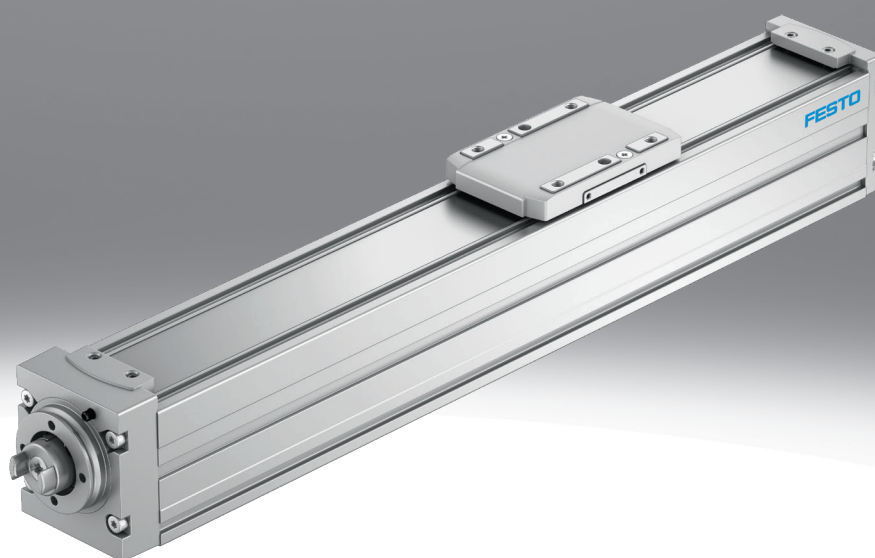


## Ball screw axis ELGC-BS

**FESTO**



## Characteristics

### At a glance

[Link](#) [elgc-bs](#)

- Optimal installation space to working space ratio
- Protected against external influences by internal guide
- Unique mounting system enables the spindle axis ELGC and mini slide EGSC to be combined without using an adapter
- Compact double bearing integrated in the axis to save space
- Stainless steel cover strip kept in place with magnetic strips
- Wide range of mounting options for optimal machine integration
- Suitable for the production of Li-ion batteries

### 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 excess pressure from developing in the cylinder interior.
- Application of slight negative pressure prevents the emission of particles
- Application of slight overpressure prevents the immission of particles

### Product segmentation



#### Festo Core Range

Solves the majority of your automation tasks

With the Festo Core Range, we have selected the most important products and functions from our broad product catalogue, and added the quickest delivery. The Core Range offers you the best value with the expected high Festo quality.

- Quickest delivery, worldwide – wherever, whenever
- Expected high Festo quality
- Easy and fast to select

### Engineering tools

[Link](#) [engineering tools](#)



Save time with engineering tools: Smart engineering for the optimal solution. Our goal is to increase your productivity. Our engineering tools play an integral part in achieving this goal. They help you size your system correctly, tap into unimagined productivity reserves and generate additional productivity along the entire value chain. In every phase of your project, from the initial contact to the modernisation of your machine, you will come across a number of different tools that will be of use to you.

### Electric Motion Sizing

- Create the optimum drive package quickly and reliably. Electric Motion Sizing calculates suitable combinations of electric axis, electric motor and servo drive using just a few application details. It provides all the relevant data including the bill of materials and documentation for your selected combination. This avoids design errors and results in significantly improved energy efficiency for the system. A smooth connection to the Festo Automation Suite also makes commissioning easier for you.

### Diagrams

[Link](#) [elgc-bs](#)



The diagrams shown in this document are also available online. These can be used to display precise values.

### Drive system

[BS] Ball screw drive

- For applications that require precision
- High reliability and long service life
- For large loads

## Characteristics

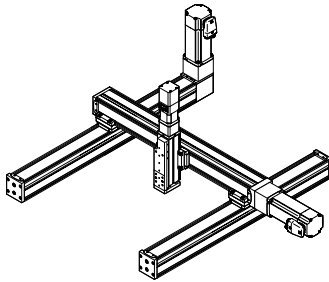
### Guide

- Very sturdy and precise guiding principle for transmitting the drive force and moving additional loads
- The guide can easily absorb high torques and forces

### Spindle pitch

The spindle pitch describes the distance travelled by the spindle nut per revolution of the spindle in millimetres.

### Overview



- From the individual axis to the handling system, such as a cantilever system, planar surface gantry or three-dimensional gantry
- The toothed belt and spindle axes ELGC and mini slides EGSC form a scalable modular system for compact automation systems
- The common platform architecture provides an integrated range with matching interfaces. A large number of systems can be implemented completely without adapter plates
- High-performance drive and guide elements ensure a long service life as well as excellent load-bearing capacity and reliability
- The uniform and universal range of accessories reduces warehousing and design costs

## Type code

001	Series
ELGC	Gantry axis

002	Drive system
BS	Ball screw drive

003	Guide
KF	Recirculating ball bearing guide

004	Size
32	32
45	45
60	60
80	80

005	Stroke [mm]
100	100
200	200
300	300
400	400
500	500
600	600
800	800
1000	1000

006	Spindle pitch
8P	8 mm
10P	10 mm
12P	12 mm
16P	16 mm

## Datasheet

General technical data				
Size	32	45	60	80
Design	Electromechanical linear axis, With ball screw			
Guide	Recirculating ball bearing guide			
Mounting position	optional			
Working stroke	100 mm; 200 mm; 300 mm; 400 mm; 500 mm; 600 mm; 800 mm			100 mm; 200 mm; 300 mm; 400 mm; 500 mm; 600 mm; 800 mm; 1,000 mm
Max. feed force F <sub>x</sub>	40 N	100 N	200 N	350 N
Idle torque at v <sub>min</sub>	0.02 Nm	0.032 Nm	0.042 Nm	0.095 Nm
Idle torque at v <sub>max</sub>	0.04 Nm	0.12 Nm	0.246 Nm	0.396 Nm
Max. radial force at drive shaft	75 N	180 N	230 N	500 N
Max. speed <sup>1)</sup>	0.6 m/s		0.8 m/s	1 m/s
Max. rotational speed <sup>2)</sup>	4,500 rpm	3,600 rpm	4,000 rpm	3,750 rpm
Max. acceleration	15 m/s <sup>2</sup>			
Repetition accuracy	±0.015 mm		±0.01 mm	
Reversing backlash theoretical	0.15 mm			
Position detection	Via proximity switch, Via inductive sensors			

1) Speed is stroke-dependent

2) Rotational speed is stroke-dependent

Operating and ambient conditions	
Ambient temperature <sup>1)</sup>	0 ... 50°C
Degree of protection	IP40
Duty cycle	100%
Cleanroom class	Class 7 according to ISO 14644-1
Maintenance interval	Life-time lubrication

1) Note operating range of the proximity switches

Weight				
Size	32	45	60	80
Basic weight for 0 mm stroke <sup>1)</sup>	296 g	724 g	1,682 g	2,942 g
Additional weight per 10 mm stroke	18 g	36 g	51 g	88 g
Moving mass	83.4 g	220 g	525 g	978 g

1) Incl. slide

Spindle				
Size	32	45	60	80
Spindle diameter	8 mm	10 mm	12 mm	16 mm
Spindle pitch	8 mm/U	10 mm/U	12 mm/U	16 mm/U

### Mass moment of inertia

$$J_A = J_O + J_H \cdot l + J_L \cdot m$$

The mass moment of inertia J of the spindle axis is calculated as follows.

l = working stroke

m = moving payload

Size	32	45	60	80
Mass moment of inertia J <sub>O</sub>	0.00274 kgcm <sup>2</sup>	0.0082 kgcm <sup>2</sup>	0.02235 kgcm <sup>2</sup>	0.07856 kgcm <sup>2</sup>
Mass moment of inertia J <sub>H</sub> per metre of stroke	0.02218 kgcm <sup>2</sup>	0.05056 kgcm <sup>2</sup>	0.10779 kgcm <sup>2</sup>	0.35257 kgcm <sup>2</sup>
Mass moment of inertia J <sub>L</sub> per kg of working load	0.016211 kgcm <sup>2</sup>	0.02533 kgcm <sup>2</sup>	0.036476 kgcm <sup>2</sup>	0.064846 kgcm <sup>2</sup>

## Datasheet

### Homing

Homing can be carried out in two ways:

- against the fixed stop
- Using a reference switch

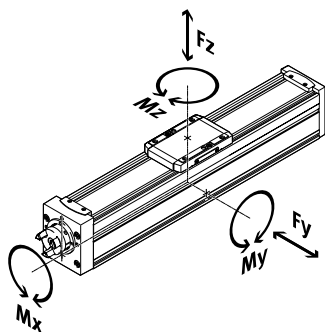
The following values must be observed:

Size	32	45	60	80
Impact energy in end positions	0.25 mJ	0.5 mJ	1 mJ	2 mJ
Note on the impact energy in the end positions	At maximum homing speed of 0.01 m/s			

### Materials

Material drive cover	Painted die cast aluminium
Material spindle nut	Steel
Material slide	Die-cast aluminium
Material guide slide	Steel
Material spindle	Steel
Material cover tape	High-alloy stainless steel
Material profile	Anodised wrought aluminium alloy
Material end cap	Painted die cast aluminium
Note on materials	RoHS-compliant
Suitability for the production of Li-ion batteries	Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. The exceptions are nickel in steel, chemically nickel-plated surfaces, circuit boards, cables, electrical plug connectors and coils

### Permissible forces and torques



The indicated forces and torques refer to the centre of the guide. The point of application is the intersection of the centre of the guide and the centre of the length of the slide. They must not be exceeded in dynamic operation. Special attention must be paid to the deceleration process.

### Permissible forces and torques on the overall axis (strength limits)

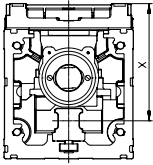
Size	32	45	60	80
Max. force Fy total axis	150 N	300 N	600 N	900 N
Max. force Fz total axis	300 N	600 N	1,800 N	2,700 N
Max. moment Mx total axis	1.3 Nm	5.5 Nm	29.1 Nm	59.8 Nm
Max. moment My total axis	1.1 Nm	4.7 Nm	31.8 Nm	56.2 Nm
Max. moment Mz total axis	1.1 Nm	4.7 Nm	31.8 Nm	56.2 Nm

### Permissible forces and torques for the guide calculation with reference service life

Size	32	45	60	80
Reference service life	5,000 km			
Max. force Fy	356 N	880 N	3,641 N	5,543 N
Max. force Fz	356 N	880 N	3,641 N	5,543 N
Max. moment Mx	1.3 Nm	5.5 Nm	29.1 Nm	59.8 Nm
Max. moment My	1.1 Nm	4.7 Nm	31.8 Nm	56.2 Nm
Max. moment Mz	1.1 Nm	4.7 Nm	31.8 Nm	56.2 Nm

## Datasheet

### Distance x from the slide surface to the centre of the guide



Distance x:

Size 32/45/60/80

Dimension x: 31.4 mm / 42.8 mm / 54.6 mm / 72.5 mm

### Calculating the load comparison factor

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

If the axis is subjected to several of the indicated forces and torques at the same time, the following equation must be satisfied in addition to the indicated maximum loads.

For a guide system to have a service life of 5000 km, the load comparison factor must have a value of  $f_v < 1$ , based on the maximum permissible forces and torques for a service life of 5000 km. This formula can be used to calculate a guide value. The engineering software "Electric Motion Sizing" is available for more precise calculations.

F1 / M1 = dynamic value

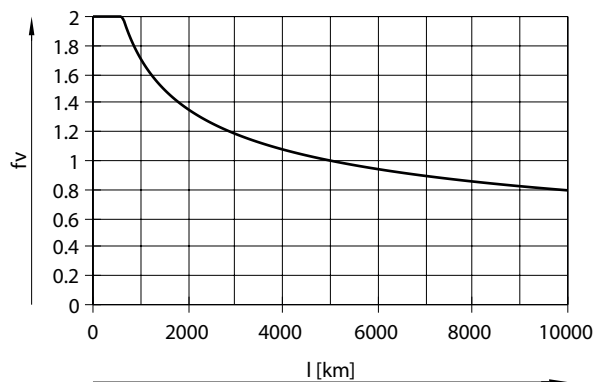
F2 / M2 = maximum value

### Calculating the service life of the guide

The service life of the guide depends on the load. To provide a rough indication of 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.

### Service life of the guide



The service life of the guide depends on the load. To be able to make a statement about 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.

Example:

A user wants to move a X kg load. The calculation results in 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 results in a service life of 5000 km.

## Datasheet

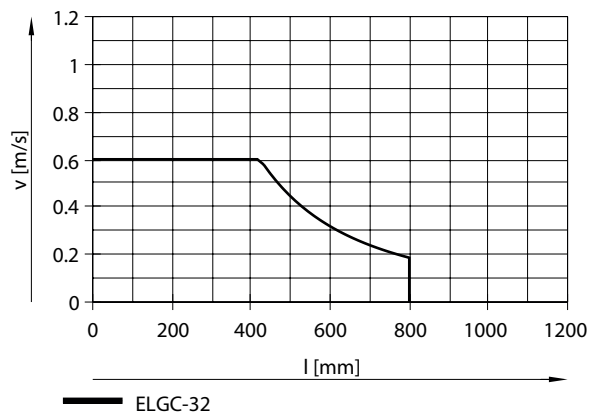
### Permissible forces and torques at a theoretical service life of 100 km (pure guide load)

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 roller guides to ISO/JIS.

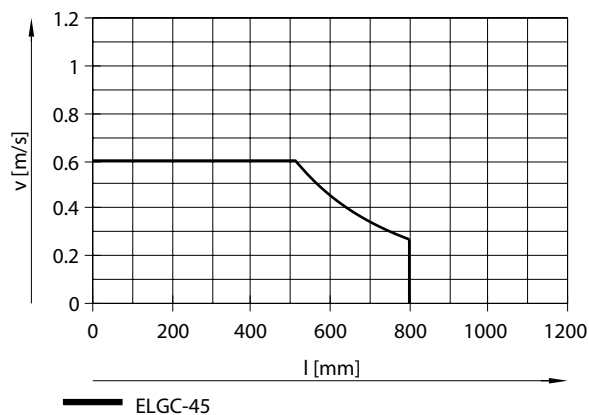
To make it easier to compare the guide capacity of linear axes ELGC with bearing guides, the table below lists the theoretically permissible forces and torques for a calculated service life of 100 km. This corresponds to the dynamic forces and moments to ISO. These 100 km values have been calculated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

Size	32	45	60	80
Fy at theoretical life value of 100 km (only guide consideration)	1,310 N	3,240 N	13,400 N	20,400 N
Fz at theoretical life value of 100 km (only guide consideration)	1,310 N	3,240 N	13,400 N	20,400 N
Mx at theoretical life value of 100 km (only guide consideration)	5 Nm	20 Nm	107 Nm	220 Nm
My at theoretical life value of 100 km (only guide consideration)	4 Nm	17 Nm	117 Nm	207 Nm
Mz at theoretical life value of 100 km (only guide consideration)	4 Nm	17 Nm	117 Nm	207 Nm

### Speed v as a function of working stroke l for size 32

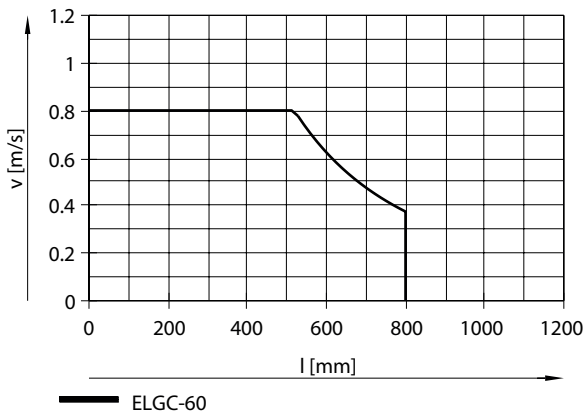
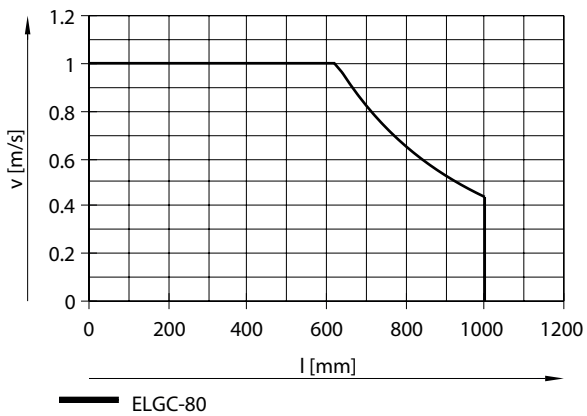
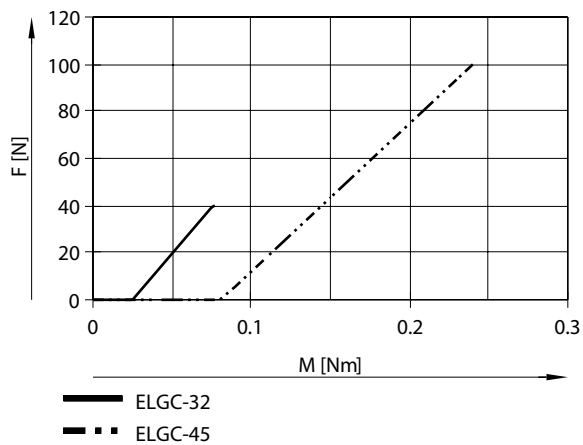


### Speed v as a function of working stroke l for size 45



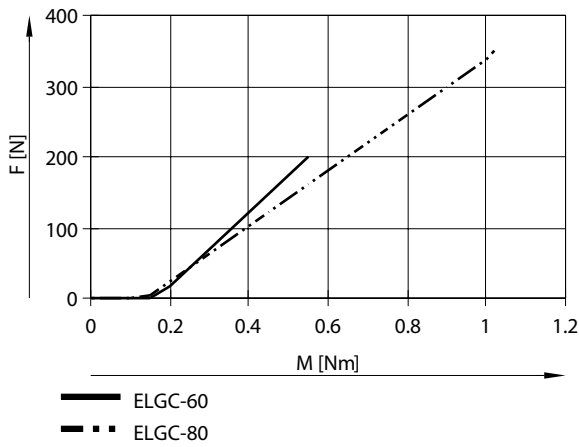


## Datasheet

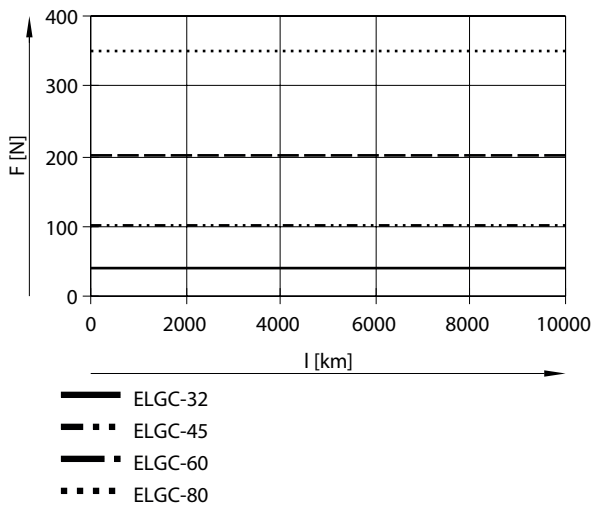
Speed  $v$  as a function of working stroke  $l$  for size 60Speed  $v$  as a function of working stroke  $l$  for size 80Theoretical feed force  $F$  as a function of input torque  $M$  for size 32/45

## Datasheet

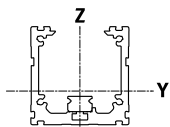
### Theoretical feed force F as a function of input torque M for size 60/80



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



### 2nd moment of area



Size	32	45	60	80
2nd moment of area I <sub>y</sub>	38,000 mm <sup>4</sup>	140,000 mm <sup>4</sup>	441,000 mm <sup>4</sup>	1,370,000 mm <sup>4</sup>
2nd moment of area I <sub>z</sub>	45,000 mm <sup>4</sup>	170,000 mm <sup>4</sup>	542,000 mm <sup>4</sup>	1,660,000 mm <sup>4</sup>

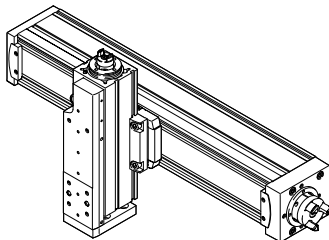
### Recommended deflection limits

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, more wear and reduced service life.

Dynamic deflection (moving load)	0.05% of the axis length, max. 0.5 mm
Static deflection (load in standstill)	0.1% of the axis length

## Datasheet

### Combinations between axis ELGC, ELGS, mini slide EGSC-BS, EGSS-BS, electric cylinder EPCC, EPCS and guide axis ELFC

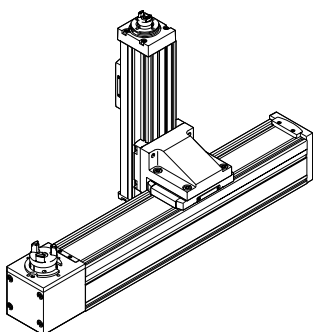


Mounting options with profile mounting EAHF-L2-...-P-D

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

1. Base axis:  
Product: ELGC, ELGS, ELFC  
Size 32, 45, 60, 80
2. Assembly axis:  
Product: ELGC, ELGS, EGSC, EGSS, EPCC, EPCS, ELFC  
Size 25, 32, 45, 60

### Combinations between axis ELGC, ELGS, mini slide EGSC-BS, EGSS-BS, electric cylinder EPCC, EPCS and guide axis ELFC

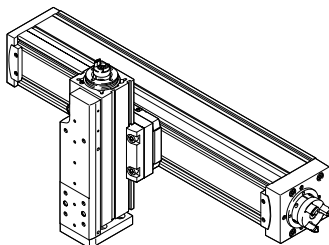


Mounting options with angle kit EHAA-D-L2-...-AP

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

1. Base axis:  
Product: ELGC, ELGS, ELFC  
Size 32, 45, 60, 80
2. Assembly axis:  
Product: ELGC, ELGS, EGSC, EGSS, EPCC, EPCS, ELFC  
Size 25, 32, 45, 60

### Combinations between axis ELGC, ELGS, mini slide EGSC-BS, EGSS-BS, electric cylinder EPCC, EPCS and guide axis ELFC

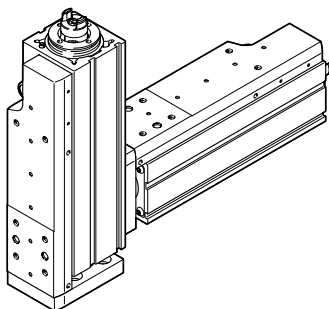


Mounting options with adapter kit EHAA-D-L2

- Mounting option: base axis with 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

1. Base axis:  
Product: ELGC, ELGS, ELFC  
Size 32, 45, 60, 80
2. Assembly axis:  
Product: ELGC, ELGS, EGSC, EGSS, EPCC, EPCS, ELFC  
Size 25, 32, 45, 60, 80

### Combinations between mini slides EGSC-BS, EGSS-BS



Mounting options with direct mounting

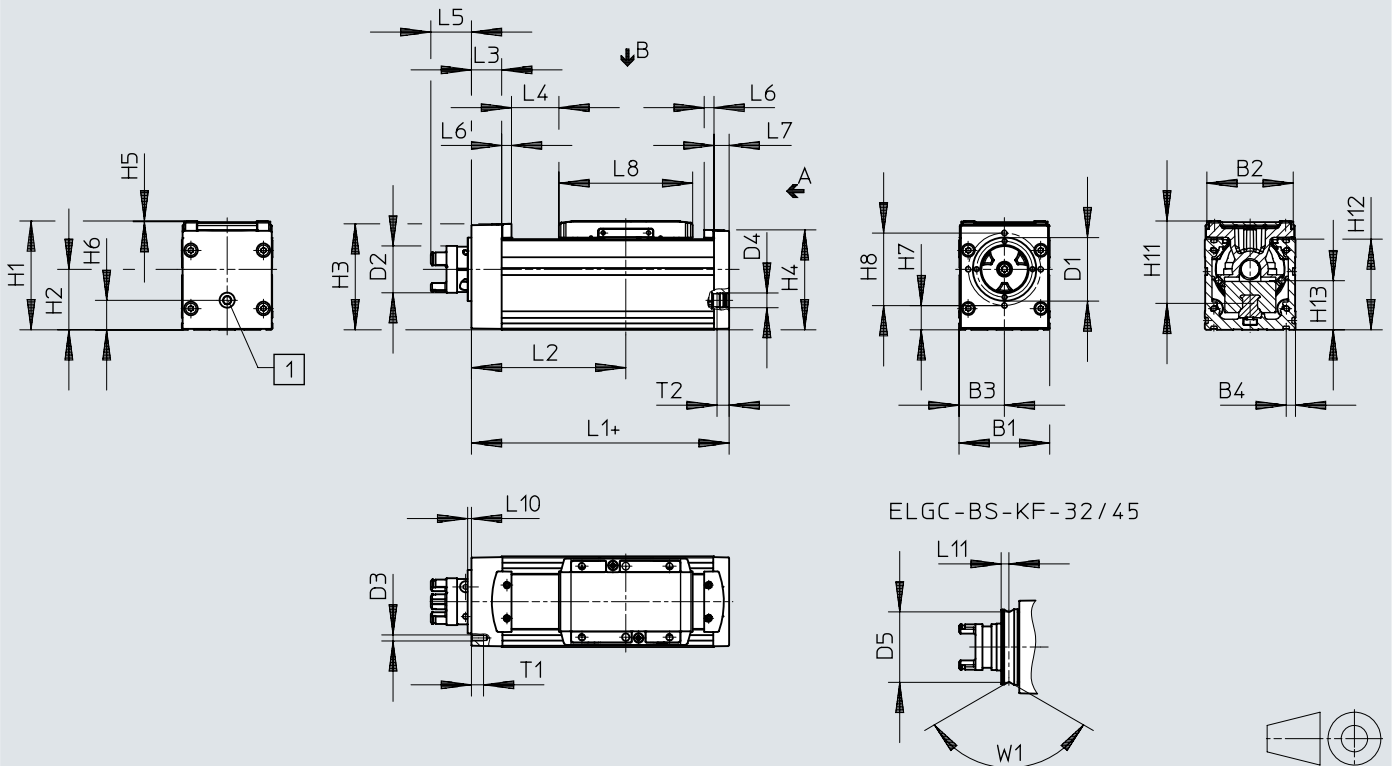
- Mounting option: base axis with same size assembly axis

1. Base axis:  
Product: EGSC, EGSS  
Size 25, 32, 45, 60
2. Assembly axis:  
Product: EGSC, EGSS  
Size 25, 32, 45, 60

## Dimensions

### Dimensions – Spindle axes ELGC-BS-KF

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



- [1] Sealing air connection (D4)
- [2] + = plus stroke length
- [3] L4 = End position zero stroke

	B1	B2	B3	B4	D1 ø	D2 <sup>1)</sup> ø	D3	D4	D5 ø	H1	H2
ELGC-BS-KF-32	32	29,6	16	4,9	25	15,5	–	M5	23	38,5	20
ELGC-BS-KF-45	45	42,6	22,5	6,1	32	16,3	–	G1/8	29,6	54	27,9
ELGC-BS-KF-60	60	57,1	30	6,1	42	31,4	M4	G1/8	–	72	40
ELGC-BS-KF-80	80	77,1	40	6,1	46	31,4	M6	G1/8	–	96	50

	H3	H4	H5	H6	H7	H8	H11	H12	H13	L1	L2 min.
ELGC-BS-KF-32	36,3	35,6	0,3	8	–	–	31,4	32	13,7	104,5	57,9
ELGC-BS-KF-45	50,8	49,6	0,5	12,5	–	–	42,8	45	18,5	134,3	79,7
ELGC-BS-KF-60	70,1	66,1	0,5	19,5	16	48	54,6	60	32,5	170,5	102,1
ELGC-BS-KF-80	90,6	88,1	0,5	20	17,5	65	72,5	80	41,5	198,5	119,6

	L3	L4	L5	L6	L7	L8	L10	L11	T1	T2	W1
ELGC-BS-KF-32	10,5	13,4	19,9	4,5	5	59	6	2,6	–	5,5	120°
ELGC-BS-KF-45	14,8	24,6	19,9	6,5	7	67,5	6	2,9	–	8	90°
ELGC-BS-KF-60	20	31,4	26,9	6,5	10	88,5	2,5	–	8	8	–
ELGC-BS-KF-80	21	39,1	25,9	6,5	12	106	2,5	–	15	8	–

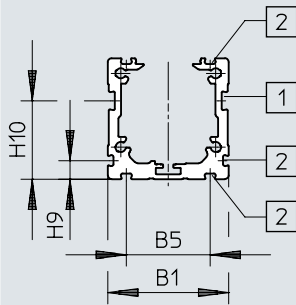
1) Coupling diameter or interference circuit diameter clamping screw

## Dimensions

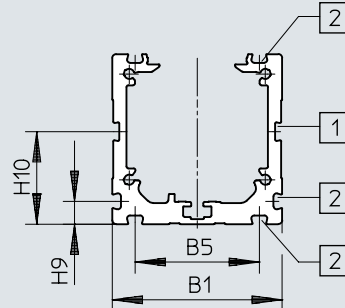
## Dimensions – Spindle axes ELGC-BS-KF (profile)

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

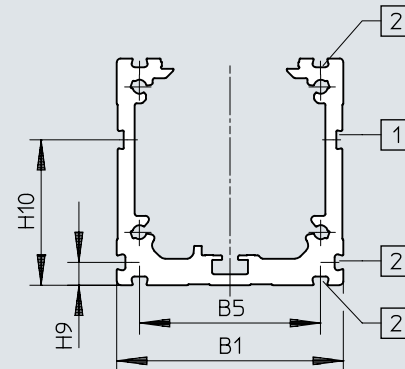
ELGC-BS-KF-32



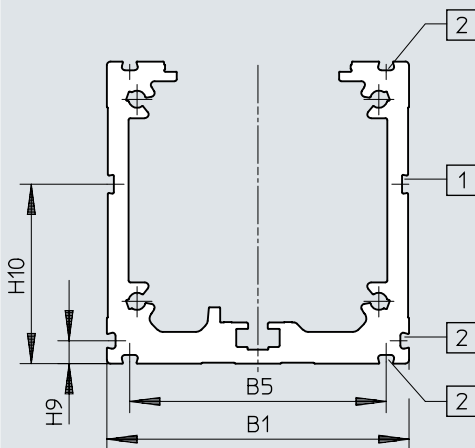
ELGC-BS-KF-45



ELGC-BS-KF-60



ELGC-BS-KF-80



[1] = Slot for sensor bracket

[2] = Mounting slot

	B1	B5	H9	H10
ELGC-BS-KF-32	32	22,2	4,9	20,8
ELGC-BS-KF-45	45	32,9	6,1	24,5
ELGC-BS-KF-60	60	47,9	6,1	38,5
ELGC-BS-KF-80	80	67,9	6,1	47,5

## Dimensions

Dimensions – Spindle axes ELGC-BS-KF, size 32 (slide)

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



[1] Drilled hole for centring pin ZBS

	B1	D1	D2 ∅ H8	D3	H1	H2
	±0,1				±0,1	±0,1
ELGC-BS-KF-32	4	M1,6	2	M3	30,5	22,5

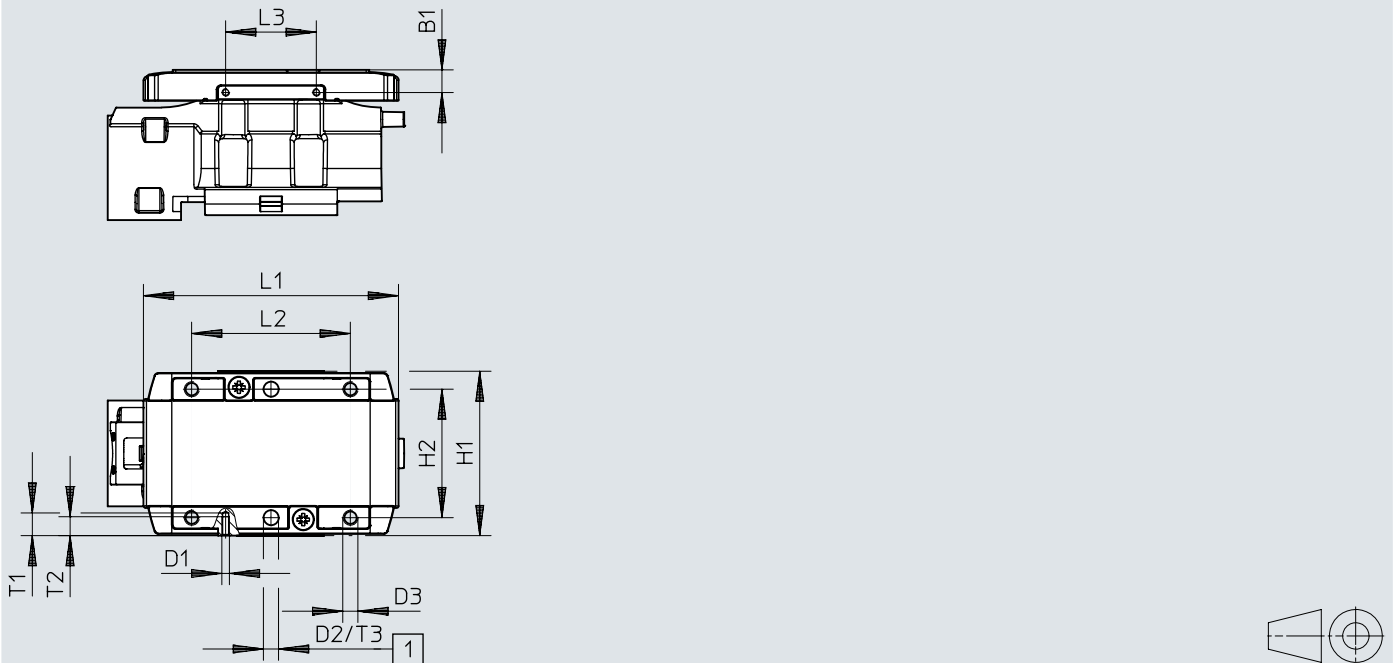
	L1	L2	L3	T1	T2	T3	T4 <sup>1)</sup>
		±0,1	±0,1			+0,1	
ELGC-BS-KF-32	59	35	18	3,8	3	3,1	4 ... 5

1) Recommended screw-in depth

## Dimensions

### Dimensions – Spindle axes ELGC-BS-KF, size 45 (slide)

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



[1] Drilled hole for centring pin ZBS

	B1	D1	D2 ∅ H8	D3	H1	H2 ±0,1
ELGC-BS-KF-45	±0,1 6	M2	4	M4	±0,1 43,5	34

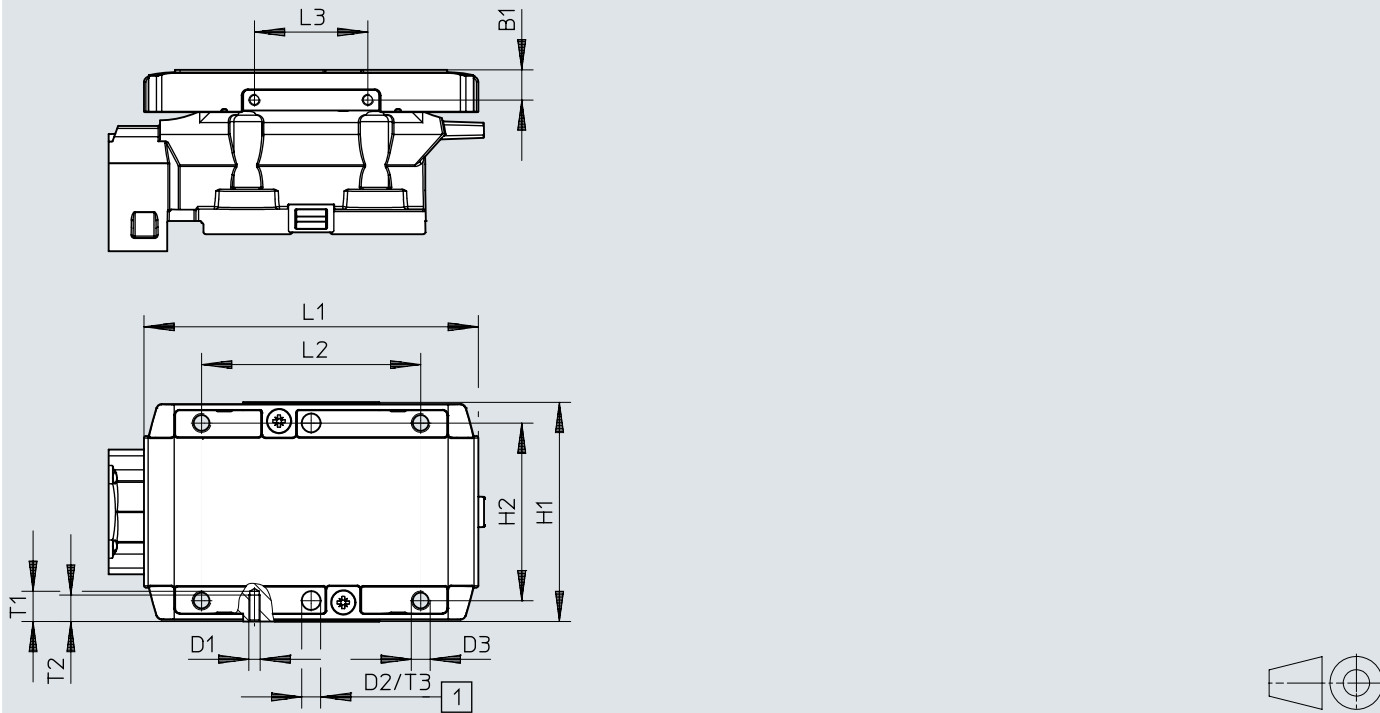
	L1	L2 ±0,1	L3 ±0,1	T1	T2	T3 +0,1	T4 <sup>1)</sup>
ELGC-BS-KF-45	67,5	42	24	6	5	3,1	6 ... 7,5

1) Recommended screw-in depth

## Dimensions

### Dimensions – Spindle axes ELGC-BS-KF, size 60 (slide)

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



[1] Hole for centring sleeve ZBH

	B1	D1	D2	D3	H1	H2
	±0,1		∅ H8		±0,1	±0,1
ELGC-BS-KF-60	8	M3	5	M5	58	47

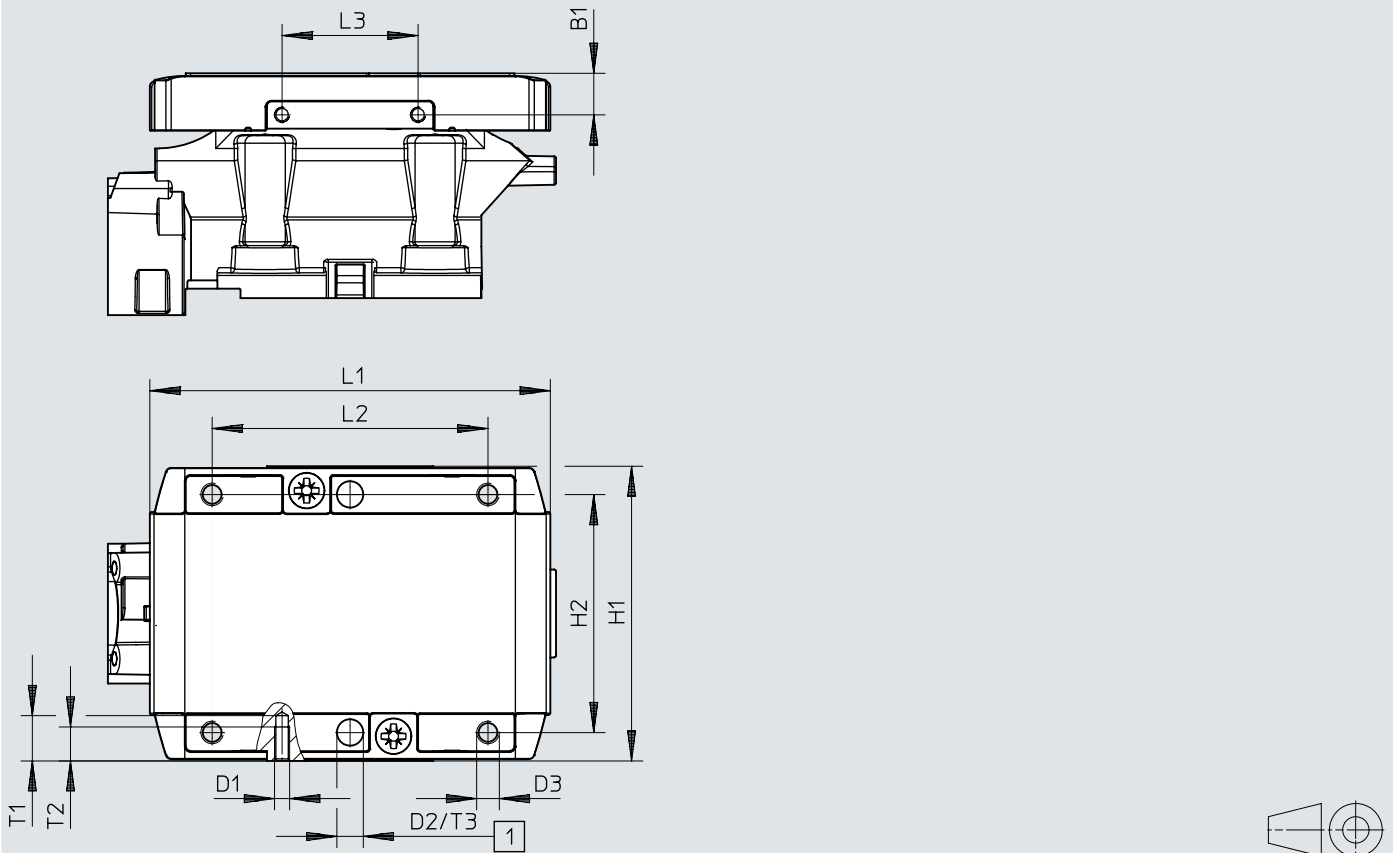
	L1	L2	L3	T1	T2	T3	T4 <sup>1)</sup>
		±0,1	±0,1			+0,1	
ELGC-BS-KF-60	88,5	58	30	9	7	1,3	8,5 ... 10

1) Recommended screw-in depth



## Dimensions

## Dimensions – Spindle axes ELGC-BS-KF, size 80 (slide)

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

[1] Hole for centring sleeve ZBH

	B1	D1	D2 ∅ H8	D3	H1	H2
	±0,1				±0,1	±0,1
ELGC-BS-KF-80	11	M4	7	M6	78	63

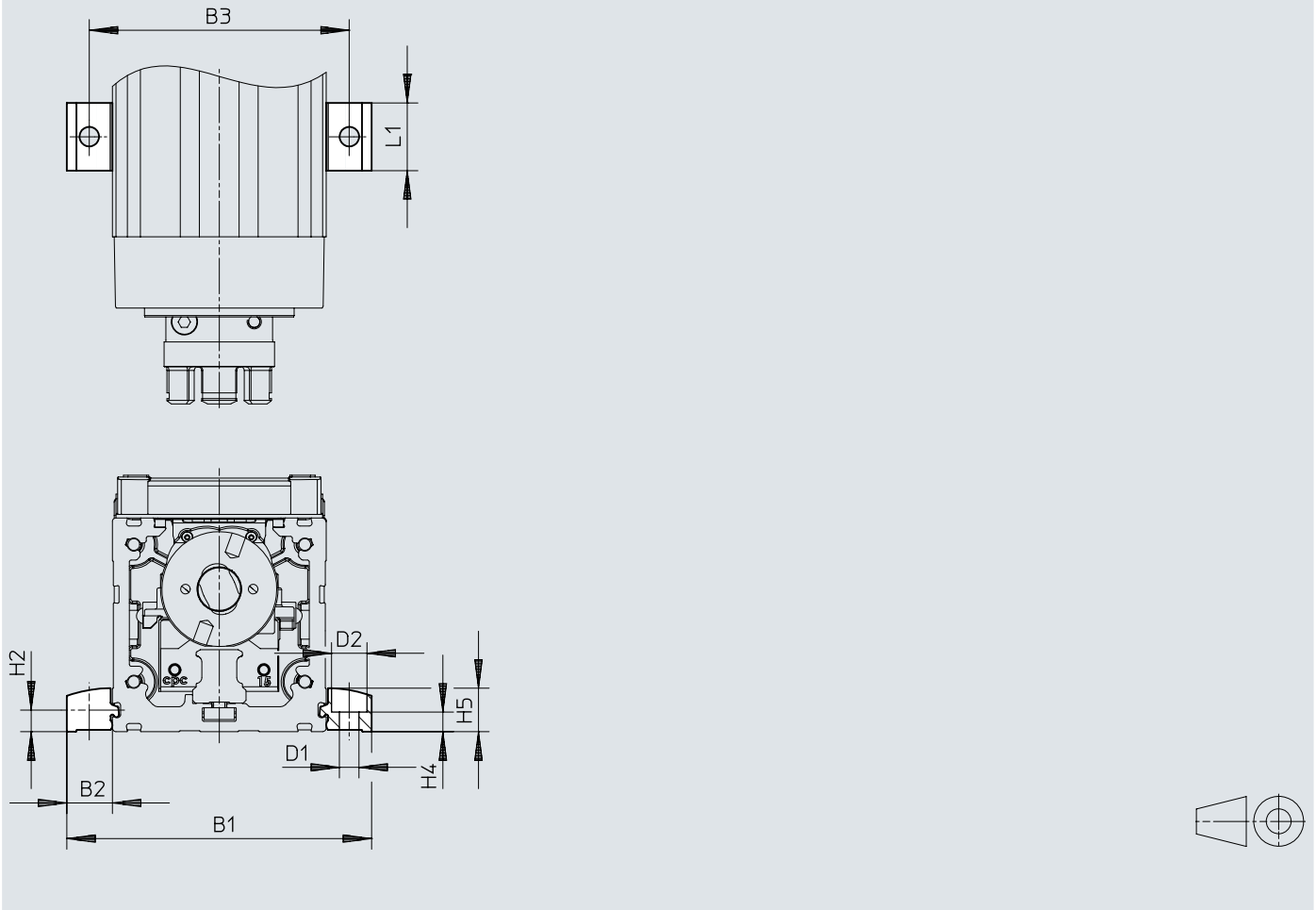
	L1	L2	L3	T1	T2	T3	T4 <sup>1)</sup>
		±0,1	±0,1			+0,1	
ELGC-BS-KF-80	106	73	36	12	9	1,6	11 ... 14

1) Recommended screw-in depth

## Dimensions

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

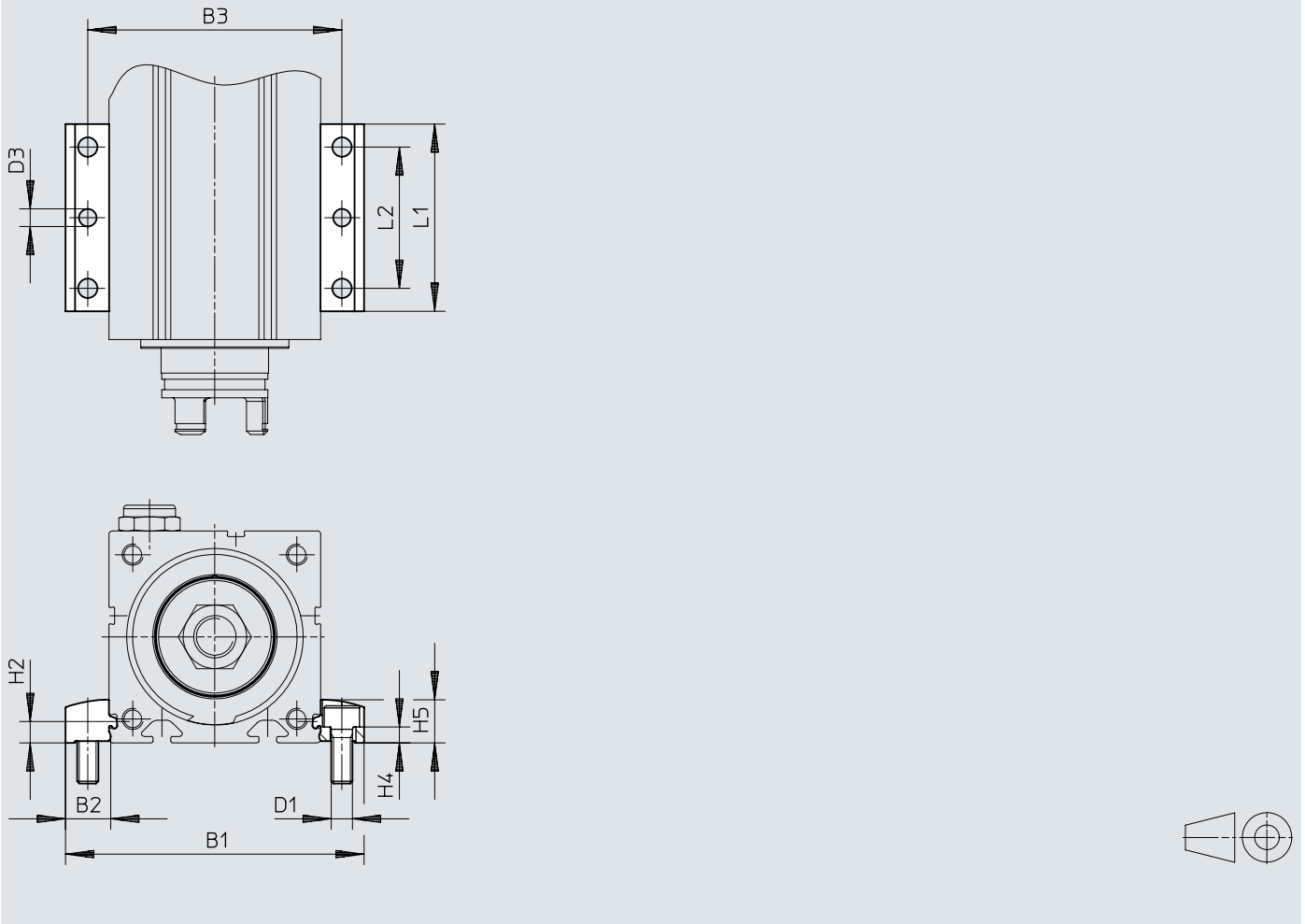
Download CAD data [www.festo.com](http://www.festo.com)



		B1	B2	B3	D1 ∅ H13	D2 ∅ H13	H2	H4 ±0,1	H5	L1
EAHF-L2-25-P-S	ELGC-BS-KF-32	51,4	9,7	42	4,5	8	4,9	4,2	9	19
EAHF-L2-45-P-S	ELGC-BS-KF-45	70,6	12,8	58	5,5	10	6,1	5,5	12,2	19
EAHF-L2-45-P-S	ELGC-BS-KF-60	85,6	12,8	73	5,5	10	6,1	5,5	12,2	19
EAHF-L2-45-P-S	ELGC-BS-KF-80	105,6	12,8	93	5,5	10	6,1	5,5	12,2	19

## Dimensions

Dimensions – Profile mounting EAHF-L2-...-P

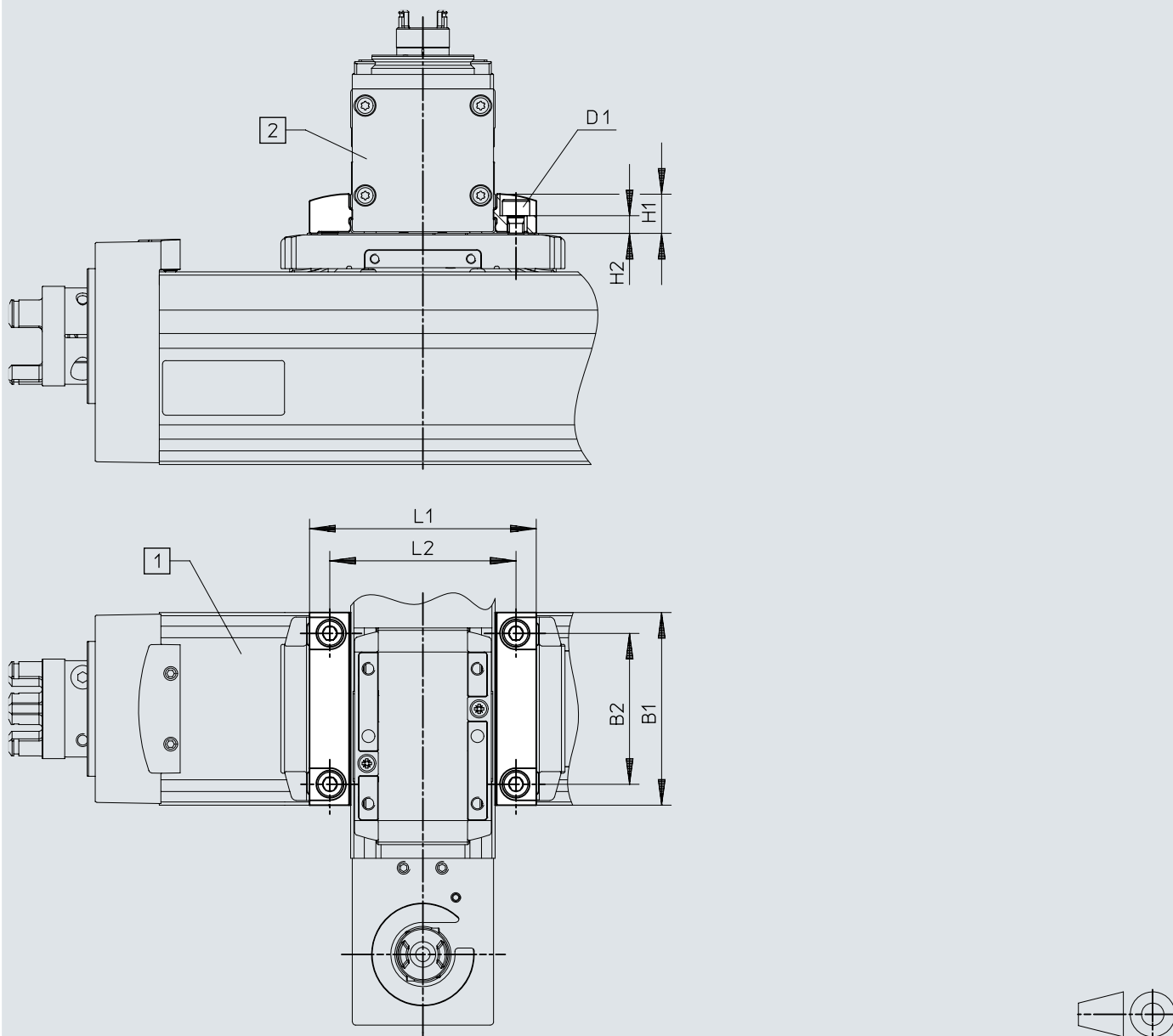
Download CAD data [www.festo.com](http://www.festo.com)

		B1	B2	B3	D1 ∅ H13	D2 ∅ H13	D3 ∅	H2	H4 ±0,1	H5	L1	L2
EAHF-L2-25-P	ELGC-BS-KF-32	51,4	9,7	42	4,5	8	4	4,9	4,2	9	53	40
EAHF-L2-45-P	ELGC-BS-KF-45	70,6	12,8	58	5,5	10	5	6,1	5,5	12,2	53	40
EAHF-L2-45-P	ELGC-BS-KF-60	85,6	12,8	73	5,5	10	5	6,1	5,5	12,2	53	40
EAHF-L2-45-P	ELGC-BS-KF-80	105,6	12,8	93	5,5	10	5	6,1	5,5	12,2	53	40

## Dimensions

Dimensions – Profile mounting EAHF-L2-...-P-D...

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



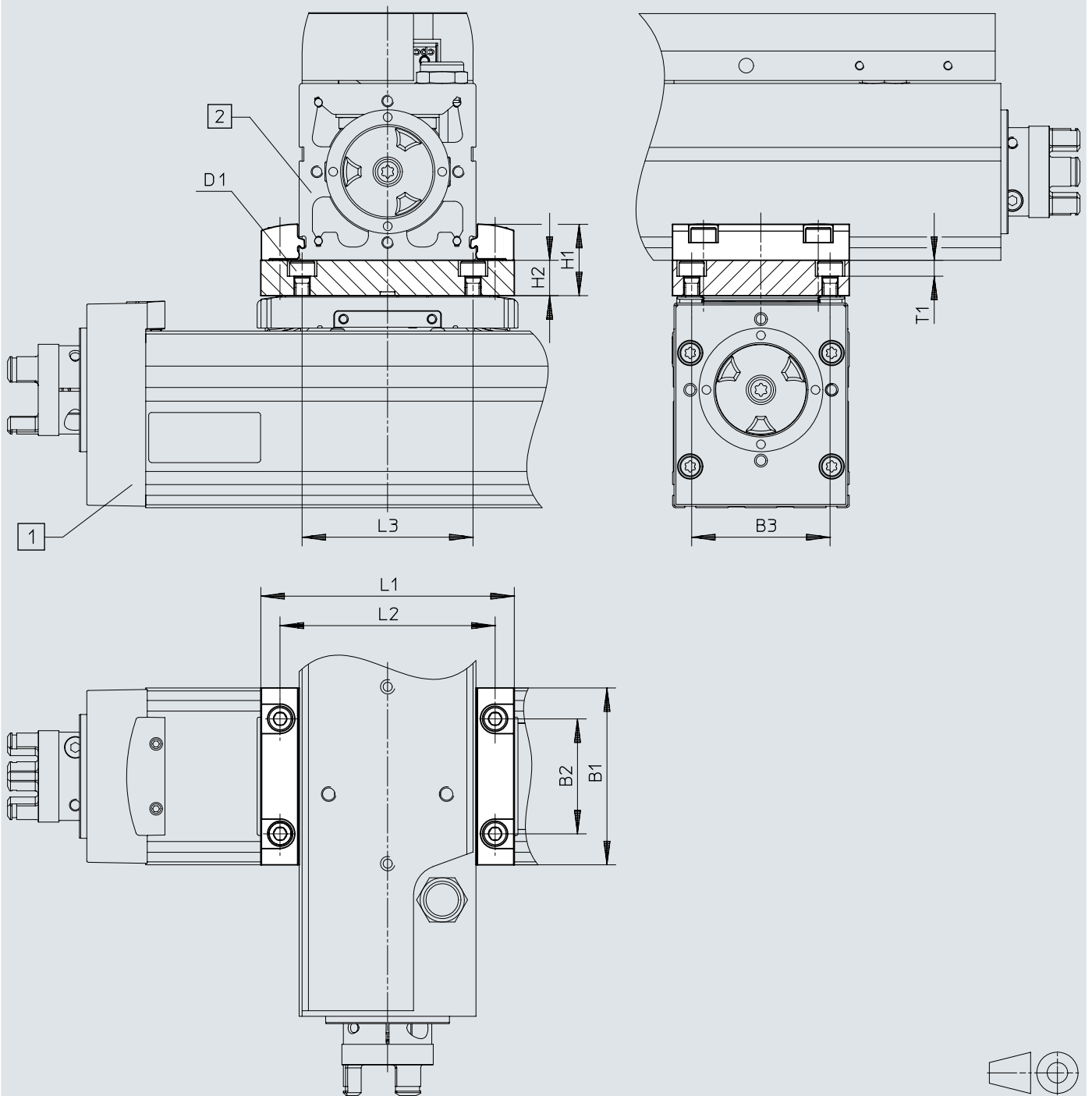
- [1] Base axis ELGC/ELGS/ELFC
- [2] Assembly axis ELGC/ELGS/ELFC/EGSC

	1)	B1	B2	D1	H1	H2 ±0,1	L1	L2
EAHF-L2-25-P-D1	32/25	32	22,5	M3	9	5,1	44,4	35
EAHF-L2-25-P-D2	45/32	45	34	M4	9	3,7	51,4	42
EAHF-L2-45-P-D3	60/45	60	47	M5	12,2	5,5	70,6	58
EAHF-L2-45-P-D4	80/60	78	63	M6	12,2	4,5	85,6	73

1) Base axis/assembly axis

## Dimensions

Dimensions – Adapter kit EHAA-D-L2

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

[1] Base axis ELGC/ELGS/ELFC

[2] Assembly axis ELGC/ELGS/ELFC/EGSC

## Dimensions

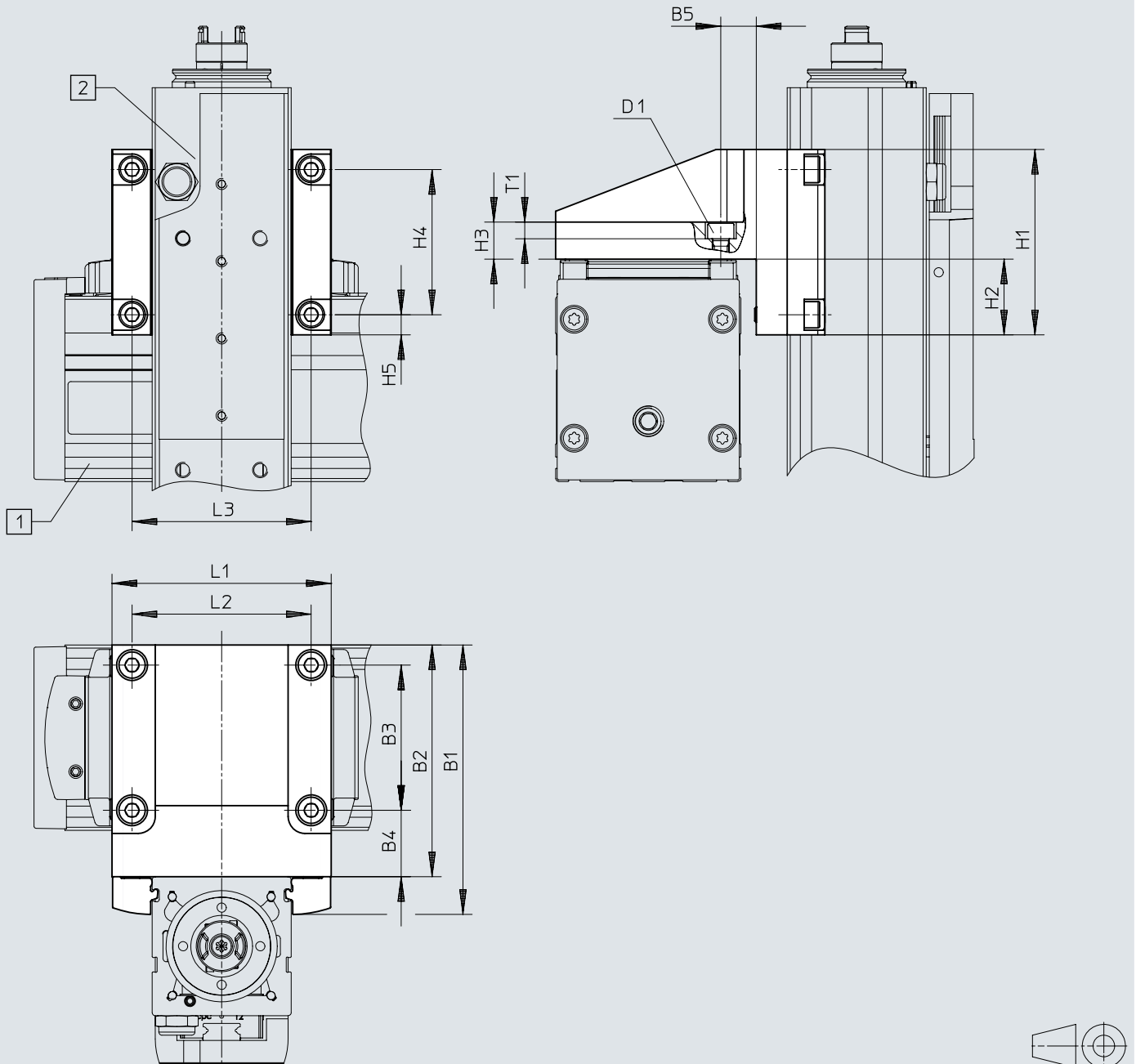
	1)	B1	B3 ±0,05	D1	H1	H2	L1	L2	L3	T1
EHAA-D-L2-32-L2-32	32/25	32	22,5	M3	19	10	44,4	35	35	4,2
EHAA-D-L2-45-L2-45	45/32	45	34	M4	19	10	51,4	42	42	5,4
EHAA-D-L2-60-L2-60	60/45	60	47	M5	24,2	12	70,6	58	58	5,4
EHAA-D-L2-80-L2-80	80/60	78	63	M6	24,2	12	85,6	73	73	6,4

	1)	B1	B2	B3 ±0,05	D1	H1	H2	L1	L2	L3	T1
EHAA-D-L2-32-L2-32	32/32	32	14,5	22,5	M3	19	10	52	42	35	4,2
EHAA-D-L2-45-L2-45	45/45	45	32	34	M4	22,2	10	71	58	42	5,4
EHAA-D-L2-60-L2-60	60/60	60	39	47	M5	24,2	12	86	73	58	5,4
EHAA-D-L2-80-L2-80	80/80	78	63	63	M6	24,2	12	106	93	73	6,4

1) Base axis/assembly axis

## Dimensions

Dimensions – Angle kit EHAA-D-L2-...-AP

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

[1] Base axis ELGC/ELGS/ELFC

[2] Assembly axis ELGC/ELGS/ELFC/EGSC

## Dimensions

	1)	B1	B2	B3	B4	B5	D1	H1	H2
EHAA-D-L2-32-L2-25-AP	32/25	53	44	22,5	16,8	8,8	M3	32	11
EHAA-D-L2-45-L2-32-AP	45/32	69	60	34	20,5	11,5	M4	45	17,5
EHAA-D-L2-60-L2-45-AP	60/45	87,2	75	47	21,5	11,5	M5	60	24,5
EHAA-D-L2-80-L2-60-AP	80/60	107,2	95	63	23,5	13,5	M6	78	33,5

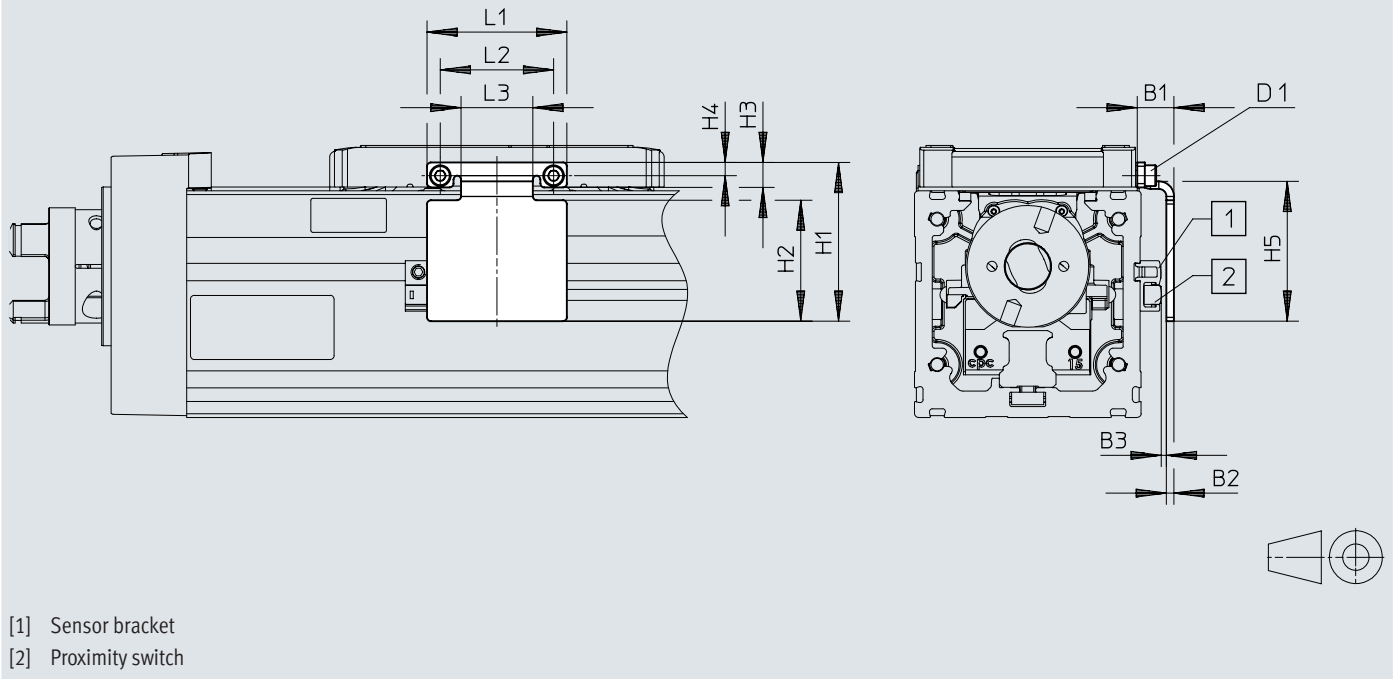
	1)	H3	H4	H5	L1	L2	L3	T1
EHAA-D-L2-32-L2-25-AP	32/25	10	22,5	4,8	45	35	35	4,2
EHAA-D-L2-45-L2-32-AP	45/32	10	34	5,5	52	42	42	5,4
EHAA-D-L2-60-L2-45-AP	60/45	12	47	6,5	71	58	58	5,4
EHAA-D-L2-80-L2-60-AP	80/60	12	63	7,5	86	73	73	6,4

1) Base axis/assembly axis



## Dimensions

## Dimensions – Switch lug EAPM-L2-SLS

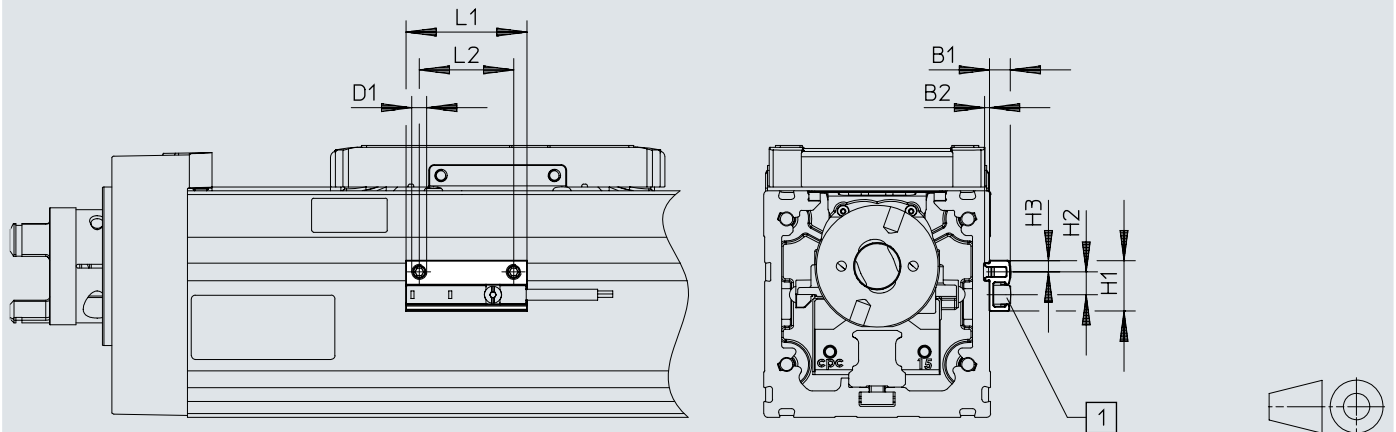
Download CAD data [www.festo.com](http://www.festo.com)

	B1	B2	B3	D1	H1 ±0,2	H2	H3	H4	H5 ±0,2	L1 ±0,2	L2 ±0,15	L3
EAPM-L2-32-SLS	9,2	2	1,0±0,31	M1,6	27	19	4,3	2,5	24	22	18	10
EAPM-L2-45-SLS	9,4	2	1,2±0,31	M2	37	28	5,5	3,3	33	30	24	14
EAPM-L2-60-SLS	9,7	2	1,3±0,31	M3	37	32	6,6	3,5	37	42	30	19
EAPM-L2-80-SLS	9,5	2	1,1±0,32	M4	53,5	42	8,3	4,5	47	44,6	36	23,4

## Dimensions

### Dimensions – Sensor bracket EAPM-L2-SH


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



[1] Proximity switch

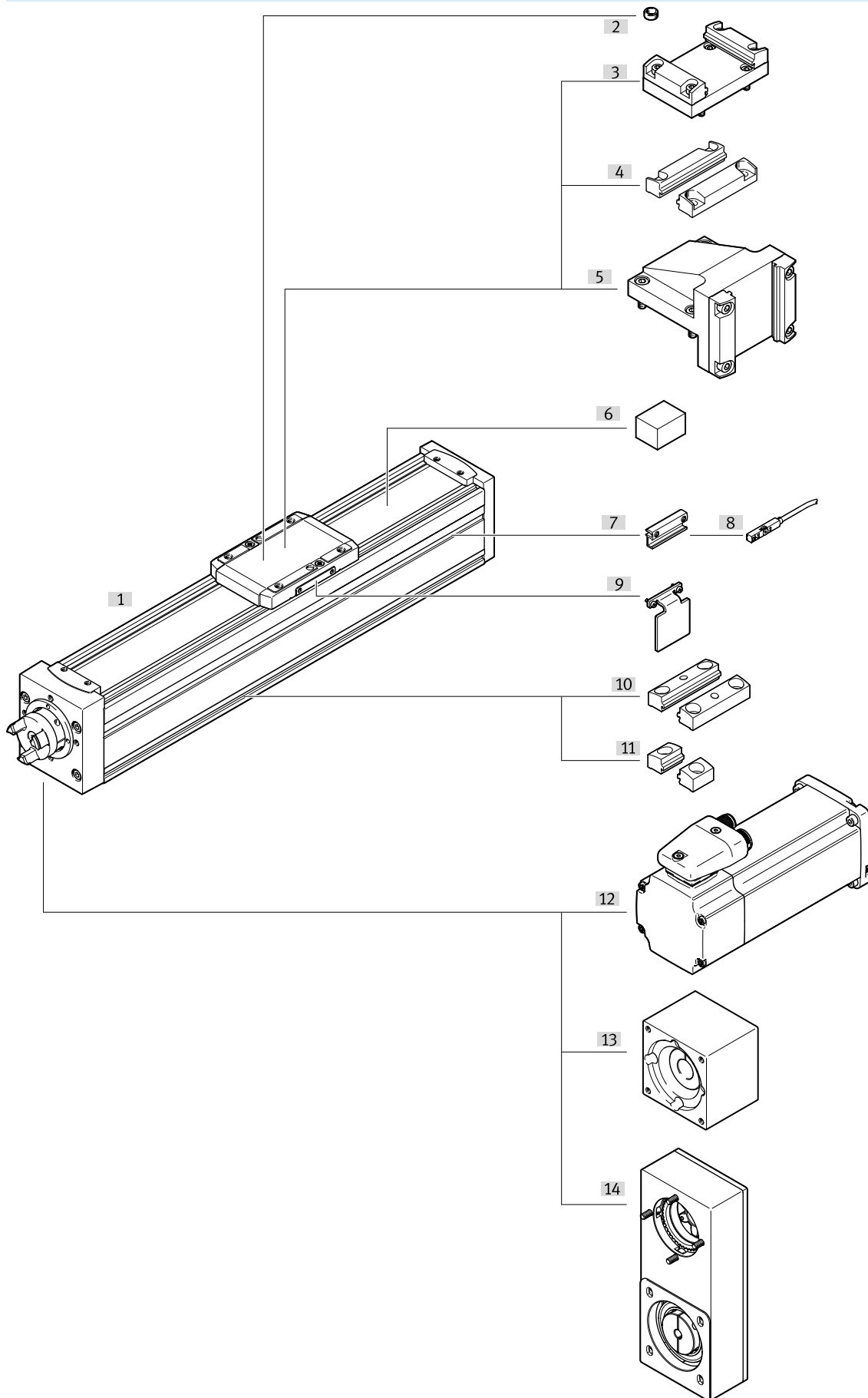
	B1	B2	D1	H1	H2	H3	L1	L2
EAPM-L2-SH	5,5	1,3	M4	13,4	6	3	32	25

## Ordering data

with recirculating ball bearing guide					
	Size	Spindle pitch	Working stroke	Part no.	Type
	32	8 mm/U	100 mm	8061477	ELGC-BS-KF-32-100-8P
			200 mm	8061478	ELGC-BS-KF-32-200-8P
			300 mm	8061479	ELGC-BS-KF-32-300-8P
			400 mm	8061480	ELGC-BS-KF-32-400-8P
			500 mm	8061481	ELGC-BS-KF-32-500-8P
			600 mm	8061482	ELGC-BS-KF-32-600-8P
			800 mm	8061483	ELGC-BS-KF-32-800-8P
	45	10 mm/U	100 mm	8061484	ELGC-BS-KF-45-100-10P
			200 mm	8061485	ELGC-BS-KF-45-200-10P
			300 mm	8061486	ELGC-BS-KF-45-300-10P
			400 mm	8061487	ELGC-BS-KF-45-400-10P
			500 mm	8061488	ELGC-BS-KF-45-500-10P
			600 mm	8061489	ELGC-BS-KF-45-600-10P
			800 mm	8061490	ELGC-BS-KF-45-800-10P
	60	12 mm/U	100 mm	8061491	ELGC-BS-KF-60-100-12P
			200 mm	8061492	ELGC-BS-KF-60-200-12P
			300 mm	8061493	ELGC-BS-KF-60-300-12P
			400 mm	8061494	ELGC-BS-KF-60-400-12P
			500 mm	8061495	ELGC-BS-KF-60-500-12P
			600 mm	8061496	ELGC-BS-KF-60-600-12P
			800 mm	8061497	ELGC-BS-KF-60-800-12P
	80	16 mm/U	100 mm	8061498	ELGC-BS-KF-80-100-16P
			200 mm	8061499	ELGC-BS-KF-80-200-16P
			300 mm	8061500	ELGC-BS-KF-80-300-16P
			400 mm	8061501	ELGC-BS-KF-80-400-16P
			500 mm	8061502	ELGC-BS-KF-80-500-16P
			600 mm	8061503	ELGC-BS-KF-80-600-16P
			800 mm	8061504	ELGC-BS-KF-80-800-16P
1,000 mm			8061505	ELGC-BS-KF-80-1000-16P	

# Peripherals

## Peripherals overview

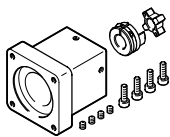


## Peripherals

Accessories		→ Link
Type/order code	Description	
[1] Spindle axis ELGC-BS-KF	Electric drive	<a href="#">elgc-bs</a>
[2] Centring sleeve ZBS	For centring loads and attachments on the slide	31
[2] Centring sleeve ZBH	For centring loads and attachments on the slide	31
[3] Adapter kit EHAA-D-L2	- For axis/axis mounting with adapter plate - Mounting option: Base axis with either same size or one-size-down assembly axis - When assembling the motor with parallel kits, interfering contours may occur. In this case, the adapter plate is required for height compensation	30
[4] Profile mounting EAHF-L2-...-P-D	- For axis/axis mounting without adapter plate - Mounting option: Base axis with one-size-down assembly axis	30
[5] Angle kit EHAA-D-L2-...-AP	For mounting one-size-down vertical axes (assembly axes) on base axes with mounting position "slide at top"	30
[6] Clamping element EADT-S-L5	Tool for retensioning the cover strip	31
[7] Sensor bracket EAPM-L2-SH	For mounting the proximity switches on the axis. The proximity switches can only be mounted using the sensor bracket	31
[8] Proximity switch SIES-8	Inductive proximity sensors, for T-slot 27	32
[8] Proximity switch SMT-8	Magnetic proximity switches, for T-slot	32
[9] Switch lug EAPM-L2-...-SLS	For sensing the slide position in conjunction with inductive proximity sensors SIES	31
[10] Profile mounting 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	30
[11] Profile mounting EAHF-L2-...-P-S	For mounting the axis on the side of the profile	30
[12] Motor EMMTST	Motors and kits specially matched with the axis Detailed information: <a href="http://www.festo.com/catalogue/eamm">www.festo.com/catalogue/eamm</a> Engineering tool: <a href="http://www.festo.com/x/electric-motion-sizing">www.festo.com/x/electric-motion-sizing</a>	<a href="#">emmt-st</a>
[12] Motor EMMTAS	Motors and kits specially matched with the axis Detailed information: <a href="http://www.festo.com/catalogue/eamm">www.festo.com/catalogue/eamm</a> Engineering tool: <a href="http://www.festo.com/x/electric-motion-sizing">www.festo.com/x/electric-motion-sizing</a>	<a href="#">emmt-as</a>
[13] Axial kit EAMM-A	For axial motor mounting More detailed information → <a href="http://www.festo.com/x/electric-motion-sizing">www.festo.com/x/electric-motion-sizing</a>	<a href="#">eamm-a</a>
[14] Parallel kit EAMM-U	For parallel motor mounting	<a href="#">eamm-u</a>

## Accessories

### Permitted axis/motor combinations for axial and parallel kits



By following these links you will find all the information about:

- Axis/motor combinations
- Permitted third-party motors
- Technical data
- Dimensions

For axial kits → Internet: [www.festo.com/catalogue/eamm-a](http://www.festo.com/catalogue/eamm-a)

For parallel kits → Internet: [www.festo.com/catalogue/eamm-u](http://www.festo.com/catalogue/eamm-u)

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

	Description	Suitability for the production of Li-ion batteries	Material plate	Product weight	Part no.	Type
	For size 32	F1a	Anodised wrought aluminium alloy	4 g	<b>5183153</b>	<b>EAHF-L2-25-P-S</b>
	For size 45, 60, 80			6 g	<b>5184133</b>	<b>EAHF-L2-45-P-S</b>

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

	Description	Suitability for the production of Li-ion batteries	Material plate	Product weight	Part no.	Type
	For size 32	F1a	Anodised wrought aluminium alloy	19 g	<b>4835684</b>	<b>EAHF-L2-25-P</b>
	For size 45, 60, 80			35 g	<b>4835728</b>	<b>EAHF-L2-45-P</b>

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

	Description <sup>1)</sup>	Suitability for the production of Li-ion batteries	Material plate	Product weight	Part no.	Type
	For size 32/25	F1a	Anodised wrought aluminium alloy	16 g	<b>4759753</b>	<b>EAHF-L2-25-P-D1</b>
	For size 45/32			24 g	<b>4759748</b>	<b>EAHF-L2-25-P-D2</b>
	For size 60/45			56 g	<b>4759739</b>	<b>EAHF-L2-45-P-D3</b>
	For size 80/60			77 g	<b>4759726</b>	<b>EAHF-L2-45-P-D4</b>

1) Base axis/assembly axis

#### Adapter kit EHAA-D-L2

	Description <sup>1)</sup>	Product weight	Part no.	Type
	For size 32/25	60 g	<b>8066713</b>	<b>EHAA-D-L2-32-L2-32</b>
	For size 45/32	136 g	<b>8066714</b>	<b>EHAA-D-L2-45-L2-45</b>
	For size 60/45	205 g	<b>8066715</b>	<b>EHAA-D-L2-60-L2-60</b>
	For size 80/60	315 g	<b>8066716</b>	<b>EHAA-D-L2-80-L2-80</b>

1) Base axis/assembly axis


When motors are mounted using parallel kits, interfering contours may occur. In this case, the adapter plate is required for height compensation.


#### Angle kit EHAA-D-L2-...-AP


	Description <sup>1)</sup>	Product weight	Part no.	Type
	For size 32/25	107 g	<b>8066717</b>	<b>EHAA-D-L2-32-L2-25-AP</b>
	For size 45/32	222 g	<b>8066718</b>	<b>EHAA-D-L2-45-L2-32-AP</b>
	For size 60/45	433 g	<b>8066719</b>	<b>EHAA-D-L2-60-L2-45-AP</b>
	For size 80/60	768 g	<b>8066720</b>	<b>EHAA-D-L2-80-L2-60-AP</b>


1) Base axis/assembly axis


## Accessories


Switch lug EAPM-L2-SLS						
	Description	Suitability for the production of Li-ion batteries	Product weight	Part no.	Type	
	For size 32	F1a	10 g	8067259	EAPM-L2-32-SLS	
	For size 45		18 g	8067260	EAPM-L2-45-SLS	
	For size 60		27 g	8067261	EAPM-L2-60-SLS	
	For size 80		42 g	8067262	EAPM-L2-80-SLS	

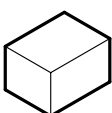
Sensor bracket EAPM-L2-SH						
	Description	Suitability for the production of Li-ion batteries	Material sensor bracket	Product weight	Part no.	Type
	For size 32, 45, 60, 80	F1a	Anodised wrought aluminium alloy	4 g	★ 4759852	EAPM-L2-SH

Centring pin ZBS-2						
	Description	Material sleeve	Size of pack	Product weight	Part no.	Type
	For size 32	Steel	10	1 g	525273	ZBS-2


Centring pin ZBS-4						
	Description	Material sleeve	Size of pack	Product weight	Part no.	Type
	For size 45	High-alloy stainless steel	10	0.5 g	562959	ZBS-4


Centring sleeve ZBH-5						
	Description	Material sleeve	Size of pack	Product weight	Part no.	Type
	For size 60	Steel	10	1 g	8146543	ZBH-5-B

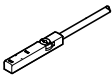
Centring sleeve ZBH-7						
	Description	Material sleeve	Size of pack	Product weight	Part no.	Type
	For size 80	Steel	10	1 g	8146544	ZBH-7-B

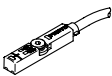
Clamping element EADT						
	Description	Material clamping element	Product weight	Part no.	Type	
	For size 32, 45, Tool for retensioning the cover strip	NBR	12 g	8065818	EADT-S-L5-32	
	for size 60, Tool for retensioning the cover strip		50 g	8058451	EADT-S-L5-70	

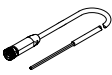
## Accessories

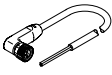
Push-in fitting QSM-M5						
	Description	Material housing	Size of pack	Product weight	Part no.	Type
	For size 32, For sealing air connection	Brass, nickel-plated	10	3 g	133004	QSM-M5-4-I-R
				3.2 g	133003	QSM-M5-3-I-R

Push-in fitting QSM-G1/8						
	Description	Material housing	Size of pack	Product weight	Part no.	Type
	For size 45, 60, 80, For sealing air connection	Brass, nickel-plated	10	8.9 g	★ 186266	QSM-G1/8-4-I
				9.5 g	★ 186267	QSM-G1/8-6-I

Proximity switch SIES for T-slot, inductive <span style="float: right;">Link <a href="#">sies-8m</a></span>						
	Switching output	Electrical connection 1, connector system	Switching element function	Cable length	Part no.	Type
	NPN	M8x1, A-coded, to EN 61076-2-104	N/C contact	0.3 m	★ 551402	SIES-8M-NO-24V-K-0,3-M8D
			N/O contact		551397	SIES-8M-NS-24V-K-0,3-M8D
		Open end	N/C contact	7.5 m	★ 551401	SIES-8M-NO-24V-K-7,5-OE
		N/O contact	551396		SIES-8M-NS-24V-K-7,5-OE	
	PNP	M8x1, A-coded, to EN 61076-2-104	N/C contact	0.3 m	★ 551392	SIES-8M-PO-24V-K-0,3-M8D
			N/O contact		551387	SIES-8M-PS-24V-K-0,3-M8D
Open end		N/C contact	7.5 m	★ 551391	SIES-8M-PO-24V-K-7,5-OE	
	N/O contact	551386		SIES-8M-PS-24V-K-7,5-OE		

Proximity switch SMT for T-slot, magneto-resistive <span style="float: right;">Link <a href="#">smt-8m</a></span>						
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Screw-clamped, Insertable in the slot from above	3-wire PNP N/C contact	Open end	7.5 m	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
				2.5 m	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		3-wire PNP N/O contact	Plug M8, A-coded	0.3 m	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D

Connecting cable NEBA, straight <span style="float: right;">Link <a href="#">neba</a></span>						
	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/cores	Cable length	Part no.	Type
	M8x1, A-coded, to EN 61076-2-104	Open end	3	2.5 m	★ 8078223	NEBA-M8G3-U-2.5-N-LE3
				5 m	★ 8078224	NEBA-M8G3-U-5-N-LE3

Connecting cable NEBA, angled <span style="float: right;">Link <a href="#">neba</a></span>						
	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/cores	Cable length	Part no.	Type
	M8x1, A-coded, to EN 61076-2-104	Open end	3	2.5 m	★ 8078230	NEBA-M8W3-U-2.5-N-LE3
				5 m	★ 8078231	NEBA-M8W3-U-5-N-LE3