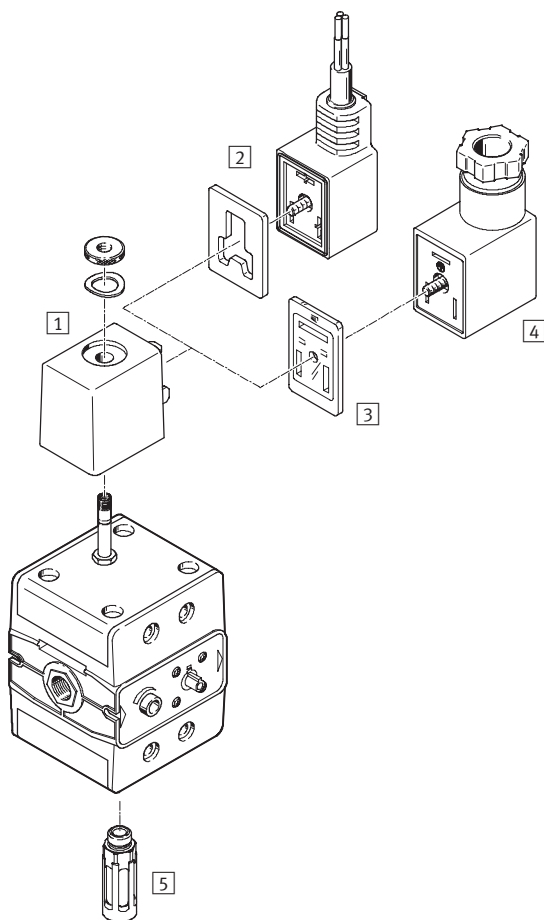


Solenoid valves MFHE/Pneumatic valves VLHE

Peripherals overview

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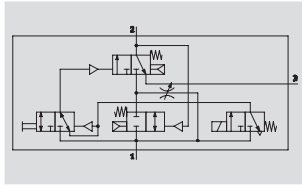
Accessories			
	MFHE	VLHE	→ Page/Internet
1 Solenoid coil MSFG/MSFW	■	–	7
2 Plug socket with cable KMF	■	–	7
3 Illuminating seal MF-LD	■	–	7
4 Plug socket MSSD-F	■	–	7
5 Silencer U	■	■	7

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-3-1/4-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

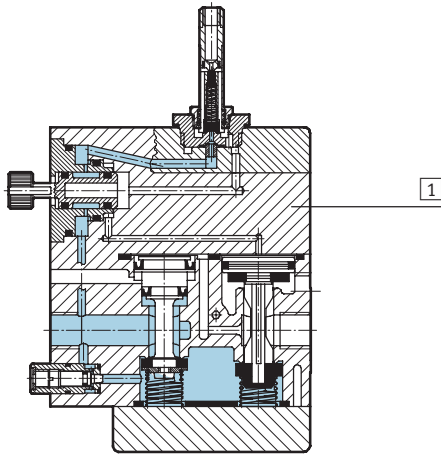
Technical data

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Operating and environmental conditions		
Operating pressure	[bar]	2 ... 10
	[psi]	28 ... 145
Operating medium	Compressed air, lubricated or unlubricated	
Ambient temperature	[°C]	−5 ... +40
Temperature of medium	[°C]	−10 ... +60

Weights [g]			
Pneumatic connection	G¼	G¾	G½
Solenoid valve MFHE	550	800	1,000

Materials	
Sectional view	



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

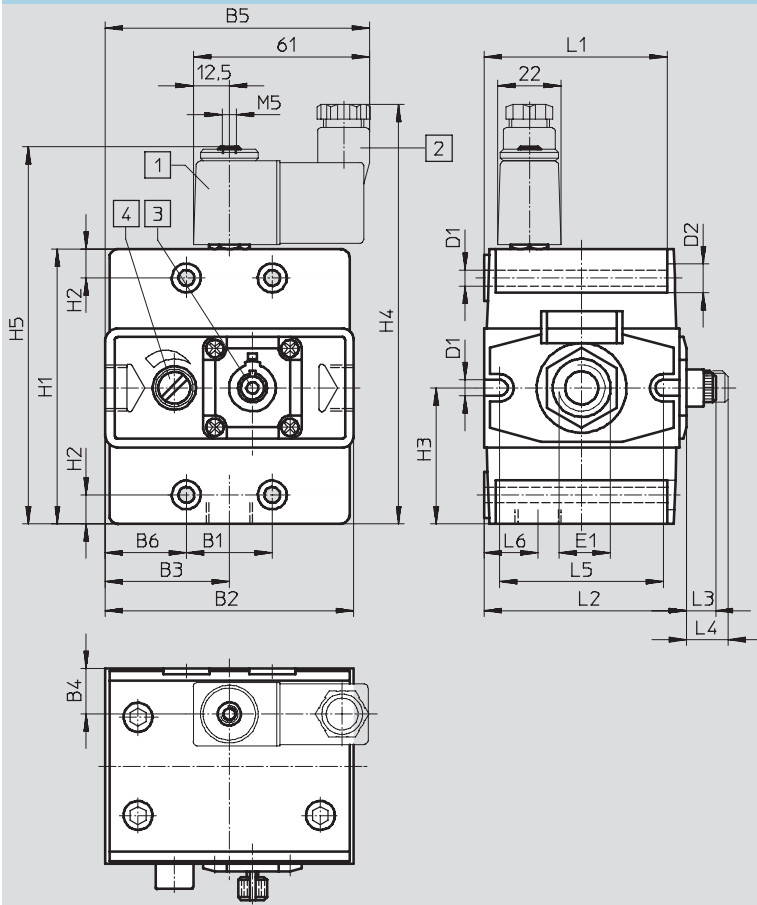
Solenoid valves MFHE

Technical data

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Dimensions

Download CAD data → www.festo.com



- 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

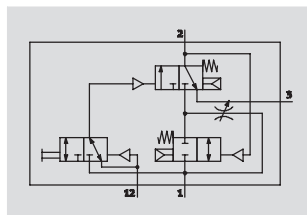
Pneumatic connection	Part No.	Type
G1/4	14 329	MFHE-3-1/4-B
G3/8	12 908	MFHE-3-3/8
G1/2	10 421	MFHE-3-1/2





Pneumatic valves VLHE

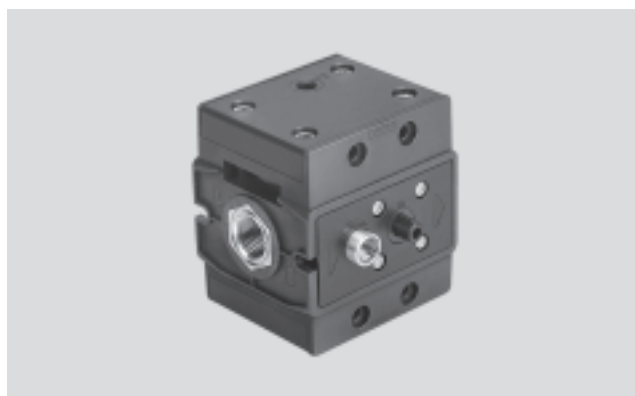
Technical data

FESTO

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-3-1/4-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 q _n [l/min]			
Pneumatic connection	G1/4	G3/8	G1/2
In flow direction 1 → 2	unthrottled 1,200	unthrottled 2,100	unthrottled 2,900
	throttled max. 150	throttled max. 450	throttled 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, lubricated or unlubricated	
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

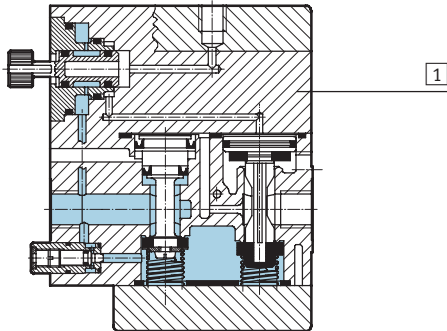
Pneumatic valves VLHE

Technical data

FESTO

Materials

Sectional view

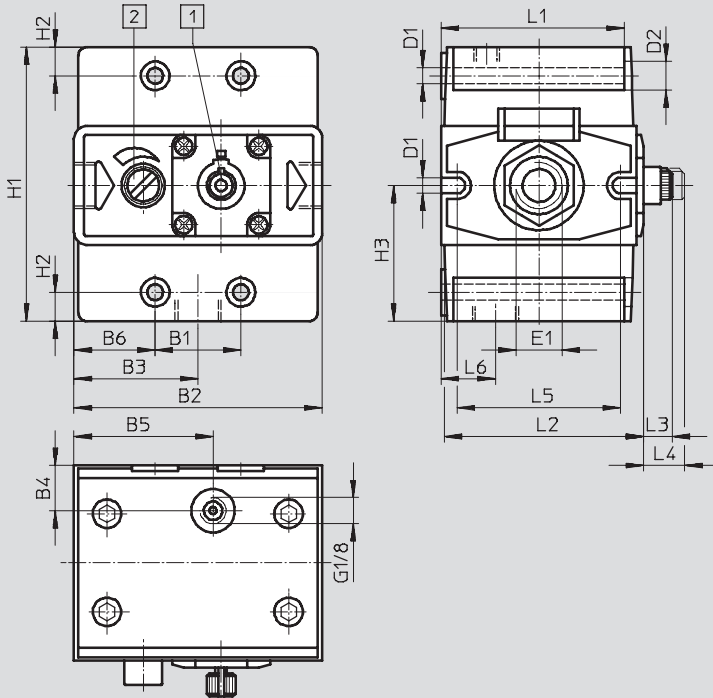


Pneumatic valve

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

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 Ø	D2 Ø	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

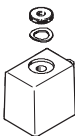
Ordering data

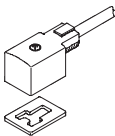
Pneumatic connection	Part No.	Type
G¼	14 330	VLHE-3-¼-B
G⅜	12 909	VLHE-3-⅜
G½	10 420	VLHE-3-½


Solenoid valves MFHE/Pneumatic valves VLHE


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Accessories

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	–	34 410	MSFG-12DC-OD
		24	42	34 411	MSFG-24DC/42AC-OD
		42	–	34 413	MSFG-42DC-OD
		–	24	34 415	MSFW-24AC-OD
		–	48	34 418	MSFW-48AC-OD
		–	110	34 420	MSFW-110AC-OD
		–	230	34 422	MSFW-230AC-OD
		–	240	34 424	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	30 935	KMF-1-24DC-2,5-LED
			5	30 937	KMF-1-24DC-5-LED
			10	193 458	KMF-1-24-10-LED
	230 V AC	–	2.5	30 936	KMF-1-230AC-2,5
			5	30 938	KMF-1-230AC-5

Ordering data – Illuminating seal MF-LD			Technical data → Internet: mf	
	Operating voltage range	Part No.	Type	
	12 ... 24 V DC	19 143	MF-LD-12-24DC	
	230 V DC/V AC ±10%	19 144	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	34 431	MSSD-F	
	Cable conduit fitting M16	539 710	MSSD-F-M16	
	Insulation displacement connector	192 746	MSSD-F-S-M16	

Ordering data – Silencers U			Technical data → Internet: u	
	Pneumatic connection	Part No.	Type	
	G1/4	6 842	U-1/4-B	
	G3/8	6 843	U-3/8-B	
	G1/2	6 844	U-1/2-B	