Electric cylinder units EPCE

Key features

At a glance
Plug and work with the Simplified Motion Series

IO-Link

The simplicity of pneumatics is now combined for the first time with the advantages of electric automation thanks to the Simplified Motion Series. These integrated drives are the perfect solution for all users who are looking for an electric alternative for very simple movement and positioning tasks between two mechanical end positions, but don't want the commissioning process for traditional electric drive systems that can often be quite complex.

There is no need for any software since operation is simply based on the "plug and work" principle. Digital I/O (DIO) and IO-Link are always automatically included – a product with two types of control as standard.

Integrated

The integrated electronics in the drive are at the heart of the Simplified Motion Series.

Easy

For commissioning, simply set all relevant parameters directly on the drive:

- Speed and force
- Reference end position and cushioning
- Manual operation

Standardised

Electrical connection via M12 plug design

- Power (4-pin): power supply for the motor
- Logic (8-pin): control signal, sensor signal and power for the integrated electronics

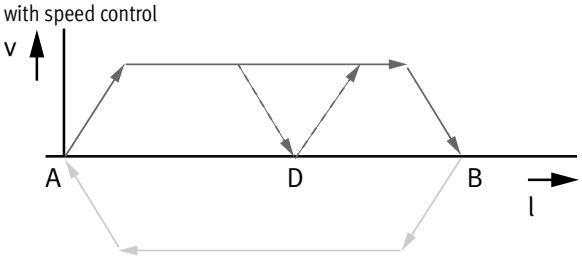
Connected

Use of extended functions possible via IO-Link:

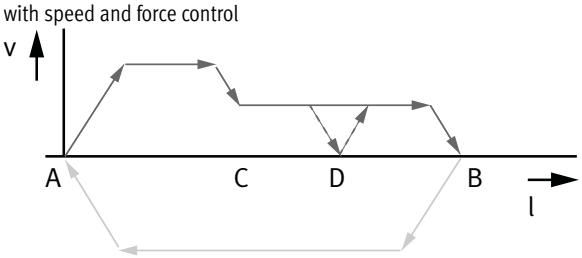
- Remote configuration of motion parameters
- Copy and backup function for transferring parameters
- Read function for extended process parameters
- Freely definable intermediate position
- Firmware update

The functions of the Simplified Motion Series

Basic profile for movement between two end positions:
with speed control



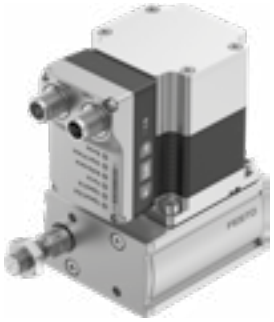
Extended motion profile for simplified press-fitting and clamping functions:
with speed and force control



- These drives are designed for simple movements between two end positions.
- Proximity switches are required in order to implement any intermediate positions.
- With the intermediate position that can be freely configured via IO-Link, movements can be stopped at a freely defined point between the end positions, without the need for proximity switches or external stops

Key features

At a glance



- Without external servo drive: all the necessary electronic components are combined in the integrated drive
- Two control options integrated as standard: digital I/O and IO-Link
- Complete solution for simple movements between mechanical end positions
- Simplified commissioning: all parameters can be manually set directly on the drive
- No special expertise required for commissioning
- Minimal zero stroke and extremely compact design make this product the perfect choice for applications where space is at a premium
- Innovative interpretation of toothed belt technology for maximum dynamic response and minimal positioning times
- Ideal for fast movement in sorting, distribution and testing applications

The products in the Simplified Motion Series

Electric cylinder unit
EPCE

Electric cylinder unit
EPCS

Electric cylinder unit with parallel motor mounting
EPCS

Mini slide unit
EGSS-BS-KF

Mini slide unit with parallel motor mounting
EGSS-BS-KF

Spindle axis unit
ELGS-BS-KF

Spindle axis unit with parallel motor mounting
ELGS-BS-KF

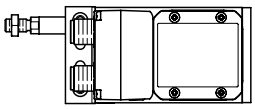
Toothed belt axis unit
ELGS-TB-KF

Toothed belt axis unit
ELGE

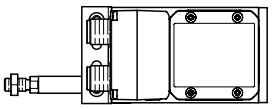
Rotary drive unit
ERMS

Piston rod variants

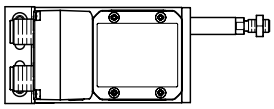
Front left



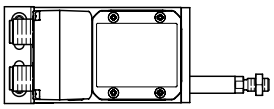
Front right



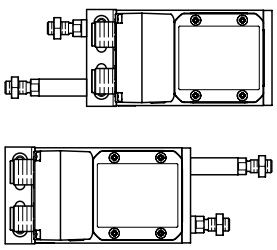
Rear left



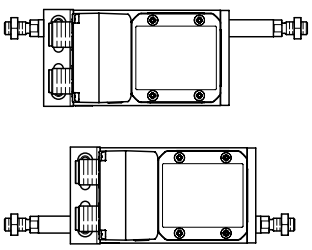
Rear right



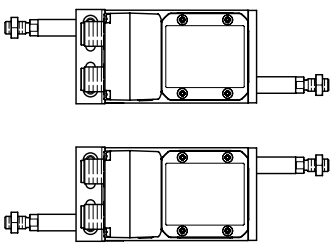
Double piston rod



Through piston rod



Piston rods acting in opposite directions

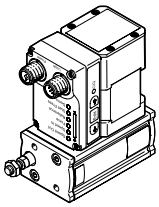


Other variants with 3 or 4 piston rods available.

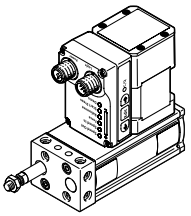
Peripherals overview

Cover variants

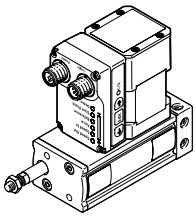
Standard



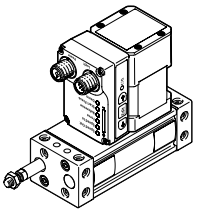
Multimount, front



Multimount, rear



Multimount, both ends

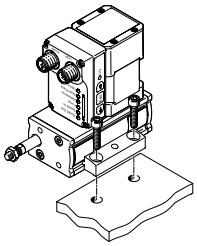


For the variants with multimount cover (EPCE-TB-...-MF / -MB / -MD), lateral female threads with centring diameter and through-holes are also available.

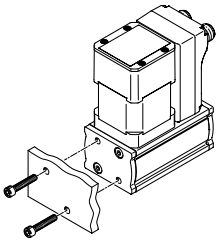
Mounting options

With standard cover variant

At the side via profile mounting

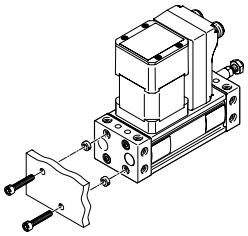


On the end face via thread

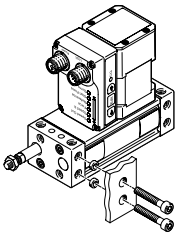


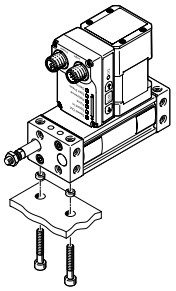
With multimount cover

On the end face via thread

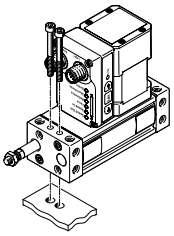


At the side/underneath via thread



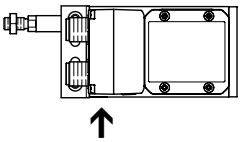


Via through-holes

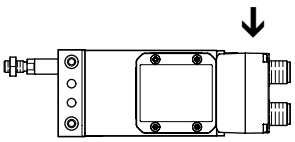


Cable outlet direction

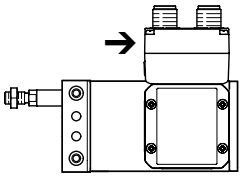
Standard



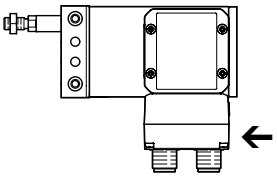
[B] Rear



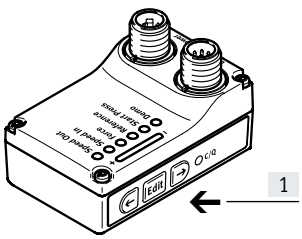
[L] Left



[R] Right

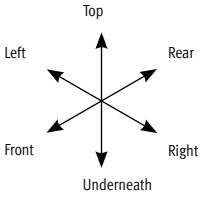


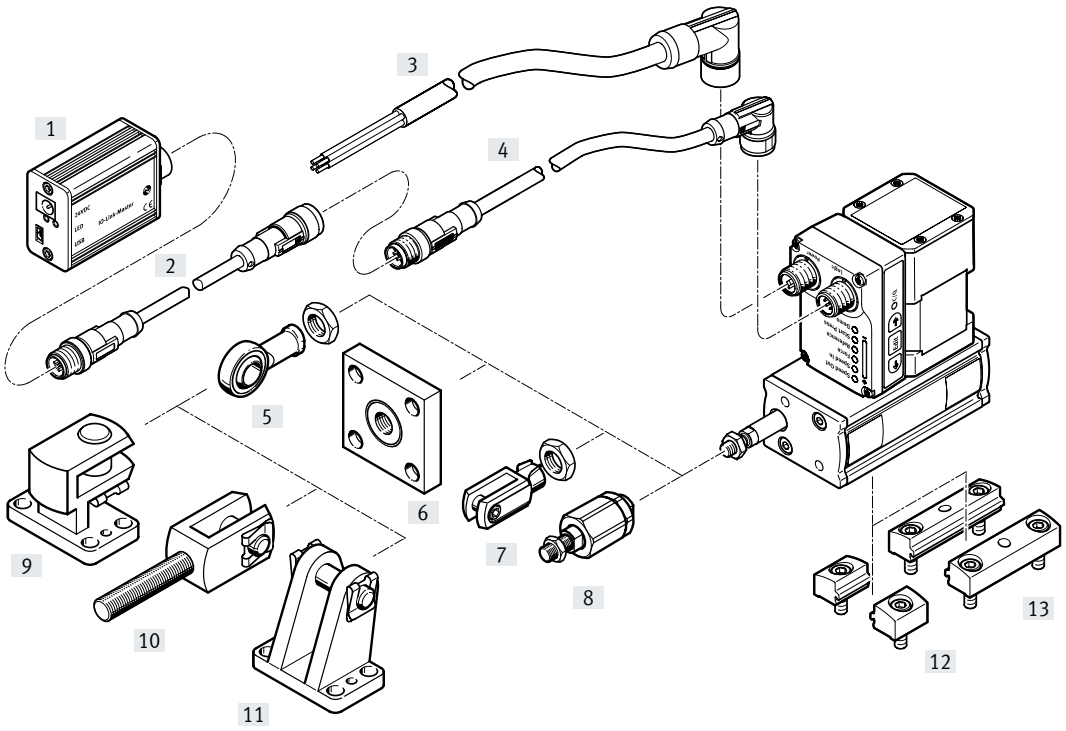
Control elements



[1] Pushbutton actuators for parameterisation and control

Peripherals overview





Accessories

	Type/order code	Description	→ Page/Internet
[1]	IO-Link master USB CDSU-1	For straightforward use of the electric cylinder unit with IO-Link	23
[2]	Adapter NEFC-M12G8	Connection between the motor and the IO-Link master	23
[3]	Supply cable NEBL-T12	For connecting load and logic supply	23
[4]	Connecting cable NEBC-M12	For connection to a controller	23
[5]	Rod eye SGS	With spherical bearing	22
[6]	Coupling piece KSG	To compensate for radial deviations	22
[7]	Rod clevis SG	Permits a swivelling movement of the cylinder in one plane	22
[8]	Self-aligning rod coupler FK	To compensate for radial and angular deviations	22
[9]	Right angle clevis foot LQG	For rod eye SGS	22
[10]	Rod clevis SGA	For swivel mounting of the cylinder	22
[11]	Clevis foot LBG	With parallel motor mounting, for spherical bearing	22
[12]	Profile mounting EAHF-L2-P-S	For mounting the axis on the side of the profile	20
[13]	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	21
–	Centring sleeve ZBH	Centring sleeves can be used to centre the electric cylinder unit in combination with the multimount cover	22

Type codes

001	Series	
EPCE	Toothed belt	

002	Drive system	
TB	Toothed belt	

003	Size	
45	45	
60	60	

004	Stroke [mm]	
5	5	
10	10	
15	15	
20	20	
25	25	
30	30	
35	35	
40	40	
45	45	
50	50	
60	60	
80	80	

005	Piston rod, front left	
	None	
FL	Piston rod with male thread	

006	Piston rod, rear left	
	None	
BL	Piston rod with male thread	

007	Piston rod, front right	
	None	
FR	Piston rod with male thread	

008	Piston rod, rear right	
	None	
BR	Piston rod with male thread	

009	Cover variant	
	Standard	
MB	Multimount, rear	
MD	Multimount, both ends	
MF	Multimount, front	

010	Motor type	
ST	Stepper motor ST	

011	Controller	
M	Integrated	

012	Control panel	
H1	Integrated	

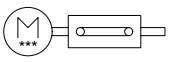
013	Bus protocol/activation	
PLK	PNP and IO-Link®	
NLK	NPN and IO-Link®	

014	End-position sensing	
AA	With integrated end-position sensing	

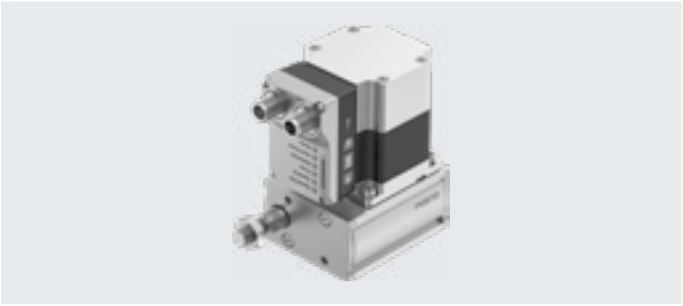
015	Cable outlet direction	
	Standard	
L	Left	
R	Right	
B	Rear	

016	Electrical accessories	
	None	
L1	Adapter for operation as IO-Link® device	

Datasheet



- Ø - Size
  45, 60
- | - Stroke length
  5 ... 80 mm



General technical data			
Size		45	60
Design		Electric cylinder with toothed belt and integrated drive	
Motor type		Stepper motor	
Protection against rotation/guide		With plain-bearing guide	
Piston rod end		Male thread	
Piston rod thread		M6	M10x1.25
Mounting position		Any	
Working stroke	[mm]	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 80
Stroke reserve	[mm]	0	
Additional functions		Built-in end-position sensing	
		User interface	
Display		LED	
Homing		Positive fixed stop block	
		Negative fixed stop block	
Type of mounting		With female thread	
		Via through-hole (only with multimount cover)	
		With accessories	
		Via centring sleeve (only with multimount cover)	
Max. cable length			
Inputs/outputs	[m]	15	
IO-Link operation	[m]	20	
Reference value, running performance	[km]	50 ... 500	50 ... 800
	[Cycles]	5 million	5 million

Mechanical data			
Size		45	60
Guide value for effective load			
Horizontal	[kg]	5	10
Vertical	[kg]	2.5	5
Max. feed force F_x	[N]	85	150
Max. speed[1]	[m/s]	0.44	0.6
Speed "Speed Press"[2]	[m/s]	0.02	
Max. acceleration[2]	[m/s²]	9	9
Repetition accuracy	[mm]	±0.05	±0.05
Max. impact energy	[J]	0.003	0.016
Position sensing		Via IO-Link	

1) Adjustable in increments of 10%
2) Unchangeable parameter

Datasheet

Toothed belt			
Size		45	60
Pitch	[mm]	2	
Elongation[1)]	[%]	0.310	0.375
Effective diameter	[mm]	10.18	
Feed constant	[mm/rev]	32	

1) At max. feed force

Electrical data			
Size		45	60
Motor			
Nominal voltage DC	[V]	24 (±15%)	
Nominal current	[A]	3	5.3
Max. current consumption (load)	[A]	3	5.3
Max. current consumption (logic)	[mA]	300	
Encoder			
Rotor position sensor		Absolute encoder, single turn	
Rotor position sensor measuring principle		Magnetic	
Rotor position encoder resolution	[bit]	16	

Interfaces			
Size		45	60
Parameterisation interface			
IO-Link		Yes	
User interface		Yes	
Digital inputs			
Number		2	
Switching logic		PNP	
		NPN	
Characteristics		Not galvanically isolated	
		Configurable	
Specification		Based on IEC 61131-2, type 1	
Operating range	[V]	24	
Digital outputs			
Number		2	
Switching logic		PNP	
		NPN	
Rotor position sensor		Absolute encoder, single turn	
Characteristics		Not galvanically isolated	
		Configurable	
Max. current	[mA]	100	

Datasheet

Technical data – IO-Link			
Size		45	60
SIO mode support		Yes	
Communication mode		COM3 (230.4 kBd)	
Connection technology		Plug	
Port class		A	
No. of ports		1	
Process data width OUT	[byte]	2	
Process data content OUT	[bit]	1 (Move in)	
	[bit]	1 (Move out)	
	[bit]	1 (Move Intermediate)	
	[bit]	1 (Quit Error)	
Process data width IN	[byte]	2	
Process data content IN	[bit]	1 (State Device)	
	[bit]	1 (State Move)	
	[bit]	1 (State in)	
	[bit]	1 (State out)	
	[bit]	1 (State Intermediate)	
Service data content IN	[bit]	32 (Force)	
	[bit]	32 (Position)	
	[bit]	32 (Speed)	
Minimum cycle time	[ms]	1	
Data memory required	[kilobyte]	0.5	
Protocol version		Device V 1.1	

Operating and environmental conditions			
Size		45	60
Insulation class		B	
Ambient temperature	[°C]	0 ... +50	
Storage temperature	[°C]	–20 ... +60	
Note on ambient temperature		Above an ambient temperature of 30°C, the power must be reduced by 2% per K	
Temperature monitoring		Switch-off for excessive temperature	
		Integrated precise CMOS temperature sensor with analogue output	
Relative humidity	[%]	0 ... 90 (non-condensing)	
Protection class		III	
Degree of protection		IP40	
Duty cycle	[%]	100	
CE marking (see declaration of conformity)		To EU EMC Directive for EMCS-ST → festo.com/sp	
		To EU RoHS Directive	
UKCA marking (see declaration of conformity)		To UK instructions for EMC	
		To UK RoHS instructions	
KC mark		KC EMC	
Certification		RCM	
Vibration resistance		Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6	
Shock resistance		Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27	
Maintenance interval		Lifetime lubrication	

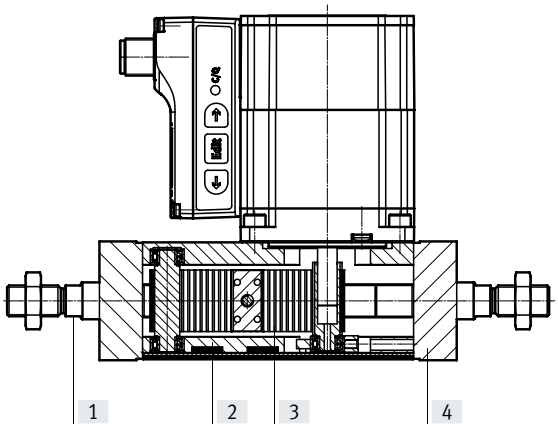
Weight			
Size		45	60
Basic weight at 0 mm stroke	[g]	775/813[1)]	1350/1407[1)]
Additional weight per 10 mm stroke	[g]	29	46
Moving mass with 0 mm stroke	[g]	83/87[1)]	188/197[1)]
Additional moving mass per 10 mm stroke	[g]	4.55	9.75

1) With cover variant EPCE-...-MF

Datasheet

Materials

Sectional view



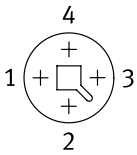
Axis		
[1]	Piston rod	High-alloy stainless steel
[2]	Housing	Anodised wrought aluminium alloy
[3]	Toothed belt	Polychloroprene with glass fibre
[4]	Cover	Anodised wrought aluminium alloy
	PWIS conformity	VDMA24364 zone III
	Note on materials	RoHS-compliant

Pin allocation

Power supply

Plug

M12x1, 4-pin, T-coded to EN 61076-2-111

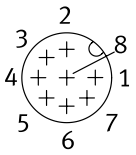


Pin	Function
1	Power voltage supply (24 V DC)
2	Reference potential, power voltage supply (GND)
3	Reserved, do not connect
4	Functional earth (FE)

Logic interface

Plug

M12x1, 8-pin, A-coded to EN 61076-2-101



When used with digital I/O

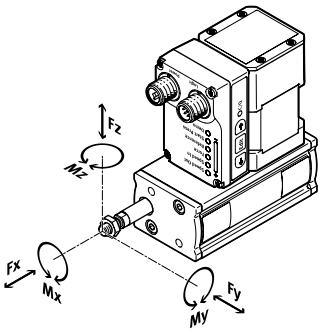
Pin	Function
1	Logic voltage supply (24 V DC)
2	Digital output 1 (State "In")
3	Digital output 2 (State "Out")
4	Reference potential, logic voltage supply (GND)
5	Digital input 1 (Move "In")
6	Digital input 2 (Move "Out")
7	Reserved, do not connect
8	Reference potential, logic voltage supply (GND)

When used with IO-Link

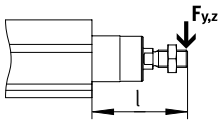
Pin	Function
1	L+ IO-Link power supply (24 V DC)
2	Reserved, do not connect
3	C/Q communication with the IO-Link master
4	L – Reference potential, IO-Link power supply (0 V)
5	Reserved, do not connect
6	Reserved, do not connect
7	Reserved, do not connect
8	L – Reference potential, IO-Link power supply (0 V)

Datasheet

Maximum permissible loads on the piston rod



If there are two or more forces and torques simultaneously acting on the piston rod, the following equations must be satisfied:
F_1/M_1 = dynamic value
F_2/M_2 = maximum value

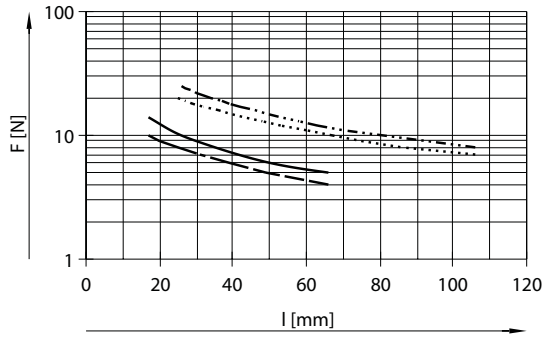


$$f_v = \frac{|F_{y1}|}{F_{y2}} + \frac{|F_{z1}|}{F_{z2}} + \frac{|M_{y1}|}{M_{y2}} + \frac{|M_{z1}|}{M_{z2}} \leq 1$$

$$|Fx| \leq Fx_{max}$$

$$|Mx| \leq Mx_{max}$$

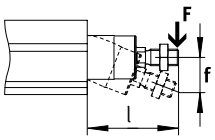
Maximum permissible lateral forces Fy_{max} and Fz_{max} on the piston rod as a function of projection l

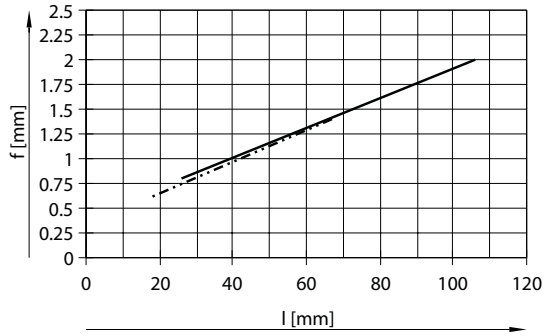


EPCE-TB-45
EPCE-TB-45-M...
EPCE-TB-60
EPCE-TB-60-M...

Size		45	60
Fx_{max} (static)	[N]	85	150
Mx_{max} (dynamic)	[Nm]	0	
My_{max}, Mz_{max}	[Nm]	0.9	2.9

Piston rod deflection f as a function of projection A





EPCE-TB-45
EPCE-TB-60

Datasheet

Sizing example

Application data:

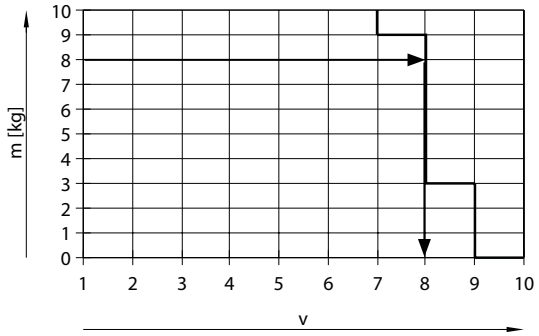
- Payload: 8 kg
- Mounting position: horizontal
- Stroke: 60 mm
- Max. permissible positioning time: 0.5 s (one direction)

Step 1: Selecting the smallest possible size from the table ➔ page 12

Mechanical data			
Size		45	60
Max. payload			
Horizontal	[kg]	5	10
Vertical	[kg]	2.5	5

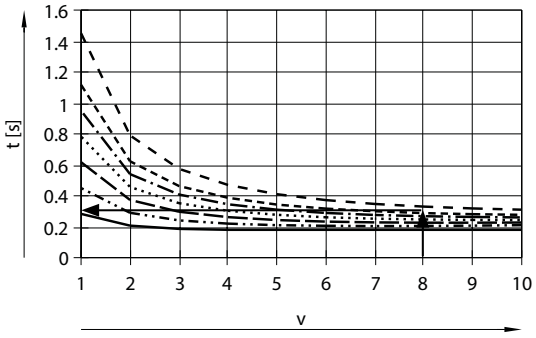
➔ Smallest possible size: EPCE-TB-60

Step 2: Selecting the max. speed level v for payload m



➔ Max. speed level for payload: level 8

Step 3: Reading off the min. positioning time t for stroke l



- l = 10 mm
- l = 20 mm
- l = 30 mm
- l = 40 mm
- l = 50 mm
- l = 60 mm
- l = 80 mm

➔ Min. positioning time for 60 mm at level 8: 0.3 s

Result

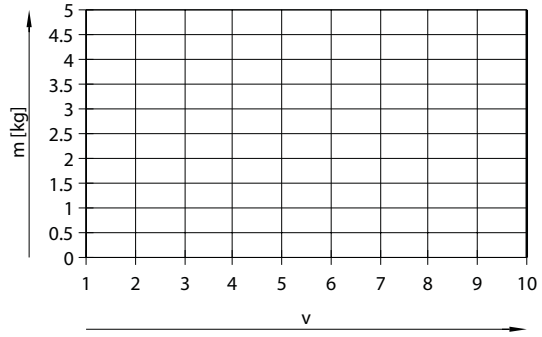
The application can be implemented using EPCE-TB-60-60. A minimum positioning time (one direction) of 0.3 s is achieved.
Longer positioning times can be selected at any time using a lower speed level.

Datasheet

Mass m as a function of speed level v

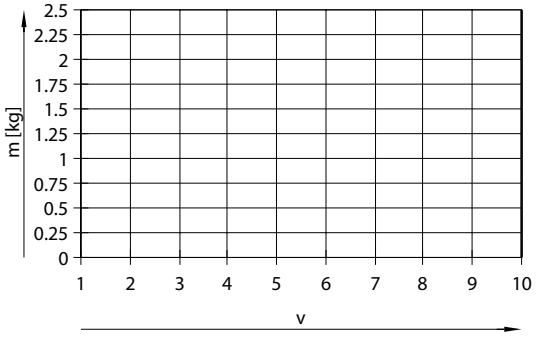
Horizontal

EPCE-45

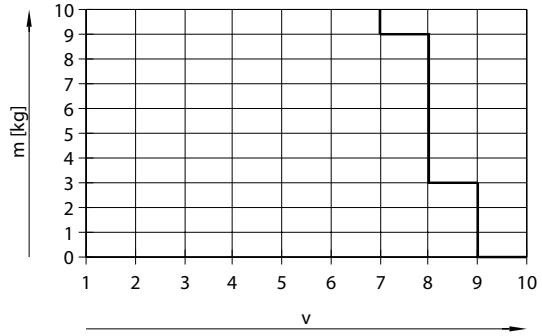


Vertical

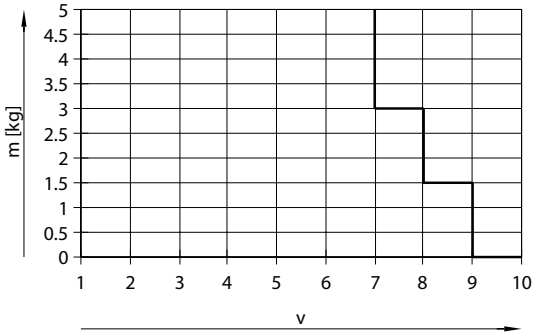
EPCE-45



EPCE-60



EPCE-60



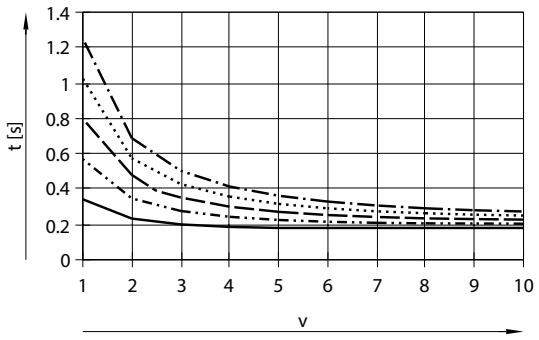
Note

The lines represent the maximum values. The lower speed levels can be set at any time.

Datasheet

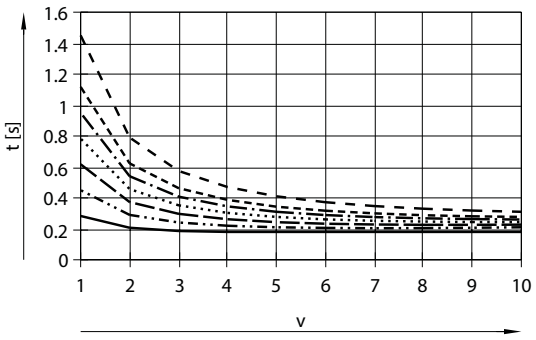
Positioning time t as a function of speed level v and stroke l

EPCE-45



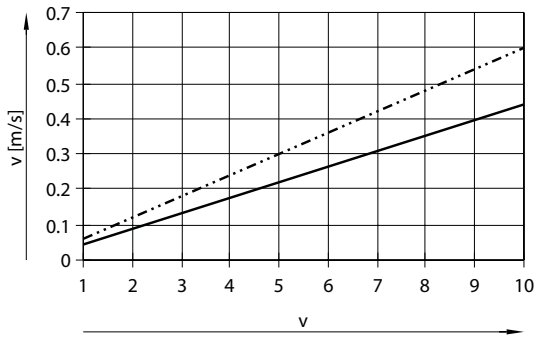
- l = 10 mm
- l = 20 mm
- l = 30 mm
- l = 40mm
- l = 50 mm

EPCE-60



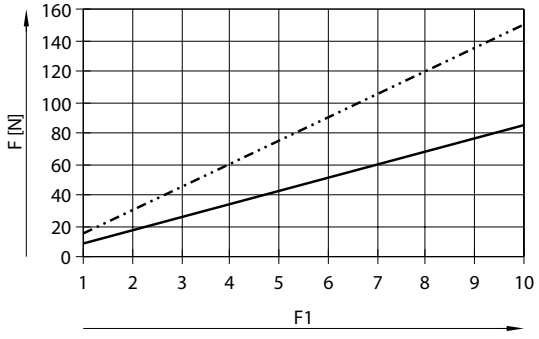
- l = 10 mm
- l = 20 mm
- l = 30 mm
- l = 40 mm
- l = 50 mm
- l = 60 mm
- l = 80 mm

Speed v as a function of speed level v



- EPCE-TB-45
- EPCE-TB-60

Feed force F as a function of force level F1

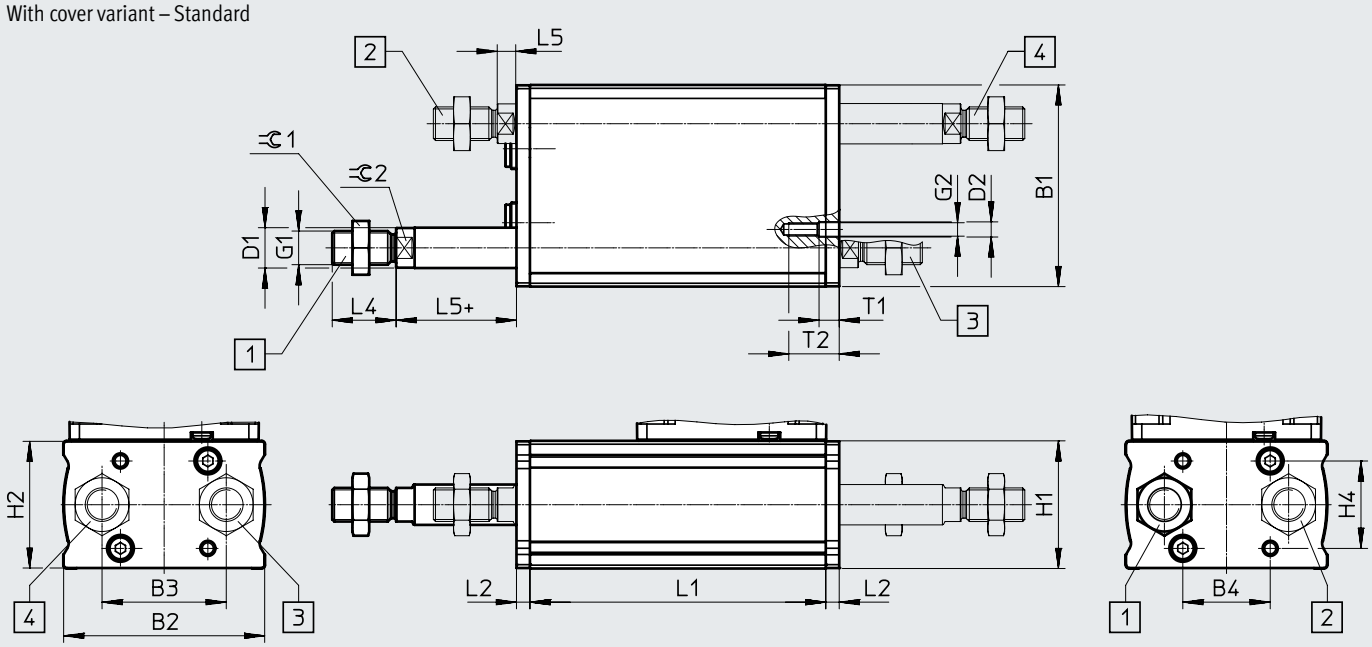


- EPCE-TB-45
- EPCE-TB-60

Datasheet

Dimensions Download CAD data ➔ www.festo.com

With cover variant – Standard



\+ = plus stroke length

[1] EPCE-TB-...-FL

[2] EPCE-TB-...-FR

[3] EPCE-TB-...-BL

[4] EPCE-TB-...-BR

Size	B1	B2	B3	B4	D1	D2	G1	G2	H1
	+0.4	±0.1			⌀ h8	⌀ H13			+0.3/–0.1
45	45	44.8	28	20	8	4.5	M6	M4	34
60	60	59.8	37	26	12	4.5	M10x1.25	M4	38

Size	H2	H4	L2	L4	L5	T1	T2	⌀1	⌀2
	±0.1		±0.1						
45	33.7	22.5	4	12	4.7+0.2/–1.2	6	15	10	7
60	37.7	26	4	19	6+0.2/–1.3	6	15	17	10

Size	Stroke	L1	Size	Stroke	L1
	[mm]	±0.1		[mm]	±0.1
45	5	59.5	60	5	68
	10	59.5		10	68
	15	69.5		15	78
	20	69.5		20	78
	25	79.5		25	88
	30	79.5		30	88
	35	89.5		35	98
	40	89.5		40	98
	45	99.5		45	108
	50	99.5		50	108
				60	118
				80	138

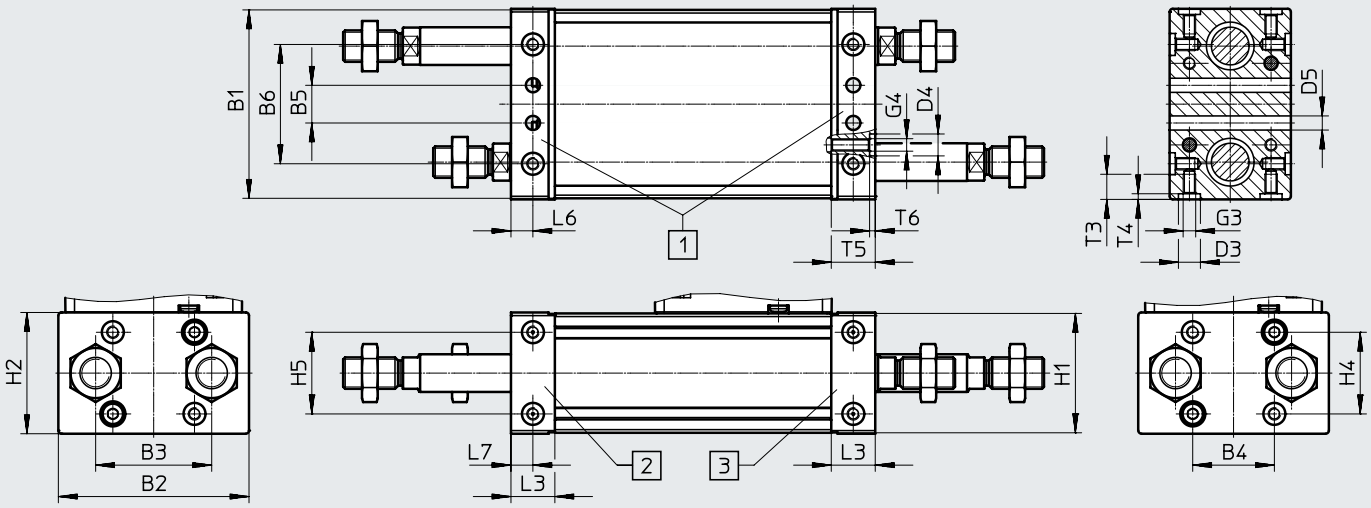
Note

Spanner flat ⌀2 can be aligned either way.

Datasheet

Dimensions Download CAD data ➔ www.festo.com

With cover variant – Multimount



[1] EPCE-TB-...-MD

[2] EPCE-TB-...-MF

[3] EPCE-TB-...-M

Size	B1	B2	B3	B4	B5	B6	D3	D4	D5	G3	G4
	+0.4	±0.1					ø H7	ø H7	ø H13		
45	45	45.7	28	20	10	32.5	7	7	4.5	M4	M4
60	60	60.7	37	26	12	38	7	7	4.5	M4	M4

Size	H1	H2	H4	H5	L3	L6	L7	T3	T4	T5	T6
	+0.3/–0.1	±0.1			±0.1				–0.1		–0.1
45	34	34.6	22.5	16	14	7	7	8	1.8	14	1.8
60	38	38.6	26	26	14	7	7	8	1.8	14	1.8

Note

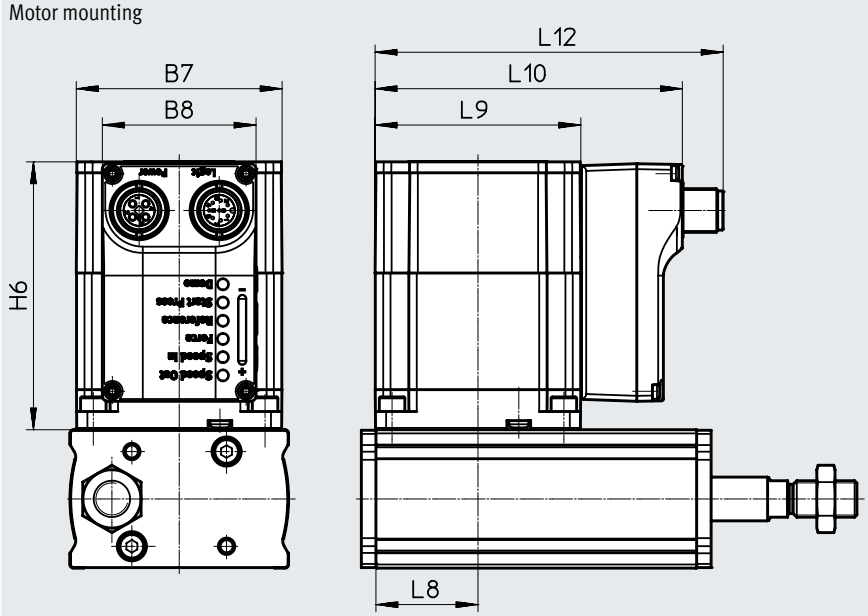
For size 60, the through-holes cannot be used with the following combinations:

- Through-hole at the front: not in combination with stroke 5 or 10 mm and motor mounting variant "Standard" (at front)
- Through-hole at the rear: not in combination with motor mounting variant "Rear"

Datasheet

Dimensions Download CAD data ➔ www.festo.com

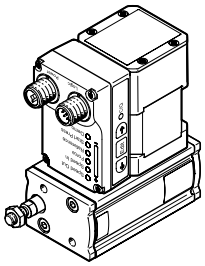
Motor mounting



Size	B7	B8	H6	L8	L9	L10	L12
	±0.3	±0.25			±0.3	±0.6	±0.8
45	42.3	42.2	65±1.1	21	42.3	70.1	81.3
60	56.6	42.2	73.5±0.9	28	56.6	84.5	95.6

Datasheet

Ordering data

	Size	Stroke	Part no.	Type
	45	Cover variant: Standard		
		10	**8101539**	**EPCE-TB-45-10-FL-ST-M-H1-PLK-AA**
		20	**8101540**	**EPCE-TB-45-20-FL-ST-M-H1-PLK-AA**
		30	**8101541**	**EPCE-TB-45-30-FL-ST-M-H1-PLK-AA**
		50	**8101542**	**EPCE-TB-45-50-FL-ST-M-H1-PLK-AA**
		Cover variant: Multimount, front		
		20	**8101544**	**EPCE-TB-45-20-FL-MF-ST-M-H1-PLK-AA**
		30	**8101545**	**EPCE-TB-45-30-FL-MF-ST-M-H1-PLK-AA**
		50	**8101546**	**EPCE-TB-45-50-FL-MF-ST-M-H1-PLK-AA**
	60	Cover variant: Standard		
		10	**8102163**	**EPCE-TB-60-10-FL-ST-M-H1-PLK-AA**
		20	**8102162**	**EPCE-TB-60-20-FL-ST-M-H1-PLK-AA**
		30	**8102164**	**EPCE-TB-60-30-FL-ST-M-H1-PLK-AA**
		50	**8102170**	**EPCE-TB-60-50-FL-ST-M-H1-PLK-AA**
		80	**8102167**	**EPCE-TB-60-80-FL-ST-M-H1-PLK-AA**
		Cover variant: Multimount, front		
		10	**8102166**	**EPCE-TB-60-10-FL-MF-ST-M-H1-PLK-AA**
		20	**8102169**	**EPCE-TB-60-20-FL-MF-ST-M-H1-PLK-AA**
		30	**8102168**	**EPCE-TB-60-30-FL-MF-ST-M-H1-PLK-AA**
		50	**8102165**	**EPCE-TB-60-50-FL-MF-ST-M-H1-PLK-AA**
		80	**8102171**	**EPCE-TB-60-80-FL-MF-ST-M-H1-PLK-AA**

Datasheet

Ordering table

Size	45	60	Conditions	Code	Enter code
Module no.	8103354	8103355			
Series	EPCE			**EPCE**	EPCE
Drive system	Toothed belt			**-TB**	-TB
Size	45	60		**-...**	
Stroke [mm]	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 80		**-...**	
Piston rod, front left	None		[1]		
	Piston rod with male thread			**-FL**	
Piston rod, rear left	None		[1]		
	Piston rod with male thread			**-BL**	
Piston rod, front right	None		[1]		
	Piston rod with male thread			**-FR**	
Piston rod, rear right	None		[1]		
	Piston rod with male thread			**-BR**	
Cover variant	Standard				
	Multimount, rear		[3]	**-MB**	
	Multimount, both ends		[2], [3]	**-MD**	
	Multimount, front		[2]	**-MF**	
Motor type	Stepper motor ST			**-ST**	-ST
Controller	Integrated			**-M**	-M
Control panel	Integrated			**-H1**	-H1
Bus protocol/control	NPN and IO-Link			**-NLK**	
	PNP and IO-Link			**-PLK**	
End-position sensing	With integrated end-position sensing			**-AA**	-AA
Cable outlet direction	Standard		[2]		
	Rear		[3]	**-B**	
	Left			**-L**	
	Right			**-R**	
Electrical accessories	None				
	Adapter for operation as IO device			**+L1**	

[1] At least one piston rod must be selected.
[2] For size 45 with stroke 5 mm or 10 mm and cover variant -MF or -MD, not in combination with cable outlet direction "Standard".
[3] For size 45 and cover variant -MB or -MD, not in combination with cable outlet direction "Rear"

Note

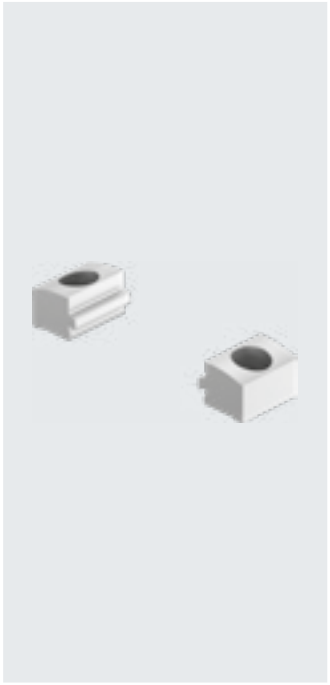
For size 60, the through-holes cannot be used with the following combinations:

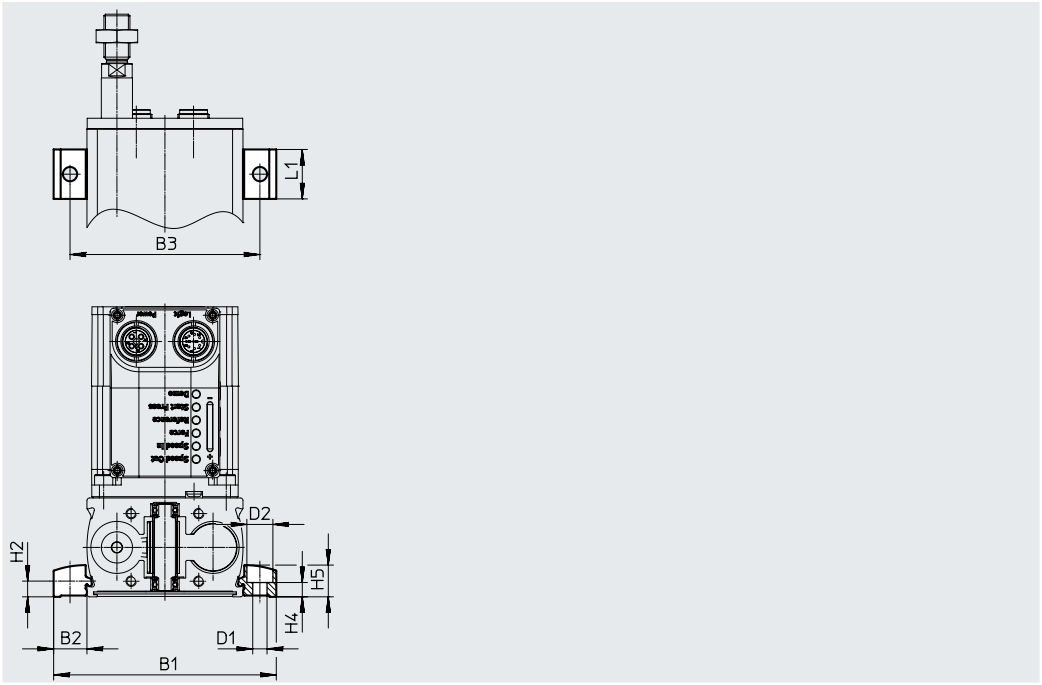
- Through-hole at the front: not in combination with stroke 5 or 10 mm and motor mounting variant "Standard" (at front)
- Through-hole at the rear: not in combination with motor mounting variant "Rear"

Accessories

Profile mounting EAHF-L2-...-P-S
Material:
Anodised wrought aluminium alloy
RoHS-compliant

- For mounting the cylinder on the side of the profile





Dimensions and ordering data

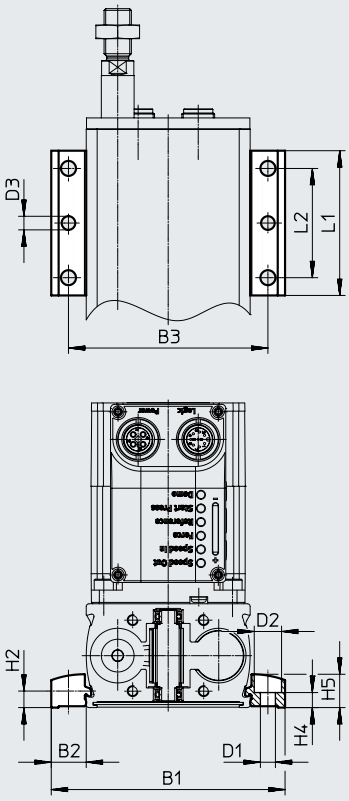
For size	B1	B2	B3	D1 ø H13	D2 ø H13	H2
45	70.6	12.8	58	5.5	10	6.1
60	85.6	12.8	73	5.5	10	6.1

For size	H4 ±0.1	H5	L1	Weight [g]	Part no.	Type
45	5.5	12.2	19	6	**5184133**	**EAHF-L2-45-P-S**
60	5.5	12.2	19	6	**5184133**	**EAHF-L2-45-P-S**

Accessories

Profile mounting EAHF-L2-...-P
Material:
Anodised wrought aluminium alloy
RoHS-compliant

- For mounting the cylinder on the side of the profile.
  The profile mounting can be attached to the mounting surface using the drilled hole in the centre



Dimensions and ordering data

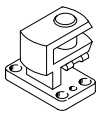
For size	B1	B2	B3	D1 ø H13	D2 ø H13	D3 ø	H2
45	70.6	12.8	58	5.5	10	5	6.1
60	85.6	12.8	73	5.5	10	5	6.1

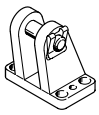
For size	H4 ±0.1	H5	L1	L2	Weight [g]	Part no.	Type
45	5.5	12.2	53	40	35	**4835728**	**EAHF-L2-45-P**
60	5.5	12.2	53	40	35	**4835728**	**EAHF-L2-45-P**

Accessories

Ordering data – Mounting components

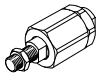
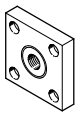
Datasheets → Internet: clevis foot

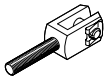
Designation	For size	Part no.	Type
Right angle clevis foot LQG			
	60	**31768**	**LQG-32**

Designation	For size	Part no.	Type
Clevis foot LBG			
	60	**31761**	**LBG-32**

Ordering data – Piston rod attachments

Datasheets → Internet: piston rod attachment

Designation	For size	Part no.	Type
Rod eye SGS			
	45	**9254**	**SGS-M6**
	60	**9261**	**SGS-M10x1.25**
Self-aligning rod coupler FK			
	45	**2061**	**FK-M6**
	60	**6140**	**FK-M10x1.25**
Coupling piece KSG			
	60	**32963**	**KSG-M10x1.25**

Designation	For size	Part no.	Type
Rod clevis SG			
	45	**3110**	**SG-M6**
	60	**6144**	**SG-M10x1.25**
Rod clevis SGA			
	60	**32954**	**SGA-M10x1.25**

Ordering data – Centring sleeves

	Description	Part no.	Type	PU[1]
	• For centring the electric cylinder unit in combination with multimount cover (EPCE-TB-...-MF / -MB / -MD)	**8146544**	**ZBH-7-B**	10

1) Packaging unit

Accessories

Ordering data – IO-Link master USB

Datasheets → Internet: cdsu

	Description	Cable length [m]	Part no.	Type
	• For using the unit with IO-Link • An external power supply plug is also required (not included in the scope of delivery)	0.3	**8091509**	**CDSU-1**

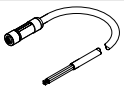
Ordering data – Adapter

Datasheets → Internet: nefc

	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Straight socket, M12x1, 8-pin	Straight plug, M12x1, 5-pin	0.3	**8080777**	**NEFC-M12G8-0.3-M12G5-LK**

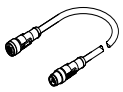
Ordering data – Supply cables

Datasheets → Internet: nebl

	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Angled socket, M12x1, 4-pin	Cable, open end, 4-wire	2	**8080778**	**NEBL-T12W4-E-2-N-LE4**
			5	**8080779**	**NEBL-T12W4-E-5-N-LE4**
			10	**8080780**	**NEBL-T12W4-E-10-N-LE4**
			15	**8080781**	**NEBL-T12W4-E-15-N-LE4**
	Straight socket, M12x1, 4-pin	Cable, open end, 4-wire	2	**8080790**	**NEBL-T12G4-E-2-N-LE4**
			5	**8080791**	**NEBL-T12G4-E-5-N-LE4**
			10	**8080792**	**NEBL-T12G4-E-10-N-LE4**
			15	**8080793**	**NEBL-T12G4-E-15-N-LE4**

Ordering data – Connecting cables

Datasheets → Internet: nebc

	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Angled socket, M12x1, 8-pin	Cable, open end, 8-wire	2	**8094476**	**NEBC-M12W8-E-2-N-B-LE8**
			5	**8094478**	**NEBC-M12W8-E-5-N-B-LE8**
			10	**8094481**	**NEBC-M12W8-E-10-N-B-LE8**
			15	**8094479**	**NEBC-M12W8-E-15-N-B-LE8**
		Straight plug, M12x1, 8-pin	2	**8080786**	**NEBC-M12W8-E-2-N-M12G8**
			5	**8080787**	**NEBC-M12W8-E-5-N-M12G8**
			10	**8080788**	**NEBC-M12W8-E-10-N-M12G8**
			15	**8080789**	**NEBC-M12W8-E-15-N-M12G8**
	Straight socket, M12x1, 8-pin	Cable, open end, 8-wire	2	**8094480**	**NEBC-M12G8-E-2-N-B-LE8**
			5	**8094477**	**NEBC-M12G8-E-5-N-B-LE8**
			10	**8094482**	**NEBC-M12G8-E-10-N-B-LE8**
			15	**8094475**	**NEBC-M12G8-E-15-N-B-LE8**
		Straight plug, M12x1, 8-pin	2	**8080782**	**NEBC-M12G8-E-2-N-M12G8**
			5	**8080783**	**NEBC-M12G8-E-5-N-M12G8**
			10	**8080784**	**NEBC-M12G8-E-10-N-M12G8**
			15	**8080785**	**NEBC-M12G8-E-15-N-M12G8**

Note

The cables are positioned at a 45° angle to the axis.