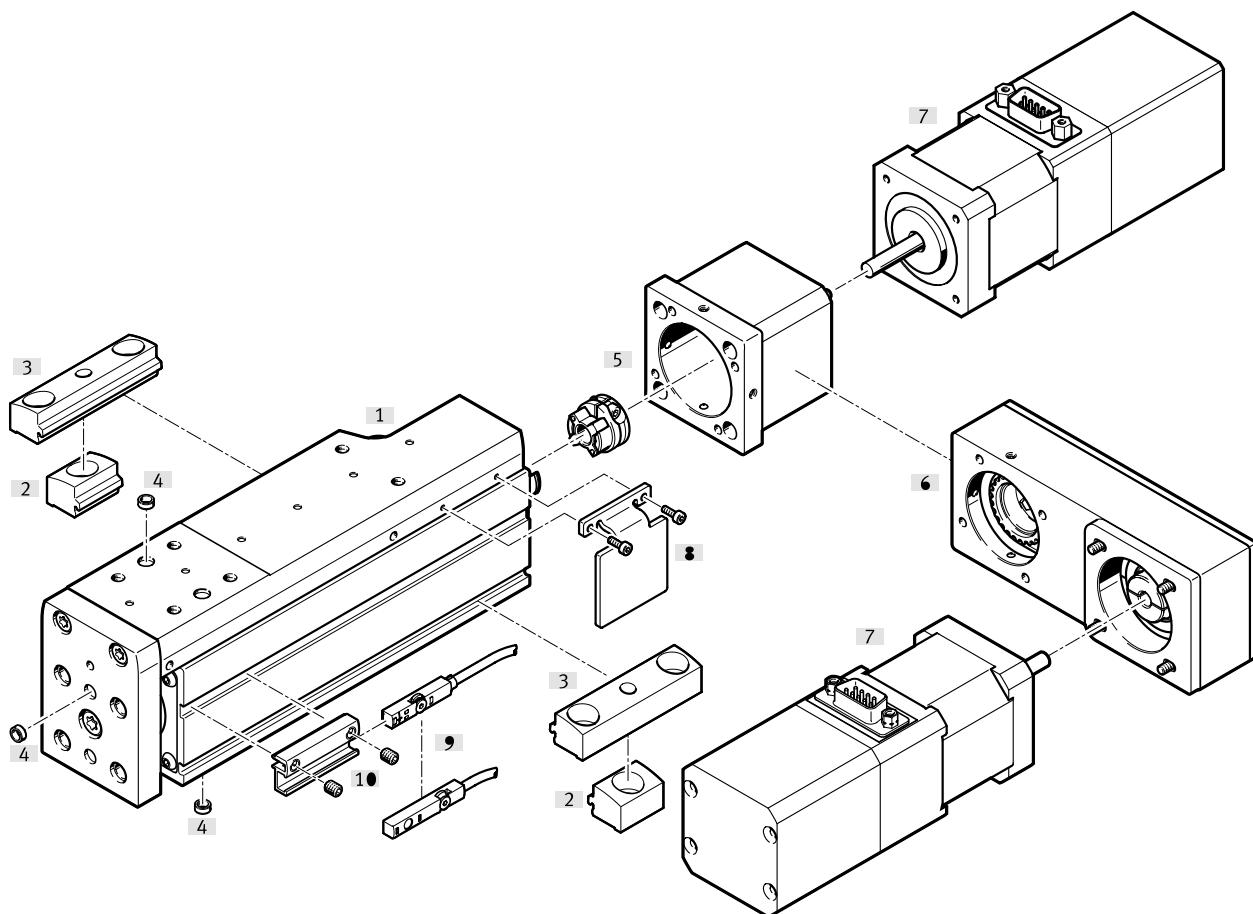
## Type codes

| 001  | Series                           |
|------|----------------------------------|
| EGSC | Mini slide                       |
| 002  | Drive system                     |
| BS   | Ball screw drive                 |
| 003  | Guide                            |
| KF   | Recirculating ball bearing guide |
| 004  | Size                             |
| 25   | 25                               |
| 32   | 32                               |
| 45   | 45                               |
| 60   | 60                               |

| 005 | Stroke [mm] |
|-----|-------------|
| 25  | 25          |
| 50  | 50          |
| 75  | 75          |
| 100 | 100         |
| 125 | 125         |
| 150 | 150         |
| 200 | 200         |

| 006 | Spindle pitch |
|-----|---------------|
| 2P  | 2 mm          |
| 3P  | 3 mm          |
| 5P  | 5 mm          |
| 6P  | 6 mm          |
| 8P  | 8 mm          |
| 10P | 10 mm         |
| 12P | 12 mm         |

## Peripherals overview



### Sealing air connection



Air is exchanged between the interior of the cylinder and the environment via a sealing air connection. This prevents negative pressure or overpressure from building up inside the cylinder.

Additional functions of the connection:

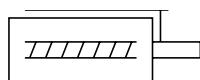
- Application of slight negative pressure prevents particles being emitted
- Application of slight overpressure prevents particles penetrating

Suitable push-in fittings → page 26

## Peripherals overview

| <b>Accessories</b>                     |   |                 |
|--|---|-----------------|
| Type/order code                        | Description   | → Page/Internet |
| [1] Mini slide<br>EGSC-BS              | With ball screw and recirculating ball bearing guide  | 8               |
| [2] Profile mounting<br>EAHF-L2-...-PS | For mounting the axis on the side of the profile  | 23              |
| [3] Profile mounting<br>EAHF-L2-...-P  | For mounting the axis on the side of the profile. The profile mounting can be attached to the mounting surface using the drilled hole in the centre | 24              |
| [4] Centring pin/sleeve<br>ZBS, ZBH    | For centring loads and attachments  | 26              |
| [5] Axial kit<br>EAMM-A                | For axial motor mounting  | 21              |
| [6] Parallel kit<br>EAMM-U             | For parallel motor mounting   | 22              |
| [7] Motors<br>EMME-AS, EMMS-ST         | Motors specially matched to the axis, with or without brake   | 21              |
| [8] Switch lug<br>EAPM-...-SLS         | For sensing the slide position in conjunction with inductive proximity switches SIES-8M   | 25              |
| [9] Proximity switch<br>SIES-8M        | Inductive proximity switches, for T-slot  | 26              |
| Proximity switch<br>SMT-8M             | Magnetic proximity switches, for T-slot   | 26              |
| [10] Sensor bracket<br>EAPM-L2         | For mounting the proximity switches on the axis. The proximity switches can only be mounted using the sensor bracket                                | 25              |

## Datasheet



- - Size  
25 ... 60
- - Stroke length  
25 ... 200 mm

**General technical data**

| Size                                  | 25  | 32    | 45              | 60    |                           |       |                            |       |
|---------------------------------------|---|-------|-----------------|-------|---------------------------|-------|----------------------------|-------|
| Spindle pitch [mm/rev]                | 2   | 6     | 3               | 8     | 3                         | 10    | 5                          | 12    |
| Design                                | Electric mini slide with ball screw drive |       |                 |       |                           |       |                            |       |
| Guide                                 | Recirculating ball bearing guide          |       |                 |       |                           |       |                            |       |
| Mounting position                     | Any                                       |       |                 |       |                           |       |                            |       |
| Working stroke [mm]                   | 25, 50, 75                                |       | 25, 50, 75, 100 |       | 25, 50, 75, 100, 125, 150 |       | 50, 75, 100, 125, 150, 200 |       |
| Guide value for payload [kg]          | 2   |       | 6               |       | 12                        |       | 25                         |       |
| Max. feed force $F_x$ [N]             | 20  |       | 60              |       | 120                       |       | 250                        |       |
| No-load driving torque at [Nm]        | 0.0053                                    | 0.015 | 0.013           | 0.025 | 0.0153                    | 0.030 | 0.0317                     | 0.04  |
| Low travel speed [m/s]                | 0.013                                     | 0.04  | 0.019           | 0.06  | 0.018                     | 0.07  | 0.025                      | 0.06  |
| No-load driving torque at [Nm]        | 0.015                                     | 0.029 | 0.044           | 0.042 | 0.059                     | 0.1   | 0.125                      | 0.306 |
| Max. travel speed [m/s]               | 0.133                                     | 0.4   | 0.188           | 0.5   | 0.18                      | 0.6   | 0.25                       | 0.6   |
| Max. radial force <sup>1)</sup> [N]   | 30  |       | 75              |       | 180                       |       | 230                        |       |
| Max. rotational speed [rpm]           | 4000                                      |       | 3750            |       | 3600                      |       | 3000                       |       |
| Max. acceleration [m/s <sup>2</sup> ] | 5   | 15    | 5               | 15    | 5                         | 15    | 5                          | 15    |
| Repetition accuracy [mm]              | $\pm 0.015$                               |       |                 |       |                           |       |                            |       |
| Reversing backlash [mm]               | $\leq 0.15$                               |       |                 |       |                           |       |                            |       |
| Position sensing                      | Magneto-resistive, inductive              |       |                 |       |                           |       |                            |       |

1) At the drive shaft

**Operating and environmental conditions**

| Size                                   | 25                               | 32 | 45 | 60 |
|--|----------------------------------|----|----|----|
| Ambient temperature <sup>1)</sup> [°C] | 0 ... +50                        |    |    |    |
| Degree of protection                   | IP40                             |    |    |    |
| Duty cycle [%]                         | 100                              |    |    |    |
| Cleanroom class                        | Class 9 according to ISO 14644-1 |    |    |    |
| Maintenance interval                   | Lifetime lubrication             |    |    |    |

1) Note operating range of proximity switches

## Datasheet

| <b>Weights [g]</b>                 |     |     |     |      |  |  |
|------------------------------------|-----|-----|-----|------|--|--|
| Size                               | 25  | 32  | 45  | 60   |  |  |
| Basic weight with 0 mm stroke      | 176 | 331 | 608 | 1555 |  |  |
| Additional weight per 10 mm stroke | 19  | 30  | 63  | 95   |  |  |
| Moving mass with 0 mm stroke       | 83  | 149 | 212 | 675  |  |  |
| Additional mass per 10 mm stroke   | 9   | 12  | 30  | 40   |  |  |

| <b>Spindle</b> |    |    |    |    |   |    |
|----------------|----|----|----|----|---|----|
| Size           | 25 | 32 | 45 | 60 |   |    |
| Diameter [mm]  | 6  | 8  | 10 | 12 |   |    |
| Pitch [mm/rev] | 2  | 6  | 3  | 8  | 3 | 10 |
|                |    |    |    |    | 5 | 12 |

| <b>Mass moment of inertia</b>                  |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|
| Size   | 25     | 32     | 45     | 60     |        |        |
| Spindle pitch [mm/rev]                         | 2      | 6      | 3      | 8      | 3      | 10     |
| $J_0$ [kg cm <sup>2</sup> ]                    | 0.0009 | 0.0014 | 0.0039 | 0.0067 | 0.0105 | 0.0136 |
| $J_H$ per metre stroke [kg cm <sup>2</sup> /m] | 0.0053 | 0.0151 | 0.0249 | 0.0448 | 0.0492 | 0.1361 |
| $J_L$ per kg payload [kg cm <sup>2</sup> /kg]  | 0.0010 | 0.0091 | 0.0023 | 0.0162 | 0.0028 | 0.0253 |
|  |        |        |        |        | 0.0063 | 0.0365 |

The mass moment of inertia  $J_{act}$  of the mini slide is calculated as follows:

$$J_{act} = J_0 + J_H / 1000 \text{ mm} \times \text{working stroke}$$

### Homing

Homing can be carried out in two ways:

- Against a fixed stop
- Using a reference switch

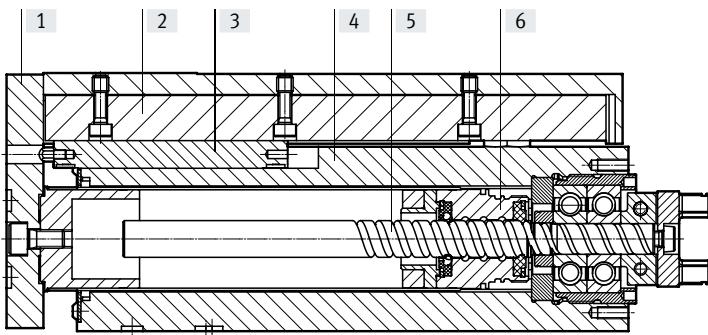
The following values must be observed:

| Size                    | 25                     | 32                     | 45                     | 60                     |  |
|-------------------------|------------------------|------------------------|------------------------|------------------------|--|
| Max. impact energy [J]  | 0.005x10 <sup>-3</sup> | 0.009x10 <sup>-3</sup> | 0.014x10 <sup>-3</sup> | 0.044x10 <sup>-3</sup> |  |
| Max. homing speed [m/s] | 0.01                   |                        |                        |                        |  |

## Datasheet

## Materials

Sectional view



## Axis

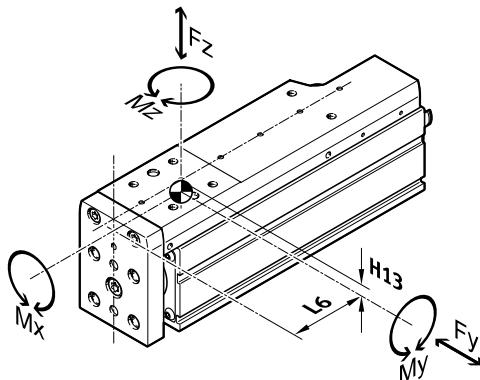
|  |             |  |
|--|-------------|--|
| [1]  | Yoke plate  | Anodised wrought aluminium alloy   |
| [2]  | Slide       | Anodised wrought aluminium alloy   |
| [3]  | Guide rail  | Rolling bearing steel  |
| [4]  | Housing     | Anodised wrought aluminium alloy   |
| [5]  | Spindle     | Rolling bearing steel  |
| [6]  | Spindle nut | Rolling bearing steel  |
| Note on materials                                    |             | RoHS-compliant   |
| PWIS conformity                                      |             | VDMA24364 zone III   |
| Suitable for the production of lithium-ion batteries |             | Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils |

## Datasheet

### Dynamic characteristic load values

The indicated forces and torques refer to the centre of the guide.

These values must not be exceeded during dynamic operation.



#### Distance from the centre of the guide

| Size                            | 25   | 32   | 45   | 60   |
|---------------------------------|------|------|------|------|
| Dimension H13 [mm]              | 7.3  | 7.9  | 10.2 | 15.9 |
| Dimension L6 <sup>1)</sup> [mm] | 25.1 | 31.8 | 37.3 | 53.4 |

1) The dimension relates to the retracted position of the slide. In the advanced position, the dimension must be extended accordingly.

#### Max. permissible forces and torques for the guide calculation, for a service life of $5 \times 10^6$ cycles and max. stroke

| Size                                | 25  | 32  | 45   | 60   |
|-------------------------------------|-----|-----|------|------|
| F <sub>y</sub> <sub>max.</sub> [N]  | 669 | 991 | 1314 | 4937 |
| F <sub>z</sub> <sub>max.</sub> [N]  | 669 | 991 | 1314 | 4937 |
| M <sub>x</sub> <sub>max.</sub> [Nm] | 2.0 | 3.4 | 8.1  | 20   |
| M <sub>y</sub> <sub>max.</sub> [Nm] | 2.1 | 3.2 | 7    | 30   |
| M <sub>z</sub> <sub>max.</sub> [Nm] | 2.1 | 3.2 | 7    | 30   |

#### - Note

For a guide system to have a service life of  $5 \times 10^6$  cycles, 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  $5 \times 10^6$  cycles.

This formula can be used to calculate a guide value.

The engineering software "Electric Motion Sizing" is available for more precise calculations → [www.festo.com/x/electric-motion-sizing](http://www.festo.com/x/electric-motion-sizing)

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:

$$f_v = \frac{|F_{y1}|}{F_{y2}} + \frac{|F_{z1}|}{F_{z2}} + \frac{|M_{x1}|}{M_{x2}} + \frac{|M_{y1}|}{M_{y2}} + \frac{|M_{z1}|}{M_{z2}} \leq 1$$

$F_1/M_1$  = dynamic value

$F_2/M_2$  = maximum value

## Datasheet

### Calculating the service life

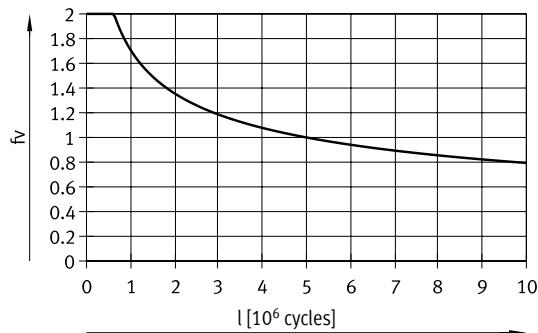
The service life of the guide depends on the load. To be able to make a statement as to the service life of the guide, the graph below plots the load comparison factor  $f_v$  against the service life  $l$ .

These values are only theoretical. You must consult your local Festo contact for a load comparison factor  $f_v$  greater than 1.

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

Example:

A user wants to move an  $x$  kg load. Using the formula (→ page 11) gives a value of 1.5 for the load comparison factor  $f_v$ . According to the graph, the guide has a service life of approx.  $1.5 \times 10^6$  cycles. 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  $5 \times 10^6$  cycles.



### Comparison of the characteristic load values for $5 \times 10^6$ cycles with dynamic forces and torques of recirculating ball bearing guides

The characteristic load values of the bearing guides are standardised to ISO and JIS using dynamic and static forces and torques. These forces and torques are based on an expected service life of the guide system 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 mini slides EGSC with roller 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)

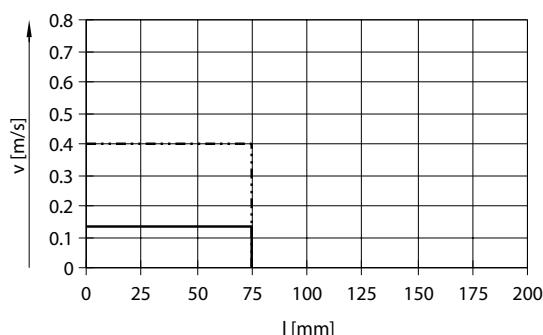
Application: mass  $m$  on the slide

| Size                   | 25   | 32   | 45   | 60    |
|------------------------|------|------|------|-------|
| $F_{y_{\max}}$<br>[N]  | 1310 | 2135 | 3240 | 13400 |
| $F_{z_{\max}}$<br>[N]  | 1310 | 2135 | 3240 | 13400 |
| $M_{x_{\max}}$<br>[Nm] | 5    | 10   | 20   | 107   |
| $M_{y_{\max}}$<br>[Nm] | 4    | 7    | 17   | 117   |
| $M_{z_{\max}}$<br>[Nm] | 4    | 7    | 17   | 117   |

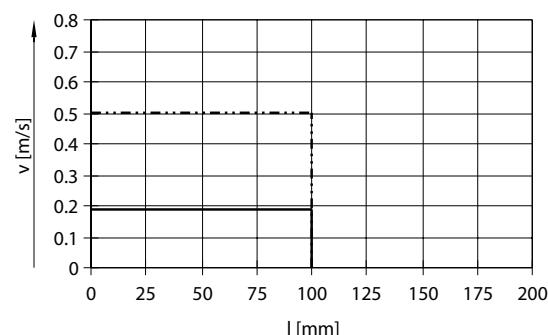
## Datasheet

## Speed v as a function of stroke l

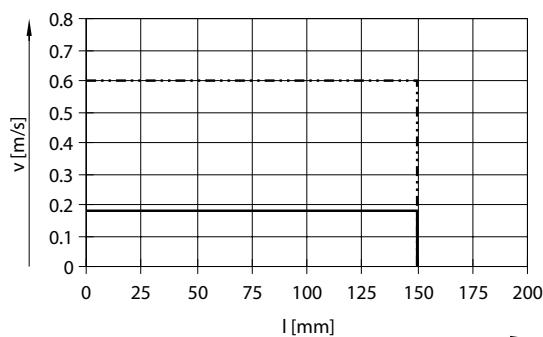
Size 25



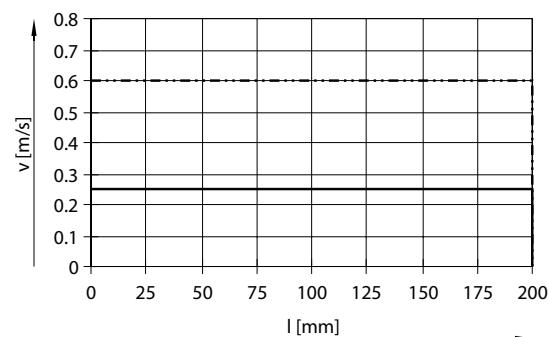
Size 32



Size 45



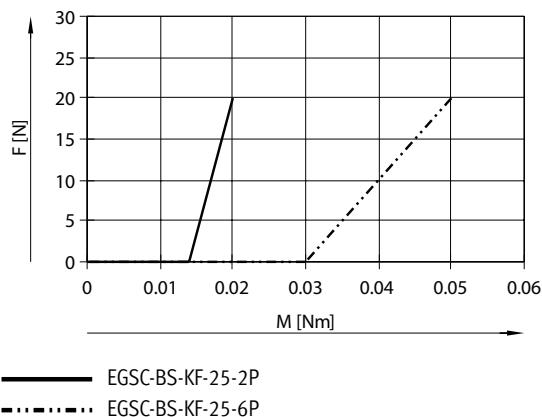
Size 60



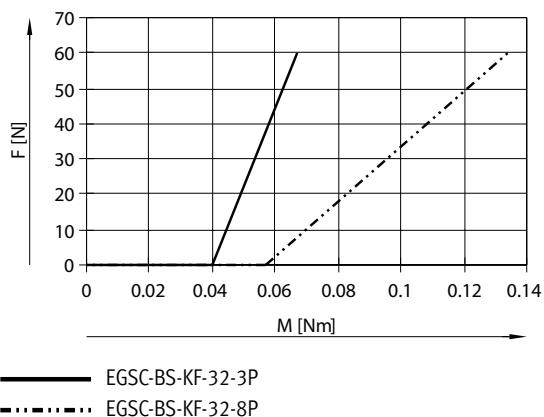
## Datasheet

### Feed force F as a function of input torque M

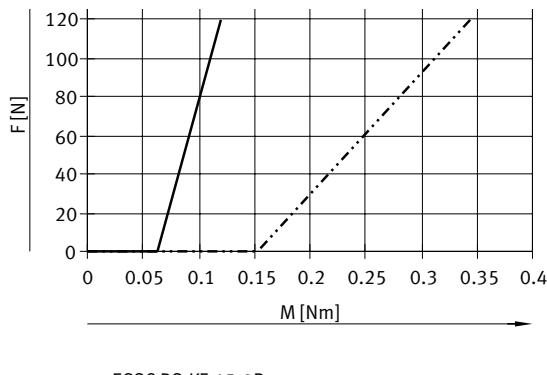
Size 25



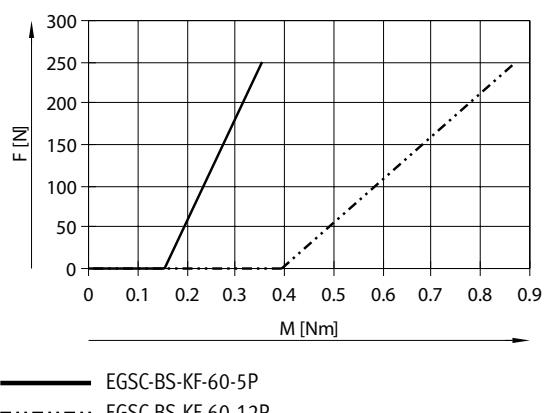
Size 32



Size 45

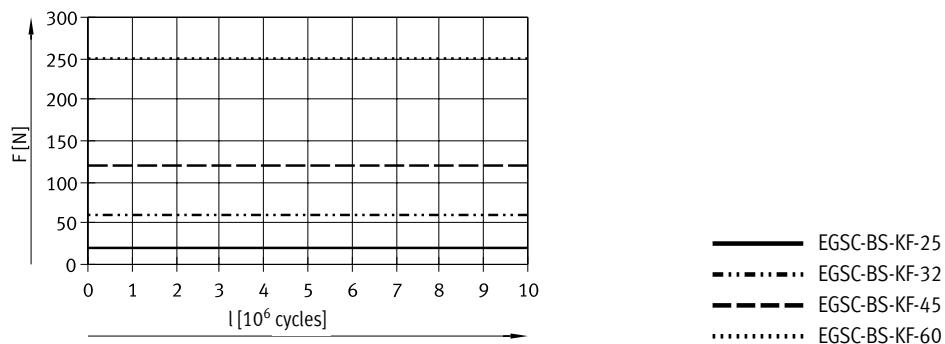


Size 60

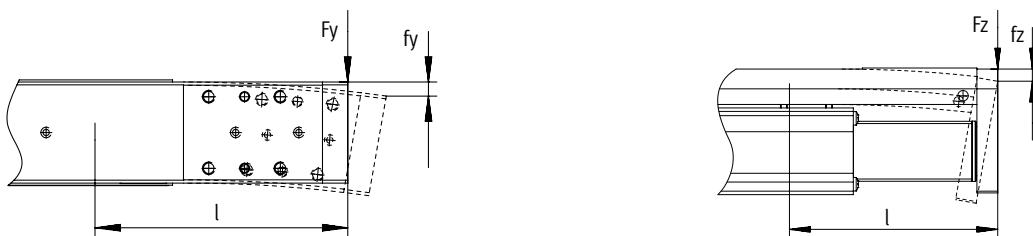


## Datasheet

### Feed force F as a function of service life l



### Deflection f of the guide rail as a function of stroke l

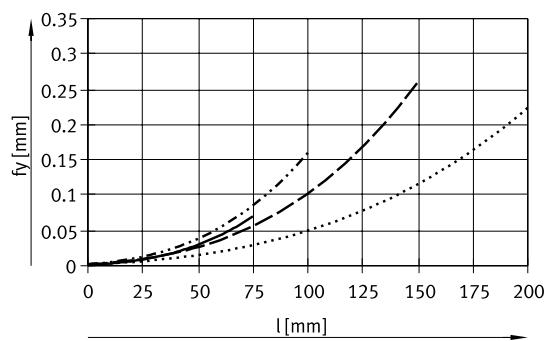


$F_y/F_z$  at which the characteristic curves were determined

EGSC-BS-KF-25: 10 N  
EGSC-BS-KF-32: 20 N

EGSC-BS-KF-45: 40 N  
EGSC-BS-KF-60: 60 N

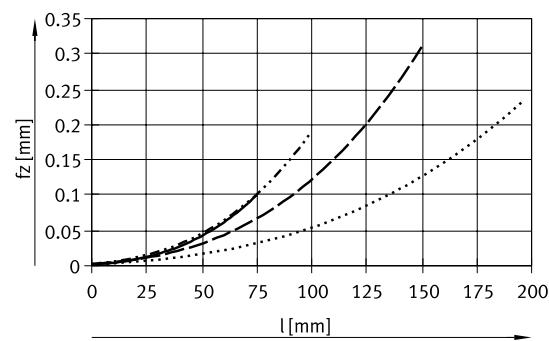
### Deflection $f_y$



Legend:

- EGSC-BS-KF-25
- EGSC-BS-KF-32
- EGSC-BS-KF-45
- EGSC-BS-KF-60

### Deflection $f_z$

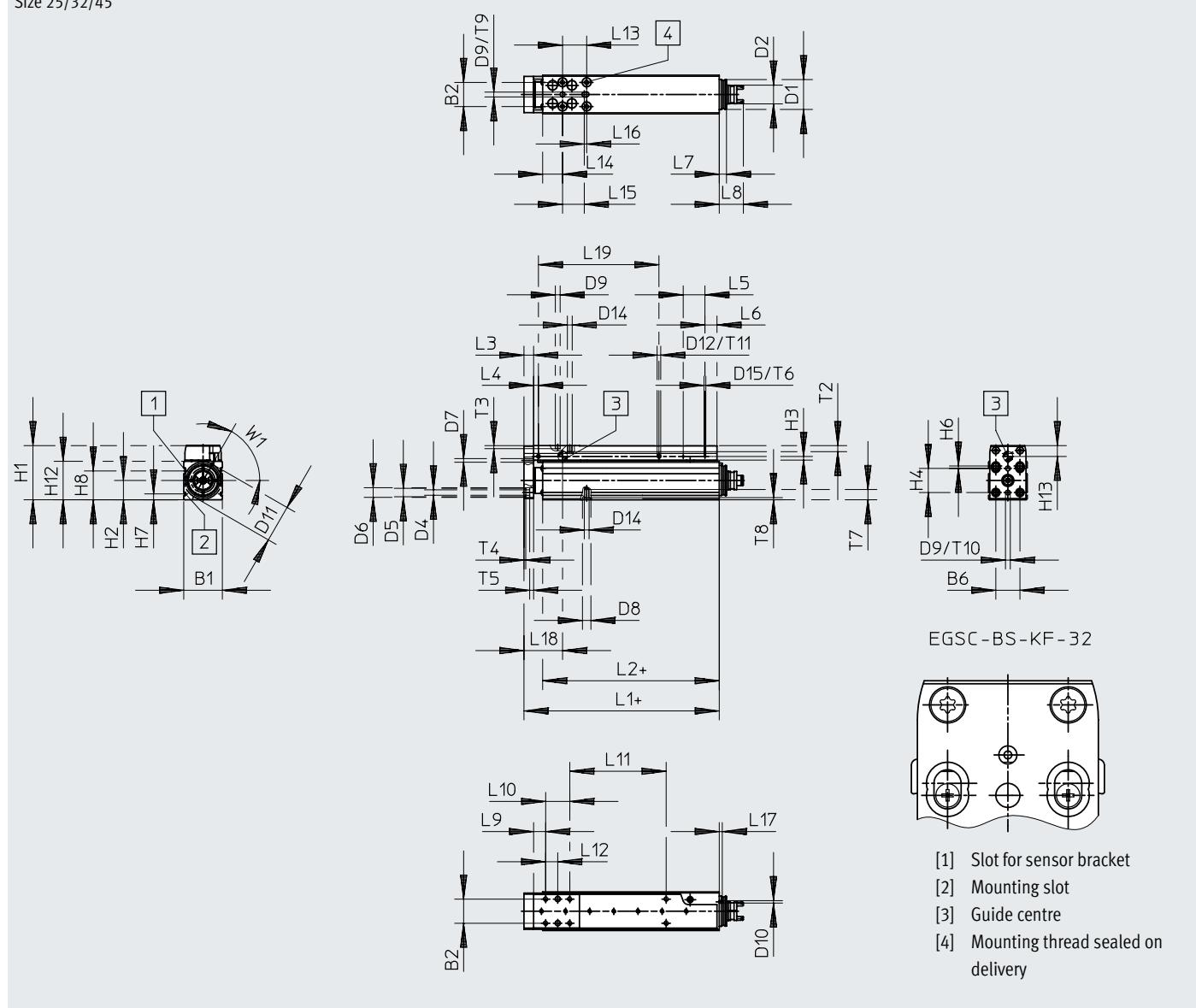


## Datasheet

### Dimensions

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

Size 25/32/45



## Datasheet

| Size | B1<br>±0.15 | B2 | B5 | B6 | D1<br>Ø | D2 <sup>1)</sup><br>Ø | D3<br>Ø | D4<br>Ø | D5<br>Ø | D6<br>Ø | D7<br>Ø | D8<br>Ø | D9<br>Ø | D10<br>Ø | D11<br>Ø |
|------|-------------|----|----|----|---------|-----------------------|---------|---------|---------|---------|---------|---------|---------|----------|----------|
| 25   | 25          | 17 | —  | 17 | 20.5    | 10.8                  | —       | 3.4     | 5       | 6       | 2.5     | 5       | 2       | 2        | 25       |
| 32   | 32          | 20 | —  | 20 | 25      | 15.5                  | —       | 4.5     | 7       | 8       | 3       | 7       | 4       | 2        | 31       |
| 45   | 45          | 25 | —  | 25 | 32      | 16.3                  | —       | 5.5     | 7       | 10      | 3       | 7       | 5       | 3        | 41       |

| Size | D12<br>Ø | D13 | D14 | D15  | D16 | H1   | H2   | H3  | H4 | H5 | H6 | H7  | H8   | H12 | H13  |
|------|----------|-----|-----|------|-----|------|------|-----|----|----|----|-----|------|-----|------|
| 25   | 3        | —   | M3  | M1.6 | —   | 36.5 | 12.5 | 2.5 | 17 | —  | —  | 4.9 | 20.5 | 25  | 7.6  |
| 32   | 3        | —   | M4  | M1.6 | —   | 45   | 16   | 3   | 20 | —  | 2  | 4.9 | 24   | 32  | 8.4  |
| 45   | 3        | —   | M5  | M2   | —   | 60.5 | 22.5 | 3   | 25 | —  | —  | 6.1 | 28.5 | 45  | 10.7 |

| Size | L1   | L2   | L3 | L4 | L5<br>+0.2 | L6 | L7 | L8   | L9 | L10 | L12  | L13 | L14  | L15  | L16 |
|------|------|------|----|----|------------|----|----|------|----|-----|------|-----|------|------|-----|
| 25   | 53.6 | 42   | 6  | 4  | 18         | 6  | 5  | 15   | 10 | 17  | 8.5  | 17  | 13.5 | 16.5 | 1   |
| 32   | 62   | 46.5 | 8  | 4  | 18         | 10 | 6  | 19.9 | 10 | 20  | 10   | 20  | 16.5 | 18   | 2   |
| 45   | 73.8 | 54.5 | 10 | 4  | 24         | 12 | 6  | 19.9 | 15 | 25  | 12.5 | 25  | 17.5 | 24   | 2   |

| Size | L17 | L18  | T1 | T2  | T3<br>+0.1 | T4<br>+0.1 | T5  | T6  | T7  | T8  | T9  | T10 | T11 | W1  | =G 1 |
|------|-----|------|----|-----|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 25   | 2.5 | 25.1 | —  | 4.5 | 2.6        | 1.3        | 3.2 | 2   | 6   | 1.3 | 2.1 | 3.1 | 2   | 60° | 6    |
| 32   | 2.5 | 31.8 | —  | 5   | 2.6        | 1.6        | 3.2 | 1.5 | 8.5 | 1.8 | 2.6 | 2.6 | 1.5 | 60° | 6    |
| 45   | 2   | 37.3 | —  | 6   | 1.3        | 1.6        | 5.4 | 4   | 7   | 1.8 | 1.3 | 1.3 | 5   | 60° | 12   |

| Size | Stroke<br>[mm] | L19 |  |  |  | L11 |  |  |  |
|------|----------------|-----|--|--|--|-----|--|--|--|
| 25   | 25             | 25  |  |  |  | 0   |  |  |  |
|      | 50             | 50  |  |  |  | 33  |  |  |  |
|      | 75             | 75  |  |  |  | 58  |  |  |  |
| 32   | 25             | 25  |  |  |  | 0   |  |  |  |
|      | 50             | 50  |  |  |  | 30  |  |  |  |
|      | 75             | 75  |  |  |  | 55  |  |  |  |
|      | 100            | 100 |  |  |  | 80  |  |  |  |
| 45   | 25             | 25  |  |  |  | 0   |  |  |  |
|      | 50             | 50  |  |  |  | 25  |  |  |  |
|      | 75             | 75  |  |  |  | 50  |  |  |  |
|      | 100            | 100 |  |  |  | 75  |  |  |  |
|      | 125            | 125 |  |  |  | 100 |  |  |  |
|      | 150            | 150 |  |  |  | 125 |  |  |  |

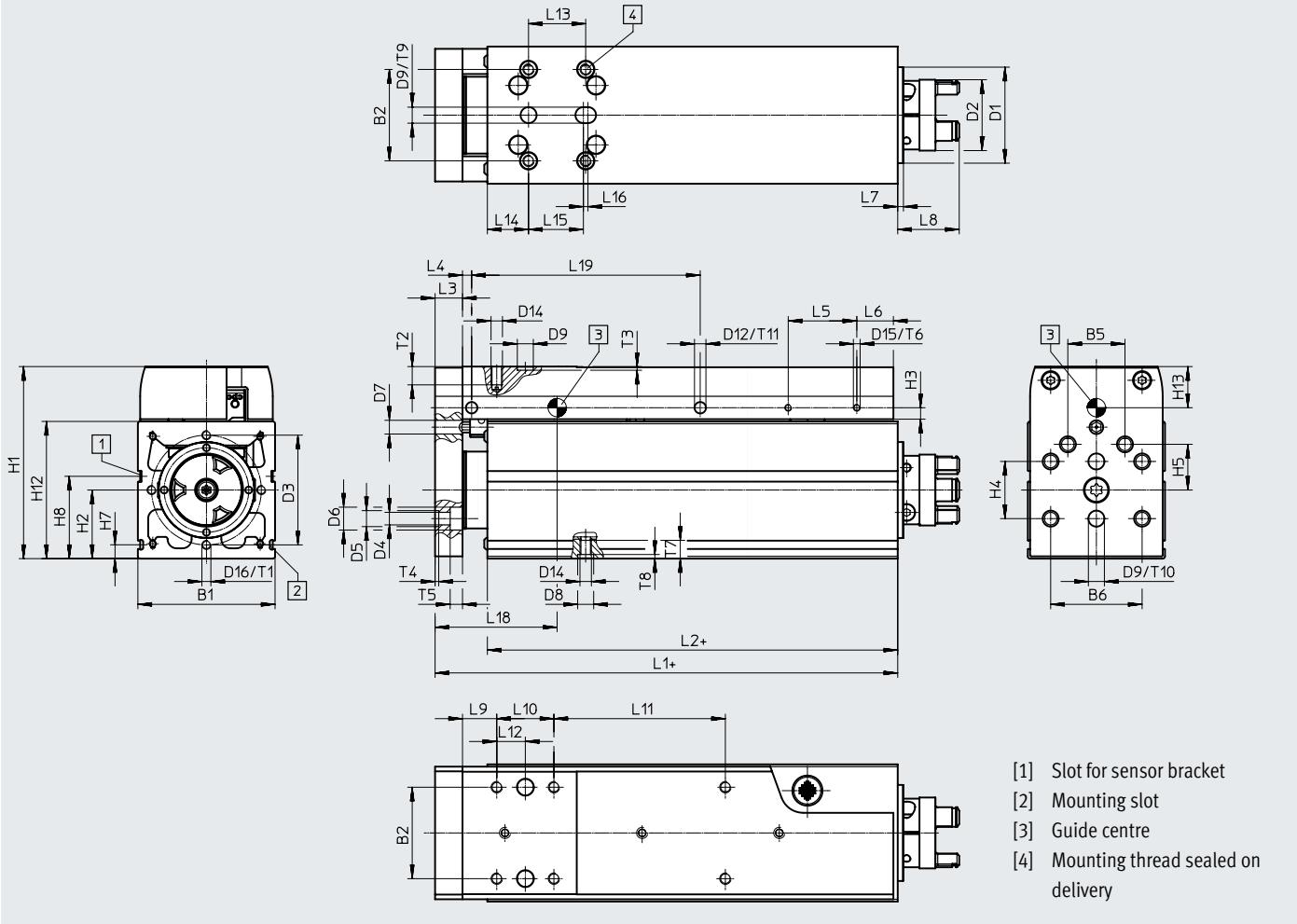
1) Coupling diameter or interference diameter of locking screw

## Datasheet

### Dimensions

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

Size 60

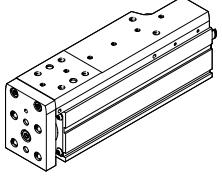


## Datasheet

| Size | B1<br>±0.15    | B2   | B5         | B6  | D1<br>Ø    | D2 <sup>1)</sup><br>Ø | D3<br>Ø<br>H13 | D4<br>Ø<br>H7 | D5<br>Ø<br>H13 | D6<br>Ø<br>H7 | D7<br>Ø<br>H7 | D8<br>Ø<br>H7 | D9<br>Ø<br>H8 | D10<br>Ø | D11<br>Ø |  |
|------|----------------|------|------------|-----|------------|-----------------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|----------|----------|--|
| 60   | 60             | 40   | 25         | 40  | 42         | 31.4                  | 48             | 5.5           | 7              | 10            | 6             | 7             | 7             | -        | -        |  |
| Size | D12<br>Ø       | D13  | D14        | D15 | D16        | H1                    | H2             | H3            | H4             | H5            | H6            | H7            | H8            | H12      | H13      |  |
| 60   | 5              | M4   | M5         | M3  | M4         | 84                    | 30             | 5             | 25             | 20            | -             | 6.1           | 36            | 60       | 16.4     |  |
| Size | L1             | L2   | L3<br>+0.2 | L4  | L5<br>±0.1 | L6                    | L7             | L8            | L9             | L10           | L12           | L13           | L14           | L15      | L16      |  |
| 60   | 102.4          | 79.5 | 12         | 4   | 30         | 16                    | 2.5            | 26.9          | 15             | 25            | 12.5          | 25            | 30            | 24       | 2        |  |
| Size | L17            | L18  | T1         | T2  | T3<br>+0.1 | T4<br>+0.1            | T5             | T6            | T7             | T8            | T9<br>+0.1    | T10<br>+0.1   | T11<br>-0.2   | W1       | =G 1     |  |
| 60   | -              | 53.4 | 10         | 8   | 1.6        | 1.6                   | 5.4            | 6             | 8              | 1.8           | 1.6           | 1.6           | 5             | -        | 15       |  |
| Size | Stroke<br>[mm] | L19  |            |     |            |                       |                |               |                | L11           |               |               |               |          |          |  |
| 60   | 50             | 50   |            |     |            |                       |                |               |                | 25            |               |               |               |          |          |  |
|      | 75             | 75   |            |     |            |                       |                |               |                | 50            |               |               |               |          |          |  |
|      | 100            | 100  |            |     |            |                       |                |               |                | 75            |               |               |               |          |          |  |
|      | 125            | 125  |            |     |            |                       |                |               |                | 100           |               |               |               |          |          |  |
|      | 150            | 150  |            |     |            |                       |                |               |                | 125           |               |               |               |          |          |  |
|      | 200            | 200  |            |     |            |                       |                |               |                | 175           |               |               |               |          |          |  |

1) Coupling diameter or interference diameter of locking screw

## Datasheet

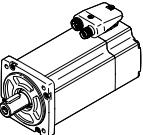
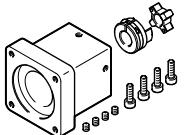
| Ordering data  |    | Size | Spindle pitch | Stroke  | Part no.              | Type                 |  |
|--|----|------|---------------|---------|-----------------------|----------------------|--|
|  | 25 | 2    | 25            | 25      | 8162069               | EGSC-BS-KF-25-25-2P  |  |
|  |    |      |               | 50      | 8162070               | EGSC-BS-KF-25-50-2P  |  |
|  |    |      |               | 75      | 8162071               | EGSC-BS-KF-25-75-2P  |  |
|  |    | 6    | 150           | 150     | 8162230               | EGSC-BS-KF-25-150-2P |  |
|  |    |      |               | 25      | 8048310               | EGSC-BS-KF-25-25-6P  |  |
|  |    |      |               | 50      | 8048311               | EGSC-BS-KF-25-50-6P  |  |
|  |    |      |               | 75      | 8061280               | EGSC-BS-KF-25-75-6P  |  |
|  | 32 | 3    | 25            | 25      | 8162073               | EGSC-BS-KF-32-25-3P  |  |
|  |    |      |               | 50      | 8162074               | EGSC-BS-KF-32-50-3P  |  |
|  |    |      |               | 75      | 8162075               | EGSC-BS-KF-32-75-3P  |  |
|  |    |      | 100           | 100     | 8162072               | EGSC-BS-KF-32-100-3P |  |
|  |    | 8    |               | 150     | 8162231               | EGSC-BS-KF-32-150-3P |  |
|  |    |      |               | 200     | 8162232               | EGSC-BS-KF-32-200-3P |  |
|  |    | 25   | 25            | 8048306 | EGSC-BS-KF-32-25-8P   |                      |  |
|  |    |      | 50            | 8048307 | EGSC-BS-KF-32-50-8P   |                      |  |
|  |    |      | 75            | 8048308 | EGSC-BS-KF-32-75-8P   |                      |  |
|  |    |      | 100           | 4356032 | EGSC-BS-KF-32-100-8P  |                      |  |
|  | 45 | 3    | 25            | 25      | 8162079               | EGSC-BS-KF-45-25-3P  |  |
|  |    |      |               | 50      | 8162080               | EGSC-BS-KF-45-50-3P  |  |
|  |    |      |               | 75      | 8162081               | EGSC-BS-KF-45-75-3P  |  |
|  |    |      | 100           | 100     | 8162076               | EGSC-BS-KF-45-100-3P |  |
|  |    | 10   |               | 125     | 8162077               | EGSC-BS-KF-45-125-3P |  |
|  |    |      |               | 150     | 8162078               | EGSC-BS-KF-45-150-3P |  |
|  |    | 25   | 25            | 8048300 | EGSC-BS-KF-45-25-10P  |                      |  |
|  |    |      | 50            | 8048301 | EGSC-BS-KF-45-50-10P  |                      |  |
|  |    |      | 75            | 8048302 | EGSC-BS-KF-45-75-10P  |                      |  |
|  |    |      | 100           | 4022926 | EGSC-BS-KF-45-100-10P |                      |  |
|  |    |      | 125           | 8048303 | EGSC-BS-KF-45-125-10P |                      |  |
|  |    |      | 150           | 8048304 | EGSC-BS-KF-45-150-10P |                      |  |
|  | 60 | 5    | 50            | 50      | 8162086               | EGSC-BS-KF-60-50-5P  |  |
|  |    |      |               | 75      | 8162087               | EGSC-BS-KF-60-75-5P  |  |
|  |    |      |               | 100     | 8162082               | EGSC-BS-KF-60-100-5P |  |
|  |    |      | 125           | 125     | 8162083               | EGSC-BS-KF-60-125-5P |  |
|  |    | 12   |               | 150     | 8162084               | EGSC-BS-KF-60-150-5P |  |
|  |    |      |               | 200     | 8162085               | EGSC-BS-KF-60-200-5P |  |
|  |    | 50   | 50            | 8048362 | EGSC-BS-KF-60-50-12P  |                      |  |
|  |    |      | 75            | 8048363 | EGSC-BS-KF-60-75-12P  |                      |  |
|  |    |      | 100           | 4356469 | EGSC-BS-KF-60-100-12P |                      |  |
|  |    |      | 125           | 8048364 | EGSC-BS-KF-60-125-12P |                      |  |
|  |    |      | 150           | 8048365 | EGSC-BS-KF-60-150-12P |                      |  |
|  |    |      | 200           | 8048366 | EGSC-BS-KF-60-200-12P |                      |  |

## Accessories


**Note**

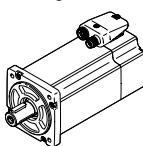
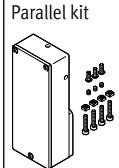
Depending on the combination of motor and drive, it may not be possible to reach the maximum feed force of the drive.

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

| Permissible axis/motor combinations with axial kit – Without gear unit            |   |  | Datasheets → Internet: eamm-a |  |  |
|---|---|--|-------------------------------|--|--|
| Motor <sup>1)</sup>   | Axial kit   |  |                               |  |  |
|  |  | <ul style="list-style-type: none"> <li>Kits for third-party motors → Internet: eamm-a</li> </ul> |                               |  |  |
| Type  | Part no.  | Type   |                               |  |  |
| <b>EGSC-25</b>  |   |  |                               |  |  |
| With stepper motor  |   |  |                               |  |  |
| EMMS-ST-28-...  | 4505258   | <b>EAMM-A-V20-28A</b>  |                               |  |  |
| <b>EGSC-32</b>  |   |  |                               |  |  |
| With servo motor  |   |  |                               |  |  |
| EMME-AS-40-...  | 4491059   | <b>EAMM-A-V25-40P</b>  |                               |  |  |
| With stepper motor  |   |  |                               |  |  |
| EMMS-ST-42-...  | 4582608   | <b>EAMM-A-V25-42A</b>  |                               |  |  |
| <b>EGSC-45</b>  |   |  |                               |  |  |
| With servo motor  |   |  |                               |  |  |
| EMME-AS-40-...  | 4595742   | <b>EAMM-A-V32-40P</b>  |                               |  |  |
| EMMT-AS-60-..., EMME-AS-60-...  | 4608750   | <b>EAMM-A-V32-60P</b>  |                               |  |  |
| With stepper motor  |   |  |                               |  |  |
| EMMS-ST-42-...  | 4281142   | <b>EAMM-A-V32-42A</b>  |                               |  |  |
| EMMS-ST-57-...  | 4597016   | <b>EAMM-A-V32-57A</b>  |                               |  |  |
| <b>EGSC-60</b>  |   |  |                               |  |  |
| With servo motor  |   |  |                               |  |  |
| EMMT-AS-60-..., EMME-AS-60-...  | 4133487   | <b>EAMM-A-T42-60P</b>  |                               |  |  |
| EMMT-AS-80-..., EMME-AS-80-...  | 4623788   | <b>EAMM-A-T42-80P</b>  |                               |  |  |
| With stepper motor  |   |  |                               |  |  |
| EMMS-ST-57-...  | 4327034   | <b>EAMM-A-T42-57A</b>  |                               |  |  |
| EMMS-ST-87-...  | 4610008   | <b>EAMM-A-T42-87A</b>  |                               |  |  |

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

## Accessories

| Permissible axis/motor combinations with parallel kit                            |   |  | Datasheets → Internet: eamm-u |  |  |
|--|---|--|-------------------------------|--|--|
| Motor/gear unit <sup>1)</sup>  | Parallel kit  | • Kits for third-party motors → Internet: eamm-u |                               |  |  |
|  |  | Type   | Part no.                      |  |  |
| <b>EGSC-25</b>   |   |  |                               |  |  |
| With stepper motor   |   |  |                               |  |  |
| EMMS-ST-28...  | 4767125   | EAMM-U-30-V20-28A-44                             |                               |  |  |
| <b>EGSC-32</b>   |   |  |                               |  |  |
| With servo motor   |   |  |                               |  |  |
| EMME-AS-40...  | 4782056   | EAMM-U-45-V25-40P-63                             |                               |  |  |
| With stepper motor   |   |  |                               |  |  |
| EMMS-ST-42...  | 4825645   | EAMM-U-45-V25-42A-63                             |                               |  |  |
| <b>EGSC-45</b>   |   |  |                               |  |  |
| With servo motor   |   |  |                               |  |  |
| EMME-AS-40...  | 4718297   | EAMM-U-45-V32-40P-63                             |                               |  |  |
| With stepper motor   |   |  |                               |  |  |
| EMMS-ST-42...  | 4280674   | EAMM-U-45-V32-42A-63                             |                               |  |  |
| <b>EGSC-60</b>   |   |  |                               |  |  |
| With servo motor   |   |  |                               |  |  |
| EMMT-AS-60..., EMME-AS-60...   | 4784301   | EAMM-U-65-T42-60P-87                             |                               |  |  |
| With stepper motor   |   |  |                               |  |  |
| EMMS-ST-57...  | 4331535   | EAMM-U-65-T42-57A-87                             |                               |  |  |

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

## Accessories

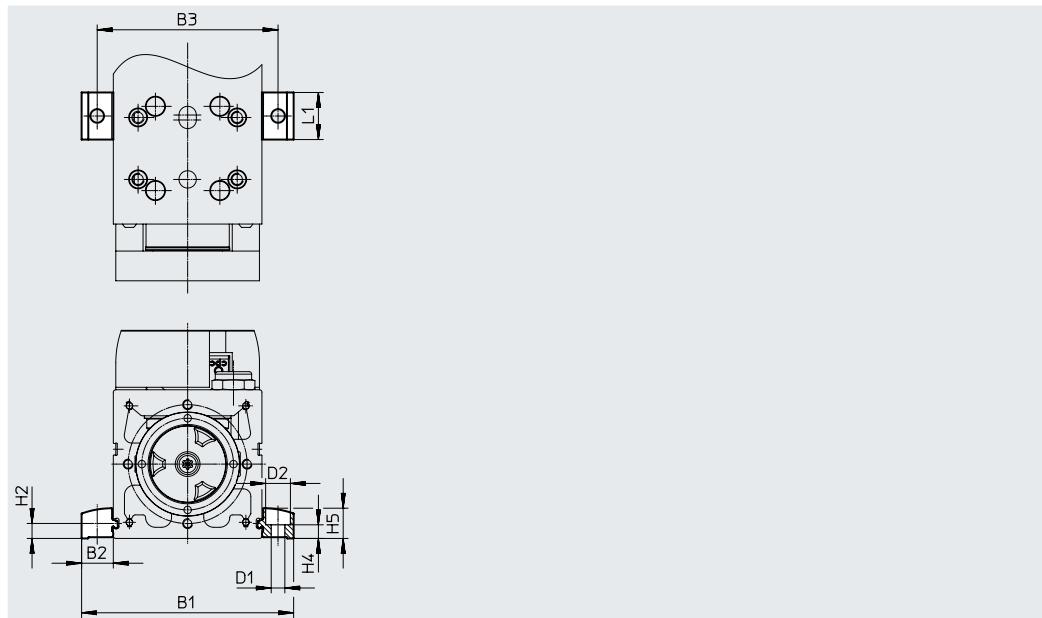
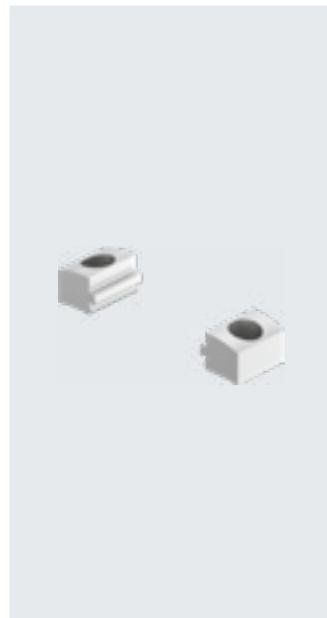
### Profile mounting EAHF-L2-...-P-S

Material:

Anodised wrought aluminium alloy

RoHS-compliant

- For mounting the slide on the side of the profile



**Dimensions and ordering data**

| For size | B1   | B2   | B3 | D1<br>Ø<br>H13 | D2<br>Ø | H2  |
|----------|------|------|----|----------------|---------|-----|
| 25       | 44.4 | 9.7  | 35 | 4.5            | 8       | 4.9 |
| 32       | 51.4 | 9.7  | 42 | 4.5            | 8       | 4.9 |
| 45       | 70.6 | 12.8 | 58 | 5.5            | 10      | 6.1 |
| 60       | 85.6 | 12.8 | 73 | 5.5            | 10      | 6.1 |

| For size | H4   | H5   | L1 | Weight<br>[g] | Part no. | Type           |
|----------|------|------|----|---------------|----------|----------------|
|          | ±0.1 |      |    |               |          |                |
| 25       | 4.2  | 9    | 19 | 4             | 5183153  | EAHF-L2-25-P-S |
| 32       | 4.2  | 9    | 19 | 4             | 5183153  | EAHF-L2-25-P-S |
| 45       | 5.5  | 12.2 | 19 | 6             | 5184133  | EAHF-L2-45-P-S |
| 60       | 5.5  | 12.2 | 19 | 6             | 5184133  | EAHF-L2-45-P-S |

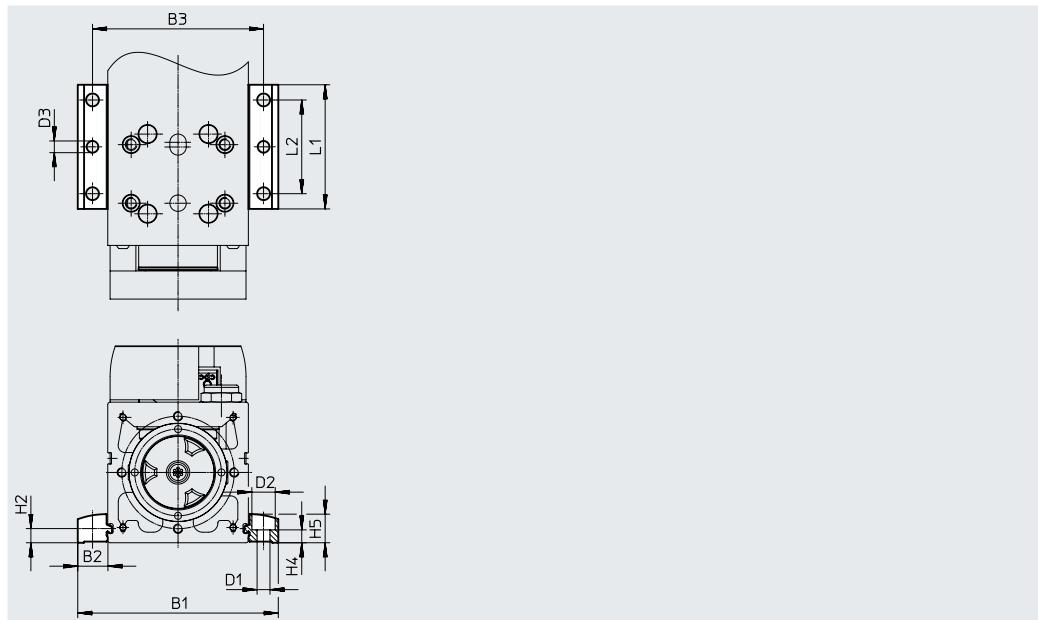
## Accessories

### Profile mounting EAHF-L2-...-P

Material:

Anodised wrought aluminium alloy

RoHS-compliant



#### Dimensions and ordering data

| For size | B1   | B2   | B3 | D1<br>Ø<br>H13 | D2<br>Ø<br>H13 | D3<br>Ø | H2  |
|----------|------|------|----|----------------|----------------|---------|-----|
| 25       | 44.4 | 9.7  | 35 | 4.5            | 8              | 4       | 4.9 |
| 32       | 51.4 | 9.7  | 42 | 4.5            | 8              | 4       | 4.9 |
| 45       | 70.6 | 12.8 | 58 | 5.5            | 10             | 5       | 6.1 |
| 60       | 85.6 | 12.8 | 73 | 5.5            | 10             | 5       | 6.1 |

| For size | H4   | H5   | L1 | L2 | Weight<br>[g] | Part no. | Type         |
|----------|------|------|----|----|---------------|----------|--------------|
|          | ±0.1 |      |    |    |               |          |              |
| 25       | 4.2  | 9    | 53 | 40 | 19            | 4835684  | EAHF-L2-25-P |
| 32       | 4.2  | 9    | 53 | 40 | 19            | 4835684  | EAHF-L2-25-P |
| 45       | 5.5  | 12.2 | 53 | 40 | 35            | 4835728  | EAHF-L2-45-P |
| 60       | 5.5  | 12.2 | 53 | 40 | 35            | 4835728  | EAHF-L2-45-P |

## Accessories

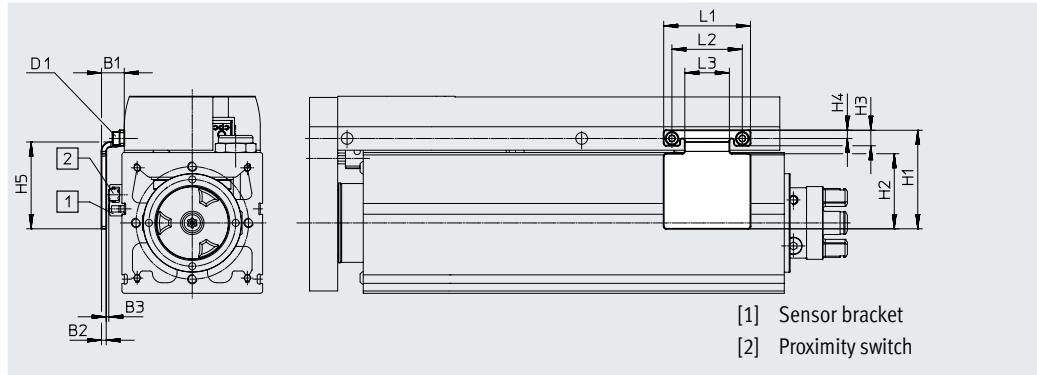
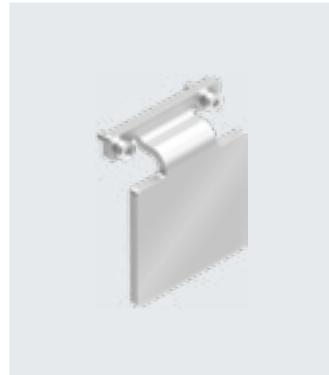
### Switch lug EAPM-...-SLS

For sensing using inductive proximity switches SIES-8M

Material:

Galvanised steel

RoHS-compliant



#### Dimensions and ordering data

| For size | B1  | B2 | B3       | D1   | H1 | H2 | H3  | H4  |
|----------|-----|----|----------|------|----|----|-----|-----|
| 25       | 9.2 | 2  | 1.0±0.32 | M1.6 | 21 | 13 | 4.3 | 2.5 |
| 32       | 9.2 | 2  | 1.0±0.26 | M1.6 | 27 | 19 | 4.3 | 2.5 |
| 45       | 9.4 | 2  | 0.7±0.26 | M2   | 37 | 28 | 5.5 | 3.3 |
| 60       | 9.7 | 2  | 0.7±0.31 | M3   | 42 | 32 | 6.6 | 3.5 |

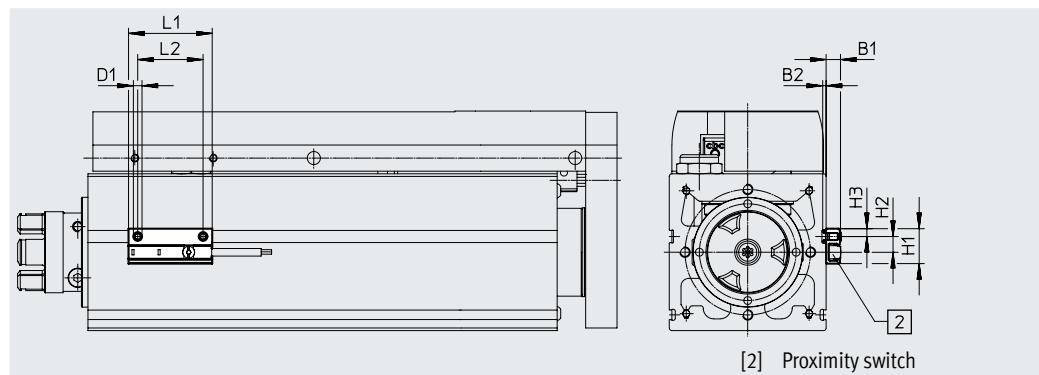
| For size | H5 | L1 | L2 | L3 | Weight<br>[g] | Part no. | Type            |
|----------|----|----|----|----|---------------|----------|-----------------|
| 25       | 18 | 22 | 18 | 10 | 8             | 8067258  | EAPM-E19-25-SLS |
| 32       | 24 | 22 | 18 | 10 | 10            | 8067259  | EAPM-L2-32-SLS  |
| 45       | 33 | 30 | 24 | 14 | 18            | 8067260  | EAPM-L2-45-SLS  |
| 60       | 37 | 37 | 30 | 19 | 27            | 8067261  | EAPM-L2-60-SLS  |

### Sensor bracket EAPM-L2

Material:

Anodised wrought aluminium alloy

RoHS-compliant



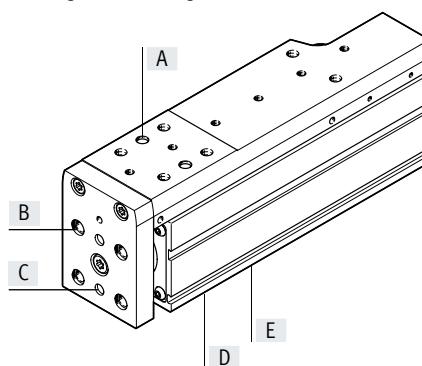
#### Dimensions and ordering data

| For size       | B1  | B2  | D1 | H1   | H2 |
|----------------|-----|-----|----|------|----|
| 25, 32, 45, 60 | 5.5 | 1.3 | M4 | 13.4 | 6  |

| For size       | H3 | L1 | L2 | Weight<br>[g] | Part no. | Type       |
|----------------|----|----|----|---------------|----------|------------|
| 25, 32, 45, 60 | 3  | 32 | 25 | 4             | 4759852  | EAPM-L2-SH |

## Accessories

## Ordering data – Centring sleeve



|  | For size | Position | Part no. | Type    | PU <sup>1)</sup> |
|--|----------|----------|----------|---------|------------------|
|  | 25       | A        | 525273   | ZBS-2   | 10               |
|  |          | B        | 8146543  | ZBH-5-B |                  |
|  |          | C        | 525273   | ZBS-2   |                  |
|  |          | D        | 8146543  | ZBH-5-B |                  |
|  |          | E        | 525273   | ZBS-2   |                  |
|  | 32       | A        | 562959   | ZBS-4   |                  |
|  |          | B        | 8146544  | ZBH-7-B |                  |
|  |          | C        | 562959   | ZBS-4   |                  |
|  |          | D        | 8146544  | ZBH-7-B |                  |
|  |          | E        | 562959   | ZBS-4   |                  |
|  | 45       | A        | 8146543  | ZBH-5-B |                  |
|  |          | B        | 8146544  | ZBH-7-B |                  |
|  |          | C        | 8146543  | ZBH-5-B |                  |
|  |          | D        | 8146544  | ZBH-7-B |                  |
|  |          | E        | 8146543  | ZBH-5-B |                  |
|  | 60       | A        | 8146544  | ZBH-7-B |                  |
|  |          | B        | 8146544  | ZBH-7-B |                  |
|  |          | C        | 8146544  | ZBH-7-B |                  |
|  |          | D        | 8146544  | ZBH-7-B |                  |
|  |          | E        | 8146544  | ZBH-7-B |                  |

1) Packaging unit

## Ordering data – Push-in fitting for sealing air connection

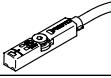
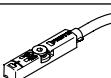
|  | For size | Part no. | Type         | PU <sup>1)</sup> |
|--|----------|----------|--------------|------------------|
|  | 25       | 133003   | QSM-M5-3-I-R | 10               |
|  |          | 133004   | QSM-M5-4-I-R |                  |
|  | 32       | 133003   | QSM-M5-3-I-R |                  |
|  |          | 133004   | QSM-M5-4-I-R |                  |
|  | 45       | 186266   | QSM-G1/8-4-I |                  |
|  |          | 186267   | QSM-G1/8-6-I |                  |
|  | 60       | 186108   | QS-G1/4-6-I  |                  |
|  |          | 186110   | QS-G1/4-8-I  |                  |

1) Packaging unit

## Ordering data – Proximity switches for T-slot, inductive

|            | Type of mounting   | Switching output | Electrical connection | Cable length [m] | Part no. | Type                     | Datasheets → Internet: sies |
|------------|--|------------------|-----------------------|------------------|----------|--------------------------|-----------------------------|
| <b>N/O</b> |  |                  |                       |                  |          |                          |                             |
|            | Inserted in the slot from above, flush with the cylinder profile | PNP              | Cable, 3-wire         | 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 |                             |
|            |  | NPN              | Cable, 3-wire         | 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 |                             |
| <b>N/C</b> |  |                  |                       |                  |          |                          |                             |
|            | Inserted in the slot from above, flush with the cylinder profile | PNP              | Cable, 3-wire         | 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 |                             |
|            |  | NPN              | Cable, 3-wire         | 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 switch for T-slot, magneto-resistive                    |  |                              |                       |                  |          | Datasheets → Internet: smt  |
|---|--|------------------------------|-----------------------|------------------|----------|-----------------------------|
|   | Type of mounting   | Switching output             | Electrical connection | Cable length [m] | Part no. | Type                        |
| <b>N/O</b>  |  |                              |                       |                  |          |                             |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP                          | Cable, 3-wire         | 2.5              | 574335   | SMT-8M-A-PS-24V-E-2.5-OE    |
|   |  |                              | Plug M8x1, 3-pin      | 0.3              | 574334   | SMT-8M-A-PS-24V-E-0.3-M8D   |
| <b>N/C</b>  |  |                              |                       |                  |          |                             |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP                          | Cable, 3-wire         | 7.5              | 574340   | SMT-8M-A-PO-24V-E-7.5-OE    |
|   |  |                              |                       |                  |          |                             |
| Ordering data – Connecting cables   |  |                              |                       |                  |          | Datasheets → 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              | 541333   | NEBU-M8G3-K-2.5-LE3         |
|   |  |                              |                       | 5                | 541334   | NEBU-M8G3-K-5-LE3           |
|  | Angled socket, M8x1, 3-pin   | Cable, open end, 3-wire      |                       | 2.5              | 541338   | NEBU-M8W3-K-2.5-LE3         |
|   |  |                              |                       | 5                | 541341   | NEBU-M8W3-K-5-LE3           |