

Flat cylinder EZH

FESTO



Characteristics

At a glance

Link [ezh](#)

The single-acting miniature cylinder with rectangular cross-section is perfect for the smallest of spaces.

- Extremely flat design
- Protected against rotation thanks to special piston shape
- Wide variety of mounting and assembly options

Position sensing

[A] For proximity sensor

By using proximity switches, any position can be detected.

Generation

[B] Function-optimised

Sturdy version with space-optimised design

Type code

001	Series	
EZH	Flat cylinder, single-acting	
002	Equivalent piston diameter	
1,5/6,5	3.4 mm	
2,5/9	5.5 mm	
5/20	11.5 mm	
10/40	22.2 mm	

003	Stroke [mm]	
10	10	
20	20	
25	25	
40	40	
50	50	
004	Position sensing	
	None	
A	For proximity sensor	
005	Generation	
	Standard	
B	Function-optimised	

Datasheet

General technical data

General technical data						
Equivalent piston diameter	3.4 mm [1,5/6,5]	5.5 mm [2,5/9]		11.5 mm [5/20]		22.2 mm [10/40]
Stroke	10 mm		20 mm	25 mm	50 mm	40 mm
Pneumatic connection	Barbed fitting PK-3					G1/8
Design	Piston Rectangular piston rod					
Protection against torque/ guide	Rectangular piston rod					
Mode of operation	Pushing Single-acting					
Cushioning	No cushioning					
Position detection	Without					Via proximity switch
Type of mounting	With transverse bore					
Mounting position	optional					

Operating and ambient conditions

Operating and ambient conditions				
Equivalent piston diameter	3.4 mm [1,5/6,5]	5.5 mm [2,5/9]	11.5 mm [5/20]	22.2 mm [10/40]
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]			
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)			
Operating pressure	0.3 ... 0.6 MPa	0.28 ... 0.6 MPa	0.25 ... 0.6 MPa	
Operating pressure	3 ... 6 bar	2.8 ... 6 bar	2.5 ... 6 bar	
Operating pressure	43.5 ... 87 psi	40.6 ... 87 psi	36.25 ... 87 psi	
Ambient temperature ¹⁾	0 ... 60°C			
Corrosion resistance class CRC ²⁾	2 - Moderate corrosion stress			

1) Note the application range of the proximity switches

2) More information www.festo.com/x/topic/kbk

Forces

Equivalent piston diameter	3.4 mm [1,5/6,5]	5.5 mm [2,5/9]		11.5 mm [5/20]		22.2 mm [10/40]
Stroke	10 mm		20 mm	25 mm	50 mm	40 mm
Theoretical force at 0.6 MPa (6 bar, 87 psi), advance stroke	3.8 N	10 N		52 N	49 N	205 N
Theoretical min. spring return force	1 N	3 N	2.8 N	8 N	10.6 N	18 N
Theoretical max. spring return force	1.7 N	4 N	4.4 N	10.6 N	13.6 N	28 N

Weights

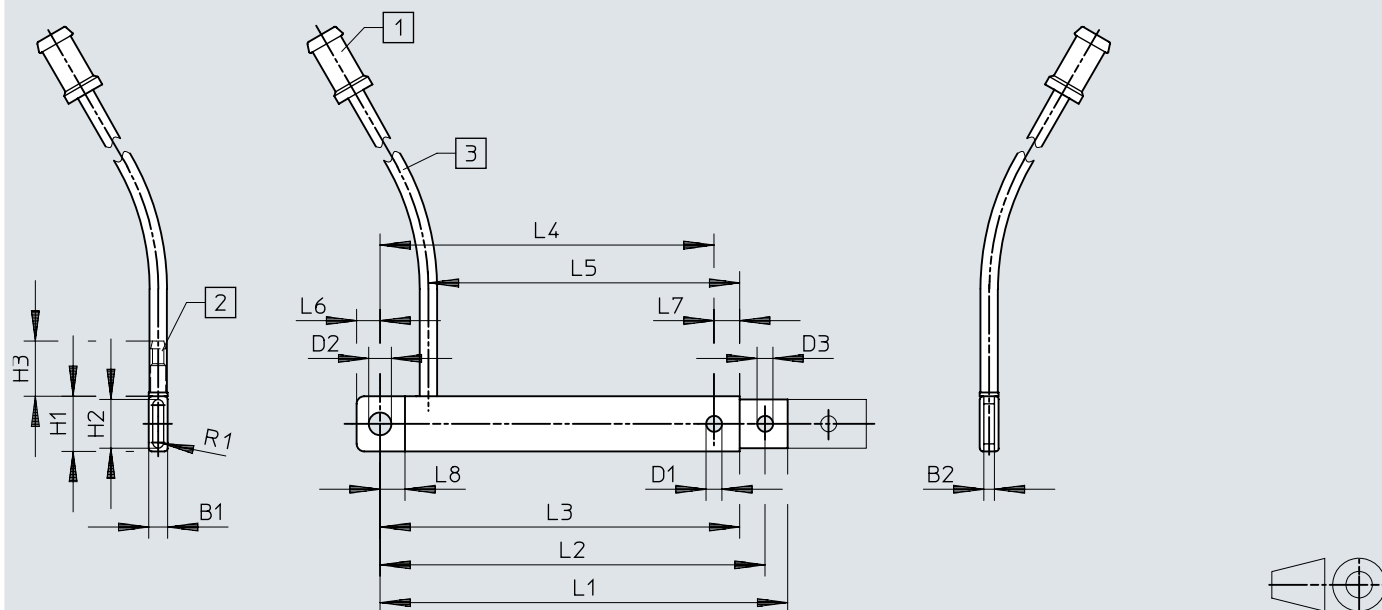
Equivalent piston diameter	3.4 mm [1,5/6,5]	5.5 mm [2,5/9]		11.5 mm [5/20]		22.2 mm [10/40]
Stroke	10 mm		20 mm	25 mm	50 mm	40 mm
Product weight	4 g	11 g	17 g	108 g	145 g	242 g

Materials

Equivalent piston diameter	3.4 mm [1,5/6,5]	5.5 mm [2,5/9]	11.5 mm [5/20]	22.2 mm [10/40]
Material housing	Aluminium			
Material cover	Aluminium			
Material piston rod	PA-reinforced	Copper alloy, Nickel-plated	Steel, Nickel-plated	PA-reinforced
Material seals	NBR			
LABS (PWIS) conformity	VDMA24364 zone III	VDMA24364-B2-L		

Dimensions

Dimensions – Flat cylinder EZH-1.5/6.5-10

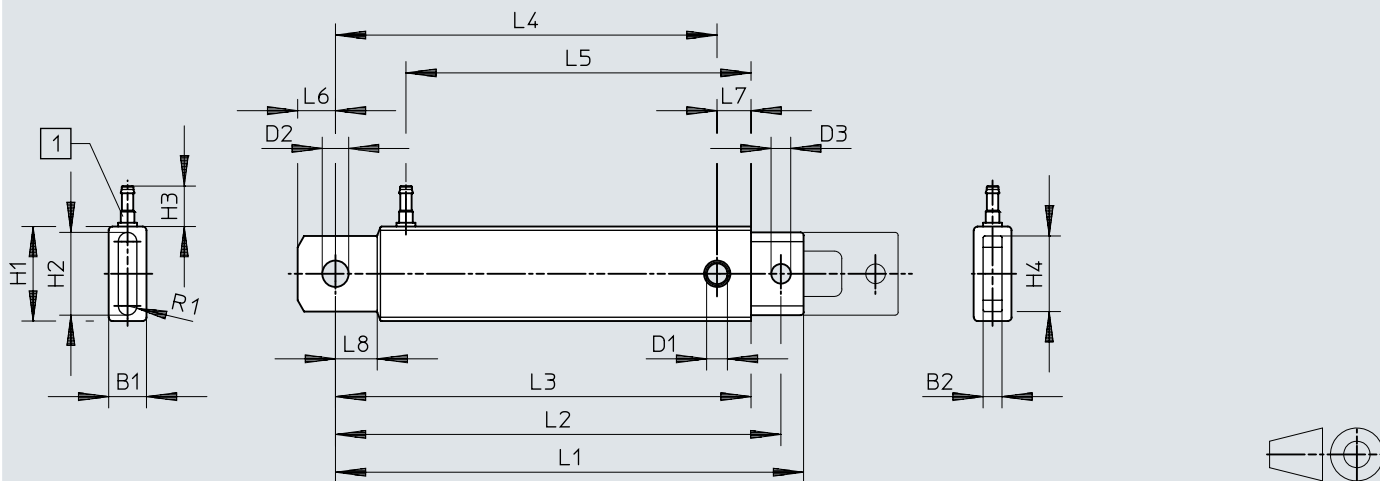
Download CAD data www.festo.com

- [1] Barbed connector for plastic tubing NW 3
 [2] Barbed connector for plastic tubing NW 1.5
 [3] Tubing length 200 mm

	B1	B2	D1 ∅	D2 ∅ H11	D3 ∅	H1	H2	H3	L1	L2	L3	L4	L5	L6	L7	L8	R1
	-0,1								±0,8	±0,9	±0,3	±0,4					
EZH-1,5/6,5-10	2,5	1,4	2,1	3	2,1	7,3	6,45	7,3	54	51	47,6	44,2	41,2	3,1	3,4	3,3	0,725

Dimensions

Dimensions – Flat cylinder EZH-2.5/9-... and EZH-5/20-...

[Download CAD data](#) www.festo.com


[1] Barbed connector for plastic tubing NW 3

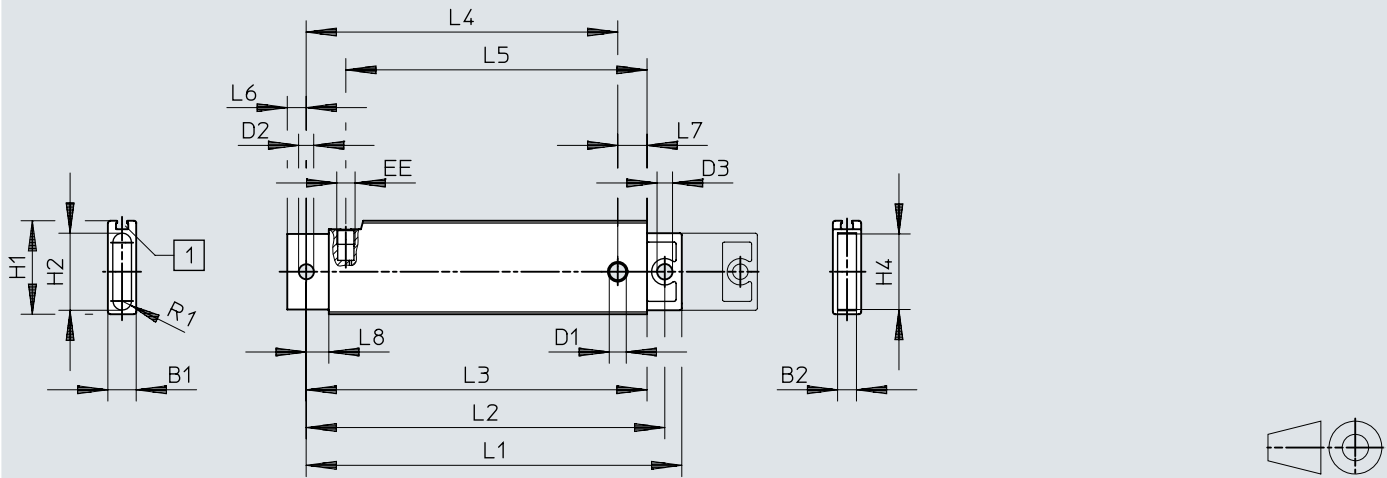
	B1	B2	D1 ø	D2 ø H11	D3 ø	H1	H2	H3	H4
EZH-2.5/9-10	4,9±0,05	2,5	3,1	4	3,1	12	9,9	10,7	9
EZH-2.5/9-20	4,9±0,05	2,5	3,1	4	3,1	12	9,9	10,7	9
EZH-5/20-25	10 _{-0,1}	5	5,5	7	5,2	25	21,9	10,7	20
EZH-5/20-50	10 _{-0,1}	5	5,5	7	5,2	25	21,9	10,7	20

	L1	L2	L3 ±0,3	L4 ±0,4	L5	L6	L7	L8	R1
EZH-2.5/9-10	62,4±0,7	58,4±0,8	54	49,5	43,6	4,5	4,5	5,5	1,2
EZH-2.5/9-20	94,5±0,7	90,5±0,8	86,1	81,6	75,5	4,5	4,5	5,5	1,2
EZH-5/20-25	123,9 _{+0,6/-0,8}	117,9 _{+0,7/-0,9}	110	101	91,3	10	9	11	2,45
EZH-5/20-50	195,9 _{+0,6/-0,8}	189,9 _{+0,7/-0,9}	182	173	163,3	10	9	11	2,45

Dimensions

Dimensions – Flat cylinder EZH-10/40-40-A-B

Download CAD data www.festo.com



[1] Mounting slot for proximity switch SME/SMT-8

	B1	B2	D1 ø	D2 ø H11	D3 ø	EE	H1	H2	H4
	-0,3	-0,2							-0,1/-0,3
EZH-10/40-40-A-B	15	10	8,5	8	8,2	G1/8	49,5	40,7	40

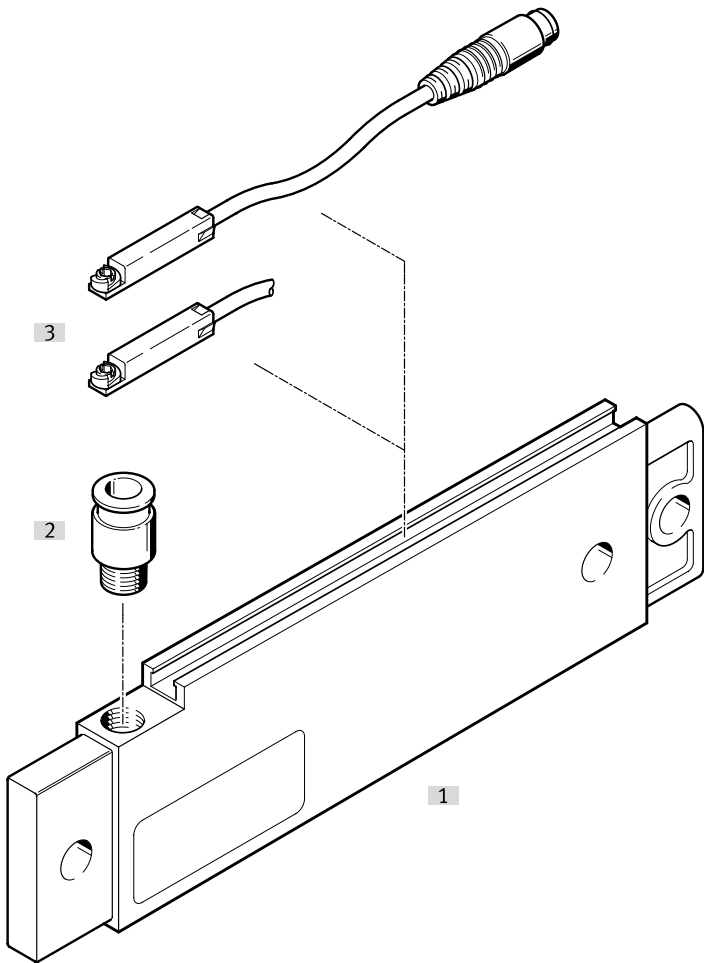
	L1	L2	L3	L4	L5	L6	L7	L8	R1
	+0,7/-1,4	+0,9/-1,6	±0,4	±0,4					
EZH-10/40-40-A-B	198,9	189,9	180,5	165	159,5	10	15,5	12	4,925

Ordering data

Flat cylinder EZH					
	Equivalent piston diameter	Stroke	Position detection	Part no.	Type
	3.4 mm	10 mm	Without	13009	EZH-1,5/6,5-10
	5.5 mm			164991	EZH-2,5/9-10-B
		20 mm		164992	EZH-2,5/9-20-B
	11.5 mm	25 mm		164993	EZH-5/20-25-B
		50 mm		164994	EZH-5/20-50-B
	22.2 mm	40 mm	Via proximity switch	164990	EZH-10/40-40-A-B

Peripherals

Flat cylinder EZH-10/40-...

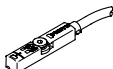


Accessories		→ Link
Type/order code	Description	
[1] Flat cylinder EZH-10/40-...	Single-acting cylinder	ezh
[2] Push-in fitting QS	For connecting compressed air tubing with standard O.D.	qs
[3] Proximity switch SME/SMT-8	Can be integrated in the cylinder profile barrel	10

Accessories

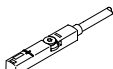
Proximity switch SMT-8M for T-slot, magneto-resistive

Link [smt](#)

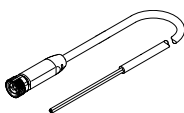
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Screw-clamped, Insertable in the slot from above	3-wire NPN N/O contact	Open end	2.5 m	574338	SMT-8M-A-NS-24V-E-2,5-OE
			Plug M8, A-coded	0.3 m	574339	SMT-8M-A-NS-24V-E-0,3-M8D
		3-wire PNP N/C contact	Open end	7.5 m	574340	SMT-8M-A-PO-24V-E-7,5-OE
		3-wire PNP N/O contact		2.5 m	574335	SMT-8M-A-PS-24V-E-2,5-OE
			Plug M8, A-coded	0.3 m	574334	SMT-8M-A-PS-24V-E-0,3-M8D
			Plug M12, A-coded		574337	SMT-8M-A-PS-24V-E-0,3-M12

Proximity switch SME-8 for T-slot, magnetic reed

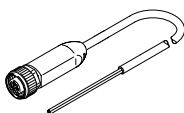
Link [sme](#)

	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Screw-clamped, Insertable in the slot from above	3-wire N/O contact	Open end	2.5 m	543862	SME-8M-DS-24V-K-2,5-OE
				5 m	543863	SME-8M-DS-24V-K-5,0-OE
		2-wire PNP N/O contact	Plug M8, A-coded	0.3 m	543861	SME-8M-DS-24V-K-0,3-M8D
			Open end	2.5 m	543872	SME-8M-ZS-24V-K-2,5-OE
	Clamped in T-slot, Insertable in the slot lengthwise	None			150855	SME-8-K-LED-24
			Plug M8, A-coded	0.3 m	150857	SME-8-S-LED-24
		N/C contact, 3-wire	Open end	7.5 m	160251	SME-8-O-K-LED-24

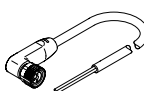
Connecting cables NEBA, straight, M8 connection

	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/cores	Cable length	Part no.	Type
	M8x1, A-coded, to EN 61076-2-104	Open end	3	2.5 m	8078223	NEBA-M8G3-U-2.5-N-LE3
				5 m	8078224	NEBA-M8G3-U-5-N-LE3

Connecting cables NEBA, straight, M12 connection

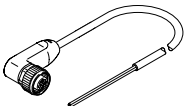
	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/cores	Cable length	Part no.	Type
	M12x1, A-coded to EN 61076-2-101	Open end	3	2.5 m	8078236	NEBA-M12G5-U-2.5-N-LE3
				5 m	8078237	NEBA-M12G5-U-5-N-LE3

Connecting cables NEBA, angled, M8 connection

	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/cores	Cable length	Part no.	Type
	M8x1, A-coded, to EN 61076-2-104	Open end	3	2.5 m	8078230	NEBA-M8W3-U-2.5-N-LE3
				5 m	8078231	NEBA-M8W3-U-5-N-LE3

Accessories

Connecting cables NEBA, angled, M12 connection

	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/cores	Cable length	Part no.	Type
	M12x1, A-coded to EN 61076-2-101	Open end	3	2.5 m	8078245	NEBA-M12W5-U-2.5-N-LE3
				5 m	8078246	NEBA-M12W5-U-5-N-LE3