

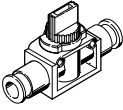
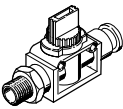
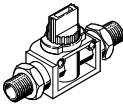
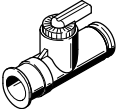
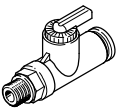
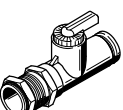
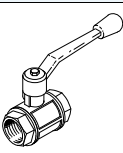
Ball valves and shut-off valves



Ball valves and shut-off valves

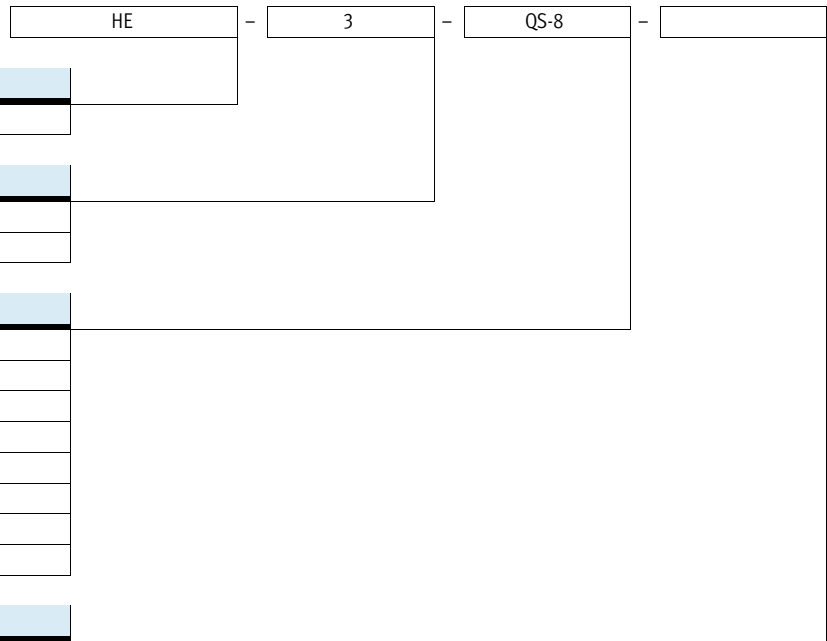
Product range overview



| Function | Design | Type | Pneumatic connection | | Valve function | | qnN [l/min] | → Page/ Internet |
|-----------------|---|------|----------------------|--------|----------------|---------------|----------------|---------------------|
| | | | 1 | 2 | 2/2-way valve | 3/2-way valve | | |
| Shut-off valves | Push-in connector at both ends | | | | | | | |
| |  | HE | QS-6 | QS-6 | ■ | ■ | 278 ... 279 | 4 |
| | | | QS-8 | QS-8 | | | 388 ... 390 | |
| | | | QS-10 | QS-10 | | | 761 ... 780 | |
| | | | QS-12 | QS-12 | | | 831 ... 840 | |
| | Male thread/push-in connector | | | | | | | |
| |  | HE | R1/8 | QS-6 | ■ | ■ | 301 ... 307 | 4 |
| | | | R1/4 | QS-8 | | | 380 ... 396 | |
| | | | R3/8 | QS-10 | | | 728 ... 733 | |
| | | | R1/2 | QS-12 | | | 776 ... 796 | |
| | Male thread at both ends | | | | | | | |
| |  | HE | R1/8 | R1/8 | - | ■ | 301 | 4 |
| R1/4 | | | R1/4 | 380 | | | | |
| R3/8 | | | R3/8 | 733 | | | | |
| Ball valves | Push-in connector at both ends | | | | | | | |
| |  | QH | QS-4 | QS-4 | ■ | - | 148 | 8 |
| | | | QS-6 | QS-6 | | | 533 | |
| | Male thread/push-in connector | | | | | | | |
| |  | QH | R1/8 | QS-4 | ■ | - | 235 | 8 |
| | | | | QS-6 | | | 560 | |
| | Bulkhead fitting, push-in connector at both ends | | | | | | | |
| |  | QHS | QS-6 | QS-6 | ■ | - | 528 | 8 |
| | Female thread at both ends | | | | | | | |
| |  | QH | G1/4 | G1/4 | ■ | - | 3400 | 10 |
| | | | G3/8 | G3/8 | | | 7500 | |
| | | | G1/2 | G1/2 | | | 11,500 | |
| G3/4 | | | G3/4 | 21,000 | | | | |
| G1 | | | G1 | 33,000 | | | | |
| G1 1/2 | | | G1 1/2 | 84,000 | | | | |

Shut-off valves HE

Type codes



| Type | |
|------|-----------------|
| HE | Shut-off valves |

| Function | |
|----------|---------------|
| 2 | 2/2-way valve |
| 3 | 3/2-way valve |

| Pneumatic connection 1 | |
|------------------------|---|
| QS-6 | Push-in connector for tubing O.D. 6 mm |
| QS-8 | Push-in connector for tubing O.D. 8 mm |
| QS-10 | Push-in connector for tubing O.D. 10 mm |
| QS-12 | Push-in connector for tubing O.D. 12 mm |
| 1/8 | Male thread R1/8 |
| 1/4 | Male thread R1/4 |
| 3/8 | Male thread R3/8 |
| 1/2 | Male thread R1/2 |

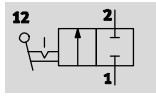
| Pneumatic connection 2 | |
|------------------------|---|
| | Same size push-in connector as pneumatic connection 1 |
| QS-6 | Push-in connector for tubing O.D. 6 mm |
| QS-8 | Push-in connector for tubing O.D. 8 mm |
| QS-10 | Push-in connector for tubing O.D. 10 mm |
| QS-12 | Push-in connector for tubing O.D. 12 mm |
| 1/8 | Male thread R1/8 |
| 1/4 | Male thread R1/4 |
| 3/8 | Male thread R3/8 |

Shut-off valves HE

Technical data

FESTO

HE-2



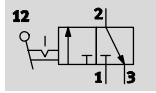
- - Standard nominal flow rate
278 ... 840 l/min

- - Temperature range
0 ... +60 °C

- - Operating pressure
-0.95 ... 10 bar



HE-3



General technical data – HE-2

| Pneumatic connection 1 | QS-6 | QS-8 | QS-10 | QS-12 | R1/8 | R1/4 | R3/8 | R1/2 |
|------------------------|---|------|-------|-------|------|------|-------|-------|
| Pneumatic connection 2 | QS-6 | QS-8 | QS-10 | QS-12 | QS-6 | QS-8 | QS-10 | QS-12 |
| Nominal width [mm] | 5 | 5 | 7 | 7 | 5 | 5 | 7 | 7 |
| Design | Piston spool valve | | | | | | | |
| Type of mounting | In-line installation With through-hole | | | | | | | |
| Mounting position | Any | | | | | | | |
| Valve function | 2/2-way valve, bistable | | | | | | | |
| Type of actuation | Manual | | | | | | | |
| Type of pilot control | Direct | | | | | | | |
| Direction of flow | Non-reversible | | | | | | | |
| Sealing principle | Soft | | | | | | | |

General technical data – HE-3

| Pneumatic connection 1 | QS-6 | QS-8 | QS-10 | QS-12 | R1/8 | R1/4 | R3/8 | R1/2 | | | |
|------------------------|---|------|-------|-------|------|------|------|------|-------|------|-------|
| Pneumatic connection 2 | QS-6 | QS-8 | QS-10 | QS-12 | QS-6 | R1/8 | QS-8 | R1/4 | QS-10 | R3/8 | QS-12 |
| Pneumatic connection 3 | Not ducted | | | | | | | | | | |
| Nominal width [mm] | 5 | 5 | 7 | 7 | 5 | 5 | 5 | 7 | 7 | 7 | 7 |
| Design | Piston spool valve | | | | | | | | | | |
| Type of mounting | In-line installation With through-hole | | | | | | | | | | |
| Mounting position | Any | | | | | | | | | | |
| Valve function | 3/2-way valve, bistable | | | | | | | | | | |
| Type of actuation | Manual | | | | | | | | | | |
| Exhaust air function | No flow control | | | | | | | | | | |
| Type of control | Direct | | | | | | | | | | |
| Direction of flow | Non-reversible | | | | | | | | | | |
| Sealing principle | Soft | | | | | | | | | | |

Operating and environmental conditions

| | |
|--------------------------------|--|
| Operating pressure [bar] | -0.95 ... 10 |
| Operating medium | Compressed air according to ISO 8573-1:2010 [7:-:-] |
| Note on operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |
| Ambient temperature [°C] | 0 ... +60 |

Materials

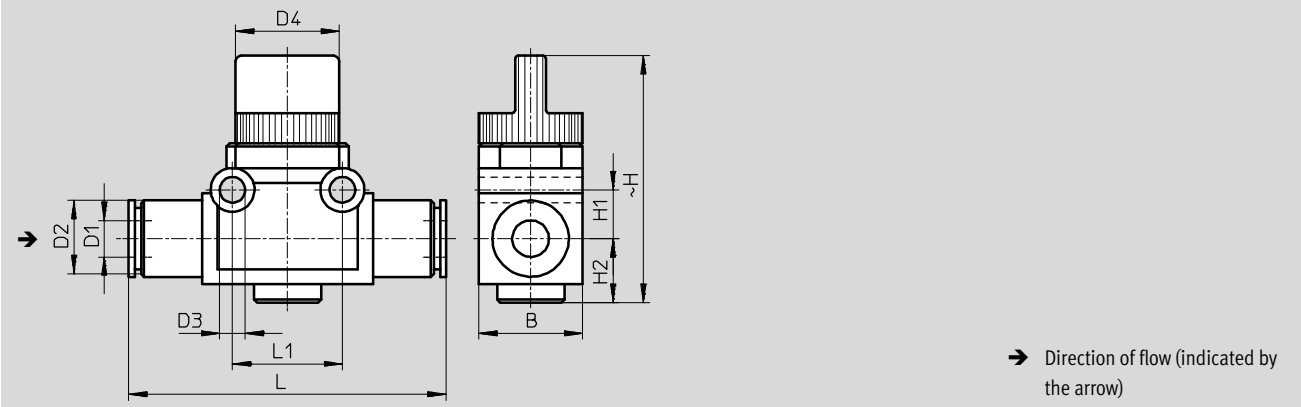
| | |
|-------------------|-----------------|
| Housing | PBT, reinforced |
| Note on materials | RoHS-compliant |

Shut-off valves HE

Technical data

Dimensions – Push-in connector at both ends

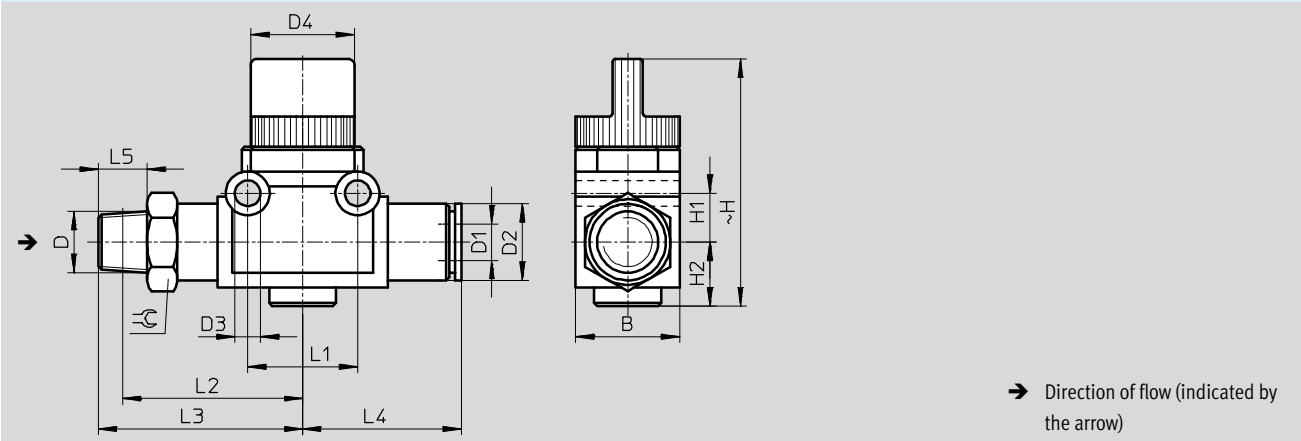
Download CAD data → www.festo.com



| Type | B | D1 ∅ | D2 ∅ | D3 ∅ | D4 ∅ | H | H1 | H2 | L | L1 |
|--------------|------|---------|---------|---------|---------|------|----|------|------|----|
| HE-...-QS-6 | 17 | 6 | 12.5 | 4.2 | 16.5 | 40.5 | 8 | 10.5 | 53.2 | 18 |
| HE-...-QS-8 | 17 | 8 | 15 | 4.2 | 16.5 | 40.5 | 8 | 10.5 | 56 | 18 |
| HE-...-QS-10 | 21.7 | 10 | 17.5 | 4.2 | 19.5 | 41 | 11 | 10.5 | 65 | 24 |
| HE-...-QS-12 | 21.7 | 12 | 21 | 4.2 | 19.5 | 41 | 11 | 10.5 | 70.2 | 24 |

Dimensions – Male thread/push-in connector

Download CAD data → www.festo.com



| Type | B | D | D1 ∅ | D2 ∅ | D3 ∅ | D4 ∅ | H | H1 | H2 | L1 | L2 | L3 | L4 | L5 | ⌀ |
|------------------|------|------|---------|---------|---------|---------|------|----|------|----|------|------|------|----|----|
| HE-...-1/8-QS-6 | 17 | R1/8 | 6 | 12.5 | 4.2 | 16.5 | 40.5 | 8 | 10.5 | 18 | 29.5 | 33.5 | 26 | 8 | 14 |
| HE-...-1/4-QS-8 | 17 | R1/4 | 8 | 15 | 4.2 | 16.5 | 40.5 | 8 | 10.5 | 18 | 30.5 | 36.5 | 28 | 11 | 14 |
| HE-...-3/8-QS-10 | 21.7 | R3/8 | 10 | 17.5 | 4.2 | 19.5 | 41 | 11 | 10.5 | 24 | 37 | 43.5 | 32.5 | 12 | 17 |
| HE-...-1/2-QS-12 | 21.7 | R1/2 | 12 | 21 | 4.2 | 19.5 | 41 | 11 | 10.5 | 24 | 38.5 | 46.5 | 35.5 | 15 | 21 |

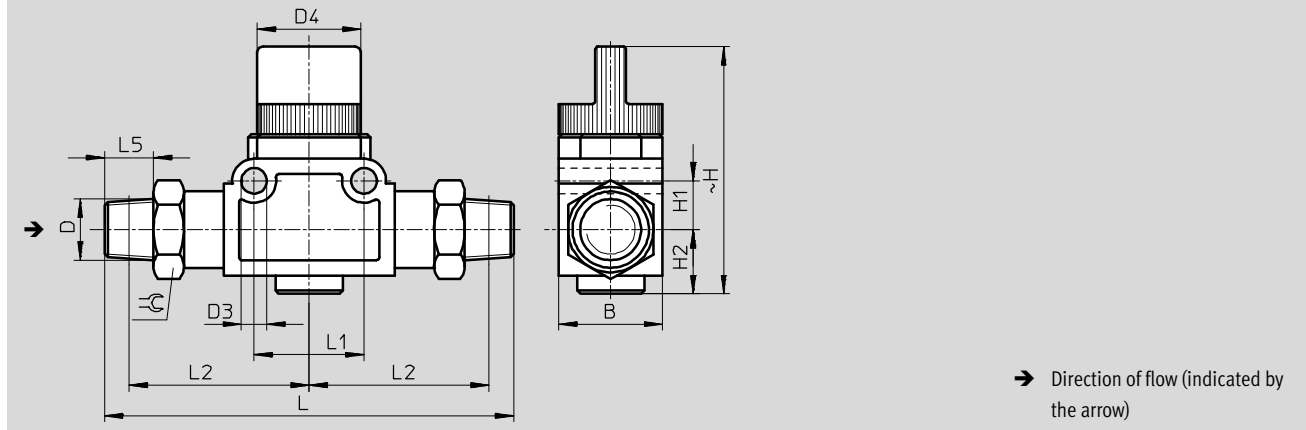
Shut-off valves HE

Technical data

FESTO

Dimensions – Male thread at both ends

Download CAD data → www.festo.com

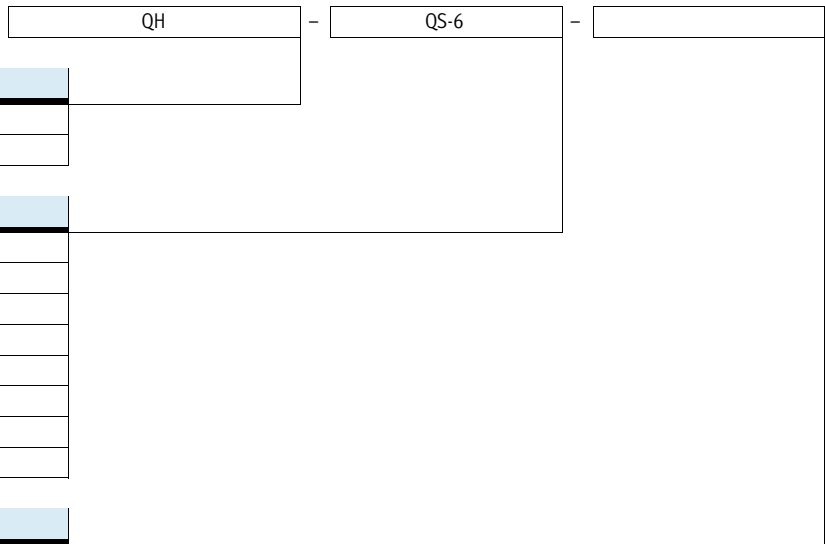


| Type | B | D | D3 ∅ | D4 ∅ | H | H1 | H2 | L | L1 | L2 | L5 | ↻ |
|--------------|------|------|---------|---------|------|----|------|----|----|------|----|----|
| HE-3-1/8-1/8 | 17 | R1/8 | 4.2 | 16.5 | 40.5 | 8 | 10.5 | 67 | 18 | 29.5 | 8 | 14 |
| HE-3-1/4-1/4 | 21.7 | R1/4 | 4.2 | 19.5 | 41 | 11 | 10.5 | 85 | 24 | 36.5 | 11 | 17 |
| HE-3-3/8-3/8 | 21.7 | R3/8 | 4.2 | 19.5 | 41 | 11 | 10.5 | 87 | 24 | 37 | 12 | 17 |

| Ordering data | | | | | | | |
|----------------------|--------------------------------|----------------------|-------|--------------------------------|--------|----------|----------------|
| Version | | Pneumatic connection | | Standard nominal flow rate qnN | Weight | Part No. | Type |
| | | 1 | 2 | [l/min] | [g] | | |
| 2/2-way valve | | | | | | | |
| | Push-in connector at both ends | QS-6 | QS-6 | 278 | 24.5 | 153467 | HE-2-QS-6 |
| | | QS-8 | QS-8 | 388 | 27 | 153468 | HE-2-QS-8 |
| | | QS-10 | QS-10 | 761 | 44 | 153469 | HE-2-QS-10 |
| | | QS-12 | QS-12 | 831 | 50 | 153470 | HE-2-QS-12 |
| | Male thread/push-in connector | R1/8 | QS-6 | 307 | 33 | 153471 | HE-2-1/8-QS-6 |
| | | R1/4 | QS-8 | 396 | 40.5 | 153472 | HE-2-1/4-QS-8 |
| | | R3/8 | QS-10 | 728 | 70 | 153473 | HE-2-3/8-QS-10 |
| | | R1/2 | QS-12 | 776 | 95 | 153474 | HE-2-1/2-QS-12 |
| 3/2-way valve | | | | | | | |
| | Push-in connector at both ends | QS-6 | QS-6 | 279 | 24.5 | 153475 | HE-3-QS-6 |
| | | QS-8 | QS-8 | 390 | 27 | 153476 | HE-3-QS-8 |
| | | QS-10 | QS-10 | 780 | 44 | 153477 | HE-3-QS-10 |
| | | QS-12 | QS-12 | 840 | 50 | 153478 | HE-3-QS-12 |
| | Male thread/push-in connector | R1/8 | QS-6 | 301 | 33 | 153479 | HE-3-1/8-QS-6 |
| | | R1/4 | QS-8 | 380 | 40.5 | 153480 | HE-3-1/4-QS-8 |
| | | R3/8 | QS-10 | 733 | 70 | 153481 | HE-3-3/8-QS-10 |
| | | R1/2 | QS-12 | 796 | 95 | 153482 | HE-3-1/2-QS-12 |
| | Male thread at both ends | R1/8 | R1/8 | 301 | 42 | 153296 | HE-3-1/8-1/8 |
| | | R1/4 | R1/4 | 380 | 79.5 | 153297 | HE-3-1/4-1/4 |
| | | R3/8 | R3/8 | 733 | 96 | 153298 | HE-3-3/8-3/8 |

Ball valves QH/QHS

Type codes



| Type | |
|------|----------------------------------|
| QH | Ball valve |
| QHS | Ball valve with bulkhead fitting |

| Pneumatic connection 1 | |
|------------------------|--|
| QS-4 | Push-in connector for tubing O.D. 4 mm |
| QS-6 | Push-in connector for tubing O.D. 6 mm |
| 1/4 | Female thread G1/4 |
| 3/8 | Female thread G3/8 |
| 1/2 | Female thread G1/2 |
| 3/4 | Female thread G3/4 |
| 1 | Female thread G1 |
| 1 1/2 | Female thread G1 1/2 |

| Pneumatic connection 2 | |
|------------------------|--|
| | Same connection size as pneumatic connection 1 |
| 1/8 | Male thread R1/8 |

Ball valves QH/QHS

Technical data

FESTO

QH/QHS



- - Standard nominal flow rate
148 ... 560 l/min
- - Temperature range
0 ... +60 °C
- - Operating pressure
-1 ... 10 bar



| General technical data | | | | | |
|------------------------|-------------------------|------|-----------------|-----------------------|--------------|
| Type | QH | | | QHS, bulkhead fitting | |
| Pneumatic connection 1 | QS-4 | QS-6 | R $\frac{1}{8}$ | QS-6 | |
| Pneumatic connection 2 | QS-4 | QS-6 | QS-4 | QS-6 | QS-6 |
| Nominal width [mm] | 2.5 | 4 | 2.5 | 2.5 | 4 |
| Design | Ball valve | | | | |
| Type of mounting | In-line installation | | Screw-in | | Via lock nut |
| Mounting position | Any | | | | |
| Valve function | 2/2-way valve, bistable | | | | |
| Type of actuation | Manual | | | | |
| Sealing principle | Soft | | | | |

| Operating and environmental conditions | |
|--|--|
| Operating pressure [bar] | -1 ... 10 |
| Operating medium | Compressed air according to ISO 8573-1:2010 [7:-:-] |
| Note on operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |
| Ambient temperature [°C] | 0 ... +60 |

| Materials | |
|-------------------|----------------|
| Housing | PBT |
| Note on materials | RoHS-compliant |

Dimensions – Push-in connector at both ends Download CAD data → www.festo.com



| Type | D1 | D2 | H | H1 | L | L1 |
|---------|----|----|----|----|------|------|
| QH-QS-4 | 4 | 11 | 15 | 13 | 38 | 17 |
| QH-QS-6 | 6 | | | | 41.5 | 17.5 |

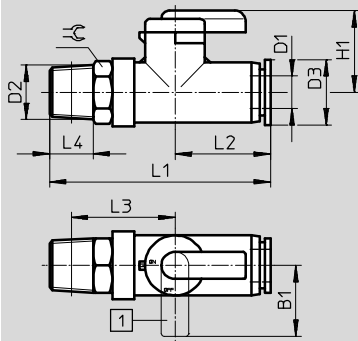
Ball valves QH/QHS

Technical data

FESTO

Dimensions – Male thread/push-in connector

Download CAD data → www.festo.com

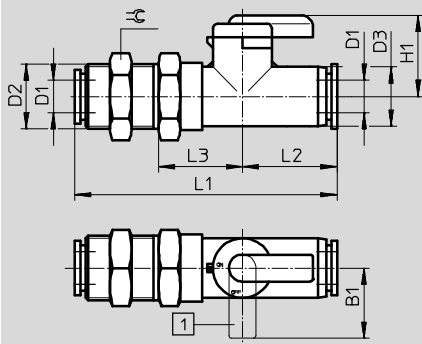


1 Closed position

| Type | B1 | D1 ∅ | D2 | D3 ∅ | H1 | L1 | L2 | L3 | L4 | ⊕ |
|-------------|----|---------|------|---------|----|------|------|----|----|----|
| QH-QS-4-1/8 | 13 | 4 | R1/8 | 11 | 15 | 41.5 | 17 | 20 | 8 | 10 |
| QH-QS-6-1/8 | | 6 | | | | 42 | 17.5 | | | |

Dimensions – Bulkhead fitting, push-in connector at both ends

Download CAD data → www.festo.com



1 Closed position

| Type | B1 | D1 ∅ | D2 | D3 ∅ | H1 | L1 | L2 | L3 | ⊕ |
|----------|----|---------|-------|---------|----|------|------|------|----|
| QHS-QS-6 | 13 | 6 | M12x1 | 11 | 15 | 48.5 | 17.5 | 15.5 | 14 |

Ordering data

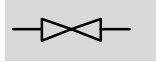
| Version | | Pneumatic connection | | Standard nominal flow rate qnN | Weight | Part No. | Type |
|----------------------|--|----------------------|------|--------------------------------|--------|----------|-------------|
| | | 1 | 2 | [l/min] | [g] | | |
| 2/2-way valve | | | | | | | |
| | Push-in connector at both ends | QS-4 | QS-4 | 148 | 12 | 153483 | QH-QS-4 |
| | | QS-6 | QS-6 | 533 | 12.5 | 153484 | QH-QS-6 |
| | Male thread/push-in connector | R1/8 | QS-4 | 235 | 14 | 153486 | QH-QS-4-1/8 |
| | | | QS-6 | 560 | 15 | 153487 | QH-QS-6-1/8 |
| | Bulkhead fitting, push-in connector at both ends | QS-6 | QS-6 | 528 | 16.5 | 153485 | QHS-QS-6 |



Ball valves QH

Technical data – With hand lever

FESTO


QH



-  - Standard nominal flow rate
3400 ... 84,000 l/min
-  - Temperature range
-20 ... +180 °C




| General technical data | | | | | | |
|------------------------|-------------------------|------|------|------|----|--------|
| Pneumatic connection 1 | G1/4 | G3/8 | G1/2 | G3/4 | G1 | G1 1/2 |
| Pneumatic connection 2 | G1/4 | G3/8 | G1/2 | G3/4 | G1 | G1 1/2 |
| Nominal size [mm] | 10 | 10 | 15 | 20 | 25 | 40 |
| Design | Ball valve | | | | | |
| Type of mounting | In-line installation | | | | | |
| Mounting position | Any | | | | | |
| Valve function | 2/2-way valve, bistable | | | | | |
| Type of actuation | Manual | | | | | |
| Sealing principle | Soft | | | | | |

-  - Note: This product conforms to ISO 1179-1 and to ISO 228-1

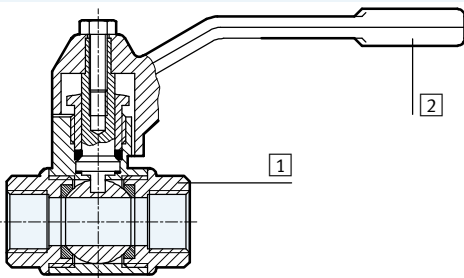
| Operating and environmental conditions | |
|--|--|
| Operating medium | Compressed air according to ISO 8573-1:2010 [7:--:-] Water ¹⁾ |
| Note on operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |
| Ambient temperature [°C] | -20 ... +180 |

1) Other media on request.

-  - Note
Not permitted for toxic gases such as natural gas, town gas etc.

Materials

Sectional view



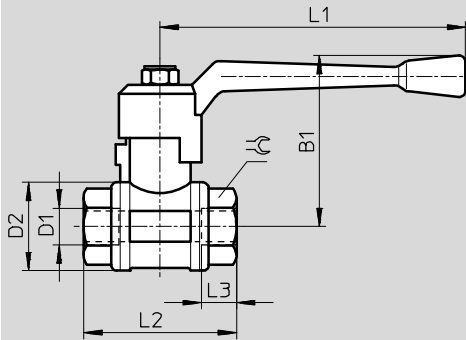
| Ball valve | | |
|------------|---------|-----------|
| 1 | Housing | Brass |
| 2 | Lever | Aluminium |

Ball valves QH

Technical data – With hand lever

Dimensions – Female thread at both ends

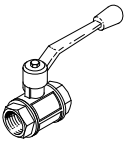
Download CAD data → www.festo.com



| Type | B1 | D1 | D2 ∅ | L1 | L2 | L3 | ⊕ |
|----------|-----|--------|---------|-----|-------|------|------|
| QH-1/4 | 56 | G1/4 | 30 | 100 | 52 | 11.5 | 21.5 |
| QH-3/8 | 56 | G3/8 | 30 | 100 | 52 | 11.5 | 21.5 |
| QH-1/2 | 59 | G1/2 | 35 | 100 | 64 | 15 | 27 |
| QH-3/4 | 72 | G3/4 | 44 | 120 | 74 | 16.3 | 32 |
| QH-1 | 77 | G1 | 51 | 120 | 88 | 19.1 | 41 |
| QH-1 1/2 | 100 | G1 1/2 | 73 | 150 | 105.5 | 21.4 | 55 |

• Note: This product conforms to ISO 1179-1 and to ISO 228-1

Ordering data

| Version | Pneumatic connection | | Standard nominal flow rate qnN | Weight | Part No. | Type |
|---|----------------------------|--------|--------------------------------|--------|----------|----------------------|
| | 1 | 2 | [l/min] | [g] | | |
| 2/2-way valve | | | | | | |
|  | Female thread at both ends | G1/4 | G1/4 | 3400 | 175 | 9541 QH-1/4 |
| | | G3/8 | G3/8 | 7500 | 180 | 9542 QH-3/8 |
| | | G1/2 | G1/2 | 11,500 | 340 | 9543 QH-1/2 |
| | | G3/4 | G3/4 | 21,000 | 590 | 9544 QH-3/4 |
| | | G1 | G1 | 33,000 | 815 | 9545 QH-1 |
| | | G1 1/2 | G1 1/2 | 84,000 | 1750 | 6837 QH-1 1/2 |