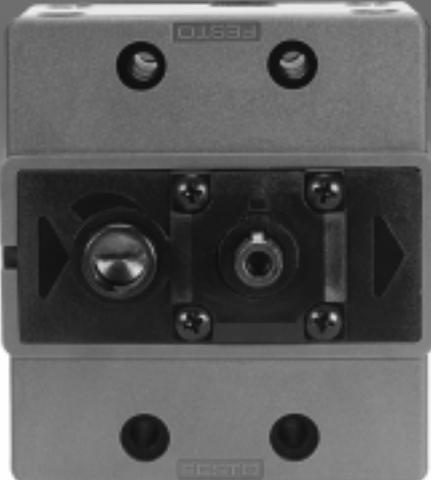


Solenoid valves MFHE/Pneumatic valves VLHE

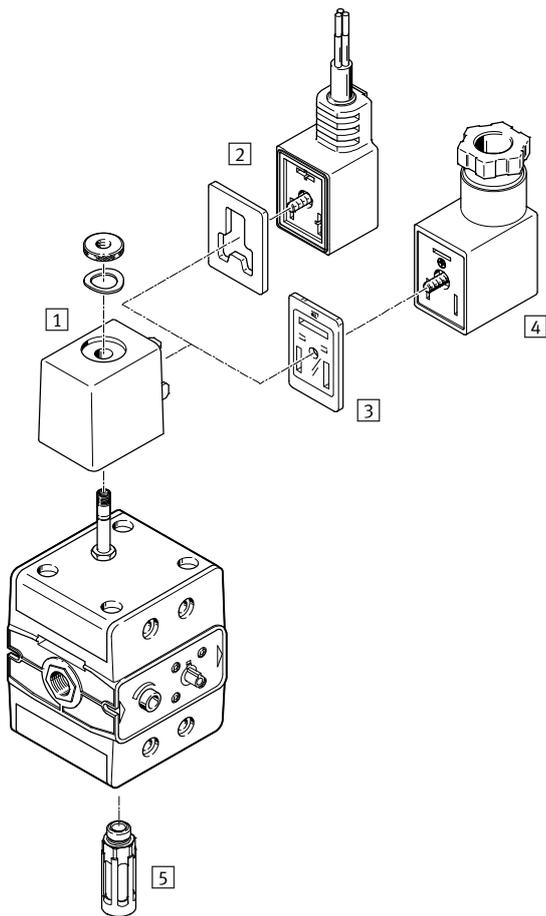


- 7 - Type discontinued  
Available up until 2016

## 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

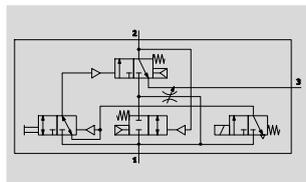
- 2 - Type discontinued  
Available up until 2016

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## Solenoid valves MFHE

Technical data

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](http://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, 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	G1/4	G3/8	G1/2
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

- 1 - Type discontinued  
Available up until 2016

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## Solenoid valves MFHE

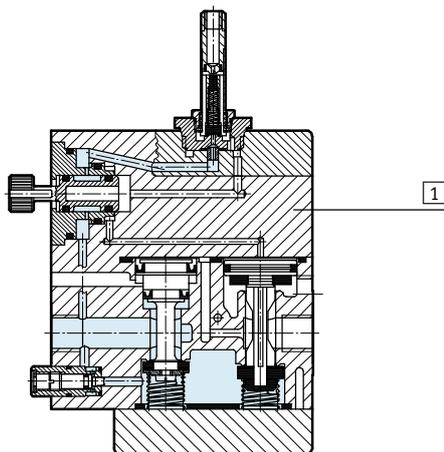
Technical data

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	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 POM, aluminium, steel, brass
-	Seals NBR
Note on materials RoHS-compliant (only MFHE-3- $\frac{1}{4}$ -B)	

- 2 - Type discontinued  
Available up until 2016

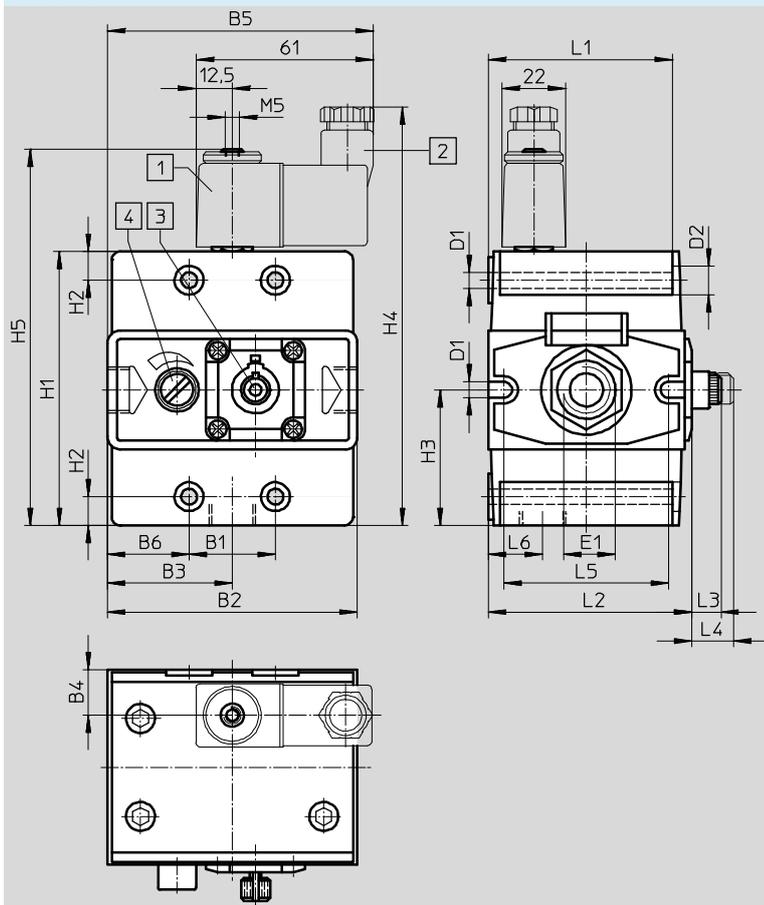
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## Solenoid valves MFHE

Technical data

### Dimensions

Download CAD data → [www.festo.com](http://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	14329	MFHE-3-1/4-B
G3/8	12908	MFHE-3-3/8
G1/2	10421	MFHE-3-1/2

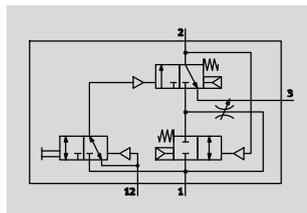
- 1 - Type discontinued  
Available up until 2016

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## Pneumatic valves VLHE

Technical data

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](http://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, 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	G1/4	G3/8	G1/2
In flow direction 1 → 2	unthrottled	1,200	2,100
	throttled	max. 150	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

- 2 - Type discontinued  
Available up until 2016

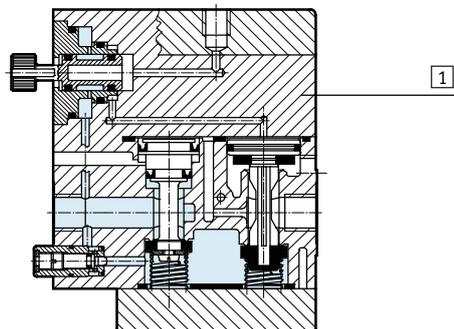
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## Pneumatic valves VLHE

Technical data

### Materials

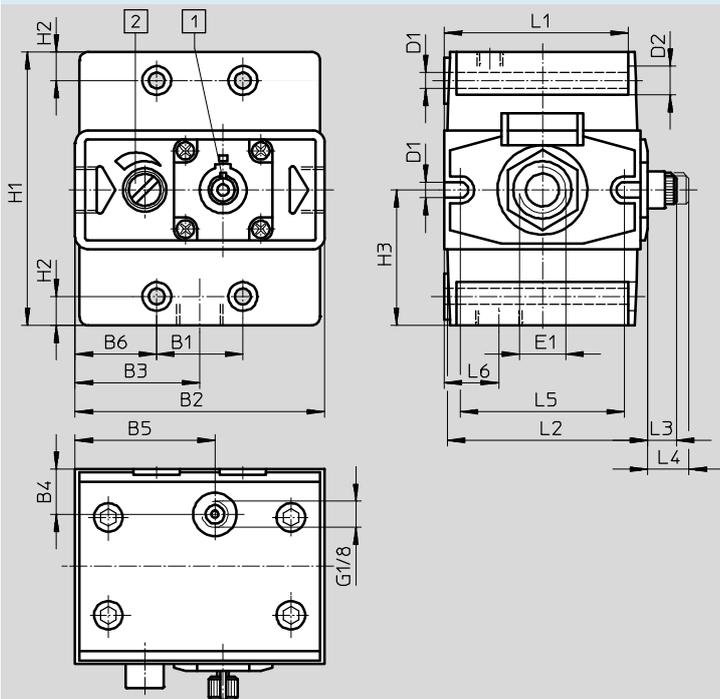
Sectional view



Pneumatic valve		
1	Housing	POM, aluminium, steel, brass
-	Seals	NBR
Note on materials		RoHS-compliant (only VLHE-3-1/4-B)

### Dimensions

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



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

Type	B1	B2	B3	B4	B5	B6	D1	D2	E1
VLHE-3-1/4-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

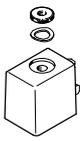
Type	H1	H2	H3	L1	L2	L3	L4	L5	L6
VLHE-3-1/4-B	82	10	40	55.6	64.3	10	14.3	47.2	16.5
VLHE-3-3/8	95	10	47	63.4	70.1	10	14.3	56.6	18.7
VLHE-3-1/2	98.2	10.1	46.7	71.6	76	10	14.7	63.7	22.9

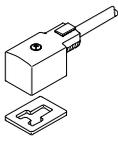
### Ordering data

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

# Solenoid valves MFHE/Pneumatic valves VLHE

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	–	<b>34410</b>	<b>MSFG-12DC-OD</b>
		24	42	<b>34411</b>	<b>MSFG-24DC/42AC-OD</b>
		42	–	<b>34413</b>	<b>MSFG-42DC-OD</b>
		–	24	<b>34415</b>	<b>MSFW-24AC-OD</b>
		–	48	<b>34418</b>	<b>MSFW-48AC-OD</b>
		–	110	<b>34420</b>	<b>MSFW-110AC-OD</b>
		–	230	<b>34422</b>	<b>MSFW-230AC-OD</b>
		–	240	<b>34424</b>	<b>MSFW-240AC-OD</b>

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	<b>30935</b>	<b>KMF-1-24DC-2,5-LED</b>
			5	<b>30937</b>	<b>KMF-1-24DC-5-LED</b>
			10	<b>193458</b>	<b>KMF-1-24-10-LED</b>
	230 V AC	–	2.5	<b>30936</b>	<b>KMF-1-230AC-2,5</b>
			5	<b>30938</b>	<b>KMF-1-230AC-5</b>

Ordering data – Illuminating seal MF-LD			Technical data → Internet: mfl	
	Operating voltage range	Part No.	Type	
	12 ... 24 V DC	<b>19143</b>	<b>MF-LD-12-24DC</b>	
	230 V DC/V AC ±10%	<b>19144</b>	<b>MF-LD-230AC</b>	

Ordering data – Plug sockets MSSD-F			Technical data → Internet: mssd	
	Type of mounting: cable connection	Part No.	Type	
	Cable conduit fitting Pg9	<b>34431</b>	<b>MSSD-F</b>	
	Cable conduit fitting M16	<b>539710</b>	<b>MSSD-F-M16</b>	
	Insulation displacement connector	<b>192746</b>	<b>MSSD-F-S-M16</b>	

Ordering data – Silencers U			Technical data → Internet: u	
	Pneumatic connection	Part No.	Type	
	G1/4	<b>6842</b>	<b>U-1/4-B</b>	
	G3/8	<b>6843</b>	<b>U-3/8-B</b>	
	G1/2	<b>6844</b>	<b>U-1/2-B</b>	