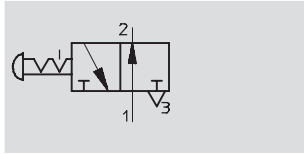


# Shut-off valve HE-LO, to safety standard

Technical data



## Function



- - Flow rate  
5,200 ... 12,000 l/min
- - Temperature range  
-10 ... +60 °C
- - Operating pressure  
1 ... 10 bar



- - Note

The shut-off valve may not be used as an emergency stop valve.

For units that require a pneumatic shut-off in order to carry out maintenance or repair work, for example.

The valve is installed into the air supply line and fulfils requirements set forth by OSHA 29 CFR 147, "Controlling Dangerous Energy Sources", issued by the United States Department of Labor.

## Function:

The valve is used for shutting off the compressed air supply, while simultaneously exhausting systems which are powered using compressed air. Flow from port 1 to port 2 is blocked when the actuator knob is pressed, and flow from port 2 to port 3 is opened.

The largest exhaust flow rate is achieved by keeping the actuating knob in the actuated position until the connected system is completely exhausted. The valve can be locked in the closed position using a padlock. This ensures that a decommissioned system (e.g. during maintenance work) cannot be pressurised without authorisation.

General technical data					
Type		HE-G $\frac{3}{8}$ -LO	HE-G $\frac{1}{2}$ -LO	HE-G $\frac{3}{4}$ -LO	HE-G1-LO
Design		Manually actuated 3/2-way valve with piston slide			
Type of mounting		Screwed into piping 2 through holes in housing with $\varnothing$ 8 mm for wall mounting			
Mounting position		Any, but make sure there is easy access to the actuating knob			
Connection	1, 2	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{3}{4}$	G1
(Female thread)	3	G1			
Operating pressure	[bar]	1 ... 10			

- - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard nominal flow rate <sup>1)</sup> qnN [l/min]					
Connection		G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{3}{4}$	G1
1 > 2		5,200	6,200	8,000	10,000
2 > 3		12,000			

1) Measured at primary pressure  $p_1 = 6$  bar and  $\Delta p = 1$  bar.

Ambient conditions		
Ambient temperature	[°C]	-10 ... +60
Corrosion resistance	CRC <sup>1)</sup>	3

1) Corrosion resistance class 3 according to Festo standard 940 070  
Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Weights [g]					
		G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{3}{4}$	G1
HE-...-LO		1,100		1,000	

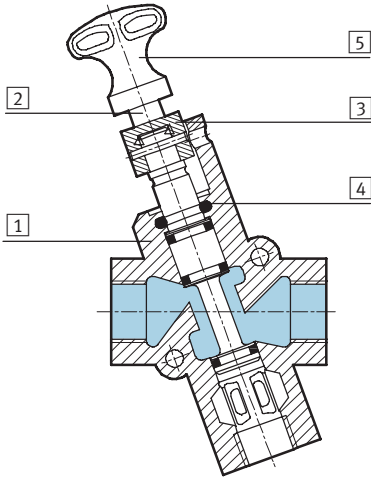
# Shut-off valve HE-LO, to safety standard

Technical data



## Materials

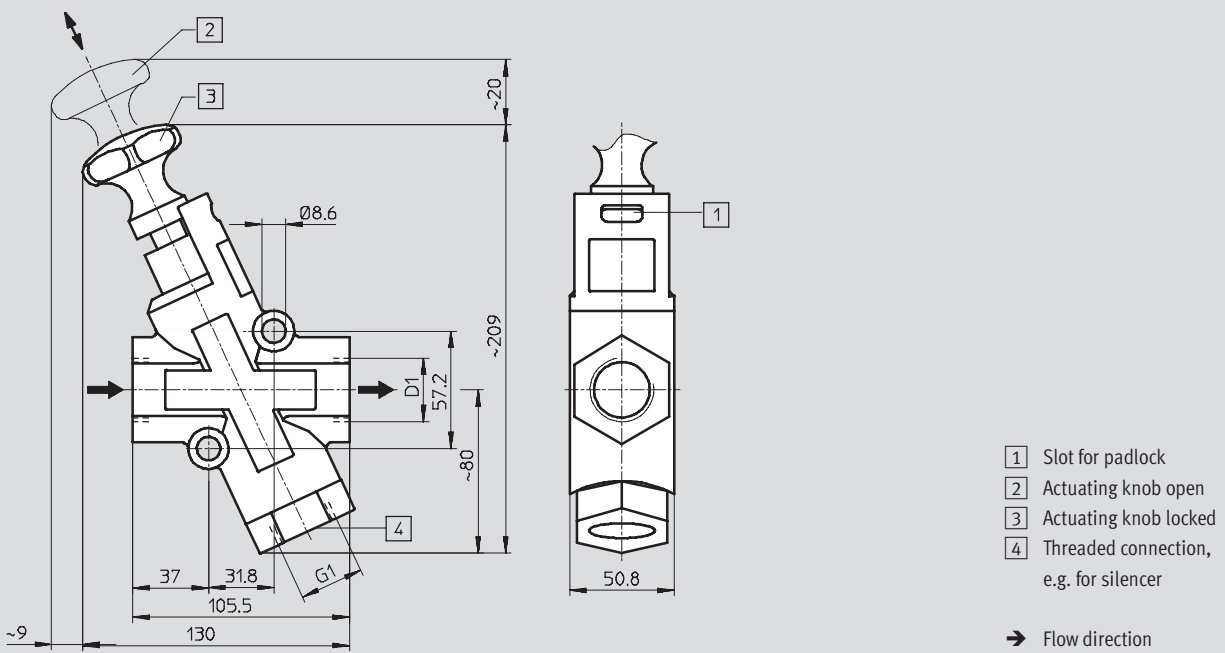
Sectional view



Shut-off valve		
1	Housing	Die-cast aluminium
2	Piston spool	Aluminium
3	Guide	Polyetrafluorethylene
4	O-ring	Polyurethane
5	Actuating knob	Die-cast aluminium
-	Seals	Nitrile rubber

## Dimensions

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



- 1 Slot for padlock
- 2 Actuating knob open
- 3 Actuating knob locked
- 4 Threaded connection, e.g. for silencer

→ Flow direction

Type	D1
HE-G $\frac{3}{8}$ -LO	G $\frac{3}{8}$
HE-G $\frac{1}{2}$ -LO	G $\frac{1}{2}$
HE-G $\frac{3}{4}$ -LO	G $\frac{3}{4}$
HE-G1-LO	G1

– Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Ordering data		
Connection	Part No.	Type
G $\frac{3}{8}$	197 133	HE-G $\frac{3}{8}$ -LO
G $\frac{1}{2}$	197 134	HE-G $\frac{1}{2}$ -LO
G $\frac{3}{4}$	197 135	HE-G $\frac{3}{4}$ -LO
G1	197 136	HE-G1-LO

# Shut-off valve HE-LO, to safety standard

Accessories



**Padlock LRVS-D**  
for shut-off valve

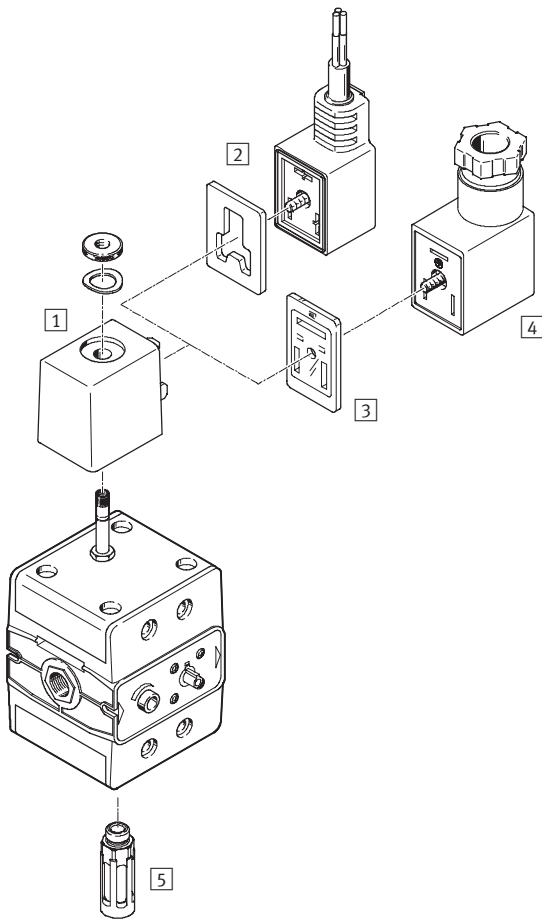
Material:  
Housing: Brass



Ordering data			
	Weight [g]	Part No.	Type
Padlock	120	193 786	LRVS-D

# Solenoid valves MFHE/Pneumatic valves VLHE

Peripherals overview

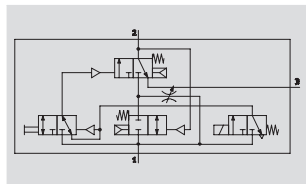


Accessories			
	MFHE	VLHE	→ Page
1	■	–	3 / 4.4-9
2	■	–	3 / 4.4-9
3	■	–	3 / 4.4-9
4	■	–	3 / 4.4-9
5	■	■	3 / 4.4-9

# 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/en/Spare\\_parts\\_service](http://www.festo.com/en/Spare_parts_service)



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
	throttled	max. 150	max. 450
In venting direction 2 → 3	1,600	2,700	3,400

# Solenoid valves MFHE

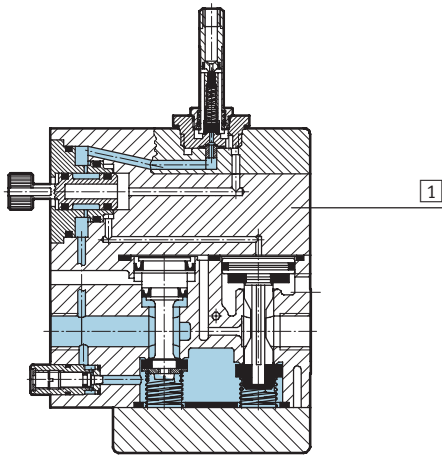
Technical data

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

Weights [g]			
Pneumatic connection	G1/4	G3/8	G1/2
Solenoid valve MFHE	550	800	1,000

## Materials

Sectional view



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

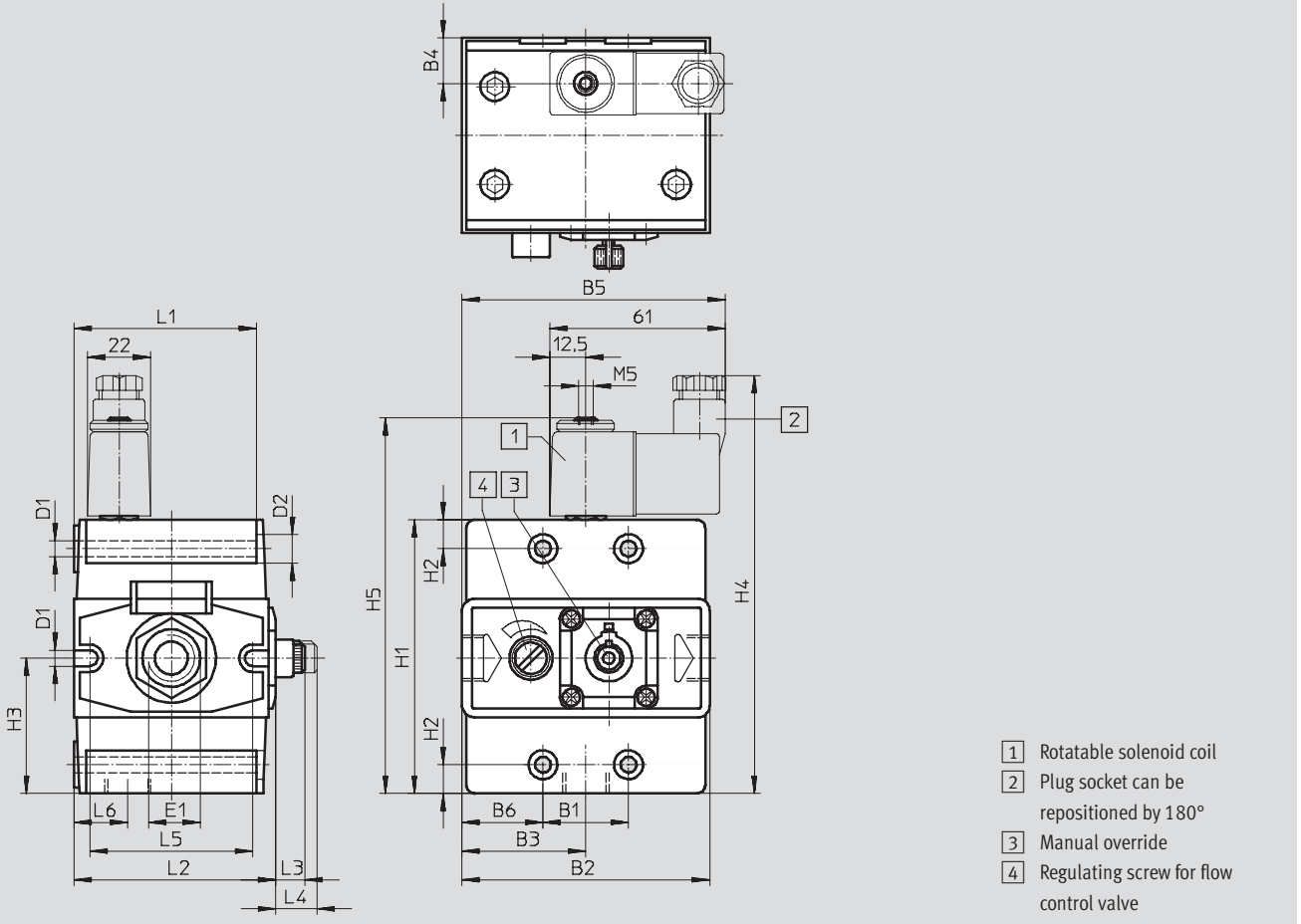
# Solenoid valves MFHE

Technical data



## Dimensions

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



- 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-3-1/4-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

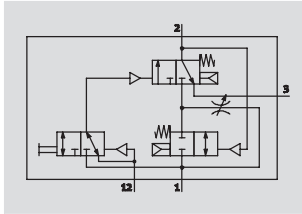
Ordering data		
Pneumatic connection	Part No.	Type
G1/4	14 329	MFHE-3-1/4-B
G3/8	12 908	MFHE-3-3/8
G1/2	10 421	MFHE-3-1/2





# Pneumatic valves VLHE

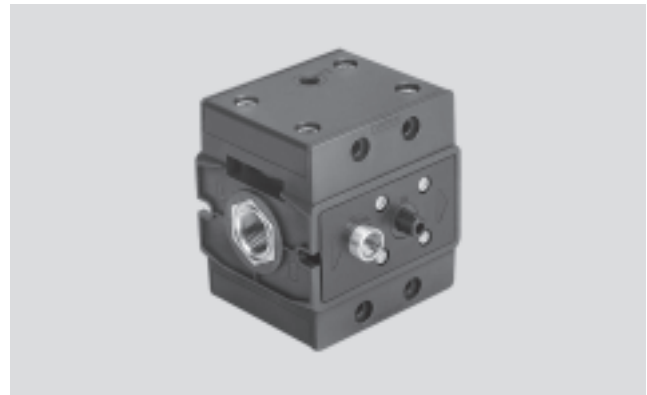
Technical data

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/en/  
Spare\\_parts\\_service](http://www.festo.com/en/Spare_parts_service)




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 unthrottled	1,200	2,100	2,900
1 → 2 throttled	max. 150	max. 450	max. 450
In venting direction	1,600	2,700	3,400
2 → 3			

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

Individual units  
Start-up and exhaust valves

4.4



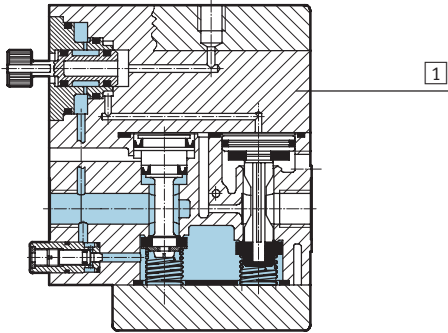
# Pneumatic valves VLHE

Technical data



## Materials

Sectional view

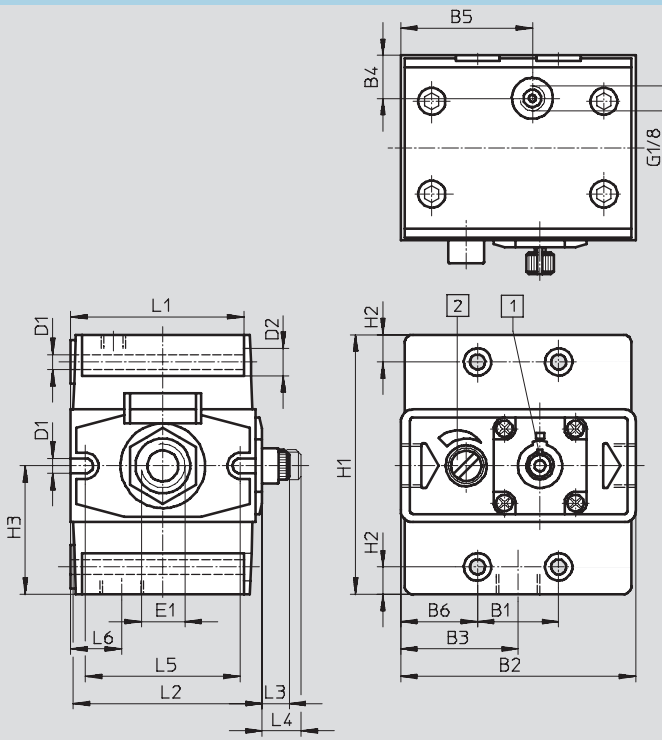


### Pneumatic valve

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

## Dimensions

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



- 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

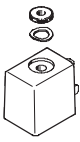
## Ordering data

Pneumatic connection	Part No.	Type
G1/4	14 330	VLHE-3-1/4-B
G3/8	12 909	VLHE-3-3/8
G1/2	10 420	VLHE-3-1/2


# Solenoid valves MFHE/Pneumatic valves VLHE


Accessories


**FESTO**

Ordering data – Solenoid coils MSFG/MSFW				Technical data → Volume 2	
	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 → Volume 2	
	Nominal operating voltage	Switching status display	Cable length [m]	Part No.	Type
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 → Volume 2	
	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 → Volume 2	
	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 → 3 / 6.1-2	
	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	

Individual units  
Start-up and exhaust valves

4.4