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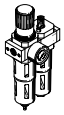
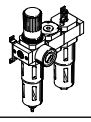
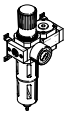
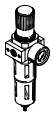
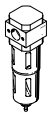
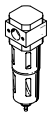
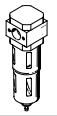
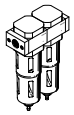
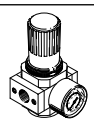
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On/off / soft-start valves HE/HEE/HEP/HEL, D series

FESTO



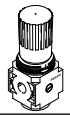
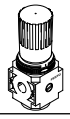
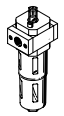
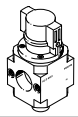
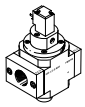
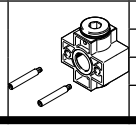
Product range overview – Service unit components, D series, metal

Type		Size	Pneumatic connection										Pressure regulation range [bar]			Grade of filtration [µm]			
			M5	M7	G1/8	G1/4	G3/8	G1/2	G3/4	G1	QS4	QS6	0.5 ... 7	0.5 ... 12	2.5 ... 12	0.01	1	5	40
Service units																			
FRC/FRCS		Micro	■	■	■	–	–	–	–	–	■	■	■	–	–	–	–	■	–
		Mini	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	■	■
		Midi	–	–	–	■	■	■	■	–	–	–	■	■	–	–	–	■	■
		Maxi	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	■	■
Service unit combinations																			
FRC-K		Micro	–																
		Mini	–	–	■	■	–	–	–	–	–	–	–	■	■	–	–	–	■
		Midi	–	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	■
		Maxi	–	–	–	–	–	■	■	–	–	–	–	■	■	–	–	–	■
LFR-K		Micro	–																
		Mini	–	–	■	■	–	–	–	–	–	–	–	■	■	–	–	–	■
		Midi	–	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	■
		Maxi	–	–	–	–	–	■	■	–	–	–	–	■	■	–	–	–	■
Individual devices																			
Filter regulators **LFR/LFRS**		Micro	■	■	■	–	–	–	–	–	■	■	■	–	–	–	–	■	–
		Mini	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	■	■
		Midi	–	–	–	■	■	■	■	–	–	–	■	■	–	–	–	■	■
		Maxi	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	■	■
Filters **LF**		Micro	■	■	■	–	–	–	–	–	■	■	–	–	–	–	–	■	–
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	–	–	–	■	■
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	–	–	–	■	■
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	–	–	–	■	■
Fine and micro filters **LFMA/LFMB**		Micro	–																
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	–	■	■	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	–	■	■	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	–	■	■	–	–
Activated carbon filters **LFX**		Micro	–																
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	–	–	–	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	–	–	–	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	–	–	–	–	–
Filter combinations **LFMBA**		Micro	–																
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	–	■	■	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	–	■	■	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	–	■	■	–	–
Pressure regulators **LR/LRS**		Micro	■	■	■	–	–	–	–	–	■	■	■	–	–	–	–	–	–
		Mini	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	■	■	–	–	–	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	–	–

Product range overview – Service unit components, D series, metal

Type	Size	Bowl guard		Condensate drain			Pressure indicator		Actuator lock		Supply voltage			Options			→ Page/ Internet
		Metal bowl guard	Plastic bowl	Manual	Semi-automatic	Fully automatic	With pressure gauge	Without pressure gauge	Rotary knob with latch	Rotary knob with integrated lock	24 V DC	110 V AC	230 V AC	Directly actuated pressure regulator with integrated return flow function	Pilot actuated pressure regulator with integrated return flow function	Differential pressure display	
Service units																	
FRC/FRCS	Micro	–	■	■	■	–	■	■	■	–	–	–	–	–	–	–	frc
	Mini	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Midi	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	■	■	■	–	–	–	■	■	–	
Service unit combinations																	
FRC-K	Micro	–															frc
	Mini	■	–	■	–	■	■	–	■	–	■	–	–	–	–	–	
	Midi	■	–	■	–	■	■	–	■	–	■	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	–	■	–	■	–	–	■	■	–	
LFR-K	Micro	–															lfr
	Mini	■	–	■	–	■	■	–	■	■	■	–	–	–	–	–	
	Midi	■	–	■	–	■	■	–	■	■	■	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	–	■	■	■	–	–	■	■	–	
Individual devices																	
Filter regulators **LFR/LFRS**	Micro	–	■	■	■	–	■	■	■	–	–	–	–	–	–	–	lfr
	Mini	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Midi	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	■	■	■	–	–	–	■	■	–	
Filters **LF**	Micro	–	■	■	■	–	–	–	–	–	–	–	–	–	–	–	lf
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
Fine and micro filters **LFMA/LFMB**	Micro	–															lfma, lfmb
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
Activated carbon filters **LFX**	Micro	–															lfx
	Mini	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Midi	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Maxi	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Filter combinations **LFMBA**	Micro	–															lfmba
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
Pressure regulators **LR/LRS**	Micro	–	–	–	–	–	■	■	■	–	–	–	–	–	–	–	lr
	Mini	–	–	–	–	–	■	■	■	■	–	–	–	■	–	–	
	Midi	–	–	–	–	–	■	■	■	■	–	–	–	■	–	–	
	Maxi	–	–	–	–	–	■	■	■	■	–	–	–	■	■	–	

Product range overview – Service unit components, D series, metal

Type		Size	Pneumatic connection										Pressure regulation range [bar]	
			M5	M7	G1/8	G1/4	G3/8	G1/2	G3/4	G1	QS4	QS6	0.5 ... 7	0.5 ... 12
Individual devices														
Pressure regulators **LRB/LRBS**		Micro	–											
		Mini	–	–	–	■	–	–	–	–	–	–	■	■
		Midi	–	–	–	–	■	–	–	–	–	–	■	■
		Maxi	–											
Pressure regulator manifolds **LRB-K**		Micro	–											
		Mini	–	–	–	■	■	–	–	–	–	–	■	■
		Midi	–	–	–	–	■	■	–	–	–	–	■	■
		Maxi	–											
Lubricators **LOE**		Micro	■	■	■	–	–	–	–	–	■	■	–	–
		Mini	–	–	■	■	■	–	–	–	–	–	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–
On/off valves **HE**		Micro	–											
		Mini	–	–	■	■	■	–	–	–	–	–	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–
On/off valves **HEE**		Micro	–											
		Mini	–	–	■	■	■	–	–	–	–	–	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–
On/off valves **HEP**		Micro	–											
		Mini	–	–	■	■	■	–	–	–	–	–	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–
Soft-start valves **HEL**		Micro	–											
		Mini	–	–	■	■	■	–	–	–	–	–	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–
Membrane air dryers **LDM1**		Micro	–											
		Mini	–											
		Midi	–											
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–
Branching modules **FRM**		Micro	–											
		Mini	–	–	■	■	■	–	–	–	–	–	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–
Distributor block **FRZ**		Micro	–	–	–	–	–	–	–	–	–	–	–	–
		Mini	–	–	–	–	–	–	–	–	–	–	–	–
		Midi	–	–	–	–	–	–	–	–	–	–	–	–
		Maxi	–	–	–	–	–	–	–	–	–	–	–	–

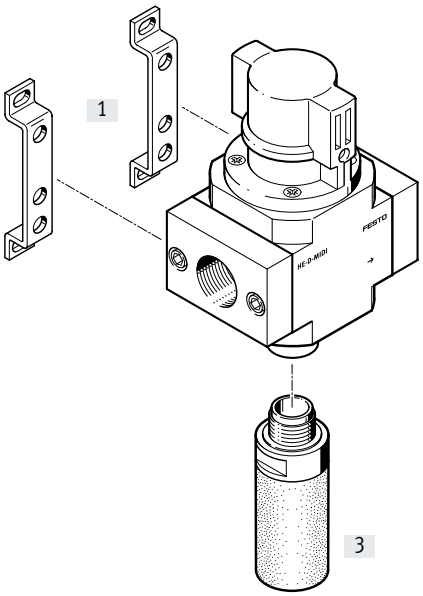
Product range overview – Service unit components, D series, metal

Type	Size	Bowl guard		Pressure indicator		Actuator lock		Supply voltage			Options		→ Page/ Internet
		Metal bowl guard	Plastic bowl	With pressure gauge	Without pressure gauge	Rotary knob with latch	Rotary knob with integrated lock	24 V DC	110 V AC	230 V AC	With non-return function	Pressure switch	
Individual devices													
Pressure regulators **LRB/LRBS**	Micro	–											lrb
	Mini	–	–	–	■	■	■	–	–	–	–	–	
	Midi	–	–	–	■	■	■	–	–	–	–	–	
	Maxi	–	–										
Pressure regulator manifolds **LRB-K**	Micro	–											lrb
	Mini	–	–	–	■	■	–	–	–	–	–	–	
	Midi	–	–	–	■	■	–	–	–	–	–	–	
	Maxi	–	–										
Lubricators **LOE**	Micro	–	■	–	■	–	–	–	–	–	–	–	loe
	Mini	■	–	–	■	–	–	–	–	–	–	–	
	Midi	■	–	–	■	–	–	–	–	–	–	–	
	Maxi	■	–	–	■	–	–	–	–	–	–	–	
On/off valves **HE**	Micro	–											6
	Mini	–	–	–	■	■	–	–	–	–	–	–	
	Midi	–	–	–	■	■	–	–	–	–	–	–	
	Maxi	–	–	–	■	■	–	–	–	–	–	–	
On/off valves **HEE**	Micro	–											12
	Mini	–	–	–	■	–	–	■	■	■	–	–	
	Midi	–	–	–	■	–	–	■	■	■	–	–	
	Maxi	–	–	–	■	–	–	■	■	■	–	–	
On/off valves **HEP**	Micro	–											18
	Mini	–	–	–	■	–	–	–	–	–	–	–	
	Midi	–	–	–	■	–	–	–	–	–	–	–	
	Maxi	–	–	–	■	–	–	–	–	–	–	–	
Soft-start valves **HEL**	Micro	–											24
	Mini	–	–	–	■	–	–	–	–	–	–	–	
	Midi	–	–	–	■	–	–	–	–	–	–	–	
	Maxi	–	–	–	■	–	–	–	–	–	–	–	
Membrane air dryers **LDM1**	Micro	–											ldm1
	Mini	–											
	Midi	–											
	Maxi	■	–	–	■	–	–	–	–	–	–	–	
Branching modules **FRM**	Micro	–											frm
	Mini	–	–	–	■	–	–	–	–	–	■	■	
	Midi	–	–	–	■	–	–	–	–	–	■	■	
	Maxi	–	–	–	■	–	–	–	–	–	■	■	
Distributor block **FRZ**	Micro	–	–	–	■	–	–	–	–	–	–	–	frz
	Mini	–	–	–	■	–	–	–	–	–	–	–	
	Midi	–	–	–	■	–	–	–	–	–	–	–	
	Maxi	–	–	–	■	–	–	–	–	–	–	–	

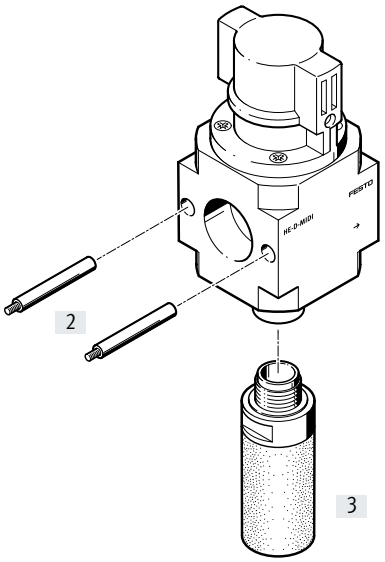
Peripherals overview

Mini/Midi/Maxi

Individual unit with connecting plates



Individual unit without connecting plates, for service unit combination



Mounting attachments and accessories

		Single device		Combination		→ Page/Internet
		With connecting plates	Without connecting plates	With connecting plates	Without connecting plates	
[1]	Mounting bracket HFOE	■	–	■	–	hfoe-d
[2]	Threaded bolt (included in the scope of delivery) FRB	–	–	■	■	frb-d
[3]	Silencer U	■	■	■	■	36

Type codes

001	Series	
HE	Shut-off valve	

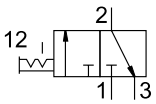
002	Valve function	
2	2/2-way valve	
3	3/2-way valve	

003	Pneumatic connection 1	
1/8	Male thread R1/8	
1/4	Male thread R1/4	
3/8	Male thread R3/8	
1/2	Male thread R1/2	
QS-6	Push-in connector 6 mm	
QS-8	Push-in connector 8 mm	
QS-10	Push-in connector 10 mm	
QS-12	Push-in connector 12 mm	

004	Pneumatic connection 2	
	Same size push-in connector as pneumatic connection 1	
1/8	Male thread R1/8	
1/4	Male thread R1/4	
3/8	Male thread R3/8	
QS-6	Push-in connector 6 mm	
QS-8	Push-in connector 8 mm	
QS-10	Push-in connector 10 mm	
QS-12	Push-in connector 12 mm	

Datasheet

Function



Flow rate
1000 ... 6500 l/min

Temperature range
–10 ... +60°C

Operating pressure
0 ... 16 bar



- 3/2-way manual shut-off valve
- The unit is exhausted when switched off
- Ducted exhaust air possible via a threaded connection
- The switching position is recognisable
- Commercially available padlock for security

General technical data

Size	Mini				Midi					Maxi			
Pneumatic connection 1, 2	G1/8	G1/4	G3/8	–[1]	G1/4	G3/8	G1/2	G3/4	–[1]	G1/2	G3/4	G1	–[1]
Pneumatic connection 3	G1/8				G1/4					G3/8			
Design	Piston spool												
Actuation type	Manual												
Type of mounting	With accessories												
	In-line installation												
Mounting position	Any												
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:4]												
	Inert gases												
Valve function	3/2-way valve, bistable												
Manual override	None												
Exhaust function	Cannot be throttled												
Flow direction	Not reversible												
Sealing principle	Soft												

1) Without connecting plates

Note: This product conforms to ISO 1179-1 and ISO 228-1.

Characteristic flow rate values

Size	Mini			Midi				Maxi		
Pneumatic connection 1, 2	G1/8	G1/4	G3/8	G1/4	G3/8	G1/2	G3/4	G1/2	G3/4	G1
Standard nominal flow rate qnN[1] [l/min]										
In main flow direction 1 → 2	1000	1500	1600	2600	3200	3600	3800	5600	6000	6500
C value [l/s*bar]										
In main flow direction 1 → 2	4.4	7.2	7.5	9.9	15.7	17	17.3	23.7	26.8	25.9
b value										
In main flow direction 1 → 2	0.44	0.28	0.27	0.45	0.3	0.3	0.42	0.32	0.35	0.37

1) Measured at p1 = 6 bar and Δp = 1 bar.

Datasheet

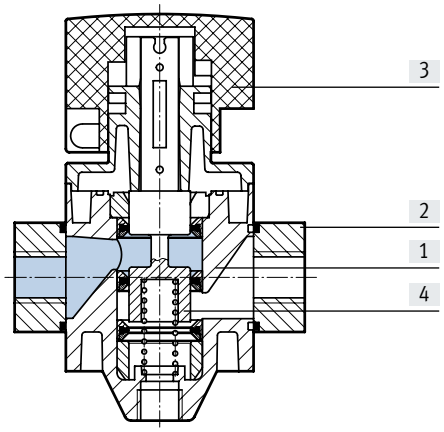
Operating and environmental conditions		
Operating pressure	[bar]	0 ... 16
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
		Inert gases
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature	[°C]	–10 ... +60
Temperature of medium	[°C]	–10 ... +60
Corrosion resistance class CRC[1)]		2

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Weight [g]			
Size	Mini	Midi	Maxi
On/off valve	192	511	796

Materials

Sectional view



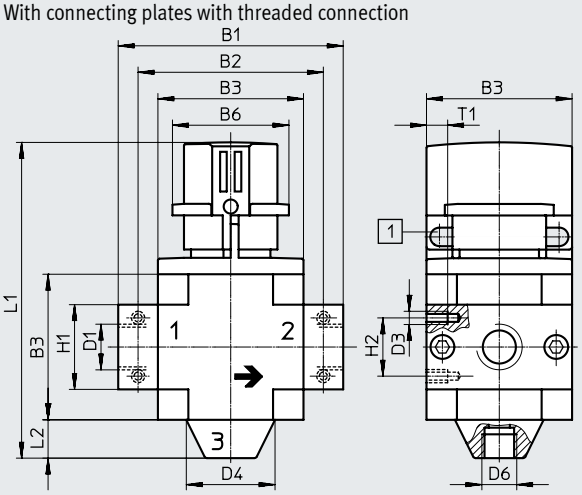
On/off valve		
[1]	Housing	Die-cast aluminium
[2]	Connecting plates	Die-cast zinc
[3]	Rotary knob	PA
[4]	Piston	Stainless steel
–	Seals	NBR
Note on materials		RoHS-compliant

Datasheet

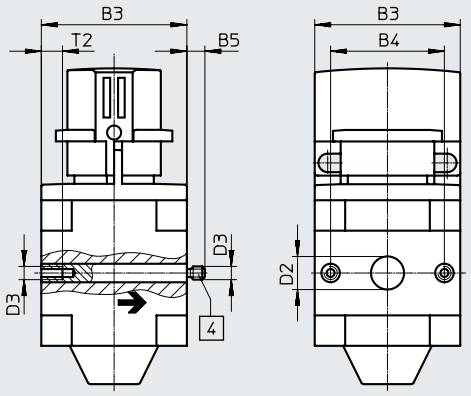
Dimensions Download CAD data ➔ www.festo.com

Mini/Midi/Maxi

With connecting plates with threaded connection



Without connecting plates



[1] Drilled hole for locking with padlock

[4] Threaded bolt (exchangeable)

➔ Flow direction

Type	B1	B2	B3	B4	B5	B6	D1	D2 ø	D3	D4 ø	D6	H1	H2	L1	L2	T1	T2
Mini																	
HE-1/8-D-MINI	64	52	40	30	–	32	G1/8	–	M4	24	G1/8	20	11	100	11	7	–
HE-1/4-D-MINI							G1/4										
HE-3/8-D-MINI	70						G3/8										
HE-D-MINI	–	–			5.8		–	11				–	–			–	10
Midi																	
HE-1/4-D-MIDI	85	70	55	43	–	44	G1/4	–	M5	34	G1/4	32	22	121	14	8	–
HE-3/8-D-MIDI							G3/8										
HE-1/2-D-MIDI							G1/2										
HE-3/4-D-MIDI							G3/4										
HE-D-MIDI	–	–			6.8		–	24				–	–			–	11
Maxi																	
HE-1/2-D-MAXI	96	80	66	46	–	44	G1/2	–	M5	38	G3/8	32	22	134	16	8	–
HE-3/4-D-MAXI							G3/4										
HE-1-D-MAXI	116	91					G1					40					
HE-D-MAXI	–	–			6.8		–	30				–	–			–	11

Note: This product conforms to ISO 1179-1 and ISO 228-1.

Datasheet

Ordering data

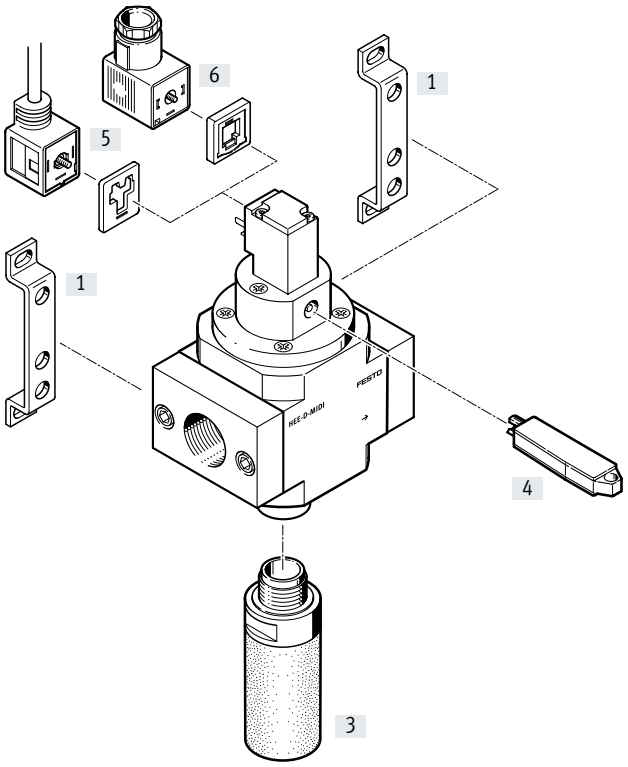
3/2-way valve, normally closed

Size	Connection	Part no.	Type
Without connecting plates			
Mini	–	**170681**	**HE-D-MINI**
Midi	–	**170682**	**HE-D-MIDI**
Maxi	–	**170683**	**HE-D-MAXI**
Connecting plates with threaded connection			
Mini	G1/8	**162806**	**HE-1/8-D-MINI**
	G1/4	**162807**	**HE-1/4-D-MINI**
	G3/8	**162808**	**HE-3/8-D-MINI**
Midi	G1/4	**186513**	**HE-1/4-D-MIDI**
	G3/8	**162809**	**HE-3/8-D-MIDI**
	G1/2	**162810**	**HE-1/2-D-MIDI**
	G3/4	**162811**	**HE-3/4-D-MIDI**
Maxi	G1/2	**186514**	**HE-1/2-D-MAXI**
	G3/4	**162812**	**HE-3/4-D-MAXI**
	G1	**162813**	**HE-1-D-MAXI**

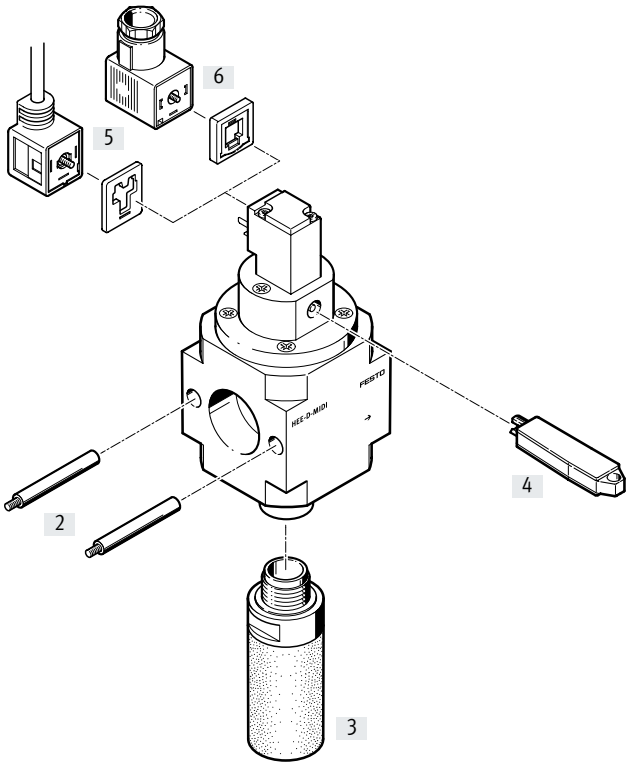
Peripherals overview

Mini/Midi/Maxi

Individual unit with connecting plates



Individual unit without connecting plates, for service unit combination



Mounting attachments and accessories

		Single device		Combination		→ Page/Internet
		With connecting plates	Without connecting plates	With connecting plates	Without connecting plates	
[1]	Mounting bracket HFOE	■	–	■	–	hfoe-d
[2]	Threaded bolt (included in the scope of delivery) FRB	–	–	■	■	frb-d
[3]	Silencer U	■	■	■	■	36
[4]	Manual override non-detenting AHB-MD/MF/MY	■	■	■	■	36
[5]	Plug socket with cable KMEB-1	■	■	■	■	36
[6]	Plug socket MSSD-EB	■	■	■	■	36

Type codes

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	

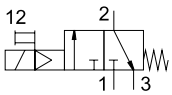
003	Version	
D	D series, metal	

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

Function



- Flow rate
  1000 ... 6500 l/min
- Temperature range
  –10 ... +60°C
- Operating pressure
  2.5 ... 16 bar



- Electric on/off valve for pressurising and exhausting pneumatic systems
- With solenoid coil, without plug socket
- Choice of three voltage ranges
- Ducted exhaust possible via a threaded connection with silencer
- Manual override, non-detenting and detenting (using override tool AHB-MD/MF/MV)
- Solenoid head can be repositioned by 4 x 90°

General technical data													
Size	Mini				Midi					Maxi			
Pneumatic connection 1, 2	G1/8	G1/4	G3/8	–[1]	G1/4	G3/8	G1/2	G3/4	–[1]	G1/2	G3/4	G1	–[1]
Pneumatic connection 3	G1/8				G1/4					G3/8			
Design	Piston spool												
Actuation type	Electrical												
Type of mounting	With accessories												
	In-line installation												
Mounting position	Any												
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:4]												
	Inert gases												
Valve function	3/2-way valve, closed, monostable												
Signal status indication	With accessories												
Manual override	Detenting												
Exhaust function	Cannot be throttled												
Reset method	Mechanical spring												
Type of control	Piloted												
Flow direction	Not reversible												
Sealing principle	Soft												

1) Without connecting plates

Note: This product conforms to ISO 1179-1 and ISO 228-1.

Electrical data		
Characteristic coil data	24	24 V DC: 3.0 W; perm. voltage fluctuations ±10%
	110	110 V AC: 50/60 Hz; pick-up power 5.0 VA; holding power 3.7 VA; permissible voltage fluctuation ±10%
	230	230 V AC: 50/60 Hz; pick-up power 5.0 VA; holding power 3.7 VA; permissible voltage fluctuation –14%/+10%
Electrical connection		Plug, to EN 175301-803, type C
Degree of protection for solenoid coil		IP65
Duty cycle [%]		100

Datasheet

Characteristic flow rate values										
Size	Mini			Midi				Maxi		
Pneumatic connection 1, 2	G1/8	G1/4	G3/8	G1/4	G3/8	G1/2	G3/4	G1/2	G3/4	G1
Standard nominal flow rate qnN[1] [l/min]										
In main flow direction 1 ➔ 2	1000	1500	1600	2600	3200	3600	3800	5600	6000	6500
In relief direction 2 ➔ 3	1000			2000				3000		
C value [l/s*bar]										
In main flow direction 1 ➔ 2	4.4	7	7.3	9.7	15.7	17	17.3	24.2	28	27.6
b value										
In main flow direction 1 ➔ 2	0.44	0.31	0.28	0.47	0.33	0.3	0.41	0.3	0.32	0.32

1) Measured at p1 = 6 bar and Δp = 1 bar.

Operating and environmental conditions				
Supply voltage		24 V DC	110 V AC	230 V AC
Operating pressure	[bar]	2.5 ... 16		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]		
		Inert gases		
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)		
PWIS conformity		VDMA24364-B1/B2-L		
Ambient temperature	[°C]	–10 ... +60		
Temperature of medium	[°C]	–10 ... +60		
Corrosion resistance class CRC[1]		2		
CE marking (see declaration of conformity)[2]		–	To EU Low Voltage Directive	
UKCA marking (see declaration of conformity)[2]		–	To UK regulations for electrical equipment	

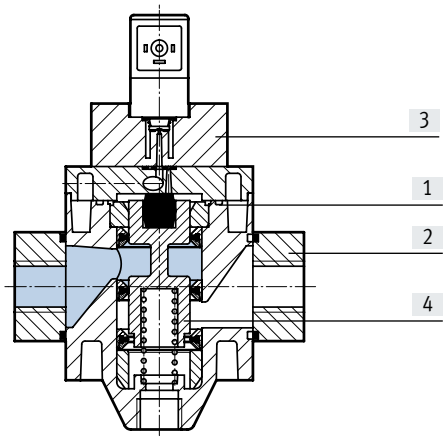
1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

2) More information www.festo.com/catalogue/hee ➔ Support/Downloads.

Weight [g]			
Size	Mini	Midi	Maxi
On/off valve	223	500	800

Materials

Sectional view

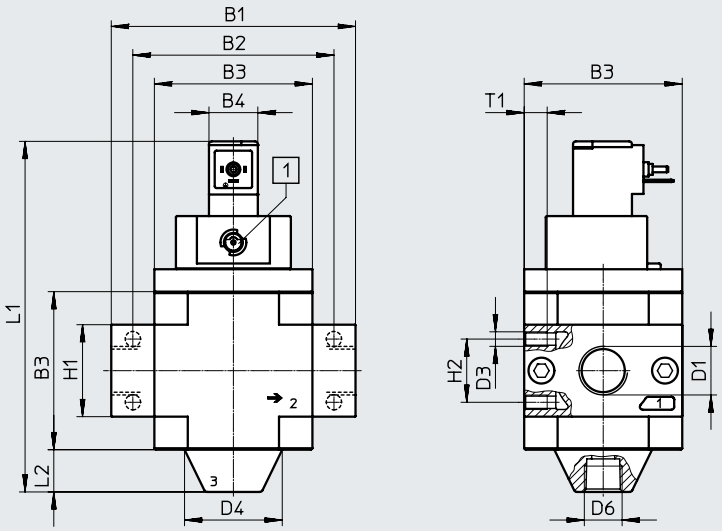


On/off valve		
[1]	Housing	Die-cast aluminium
[2]	Connecting plates	Die-cast zinc
[3]	Solenoid and intermediate plate	PA
[4]	Piston	Stainless steel
–	Seals	NBR
Note on materials		RoHS-compliant

Datasheet

Dimensions Download CAD data ➔ www.festo.com

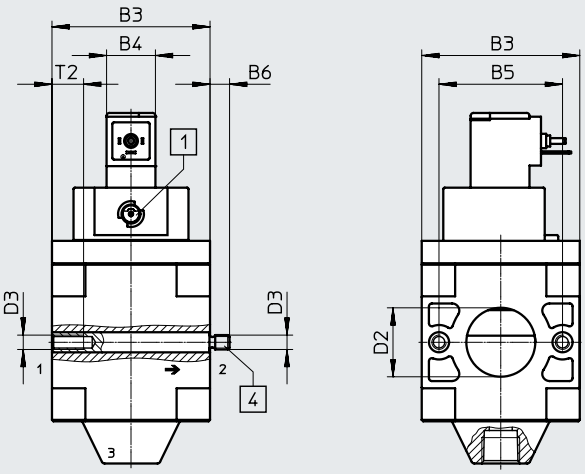
Mini/Midi/Maxi, with connecting plates with threaded connection



[1] Manual override

➔ Flow direction

Mini/Midi/Maxi, without connecting plates



[1] Manual override
[4] Threaded bolt (exchangeable)

➔ Flow direction

Type	B1	B2	B3	B4	B5	B6	D1	D2 ø	D3	D4 ø	D6	H1	H2	L1	L2	T1	T2
Mini																	
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	70						G3/8										
HEE-D-MINI	–	–				5.8	–	11				–	–			–	10
Midi																	
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-D-MIDI	–	–				6.8	–	24				–	–			–	11
Maxi																	
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	116	91					G1					40					
HEE-D-MAXI	–	–				6.8	–	30				–	–			–	11

Note: This product conforms to ISO 1179-1 and ISO 228-1.

Datasheet

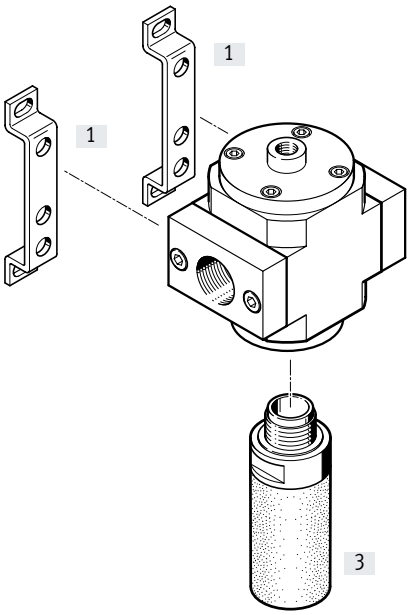
Ordering data
3/2-way valve, normally closed

Size	Connection	24 V DC		110 V AC		230 V AC	
		Part no.	Type	Part no.	Type	Part no.	Type
Without connecting plates							
Mini	–	**172956**	**HEE-D-MINI-24**	**172957**	**HEE-D-MINI-110**	**172958**	**HEE-D-MINI-230**
Midi	–	**172959**	**HEE-D-MIDI-24**	**172960**	**HEE-D-MIDI-110**	**172961**	**HEE-D-MIDI-230**
Maxi	–	**172962**	**HEE-D-MAXI-24**	**172963**	**HEE-D-MAXI-110**	**172964**	**HEE-D-MAXI-230**
Connecting plates with threaded connection							
Mini	G1/8	**165068**	**HEE-1/8-D-MINI-24**			**165070**	**HEE-1/8-D-MINI-230**
	G1/4	**165071**	**HEE-1/4-D-MINI-24**			**165073**	**HEE-1/4-D-MINI-230**
	G3/8	**165074**	**HEE-3/8-D-MINI-24**			**172940**	**HEE-3/8-D-MINI-230**
Midi	G1/4	**186515**	**HEE-1/4-D-MIDI-24**			**186516**	**HEE-1/4-D-MIDI-230**
	G3/8	**172941**	**HEE-3/8-D-MIDI-24**			**172943**	**HEE-3/8-D-MIDI-230**
	G1/2	**172944**	**HEE-1/2-D-MIDI-24**			**172946**	**HEE-1/2-D-MIDI-230**
	G3/4	**172947**	**HEE-3/4-D-MIDI-24**			**172949**	**HEE-3/4-D-MIDI-230**
Maxi	G1/2	**186518**	**HEE-1/2-D-MAXI-24**			**186519**	**HEE-1/2-D-MAXI-230**
	G3/4	**172950**	**HEE-3/4-D-MAXI-24**			**172952**	**HEE-3/4-D-MAXI-230**
	G1	**172953**	**HEE-1-D-MAXI-24**			**172955**	**HEE-1-D-MAXI-230**

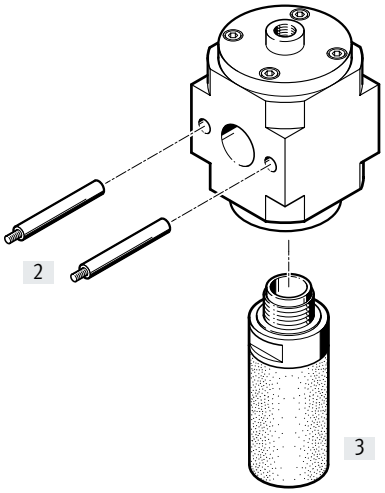
Peripherals overview

Mini/Midi/Maxi

Individual unit with connecting plates



Individual unit without connecting plates, for service unit combination



Mounting attachments and accessories

		Single device		Combination		→ Page/Internet
		With connecting plates	Without connecting plates	With connecting plates	Without connecting plates	
[1]	Mounting bracket HFOE	■	–	■	–	hfoe-d
[2]	Threaded bolt (included in the scope of delivery) FRB	–	–	■	■	frb-d
[3]	Silencer U	■	■	■	■	36

Type codes

001	Series	
HEP	On/off valve	

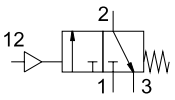
002	Pneumatic connection	
	None	
1/8	Female thread G1/8	
1/4	Female thread G1/4	
3/8	Female thread G3/8	
1/2	Female thread G1/2	
3/4	Female thread G3/4	
1	Female thread G1	

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)	

Datasheet

Function



Flow rate
800 ... 6500 l/min

Temperature range
–10 ... +60°C

Operating pressure
0 ... 16 bar



- Pneumatically actuated on-off valve for pressurising and exhausting pneumatic systems
- The valve can be used as an individual device or in combination with other D-series modules

General technical data													
Size	Mini				Midi					Maxi			
Pneumatic connection 1, 2	G1/8	G1/4	G3/8	–[1]	G1/4	G3/8	G1/2	G3/4	–[1]	G1/2	G3/4	G1	–[1]
Pneumatic connection 3	G1/8				G1/4					G3/8			
Pilot air port 12	G1/8												
Design	Piston spool												
Actuation type	Pneumatic												
Type of mounting	With accessories												
	In-line installation												
Mounting position	Any												
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:4]												
	Inert gases												
Valve function	3/2-way valve, closed, monostable												
Manual override	None												
Exhaust function	Cannot be throttled												
Reset method	Mechanical spring												
Flow direction	Not reversible												
Sealing principle	Soft												

1) Without connecting plates

Note: This product conforms to ISO 1179-1 and ISO 228-1.

Datasheet

Characteristic flow rate values										
Size	Mini			Midi				Maxi		
Pneumatic connection 1, 2	G1/8	G1/4	G3/8	G1/4	G3/8	G1/2	G3/4	G1/2	G3/4	G1
Standard nominal flow rate qnN[1] [l/min]										
In main flow direction 1 → 2	1000	1500	1600	2600	3500	3900	4100	5600	6000	6500
In relief direction 2 → 3	800			1900				2400		
C value [l/s*bar]										
In main flow direction 1 → 2	4.3	7.2	7.7	10.1	15.5	16.6	16.2	24.2	28	27.6
b value										
In main flow direction 1 → 2	0.48	0.34	0.3	0.46	0.33	0.4	0.47	0.3	0.32	0.32

1) Measured at p1 = 6 bar and Δp = 1 bar.

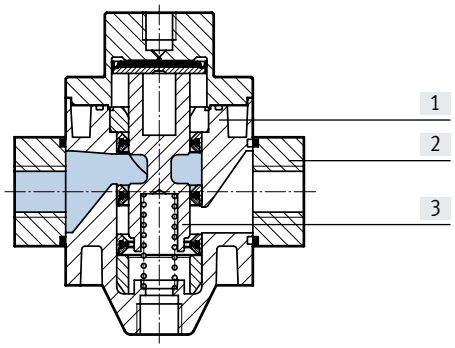
Operating and environmental conditions		
Operating pressure	[bar]	0 ... 16
Pilot pressure	[bar]	3 ... 16
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
		Inert gases
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature	[°C]	–10 ... +60
Temperature of medium	[°C]	–10 ... +60
Corrosion resistance class CRC[1]		2

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Weight [g]			
Size	Mini	Midi	Maxi
On/off valve	223	500	800

Materials

Sectional view



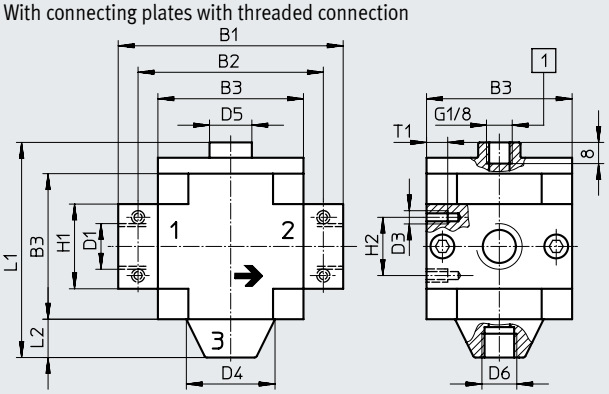
On/off valve		
[1]	Housing	Die-cast aluminium
[2]	Connecting plates	Die-cast zinc
[3]	Piston	Stainless steel
–	Seals	NBR
Note on materials		RoHS-compliant

Datasheet

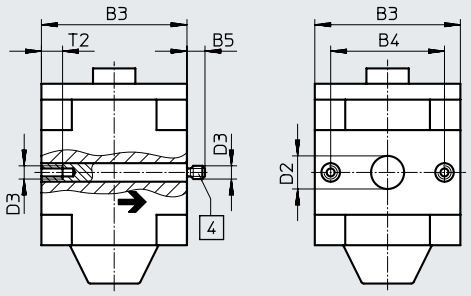
Dimensions Download CAD data ➔ www.festo.com

Mini/Midi/Maxi

With connecting plates with threaded connection



Without connecting plates



[1] Threaded connection for pilot air (12)

[4] Threaded bolt (exchangeable)

➔ Flow direction

Type	B1	B2	B3	B4	B5	D1	D2 ø	D3	D4 ø	D5	D6	H1	H2	L1	L2	T1	T2
Mini																	
HEP-1/8-D-MINI	64	52	40	30	–	G1/8	–	M4	24	16	G1/8	20	11	73.8	11	7	–
HEP-1/4-D-MINI						G1/4											
HEP-3/8-D-MINI	70					G3/8											
HEP-D-MINI	–	–			5.8	–	11					–	–			–	10
Midi																	
HEP-1/4-D-MIDI	85	70	55	43	–	G1/4	–	M5	34	32	G1/4	32	22	94.6	14	8	–
HEP-3/8-D-MIDI						G3/8											
HEP-1/2-D-MIDI						G1/2											
HEP-3/4-D-MIDI						G3/4											
HEP-D-MIDI	–	–			6.8	–	24					–	–			–	11
Maxi																	
HEP-1/2-D-MAXI	96	80	66	46	–	G1/2	–	M5	38	16	G3/8	32	22	95.6	16	8	–
HEP-3/4-D-MAXI						G3/4											
HEP-1-D-MAXI	116	91				G1						40					
HEP-D-MAXI	–	–			6.8	–	30					–	–			–	11

Note: This product conforms to ISO 1179-1 and ISO 228-1.

Datasheet

Ordering data

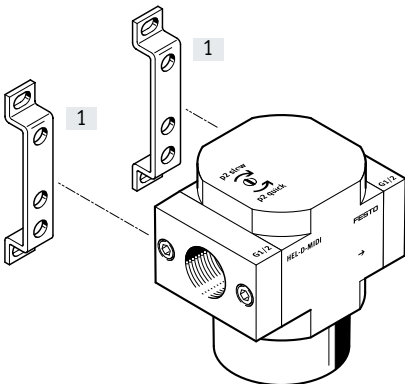
3/2-way valve, normally closed

Size	Connection	Part no.	Type
Without connecting plates			
Mini	–	**193242**	**HEP-D-MINI**
Midi	–	**193249**	**HEP-D-MIDI**
Maxi	–	**193257**	**HEP-D-MAXI**
Connecting plates with threaded connection			
Mini	G1/8	**193243**	**HEP-1/8-D-MINI**
	G1/4	**193244**	**HEP-1/4-D-MINI**
	G3/8	**193245**	**HEP-3/8-D-MINI**
Midi	G1/4	**193250**	**HEP-1/4-D-MIDI**
	G3/8	**193251**	**HEP-3/8-D-MIDI**
	G1/2	**193252**	**HEP-1/2-D-MIDI**
	G3/4	**193253**	**HEP-3/4-D-MIDI**
Maxi	G1/2	**193258**	**HEP-1/2-D-MAXI**
	G3/4	**193259**	**HEP-3/4-D-MAXI**
	G1	**193260**	**HEP-1-D-MAXI**

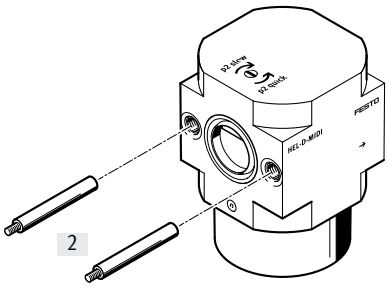
Peripherals overview

Mini/Midi/Maxi

Individual unit with connecting plates



Individual unit without connecting plates, for service unit combination



Mounting attachments and accessories

		Single device		Combination		→ Page/Internet
		With connecting plates	Without connecting plates	With connecting plates	Without connecting plates	
[1]	Mounting bracket HFOE	■	–	■	–	hfoe-d
[2]	Threaded bolt (included in the scope of delivery) FRB	–	–	■	■	frb-d

Type codes

001	Series	
HEL	Soft-start valve	

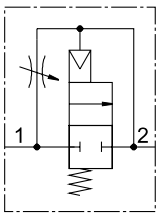
002	Pneumatic connection	
	None	
1/8	Female thread G1/8	
1/4	Female thread G1/4	
3/8	Female thread G3/8	
1/2	Female thread G1/2	
3/4	Female thread G3/4	
1	Female thread G1	

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)	

Datasheet

Function



Flow rate
1000 ... 6500 l/min

Temperature range
–10 ... +60°C

Operating pressure
3 ... 16 bar



The duration of the pressure build-up is set using the restrictor attached to the valve cap.

The outlet pressure p2 rises slowly in accordance with the restrictor setting. The main seat opens when the switch-through pressure is reached.

- Pneumatically actuated soft-start valve for slowly pressurising and venting pneumatic systems (for use with on/off valves HE and HEE)
- The drives move slowly and reliably into the initial position
- Sudden and erratic movements are avoided
- Main seat opening at approx. 50% of input pressure
- Adjustable switching time delay

General technical data

Size	Mini				Midi					Maxi			
Pneumatic connection 1, 2	G1/8	G1/4	G3/8	–[1]	G1/4	G3/8	G1/2	G3/4	–[1]	G1/2	G3/4	G1	–[1]
Design	Piston spool												
Actuation type	Pneumatic												
Type of mounting	With accessories												
	In-line installation												
Mounting position	Any												
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:4]												
	Inert gases												
Valve function	2/2-way valve, closed, monostable												
Manual override	None												
Exhaust function	Can be throttled												
Reset method	Mechanical spring												
Type of control	Direct												
Flow direction	Not reversible												
Sealing principle	Soft												

1) Without connecting plates

Note: This product conforms to ISO 1179-1 and ISO 228-1.

Characteristic flow rate values

Size	Mini			Midi				Maxi		
Pneumatic connection 1, 2	G1/8	G1/4	G3/8	G1/4	G3/8	G1/2	G3/4	G1/2	G3/4	G1
Standard nominal flow rate qnN[1] [l/min]										
In main flow direction 1 → 2	1000	1500	1600	2600	3200	3600	3800	5600	6000	6500
C value [l/s*bar]										
In main flow direction 1 → 2	4.5	7.1	7.6	9	16.5	19.8	20.5	26.9	33.9	28.3
b value										
In main flow direction 1 → 2	0.46	0.41	0.3	0.59	0.39	0.37	0.48	0.36	0.38	0.54

1) Measured at p1 = 6 bar and Δp = 1 bar.

Datasheet

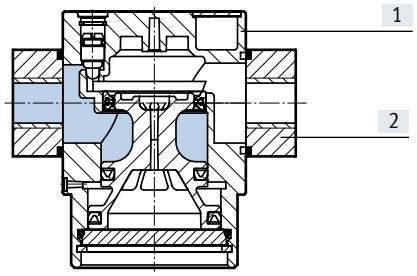
Operating and environmental conditions		
Operating pressure	[bar]	3 ... 16
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
		Inert gases
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature	[°C]	–10 ... +60
Temperature of medium	[°C]	–10 ... +60
Corrosion resistance class CRC[1)]		2

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Weight [g]			
Size	Mini	Midi	Maxi
Soft-start valve	126	270	394

Materials

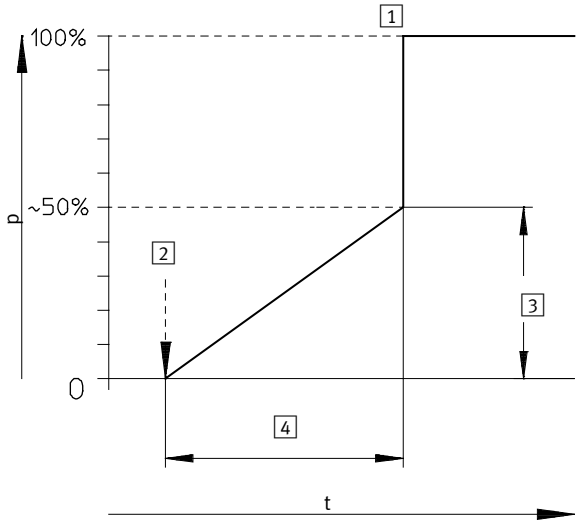
Sectional view



Soft-start valve		
[1]	Housing	Die-cast aluminium
[2]	Connecting plates	Die-cast zinc
–	Seals	NBR
Note on materials		RoHS-compliant

Switching point

Pressure p as a function of time t

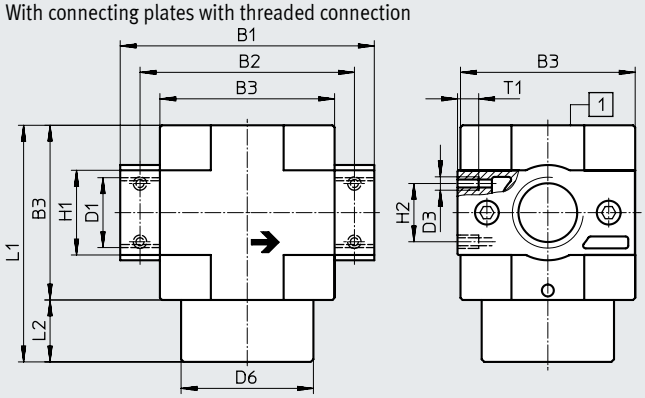


[1] Operating pressure p2 (= p1)
[2] Start signal
[3] Gradual pressure build-up
[4] Switching time delay

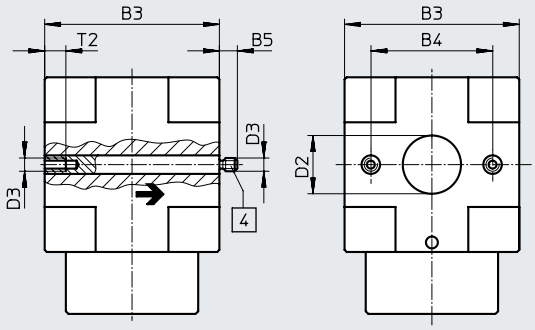
Datasheet

Dimensions Download CAD data ➔ www.festo.com

With connecting plates with threaded connection



Without connecting plates



[1] Adjusting screw in housing

[4] Threaded bolt (exchangeable)

➔ Flow direction

Type	B1	B2	B3	B4	B5	D1	D2 ø	D3	D6	H1	H2	L1	L2	T1	T2
Mini															
HEL-1/8-D-MINI	64	52	40	30	–	G1/8	–	M4	30	20	11	56	16	7	–
HEL-1/4-D-MINI						G1/4									
HEL-3/8-D-MINI	70					G3/8									
HEL-D-MINI	–	–			5.8	–	11			–	–			–	10
Midi															
HEL-1/4-D-MIDI	85	70	55	43	–	G1/4	–	M5	50	32	22	77	22	8	–
HEL-3/8-D-MIDI						G3/8									
HEL-1/2-D-MIDI						G1/2									
HEL-3/4-D-MIDI						G3/4									
HEL-D-MIDI	–	–			6.8	–	24			–	–			–	11
Maxi															
HEL-1/2-D-MAXI	96	80	66	46	–	G1/2	–	M5	50	32	22	89	23	8	–
HEL-3/4-D-MAXI						G3/4									
HEL-1-D-MAXI	116	91				G1				40					
HEL-D-MAXI	–	–			6.8	–	30			–	–			–	11

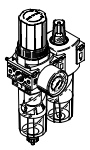
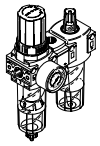
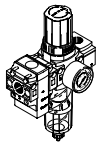
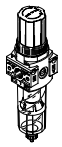
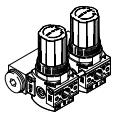
Note: This product conforms to ISO 1179-1 and ISO 228-1.

Datasheet

Ordering data
2/2-way valve, normally closed

Size	Connection	Part no.	Type
Without connecting plates			
Mini	–	**170690**	**HEL-D-MINI**
Midi	–	**170691**	**HEL-D-MIDI**
Maxi	–	**170692**	**HEL-D-MAXI**
Connecting plates with threaded connection			
Mini	G1/8	**165076**	**HEL-1/8-D-MINI**
	G1/4	**165077**	**HEL-1/4-D-MINI**
	G3/8	**165078**	**HEL-3/8-D-MINI**
Midi	G1/4	**186521**	**HEL-1/4-D-MIDI**
	G3/8	**165079**	**HEL-3/8-D-MIDI**
	G1/2	**165080**	**HEL-1/2-D-MIDI**
	G3/4	**165081**	**HEL-3/4-D-MIDI**
Maxi	G1/2	**186522**	**HEL-1/2-D-MAXI**
	G3/4	**165082**	**HEL-3/4-D-MAXI**
	G1	**165083**	**HEL-1-D-MAXI**

Product range overview – Service unit components, D series, polymer

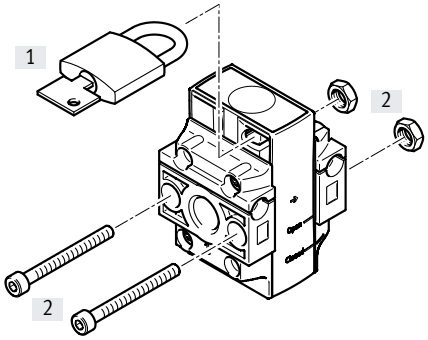
Type		Size	Pneumatic connection		Pressure regulation range [bar]	Grade of filtration [µm]	
			G1/4	G1/2	0.5 ... 7	5	40
Service units							
FRC		Mini	■	–	■	■	■
Service unit combinations							
FRC-K		Mini	■	–	■	–	■
LFR-K		Mini	■	–	■	–	■
Individual devices							
Filter regulators **LFR**		Mini	■	–	■	■	■
Pressure regulators **LR**		Mini	■	–	■	–	–
Pressure regulator manifolds **LRB-K**		Mini	–	■	■	–	–
On/off valves **HE**		Mini	■	–	–	–	–

Product range overview – Service unit components, D series, polymer

Type	Size	Condensate drain		Pressure indicator		Actuator lock	Regulating functions		→ Page/ Internet
		Manual	Semi-automatic	With pressure gauge	Without pressure gauge	Rotary knob with latch	With secondary exhausting	With return flow function	
Service units									
FRC	Mini	■	■	■	–	■	■	■	frc
Service unit combinations									
FRC-K	Mini	■	–	■	–	■	■	■	frc
LFR-K	Mini	■	–	■	–	■	■	■	lfr
Individual devices									
Filter regulators **LFR**	Mini	■	■	■	■	■	■	■	lfr
Pressure regulators **LR**	Mini	–	–	■	■	■	■	■	lr
Pressure regulator manifolds **LRB-K**	Mini	–	–	–	■	■	■	■	lrb
On/off valves **HE**	Mini	–	–	–	■	–	–	–	32

Peripherals overview

Peripherals overview



Mounting attachments and accessories

		→ Page/Internet
[1]	Padlock LRVS-D	36
[2]	Socket head screw with hex nut for mounting with the following service unit component (2 included in the scope of delivery) DIN 912-M4X40-8.8/DIN 934-M4-6AU	–
–	Socket head screw for wall mounting (2 included in the scope of delivery) DIN 84-M4X45-4.8	–

Type codes

Type codes

001	Series	
HE	On/off-exhaust valve	

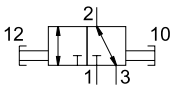
002	Pneumatic connection	
1/4	Female thread G1/4	

003	Version	
DB	D series, polymer	

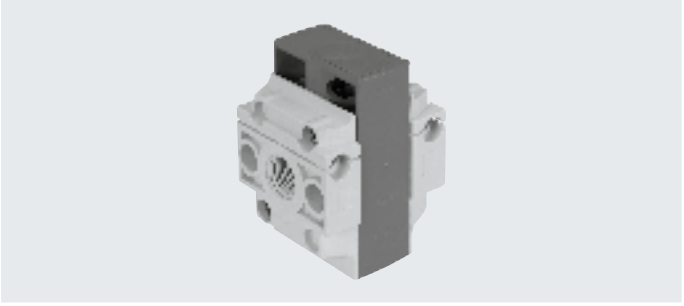
004	Size	
MINI	Grid dimension 40 mm (without connecting plates)	

Datasheet

Function



- Flow rate
  2300 l/min
- Temperature range
  –5 ... +50°C
- Operating pressure
  0 ... 10 bar



- 3/2-way manual shut-off valve
- The switching position is recognisable
- Commercially available padlock for security

General technical data	
Size	Mini
Pneumatic connection 1, 2	G1/4
Design	On/off valve
Actuation type	Manual
Type of mounting	In-line installation
	Via through-hole
Mounting position	Any
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:4]
	Inert gases
Valve function	3/2-way valve, bistable
Actuator lock	Padlock (optional)
Manual override	None
Exhaust function	Cannot be throttled
Type of control	Direct
Sealing principle	Soft

Characteristic flow rate values	
Pneumatic connection 1, 2	G1/4
Standard nominal flow rate qnN[1] [l/min]	
In main flow direction 1 ➔ 2	2300
In relief direction 2 ➔ 3	700
C value [l/s*bar]	
In main flow direction 1 ➔ 2	6.3
b value	
In main flow direction 1 ➔ 2	0.28

1) Measured at p1 = 6 bar and Δp = 1 bar.

Datasheet

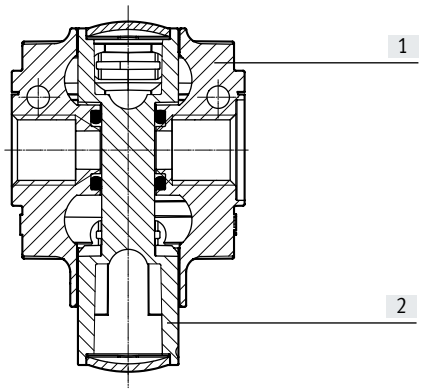
Operating and environmental conditions		
Size		Mini
Operating pressure	[bar]	0 ... 10
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
		Inert gases
Note on the operating/ pilot medium		Lubricated operation not possible
Ambient temperature	[°C]	–5 ... +50
Temperature of medium	[°C]	–5 ... +50
Corrosion resistance class CRC[1)]		1

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal 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).

Weight [g]	
Size	Mini
On/off valve	66

Materials

Sectional view

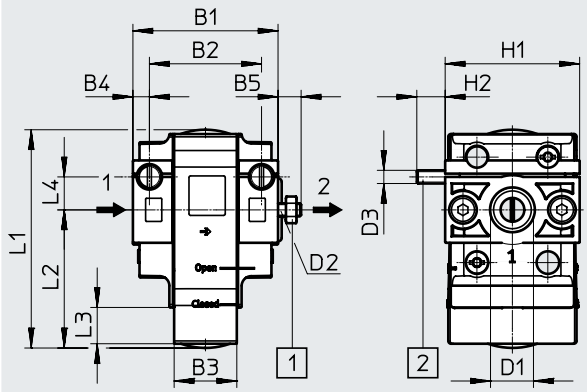


On/off valve		Mini
[1]	Housing	Reinforced PA
[2]	Piston spool	POM
–	Seals	FPM
Note on materials		RoHS-compliant

Dimensions

Download CAD data ➔ www.festo.com

Mini



[1] Socket head screw with hex nut for mounting with the following service unit component (2 included in the scope of delivery)
[2] Socket head screw for wall mounting (2 included in the scope of delivery)

➔ Flow direction

Type	B1	B2	B3	B4	B5	D1	D2	D3	H1	H2	L1	L2	L3	L4
HE-1/4-DB	44	34	19	5	7	G1/4	M4	M4	41	9	66	42	11	10

Ordering data			
Size	Connection	Part no.	Type
Mini	G1/4	**3563687**	**HE-1/4-DB-MINI**

Accessories

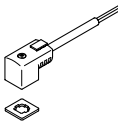
Ordering data – Plug socket MSSD

Datasheets → Internet: mssd

	Description	Electrical connection	Type of mounting for cable connection	Part no.	Type
	For HEE	3-pin	Clamping screws	**151687**	**MSSD-EB**
		4-pin	Insulation displacement technology	**192745**	**MSSD-EB-S-M14**

Ordering data – Plug socket with cable KMEB

Datasheets → Internet: kmeb

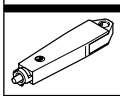
	Description	Operating voltage	Electrical connection	Switching status indication	Cable length [m]	Part no.	Type
	For HEE	24 V DC	3-pin	LED	2.5	**151688**	**KMEB-1-24-2.5-LED**
					5	**151689**	**KMEB-1-24-5-LED**
					10	**193457**	**KMEB-1-24-10-LED**
		230 V AC	3-pin	–	2.5	**151690**	**KMEB-1-230AC-2.5**
					5	**151691**	**KMEB-1-230AC-5**

Ordering data – Illuminating seal MEB-LD

Datasheets → Internet: meb

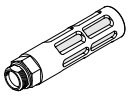
	Description	Operating voltage range	Part no.	Type
	For plug socket with cable KMEB and plug socket MSSD-EB	12 ... 24 V DC	**151717**	**MEB-LD-12-24DC**
		230 V DC/AC ±10%	**151718**	**MEB-LD-230AC**

Ordering data – Manual override AHB-MD/MF/MV

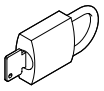
	Description	Part no.	Type
	Turn 90° to actuate and lock manual override	**157651**	**AHB-MD/MF/MV**

Ordering data – Silencer U

Datasheets → Internet: u

	Pneumatic connection	Part no.	Type
	G1/8	**6841**	**U-1/8-B**
	G1/4	**6842**	**U-1/4-B**
	G3/8	**6843**	**U-3/8-B**
	G1/2	**6844**	**U-1/2-B**
	G3/4	**6845**	**U-3/4-B**
	G1	**151990**	**U-1-B**

Ordering data – Padlock LRVS-D

	Weight [g]	Part no.	Type
	120	**193786**	**LRVS-D**

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