Solenoid valves MFHE/Pneumatic valves VLHE

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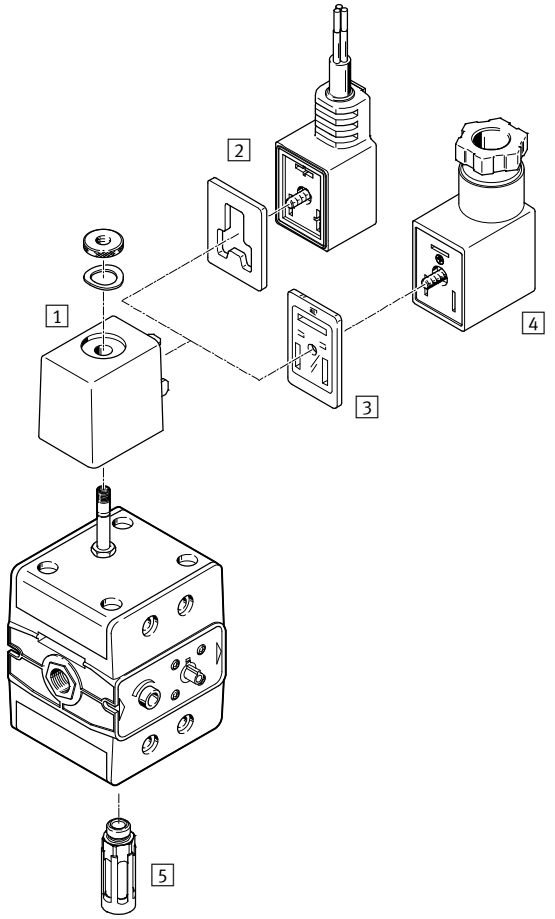
Solenoid valves MFHE/Pneumatic valves VLHE

Peripherals overview



Accessories			
MFHE	VLHE	➔ Page/Internet	
1 Solenoid coil MSFG/MSFW	■	–	8
2 Plug socket with cable KMF	■	–	8
3 Illuminating seal MF-LD	■	–	8
4 Plug socket MSSD-F	■	–	8
5 Silencer U	■	■	8

Solenoid valves MFHE

Technical data

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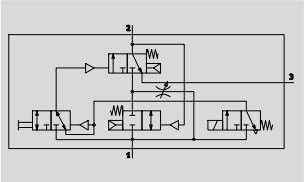
Function



- Flow rate
  1,200 ... 2,900 l/min
- Temperature range
  –10 ... +60 °C
- Operating pressure
  2 ... 10 bar/28 ... 145 psi
- www.festo.com

Solenoid actuated soft start valve for gradual pressure build-up in pneumatic systems. This ensures safe start-up of pneumatic systems.
A minimal amount of air flows into the system via an adjustable flow control valve. Output pressure is built up slowly. Downstream cylinders and working devices are slowly advanced to their initial positions. When the output pressure reaches approx. 50% of the supply pressure, the valve switches to full flow.

- For F solenoid coils
  – 12, 24, 42 V DC
  – 24, 42, 48, 110, 230, 240 V AC (50 ... 60 Hz)
- On-off valve in combination with service units
- Manual override, detenting

Note

Manual override can be detented and secured in the initial position. In the depressed position, the manual override is advanced automatically to its initial position when the valve is actuated.

Note

Control voltage should not be switched to downstream solenoid valves until after pressure has been built up.

General technical data				
Type		MFHE-3-¼-B	MFHE-3-⅜	MFHE-3-½
Pneumatic connection 1, 2		G¼	G⅜	G½
Pneumatic connection 3		G¼	G⅜	G½
Nominal diameter	[mm]	8	9	12
Design		Disk seat		
Type of mounting		Via through-holes		
Mounting position		Any		
Valve function		3/2-way valve, closed, single solenoid		
Exhaust function		Without flow control		
Reset method		Mechanical spring		
Actuation type		Direct		
Direction of flow		Non-reversible		
Sealing principle		Soft		
Response time on/off	[ms]	12/80	20/94	28/76

Standard nominal flow rate qnN [l/min]				
Pneumatic connection		G¼	G⅜	G½
In flow direction 1 → 2	unthrottled	1,200	2,100	2,900
	throttled	max. 150	max. 450	max. 450
In venting direction 2 → 3		1,600	2,700	3,400

Solenoid valves MFHE

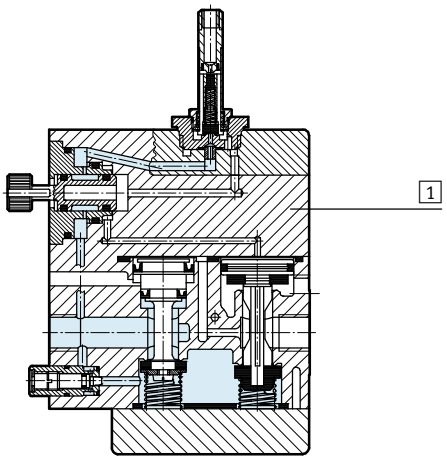
Technical data

Operating and environmental conditions		
Operating pressure	[bar]	2 ... 10
	[psi]	28 ... 145
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)
Ambient temperature	[°C]	–5 ... +40
Temperature of medium	[°C]	–10 ... +60

Weights [g]			
Pneumatic connection	G¼	G⅜	G½
Solenoid valve MFHE	550	800	1,000

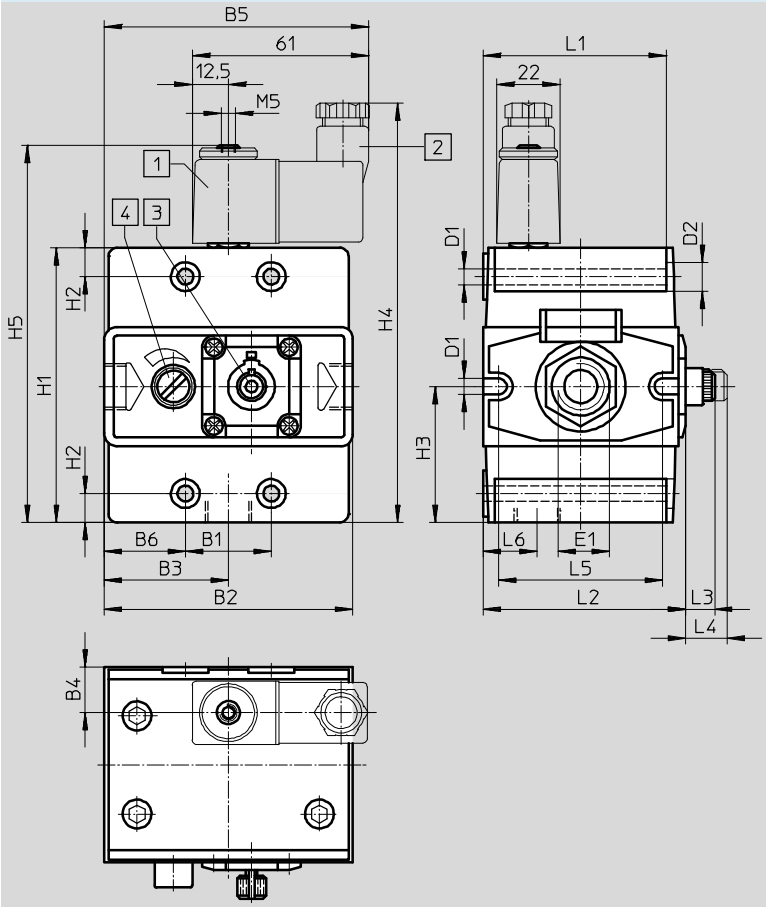
Materials

Sectional view



Solenoid valve	
1 Housing	POM, aluminium, steel, brass
– Seals	NBR
Note on materials	RoHS-compliant (only MFHE-3-¼-B)

Dimensions Download CAD data ➔ **www.festo.com**



1 Rotatable solenoid coil
2 Plug socket can be repositioned by 180°
3 Manual override
4 Regulating screw for flow control valve

Type	B1	B2	B3	B4	B5	B6	D1 ∅	D2 ∅	E1	H1
MFHE-3-¼-B	27	71	36.55	16.4	85.05	22	5.5	10	G¼	82
MFHE-3-⅜	29.7	86	43	15.7	91.5	28.2	5.5	10	G⅜	95
MFHE-3-½	29.7	90.7	45.3	20.3	93.8	30.5	6.5	11	G½	98.2

Type	H2	H3	H4	H5	L1	L2	L3	L4	L5	L6
MFHE-3-¼-B	10	40	132	116	55.6	64.3	10	14.3	47.2	16.5
MFHE-3-⅜	10	47	145	129	63.4	70.1	10	14.3	56.6	18.7
MFHE-3-½	10.1	46.7	148	132	71.6	76	10	14.7	63.7	22.9

Ordering data

Pneumatic connection	Part No.	Type
G¼	**14329**	**MFHE-3-¼-B**
G⅜	**12908**	**MFHE-3-⅜**
G½	**10421**	**MFHE-3-½**

Pneumatic valves VLHE

Technical data

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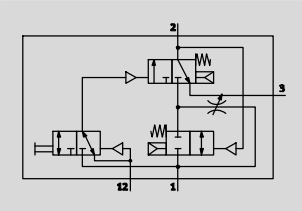
Function



- Flow rate
  1,200 ... 2,900 l/min
- Temperature range
  –10 ... +60 °C
- Operating pressure
  2 ... 12 bar/28 ... 180 psi
- www.festo.com

Pneumatically actuated soft start valve for gradual pressure build-up in pneumatic systems. This ensures safe start-up of pneumatic systems.
A minimal amount of air flows into the system via an adjustable flow control valve. Output pressure is built up slowly. Downstream cylinders and work devices are slowly advanced to their initial positions. When the output pressure reaches approx. 50% of the supply pressure, the valve switches to full flow.

- On-off valve in combination with service units
- Manual override, detenting

- Note

Manual override can be detented and secured in the initial position. In the depressed position, the manual override is advanced automatically to its initial position when the valve is actuated.

General technical data				
Type		VLHE-3-¼-B	VLHE-3-⅜	VLHE-3-½
Pneumatic connection 1, 2		G¼	G⅜	G½
Pneumatic connection 3		G¼	G⅜	G½
Pneumatic connection 12 (pilot air)		G⅛	G⅛	G⅛
Nominal diameter	[mm]	8	9	12
Design		Disk seat		
Type of mounting		Via through-holes		
Mounting position		Any		
Valve function		3/2-way valve, closed, single solenoid		
Exhaust function		With flow control		
Sealing principle		Soft		
Response time on/off	[ms]	8/23	8.5/19.5	25/39

Standard nominal flow rate qnN [l/min]				
Pneumatic connection		G¼	G⅜	G½
In flow direction 1 ⇢ 2	unthrottled	1,200	2,100	2,900
	throttled	max. 150	max. 450	max. 450
In venting direction 2 ⇢ 3		1,600	2,700	3,400

Operating and environmental conditions		
Operating pressure	[bar]	2 ... 12
	[psi]	28 ... 180
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)
Ambient temperature	[°C]	–10 ... +60
Temperature of medium	[°C]	–10 ... +60

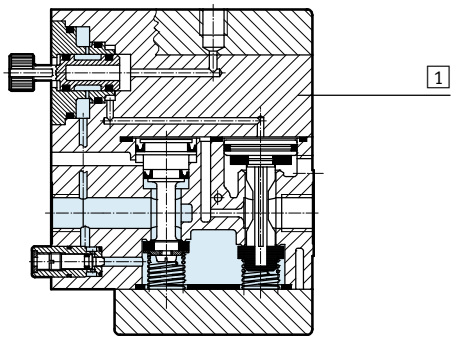
Weights [g]			
Pneumatic connection	G¼	G⅜	G½
Pneumatic valve VLHE	430	790	980

Pneumatic valves VLHE

Technical data

Materials

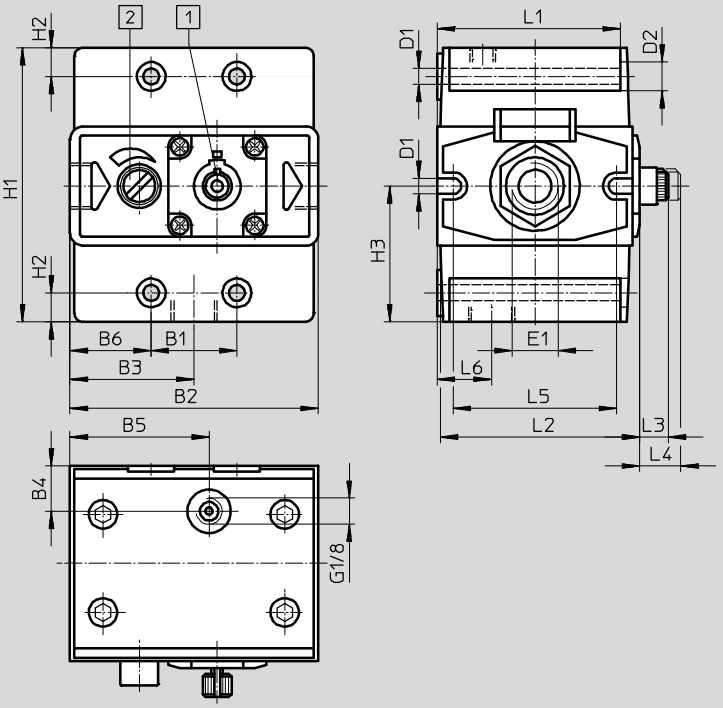
Sectional view



Pneumatic valve	
1 Housing	POM, aluminium, steel, brass
– Seals	NBR
Note on materials	RoHS-compliant (only VLHE-3-¼-B)

Dimensions

Download CAD data ➔ **www.festo.com**



1 Manual override
2 Regulating screw for flow control valve

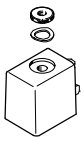
Type	B1	B2	B3	B4	B5	B6	D1 ∅	D2 ∅	E1
VLHE-3-¼-B	27	71	36.5	16.5	40	22	5.5	10	G¼
VLHE-3-⅜	29.7	86	43	15.7	48.2	28	5.5	10	G⅜
VLHE-3-½	29.7	90.7	45.3	20.2	51	30.5	6.5	11	G½

Type	H1	H2	H3	L1	L2	L3	L4	L5	L6
VLHE-3-¼-B	82	10	40	55.6	64.3	10	14.3	47.2	16.5
VLHE-3-⅜	95	10	47	63.4	70.1	10	14.3	56.6	18.7
VLHE-3-½	98.2	10.1	46.7	71.6	76	10	14.7	63.7	22.9

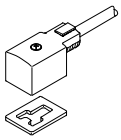
Ordering data

Pneumatic connection	Part No.	Type
G¼	**14330**	**VLHE-3-¼-B**
G⅜	**12909**	**VLHE-3-⅜**
G½	**10420**	**VLHE-3-½**

Ordering data – Solenoid coils MSFG/MSFW — Technical data ➔ Internet: msf

	Description	Operating voltage		Part No.	Type
		V DC	V AC (50 ... 60 Hz)		
	F solenoid coil, with spring washer and knurled nut, without plug socket	12	–	**34410**	**MSFG-12DC-OD**
		24	42	**34411**	**MSFG-24DC/42AC-OD**
		42	–	**34413**	**MSFG-42DC-OD**
		–	24	**34415**	**MSFW-24AC-OD**
		–	48	**34418**	**MSFW-48AC-OD**
		–	110	**34420**	**MSFW-110AC-OD**
		–	230	**34422**	**MSFW-230AC-OD**
		–	240	**34424**	**MSFW-240AC-OD**

Ordering data – Plug sockets with cable KMF — Technical data ➔ Internet: kmf

	Nominal operating voltage	Switching status display	Cable length [m]	Part No.	Type
	24 V DC	LED	2.5	**30935**	**KMF-1-24DC-2,5-LED**
			5	**30937**	**KMF-1-24DC-5-LED**
			10	**193458**	**KMF-1-24-10-LED**
	230 V AC	–	2.5	**30936**	**KMF-1-230AC-2,5**
			5	**30938**	**KMF-1-230AC-5**

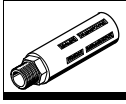
Ordering data – Illuminating seal MF-LD — Technical data ➔ Internet: mf

	Operating voltage range	Part No.	Type
	12 ... 24 V DC	**19143**	**MF-LD-12-24DC**
	230 V DC/V AC ±10%	**19144**	**MF-LD-230AC**

Ordering data – Plug sockets MSSD-F — Technical data ➔ Internet: mssd

	Type of mounting: cable connection	Part No.	Type
	Cable conduit fitting Pg9	**34431**	**MSSD-F**
	Cable conduit fitting M16	**539710**	**MSSD-F-M16**
	Insulation displacement connector	**192746**	**MSSD-F-S-M16**

Ordering data – Silencers U — Technical data ➔ Internet: u

	Pneumatic connection	Part No.	Type
	G¼	**6842**	**U-¼-B**
	G⅜	**6843**	**U-⅜-B**
	G½	**6844**	**U-½-B**