

Linear drives ELGL-LAS, with air bearing and linear motor



Linear drives ELGL-LAS, with air bearing and linear motor

Key features

At a glance

The electric linear drive ELGL is a handling axis with air-bearing guide and integrated linear motor. The drive elements and the air bearing form a single unit. The slide moves on the stator rail. An integrated displacement encoder sends signals to the controller.

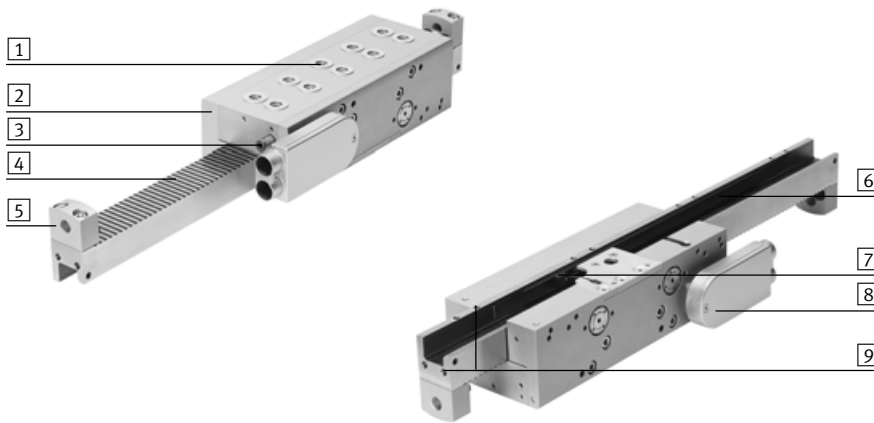
The displacement encoder, controller and motor operate in a closed-loop control circuit.

This enables the motor to regulate to specified set values for speed and position within the permitted stroke range with a high degree of accuracy.

Advantages

- Highly accurate positioning and very good linearity thanks to the air bearing
- Integrated locking brake function through magnetic pretensioning of the air bearing
- Multiple carriages possible on one axis
- Opposing and synchronous movements possible
- No friction on the guide parts
- Maintenance and wear-free

The technology in detail



- 1 Mounting thread with centring recesses
- 2 Slide
- 3 Supply port for air bearing
- 4 Stator
- 5 End stop with rubber buffer, shock absorbers can alternatively be screwed in
- 6 Integrated displacement encoder
- 7 Sensor
- 8 Electrical interface, rotatable in steps of 90°
- 9 Mounting thread for foot mountings

Complete system consisting of linear drive and motor controller

Linear axis ELGL



Motor controller CMMP-AS



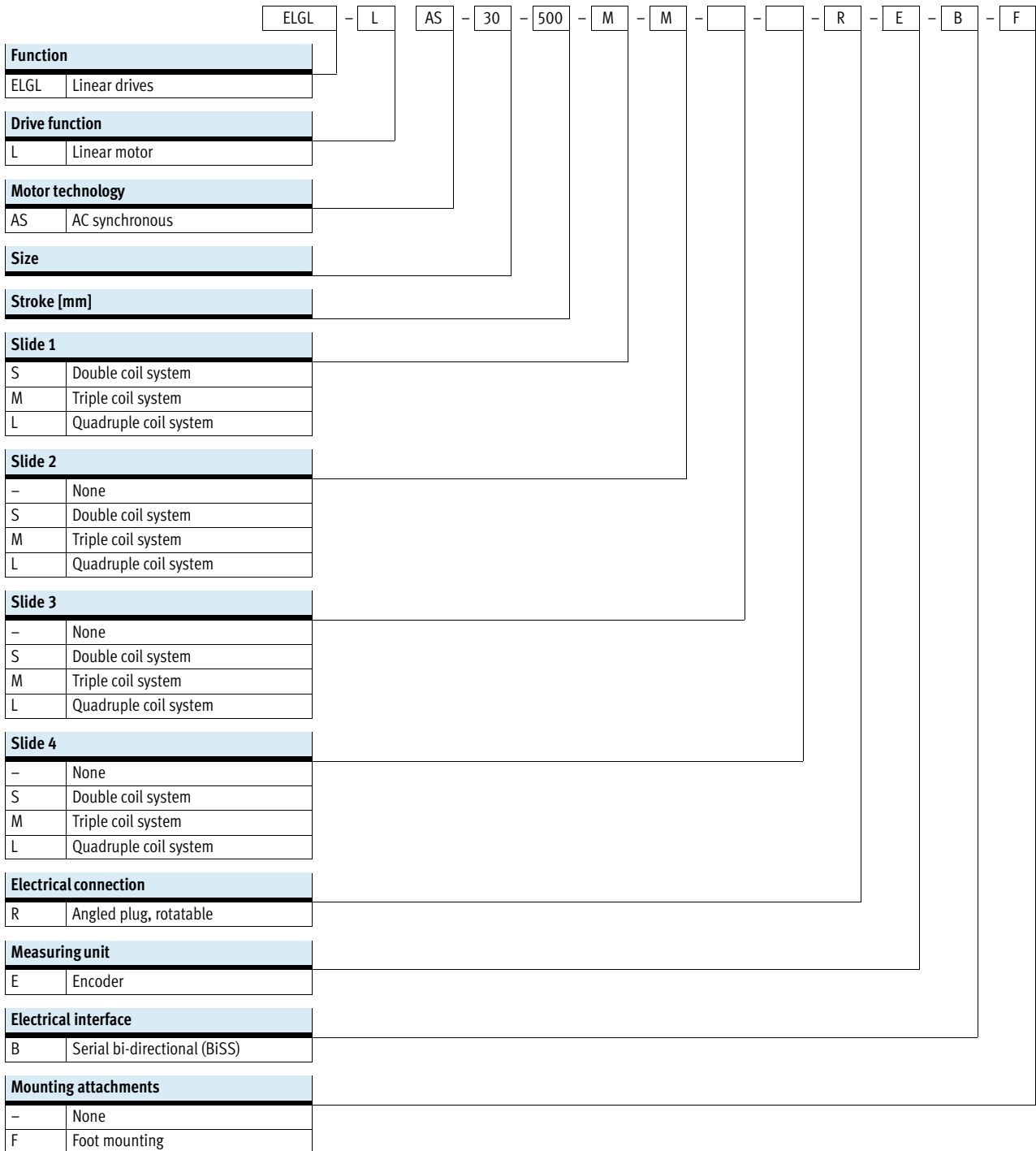
Note

When using the linear axis, make sure that no dirt or dirt particles are sticking to the surface of the air bearing.

Invasive or hardened dirt can block the nozzles of the air bearing to the extent where they need to be replaced.

Linear drives ELGL-LAS, with air bearing and linear motor

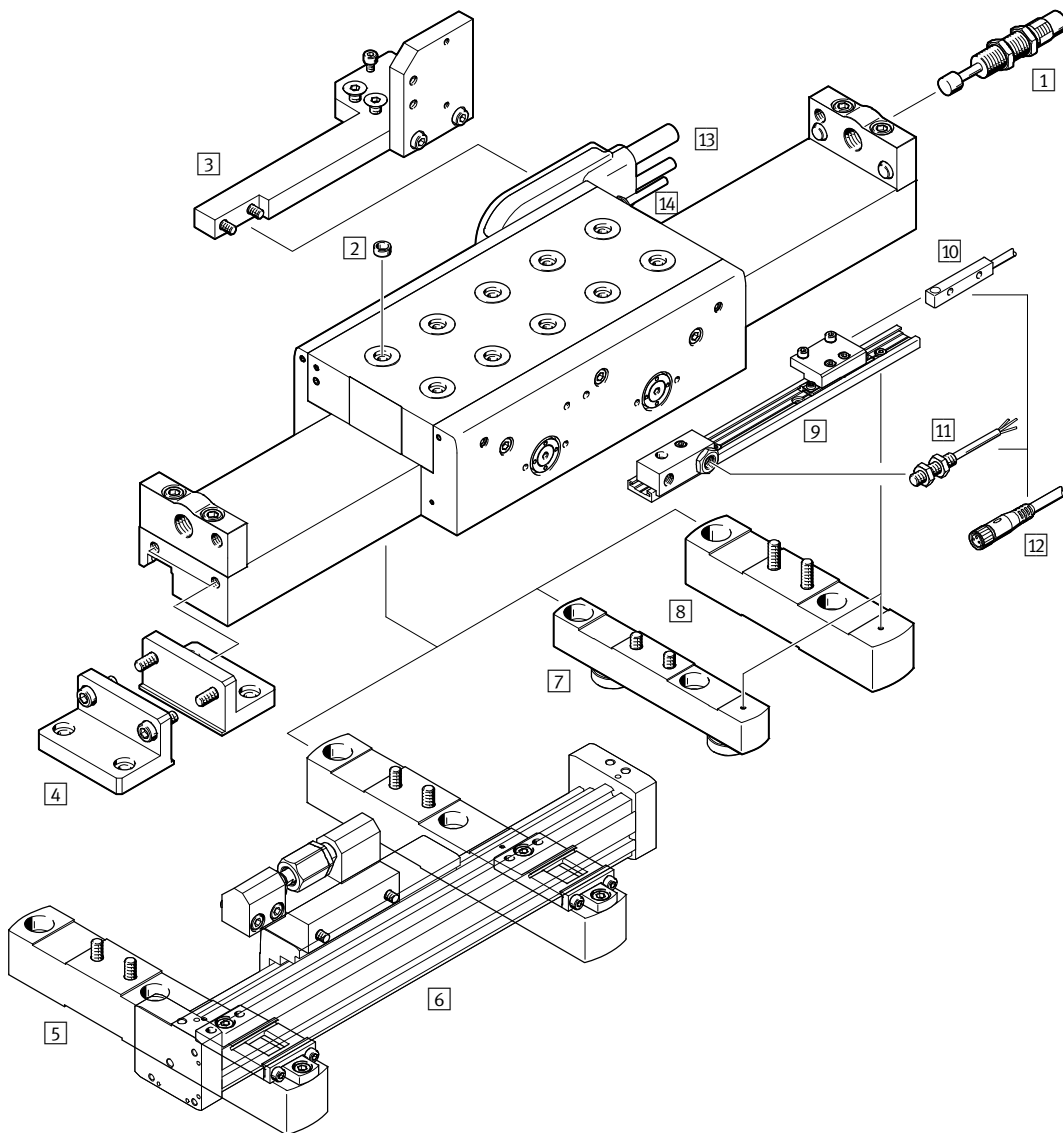
Type codes



Linear drives ELGL-LAS, with air bearing and linear motor

Peripherals overview

FESTO



Linear drives ELGL-LAS, with air bearing and linear motor

Peripherals overview

Accessories			
Type	Brief description	→ Page/Internet	
1 Shock absorber YSRW	For avoiding damage at the end stop in the event of malfunction	21	
2 Centring sleeve ZBH	<ul style="list-style-type: none"> For centring loads and attachments on the slide Centring sleeves are not included in the scope of delivery of the drive 	21	
3 Mounting kit EAHT	For mounting an energy chain (type: E6.29 or E6.40) on the linear drive ELGL	19	
4 Foot mounting EAHF	<ul style="list-style-type: none"> For mounting the axis on the end cap 2 included in the scope of delivery 	16	
5 Mounting kit EAHC	<ul style="list-style-type: none"> For mounting a pneumatic linear drive DGC on the linear drive ELGL The slides are connected to each other via a self-aligning rod coupler 	20	
6 Linear drive DGC-18-...	For relieving the load on the linear motor when used vertically (→ below)	dgc	
7 Adjustable foot mounting EAHF-...-PJ	<ul style="list-style-type: none"> For mounting the axis on the stator Height-adjustable foot mounting, compensates for unevenness of the mounting surface 1 included in the scope of delivery 	17	
8 Foot mounting EAHF-...-P	<ul style="list-style-type: none"> For mounting the axis on the stator 2 included in the scope of delivery 	16	
9 Sensor bracket EAPR	For attaching the inductive proximity sensors to the foot mountings EAHF-...-P or EAHF-...-PJ	18	
10 Proximity sensor SIES	Inductive proximity sensor, square design	21	
11 Proximity sensor SIEN	Inductive proximity sensor, round design	22	
12 Connecting cable NEBU	For connecting the proximity sensor with plug connection to the controller	22	
13 Motor cable NEBM	<ul style="list-style-type: none"> For connecting the motor and controller Connection can be rotated in steps of 90° 	21	
13 Encoder cable NEBM	<ul style="list-style-type: none"> For connecting the displacement encoder and controller Connection can be rotated in steps of 90° 	21	
14 QS push-in fitting QSM	For connecting compressed air tubing with standard external diameters	22	

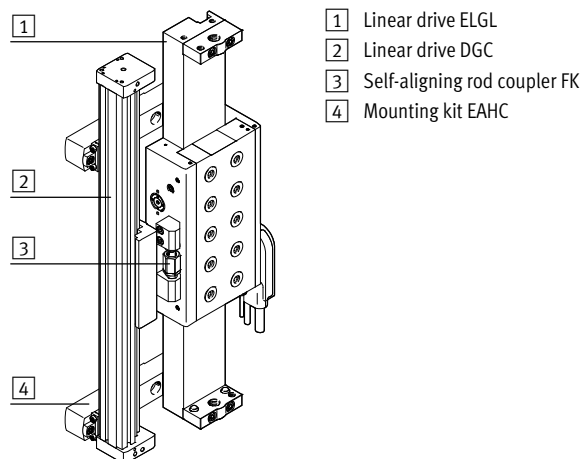
Compressed air backup for vertical operation

A pneumatic linear drive DGC-18 can be attached to the linear drive ELGL to protect the linear motor from overheating. The effective load is additionally held by the DGC when approaching the position by means of an appropriate backpressure in the DGC.

Ordering aid:

Part number: 532446

Type: DGC-18-...-G-...

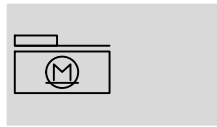


Linear drives ELGL-LAS, with air bearing and linear motor

FESTO

Technical data

Function

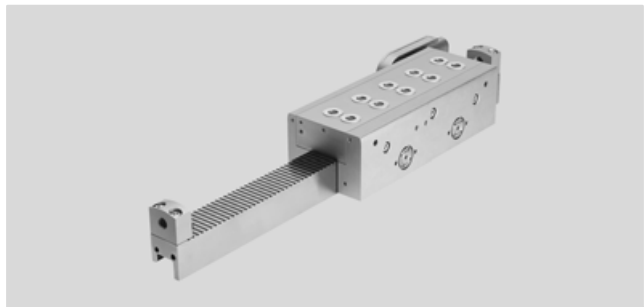


Size
30 ... 120

Stroke length
1 ... 5750 mm

Note

All values are based on a normal temperature of 23 °C. Dynamic response and accuracy depend on the mounting (rigidity) and temperature stresses (heat concentration).



General technical data							
Size	30		64		120		
Coil system	S		S	M	S	M	L
Constructional design	Electric linear direct drive						
	Guide with integrated displacement encoder						
Guide	Air bearing						
Type of mounting	Via accessories						
Mounting position	Horizontal		Any				
Effective stroke [mm]	1 ... 740	1 ... 1750 ¹⁾	1 ... 1650 ¹⁾	1 ... 1750 ¹⁾	1 ... 1650 ¹⁾	1 ... 1550 ¹⁾	
Max. feed force F _x [N]	44	119	164	240	310	450	
Continuous feed force F _x [N]	44	110	160	217	282	330	
Max. speed [m/s]	4			3.4	3.2	2	
Max. acceleration [m/s ²]	15.4	29.4	29.1	47.6	40.4	50.2	
Repetition accuracy [mm]	±0.01						
Locking brake	Integrated by means of air bearing						

1) Work strokes up to 5,750 mm on request

Electrical data							
Size	30		64		120		
Coil system	S		S	M	S	M	L
Type of motor	Linear AC servo motor						
Stator pole pitch [mm]	5						
Displacement encoder	Incremental, magnetic, resolution 1.56 µm						
Intermediate circuit voltage [V]	600						
Peak current [A]	4.0	4.0	4.0	4.5	4.5	4.5	
Nominal current [A]	3.5	3.5	3.0	3.5	3.0	2.75	
Magnetic radiation	None						

Pneumatic data							
Size	30		64		120		
Coil system	S		S	M	S	M	L
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [2:4:2]						
	For dust: class 2 (max. particle size 1 µm, max. particle density 1 mg/m ³)						
	For water: class 4 (≤3°C pressure dew point)						
	For oil: class 2 (≤0.1 mg/m ³ , oil-free)						
Operating pressure [bar]	5					6	
Air consumption [l/min]	15	15	20	15	20	40	

Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

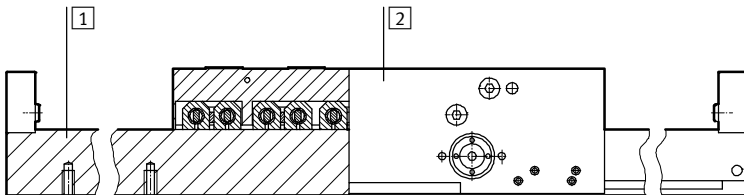
Operating and environmental conditions	
Ambient temperature ¹⁾	[°C] 0 ... +40
Max. motor temperature	[°C] 70
Normal temperature ²⁾	[°C] 23
Temperature monitoring	Automatic switch-off in event of over-temperature (PTC resistor)
Degree of protection	IP65
Relative air humidity (non-condensing)	[%] 20 ... 80
CE mark (see declaration of conformity)	To EU EMC Directive
	To EU Low Voltage Directive
Certification	C-Tick

- 1) Temperature range must also be adhered to during transport.
- 2) Unless otherwise stated, all values are based on normal temperature

Weight						
Size		30	64		120	
Coil system		S	S	M	S	M L
Slide	[kg]	2.8	3.8	5.0	4.7	6.8 8.7
Stator	[kg/m]	4.9	13.3		27.0	

Materials

Sectional view



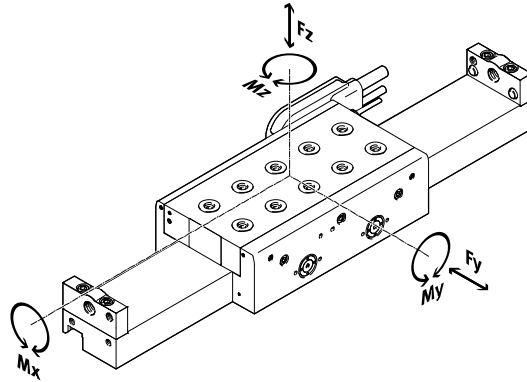
Linear drive		
1	Stator	Steel
2	Housing	Wrought aluminium alloy, anodised
-	Note on materials	Contains PWIS (paint-wetting impairment substances)
		RoHS-compliant

Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

Static characteristic load values

The indicated forces and torques refer to the slide surface. 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. Attention must be paid to the acceleration and braking.



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

$$\frac{|Fy|}{Fy_{max.}} + \frac{|Fz|}{Fz_{max.}} + \frac{|Mx|}{Mx_{max.}} + \frac{|My|}{My_{max.}} + \frac{|Mz|}{Mz_{max.}} \leq 1$$

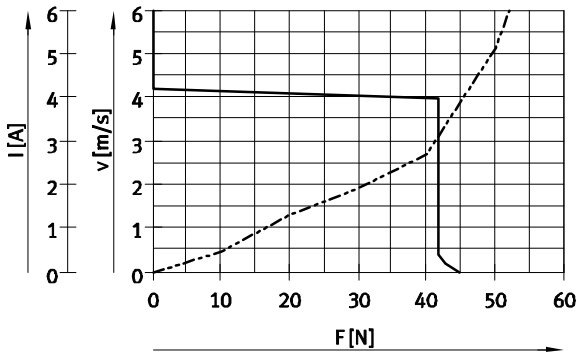
Permissible forces and torques								
Size		30		64		120		
Coil system		S		S	M	S	M	L
Fy _{max.}	[N]	600		600	600	600	600	600
Limit load Fz _{max.}	[N]	160		700	1000	1300	1700	2500
Tensile load Fz _{max.}	[N]	35		140	220	260	300	400
Mx _{max.}	[Nm]	1.2		8	10	14	21	28
My _{max.}	[Nm]	7		20	28	45	60	80
Mz _{max.}	[Nm]	20		20	30	20	30	50

Linear drives ELGL-LAS, with air bearing and linear motor

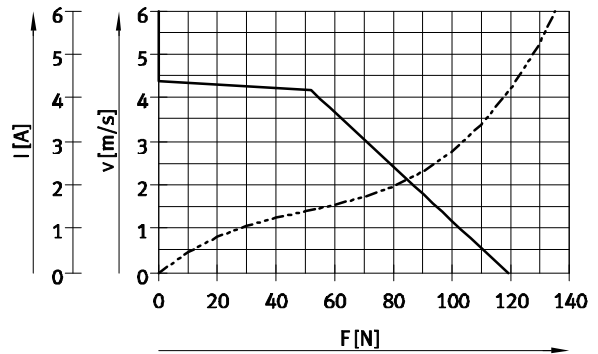
Technical data

Speed v and current I as a function of feed force F

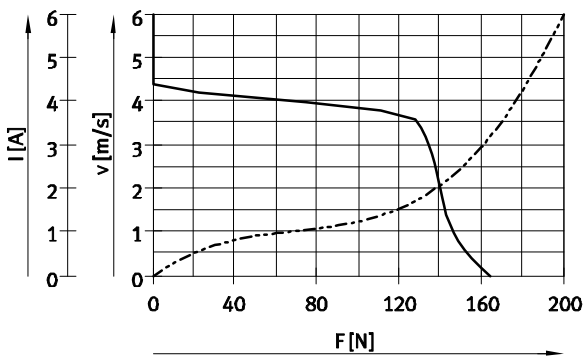
ELGL-LAS-30-...-S



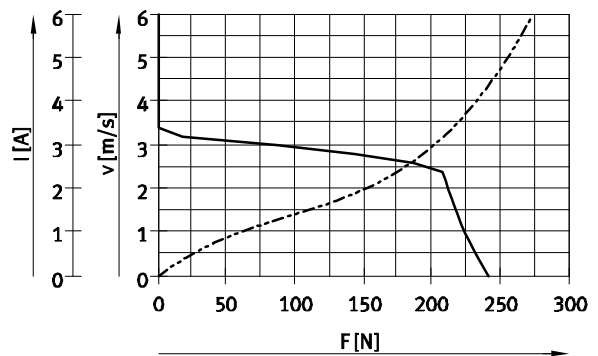
ELGL-LAS-64-...-S



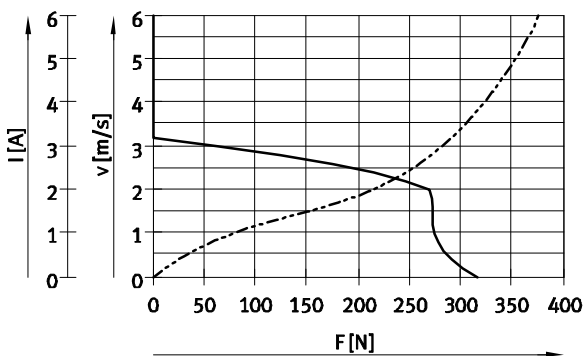
ELGL-LAS-64-...-M



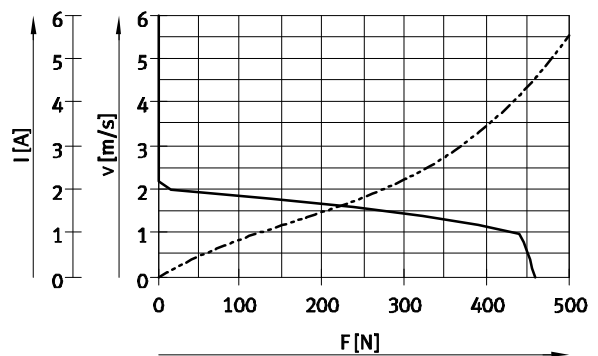
ELGL-LAS-120-...-S




ELGL-LAS-120-...-M



ELGL-LAS-120-...-L



— Speed m/s
 - - - - Current A

 Note

The characteristics are produced in combination with the relevant motor controllers CMMP-AS → 21

Linear drives ELGL-LAS, with air bearing and linear motor

FESTO

Technical data

Mounting options

The stator has an evenness value of $7\ \mu\text{m}$ over 300 mm. To ensure the quality of the air bearing, the mounting surface must be correspondingly precise.

For points of support with smooth surfaces, the linear drive can be mounted directly at the stator **1** or with the help of the foot mountings **2**.

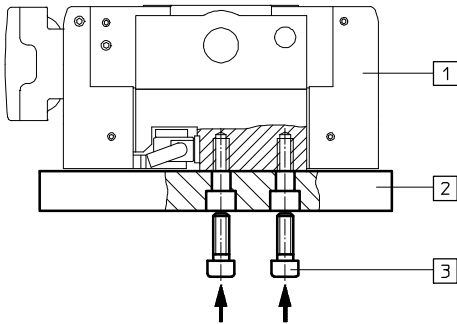
If the surface is not sufficiently even, the foot mounting **3** is used together with the adjustable foot mounting **4**.

A 3 or 4-point mounting is recommended to secure the load.

1 Direct mounting

Range of application:

- Only with smooth surface (e.g. granite table)
- Required planarity: $7\ \mu\text{m}$ over 300 mm

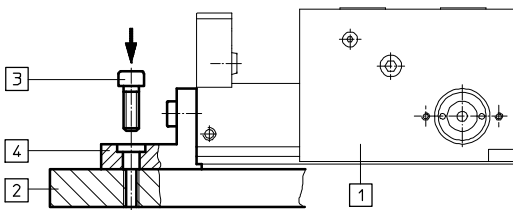


- 1** Linear drive
- 2** Mounting surface
- 3** Socket head screw

2 Angled foot mounting

Range of application:

- Only with smooth surface (e.g. granite table)
- Up to a stator length of max. 500 mm
- Manual height adjustment may be required



- 1** Linear drive
- 2** Mounting surface
- 3** Socket head screw
- 4** Foot mounting EAHF...

Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

Mounting options

The stator has an evenness value of $7\ \mu\text{m}$ over 300 mm. To ensure the quality of the air bearing, the mounting surface must be correspondingly precise.

For points of support with smooth surfaces, the linear drive can be mounted directly at the stator [1] or with the help of the foot mountings [2].

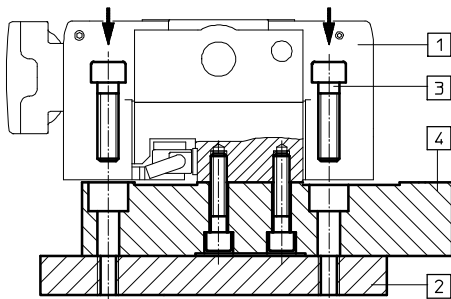
If the surface is not sufficiently even, the foot mounting [3] is used together with the adjustable foot mounting [4].

A 3 or 4-point mounting is recommended to secure the load.

[3] Foot mounting

Range of application:

- With milled surface (good evenness)
- Recommended support spacing: every 360 mm
- Manual height adjustment may be required

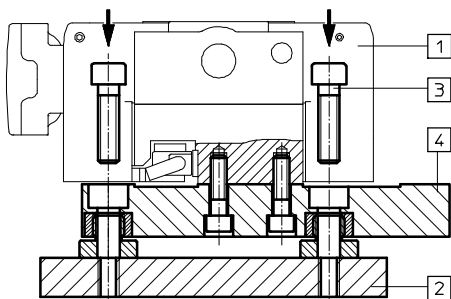


- [1] Linear drive
- [2] Mounting surface
- [3] Socket head screw
- [4] Foot mounting EAHF-...-P

[4] Adjustable foot mounting

Range of application:

- With surface with low evenness
- Recommended support spacing: every 360 mm



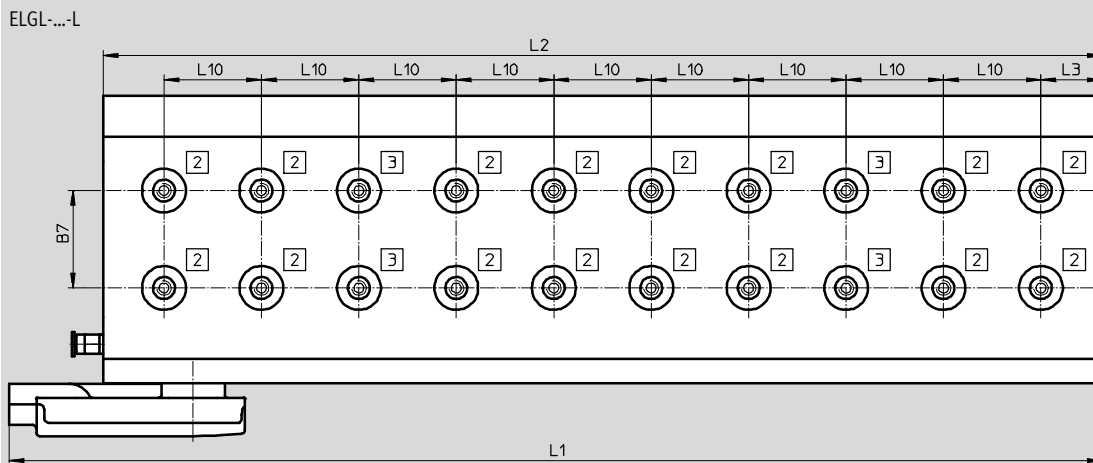
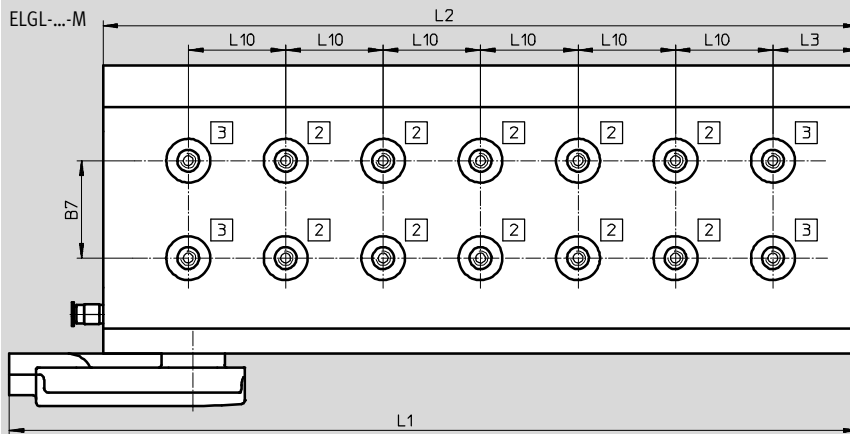
- [1] Linear drive
- [2] Mounting surface
- [3] Socket head screw
- [4] Foot mounting EAHF-...-P]

Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

Dimensions

Download CAD data → www.festo.com



Size	B1	B3	B4	B5	B6	B7	B8	B9	D1	D2	D4	D5	D6	D7	D8	H1
						±0.01								H7		
30	105.8	–	42	84	30	20	–	3	M10x1	–	M4	M5	18	9	M6	62
64	139.8	83.5	59	118	64	40	24	8	M14x1	M8x1	M6	M5	18	9	M6	62
120	195.8	111.5	87	174	120	80	72	12	M14x1	M8x1	M6	M5	18	9	M6	62


Size	H2	H3	H4	H5	H6	H7	L4	L5	L6	L7	L8	L9	L10	T1	T2	T3	T4
													±0.01		+0.1		
30	–	46.5	47	58	12	1	20	17	5	10	120	20	40	10	2.1	12	9
64	50	47	47	60	12	1	16	14	5	30	120	–	40	12	2.1	12	9
120	50	47	52	60	12	1	16	14	5	30	120	–	40	12	2.1	12	9

Size	Rotor variant	B2	D3		L1	L2	L3
			QS push-in fitting	For tubing O.D.			
30	S	68	QSM-M5-4	4	248.6	210	25
64	S	102	QSM-M5-4	4	248.6	210	25
	M	102	QSM-M5-4	4	348.6	310	35
120	S	158	QSM-M5-4	4	248.6	210	25
	M	158	QSM-M5-4	4	348.6	310	35
	L	154	QSM-1/8-6	6	453.1	410	25

Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

Total length of the drive with one slide						
Size	30	64		120		
Slide variant	S	S	M	S	M	L
Work stroke [mm]						
100	360	350	450	350	450	550
200	460	450	550	450	550	650
300	560	550	650	550	650	765
400	660	650	765	650	765	850
500	765	765	850	765	850	950
600	860	850	950	850	950	1050
700	960	950	1050	950	1050	1150
800	–	1050	1150	1050	1150	1250
900	–	1150	1250	1150	1250	1365
1000	–	1250	1365	1250	1365	1450
1100	–	1365	1450	1365	1450	1550
1200	–	1450	1550	1450	1550	1650
1300	–	1550	1650	1550	1650	1750
1400	–	1650	1750	1650	1750	1850
1500	–	1750	1850	1750	1850	1965
1600	–	1850	1965	1850	1965	–
1700	–	1965	–	1965	–	–

-  - Note
Total length for other variants on request.

Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

Foot mounting EAHF

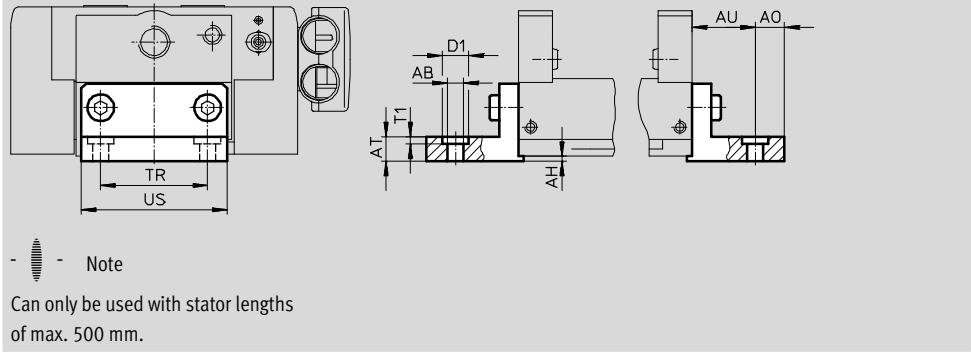
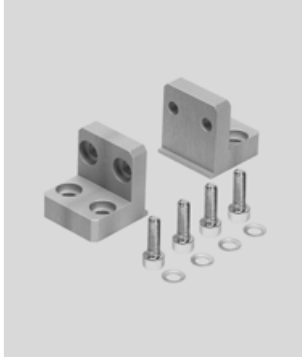
2 included in the scope of delivery

Material:

Aluminium

Contains PWIS (paint-wetting impairment substances)

RoHS-compliant



Dimensions and ordering data													
For size	AB	AH -0.1	A0	AT	AU	D1	T1	TR	US	CRC ¹⁾	Weight [g]	Part No.	Type
30	5.5	2	10	10	18	10	3	18	29	1	180	564252	EAHF-L1-30
64	6.5	2	12	10	26	11	3	44	60	1	400	564253	EAHF-L1-64
120	6.5	2	12	10	26	11	3	78	94	1	600	564254	EAHF-L1-120

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Foot mounting EAHF-...-P

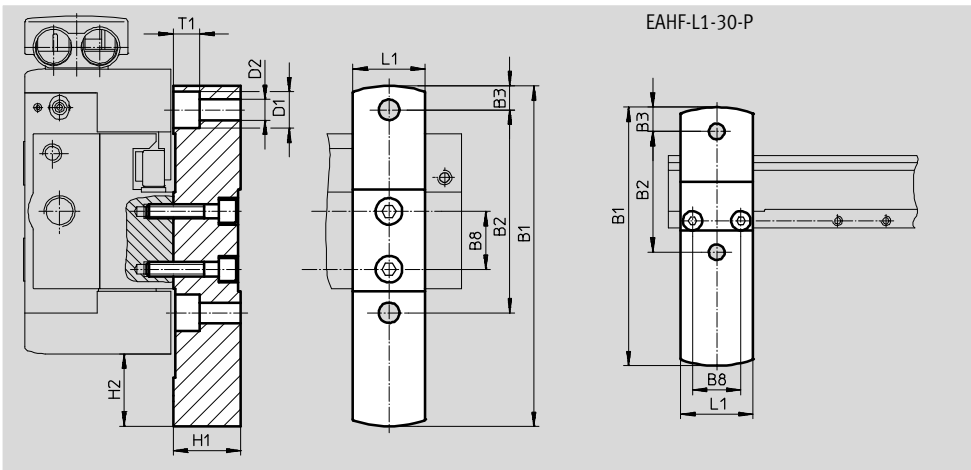
2 included in the scope of delivery

Material:

Aluminium

Contains PWIS (paint-wetting impairment substances)

RoHS-compliant



Dimensions and ordering data													
For size	B1	B2	B3	B8	D1	D2	H1 -0.01	H2	L1	CRC ¹⁾	Weight [g]	Part No.	Type
30	107	50	10	20	11	6.5	28	30	30	1	250	564246	EAHF-L1-30-P
64	141	84	10	24	15	8.5	28	30	30	1	310	564247	EAHF-L1-64-P
120	197	140	10	72	15	8.5	28	30	30	1	450	564248	EAHF-L1-120-P

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

Adjustable foot mounting

EAHF-...-PJ

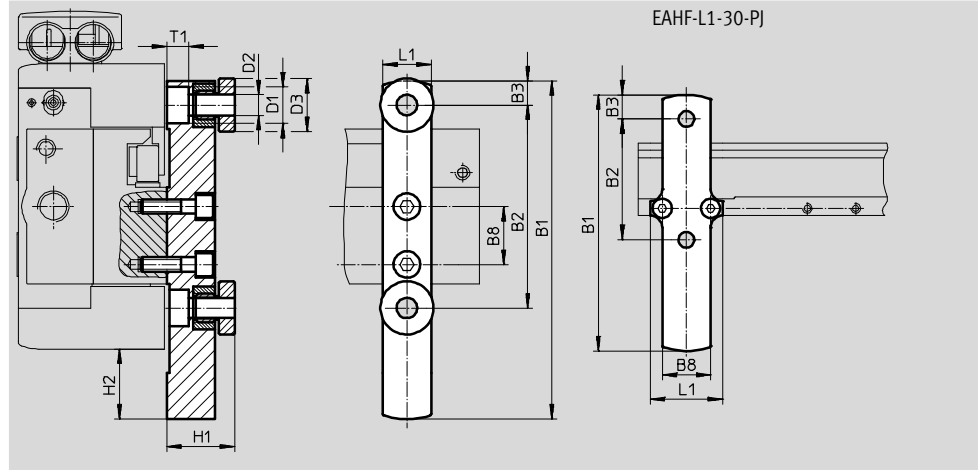
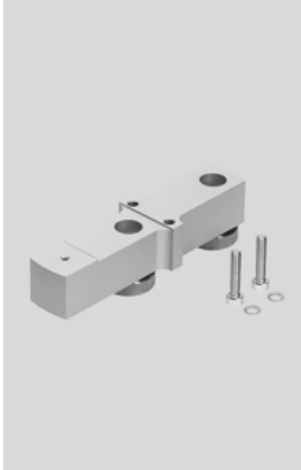
1 included in the scope of delivery

Material:

Aluminium

Contains PWIS (paint-wetting
impairment substances)

RoHS-compliant



Dimensions and ordering data														
For size	B1	B2	B3	B8	D1	D2	D3	H1	H2	L1	CRC ¹⁾	Weight [g]	Part No.	Type
30	106	50	10	20	11	6.5	22	28	29	30	1	210	564249	EAHF-L1-30-PJ
64	140	84	10	24	15	8.5	22	28	29	20	1	230	564250	EAHF-L1-64-PJ
120	196	140	10	72	15	8.5	22	28	29	20	1	260	564251	EAHF-L1-120-PJ

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

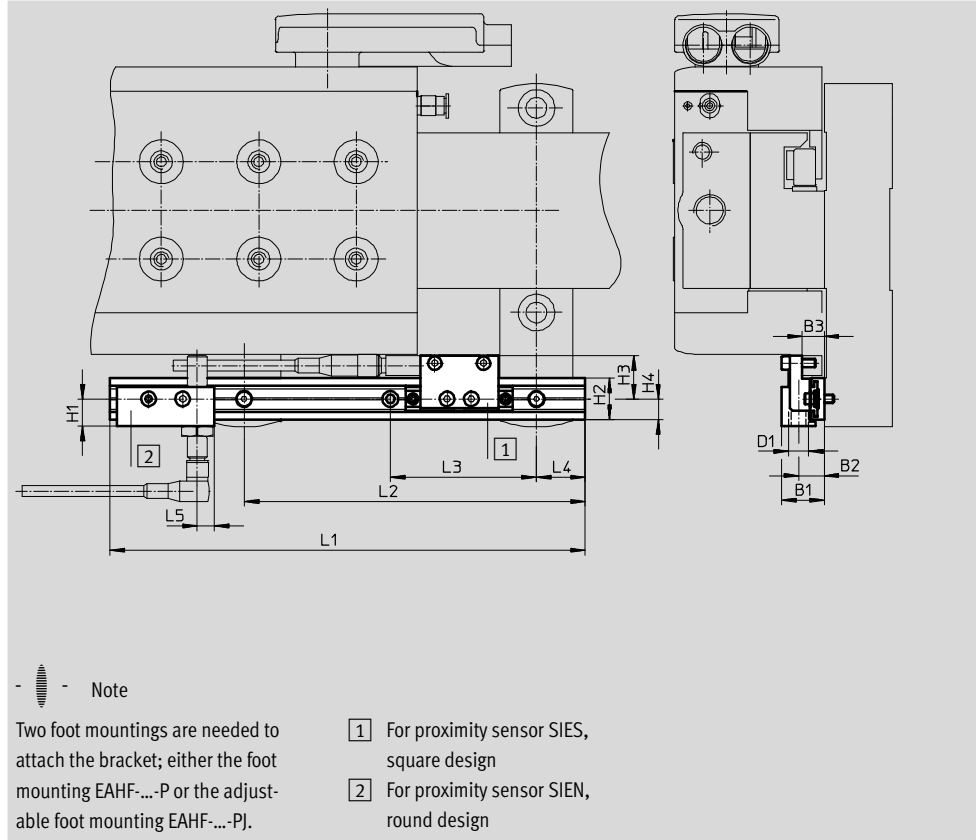
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

Sensor bracket EAPR

Material:
Aluminium
Contains PWIS (paint-wetting
impairment substances)
RoHS-compliant



Dimensions and ordering data								
For size	B1	B2	B3	D1	H1	H2	H3	H4
30, 64, 120	17.5	10.5	9	M8	11.2	17	17.7	8.5

For size	L1	L2	L3	L4	L5	CRC ¹⁾	Weight [g]	Part No.	Type
30, 64, 120	195	140	60	20	7	1	75	564259	EAPR-L1-S

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

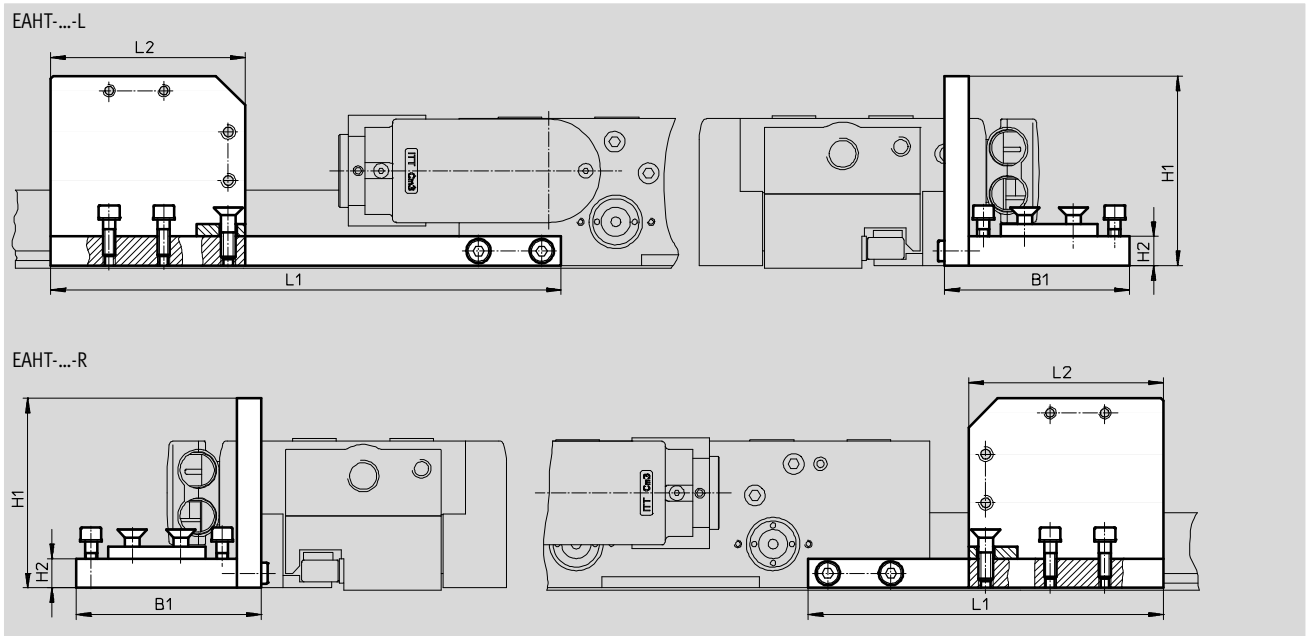
Mounting kit EAHT

Material:

Aluminium

Contains PWIS (paint-wetting
impairment substances)

RoHS-compliant



Dimensions and ordering data									
For size	B1	H1	H2	L1	L2	CRC ¹⁾	Weight [g]	Part No.	Type
For energy chain type: E6.29									
30, 64, 120	60	62	12	170	50	1	300	564255	EAHT-L1-E6-29-L
	60	62	12	105	50	1	300	564256	EAHT-L1-E6-29-R
For energy chain type: E6.40									
30, 64, 120	76	78	12	210	80	1	400	564257	EAHT-L1-E6-40-L
	76	78	12	146	80	1	400	564258	EAHT-L1-E6-40-R

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Linear drives ELGL-LAS, with air bearing and linear motor



Accessories

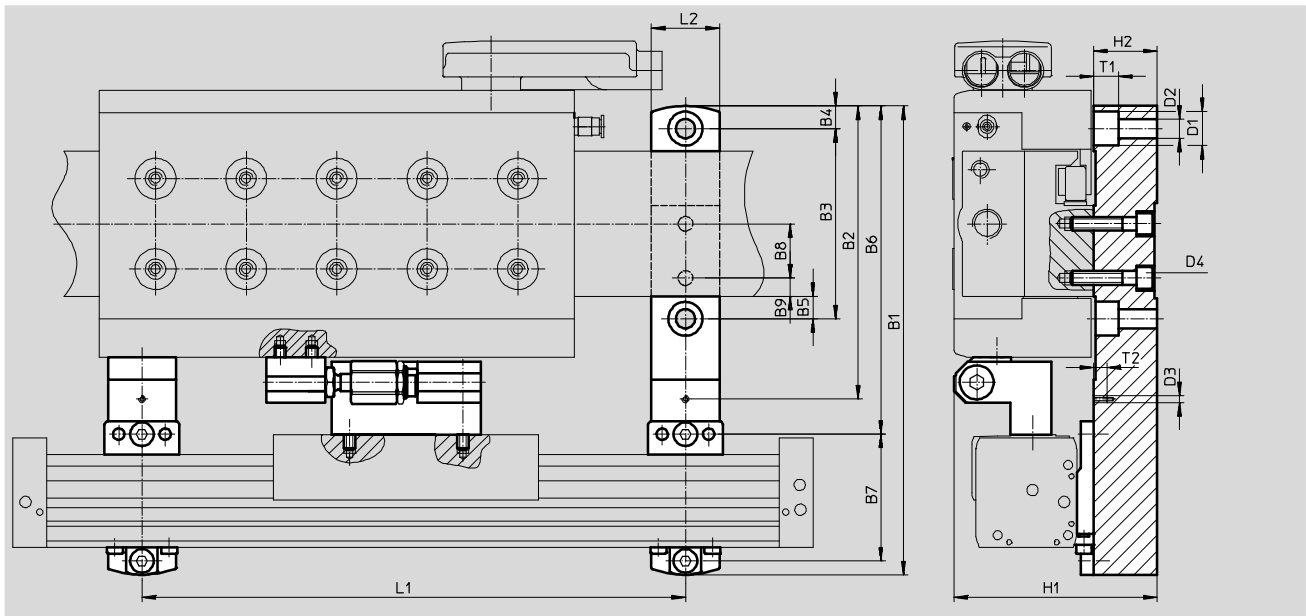
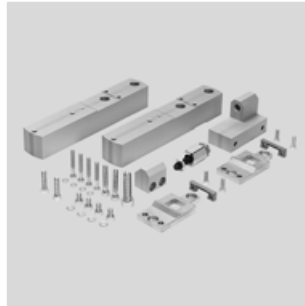
Mounting kit EAHC

Material:

Aluminium

Contains PWIS (paint-wetting
impairment substances)

RoHS-compliant



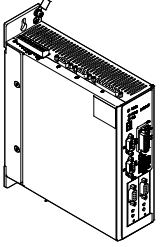
Dimensions and ordering data													
For size	B1	B2	B3	B4	B5	B6	B7	B8	B9	D1 Ø	D2 Ø	D3	D4
30	173	95.5	50	10	10	111	56	-	3	11	6.5	M3	M4
64	207	129.5	84	10	10	145	56	24	8	15	8.5	M3	M6
120	263	185.5	140	10	10	201	56	72	12	15	8.5	M3	M6

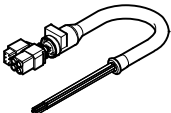
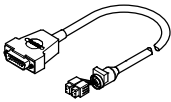
For size	H1	H2 -0.01	L1	L2	L3	T1	T2	CRC ¹⁾	Weight [g]	Part No.	Type
30	89.6	28	nx120	30	20	8	6	1	960	564260	EAHC-L1-30
64	89.6	28	nx120	30	-	11	6	1	1100	564261	EAHC-L1-64
120	89.6	28	nx120	30	-	11	6	1	1350	564262	EAHC-L1-120

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

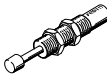

Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

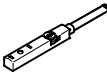
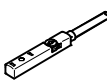
Ordering data – Motor controller				Technical data → Internet: ccmp	
	For size	Coil system (code)	Part No.	Type	
	ELGL-LAS-30...	S	1501326	CMMP-AS-C5-3A-M3	
	ELGL-LAS-64-...-S	S	1501326	CMMP-AS-C5-3A-M3	
	ELGL-LAS-64-...-M	M	1501327	CMMP-AS-C5-11A-P3-M3	
	ELGL-LAS-120...	S; M; L	1501328	CMMP-AS-C10-11A-P3-M3	

Ordering data – Cables					
	Brief description	Cable length [m]	Part No.	Type	
	Motor cable, for connecting motor and controller	5	550306	NEBM-T1G7-E-5-N-LE7	
		10	550307	NEBM-T1G7-E-10-N-LE7	
		15	550308	NEBM-T1G7-E-15-N-LE7	
		X length ¹⁾	550309	NEBM-T1G7-E- -N-LE7	
	Encoder cable, for connecting motor and controller	5	550314	NEBM-T1G8-E-5-N-S1G15	
		10	550315	NEBM-T1G8-E-10-N-S1G15	
		15	550316	NEBM-T1G8-E-15-N-S1G15	
		X length ¹⁾	550317	NEBM-T1G8-E- -N-S1G15	

1) Max. 25 m

Ordering data					
	For size	Comment	Part No.	Type	PU ¹⁾
Shock absorber YSRW Technical data → Internet: ysrw					
	30	For avoiding damage at the end stop in the event of malfunction	191193	YSRW-7-10	1
	64, 120		191195	YSRW-10-17	
Centring sleeve ZBH					
	30, 64, 120	For slide	150927	ZBH-9	10





1) Packaging unit quantity



Ordering data – Proximity sensors, inductive						Technical data → Internet: sies	
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type	
N/O contact							
	Is screwed on via mounting attachment	PNP	Cable, 3-wire	2.5	178294	SIES-Q8B-PS-K-L	
			Plug M8x1, 3-pin	0.3	178295	SIES-Q8B-PS-S-L	
N/C contact							
	Is screwed on via mounting attachment	PNP	Cable, 3-wire	2.5	174552	SIES-Q8B-PO-K-L	
			Plug M8x1, 3-pin	0.3	174553	SIES-Q8B-PO-S-L	



Linear drives ELGL-LAS, with air bearing and linear motor

FESTO

Accessories

Ordering data – Inductive proximity sensors M8						Technical data → Internet: sien	
	Electrical connection		Switching output	LED	Cable length [m]	Part No.	Type
	Cable	Plug M8					
N/O contact							
	3-wire	–	PNP	■	2.5	150386	SIEN-M8B-PS-K-L
	–	3-pin	PNP	■	–	150387	SIEN-M8B-PS-S-L
N/C contact							
	3-wire	–	PNP	■	2.5	150390	SIEN-M8B-PO-K-L
	–	3-pin	PNP	■	–	150391	SIEN-M8B-PO-S-L

Ordering data – Connecting cables					Technical data → 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	

Ordering data							
	For size	Connection		Description	Part No.	Type	PU ¹⁾
		Threaded	O.D.				
Push-in fitting QSM							
Technical data → Internet: quick star							
	30	M5	4	For connecting compressed air tubing with standard external diameters	153304	QSM-M5-4	10
	64-...-S	M5	4				
	64-...-M	M5	4				
	120-...-S	M5	4				
	120-...-M	M5	4				
	120-...-L	G1/8	6	153307	QSM-1/8-6		
Blanking plug QSC...H							
Technical data → Internet: quick star							
	30	–	4	For closing off QS push-in connections	153267	QSC-4H	10
	64-...-S	–	4				
	64-...-M	–	4				
	120-...-S	–	4				
	120-...-M	–	4				
	120-...-L	–	6	153268	QSC-6H		

1) Packaging unit quantity

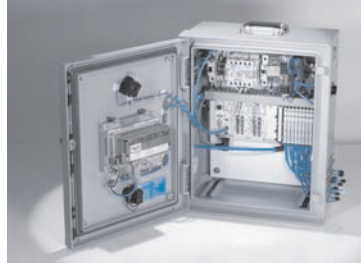
Product Range and Company Overview

A Complete Suite and Company Overview

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drivers



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 16,000 employees in 60 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.

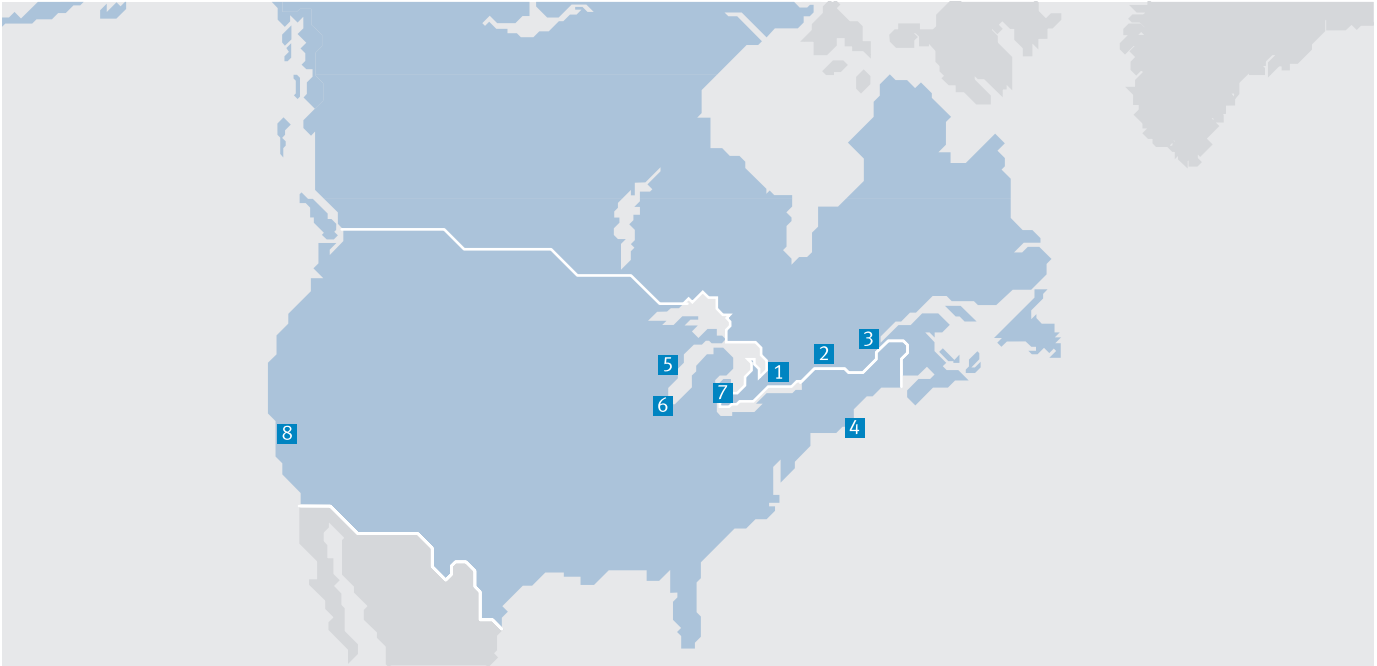


© Copyright 2013, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. For Liability and Warranty conditions, refer to our "Terms and Conditions of Sale", available from your local Festo office. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Festo. All technical data subject to change according to technical update.



Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmental friendly printing plant.

Festo North America



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

2 Montréal
5600, Trans-Canada
Pointe-Claire, QC
H9R 1B6

3 Québec City
2930, rue Watt#117
Québec, QC
G1X 4G3



**4 Festo United States
Headquarters
Festo Corporation**
395 Moreland Road
Hauppauge, NY
11788

5 Appleton
North 922 Tower View Drive, Suite N
Greenville, WI
54942

7 Detroit
1441 West Long Lake Road
Troy, MI
48098

6 Chicago
85 W Algonquin - Suite 340
Arlington Heights, IL
60005

8 Silicon Valley
4935 Southfront Road, Suite F
Livermore, CA
94550

Festo Regional Contact Center

Canadian Customers

Commercial Support:
Tel: 1 877 GO FESTO (1 877 463 3786)
Fax: 1 877 FX FESTO (1 877 393 3786)
Email: festo.canada@ca.festo.com

Technical Support:
Tel: 1 866 GO FESTO (1 866 463 3786)
Fax: 1 877 FX FESTO (1 877 393 3786)
Email: technical.support@ca.festo.com

USA Customers

Commercial Support:
Tel: 1 800 99 FESTO (1 800 993 3786)
Fax: 1 800 96 FESTO (1 800 963 3786)
Email: customer.service@us.festo.com

Technical Support:
Tel: 1 866 GO FESTO (1 866 463 3786)
Fax: 1 800 96 FESTO (1 800 963 3786)
Email: product.support@us.festo.com

Subject to change

Internet: www.festo.com/us