

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

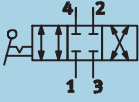
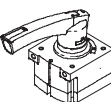
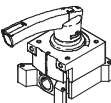
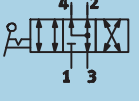
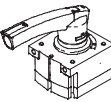
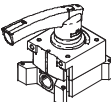
These valves can be used to stop single-acting cylinders (3/3-way valve) or double-acting cylinders (4/3-way valve) within the stroke range.

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 | - | ■ | - | - | ■ | | |

Hand lever valves VHER, NPT

Type codes

| VHER | | AH | | M04C | | N18 | | LD | |
|---------------------------|---------------------------------------|----|--|------|--|-----|--|----|--|
| 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 ¹ / ₈ -27 | | | | | | | | |
| N14 | NPT ¹ / ₄ -18 | | | | | | | | |
| N12 | NPT ¹ / ₂ -14 | | | | | | | | |
| Type of connection | | | | | | | | | |
| LD | To the side | | | | | | | | |
| UD | Underneath | | | | | | | | |

Hand lever valves VHER, NPT

Overview of peripherals

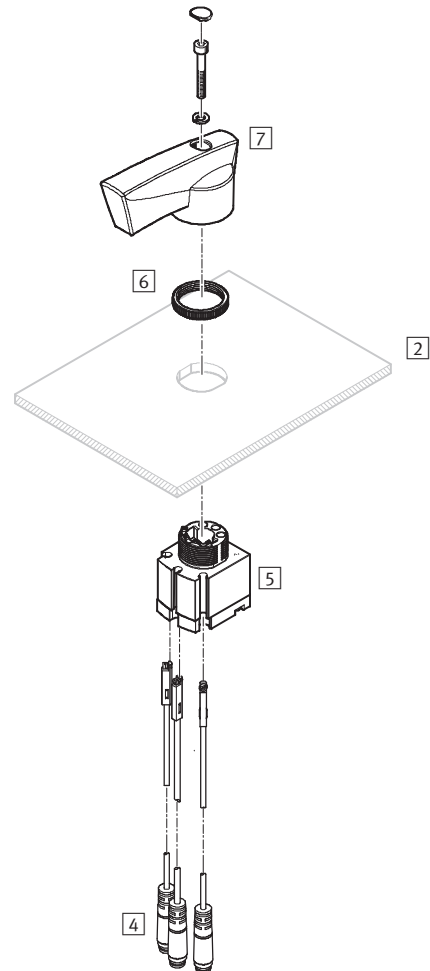
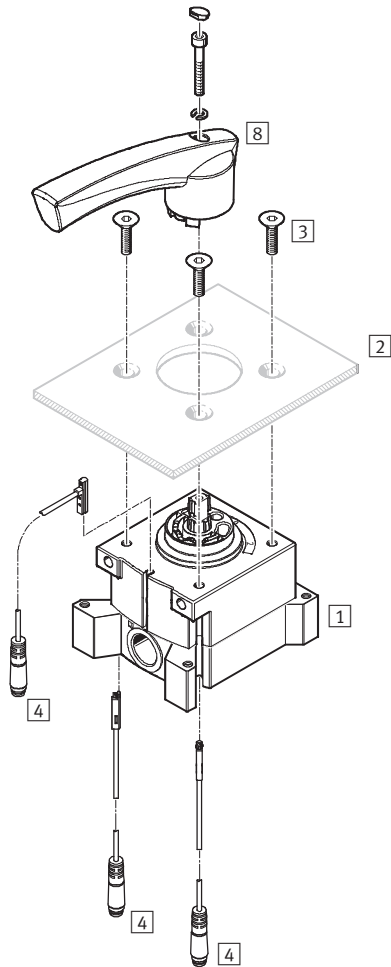
Control panel installation

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

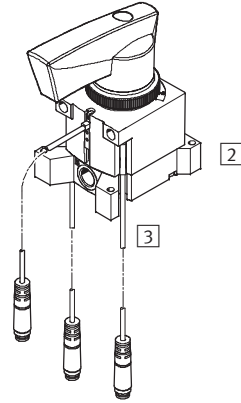
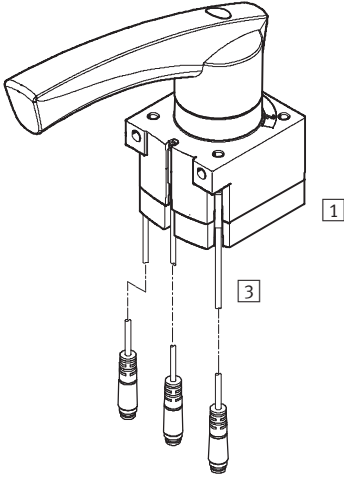
Assembled valves with accessories

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 | - | ■ |

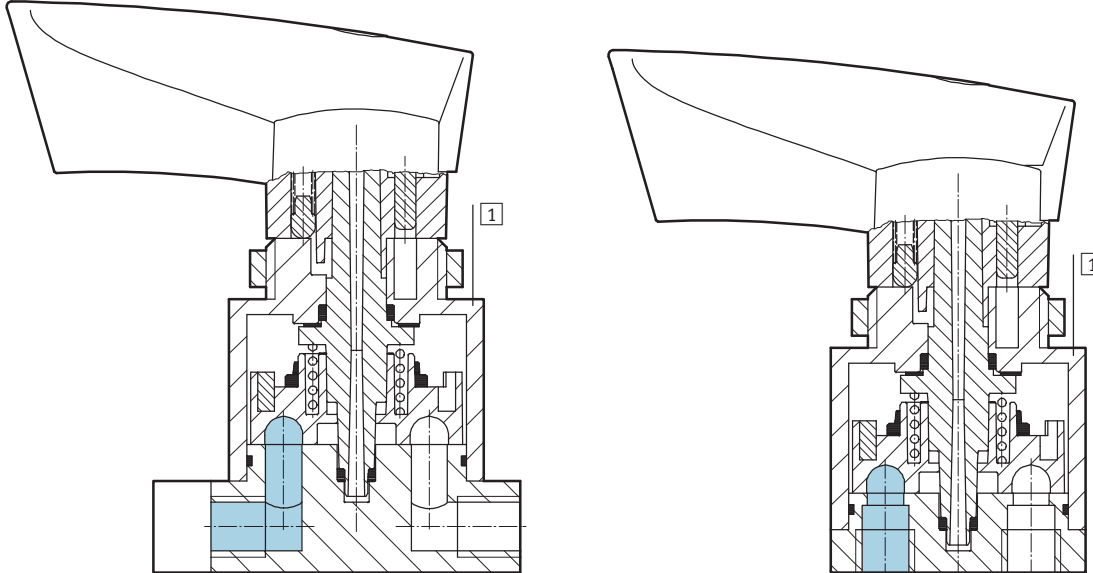
Hand lever valves VHER, NPT

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 |

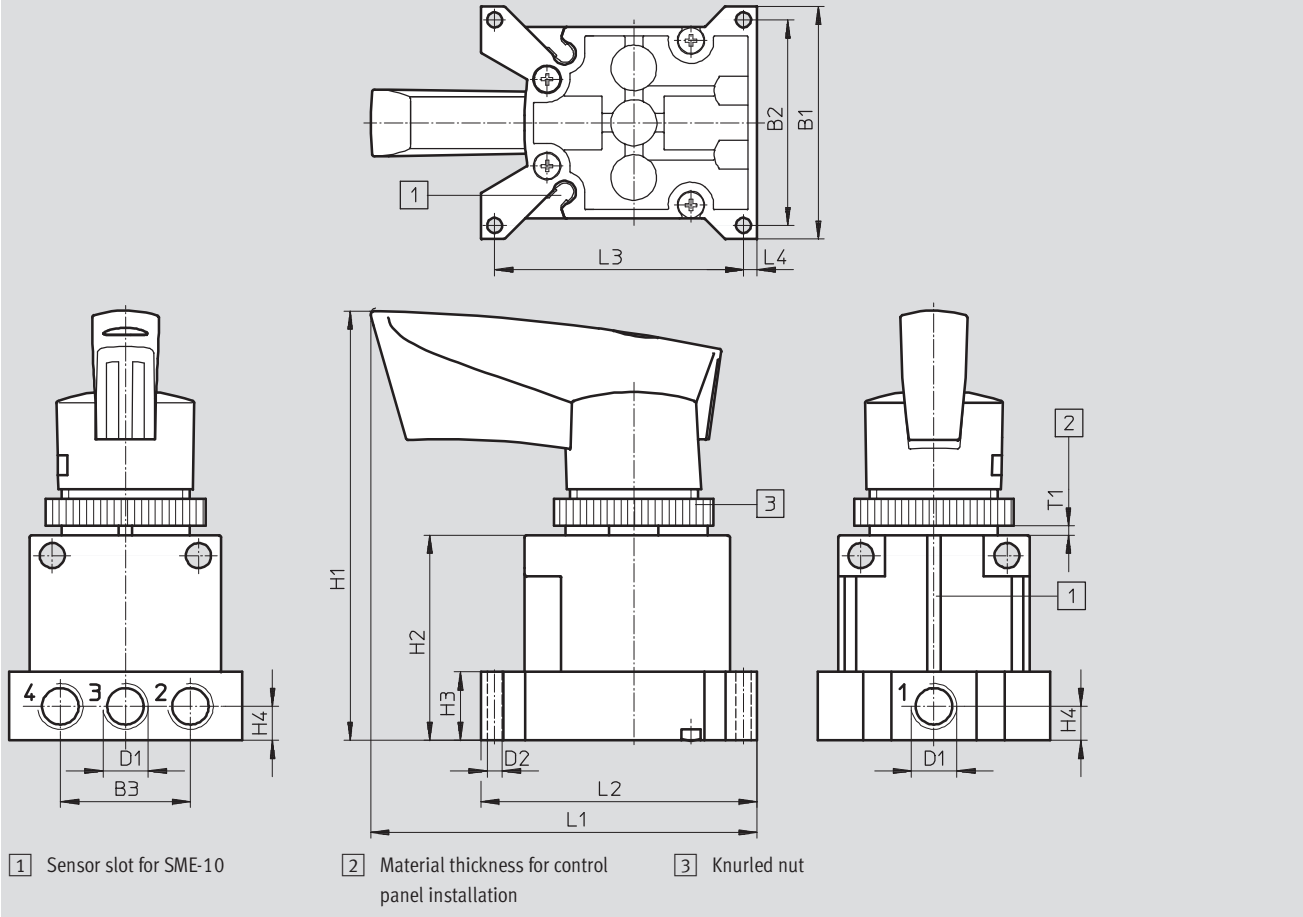
Hand lever valves VHER, NPT

Technical data – VHER with metal lever

Dimensions

Download CAD data → www.festo.com

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



| Type | B1 | B2 | B3 | D1 | D2 Ø | H1 | H2 | H3 | H4 | L1 | L2 | L3 | L4 | T1 |
|--------------------|----|----|------|-------------------|---------|----|----|----|-----|----|------|------|----|---------|
| VHER-AH-...-N18-LD | 51 | 45 | 28.5 | $\frac{1}{8}$ NPT | 3 | 94 | 45 | 15 | 7.5 | 85 | 60.5 | 54.5 | 3 | 2 ... 4 |

Hand lever valves VHER, NPT

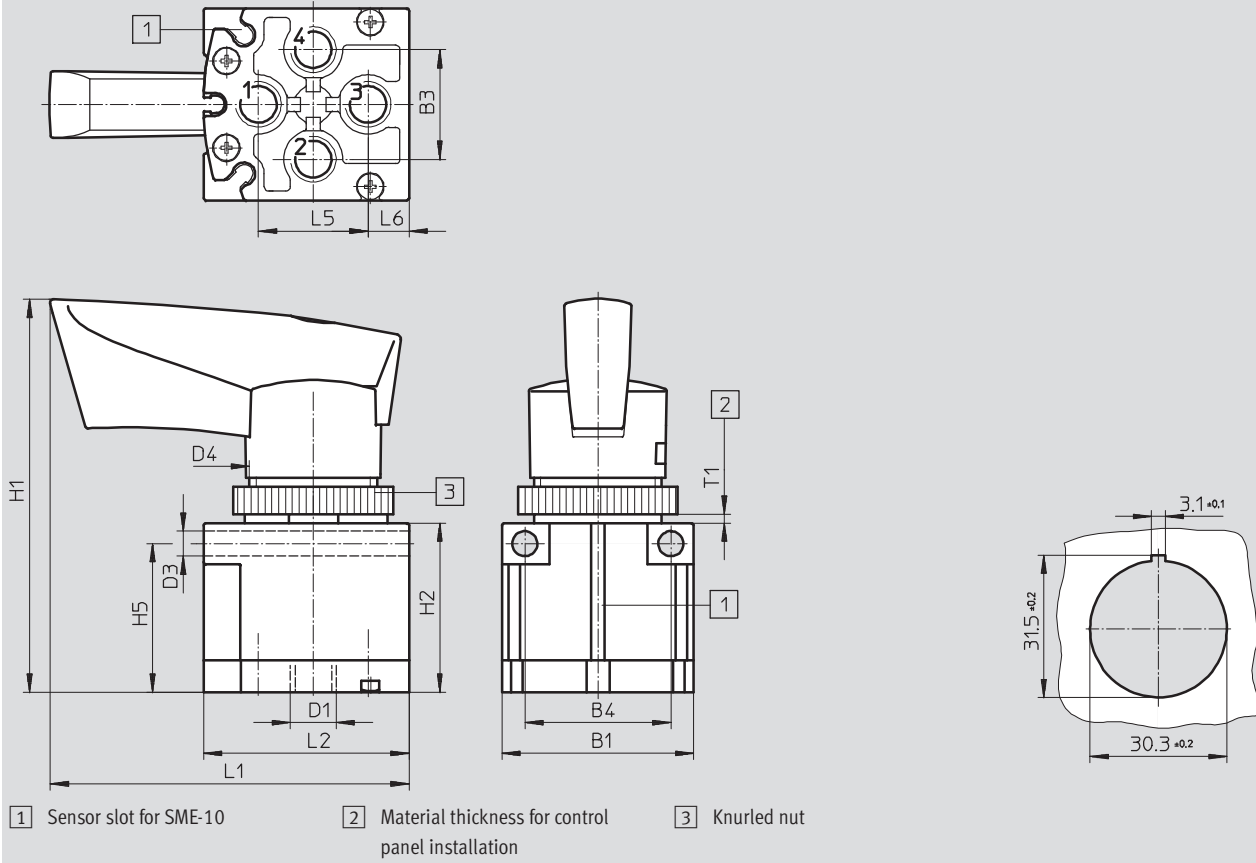
Technical data – VHER with metal lever

Dimensions

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

Download CAD data → www.festo.com

Mounting aperture



| Type | B1 | B3 | B4 | D1 | D3 ∅ | D4 | H1 | H2 | H5 | L1 | L2 | L5 | L6 | T1 |
|--------------------|----|----|----|--------|---------|-----|----|----|------|----|----|----|----|---------|
| VHER-AH-...-N18-UD | 42 | 24 | 32 | 1/8NPT | 5.5 | M30 | 87 | 37 | 32.5 | 79 | 45 | 24 | 9 | 2 ... 4 |

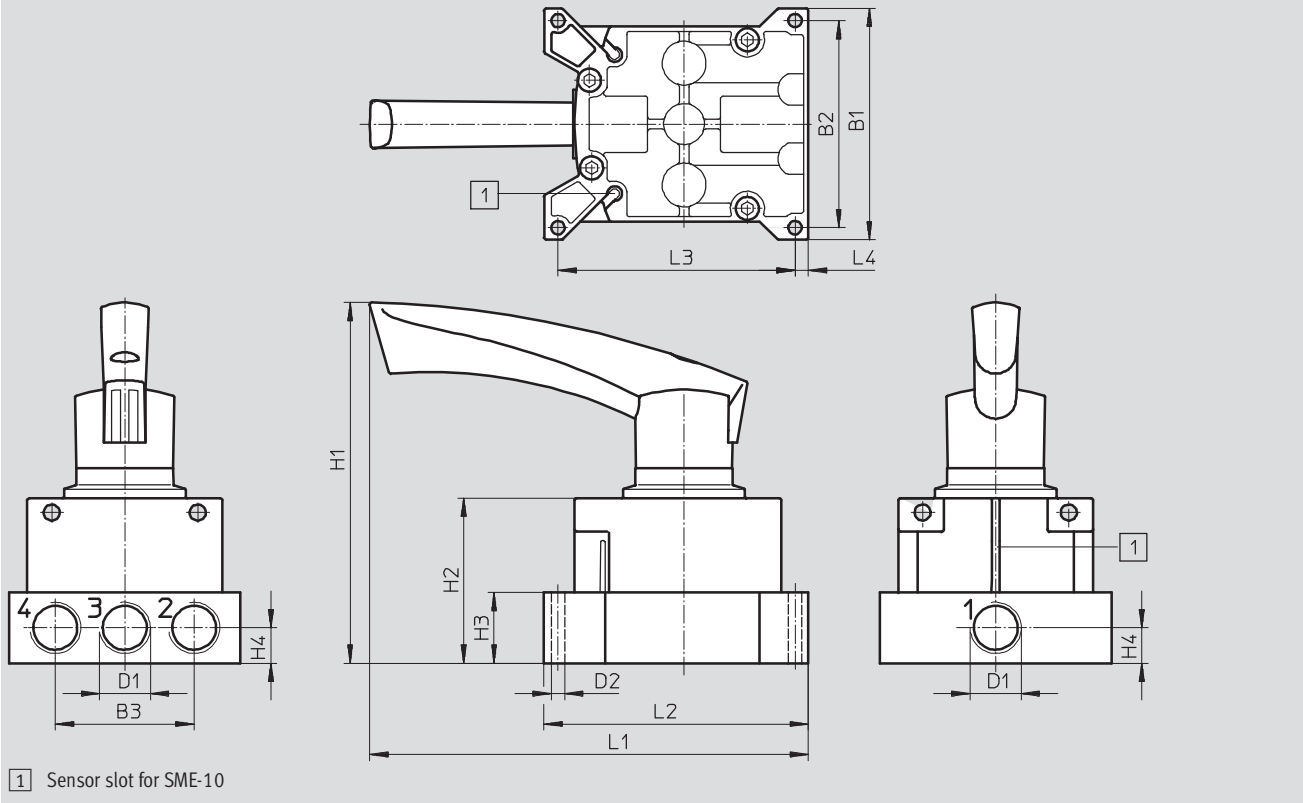
Hand lever valves VHER, NPT

Technical data – VHER with metal lever

Dimensions

Download CAD data → www.festo.com

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



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

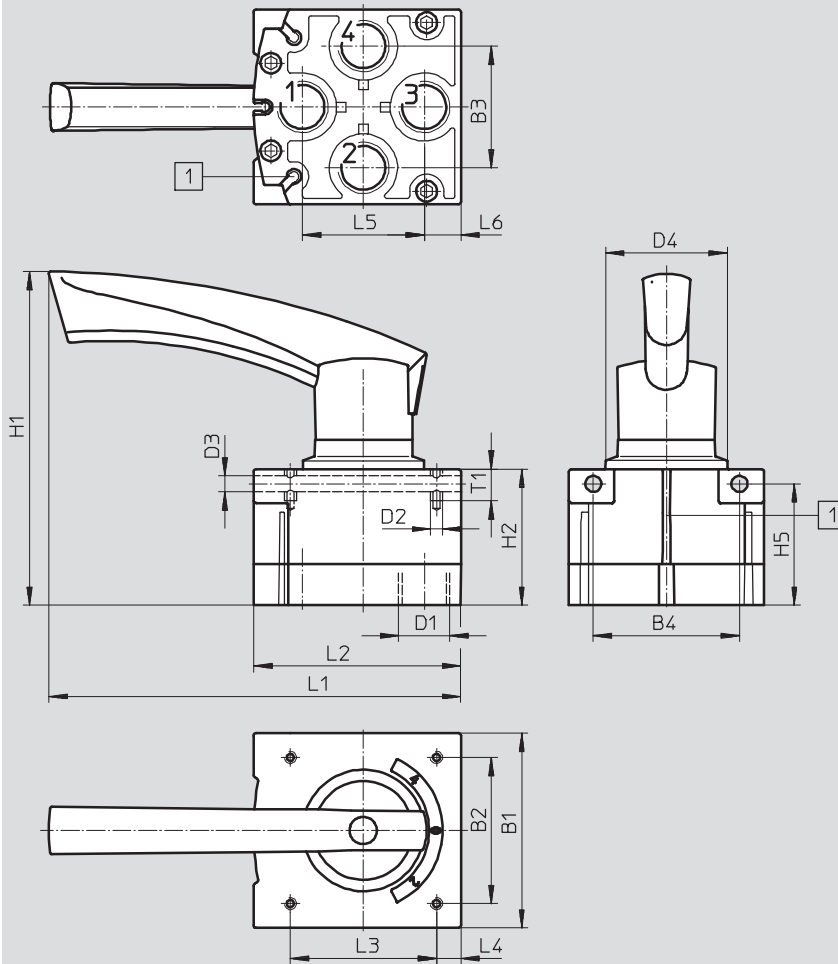
Hand lever valves VHER, NPT

Technical data – VHER with metal lever

Dimensions

Download CAD data → www.festo.com

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



1 Sensor slot for SME-10

| Type | B1 | B2 | B3 | B4 | D1 | D2 | D3 Ø | D4 Ø | H1 | H2 | H5 | L1 | L2 | L3 | L4 | L5 | L6 | T1 |
|--------------------|----|----|----|----|--------|----|---------|---------|-----|------|------|-----|----|----|-----|----|------|----|
| VHER-AH-...-N14-UD | 56 | 42 | 33 | 42 | 1/4NPT | M5 | 5.5 | 40 | 130 | 49 | 43.5 | 157 | 60 | 42 | 7.2 | 33 | 11.4 | 12 |
| VHER-AH-...-N12-UD | 80 | 60 | 50 | 60 | 1/2NPT | M6 | 6.4 | 50 | 137 | 55.8 | 49.8 | 169 | 85 | 60 | 10 | 50 | 15 | 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

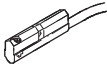
Accessories

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| 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 $\frac{1}{4}$ -18 | 31783 | B- $\frac{1}{4}$ -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 | |
| 153601 | QS- $\frac{1}{8}$ - $\frac{5}{32}$ -U | 153602 | QS- $\frac{1}{4}$ - $\frac{5}{32}$ -U | 153613 | QS- $\frac{1}{2}$ - $\frac{3}{8}$ -U |
| 153903 | QSM- $\frac{1}{8}$ - $\frac{1}{8}$ -U | 153604 | QS- $\frac{1}{4}$ - $\frac{3}{16}$ -U | 153615 | QS- $\frac{1}{2}$ - $\frac{1}{2}$ -U |
| 190677 | QSM- $\frac{1}{8}$ - $\frac{5}{32}$ -U | 153606 | 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 | 153609 | 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 | 173213 | SME-10-SQ-LED-24 |