

Hand lever valves VHER, NPT



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Key features

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Powerful

 Flow rate
600 ... 4,300 l/min

Versatile

- 4/3-way valve
Mid-position closed
Mid-position exhausted
- Connection NPT $\frac{1}{8}$ -27, NPT $\frac{1}{4}$ -18,
NPT $\frac{1}{2}$ -14
- 3/3-way valve
The hand lever valve VHER can be used as a 3/3-way valve by sealing port 2

Practical

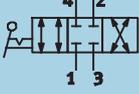
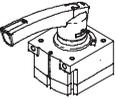
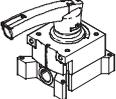
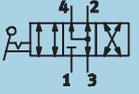
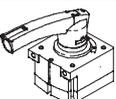
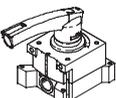
These valves can be used to stop single-acting cylinders (3/3-way valve) or double-acting cylinders (4/3-way valve) within the stroke range.

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

With the mid-position exhausted, the piston can be moved manually (only the frictional forces have to be overcome).

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Product range overview

Function	Version	Type	Nominal flow rate	Lever		Connection size			→ Page/ Internet
			[l/min]	Small	Large	NPT ¹ / ₈ -27	NPT ¹ / ₄ -18	NPT ¹ / ₂ -14	
	Port underneath								
		VHER-AH-M04C-N18-UD	800	■	-	■	-	-	7
		VHER-AH-M04C-N14-UD	1,500	-	■	-	■	-	
		VHER-AH-M04C-N12-UD	4,300	-	■	-	-	■	
	Port at side								
		VHER-AH-M04C-N18-LD	600	■	-	■	-	-	7
	VHER-AH-M04C-N14-LD	1,150	-	■	-	■	-		
	VHER-AH-M04C-N12-LD	3,500	-	■	-	-	■		
	Port underneath								
		VHER-AH-M04E-N18-UD	800	■	-	■	-	-	7
		VHER-AH-M04E-N14-UD	1,500	-	■	-	■	-	
		VHER-AH-M04E-N12-UD	4,300	-	■	-	-	■	
	Port at side								
		VHER-AH-M04E-N18-LD	600	■	-	■	-	-	7
	VHER-AH-M04E-N14-LD	1,150	-	■	-	■	-		
	VHER-AH-M04E-N12-LD	3,500	-	■	-	-	■		

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Type codes

Type	
VHER	Hand lever valve with detent

Design	
AH	Metal lever

Valve function	
M04C	4/3-way valve, mid-position closed
M04E	4/3-way valve, mid-position exhausted

Connection size	
N18	NPT $\frac{1}{8}$ -27
N14	NPT $\frac{1}{4}$ -18
N12	NPT $\frac{1}{2}$ -14

Type of connection	
LD	To the side
UD	Underneath

Hand lever valves VHER, NPT

Overview of peripherals

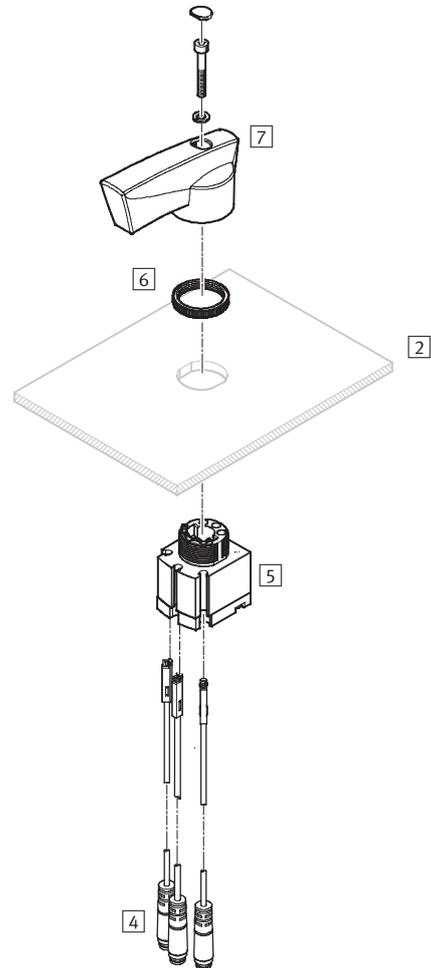
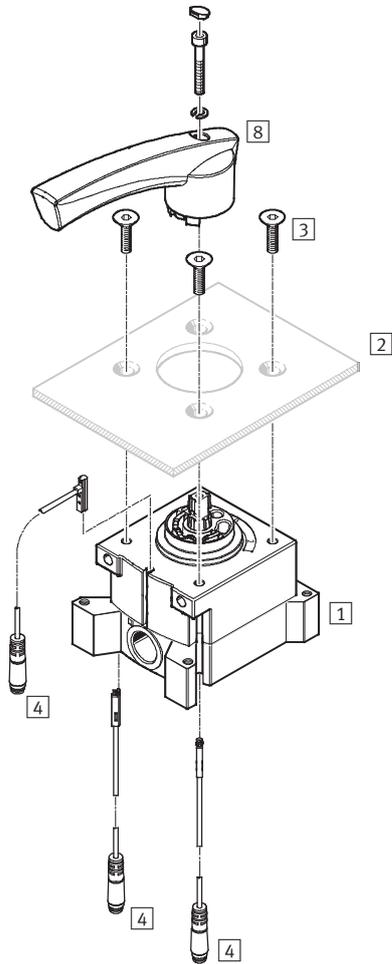
Control panel installation

Connection size (large): VHER...N14-LD, VHER...N12-LD

Type of connection: To the side

Connection size (small): VHER...N18-UD

Type of connection: Underneath



Component parts and accessories	Brief description	→ Page/Internet
1 Hand lever valve VHER	Connection size NPT $\frac{1}{4}$ -18 and NPT $\frac{1}{2}$ -14	7
2 Control panel	Not included in the scope of delivery	-
3 Mounting screws	Not included in the scope of delivery	-
4 Proximity sensors SME-10-... L, SME-10-... Q	Not included in the scope of delivery	sme
5 Hand lever valve VHER	Connection size NPT $\frac{1}{8}$ -27	7
6 Knurled nut	Control panel mounting	-
7 Actuating lever	Small, metal	
8 Actuating lever	Large, metal	

Hand lever valves VHER, NPT

Overview of peripherals

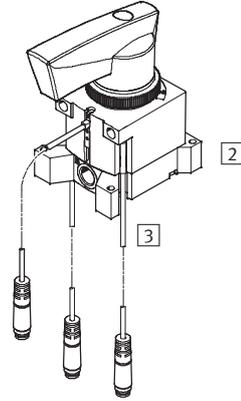
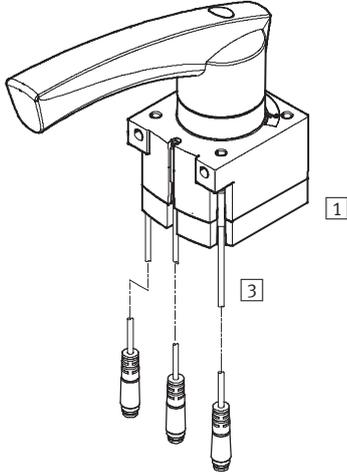
Assembled valves with accessories

Connection size (large): VHER...N14-UD, VHER...N12-UD

Type of connection: Underneath

Connection size (small): VHER...N18-LD

Type of connection: To the side



Component parts and accessories	Brief description	→ Page/Internet
1 Hand lever valve VHER	Connection size NPT $\frac{1}{4}$ -18 and NPT $\frac{1}{2}$ -14 with metal lever	7
2 Hand lever valve VHER	Connection size NPT $\frac{1}{8}$ -27 with metal lever	7
3 Proximity sensors SME-10-... L, SME-10-... Q	Not included in the scope of delivery	sme

Hand lever valves VHER, NPT

Technical data – VHER with metal lever

Flow rate
600 ... 4,300 l/min

Pressure
-0.95 ... +10 bar

Temperature range
-20 ... +80 °C



General technical data					
Connection size		NPT $\frac{1}{8}$ -27	NPT $\frac{1}{4}$ -18	NPT $\frac{1}{2}$ -14	
Valve function	4/3-way, closed or exhausted				
Design	Rotary slide valve				
Sealing principle	Hard				
Type of mounting	Option of front panel mounting or via through-holes				
Type of control	Direct				
Actuation type	Manual				
Actuating lever	Metal				
Switching position display	Via accessories				
Mounting position	Any				
Direction of flow	Reversible				
Non-overlapping	Yes				
Exhaust function	Flow control				
Standard nominal flow rate	Port at side	[l/min]	600	1,150	3,500
	Port underneath	[l/min]	800	1,500	4,300
Nominal size		[mm]	6	8	12
Pneumatic connection 1,2,3,4			NPT $\frac{1}{8}$ -27	NPT $\frac{1}{4}$ -18	NPT $\frac{1}{2}$ -14
Actuating torque at 10 bar		[Nm]	1.1	2.8	5

Operating and environmental conditions	
Operating medium	Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm
Operating pressure [bar]	-0.95 ... 10
Ambient temperature [°C]	-20 ... +80
Corrosion resistance [CRC]	2 ¹⁾

1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Proximity sensors for switching position display			
Connection size	Connection direction	Type	
		SME-10-... L	SME-10-... Q
NPT $\frac{1}{8}$ -27	Underneath (UD)	■	■
	At the side (LD)	-	■
NPT $\frac{1}{4}$ -18	Underneath	■	■
	At the side	-	■
NPT $\frac{1}{2}$ -14	Underneath	■	■
	At the side	-	■

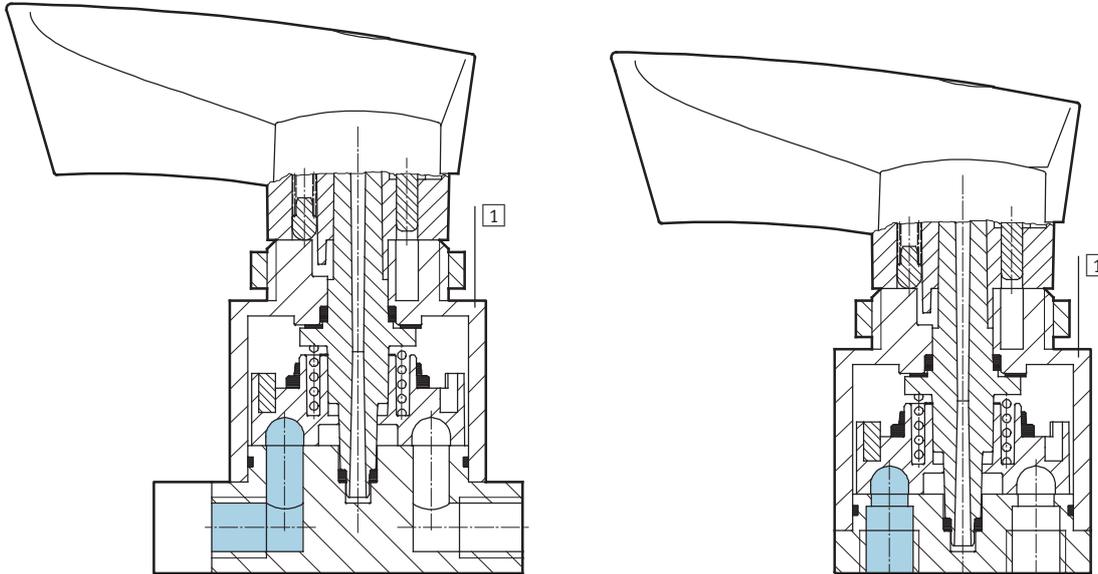
Hand lever valves VHER, NPT

Technical data – VHER with metal lever

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Sectional view

Hand lever valve VHER-AH



Materials

1	Housing	Die-cast aluminium
-	Seals	Nitrile rubber
-		Contains PWIS (paint wetting impairment substances)
-		Free of copper and PTFE

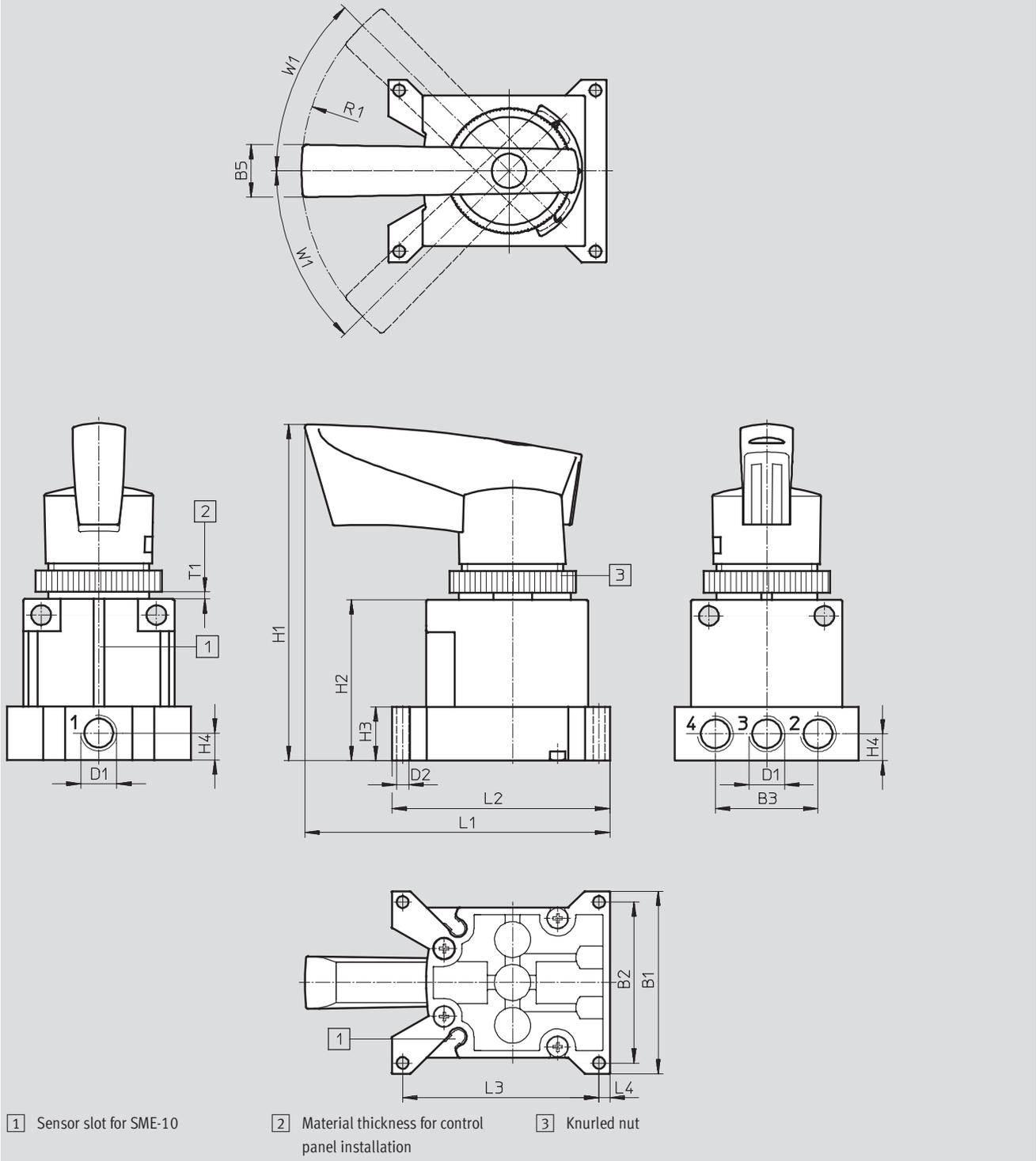
Hand lever valves VHER, NPT

Technical data – VHER with metal lever

Dimensions

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

Pneumatic connection NPT $\frac{1}{8}$ -27, at the side



Type	B1	B2	B3	B5	D1	D2 Ø	H1	H2	H3	H4	L1	L2	L3	L4	R1	T1	W1
VHER-AH-...-N18-LD	51	45	28.5	14.6	$\frac{1}{8}$ NPT	3.3	95	45	15	7.5	85	60.5	54.5	3	57.9	2 ... 4	45°

Hand lever valves VHER, NPT

Technical data – VHER with metal lever

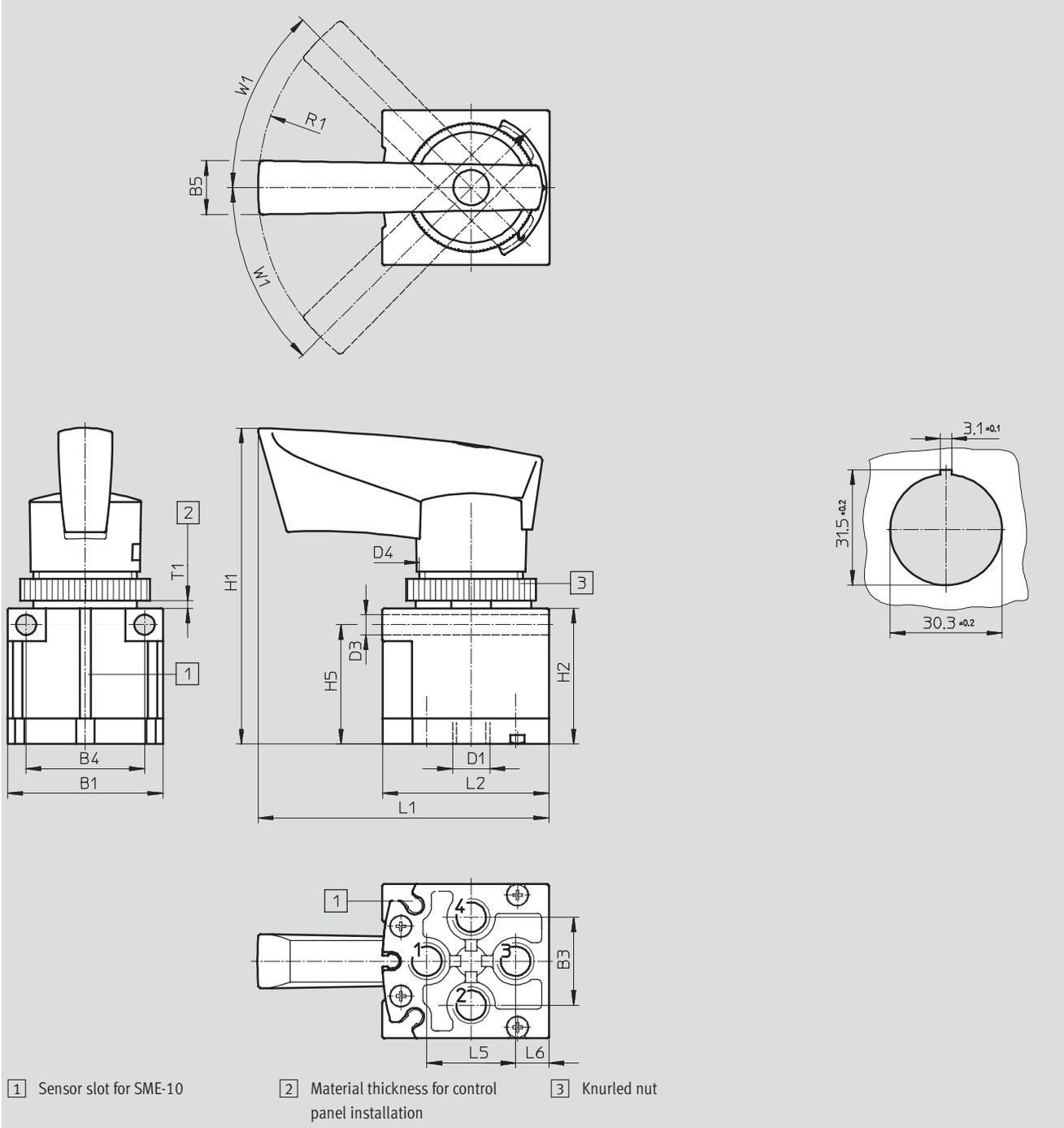


Dimensions

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

Pneumatic connection NPT $\frac{1}{8}$ -27, underneath

Mounting aperture



Type	B1	B3	B4	B5	D1	D3	D4	H1	H2	H5	L1	L2	L5	L6	R1	T1	W1
VHER-AH-...-N18-UD	42	24	32	14.6	$\frac{1}{8}$ NPT	5.5	M30	87	37	32.5	79	45	24	9	57.9	2 ... 4	45°

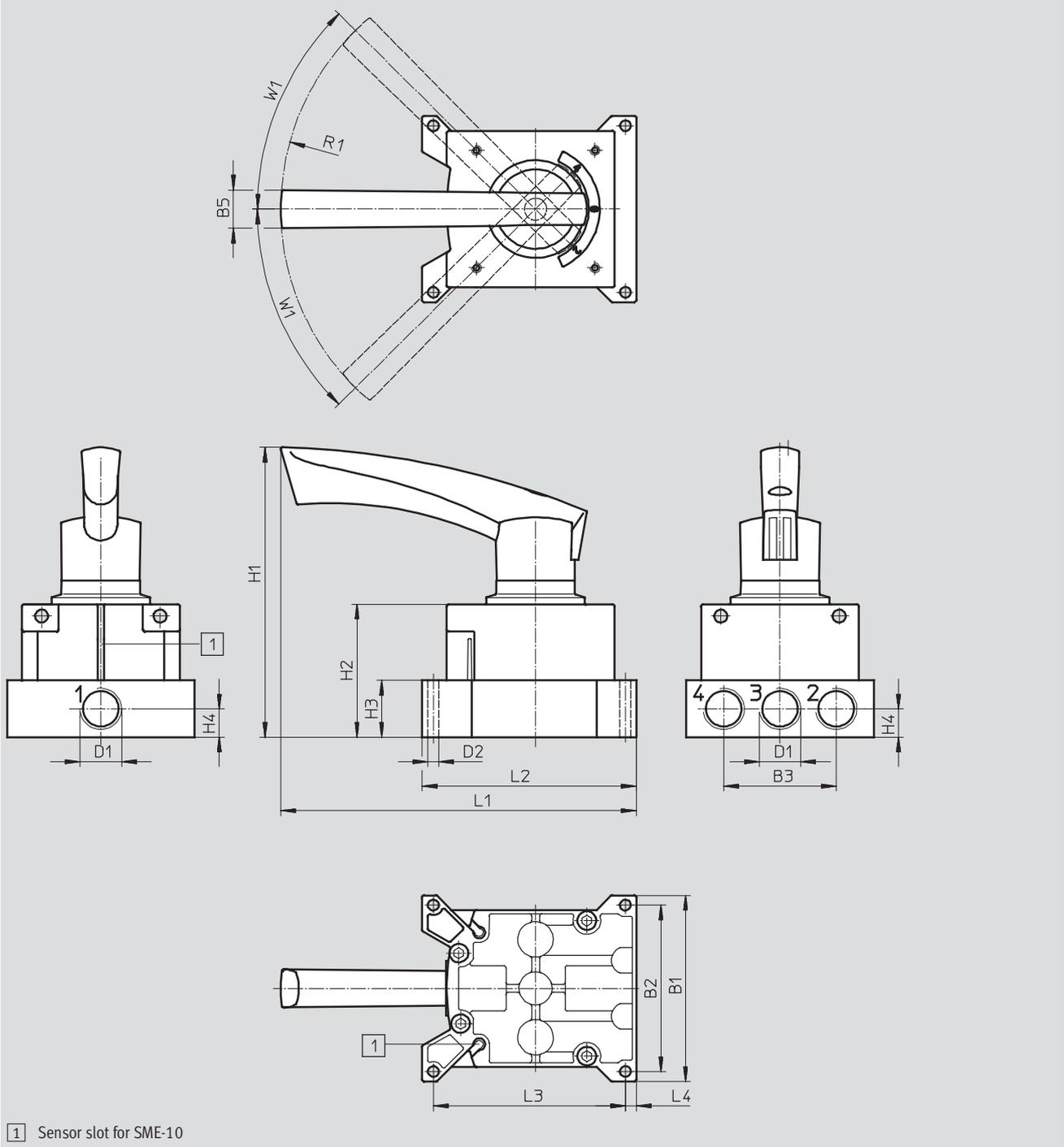
Hand lever valves VHER, NPT

Technical data – VHER with metal lever

Dimensions

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

Pneumatic connection NPT $\frac{1}{4}$ -18 and NPT $\frac{1}{2}$ -14, at the side



Type	B1	B2	B3	B5	D1	D2 ∅	H1	H2	H3	H4	L1	L2	L3	L4	R1	W1
VHER-AH-...-N14-LD	66	57.5	37.5	19.5	1/4NPT	4.5	136	56	20.5	10.3	165	77	69.2	4	128.7	45°
VHER-AH-...-N12-LD	95	85	57	19.5	1/2NPT	5.5	149	68	29	14.5	180	108.5	97.3	5.5	128.7	

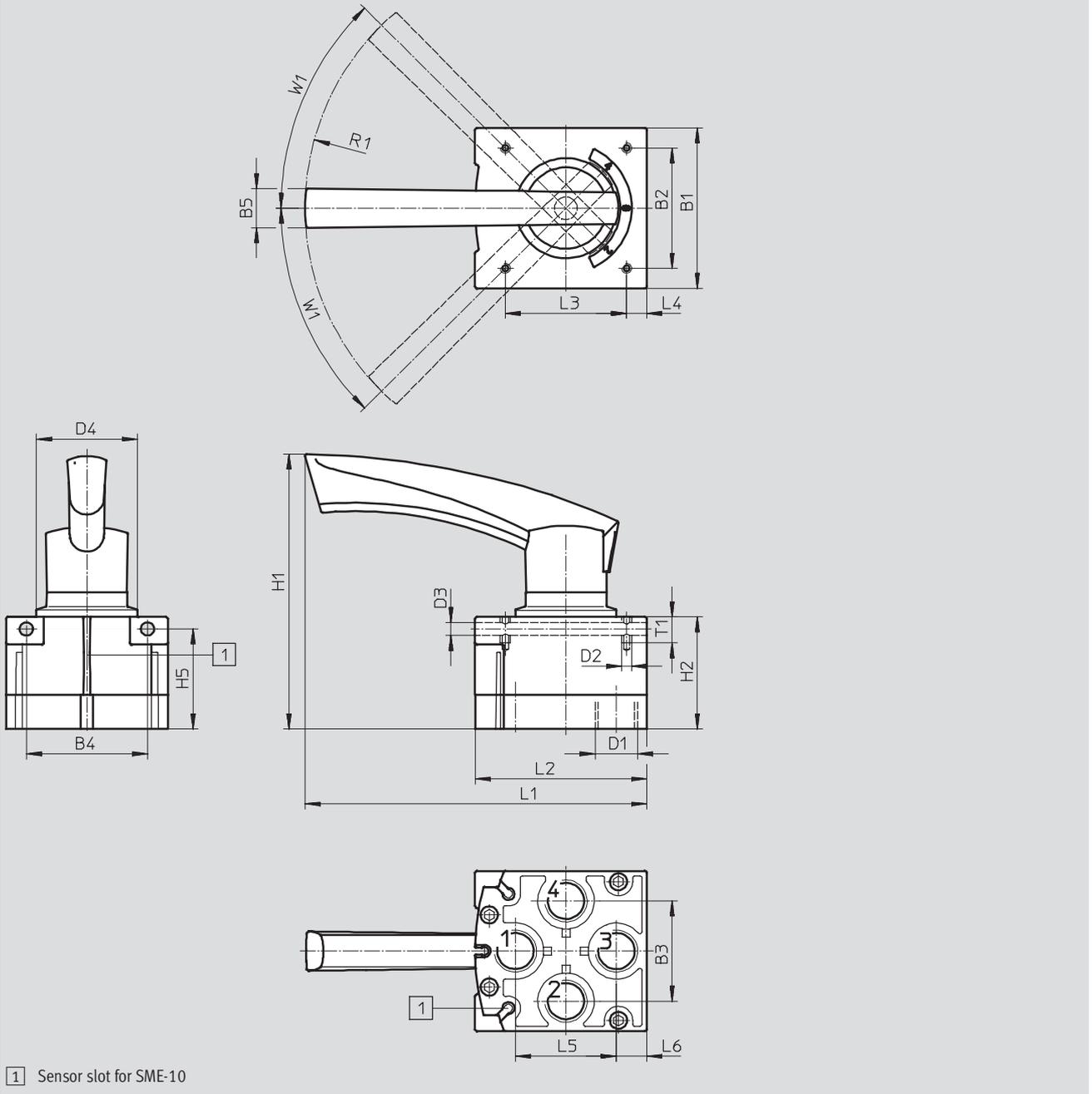
Hand lever valves VHER, NPT

Technical data – VHER with metal lever

Dimensions

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

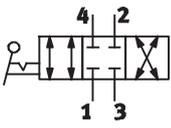
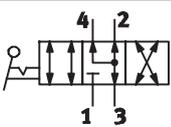
Pneumatic connection NPT $\frac{1}{4}$ -18 and NPT $\frac{1}{2}$ -14, underneath



Type	B1	B2	B3	B4	B5	D1	D2	D3	D4	H1	H2	H5	L1	L2	L3	L4	L5	L6	R1	T1	W1
VHER-AH-...-N14-UD	56	42	33	42	19.5	1/4 NPT	M5	5.5	40.5	130	49	43.5	157	60	42	7.2	33	11.4	128.7	12	45°
VHER-AH-...-N12-UD	80	60	50	60	19.5	1/2 NPT	M6	6.6	51	137	55.8	49.8	169	85	60	10	50	15	128.7	13	

Hand lever valves VHER, NPT

Accessories

Ordering data						
Circuit symbol	Description	Weight [g]	Connection direction	Connection size	Part No.	Type
4/3-way valve ¹⁾						
	Mid-position closed	260	At the side	NPT ¹ / ₈ -27	545260	VHER-AH-M04C-N18-LD
		560		NPT ¹ / ₄ -18	545264	VHER-AH-M04C-N14-LD
		1,010		NPT ¹ / ₂ -14	545268	VHER-AH-M04C-N12-LD
		220	Underneath	NPT ¹ / ₈ -27	545261	VHER-AH-M04C-N18-UD
		510		NPT ¹ / ₄ -18	545265	VHER-AH-M04C-N14-UD
		860		NPT ¹ / ₂ -14	545269	VHER-AH-M04C-N12-UD
	Mid-position exhausted	260	At the side	NPT ¹ / ₈ -27	545262	VHER-AH-M04E-N18-LD
		560		NPT ¹ / ₄ -18	545266	VHER-AH-M04E-N14-LD
		1,010		NPT ¹ / ₂ -14	545270	VHER-AH-M04E-N12-LD
		220	Underneath	NPT ¹ / ₈ -27	545263	VHER-AH-M04E-N18-UD
		510		NPT ¹ / ₄ -18	545267	VHER-AH-M04E-N14-UD
		860		NPT ¹ / ₂ -14	545271	VHER-AH-M04E-N12-UD

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

Hand lever valves VHER, NPT

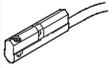
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Accessories

Ordering data					
Description		Pneumatic connection		Part No.	Type
Blanking plug					
	For sealing ports	NPT $\frac{1}{8}$ -27		173985	B- $\frac{1}{8}$ -NPT
		NPT $\frac{1}{2}$ -14		31785	B- $\frac{1}{2}$ -NPT

Ordering data QS fittings					
Part No.	Type	Part No.	Type	Part No.	Type
VHER-...-N18-UD		VHER-...-N14-UD		VHER-...-N12-UD	
533271	QS- $\frac{1}{8}$ - $\frac{5}{32}$ -U	567772	QS- $\frac{1}{4}$ - $\frac{5}{32}$ -U	533283	QS- $\frac{1}{2}$ - $\frac{3}{8}$ -U
153903	QSM- $\frac{1}{8}$ - $\frac{1}{8}$ -U	533275	QS- $\frac{1}{4}$ - $\frac{3}{16}$ -U	533284	QS- $\frac{1}{2}$ - $\frac{1}{2}$ -U
190677	QSM- $\frac{1}{8}$ - $\frac{5}{32}$ -U	533276	QS- $\frac{1}{4}$ - $\frac{1}{4}$ -U	190698	QS- $\frac{1}{2}$ - $\frac{1}{2}$ -U
190688	QS- $\frac{1}{8}$ - $\frac{5}{32}$ -I-U	533277	QS- $\frac{1}{4}$ - $\frac{5}{16}$ -U		
190690	QS- $\frac{1}{8}$ - $\frac{1}{4}$ -I-U	190692	QS- $\frac{1}{4}$ - $\frac{1}{4}$ -I-U		
190691	QS- $\frac{1}{8}$ - $\frac{5}{16}$ -I-U	190693	QS- $\frac{1}{4}$ - $\frac{5}{16}$ -I-U		
190685	QSM- $\frac{1}{8}$ - $\frac{5}{32}$ -I-U	190694	QS- $\frac{1}{4}$ - $\frac{3}{8}$ -I-U		
190689	QSM- $\frac{1}{8}$ - $\frac{3}{16}$ -I-U	190680	QSM- $\frac{1}{4}$ - $\frac{1}{8}$ -U		
VHER-...-N18-LD		VHER-...-N14-LD		VHER-...-N12-LD	
190688	QS- $\frac{1}{8}$ - $\frac{5}{32}$ -I-U	190692	QS- $\frac{1}{4}$ - $\frac{1}{4}$ -I-U	190698	QS- $\frac{1}{2}$ - $\frac{1}{2}$ -I-U
190690	QS- $\frac{1}{8}$ - $\frac{1}{4}$ -I-U	190693	QS- $\frac{1}{4}$ - $\frac{5}{16}$ -I-U		
		190694	QS- $\frac{1}{4}$ - $\frac{3}{8}$ -I-U		

Ordering data Silencers					
Part No.	Type	Part No.	Type	Part No.	Type
VHER-...-N18-UD		VHER-...-N14-UD		VHER-...-N12-UD	
12638	U- $\frac{1}{8}$ -B-NPT	12639	U- $\frac{1}{4}$ -B-NPT	12741	U- $\frac{1}{2}$ -B-NPT
161419	UC- $\frac{1}{8}$	165004	UC- $\frac{1}{4}$		
VHER-...-N18-LD		VHER-...-N14-LD		VHER-...-N12-LD	
161419	UC- $\frac{1}{8}$	165004	UC- $\frac{1}{4}$	12741	U- $\frac{1}{2}$ -B-NPT
		12639	U- $\frac{1}{4}$ -B-NPT		

Ordering data Proximity sensors for VHER						
	Electrical connection		Cable length [m]	Connection direction	Part No.	Type
	Cable	Plug M8x1				
	N/O contact		2.5	In-line	173210	SME-10-KL-LED-24
	3-wire	-				
	-	3-pin	0.3	In-line	173212	SME-10-SL-LED-24
			Lateral	173211	SME-10-KQ-LED-24	
			Lateral	173213	SME-10-SQ-LED-24	

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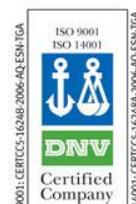
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