

Solenoid valves MFHE/Pneumatic valves VLHE

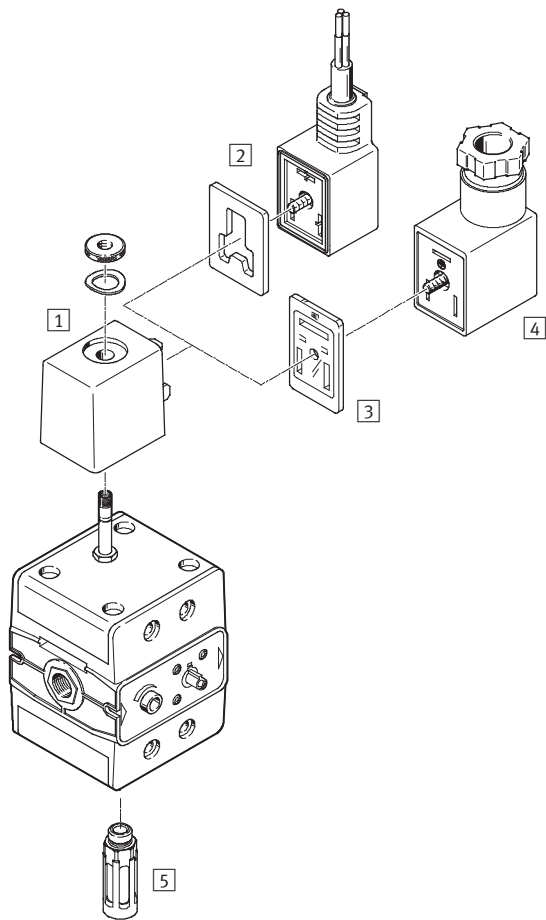
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Solenoid valves MFHE/Pneumatic valves VLHE

Peripherals overview

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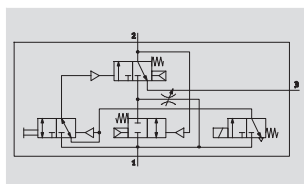
Accessories			
	MFHE	VLHE	→ Page/Internet
1 Solenoid coil MSFG/MSFW	■	–	8
2 Plug socket with cable KMF	■	–	8
3 Illuminating seal MF-LD	■	–	8
4 Plug socket MSSD-F	■	–	8
5 Silencer U	■	■	8

Solenoid valves MFHE

Technical data

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Function



Flow rate

1,200 ... 2,900 l/min

Temperature range

-10 ... +60 °C

Pressure

2 ... 10 bar/28 ... 145 psi

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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-3-1/4-B	MFHE-3-3/8	MFHE-3-1/2
Pneumatic connection 1, 2	G1/4	G3/8	G1/2
Pneumatic connection 3	G1/4	G3/8	G1/2
Nominal diameter [mm]	8	9	12
Design	Disk seat		
Type of mounting	Via through-holes		
Mounting position	Any		
Valve function	3/2-way valve, single solenoid, closed		
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	G1/4	G3/8	G1/2
In flow direction			
1 → 2 unthrottled	1,200	2,100	2,900
1 → 2 throttled	max. 150	max. 450	max. 450
In venting direction			
2 → 3	1,600	2,700	3,400

Solenoid valves MFHE

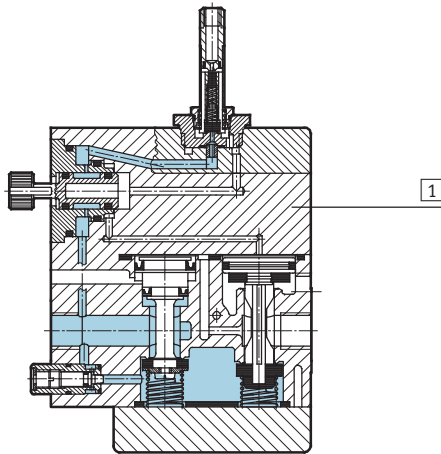
Technical data

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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	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$
Solenoid valve MFHE	550	800	1,000

Materials	
Sectional view	



Solenoid valve		
1	Housing	Polyacetal, aluminium, steel, brass
-	Seals	Nitrile rubber

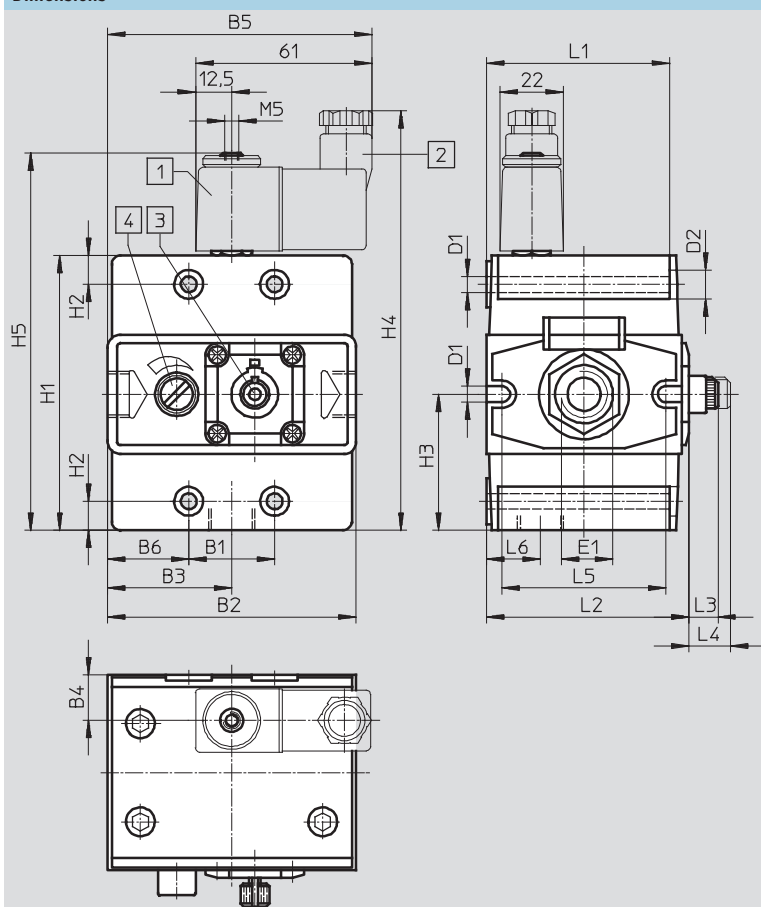
Solenoid valves MFHE

Technical data

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Dimensions

Download CAD Data → www.festo.com/us/cad



- 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 Ø	D2 Ø	E1	H1
MFHE-3-1/4-B	27	71	36.55	16.4	85.05	22	5.5	10	G1/4	82
MFHE-3-3/8	29.7	86	43	15.7	91.5	28.2	5.5	10	G3/8	95
MFHE-3-1/2	29.7	90.7	45.3	20.3	93.8	30.5	6.5	11	G1/2	98.2

Type	H2	H3	H4	H5	L1	L2	L3	L4	L5	L6
MFHE-3-1/4-B	10	40	132	116	55.6	64.3	10	14.3	47.2	16.5
MFHE-3-3/8	10	47	145	129	63.4	70.1	10	14.3	56.6	18.7
MFHE-3-1/2	10.1	46.7	148	132	71.6	76	10	14.7	63.7	22.9

Ordering data

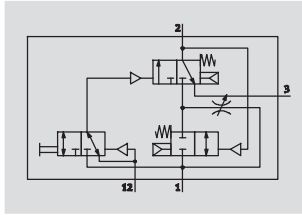
Pneumatic connection	Part No.	Type
G1/4	14329	MFHE-3-1/4-B
G3/8	12908	MFHE-3-3/8
G1/2	10421	MFHE-3-1/2

Pneumatic valves VLHE

Technical data

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Function



Flow rate

1,200 ... 2,900 l/min

Temperature range

-10 ... +60 °C

Pressure

2 ... 12 bar/28 ... 180 psi

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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-3-1/4-B	VLHE-3-3/8	VLHE-3-1/2
Pneumatic connection 1, 2	G1/4	G3/8	G1/2
Pneumatic connection 3	G1/4	G3/8	G1/2
Pneumatic connection 12 (pilot air)	G1/8	G1/8	G1/8
Nominal diameter [mm]	8	9	12
Design	Disk seat		
Type of mounting	Via through-holes		
Mounting position	Any		
Valve function	3/2-way valve, single solenoid, closed		
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	G1/4	G3/8	G1/2
In flow direction			
1 → 2	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	G1/4	G3/8	G1/2
Pneumatic valve VLHE	430	790	980

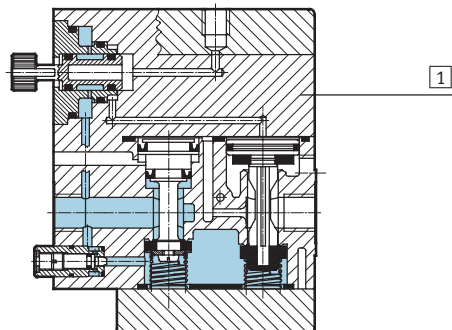
Pneumatic valves VLHE

Technical data

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Materials

Sectional view

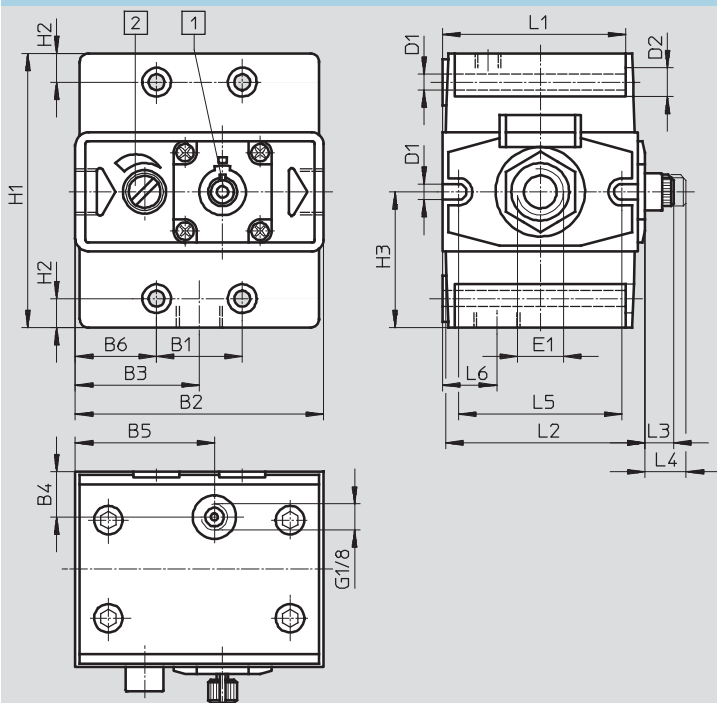


Pneumatic valve

1	Housing	Polyacetal, aluminium, steel, brass
-	Seals	Nitrile rubber

Dimensions

Download CAD Data → www.festo.com/us/cad



- 1 Manual override
- 2 Regulating screw for flow control valve

Type	B1	B2	B3	B4	B5	B6	D1 Ø	D2 Ø	E1
VLHE-3-1/4-B	27	71	36.5	16.5	40	22	5.5	10	G1/4
VLHE-3-3/8	29.7	86	43	15.7	48.2	28	5.5	10	G3/8
VLHE-3-1/2	29.7	90.7	45.3	20.2	51	30.5	6.5	11	G1/2

Type	H1	H2	H3	L1	L2	L3	L4	L5	L6
VLHE-3-1/4-B	82	10	40	55.6	64.3	10	14.3	47.2	16.5
VLHE-3-3/8	95	10	47	63.4	70.1	10	14.3	56.6	18.7
VLHE-3-1/2	98.2	10.1	46.7	71.6	76	10	14.7	63.7	22.9

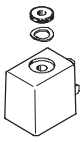
Ordering data

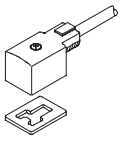
Pneumatic connection	Part No.	Type
G1/4	14330	VLHE-3-1/4-B
G3/8	12909	VLHE-3-3/8
G1/2	10420	VLHE-3-1/2


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Accessories


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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: mlf	
	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
	G1/4		6842	U-1/4-B
	G3/8		6843	U-3/8-B
	G1/2		6844	U-1/2-B

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