# Toothed belt axes ELGC-TB-KF







### Toothed belt axes ELGC-TB-KF, with recirculating ball bearing guide

## Key features

#### At a glance



- Optimal installation space to working space ratio
- · Protected against external influences by internal guide
- Compact, integrated coupling, easy to service
- Unique assembly system
- Compact double bearing integrated in the axis to save space
- Stainless steel cover strip kept in place with magnetic strips
- Easy to clean and less susceptible to contamination

#### 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 cover strip and optional vacuum connection protect against particle emissions and atmospheric pollution

#### 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

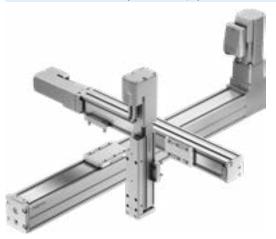
This product is also available as a product unit as part of the Simplified Motion Series:



- 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 or special expertise
- Digital I/O and IO-Link integrated as standard

## Key features

#### From individual axis to complete handling system



- The toothed belt and spindle axes ELGC and mini slide 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









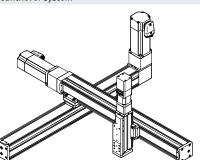
Mini slide



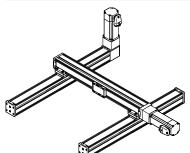


For applications where compact dimensions are essential, the axes ELGC can be combined into very space-saving handling systems that are suitable for assembly systems, test and inspection systems, small parts handling, the electronics industry and desktop applications. The very compact linear axes ELGC, mini slide EGSC and electric cylinder EPCC offer an optimal ratio between installation space and working space. They feature a common system approach and platform architecture and the connections are largely adapterless.

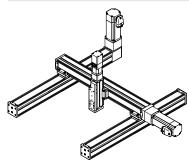








3-dimensional gantry

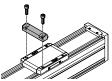


## Key features

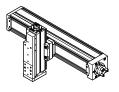
# Matrix showing combinations between axis ELGC/ELGS-TB, ELGC/ELGS-BS, mini slide EGSC/EGSS-BS, electric cylinder EPCC/EPCS-BS and guide axis ELFC Mounting options with profile mounting and via angle kit

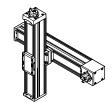
		Assembly axis ELGC-BS/-TB; ELFC; EGSC-BS; EPCC-BS; ELGS-BS/-TB; EGSS-BS, EPCS-BS					
	Size	25	32	45	60		
Base axis	32	•	-	-	-		
ELGC-BS/-TB; ELFC;	45	-		-	-		
ELGS-BS/-TB	60	-	-		-		
	80	-	-	-	•		

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



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



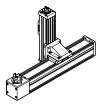


#### With angle kit EHAA-D-L2-...-AP



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

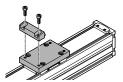




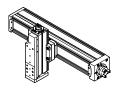
# Matrix showing combinations between axis ELGC/ELGS-TB, ELGC/ELGS-BS, mini slide EGSC/EGSS-BS, electric cylinder EPCC/EPCS-BS and guide axis ELFC Assembly options with adapter kit

		Assembly axis ELGC-BS/-TB;	Assembly axis ELGC-BS/-TB; ELFC; EGSC-BS; EPCC-BS; ELGS-BS/-TB; EGSS-BS, EPCS-BS				
	Size	25	32	45	60	80	
Base axis	32		•	_	-	-	
ELGC-BS/-TB; ELFC;	45	-			-	-	
ELGS-BS/-TB	60	-	-			-	
	80	-	-	-	i	•	

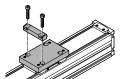
#### With adapter kit EHAA-D-L2



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







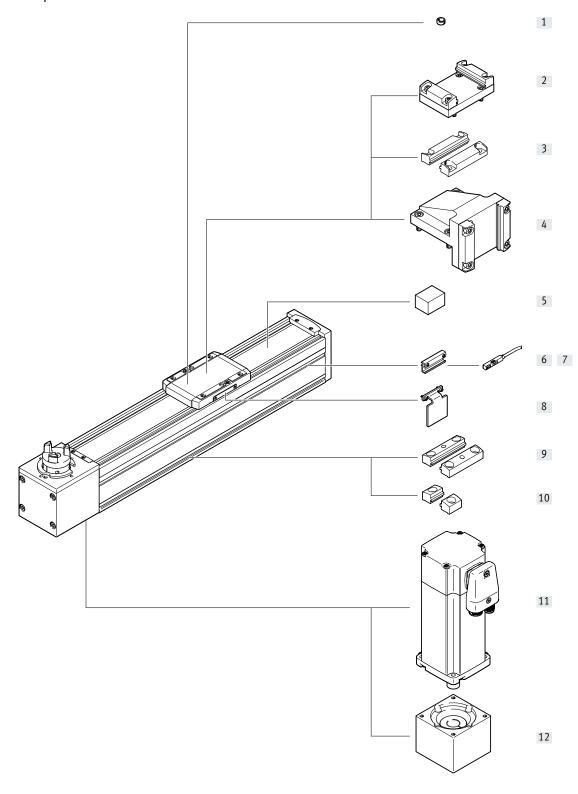
- Mounting option: base axis with height adjustment for one-size-down assembly axis
- When motors are mounted using parallel kits, this may lead to interfering contours. In this case, the adapter plate is required for height compensation

# Type codes

001	Series
ELGC	Gantry axis
002	Drive system
TB	Toothed belt
003	Guide
KF	Recirculating ball bearing guide
<b>KF</b>	Recirculating ball bearing guide Size
004	Size

Stroke	
200	
300	
500	
600	
800	
1000	
1200	
1500	
1800	
2000	
	300 500 600 800 1000 1200 1500 1800

# Peripherals overview



# Peripherals overview

Acces	sories		
	Туре	Description	→ Page/Internet
[1]	Centring pin/sleeve ZBS/ZBH	For centring loads and attachments on the slide	26
[2]	Adapter kit EHAA-D-L2	<ul> <li>For axis/axis mounting with adapter plate</li> <li>Mounting option: base axis with same size or one-size-down assembly axis (→ page 4)</li> <li>When motors are mounted using parallel kits, this may lead to interfering contours. In this case, the adapter plate is required for height compensation (download CAD data → www.festo.com)</li> </ul>	23
[3]	Profile mounting EAHF-L2P-D	<ul> <li>For axis/axis mounting without adapter plate</li> <li>Mounting option: base axis with one-size-down assembly axis (→ page 4)</li> </ul>	22
[4]	Angle kit EHAA-D-L2AP	For mounting one-size-down vertical axes (assembly axes) on base axes with mounting position "slide at top" (→ page 4)	24
[5]	Clamping element EADT-S-L5-32	Tool for retensioning the cover strip	26
[6]	Sensor bracket EAPM-L2-SH	For mounting the proximity switches on the axis. The proximity switches can only be mounted using the sensor bracket	25
[7]	Proximity switches SIES-8M	Inductive proximity switches, for T-slot	26
	Proximity switches SMT-8M	Magnetic proximity switches, for T-slot	26
[8]	Switch lug EAPM-L2SHS	For sensing the slide position in conjunction with inductive proximity sensors SIES-8M	25
[9]	Profile mounting EAHF-L2P	For mounting the axis on the side of the profile. The profile mounting can be fixed in place on the mounting surface using the drill hole in the centre	21
[10]	Profile mounting EAHF-L2P-S	For mounting the axis on the side of the profile	20
[11]	Motor EMME-AS, EMMS-ST	Motors specially matched to the axis	19
[12]	Axial kit EAMM-A	For axial motor mounting	19

## 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 arising in the interior of the cylinder.

Additional functions of the connection:

- Application of slight negative pressure prevents emission of particles
- $\bullet \ \ \mbox{Application of slight excess pressure prevents atmospheric pollution}$

Suitable push-in fittings → page 26

# Toothed belt axes ELGC-TB-KF, with recirculating ball bearing guide

## Data sheet



-Ø-

Size

45 ... 80



Stroke length 200 ... 2000 mm



www.festo.com



General technical data				
Size		45	60	80
Design		Electromechanical axis with toothed belt		
Guide		Recirculating ball bearing guide		
Mounting position		Any		
Working stroke	[mm]	200, 300, 500, 600, 800, 1000, 1200,	200, 300, 500, 600, 800, 1000, 1200,	200, 300, 500, 600, 800, 1000, 1200,
		1500	1500, 1800, 2000	1500, 1800, 2000
Max. feed force F <sub>x</sub>	[N]	75	120	250
Max. no-load torque <sup>1)</sup>	[Nm]	0.075	0.194	0.413
Max. no-load resistance to shifting <sup>1)</sup>	[N]	7.8	15.6	24.7
Max. driving torque	[Nm]	0.716	1.49	4.178
Max. speed	[m/s]	1.2	1.5	1.5
Max. acceleration	[m/s <sup>2</sup> ]	15		
Repetition accuracy	[mm]	±0.1		
Position sensing		Magneto-resistive, inductive		

<sup>1)</sup> At 0.2 m/s

Operating and environmental conditions			
Ambient temperature <sup>1)</sup>	[°C]	0+50	
Degree of protection		IP40	
Duty cycle	[%]	100	
Maintenance interval		Life-time lubrication	

<sup>1)</sup> Note operating range of proximity switches

Weight [g]			
Size	45	60	80
Basic weight with 0 mm stroke <sup>1)</sup>	760	1775	3500
Additional weight per 10 mm stroke	23	43	73
Moving mass	169	482	901

<sup>1)</sup> Including slide

Toothed belt				
Size		45	60	80
Indexing	[mm]	2	3	3
Elongation <sup>1)</sup>	[%]	0.187	0.124	0.200
Effective diameter	[mm]	19.1	24.83	33.42
Feed constant	[mm/rev]	60	78	105

<sup>1)</sup> At max. feed force

Mass moment of inertia					
Size		45	60	80	
Jo	[kg mm <sup>2</sup> ]	18.62	88.04	291.2	
J <sub>H</sub> per metre stroke	[kg mm <sup>2</sup> /m]	2.81	8.51	19.27	
J <sub>L</sub> per kg payload	[kg mm <sup>2</sup> /kg]	91.19	154.11	279.3	

The mass moment of inertia  $J_A$  of the entire axis is calculated as follows:

 $J_A = J_O + J_H x$  working stroke [m] +  $J_L x$  m<sub>payload</sub> [kg]

## Homing

Homing can be carried out in two ways:

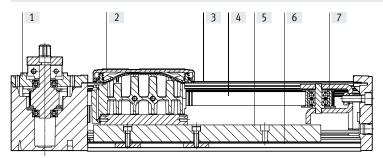
- Against a fixed stop
- Using a reference switch

The following values must be observed:

Size		45	60	80
Max. impact energy	[J]	0.5x10 <sup>-3</sup>	1x10 <sup>-3</sup>	2x10 <sup>-3</sup>
At max. homing speed	[m/s]	0.01		

#### Materials

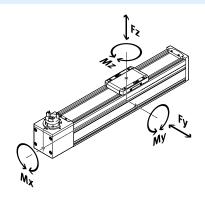
Sectional view



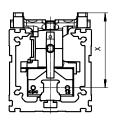
Axis		
[1]	Drive cover	Painted die-cast aluminium
[2]	Slide	Die-cast aluminium
[3]	Cover strip	High-alloy stainless steel
[4]	Toothed belt	Polychloroprene with glass cord and nylon coating
[5]	Guide	Steel
[6]	Profile	Anodised wrought aluminium alloy
[7]	Guide pulley	Aluminium
	Note on materials	RoHS-compliant RoHS-compliant
		Contains paint-wetting impairment substances

#### Characteristic load values

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



Distance from the slide surface to the centre of the guide



Max. permissible forces and torques on the slide (strength limits)										
Size		45	60	80						
Fy <sub>max</sub> .	[N]	300	600	900						
Fz <sub>max</sub> .	[N]	600	1800	2700						
Mx <sub>max</sub> .	[Nm]	5.5	29.1	59.8						
My <sub>max</sub> .	[Nm]	4.7	31.8	56.2						
Mz <sub>max</sub> .	[Nm]	4.7	31.8	56.2						

Distance from the slide surface to the centre of the guide									
Size		45	60	80					
Dimension x	[mm]	42.8	54.6	72.5					

Max. permissible for	Max. permissible forces and torques for the bearing calculation, for a service life of 5000 km or 5 x 10 <sup>6</sup> cycles									
Size		45	60	80						
Fy <sub>max</sub> .	[N]	880	3641	5543						
Fz <sub>max</sub> .	[N]	880	3641	5543						
Mx <sub>max.</sub>	[Nm]	5.5	29.1	59.8						
My <sub>max</sub> .	[Nm]	4.7	31.8	56.2						
Mz <sub>max</sub> .	[Nm]	4.7	31.8	56.2						



For a guide system to have a service life of 5000 km, the load comparison factor must have a value of  $fv \le 1$ , 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 "PositioningDrives" is available

for more precise calculations → www.festo.com

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:

$$f_{v} = \frac{|F_{y1}|}{F_{y2}} + \frac{|F_{z1}|}{F_{z2}} + \frac{|M_{x1}|}{M_{x2}} + \frac{|M_{y1}|}{M_{y2}} + \frac{|M_{z1}|}{M_{z2}} \le 1$$

 $F_1/M_1 = dynamic value$ 

 $F_2/M_2 = maximum value$ 

#### Calculating the service life

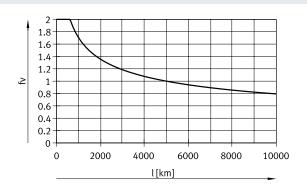
The service life of the guide depends on the load. To be able to make a statement as to the service life of the guide, the graph below plots the load comparison factor fv against the service life.

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

#### Load comparison factor f<sub>v</sub> as a function of service life l

#### Example:

A user wants to move an x kg load. Using the formula ( $\rightarrow$  page 10) gives a value of 1.5 for the load comparison factor  $f_v$ . According to the graph, the guide would have a service life of approx. 1500 km. Reducing the acceleration reduces the Mz and My values. A load comparison factor  $f_v$  of 1 now gives a service life of 5000 km.



#### Comparison of the characteristic load values for 5000 km 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 according to ISO or 50 km according to JIS.

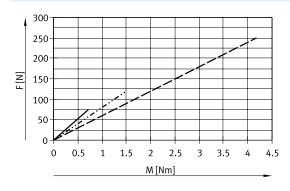
As the characteristic load values are dependent on the service life, the maximum permissible forces and torques for a 5000 km service life cannot be compared with the dynamic forces and torques of bearing guides to ISO/JIS.

To make it easier to compare the guide capacity of linear axes 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 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.

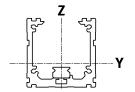
Max. permissible force	Max. permissible forces and torques for a theoretical service life of 100 km (from a guide perspective only)										
Size		45	60	80							
Fy <sub>max</sub> .	[N]	3240	13400	20400							
Fz <sub>max</sub> .	[N]	3240	13400	20400							
Mx <sub>max.</sub>	[Nm]	20	107	220							
My <sub>max.</sub>	[Nm]	17	117	207							
Mz <sub>max</sub> .	[Nm]	17	117	207							

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



ELGC-TB-60
ELGC-TB-80

## Second moment of area



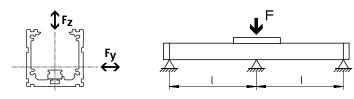
Size		45	60	80
ly	[mm <sup>4</sup> ]	140x10 <sup>3</sup>	441x10 <sup>3</sup>	1.37x10 <sup>6</sup>
Iz	[mm <sup>4</sup> ]	170x10 <sup>3</sup>	542x10 <sup>3</sup>	1.66x10 <sup>6</sup>

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

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

The following graphs can be used to determine the maximum permissible support spacing I as a function of force F acting on the axis.

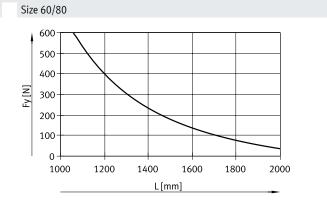
The deflection is f = 0.5 mm.

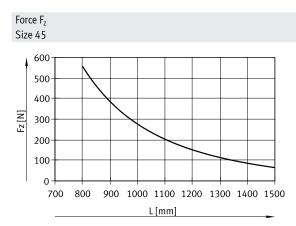


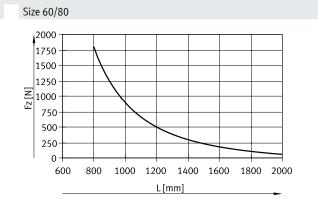
Force F<sub>y</sub>
Size 45

300
250
200
150
100
50
800 900 1000 1100 1200 1300 1400 1500

L[mm]







#### Recommended deflection limits

Adherence to the following deflection limits is recommended so as not to impair the functionality of the axes. Greater deformation can result in increased friction, greater wear and reduced service life.

Si	ize		Static deflection (stationary load)
4	5 80	0.05% of the axis length, max. 0.5 mm	0.1% of the axis length

Dimensions								Downl	oad CAD data →	www.festo.com
D2									=======================================	
	<u>H</u>	7 Н8		<b>⊕</b> ⊕ ⊕		•		[1] = Se push	us stroke length aling air connecti I-in fittings → pa d position zero st	ge 26
Size	B1	B2	B3	B4	D		D3	D4	H1	H2
					'	ð				
45	45	42.6	22.5	6.1	16		-	G1/8	54	22
60	45 60	57.1	22.5	6.1	16	5.5	- M4	G1/8	72	29.5
					16	5.5				
60	60	57.1	30	6.1	16	5.5 1 1	M4	G1/8	72	29.5
60 80 Size	60 80	57.1 77.1	30 40	6.1	16 3 3	5.5 1 1	M4 M6	G1/8 G1/8 H11	72 96 H12	29.5 39.5
60 80 Size 45 60	60 80 H3 49 65.5	57.1 77.1 H4 49.6 66.1	30 40 H5 0.5 0.5	6.1 6.1 H6	16 3 3 H	5.5 1 1 7	M4 M6 H8 - 48	G1/8 G1/8 H11 42.8 54.6	72 96 H12 45 60	29.5 39.5 H13 18.5 32.5
60 80 Size	60 80 H3	57.1 77.1 H4 49.6	30 40 H5	6.1 6.1 H6	16 3 3	5.5 1 1 7	M4 M6 H8	G1/8 G1/8 H11	72 96 H12	29.5 39.5 H13
60 80 Size 45 60	60 80 H3 49 65.5	57.1 77.1 H4 49.6 66.1	30 40 H5 0.5 0.5	6.1 6.1 H6	16 3 3 H	5.5 1 1 7	M4 M6 H8 - 48	G1/8 G1/8 H11 42.8 54.6	72 96 H12 45 60	29.5 39.5 H13 18.5 32.5
60 80 Size 45 60 80	60 80 H3 49 65.5 85.5	57.1 77.1 H4 49.6 66.1 88.1	30 40 H5 0.5 0.5 0.5	6.1 6.1 H6 12.5 19.5 20	16 3 3 H	7	M4 M6 H8 - 48 65	G1/8 G1/8 H11 42.8 54.6 72.5	72 96 H12 45 60 80	29.5 39.5 H13 18.5 32.5 41.5
60 80 Size 45 60 80	60 80 H3 49 65.5 85.5	57.1 77.1 H4 49.6 66.1 88.1 L2	30 40 H5 0.5 0.5 0.5	6.1 6.1 H6 12.5 19.5 20 L4 1) min.	16 3 3 H	5.5 1 1 7 	M4 M6 H8 - 48 65 L7	G1/8 G1/8 H11 42.8 54.6 72.5	72 96 H12 45 60 80	29.5 39.5 H13 18.5 32.5 41.5

<sup>1)</sup> Includes a stroke reserve of approx. 3 mm

6.1

6.1

38.5

47.5

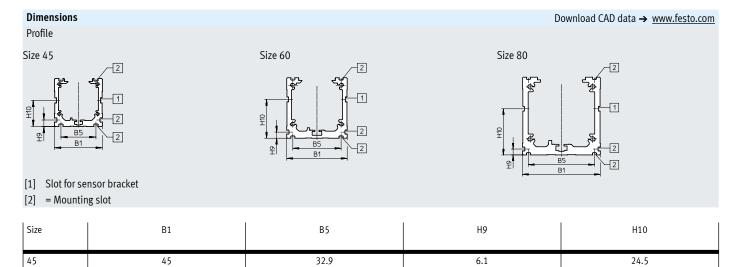
# Data sheet

60

80

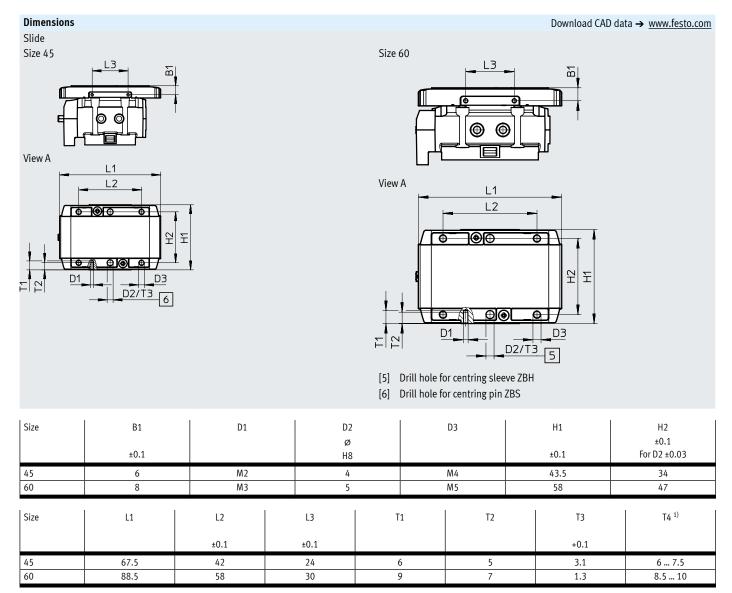
60

80



47.9

67.9



<sup>1)</sup> Recommended screw-in depth

#### Dimensions Download CAD data → www.festo.com Slide Size 80 View A L1 L2 **®**(0) का 모모 lacktriangle\_D3 D1\_ D2/T3 5 [5] Drill hole for centring sleeve ZBH Size В1 D1 D2 D3 Н1 ±0.1 ±0.1 ±0.1 For D2 ±0.03 Н8 80 11 M4 M6 78 63 T4 1) Size L1 L2 L3 T1 T2 T3 ±0.1 ±0.1 +0.1

106

73

36

12

9

1.6

11 ... 14

80

<sup>1)</sup> Recommended screw-in depth

Ordering data				
	Size	Stroke	Part no.	Туре
		[mm]		
	45	200	8062768	ELGC-TB-KF-45-200
		300	8062769	ELGC-TB-KF-45-300
		500	8062770	ELGC-TB-KF-45-500
		600	8062771	ELGC-TB-KF-45-600
		800	8062772	ELGC-TB-KF-45-800
		1000	8062773	ELGC-TB-KF-45-1000
		1200	8062774	ELGC-TB-KF-45-1200
		1500	8062775	ELGC-TB-KF-45-1500
	60	200	8062776	ELGC-TB-KF-60-200
		300	8062777	ELGC-TB-KF-60-300
		500	8062778	ELGC-TB-KF-60-500
		600	8062779	ELGC-TB-KF-60-600
		800	8062780	ELGC-TB-KF-60-800
		1000	8062781	ELGC-TB-KF-60-1000
		1200	8062782	ELGC-TB-KF-60-1200
		1500	8062783	ELGC-TB-KF-60-1500
		1800	8062784	ELGC-TB-KF-60-1800
		2000	8062785	ELGC-TB-KF-60-2000
	80	200	8062786	ELGC-TB-KF-80-200
		300	8062787	ELGC-TB-KF-80-300
		500	8062788	ELGC-TB-KF-80-500
		600	8062789	ELGC-TB-KF-80-600
		800	8062790	ELGC-TB-KF-80-800
		1000	8062791	ELGC-TB-KF-80-1000
		1200	8062792	ELGC-TB-KF-80-1200
		1500	8062793	ELGC-TB-KF-80-1500
		1800	8062794	ELGC-TB-KF-80-1800
		2000	8062795	ELGC-TB-KF-80-2000



#### Note

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

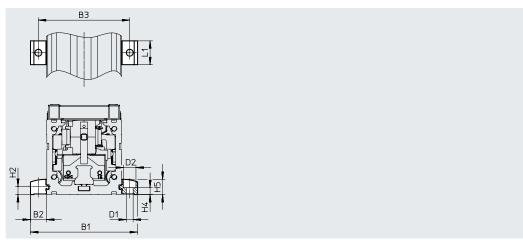
Permissible axis/motor combinations wit	h axial kit		Data sheets → Internet: eamm-a
Motor <sup>1)</sup>	Axial kit		
		II PE	
Туре	Part no.	Туре	
ELGC-TB-KF-45			
With servo motor			
EMME-AS-40	4595742	EAMM-A-V32-40P	
EMME-AS-60	4608750	EAMM-A-V32-60P	
With stepper motor			
EMMS-ST-42	4281142	EAMM-A-V32-42A	
EMMS-ST-57	4597016	EAMM-A-V32-57A	
ELGC-TB-KF-60			
With servo motor			
EMME-AS-60	4133487	EAMM-A-T42-60P	
EMME-AS-80	4623788	EAMM-A-T42-80P	
With stepper motor			
EMMS-ST-57	4327034	EAMM-A-T42-57A	
EMMS-ST-87	4610008	EAMM-A-T42-87A	
ELGC-TB-KF-80			
With servo motor			
EMME-AS-60	4824833	EAMM-A-T46-60P	
EMME-AS-80	4624170	EAMM-A-T46-80P	
EMME-AS-100	4624227	EAMM-A-T46-100A	
EMMS-AS-100	4624227	EAMM-A-T46-100A	
With stepper motor	•		
EMMS-ST-87	4048771	EAMM-A-T46-87A	

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

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

Material: Anodised wrought aluminium alloy RoHS-compliant • For mounting the axis on the side of the profile





Dimensions and ord	Dimensions and ordering data												
For size	B1	B2	В3	D1	D2	H2							
				Ø	Ø								
				H13	H13								
45	70.6	12.8	58	5.5	10	6.1							
60	85.6	12.8	73	5.5	10	6.1							
80	105.6	12.8	93	5.5	10	6.1							

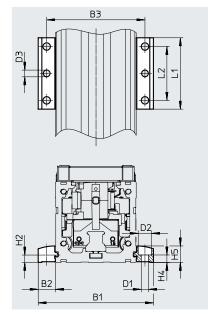
For size	H4 ±0.1	Н5	L1	Weight [g]	Part no.	Туре
45	5.5	12.2	19	6	5184133	EAHF-L2-45-P-S
60	5.5	12.2	19	6	5184133	EAHF-L2-45-P-S
80	5.5	12.2	19	6	5184133	EAHF-L2-45-P-S

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

Material: Anodised wrought aluminium alloy RoHS-compliant • For mounting the axis on the side of the profile.

The profile mounting can be attached to the mounting surface using the drill hole in the centre.





Dimensions and ord	imensions and ordering data												
For size	B1	B2	В3	D1	D2	D3	H2						
				Ø	Ø	Ø							
				H13	H13								
45	70.6	12.8	58	5.5	10	5	6.1						
60	85.6	12.8	73	5.5	10	5	6.1						
80	105.6	12.8	93	5.5	10	5	6.1						

For size	H4 ±0.1	H5	L1	L2	Weight [g]	Part no.	Туре
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
80	5.5	12.2	53	40	35	4835728	EAHF-L2-45-P

# Toothed belt axes ELGC-TB-KF, with recirculating ball bearing guide

## Accessories

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

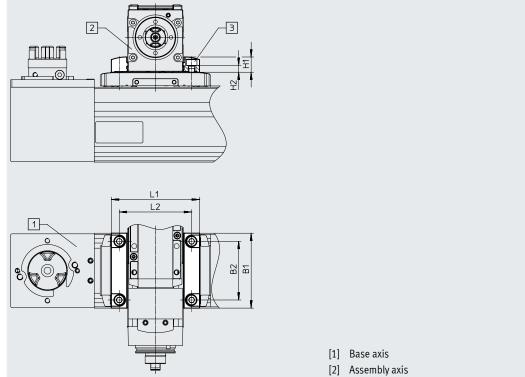
Material:

Anodised wrought aluminium alloy RoHS-compliant

- For axis/axis mounting without adapter plate
- Mounting option: base axis with one-size-down assembly axis (→ page 4)

Combination matrix					
		[2] Assembly axis ELGC-	BS/-TB; ELFC; EGSC-BS		
	Size	32	45	60	
[1] Base axis	45	4759748	-	-	
ELGC-BS/-TB, ELFC	60	-	4759739	-	
	80	_	_	4759726	





Dimensions and orderin	g data			
For combination	B1	B2	D1	H1
(size)				
4 5/32	45	34	M4	9
6 0/45	60	47	M5	12.2
8 0/60	78	63	M6	12.2

For combination	H2	L1	L2	Weight	Part no.	Туре
(size)	±0.1			[g]		
4 5/32	3.7	51.4	42	24	4759748	EAHF-L2-25-P-D2
6 0/45	5.5	70.6	58	56	4759739	EAHF-L2-45-P-D3
8 0/60	4.5	85.6	73	77	4759726	EAHF-L2-45-P-D4

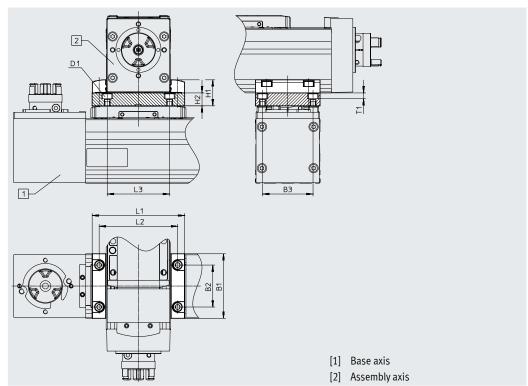
## Adapter kit EHAA-D-L2

Material: Anodised wrought aluminium alloy RoHS-compliant

- For axis/axis mounting with adapter plate
- Mounting option: base axis with same size or one-size-down assembly axis
   (→ page 4)
- When motors are mounted using parallel kits, this may lead to interfering contours. In this case, the adapter plate is required for height compensation (download CAD data → www.festo.com)

Combination matrix	(					
		[2] Assembly axis E	LGC-BS/-TB; ELFC; EGSC-BS			
	Size	32	45	60	80	
[1] Base axis	45	8066714		-	-	
ELGC-BS/-TB; ELFC	60	-	8066715		-	
	80	-	-	8066716		





For combination (size)	B1	B3 ±0.05	D1	H1	H2	L1	L2	L3	T1	Weight [g]	Part no.	Туре
4 5/32	45	34	M4	19	10	51.4	42	42	5.4	136	8066714	EHAA-D-L2-45-L2-45
6 0/45	60	47	M5	24.2	12	70.6	58	58	5.4	205	8066715	EHAA-D-L2-60-L2-60
8 0/60	78	63	M6	24.2	12	85.6	73	73	6.4	315	8066716	EHAA-D-L2-80-L2-80

For combination	B1	B2	В3	D1	H1	H2	L1	L2	L3	T1	Weight	Part no.	Туре
(size)			±0.05								[g]		
4 5/45	45	32	34	M4	22.2	10	71	58	42	5.4	136	8066714	EHAA-D-L2-45-L2-45
6 0/60	60	39	47	M5	24.2	12	86	73	58	5.4	205	8066715	EHAA-D-L2-60-L2-60
8 0/80	78	63	63	M6	24.2	12	106	93	73	6.4	315	8066716	EHAA-D-L2-80-L2-80

# Toothed belt axes ELGC-TB-KF, with recirculating ball bearing guide

# Accessories

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

Material:

Anodised wrought aluminium alloy

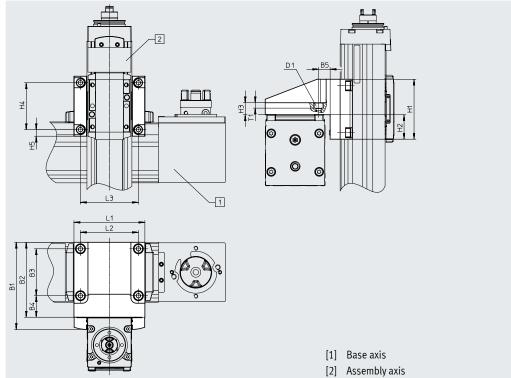
RoHS-compliant

• For mounting one-size-down vertical axes (assembly axes) on base axes with mounting position "slide at top"

(→ page 4)

Combination matrix				
		[2] Assembly axis ELGC-BS/-TB; ELFC; EG	SC-BS	
	Size	32	45	60
[1] Base axis	45	8066718	-	-
ELGC-BS/-TB; ELFC	60	-	8066719	-
	80	-	-	8066720





Dimensions and order	ring data									
For combination (size)	B1	B2	B3	B4	B5	D1	H1	H2	H3	H4
4 5/32	69	60	34	20.5	11.5	M4	45	17.5	10	34
6 0/45	87.2	75	47	21.5	21.5	M5	60	24.5	12	47
8 0/60	107.2	95	63	23.5	23.5	M6	78	33.5	12	63

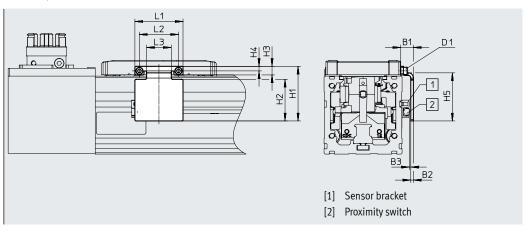
For combination (size)	H5	L1	L2	L3	T1	Weight [g]	Part no.	Туре
4 5/32	5.5	52	42	42	5.4	222	8066718	EHAA-D-L2-45-L2-32-AP
6 0/45	6.5	71	58	58	5.4	433	8066719	EHAA-D-L2-60-L2-45-AP
8 0/60	7.5	86	73	73	6.4	768	8066720	EHAA-D-L2-80-L2-60-AP

## Switch lug EAPM-L2-SLS

For sensing using inductive proximity switches SIES-8M

Material: Galvanised steel RoHS-compliant





Dimensions and or	dering data							
For size	B1	B2	В3	D1	H1	H2	Н3	H4
					±0.2			
45	9.4	2	1.2±0.31	M2	37	28	5.5	3.3
60	9.7	2	1.3±0.31	M3	42	32	6.6	3.5
80	9.5	2	1.1±0.32	M4	53.5	42	8.3	4.5

For size	H5 ±0.2	L1 ±0.2	L2 ±0.15	L3	Weight [g]	Part no.	Туре
45	33	30	24	14	18	8067260	EAPM-L2-45-SLS
60	37	37	30	19	27	8067261	EAPM-L2-60-SLS
80	47	44.6	36	23.4	42	8067262	EAPM-L2-80-SLS

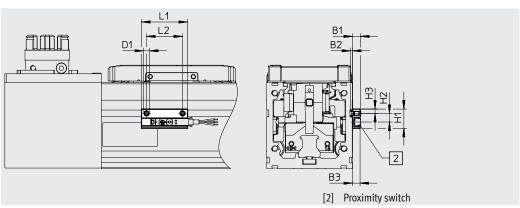
## Sensor bracket EAPM-L2-SH

Material:

Anodised wrought aluminium alloy

RoHS-compliant





Dimensions and ord	ering data				
For size	B1	B2	D1	H1	H2
45, 60, 80	5.5	1.3	M4	13.4	6

For size	H3	L1	L2	Weight [g]	Part no.	Туре
45, 60, 80	3	32	25	4	4759852	EAPM-L2-SH

# Toothed belt axes ELGC-TB-KF, with recirculating ball bearing guide $% \left( 1\right) =\left( 1\right) \left( 1\right)$

# Accessories

Ordering data					
	For size	Description	Part no.	Туре	PU <sup>1)</sup>
Centring pin ZB	S/centring sleeve ZBH			i i	
	45	For slide	562959	ZBS-4	10
	60		189652	ZBH-5	
	80		186717	ZBH-7	
Clamping elem	ent EADT				
$\overline{}$	45	Tool for retensioning the cover strip	8065818	EADT-S-L5-32	1
	60,80		8058451	EADT-S-L5-70	
Push-in fitting					
		For sealing air connection	186266	QSM-G1/8-4-I	10
	45, 60, 80	roi Seating an connection	100200	Q3W-01/0-4-I	10

					100207	<b>~</b>
9					-	<del></del>
Packaging uni	it					
	Production with the fort state to deather					
rdering data	a – Proximity switches for T-slot, inductive		Lecture of	المالية المالية	la .	Data sheets → Internet: si
	Type of mounting	Switching	Electrical connection	Cable length	Part no.	Туре
		output		[m]		
/O contact						
_//	Inserted in the slot from above, flush with	PNP	Cable, 3-wire	7.5	551386	SIES-8M-PS-24V-K-7,5-0E
<b>S</b>	the cylinder profile		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-7,5-0E
			Plug M8x1, 3-pin	0.3	551397	SIES-8M-NS-24V-K-0,3-M8D
I/C contact		•				
/C contact	Inserted in the slot from above, flush with	PNP	Cable 2 wire	7.5	FF4204	CIEC OM DO 24V V 7 F OF
_//	the cylinder profile	PNP	Cable, 3-wire		551391	SIES-8M-PO-24V-K-7,5-OE
	the cylinder profile	NDN	Plug M8x1, 3-pin	0.3	551392	SIES-8M-PO-24V-K-0,3-M8D
		NPN	Cable, 3-wire	7.5 0.3	551401 551402	SIES-8M-NO-24V-K-7,5-OE SIES-8M-NO-24V-K-0,3-M8D
						\IF\-XM-N()-/4V-K-() \( \tau \) \( \tau \)
)rdering data	n – Proximity switches for T-slot, magneto-res		Plug M8x1, 3-pin			Data sheets → Internet: sr
Ordering data	n – Proximity switches for T-slot, magneto-res    Type of mounting	istive   Switching   output	Plug M8x1, 3-pin	Cable length	Part no.	:
-	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Data sheets → Internet: si Type
-	Type of mounting  Insertable in the slot from above,	Switching	Electrical connection  Cable, 3-wire	Cable length [m]	Part no. 574335	Data sheets → Internet: si Type  SMT-8M-A-PS-24V-E-2,5-OE
-	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Data sheets → Internet: sr Type
I/O contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design	Switching output	Electrical connection  Cable, 3-wire	Cable length   [m]	Part no. 574335	Data sheets → Internet: sr Type SMT-8M-A-PS-24V-E-2,5-0E
N/O contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design  Insertable in the slot from above,	Switching output	Electrical connection  Cable, 3-wire	Cable length [m]	Part no. 574335	Data sheets → Internet: sr Type SMT-8M-A-PS-24V-E-2,5-0E
I/O contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design  Insertable in the slot from above, flush with the cylinder profile,	Switching output	Electrical connection  Cable, 3-wire Plug M8x1, 3-pin	Cable length   [m]	Part no. 574335 574334	Data sheets → Internet: sr Type  SMT-8M-A-PS-24V-E-2,5-OE  SMT-8M-A-PS-24V-E-0,3-M8D
I/O contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design  Insertable in the slot from above,	Switching output	Electrical connection  Cable, 3-wire Plug M8x1, 3-pin	Cable length   [m]	Part no. 574335 574334	Data sheets → Internet: so Type  SMT-8M-A-PS-24V-E-2,5-OE  SMT-8M-A-PS-24V-E-0,3-M8D
I/O contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design  Insertable in the slot from above, flush with the cylinder profile,	Switching output	Electrical connection  Cable, 3-wire Plug M8x1, 3-pin	Cable length   [m]	Part no. 574335 574334	Data sheets → Internet: si Type  SMT-8M-A-PS-24V-E-2,5-OE  SMT-8M-A-PS-24V-E-0,3-M8D
I/O contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design  Insertable in the slot from above, flush with the cylinder profile,	Switching output	Electrical connection  Cable, 3-wire Plug M8x1, 3-pin	Cable length   [m]	Part no. 574335 574334	Data sheets → Internet: s  Type  SMT-8M-A-PS-24V-E-2,5-OE  SMT-8M-A-PS-24V-E-0,3-M8D  SMT-8M-A-PO-24V-E-7,5-OE
//O contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design  Insertable in the slot from above, flush with the cylinder profile, short design	Switching output  PNP  PNP	Electrical connection  Cable, 3-wire Plug M8x1, 3-pin	Cable length   [m]	Part no. 574335 574334	Data sheets → Internet: s  Type  SMT-8M-A-PS-24V-E-2,5-OE  SMT-8M-A-PS-24V-E-0,3-M8D  SMT-8M-A-PO-24V-E-7,5-OE
/O contact /C contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design  Insertable in the slot from above, flush with the cylinder profile, short design  - Connecting cables	Switching output  PNP  PNP	Electrical connection  Cable, 3-wire Plug M8x1, 3-pin  Cable, 3-wire	Cable length   [m]	Part no. 574335 574334 574340	Data sheets → Internet: si Type  SMT-8M-A-PS-24V-E-2,5-OE SMT-8M-A-PS-24V-E-0,3-M8D  SMT-8M-A-PO-24V-E-7,5-OE  Data sheets → Internet: nel
/O contact /C contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design  Insertable in the slot from above, flush with the cylinder profile, short design  - Connecting cables  Electrical connection, left	Switching output  PNP  PNP	Cable, 3-wire Plug M8x1, 3-pin  Cable, 3-wire	Cable length [m]  2.5 0.3  7.5  Cable length [m]	Part no.	Data sheets → Internet: so Type  SMT-8M-A-PS-24V-E-2,5-OE SMT-8M-A-PS-24V-E-0,3-M8D  SMT-8M-A-PO-24V-E-7,5-OE  Data sheets → Internet: net Type
I/O contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design  Insertable in the slot from above, flush with the cylinder profile, short design  - Connecting cables	Switching output  PNP  PNP	Electrical connection  Cable, 3-wire Plug M8x1, 3-pin  Cable, 3-wire	Cable length [m]  2.5 0.3  7.5	Part no.  574335 574334  574340  Part no.  541333	Data sheets → Internet: sr Type  SMT-8M-A-PS-24V-E-2,5-OE SMT-8M-A-PS-24V-E-0,3-M8D  SMT-8M-A-PO-24V-E-7,5-OE  Data sheets → Internet: net Type  NEBU-M8G3-K-2.5-LE3
N/O contact	Type of mounting  Insertable in the slot from above, flush with the cylinder profile, short design  Insertable in the slot from above, flush with the cylinder profile, short design  - Connecting cables  Electrical connection, left	Switching output  PNP  PNP  Electrical	Cable, 3-wire Plug M8x1, 3-pin  Cable, 3-wire	Cable length	Part no.	Data sheets → Internet: sr Type  SMT-8M-A-PS-24V-E-2,5-OE  SMT-8M-A-PS-24V-E-0,3-M8D  SMT-8M-A-PO-24V-E-7,5-OE  Data sheets → Internet: net