

Hand lever valves VHER




Hand lever valves VHER

Key features

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Powerful

-  - Flow
170 ... 3800 l/min

Flexible

- 4/3-way valve
mid-position closed
mid-position exhausted
mid-position pressurised
- Connections: M5, G1/8, G1/4, G1/2
- 3/3-way valve
Hand lever valves VHER can be used as 3/3-way valves by sealing port 2

Practical

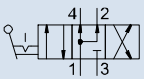
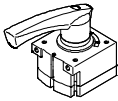
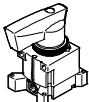
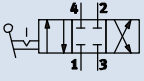
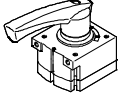
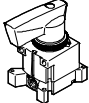
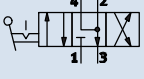
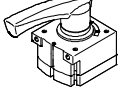
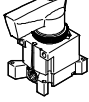
With these valves it is possible to stop single-acting cylinders (3/3-way valve) or double-acting cylinders (4/3-way valve) within the stroke range.

In mid-position closed, the drive piston moves until the forces are balanced.

In mid-position exhausted the piston can be moved manually; only the frictional forces have to be overcome. In mid-position pressurised, the same pressure is present at ports 2 and 4. The piston is not moved (in the case of flat surfaces).

Hand lever valves VHER-B43

Product range overview

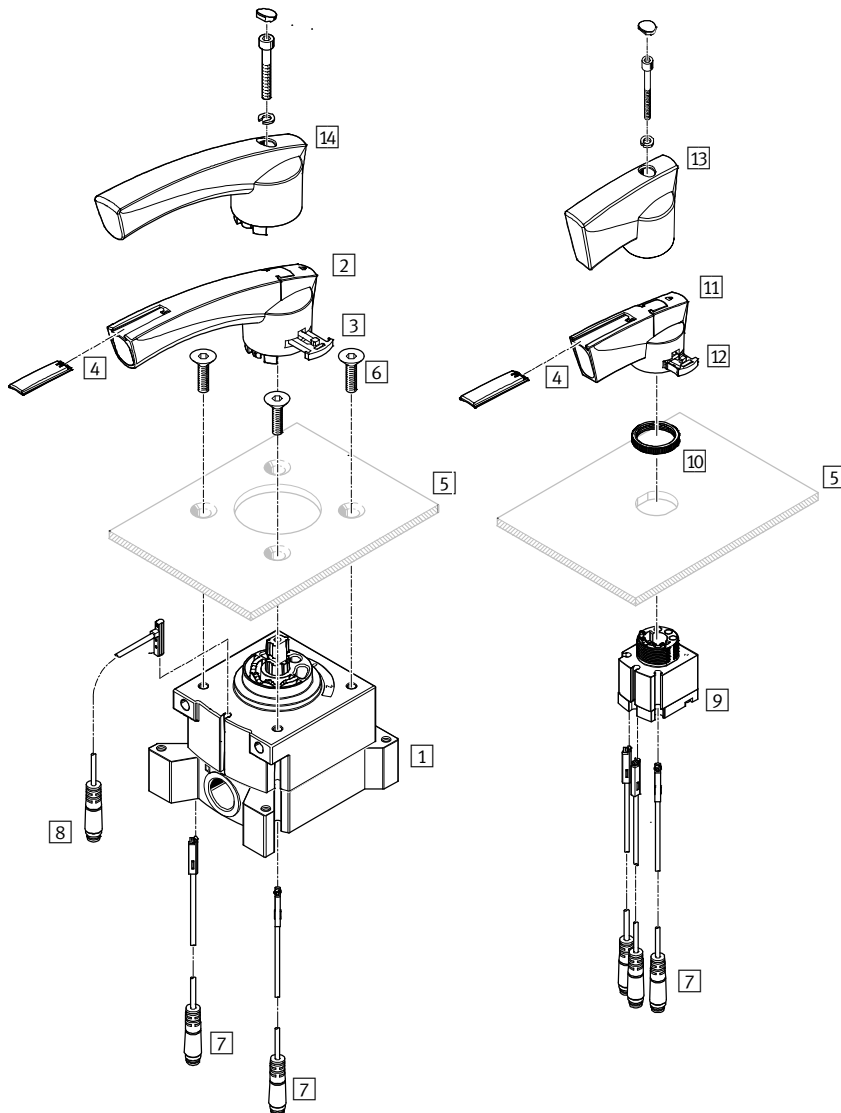
Function	Feature	Type	Nominal flow rate [l/min.]	Hand lever	→ Page/ Internet	
		Port underneath, mid-position pressurised				
		VHER-H-B43U-B-G18	800	Metal	Without lock	7
		VHER-H-B43U-B-G14	1500			
		VHER-H-B43U-B-G12	3800			
		VHER-P-H-B43U-B-M5	260	Polymer	With lock	19
		VHER-P-H-B43U-B-G18	800			
		VHER-P-H-B43U-B-G14	1500			
	VHER-P-H-B43U-B-G12	3800				
		Port at side, mid-position pressurised				
		VHER-H-B43U-G18	600	Metal	Without lock	7
		VHER-H-B43U-G14	1150			
		VHER-H-B43U-G12	3200			
		VHER-P-H-B43U-M5	170	Polymer	With lock	19
		VHER-P-H-B43U-G18	600			
VHER-P-H-B43U-G14		1150				
VHER-P-H-B43U-G12	3200					
		Port underneath, mid-position closed				
		VHER-H-B43C-B-G18	800	Metal	Without lock	7
		VHER-H-B43C-B-G14	1500			
		VHER-H-B43C-B-G12	3800			
		VHER-P-H-B43C-B-M5	260	Polymer	With lock	19
		VHER-P-H-B43C-B-G18	800			
		VHER-P-H-B43C-B-G14	1500			
	VHER-P-H-B43C-B-G12	3800				
		Port at side, mid-position closed				
		VHER-H-B43C-G18	600	Metal	Without lock	7
		VHER-H-B43C-G14	1150			
		VHER-H-B43C-G12	3200			
		VHER-P-H-B43C-M5	170	Polymer	With lock	19
		VHER-P-H-B43C-G18	600			
VHER-P-H-B43C-G14		1150				
VHER-P-H-B43C-G12	3200					
		Port underneath, mid-position exhausted				
		VHER-H-B43E-B-G18	800	Metal	Without lock	7
		VHER-H-B43E-B-G14	1500			
		VHER-H-B43E-B-G12	3800			
		VHER-P-H-B43E-B-M5	260	Polymer	With lock	19
		VHER-P-H-B43E-B-G18	800			
		VHER-P-H-B43E-B-G14	1500			
	VHER-P-H-B43E-B-G12	3800				
		Port at side, mid-position exhausted				
		VHER-H-B43E-G18	600	Metal	Without lock	7
		VHER-H-B43E-G14	1150			
		VHER-H-B43E-G12	3200			
		VHER-P-H-B43E-M5	170	Polymer	With lock	19
		VHER-P-H-B43E-G18	600			
VHER-P-H-B43E-G14		1150				
VHER-P-H-B43E-G12	3200					

Hand lever valves VHER

Peripherals overview

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Control panel installation



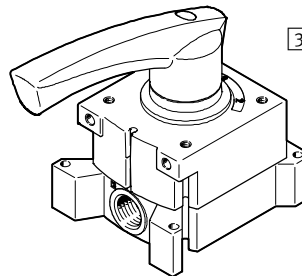
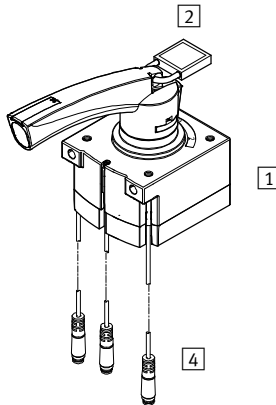
Component parts and accessories	Brief description	→ Page/ Internet
1 Hand lever valve VHER	Connection size M5, G1/8, G1/4, G1/2 (lateral pneumatic connections)	7, 19
2 Actuating lever	Large, polymer	-
3 Lever mounting clip	Large	-
4 Inscription label	-	-
5 Control panel	Not included in the scope of delivery	-
6 Mounting screws ¹⁾	Not included in the scope of delivery	-
7 Proximity sensor SM...-10-... -L-...	Not included in the scope of delivery (electrical connection, in-line outlet)	18, 30
8 Proximity sensor SM...-10-... -Q-...	Not included in the scope of delivery (electrical connection, lateral outlet)	18, 30
9 Hand lever valve VHER	Connection size M5, G1/8, G1/4, G1/2 (pneumatic connections underneath)	7, 19
10 Knurled nut	Control panel mounting	-
11 Actuating lever	Small, polymer	-
12 Lever mounting clip	Small	-
13 Actuating lever	Small, metal	-
14 Actuating lever	Large, metal	-

1) For design reasons, it is not possible for every valve spool VHER to be screwed to a control panel on the lever side using mounting screws.

Hand lever valves VHER

Peripherals overview

Mounted valves with accessories



Component parts and accessories	Brief description	→ Page/ Internet
1 Hand lever valve VHER-P-H...	Connection size M5, G1/8, G1/4, G1/2 with polymer lever, large (pneumatic connections underneath)	19
2 Lock	Not included in the scope of delivery	-
3 Hand lever valve VHER-H...	Connection size G1/8, G1/4, G1/2 with metal lever, large (lateral pneumatic connections)	7
4 Proximity sensor SM...-10-... -L-...	Not included in the scope of delivery (electrical connection, in-line outlet)	18, 30
Proximity sensor SM...-10-... -Q-...	Not included in the scope of delivery (electrical connection, lateral outlet)	18, 30



Note

For design reasons, it is not possible for every valve spool VHER to be screwed to a control panel on the lever side using mounting screws.




Hand lever valves, VHER-H-B43, non-reversible

Type codes

VHER		-		-	H	-		-		-		-		-	
Type															
VHER	Hand lever valve with detent														
Design															
-	Hand lever, metal version														
P	Hand lever, polymer version														
Type of actuation															
H	Hand lever, top														
Valve function															
B43C	4/3-way valve, detenting, mid-position closed														
B43E	4/3-way valve, detenting, mid-position open														
B43U	4/3-way valve, detenting, mid-position pressurised														
Direction of flow															
-	Non-reversible														
Connection direction, pneumatic connection															
-	At the side														
B	Underneath														
Connection size, pneumatic connection															
M5	M5														
G18	G1/8														
G14	G1/4														
G12	G1/2														

Hand lever valves, VHER-H-B43, non-reversible, metal lever

Technical data VHER-H-B43

-  Flow rate
600 ... 3800 l/min
-  Pressure
-0.95 ... +10 bar
-  Temperature range
-20 ... +80 °C



General technical data							
Connection size		G1/8		G1/4		G1/2	
Valve function		4/3-way, detenting, mid-position closed, exhausted or pressurised					
Design		Rotary slide valve					
Sealing principle		Hard					
Type of mounting		Option of front panel mounting or through-holes					
Type of pilot control		Direct					
Type of actuation		Manual					
Actuating lever (can be removed)		Metal (die-cast aluminium)					
Actuator lock		None					
Switching position indication		Via accessories					
Mounting position		Any					
Direction of flow		Non-reversible					
Non-overlapping		Yes					
Exhaust air function		With flow control					
Nominal flow rate	Port at side	[l/min.]	600	1150	3200		
	Port underneath	[l/min.]	800	1500	3800		
Nominal width		[mm]	6	8	12		
Pneumatic connection 1, 2, 3, 4			G1/8	G1/4	G1/2		
Actuating torque at 6 bar		[Nm]	0.9	2	5		

Operating and environmental conditions							
Connection size		G1/8		G1/4		G1/2	
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)					
Operating pressure		[bar]	0 ... 10 (vacuum only permitted at port 3)				
Ambient temperature		[°C]	-20 ... +80				
Temperature of medium		[°C]	-20 ... +80				
Corrosion resistance class CRC ¹⁾			2				

1) Corrosion resistance class 2 according to Festo standard 940070
Components subject to moderate corrosion stress. External visible parts with primarily decorative surface requirements which are in direct contact with the surrounding industrial environment or media such as coolants or lubricating agents.

Proximity sensors for switching position indication					
Connection size	Connection direction	Type			
		SME-10-... -L-...	SME-10-... -Q-...		
G1/8	Underneath	■		■	
	At the side	-		■	
G1/4	Underneath	■		■	
	At the side	-		■	
G1/2	Underneath	■		■	
	At the side	-		■	

Hand lever valves, VHER-H-B43, non-reversible, metal lever

Technical data VHER-H-B43

Operation with different pressures

Vacuum operation

The direction of flow of the VHER-B43 valves is clearly defined and cannot be reversed.

The vacuum may only be connected to port 3 to maintain the direction of flow.

Vacuum operation at port 3:
-0.95 ... 0 bar



Note

A filter must be installed upstream of valves operated in vacuum mode. This prevents any foreign matter in

the intake air getting into the valve (e.g. when operating a suction cup).



Note

During vacuum operation, the valve function changes from exhausted (VHER-...-B43E-...) to pressurised (VHER-...-B43U-...) and vice versa.

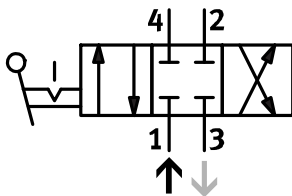


Note

Vacuum must not be connected to port 1.

During vacuum operation:

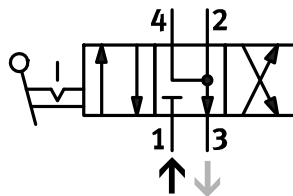
Mid-position closed
(VHER-...-B43C-...)



(During normal operation: mid-position closed VHER-...-B43C-...)

During vacuum operation:

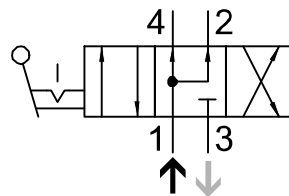
Mid-position pressurised
(VHER-...-B43U-...)



(During normal operation: mid-position exhausted VHER-...-B43E-...)

During vacuum operation:

Mid-position exhausted
(VHER-...-B43E-...)



(During normal operation: mid-position pressurised VHER-...-B43U-...)

Connections with vacuum:

- Vacuum is generated by connecting vacuum generator to port 3
- Exhaust (or pressurisation) takes place via port 1
- Vacuum operation (e.g. suction cup) takes place at port 2 (or 4)

Dual-pressure operation

Valves VHER-B43 are suitable for dual-pressure operation.

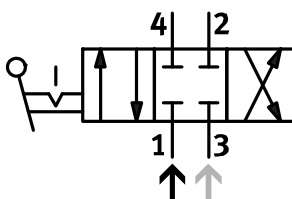
Please note that for design reasons compressed air may only be applied to port 1 and 3.



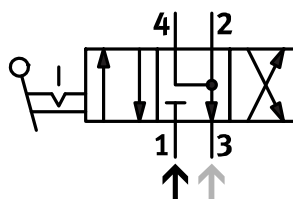
Note

In the case of dual-pressure operation, the higher pressure must always be applied to port 1.

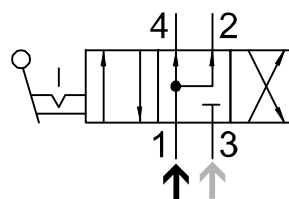
Mid-position closed
VHER-...-B43C-...



Mid-position exhausted
VHER-...-B43E-...



Mid-position pressurised
VHER-...-B43U-...



Connections with dual-pressure operation:

- Supply port: port 1 (high pressure)
- Supply port: port 3 (lower pressure)

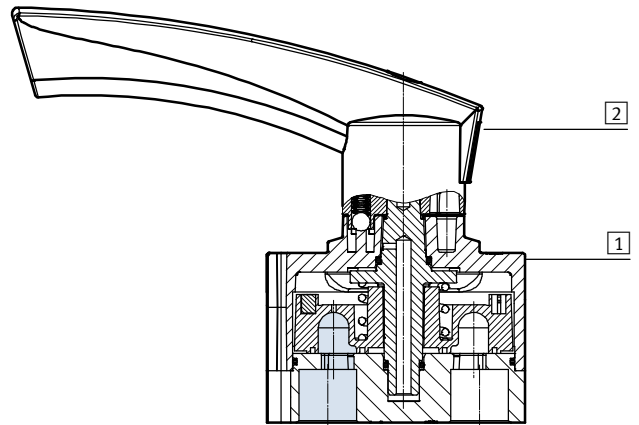
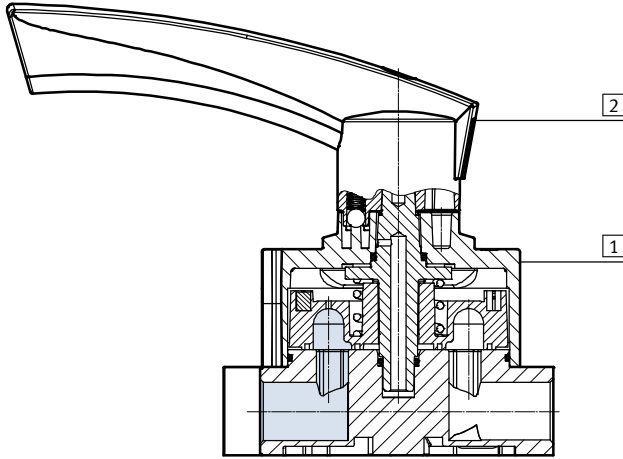
Hand lever valves, VHER-H-B43, non-reversible, metal lever

Technical data VHER-H-B43

Sectional view

Hand lever valve VHER-H-B43-...

Hand lever valve VHER-H-B43...-B-...



Materials

1	Housing	Die-cast aluminium
2	Actuating lever	Metal (die-cast aluminium)
-	Seals	NBR
-	Note on materials	RoHS compliant
-	Note on materials	Free of copper and PTFE

Hand lever valves, VHER-H-B43, non-reversible, metal lever

Technical data VHER-H-B43

Dimensions Download CAD data → www.festo.com

Pneumatic connection G1/8 at side

1 Slot for proximity sensor SM...-10...
 2 Mounting hole
 3 Knurled nut M30
 4 Control panel

Type	B1	B2	B3	B4	B5	D1	D3	D4	D5
VHER-H-B43...-G18	51	45	28.5	32	14.6	G1/8	5.5	30.2	3.3

Type	H1	H2	H3	H4	H5	H6		L1	L2	L3	L4	W1
						min.	max.					
VHER-H-B43...-G18	95.6	45	15	7.5	40.5	2	4	84.9	60.5	54.5	3	45°

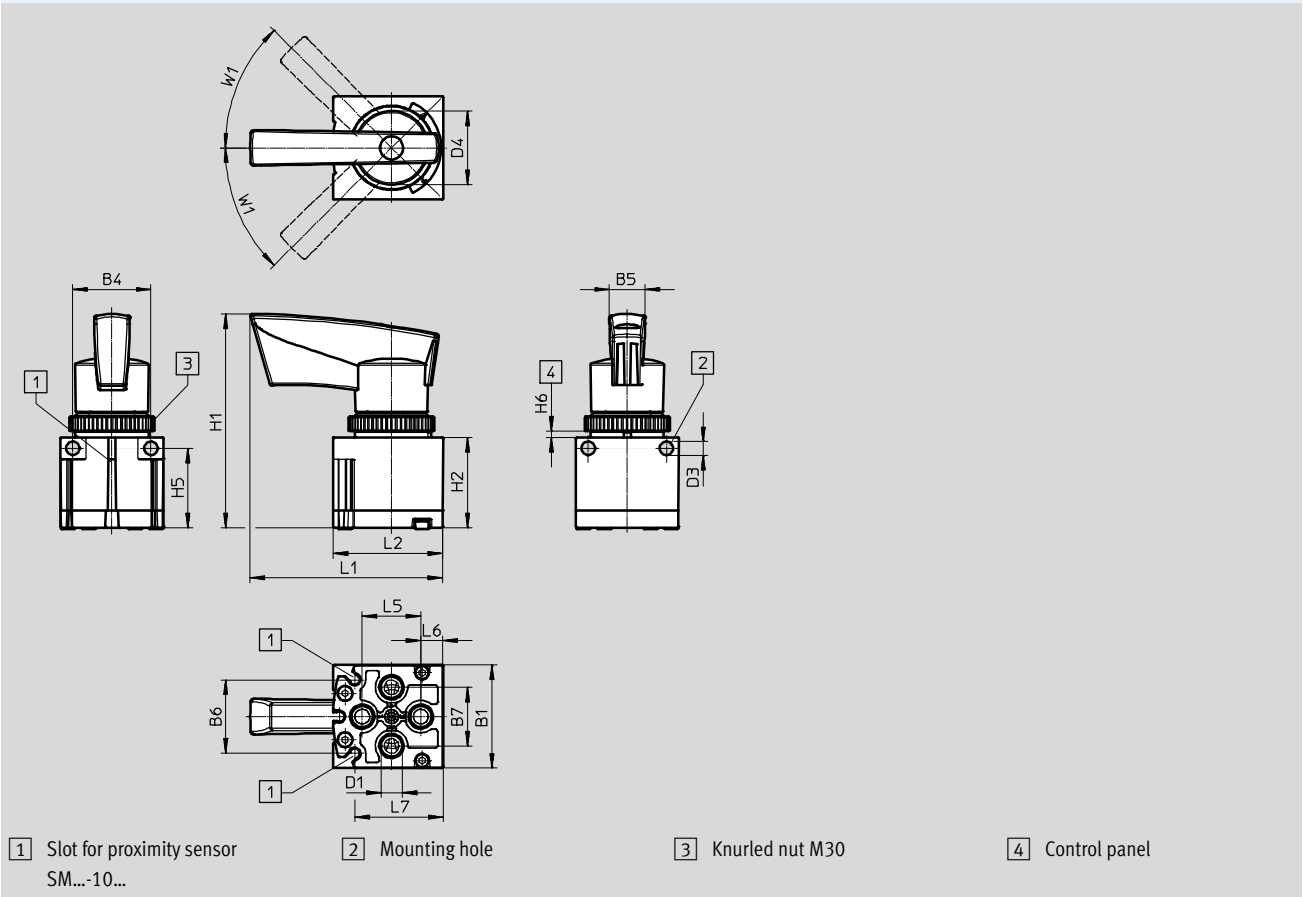
Hand lever valves, VHER-H-B43, non-reversible, metal lever

Technical data VHER-H-B43

Dimensions

Download CAD data → www.festo.com

Pneumatic connection G1/8 underneath



Type	B1	B4	B5	B6	B7	D1	D3 Ø	D4 Ø
VHER-H-B43...-B-G18	42.2	32	14.6	30.4	24	G1/8	5.5	30.2

Type	H1	H2	H5	H6		L1	L2	L5	L6	L7	W1
				min.	max.						
VHER-H-B43...-B-G18	87.6	37	32.5	2	4	78.6	44.9	24	9	36.2	45°

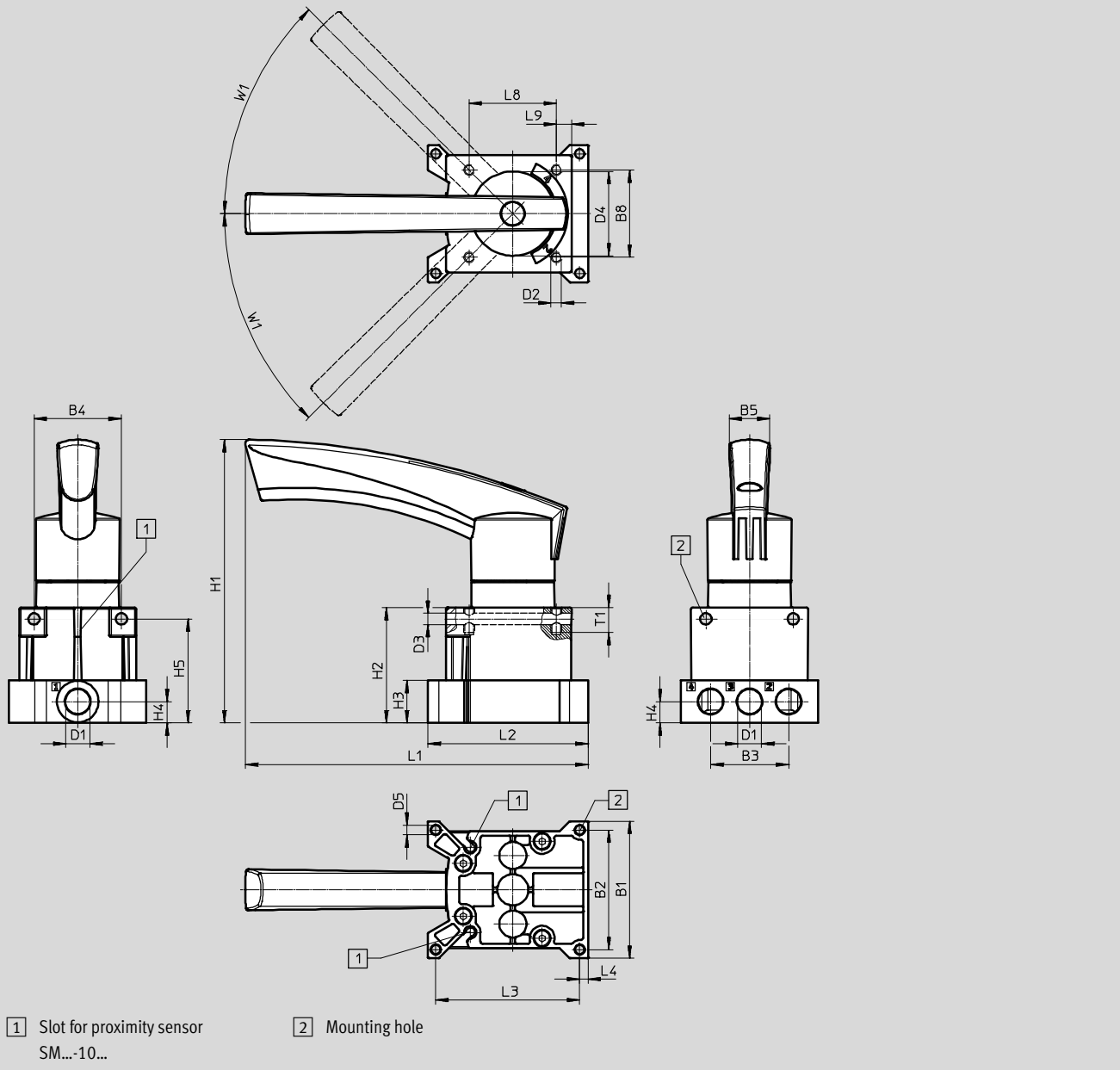
Hand lever valves, VHER-H-B43, non-reversible, metal lever

Technical data VHER-H-B43

Dimensions

Download CAD data → www.festo.com

Pneumatic connection G1/4 at side



Type	B1	B2	B3	B4	B5	B8	D1	D2	D3	D4	D5
VHER-H-B43...-G14	66	57.5	37.5	42	19.5	42	G1/4	M5	5.5	40.5	4.5

Type	H1	H2	H3	H4	H5	L1	L2	L3	L4	L8	L9	T1	W1
VHER-H-B43...-G14	136.3	55.5	20.5	10.3	50	164.8	77	69.2	4	42	7.2	12	45°

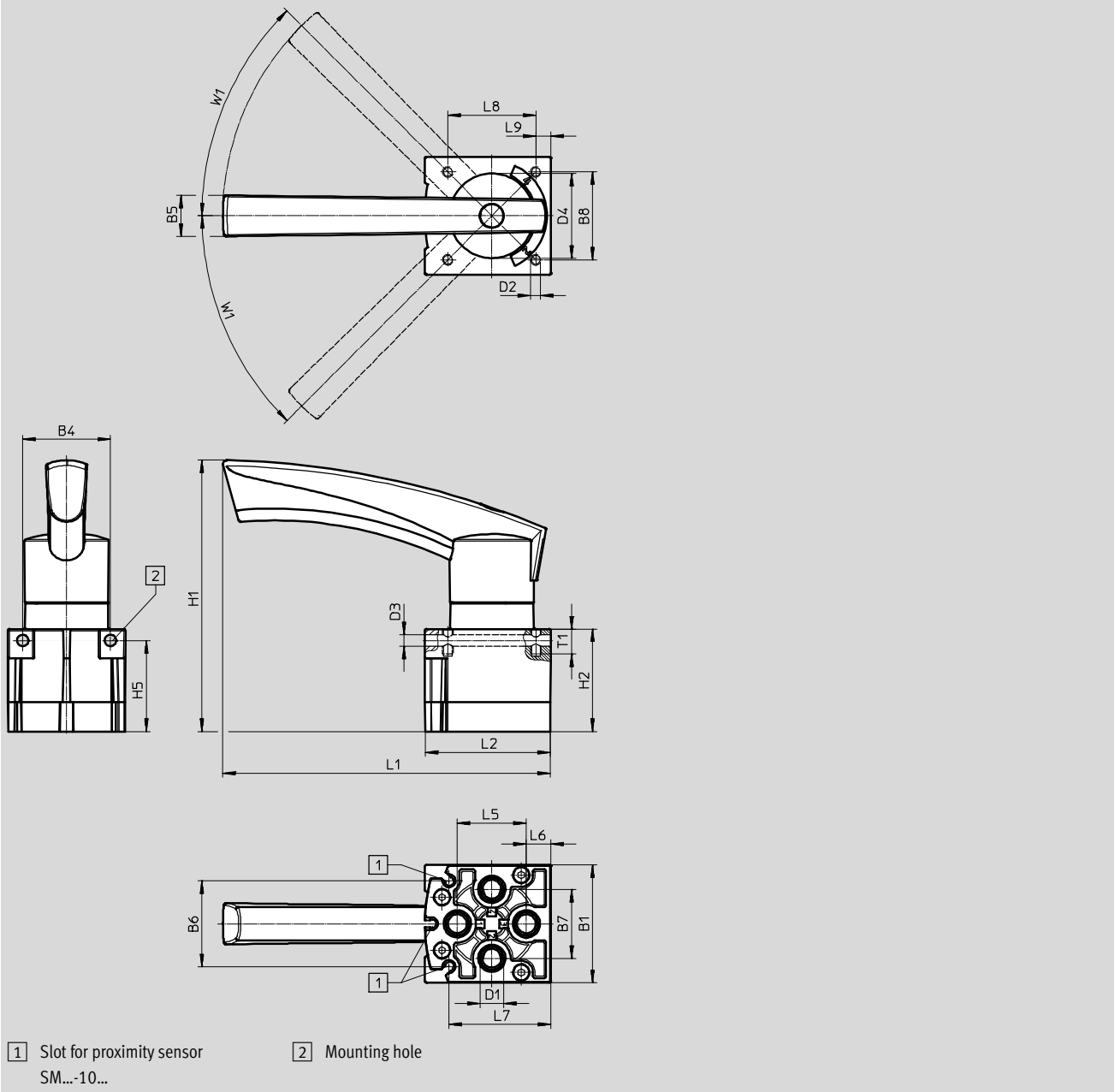
Hand lever valves, VHER-H-B43, non-reversible, metal lever

Technical data VHER-H-B43

Dimensions

Download CAD data → www.festo.com

Pneumatic connection G1/4 underneath



Type	B1	B4	B5	B6	B7	B8	D1	D2	D3	D4
VHER-H-B43...-B-G14	56.3	42	19.5	40.4	33	42	G1/4	M5	5.5	40.5

Type	H1	H2	H5	L1	L2	L5	L6	L7	L8	T1	W1
VHER-H-B43...-B-G14	129.8	49	43.5	156.6	59.8	33	11	48.2	42	12	45°

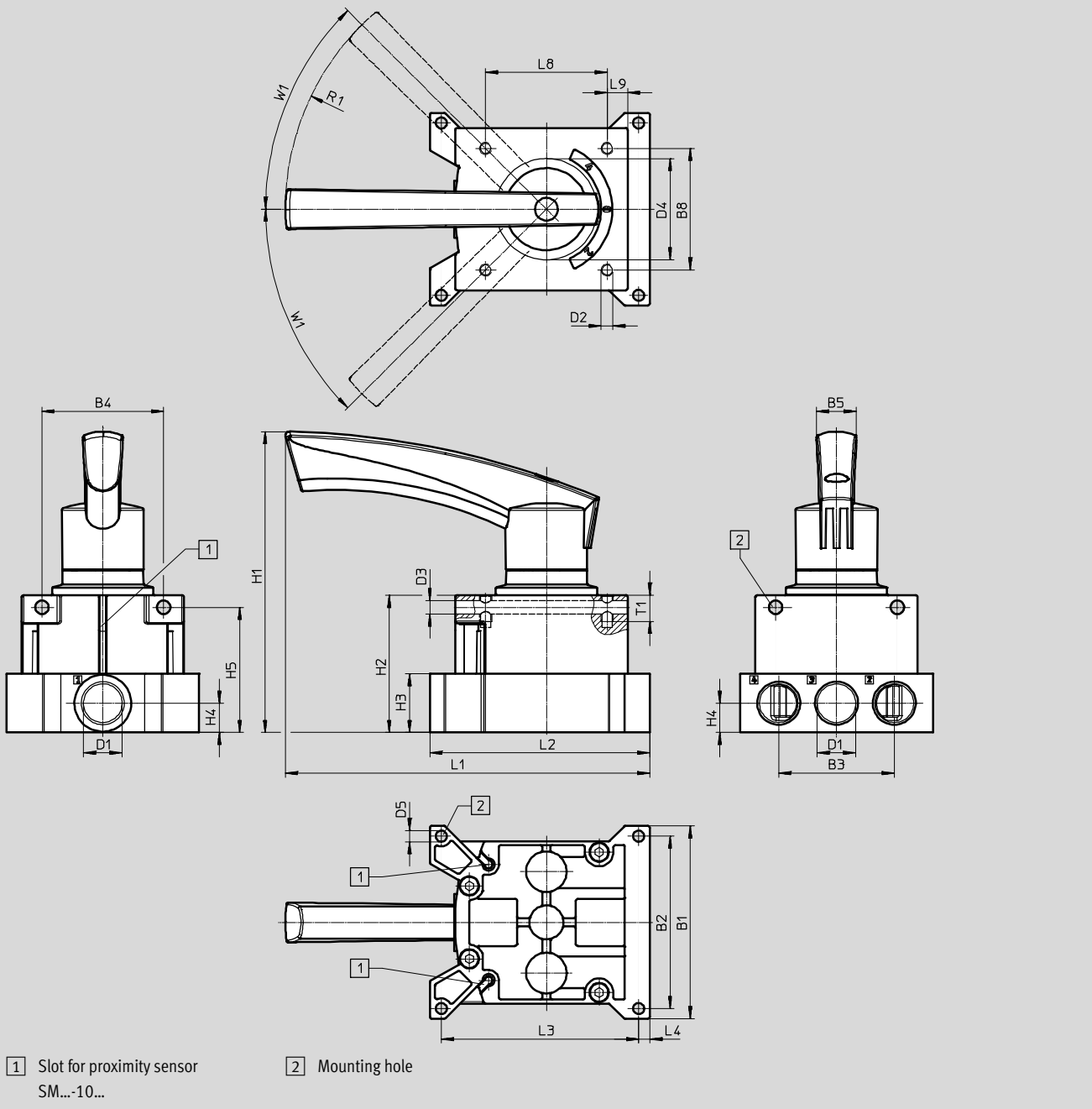
Hand lever valves, VHER-H-B43, non-reversible, metal lever

Technical data VHER-H-B43

Dimensions

Download CAD data → www.festo.com

Pneumatic connection G1/2 at side



Type	B1	B2	B3	B4	B5	B8	D1	D2	D3 ∅	D4 ∅	D5 ∅
VHER-H-B43-...-G12	95	85	57	60	19.5	60	G1/2	M5	6.6	51	5.5

Type	H1	H2	H3	H4	H5	L1	L2	L3	L4	L8	L9	R1	T1	W1
VHER-H-B43-...-G12	149	68	29	14.5	61.8	180	108.8	97.3	5.5	60	10	128	13	45°

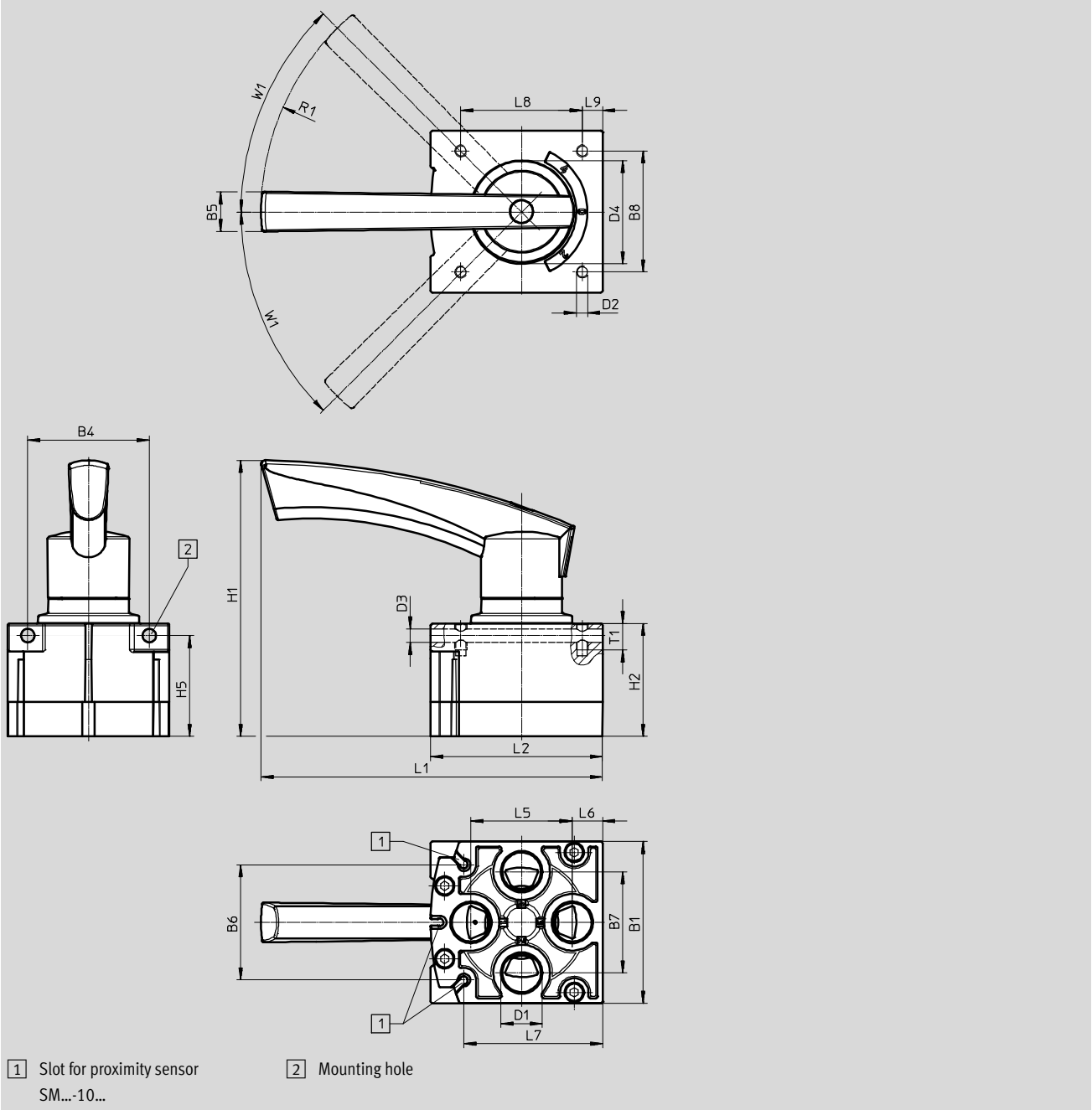
Hand lever valves, VHER-H-B43, non-reversible, metal lever

Technical data VHER-H-B43

Dimensions

Download CAD data → www.festo.com

Pneumatic connection G1/2 underneath



Type	B1	B4	B5	B6	B7	B8	D1	D2	D3 Ø	D4 Ø
VHER-H-B43-...-B-G12	80	60	19.5	56.9	50	60	G1/2	M5	6.6	51

Type	H1	H2	H5	L1	L2	L5	L6	L7	L8	L9	R1	T1	W1
VHER-H-B43-...-B-G12	136.5	55.8	49.8	168.8	84.8	50	15	68.5	60	10	128	13	45°

Hand lever valves, VHER-H-B43, non-reversible, metal lever

Ordering data

Ordering data – Hand lever valves-							
Circuit symbol	Description	Actuating lever	Actuator lock	Pneumatic connection	Weight [g]	Width [mm]	Part No. Type
4/3-way valve ¹⁾							
	Mid-position pressurised	Metal	–	Underneath	220	42	3488215 VHER-H-B43U-B-G18
					510	56	3515286 VHER-H-B43U-B-G14
					860	80	3192072 VHER-H-B43U-B-G12
		Metal	–	At the side	260	51	3488214 VHER-H-B43U-G18
					560	66	3515108 VHER-H-B43U-G14
					1010	95	3192071 VHER-H-B43U-G12
	Mid-position closed	Metal	–	Underneath	220	42	3488205 VHER-H-B43C-B-G18
					510	56	3515202 VHER-H-B43C-B-G14
					860	80	3192066 VHER-H-B43C-B-G12
		Metal	–	At the side	260	51	3488204 VHER-H-B43C-G18
					560	66	3514710 VHER-H-B43C-G14
					1010	95	3192065 VHER-H-B43C-G12
	Mid-position exhausted	Metal	–	Underneath	220	42	3488207 VHER-H-B43E-B-G18
					510	56	3515258 VHER-H-B43E-B-G14
					860	80	3192068 VHER-H-B43E-B-G12
		Metal	–	At the side	260	51	3488206 VHER-H-B43E-G18
					560	66	3515082 VHER-H-B43E-G14
					1010	95	3192067 VHER-H-B43E-G12





1) The hand lever valve can be used as a 3/3-way valve by sealing port 2.

Ordering data – Push-in fittings						
Description	Connection		Part No.	Type	PU ¹⁾	
Pneumatic connection: underneath, external hexagon						
	G1/8	G thread with sealing ring for (short design)	Tubing O.D. 4 mm	186264 QSM-G1/8-4	10	
			Tubing O.D. 6 mm	186265 QSM-G1/8-6	10	
	G1/8	G thread with sealing ring for	Tubing O.D. 4 mm	186095 QS-G1/8-4	10	
			Tubing O.D. 6 mm	186096 QS-G1/8-6	10	
			Tubing O.D. 8 mm	186098 QS-G1/8-8	10	
	G1/4	G thread with sealing ring for	Tubing O.D. 6 mm	186097 QS-G1/4-6	10	
			Tubing O.D. 8 mm	186098 QS-G1/4-8	10	
			Tubing O.D. 10 mm	186101 QS-G1/4-10	10	
	G1/2	G thread with sealing ring for	Tubing O.D. 12 mm	186104 QS-G1/2-12	1	
			Tubing O.D. 16 mm	186105 QS-G1/2-16	1	
Pneumatic connection: underneath, internal hexagon						
	G1/8	G thread with sealing ring for (short design)	Tubing O.D. 4 mm	186266 QSM-G1/8-4-I	10	
			Tubing O.D. 6 mm	186267 QSM-G1/8-6-I	10	
	G1/8	G thread with sealing ring for	Tubing O.D. 4 mm	186106 QS-G1/8-4-I	10	
			Tubing O.D. 6 mm	186107 QS-G1/8-6-I	10	
			Tubing O.D. 8 mm	186109 QS-G1/8-8-I	10	
	G1/4	G thread with sealing ring for	Tubing O.D. 6 mm	186108 QS-G1/4-6-I	10	
			Tubing O.D. 8 mm	186110 QS-G1/4-8-I	10	
			Tubing O.D. 10 mm	186112 QS-G1/4-10-I	10	
	G1/2	G thread with sealing ring for	Tubing O.D. 12 mm	186115 QS-G1/2-12-I	1	



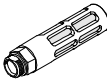

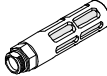
1) Packaging unit

Hand lever valves, VHER-H-B43, non-reversible, metal lever

Accessories

Ordering data – Push-in fittings						
Description	Connection			Part No.	Type	PU ¹⁾
Pneumatic connection: at the side, internal hexagon						
	G1/8	G thread with sealing ring for (short design)	Tubing O.D. 4 mm	186266	QSM-G1/8-4-I	10
			Tubing O.D. 6 mm	186267	QSM-G1/8-6-I	10
	G1/8	G thread with sealing ring for	Tubing O.D. 4 mm	186106	QS-G1/8-4-I	10
			Tubing O.D. 6 mm	186107	QS-G1/8-6-I	10
			Tubing O.D. 8 mm	186109	QS-G1/8-8-I	10
	G1/4	G thread with sealing ring for	Tubing O.D. 6 mm	186108	QS-G1/4-6-I	10
			Tubing O.D. 8 mm	186110	QS-G1/4-8-I	10
			Tubing O.D. 10 mm	186112	QS-G1/4-10-I	10
	G1/2	G thread with sealing ring for	Tubing O.D. 12 mm	186115	QS-G1/2-12-I	1

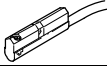
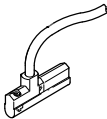
1) Packaging unit

Ordering data – Silencers							
Description	Connection	Materials			Part No.	Type	PU ¹⁾
		Stud end connector	Silencer	Housing			
Pneumatic connection: underneath							
	G1/8	PE	PE	–	161419	UC-1/8	1
	G1/4	PE	PE	–	165004	UC-1/4	1
	G1/8	Die-cast aluminium	PE	Die-cast aluminium	6841	U-1/8-B	1
	G1/8	PA	PE	PA	2307	U-1/8	1
	G1/4	Die-cast aluminium	PE	Die-cast aluminium	6842	U-1/4-B	1
	G1/4	PA	PE	PA	2316	U-1/4	1
	G1/2	Die-cast aluminium	PE	Die-cast aluminium	6844	U-1/2-B	1
Pneumatic connection: at side							
	G1/8	PE	PE	–	161419	UC-1/8	1
	G1/4	PE	PE	–	165004	UC-1/4	1
	G1/2	Die-cast aluminium	PE	Die-cast aluminium	6844	U-1/2-B	1


1) Packaging unit

Hand lever valves, VHER-H-B43, non-reversible, metal lever

Accessories

Ordering data – Proximity sensors-								
	Connection outlet direction	Measuring principle	Switching output	Electrical connection	Cable length [m]	Part No.	Type	PU ¹⁾
N/O contact								
	In-line	Magnetic reed	Contacting, bipolar	Cable, 3-wire	2.5	173210	SME-10-KL-LED-24	1
				Plug M8x1, 3-pin	0.3	173212	SME-10-SL-LED-24	1
	Lateral	Magnetic reed	Contacting, bipolar	Cable, 3-wire	2.5	173211	SME-10-KQ-LED-24	1
				Plug M8x1, 3-pin	0.3	173213	SME-10-SQ-LED-24	1

1) Packaging unit




Ordering data					
	Description	Connection	Part No.	Type	PU ¹⁾
Blanking plug					
	With sealing ring, internal hexagon, for sealing ports	G1/8	3568	B-1/8	10
			534213	B-1/8-100	100
		G1/4	3569	B-1/4	10
			534214	B-1/4-50	50
		G1/2	3571	B-1/2	10
			534216	B-1/2-20	20

1) Packaging unit

Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

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Technical data VHER-P-H-B43

-  Flow rate
170 ... 3800 l/min
-  Pressure
-0.95 ... +10 bar
-  Temperature range
-20 ... +80 °C



General technical data						
Connection size		M5	G1/8	G1/4	G1/2	
Valve function		4/3-way, detenting, mid-position closed, exhausted or pressurised				
Design		Rotary slide valve				
Sealing principle		Hard				
Type of mounting		Option of front panel mounting or through-holes				
Type of piloting		Direct				
Type of actuation		Manual				
Actuating lever (can be removed)		Polymer (plastic, PA)				
Actuator lock		With accessories (Actuating lever can be latched and locked in 3 positions. If the actuating lever is locked, it cannot be removed.)				
Switching position indication		Via accessories				
Mounting position		Any				
Direction of flow		Non-reversible				
Non-overlapping		Yes				
Exhaust air function		With flow control				
Nominal flow rate	Port at side	[l/min.]	170	600	1150	3200
	Port underneath	[l/min.]	260	800	1500	3800
Nominal width		[mm]	4	6	8	12
Pneumatic connection 1, 2, 3, 4			M5	G1/8	G1/4	G1/2
Actuating torque at 6 bar		[Nm]	0.5	0.9	2	5

Operating and environmental conditions						
Connection size		M5	G1/8	G1/4	G1/2	
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]				
Note on operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)				
Operating pressure		[bar]	0 ... 10 (vacuum only permitted at port 3)			
Ambient temperature		[°C]	-20 ... +80			
Temperature of medium		[°C]	-20 ... +80			
Corrosion resistance class CRC ¹⁾			2			

1) Corrosion resistance class 2 according to Festo standard 940070
Components subject to moderate corrosion stress. External visible parts with primarily decorative surface requirements which are in direct contact with the surrounding industrial environment or media such as coolants or lubricating agents.

Proximity sensors for switching position indication						
Connection size	Connection direction	Type				
		SME-10-... -L-...	SME-10-... -Q-...			
M5	Underneath	■			■	
	At the side	-			■	
G1/8	Underneath	■			■	
	At the side	-			■	
G1/4	Underneath	■			■	
	At the side	-			■	
G1/2	Underneath	■			■	
	At the side	-			■	

Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

Technical data VHER-P-H-B43

Operation with different pressures

Vacuum operation

The direction of flow of the VHER-B43 valves is clearly defined and cannot be reversed.

The vacuum may only be connected to port 3 to maintain the direction of flow.

Vacuum operation at port 3:
-0.95 ... 0 bar



Note

A filter must be installed upstream of valves operated in vacuum mode. This prevents any foreign matter in

the intake air getting into the valve (e.g. when operating a suction cup).



Note

During vacuum operation, the valve function changes from exhausted (VHER-...-B43E-...) to pressurised (VHER-...-B43U-...) and vice versa.

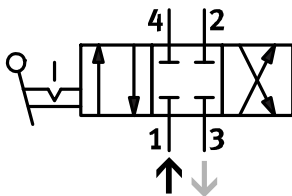


Note

Vacuum must not be connected to port 1.

During vacuum operation:

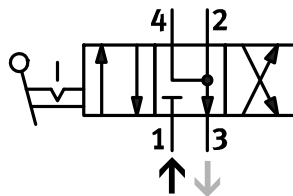
Mid-position closed
(VHER-...-B43C-...)



(During normal operation: mid-position closed VHER-...-B43C-...)

During vacuum operation:

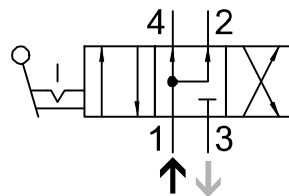
Mid-position pressurised
(VHER-...-B43U-...)



(During normal operation: mid-position exhausted VHER-...-B43E-...)

During vacuum operation:

Mid-position exhausted
(VHER-...-B43E-...)



(During normal operation: mid-position pressurised VHER-...-B43U-...)

Connections with vacuum:

- Vacuum is generated by connecting vacuum generator to port 3
- Exhaust (or pressurisation) takes place via port 1
- Vacuum operation (e.g. suction cup) takes place at port 2 (or 4)

Dual-pressure operation

Valves VHER-B43 are suitable for dual-pressure operation.

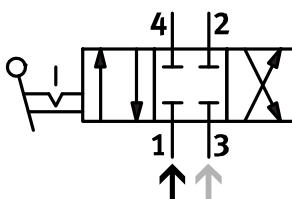
Please note that for design reasons compressed air may only be applied to port 1 and 3.



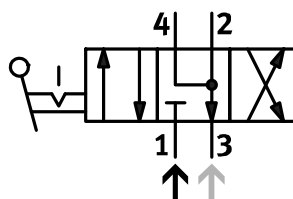
Note

In the case of dual-pressure operation, the higher pressure must always be applied to port 1.

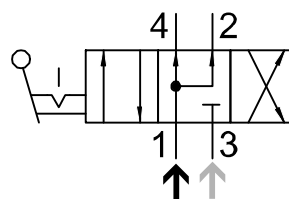
Mid-position closed
VHER-...-B43C-...



Mid-position exhausted
VHER-...-B43E-...



Mid-position pressurised
VHER-...-B43U-...



Connections with dual-pressure operation:

- Supply port: port 1 (high pressure)
- Supply port: port 3 (lower pressure)

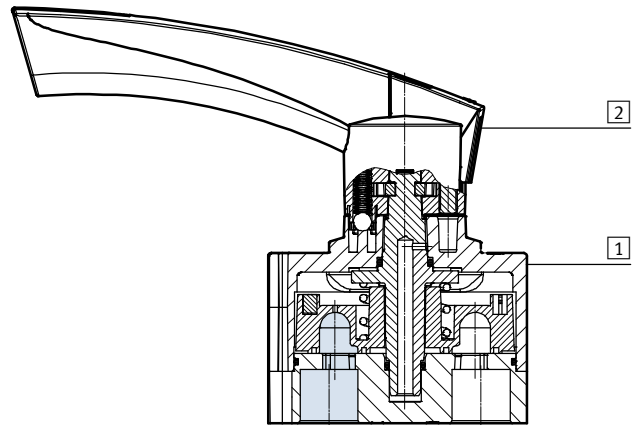
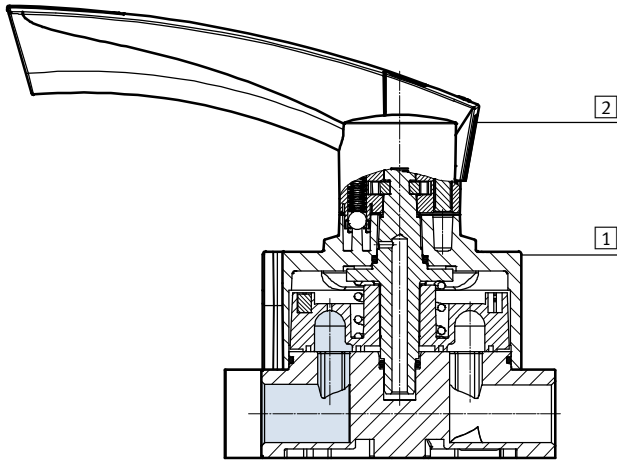
Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

Technical data VHER-P-H-B43

Sectional view

Hand lever valve VHER-P-H-B43-...

Hand lever valve VHER-P-H-B43...-B-...



Materials		M5	G1/8	G1/4	G1/2
1	Housing	PA	PA	PA	Die-cast aluminium
2	Actuating lever	PA			
-	Seals	NBR			
-	Note on materials	RoHS compliant			
-	Note on materials	Free of copper and PTFE			

Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

Technical data VHER-P-H-B43

Dimensions Download CAD data → www.festo.com

Pneumatic connection M5 at side

1 Slot for proximity sensor SM...-10...
 2 Mounting hole
 3 Knurled nut M22
 4 Control panel
 5 Drill hole for interlock, Ø 7.5 mm
 6 Lever mounting clip, removable
 7 Latching button with lock

Type	B1	B2	B3	B5	D1	D4	D5
VHER-P-H-B43...-M5	37	32	17.4	14.6	M5	∅ 30.2	∅ 2.7

Type	H1	H2	H3	H4	H6		L1	L2	L3	L4	W1
					min.	max.					
VHER-P-H-B43...-M5	82.1	32	10	5	1.5	5.5	77.6	45	40	2.5	45°

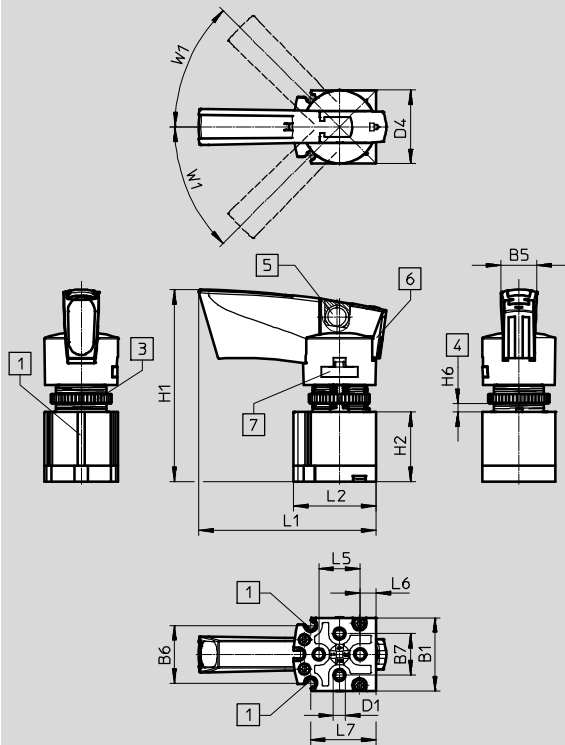
Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

Technical data VHER-P-H-B43

Dimensions

Download CAD data → www.festo.com

Pneumatic connection M5 underneath



- 1 Slot for proximity sensor SM...-10...
- 2 Knurled nut M22
- 3 Drill hole for interlock, \varnothing 7.5 mm
- 4 Control panel
- 5 Latching button with lock
- 6 Lever mounting clip, removable

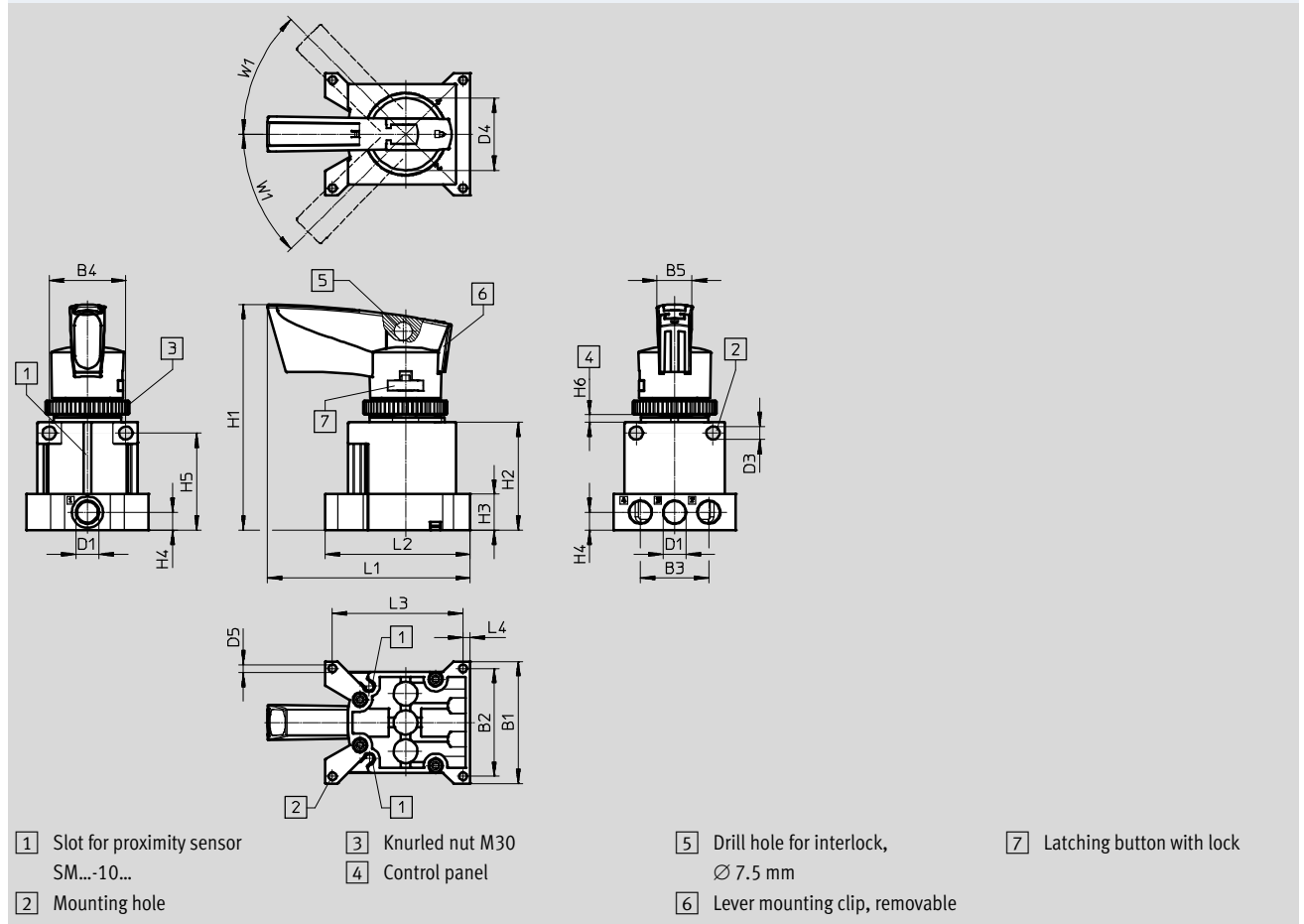
Type	B1	B5	B6	B7	D1	D4
VHER-P-H-B43...-M5	30	14.6	23.7	17	M5	\varnothing 30.2

Type	H1	H2	H6		L1	L2	L5	L6	L7	W1
			min.	max.						
VHER-P-H-B43...-M5	78.7	28.6	1.5	5.5	72.6	33.8	17	6.5	26.8	45°

Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

Technical data VHER-P-H-B43

Dimensions Download CAD data → www.festo.com
 Pneumatic connection G1/8 at side



Type	B1	B2	B3	B4	B5	D1	D3 Ø	D4 Ø	D5 Ø
VHER-P-H-B43...-G18	51	45	28.5	32	14.6	G1/8	5.5	30.2	3.3

Type	H1	H2	H3	H4	H5	H6		L1	L2	L3	L4	W1
						min.	max.					
VHER-P-H-B43...-G18	94	45	15	7.5	40.5	2	4	84.6	60.5	54.5	3	45°

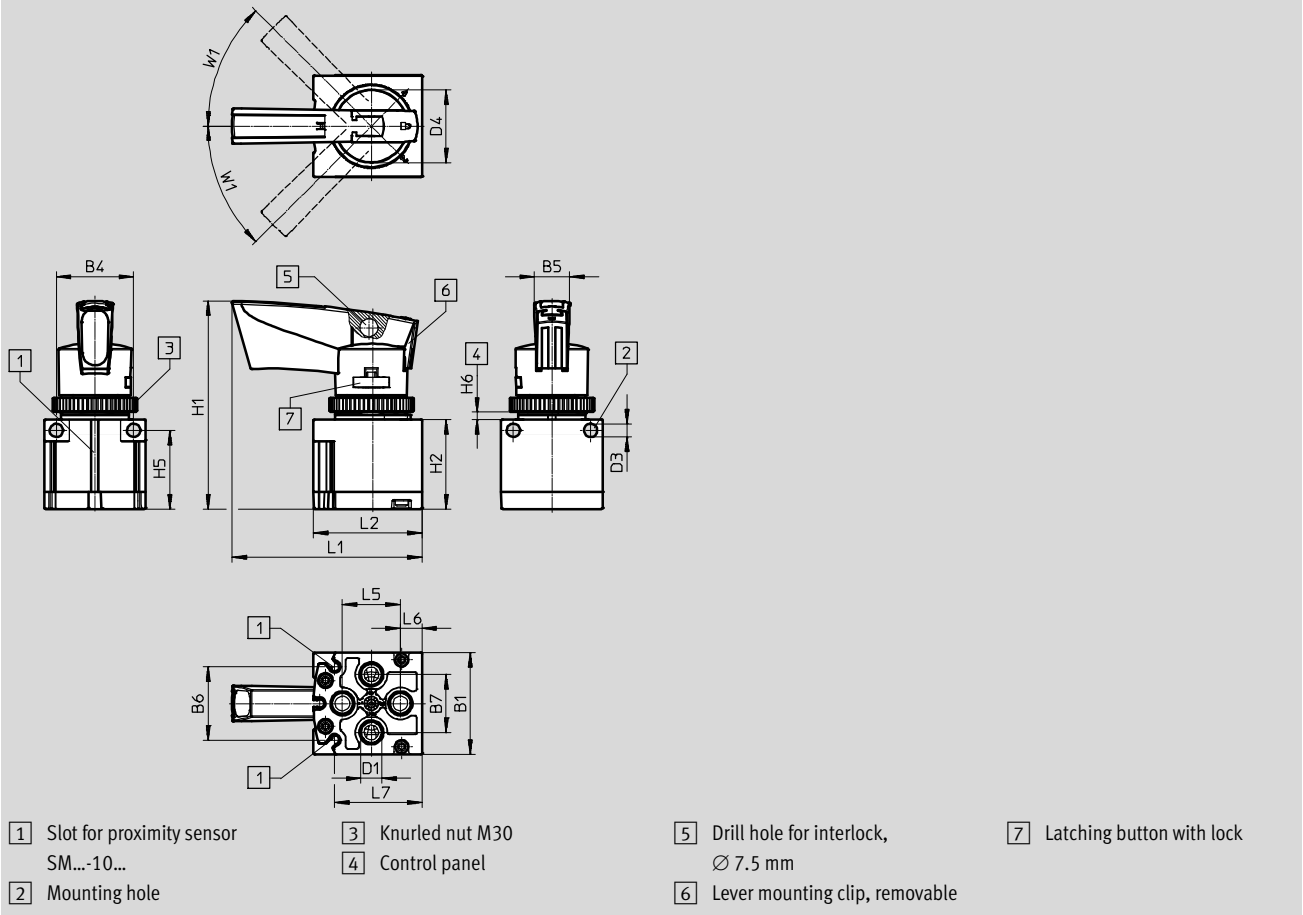
Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

Technical data VHER-P-H-B43

Dimensions

Download CAD data → www.festo.com

Pneumatic connection G1/8 underneath



- 1 Slot for proximity sensor SM...-10...
- 2 Mounting hole
- 3 Knurled nut M30
- 4 Control panel
- 5 Drill hole for interlock, Ø 7.5 mm
- 6 Lever mounting clip, removable
- 7 Latching button with lock

Type	B1	B4	B5	B6	B7	D1	D3	D4
VHER-P-H-B43...-B-G18	42	32	14.6	30.4	24	G1/8	5.5	30.2

Type	H1	H2	H5	H6		L1	L2	L5	L6	L7	W1
				min.	max.						
VHER-P-H-B43...-B-G18	86	37	32.5	2	4	78.6	45	24	9	36.2	45°

Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

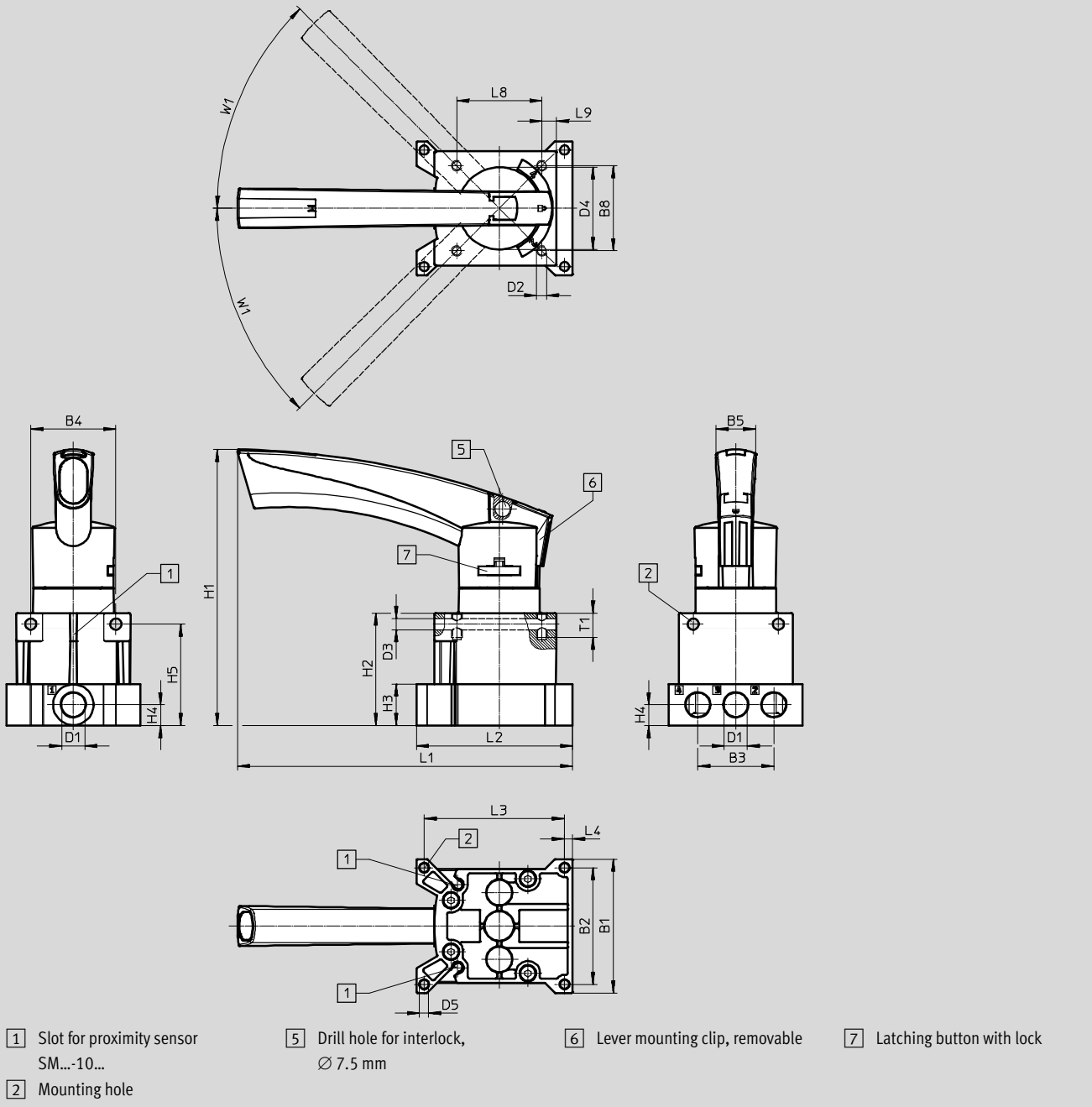
Technical data VHER-P-H-B43

FESTO

Dimensions

Download CAD data → www.festo.com

Pneumatic connection G1/4 at side



Type	B1	B2	B3	B4	B5	B8	D1	D2	D3	D4	D5
VHER-P-H-B43...-G14	66	57.5	37.5	42	19.5	42	G1/4	M5	5.5	40.5	4.5

Type	H1	H2	H3	H4	H5	L1	L2	L3	L4	L8	L9	T1	W1
VHER-P-H-B43...-G14	135.7	55.5	20.5	10.3	50	165.3	77	69.2	4	42	7.2	12	45°

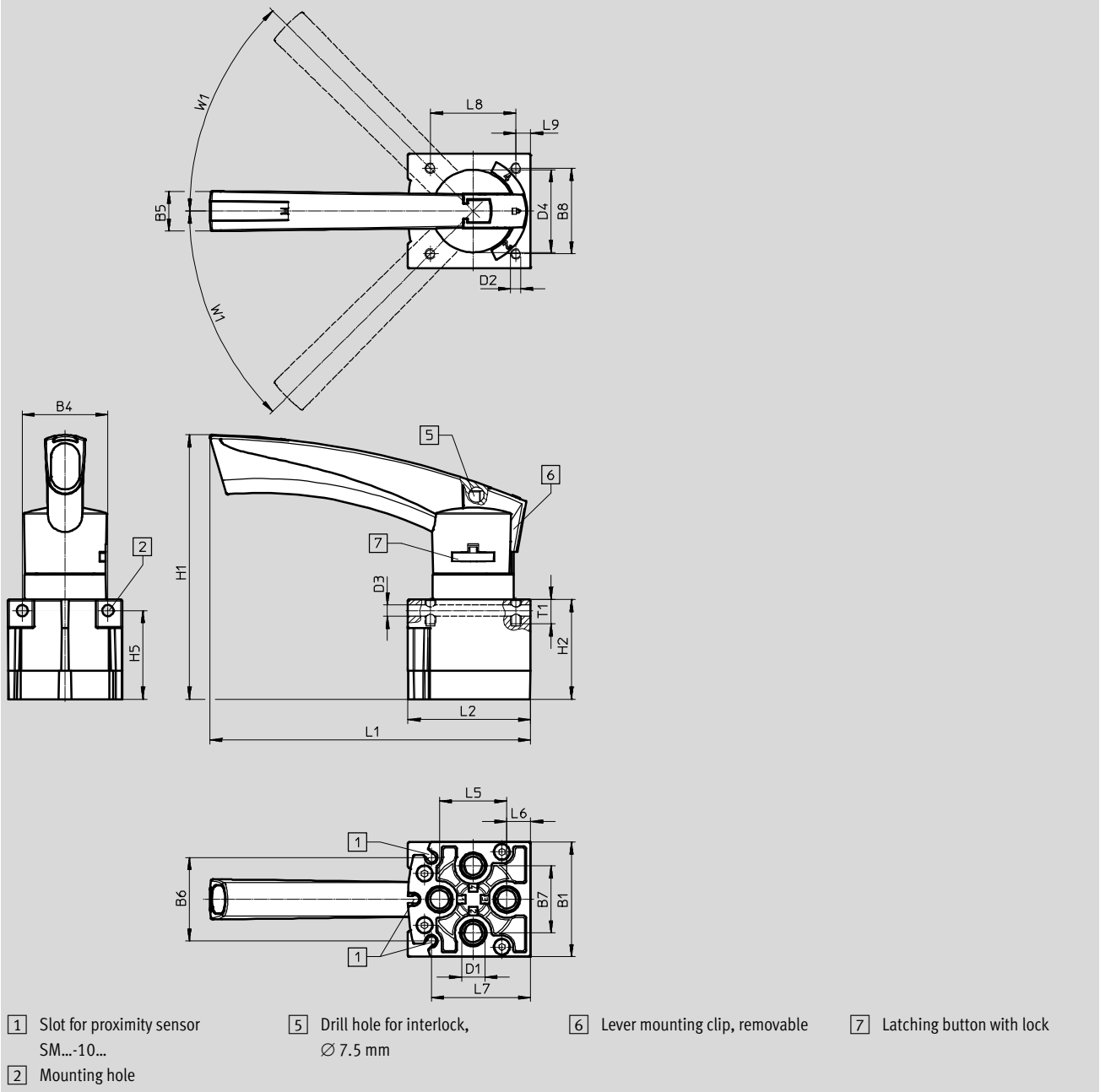
Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

Technical data VHER-P-H-B43

Dimensions

Download CAD data → www.festo.com

Pneumatic connection G1/4 underneath



Type	B1	B4	B5	B6	B7	B8	D1	D2	D3	D4
VHER-P-H-B43...-B-G14	56.3	42	19.5	41	33	42	G1/4	M5	5.5	40.5

Type	H1	H2	H5	L1	L2	L5	L6	L7	L8	L9	T1	W1
VHER-P-H-B43...-B-G14	129.2	49	43.5	157	60.2	33	11.5	48.7	42	7.2	12	45°

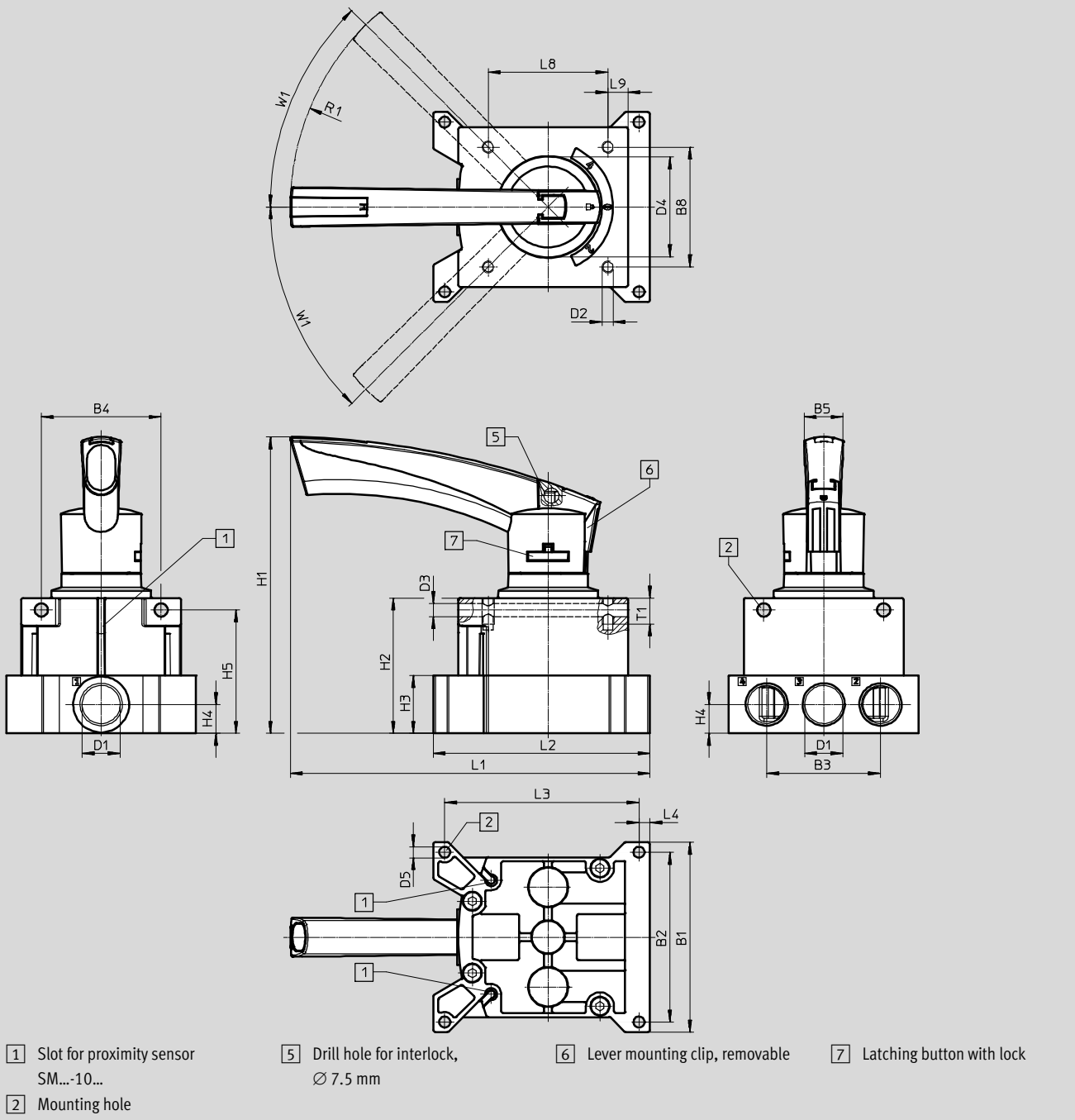
Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

Technical data VHER-P-H-B43

Dimensions

Download CAD data → www.festo.com

Pneumatic connection G1/2 at side



Type	B1	B2	B3	B4	B5	B8	D1	D2	D3	D4	D5
VHER-P-H-B43-...-G12	95	85	57	60	19.5	60	G1/2	M5	6.6	51	5.5

Type	H1	H2	H3	H4	H5	L1	L2	L3	L4	L8	L9	R1	T1	W1
VHER-P-H-B43-...-G12	148	67.8	29	14.5	61.8	180.1	108.5	97.3	5.5	60	10	128	13	45°

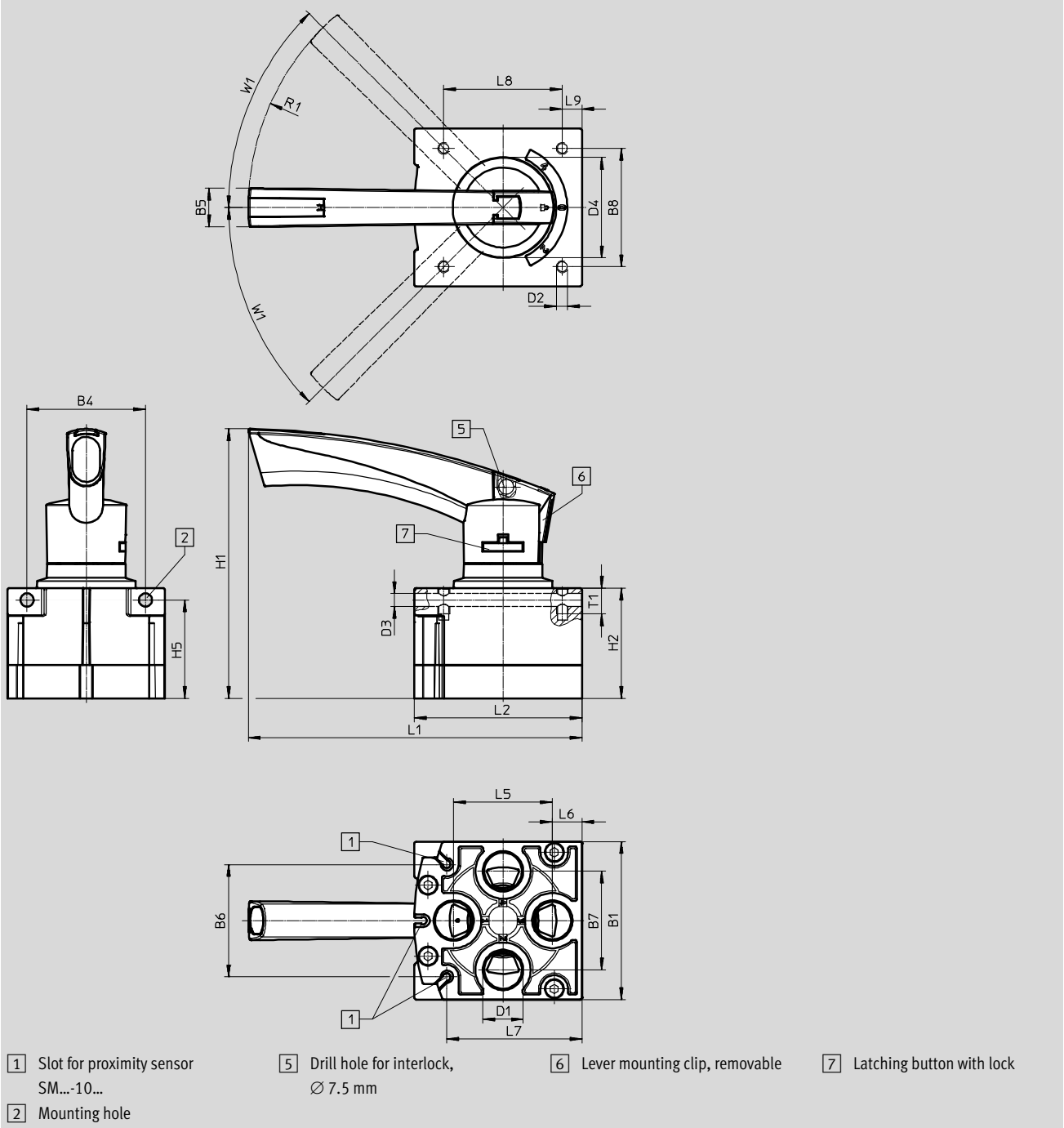
Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

Technical data VHER-P-H-B43

Dimensions

Download CAD data → www.festo.com

Pneumatic connection G1/2 underneath

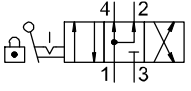
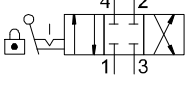
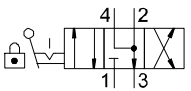


Type	B1	B4	B5	B6	B7	B8	D1	D2	D3	D4
VHER-P-H-B43-...-B-G12	80	60	19.5	56.9	50	60	G1/2	M5	6.6	51

Type	H1	H2	H5	L1	L2	L5	L6	L7	L8	L9	R1	T1	W1
VHER-P-H-B43-...-B-G12	137	55.8	49.8	169	84.8	50	15	68.5	60	10	128	13	45°

Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever


Ordering data

Ordering data – Hand lever valves-								
Circuit symbol	Description	Actuating lever	Actuator lock	Pneumatic connection	Weight [g]	Width [mm]	Part No.	Type
4/3-way valve ¹⁾								
	Mid-position pressurised	Polymer	Lockable using accessories	Underneath	80	30	3410684	VHER-P-H-B43U-B-M5
					125	42	3488217	VHER-P-H-B43U-B-G18
					375	56	3515683	VHER-P-H-B43U-B-G14
					740	80	3192084	VHER-P-H-B43U-B-G12
				At the side	95	37	3410683	VHER-P-H-B43U-M5
					165	51	3488216	VHER-P-H-B43U-G18
					435	66	3515573	VHER-P-H-B43U-G14
					900	95	3192082	VHER-P-H-B43U-G12
	Mid-position closed	Polymer	Lockable using accessories	Underneath	80	30	3410680	VHER-P-H-B43C-B-M5
					125	42	3488209	VHER-P-H-B43C-B-G18
					375	56	3515601	VHER-P-H-B43C-B-G14
					740	80	3192075	VHER-P-H-B43C-B-G12
				At the side	95	37	3410679	VHER-P-H-B43C-M5
					165	51	3488208	VHER-P-H-B43C-G18
					435	66	3515361	VHER-P-H-B43C-G14
					900	95	3192074	VHER-P-H-B43C-G12
	Mid-position exhausted	Polymer	Lockable using accessories	Underneath	80	30	3410682	VHER-P-H-B43E-B-M5
					125	42	3488211	VHER-P-H-B43E-B-G18
					375	56	3515640	VHER-P-H-B43E-B-G14
					740	80	3192077	VHER-P-H-B43E-B-G12
				At the side	95	37	3410681	VHER-P-H-B43E-M5
					165	51	3488210	VHER-P-H-B43E-G18
					435	66	3515542	VHER-P-H-B43E-G14
					900	95	3192076	VHER-P-H-B43E-G12

1) The hand lever valve can be used as a 3/3-way valve by sealing port 2.

Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

Accessories



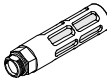

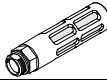
Ordering data – Push-in fittings-						
Description	Connection			Part No.	Type	PU ¹⁾
Pneumatic connection: underneath, external hexagon						
	M5	Metric thread with sealing ring for (short design)	Tubing O.D. 3 mm	153302	QSM-M5-3	10
			Tubing O.D. 4 mm	153304	QSM-M5-4	10
			Tubing O.D. 6 mm	153306	QSM-M5-6	10
	G1/8	G thread with sealing ring for (short design)	Tubing O.D. 4 mm	186264	QSM-G1/8-4	10
			Tubing O.D. 6 mm	186265	QSM-G1/8-6	10
	G1/8	G thread with sealing ring for	Tubing O.D. 4 mm	186095	QS-G1/8-4	10
			Tubing O.D. 6 mm	186096	QS-G1/8-6	10
			Tubing O.D. 8 mm	186098	QS-G1/8-8	10
	G1/4	G thread with sealing ring for	Tubing O.D. 6 mm	186097	QS-G1/4-6	10
			Tubing O.D. 8 mm	186098	QS-G1/4-8	10
			Tubing O.D. 10 mm	186101	QS-G1/4-10	10
	G1/2	G thread with sealing ring for	Tubing O.D. 12 mm	186104	QS-G1/2-12	1
			Tubing O.D. 16 mm	186105	QS-G1/2-16	1
Pneumatic connection: underneath, internal hexagon						
	M5	Metric thread with sealing ring for (short design)	Tubing O.D. 3 mm	153313	QSM-M5-3-I	10
			Tubing O.D. 4 mm	153315	QSM-M5-4-I	10
			Tubing O.D. 6 mm	153317	QSM-M5-6-I	10
	G1/8	G thread with sealing ring for (short design)	Tubing O.D. 4 mm	186266	QSM-G1/8-4-I	10
			Tubing O.D. 6 mm	186267	QSM-G1/8-6-I	10
	G1/8	G thread with sealing ring for	Tubing O.D. 4 mm	186106	QS-G1/8-4-I	10
			Tubing O.D. 6 mm	186107	QS-G1/8-6-I	10
			Tubing O.D. 8 mm	186109	QS-G1/8-8-I	10
	G1/4	G thread with sealing ring for	Tubing O.D. 6 mm	186108	QS-G1/4-6-I	10
			Tubing O.D. 8 mm	186110	QS-G1/4-8-I	10
			Tubing O.D. 10 mm	186112	QS-G1/4-10-I	10
	G1/2	G thread with sealing ring for	Tubing O.D. 12 mm	186115	QS-G1/2-12-I	1
Pneumatic connection: at the side, internal hexagon						
	M5	Metric thread with sealing ring for (short design)	Tubing O.D. 3 mm	153313	QSM-M5-3-I	10
			Tubing O.D. 4 mm	153315	QSM-M5-4-I	10
	G1/8	G thread with sealing ring for (short design)	Tubing O.D. 4 mm	186266	QSM-G1/8-4-I	10
			Tubing O.D. 6 mm	186267	QSM-G1/8-6-I	10
	G1/8	G thread with sealing ring for	Tubing O.D. 4 mm	186106	QS-G1/8-4-I	10
			Tubing O.D. 6 mm	186107	QS-G1/8-6-I	10
			Tubing O.D. 8 mm	186109	QS-G1/8-8-I	10
	G1/4	G thread with sealing ring for	Tubing O.D. 6 mm	186108	QS-G1/4-6-I	10
			Tubing O.D. 8 mm	186110	QS-G1/4-8-I	10
			Tubing O.D. 10 mm	186112	QS-G1/4-10-I	10
	G1/2	G thread with sealing ring for	Tubing O.D. 12 mm	186115	QS-G1/2-12-I	1

1) Packaging unit

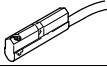
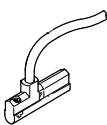
Hand lever valves, VHER-P-H-B43, non-reversible, polymer lever

FESTO



Accessories

Ordering data – Silencers-							
Description	Connection	Materials			Part No.	Type	PU ¹⁾
		Stud end connector	Silencer	Housing			
Pneumatic connection: underneath							
	M5	PE	PE	–	165003	UC-M5	1
	G1/8	PE	PE	–	161419	UC-1/8	1
	G1/4	PE	PE	–	165004	UC-1/4	1
	G1/8	Die-cast aluminium	PE	Die-cast aluminium	6841	U-1/8-B	1
	G1/8	PA	PE	PA	2307	U-1/8	1
	G1/4	Die-cast aluminium	PE	Die-cast aluminium	6842	U-1/4-B	1
	G1/4	PA	PE	PA	2316	U-1/4	1
	G1/2	Die-cast aluminium	PE	Die-cast aluminium	6844	U-1/2-B	1
Pneumatic connection: at side							
	M5	PE	PE	–	165003	UC-M5	1
	G1/8	PE	PE	–	161419	UC-1/8	1
	G1/4	PE	PE	–	165004	UC-1/4	1
	G1/2	Die-cast aluminium	PE	Die-cast aluminium	6844	U-1/2-B	1

1) Packaging unit

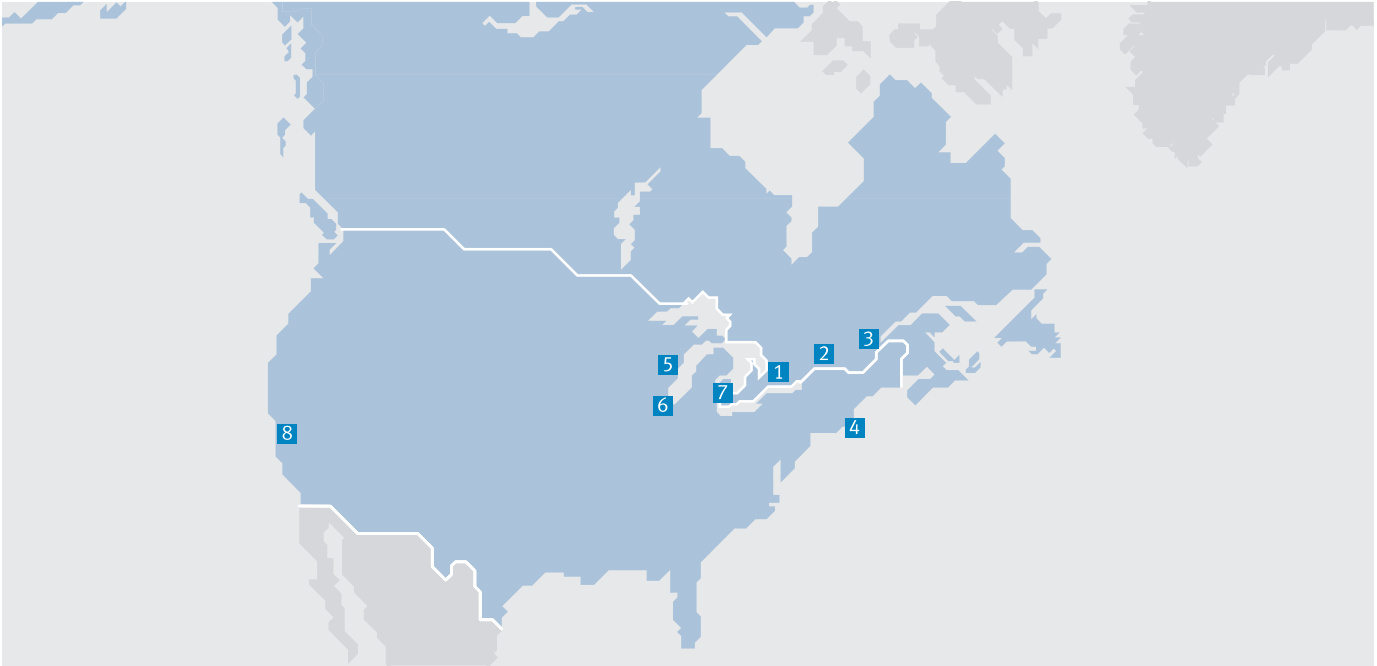
Ordering data – Proximity sensors								
Description	Connection outlet direction	Measuring principle	Switching output	Electrical connection	Cable length [m]	Part No.	Type	PU ¹⁾
	In-line	Magnetic reed	Contacting, bipolar	Cable, 3-wire	2.5	173210	SME-10-KL-LED-24	1
				Plug M8x1, 3-pin	0.3	173212	SME-10-SL-LED-24	1
	Lateral	Magnetic reed	Contacting, bipolar	Cable, 3-wire	2.5	173211	SME-10-KQ-LED-24	1
				Plug M8x1, 3-pin	0.3	173213	SME-10-SQ-LED-24	1

1) Packaging unit

Ordering data				
Description	Connection	Part No.	Type	PU ¹⁾
Blanking plug				
	M5	3843	B-M5	10
		534212	B-M5-100	100
	G1/8	3568	B-1/8	10
		534213	B-1/8-100	100
	G1/4	3569	B-1/4	10
		534214	B-1/4-50	50
	G1/2	3571	B-1/2	10
		534216	B-1/2-20	20

1) Packaging unit

Festo North America



**1 Festo Canada
Headquarters
Festo Inc.**
5300 Explorer Drive
Mississauga, ON
L4W 5G4

2 Montréal
5600, Trans-Canada
Pointe-Claire, QC
H9R 1B6

3 Québec City
2930, rue Watt#117
Québec, QC
G1X 4G3



**4 Festo United States
Headquarters
Festo Corporation**
395 Moreland Road
Hauppauge, NY
11788

5 Appleton
North 922 Tower View Drive, Suite N
Greenville, WI
54942

7 Detroit
1441 West Long Lake Road
Troy, MI
48098

6 Chicago
85 W Algonquin - Suite 340
Arlington Heights, IL
60005

8 Silicon Valley
4935 Southfront Road, Suite F
Livermore, CA
94550

Festo Regional Contact Center

Canadian Customers

Commercial Support:
Tel: 1 877 GO FESTO (1 877 463 3786)
Fax: 1 877 FX FESTO (1 877 393 3786)
Email: festo.canada@ca.festo.com

Technical Support:
Tel: 1 866 GO FESTO (1 866 463 3786)
Fax: 1 877 FX FESTO (1 877 393 3786)
Email: technical.support@ca.festo.com

USA Customers

Commercial Support:
Tel: 1 800 99 FESTO (1 800 993 3786)
Fax: 1 800 96 FESTO (1 800 963 3786)
Email: customer.service@us.festo.com

Technical Support:
Tel: 1 866 GO FESTO (1 866 463 3786)
Fax: 1 800 96 FESTO (1 800 963 3786)
Email: product.support@us.festo.com