

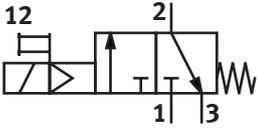
## On/off valve, electric HEE

**FESTO**



## Characteristics

### At a glance



Electric on/off valve for pressurising and exhausting pneumatic systems.

- With solenoid coil, without plug socket
- 3 voltage ranges can be selected
- Ducted exhaust is possible via a threaded connection with silencer
- Manual override, non-detenting and detenting (using override tool AHB-MD/MF/MV)
- Solenoid actuator can be repositioned by 4 x 90°

### Version

[D] D series, metal

Sturdy in full metal design for the specific requirements of the process automation industry

## Type code

001	Series
HEE	On/off valve, electric

002	Pneumatic connection
	None
1/8	Female thread G1/8
1/4	Female thread G1/4
3/8	Female thread G3/8
1/2	Female thread G1/2
3/4	Female thread G3/4
1	Female thread G1

003	Version
D	D series, metal

004	Size
MINI	Grid dimension 40 mm (without connecting plates)
MIDI	Grid dimension 55 mm (without connecting plates)
MAXI	Grid dimension 66 mm (without connecting plates)

005	Rated operating voltage
24	24 V DC
110	110 V AC
230	230 V AC

## Datasheet

### General technical data

Size	Grid dimension 40 mm (without connecting plates)	Grid dimension 55 mm (without connecting plates)	Grid dimension 66 mm (without connecting plates)
Pneumatic connection, port 1 <sup>1)</sup>	G1/8, G1/4, G3/8, 1/8 NPT, 1/4 NPT, 3/8 NPT	G1/4, G3/8, G1/2, G3/4, 3/8 NPT, 1/2 NPT, 3/4 NPT	G1/2, G3/4, G1, 3/4 NPT, 1 NPT
Pneumatic connection, port 2	G1/8, G1/4, G3/8, 1/8 NPT, 1/4 NPT, 3/8 NPT	G1/4, G3/8, G1/2, G3/4, 3/8 NPT, 1/2 NPT, 3/4 NPT	G1/2, G3/4, G1, 3/4 NPT, 1 NPT
Pneumatic connection, port 3	G1/8	G1/4	G3/8
Design	Piston gate valve		
lap	Overlap		
Type of mounting	In-line installation, With accessories		
Mounting position	optional		
Valve function	3/2-way, closed, monostable		
Exhaust-air function	Without flow control option		
Manual override	Detenting		
Type of reset	Mechanical spring		
Type of piloting	Pilot actuated		

1) NPT thread for North America only

### Electrical data

Pneumatic connection, port 1	G1/8	G1/4	G3/8	G1/2	G3/4	G1				
Characteristic coil data	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	24 V DC: 2.5 W	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	24 V DC: 2.5 W	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	24 V DC: 2.5 W	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	24 V DC: 2.5 W	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	24 V DC: 2.5 W
Permissible voltage fluctuations	-14% / +10%	+/- 10%	-14% / +10%	+/- 10%	-14% / +10%	+/- 10%	-14% / +10%	+/- 10%	-14% / +10%	+/- 10%
Switch-on time	-									
Electrical connection	Type C Plugs To DIN EN 175301-803									

### Flow characteristics

Pneumatic connection, port 1	G1/8	G1/4	G3/8	G1/2	G3/4	G1				
Pneumatic connection, port 3	G1/8	G1/4	G1/8	G1/4	G3/8	G1/4	G3/8			
Standard nominal flow rate (standardised to DIN 1343) <sup>1)</sup>	1,000 l/min	1,500 l/min	2,400 l/min	1,600 l/min	3,200 l/min	3,600 l/min	5,600 l/min	3,800 l/min	6,000 l/min	6,500 l/min
C value	4.4 l/sbar	7 l/sbar	7.3 l/sbar	15.7 l/sbar	17 l/sbar	24.2 l/sbar	17.3 l/sbar	28 l/sbar	27.6 l/sbar	27.6 l/sbar
b value	0.44	0.31	0.47	0.28	0.33	0.3	0.41	0.32	0.32	0.32

1) Measured at p1 = 6 bar and p2 = 5 bar, Δp = 1 bar.

### Characteristic flow rate – NPT thread (only for North America)

Pneumatic connection, port 1	1/8 NPT	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT		
Pneumatic connection, port 3	G1/8	G1/4	G3/8	G1/4	G3/8	G3/8		
Standard nominal flow rate (standardised to DIN 1343) <sup>1)</sup>	1,000 l/min	1,500 l/min	1,600 l/min	3,200 l/min	3,600 l/min	3,800 l/min	6,000 l/min	6,500 l/min
C value	4.4 l/sbar	7 l/sbar	7.3 l/sbar	15.7 l/sbar	17 l/sbar	17.3 l/sbar	28 l/sbar	27.6 l/sbar
b value	0.44	0.31	0.28	0.33	0.3	0.41	0.32	0.32

1) Measured at p1 = 6 bar and p2 = 5 bar, Δp = 1 bar.

## Datasheet

### Operating and environmental conditions

Operating pressure	0.25 ... 1.6 MPa
Operating pressure	2.5 ... 16 bar
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4], Inert gases
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature	-10 ... 60°C
Media temperature	-10 ... 60°C
Corrosion resistance class CRC <sup>1)</sup>	2 - Moderate corrosion stress

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

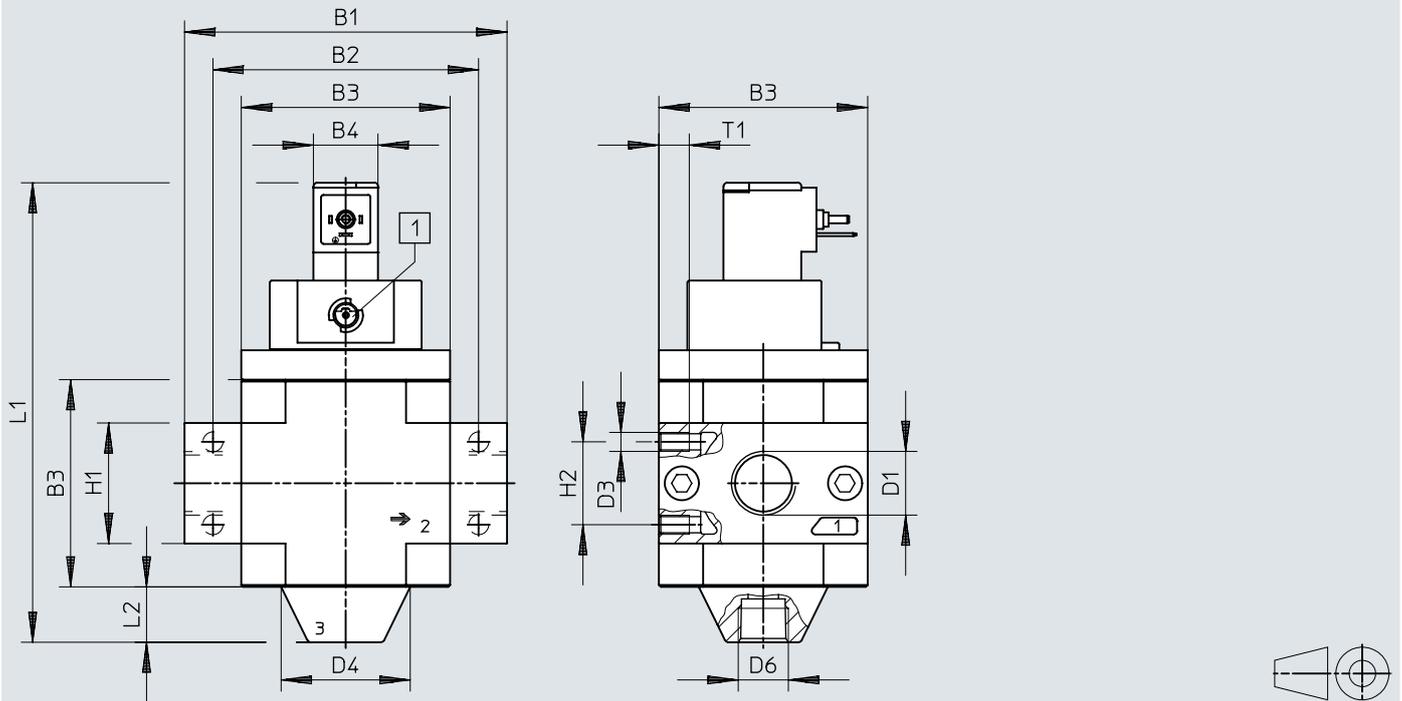
### Materials

Material housing	Die-cast aluminium
Material seals	NBR
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

## Dimensions

Dimensions – Mini/Midi/Maxi, with connecting plates with threaded connection

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



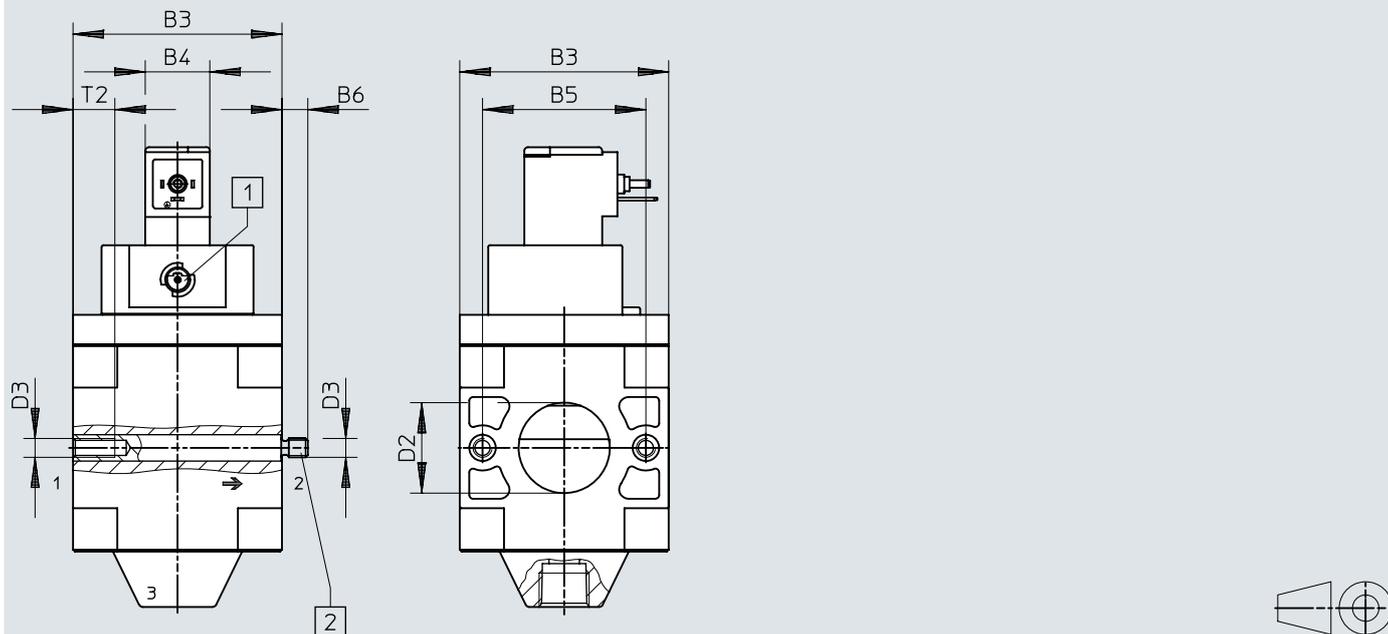
[1] Manual override

	B3	B4	B5	B6	D2 ø	D3	D4 ø	D6	L1	L2	T2
HEE-D-MINI	40	17	30	5,8	11	M4	24	G1/8	104	11	10
HEE-D-MIDI	55	17	43	6,8	24	M5	34	G1/4	122	14	11
HEE-D-MAXI	66	17	46	6,8	30	M5	38	G3/8	135	16	11

## Dimensions

Dimensions – Mini/Midi/Maxi, without connecting plates

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



- [1] Manual override
- [2] Threaded bolt (exchangeable)

	B1	B2	B3	B4	B5	D1	D3	D4 ∅	D6	H1	H2	L1	L2	T1
HEE-1/8-D-MINI	64	52	40	17	30	G1/8	M4	24	G1/8	20	11	104	11	7
HEE-1/4-D-MINI						G1/4								
HEE-3/8-D-MINI						G3/8								
HEE-1/4-D-MIDI	85	70	55	17	43	G1/4	M5	34	G1/4	32	22	122	14	8
HEE-3/8-D-MIDI						G3/8								
HEE-1/2-D-MIDI						G1/2								
HEE-3/4-D-MIDI						G3/4								
HEE-1/2-D-MAXI	96	80	66	17	46	G1/2	M5	38	G3/8	32	22	135	16	8
HEE-3/4-D-MAXI						G3/4								
HEE-1-D-MAXI						G1				40				

1) Note: This product complies with ISO 1179-1 and ISO 228-1.

## Ordering data

Ordering data – metric threads						
Pneumatic connection, port 1 <sup>1)</sup>	Pneumatic connection, port 2 <sup>2)</sup>	Pneumatic connection, port 3	Characteristic coil data	Product weight	Part no.	Type
			24 V DC: 2.5 W		165068	HEE-1/8-D-MINI-24
		G1/8	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	223 g	172957	HEE-D-MINI-110
			230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA		172958	HEE-D-MINI-230
			24 V DC: 2.5 W		172956	HEE-D-MINI-24
		G1/4	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	500 g	172960	HEE-D-MIDI-110
			230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA		172961	HEE-D-MIDI-230
			24 V DC: 2.5 W		172959	HEE-D-MIDI-24
		G3/8	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	800 g	172963	HEE-D-MAXI-110
			230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA		172964	HEE-D-MAXI-230
			24 V DC: 2.5 W		172962	HEE-D-MAXI-24
G1/8	G1/8	G1/8	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	223 g	165070	HEE-1/8-D-MINI-230
G1/4	G1/4				165073	HEE-1/4-D-MINI-230
					165071	HEE-1/4-D-MINI-24
		G1/4	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	500 g	186516	HEE-1/4-D-MIDI-230
			24 V DC: 2.5 W		186515	HEE-1/4-D-MIDI-24
G3/8	G3/8	G1/8	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	223 g	172940	HEE-3/8-D-MINI-230
					165074	HEE-3/8-D-MINI-24
					G1/4	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA
			24 V DC: 2.5 W	172941	HEE-3/8-D-MIDI-24	
			230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	172946	HEE-1/2-D-MIDI-230	
G1/2	G1/2	G3/8	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	800 g	172944	HEE-1/2-D-MIDI-24
					186519	HEE-1/2-D-MAXI-230
					186518	HEE-1/2-D-MAXI-24
G3/4	G3/4	G1/4	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	500 g	172949	HEE-3/4-D-MIDI-230
					172947	HEE-3/4-D-MIDI-24
					G3/8	230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA
			24 V DC: 2.5 W	172950	HEE-3/4-D-MAXI-24	
G1	G1		230 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	800 g	172955	HEE-1-D-MAXI-230
			24 V DC: 2.5 W		172953	HEE-1-D-MAXI-24

1) Connecting plates

2) Connecting plates

## Ordering data

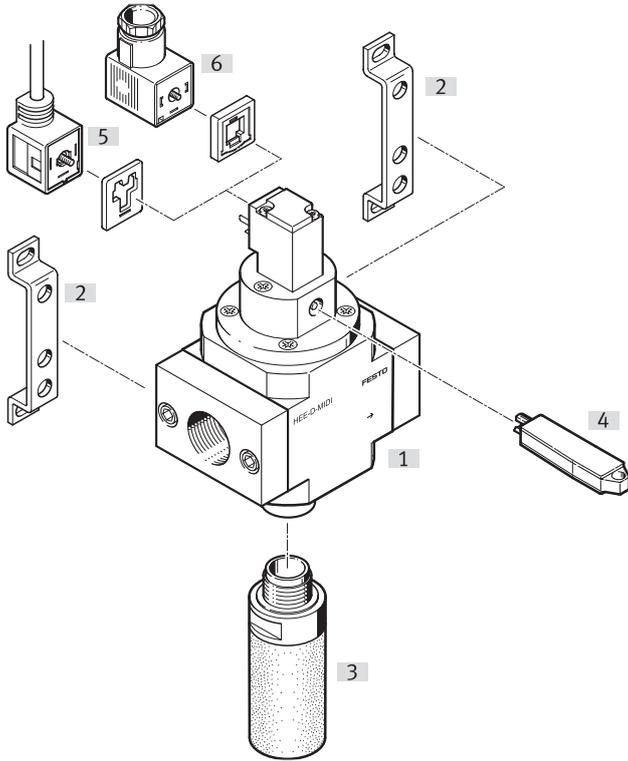
Ordering data – NPT thread (only for North America)						
Pneumatic connection, port 1 <sup>1)</sup>	Pneumatic connection, port 2 <sup>2)</sup>	Pneumatic connection, port 3	Characteristic coil data	Product weight	Part no.	Type
1/8 NPT	1/8 NPT	G1/8	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	223 g	173901	HEE-1/8-D-MINI-110-NPT
			24 V DC: 2.5 W		173900	HEE-1/8-D-MINI-24-NPT
1/4 NPT	1/4 NPT	G1/8	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	223 g	173903	HEE-1/4-D-MINI-110-NPT
			24 V DC: 2.5 W		173902	HEE-1/4-D-MINI-24-NPT
3/8 NPT	3/8 NPT	G1/8	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	223 g	173905	HEE-3/8-D-MINI-110-NPT
			24 V DC: 2.5 W		173904	HEE-3/8-D-MINI-24-NPT
1/2 NPT	1/2 NPT	G1/4	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	500 g	173907	HEE-3/8-D-MIDI-110-NPT
			24 V DC: 2.5 W		173906	HEE-3/8-D-MIDI-24-NPT
3/4 NPT	3/4 NPT	G1/4	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	500 g	173909	HEE-1/2-D-MIDI-110-NPT
			24 V DC: 2.5 W		173908	HEE-1/2-D-MIDI-24-NPT
1 NPT	1 NPT	G3/8	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	800 g	173911	HEE-3/4-D-MIDI-110-NPT
			24 V DC: 2.5 W		173910	HEE-3/4-D-MIDI-24-NPT
1 NPT	1 NPT	G3/8	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	800 g	173913	HEE-3/4-D-MAXI-110-NPT
			24 V DC: 2.5 W		173912	HEE-3/4-D-MAXI-24-NPT
1 NPT	1 NPT	G3/8	110 V AC: 50/60 Hz, pick-up power 5.0 VA, holding power 3.7 VA	800 g	173915	HEE-1-D-MAXI-110-NPT
			24 V DC: 2.5 W		173914	HEE-1-D-MAXI-24-NPT

1) Connecting plates

2) Connecting plates

## Peripherals

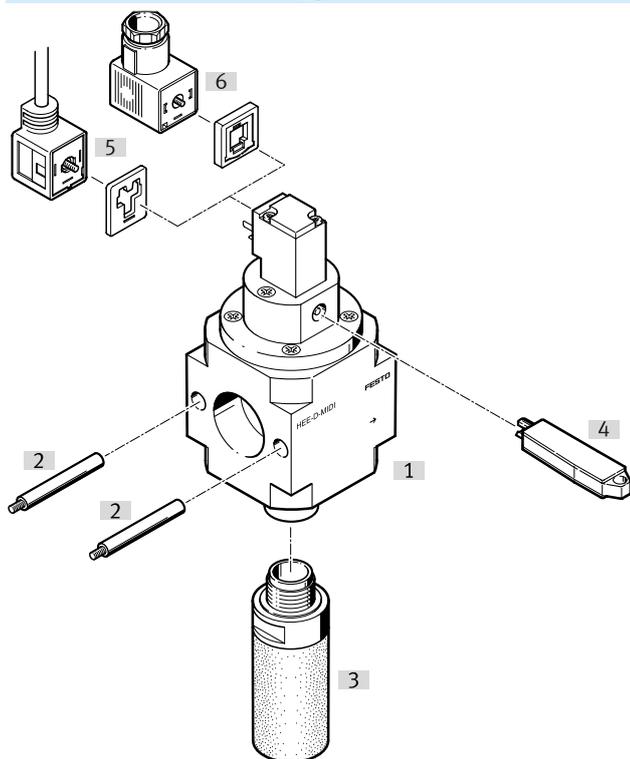
### Individual unit with connecting plates



Accessories		→ Link
Type/order code	Description	
[1]	On/off valve HEE	<a href="#">hee-d</a>
[2]	Mounting bracket HFOE	<a href="#">12</a>
[3]	Silencer U	<a href="#">12</a>
[4]	Manual override AHB-MD/MF/MV	<a href="#">13</a>
[5]	Plug socket with cable KMEB	<a href="#">13</a>
[6]	Plug socket MSSD-EB	For on/off valve MS...-V24P and MS...-V24...-EX2, the plug socket is included in the scope of delivery. <a href="#">12</a>

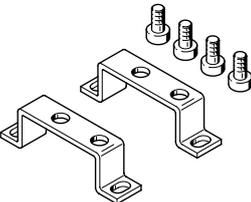
## Peripherals

Individual unit without connecting plates, for service unit combination



Accessories		→ Link
Type/order code	Description	
[1] On/off valve HEE		<a href="#">hee-d</a>
[2] Threaded bolt FRB	Included in the scope of delivery	<a href="#">12</a>
[3] Silencer U		<a href="#">12</a>
[4] Manual override AHB-MD/MF/MV		<a href="#">13</a>
[5] Plug socket with cable KMEB		<a href="#">13</a>
[6] Plug socket MSSD-EB	For on/off valve MS...-V24P and MS...-V24-...-EX2, the plug socket is included in the scope of delivery.	<a href="#">12</a>

## Accessories

Mounting bracket HFOE					
	Corrosion resistance class CRC <sup>1)</sup>	LABS (PWIS) conformity	Product weight	Part no.	Type
	2 - Moderate corrosion stress	VDMA24364-B2-L	66 g	<b>159593</b>	<b>HFOE-D-MIDI/MAXI</b>
		VDMA24364-B1/B2-L		<b>159638</b>	<b>HFOE-D-MINI</b>

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

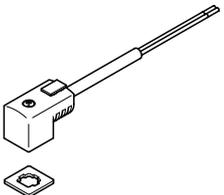
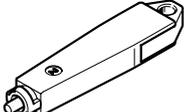
Threaded bolt FRB			
	Size	Part no.	Type
	Grid dimension 40 mm (without sub-bases)	<b>159642</b>	<b>FRB-D-MINI</b>
	Grid dimension 55 mm (without sub-bases)	<b>159595</b>	<b>FRB-D-MIDI</b>
	Grid dimension 66 mm (without sub-bases)	<b>159643</b>	<b>FRB-D-MAXI</b>

Silencer U						
	Pneumatic connection	Flow rate to atmosphere	Sound pressure level	Product weight	Part no.	Type
	G1/8	1,340 l/min	74 dB(A)	8 g	<b>6841</b>	<b>U-1/8-B</b>
	G1/4	2,440 l/min	80 dB(A)	17 g	<b>6842</b>	<b>U-1/4-B</b>
	G3/8	5,800 l/min		37 g	<b>6843</b>	<b>U-3/8-B</b>
	G1/2	7,500 l/min	81 dB(A)	75 g	<b>6844</b>	<b>U-1/2-B</b>
	G3/4	10,000 l/min	83 dB(A)	120 g	<b>6845</b>	<b>U-3/4-B</b>
	G1	17,500 l/min	85 dB(A)	233 g	<b>151990</b>	<b>U-1-B</b>

Illuminating seal MEB-LD					
	Operational voltage range DC	Switching position indicator	Product weight	Part no.	Type
	12 ... 24 V	LED	0.6 g	<b>151717</b>	<b>MEB-LD-12-24DC</b>

Plug socket MSSD-EB					
	Electrical connection	Type of mounting	Product weight	Part no.	Type
	3-pin, Socket, Angled socket, Type C, To DIN EN 175301-803, To DIN EN 61984, Square design MSEB, Square design MSN2	On solenoid valve via M2.5 central screw	11 g	<b>151687</b>	<b>MSSD-EB</b>

## Accessories

Plug socket with cable KMEB						
	Nominal operating voltage DC	Electrical connection 2, number of connections/cores	Signal status display	Cable length	Part no.	Type
		3		2.5 m	151690	KMEB-1-230AC-2.5
				5 m	151691	KMEB-1-230AC-5
	24 V		Yellow LED	2.5 m	151688	KMEB-1-24-2.5-LED
				5 m	151689	KMEB-1-24-5-LED
				10 m	193457	KMEB-1-24-10-LED
Manual override AHB-MD/MF/MV						
	Type of mounting			Part no.	Type	
	Snapping in			157651	AHB-MD/MF/MV	