



- Shut-off valves HE
- Hand slide valves W
- Ball valves QH,
manually actuated
- Ball valves VAPB,
mechanically actuated
- Ball valves VAPB-CR,
mechanically actuated,
corrosion resistant

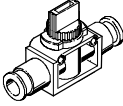
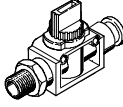
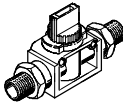
Ball valves and shut-off valves

Product range overview

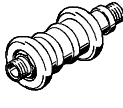


Flow, non-return and regulating valves
Ball valves and shut-off valves

5.2

Function	Design	Type	Pneumatic connection		2/2-way valves	3/2-way valves	→ Page	
			Thread	For tubing O.D. [mm]				
Shut-off valves	With QS push-in connector ¹⁾ at both ends							
		HE	-	6	6	■ ²⁾	■ ²⁾	2 / 5.2-6
				8	8	■ ²⁾	■ ²⁾	
				10	10	■ ²⁾	■ ²⁾	
				12	12	■ ²⁾	■ ²⁾	
	With PTFE-coated connecting thread and QS push-in connector ¹⁾							
		HE	R $\frac{1}{8}$	6	6	■	■	2 / 5.2-7
				8	8	■	■	
				10	10	■	■	
				12	12	■	■	
	With PTFE-coated connecting thread at both ends							
		HE	R $\frac{1}{8}$	-	6	6	■	2 / 5.2-7
8					8	■	■	
10					10	■	■	
12					12	■	■	

- 1) for standard O.D. plastic tubing
- 2) Free of copper, PTFE and silicone

Function	Design	Type	Pneumatic connection		→ Page	
			Thread	For tubing O.D. [mm]		
Hand slide valves	With connecting thread at both ends					
		W	M5	-		2 / 5.2-9
			G $\frac{1}{8}$			
			G $\frac{1}{4}$			
			G $\frac{3}{8}$			
			G $\frac{1}{2}$			
			G $\frac{3}{4}$			

Ball valves and shut-off valves

Product range overview



Function	Design	Type	Pneumatic connection		→ Page
			Thread	For tubing O.D. [mm]	
Ball valves QH/QHS, manually actuated	With QS push-in connector ¹⁾ at both ends				
		QH	-	4	2 / 5.2-13
				6	
	With QS push-in connector ¹⁾ at both ends, with bulkhead connector at one end				
		QHS	-	6	2 / 5.2-13
	With PTFE-coated connecting thread and QS push-in connector ¹⁾				
		QH	R ¹ / ₈	4	2 / 5.2-13
				6	
With connecting thread at both ends					
	QH		G ¹ / ₄	-	2 / 5.2-15
			G ³ / ₈		
			G ¹ / ₂		
			G ³ / ₄		
			G1		
			G ¹ / ₂		

1) for standard O.D. plastic tubing

Function	Design	Type	Connecting thread ¹⁾	Nominal size [mm]	Flanged connection to ISO 5211	Max. operating pressure [bar]	→ Page
	VAPB	R ¹ / ₄	15	F03	63	2 / 5.2-20	
		R ³ / ₈	15	F03	63		
		R ¹ / ₂	15	F03	63		
		R ³ / ₄	20	F03	50		
		R1	25	F03	50		
		R ¹ / ₄	32	F0304	40		
		R ¹ / ₂	40	F0304	40		
		R2	50	F0405	32		
R ² / ₂	63	F0507	25				
Stainless steel, corrosion-resistant							
	VAPB-...-CR	R ¹ / ₄	15	F0304	63	2 / 5.2-23	
		R ³ / ₈	15	F0304			
		R ¹ / ₂	15	F0304			
		R ³ / ₄	20	F0304			
		R1	25	F0405			
		R ¹ / ₄	32	F0405			
		R ¹ / ₂	40	F0507			
		R2	50	F0507			
		R ² / ₂	63	F0710			
		R3	80	F0710			
		R4	100	F1012			

1) Cylindrical barrel with female thread to DIN 2999

2) Ball valve drive units QH-DR → Volume 7

Shut-off valves HE


Features

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Flow, non-return and regulating valves
Ball valves and shut-off valves

5.2



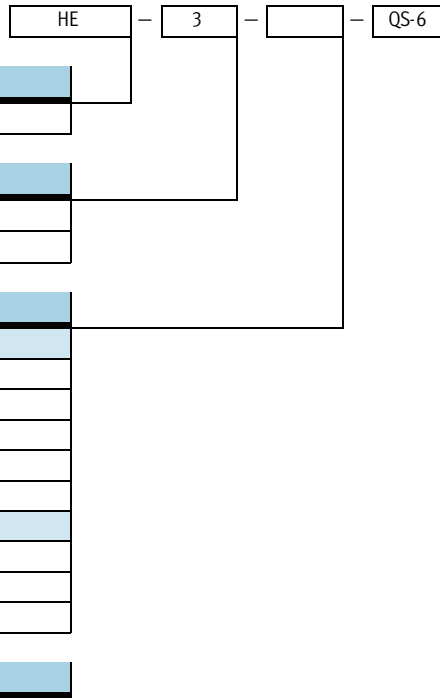
 Flow rate
300 ... 800 l/min

- Connection $R\frac{1}{8}$... $R\frac{1}{2}$
- With QS push-in connector for standard O.D. tubing at both ends
- With connecting thread and push-in connector
- With connecting thread at both ends
- Designs with connecting thread can be turned 360°

Air flow is fully blocked in both directions with this valve.

Shut-off valves HE

Type codes



Type	
HE	Shut-off valve

Function	
2	2/2-way
3	3/2-way

Screw-in and connecting thread	
Connecting thread at one end	
1/8	Pipe thread R1/8
1/4	Pipe thread R1/4
3/8	Pipe thread R3/8
1/2	Pipe thread R1/2
Connecting thread at both ends	
1/8-1/8	Pipe thread R1/8
1/4-1/4	Pipe thread R1/4
3/8-3/8	Pipe thread R3/8

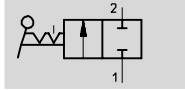
Tubing connection	
Type of connection	
QS	Push-in connector for standard O.D. tubing
For tubing O.D.∅	
6	6 mm
8	8 mm
10	10 mm
12	12 mm

Shut-off valves HE

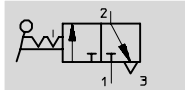
Technical data



Function

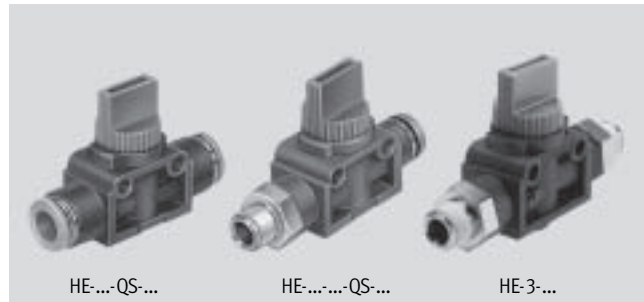


2/2-way



3/2-way

Flow rate
280 ... 840 l/min



Flow, non-return and regulating valves
Ball valves and shut-off valves

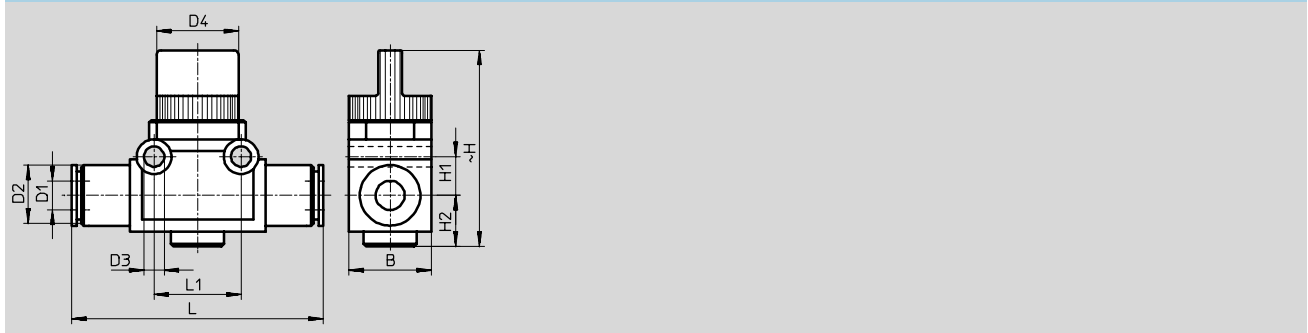
5.2

General technical data					
Push-in connector for tubing O.D.	[mm]	6	8	10	12
Type of mounting		2 through-holes in housing In-line installation			
Nominal size	[mm]	5	5	7	7

Operating and environmental conditions	
Operating medium	Filtered compressed air, lubricated or unlubricated
Operating pressure	[bar] -0.75 ... +10
Temperature of medium	[°C] 0 ... 60

Technical data – QS push-in connector at both ends					
Push-in connector for tubing O.D.	[mm]	6	8	10	12
Standard nominal flow rate	HE-2 [l/min]	280	390	760	830
1→2	HE-3 [l/min]	280	390	780	840
Materials		Housing: Polybutylene terephthalate			
Note on material		Free of copper, PTFE and silicone → Ordering data			
Weight	[g]	25	27	44	50

Dimensions – QS push-in connector, both ends Download CAD data → www.festo.com/en/engineering



Tubing O.D. D1	B	D2 ∅	D3 ∅	D4 ∅	H	H1	H2	L	L1
6	17	12.5	4.2	16.5	40.5	8	10.5	53.2	18
8	17	15	4.2	16.5	40.5	8	10.5	56	18
10	21	17.5	4.2	19.5	41	11	10.5	65	24
12	21	21	4.2	19.5	41	11	10.5	70.2	24

Shut-off valves HE

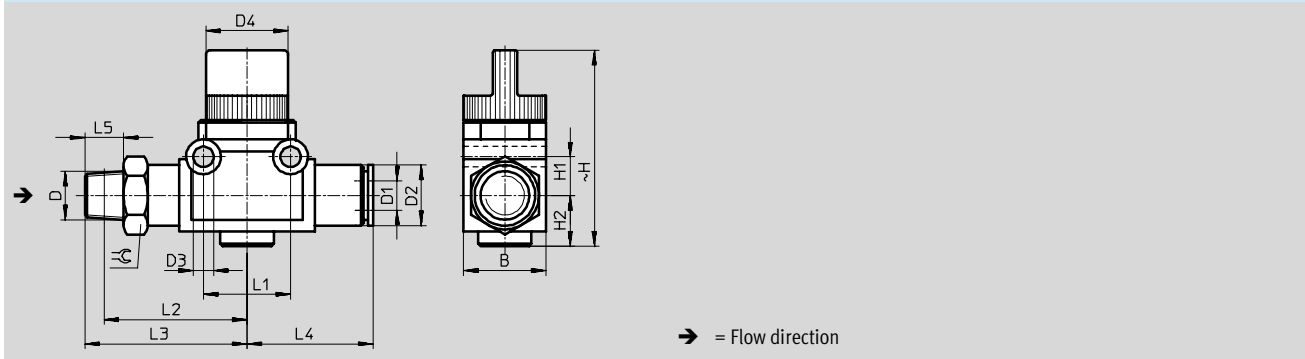
Technical data



Technical data – Connecting thread at one or both ends					
Connecting thread		R1/8	R1/4	R3/8	R1/2
Push-in connector for tubing O.D.	[mm]	6	8	10	12
Standard nominal flow rate	HE-2 [l/min]	310	400	730	780
1 → 2	HE-3 [l/min]	300	380	730	800
Permissible tightening torque	[Nm]	7 ... 9	12 ... 14	22 ... 24	28 ... 30
Materials		Housing: Polybutylene terephthalate			
		Threaded connection: Nickel-plated brass			
Weight	Connecting thread at one end [g]	33	45	70	95
	Connecting thread at both ends [g]	42	80	96	–

Dimensions – Connecting thread at one end Download CAD data → www.festo.com/en/engineering

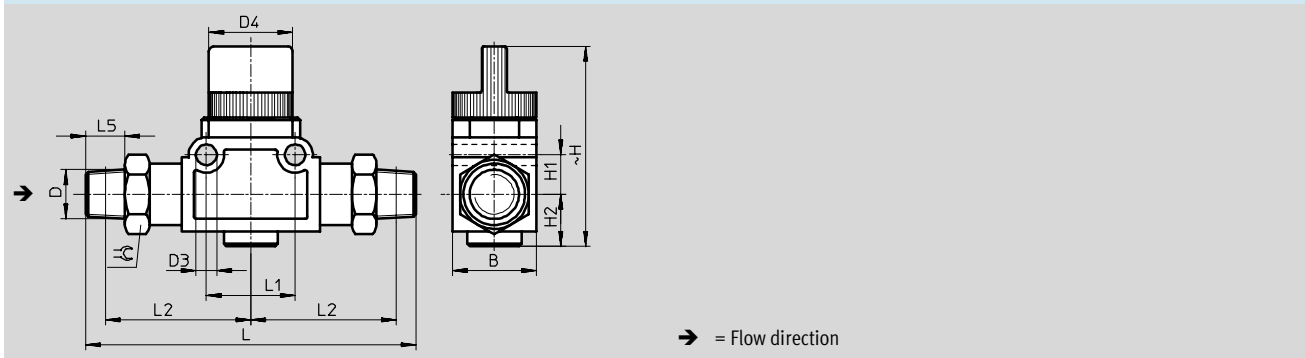
With PTFE-coated pipe thread and QS push-in connector, can be rotated 360°



Connecting thread D	B	D1 ∅	D2 ∅	D3 ∅	D4 ∅	H	H1	H2	L1	L2	L3	L4	L5	↻
R1/8	17	6	12.5	4.2	16.5	40.5	8	10.5	18	29.5	33.5	26	8	14
R1/4	17	8	15	4.2	16.5	40.5	8	10.5	18	30.5	36.5	28	11	14
R3/8	21	10	17.5	4.2	19.5	41	11	10.5	24	37	43.5	32.5	12	17
R1/2	21	12	21	4.2	19.5	41	11	10.5	24	38.5	46.5	35.5	15	21

Dimensions – Connecting thread at both ends Download CAD data → www.festo.com/en/engineering

With PTFE-coated pipe thread at both ends, can be rotated 360°

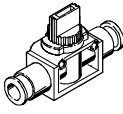
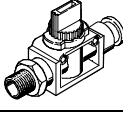



Connecting thread D	B	D3 ∅	D4 ∅	H	H1	H2	L	L1	L2	L5	↻
R1/8	17	4.2	16.5	40.5	8	10.5	67	18	29.5	8	14
R1/4	21	4.2	19.5	41	11	10.5	85	24	36.5	11	17
R3/8	21	4.2	19.5	41	11	10.5	87	24	37	12	17

Shut-off valves HE

Technical data



Ordering data							
	Description	Connecting thread	For tubing O.D. [mm]	2/2-way valves		3/2-way valves	
				Part No.	Type	Part No.	Type
	QS push-in connector, both ends	-	6	153 467	HE-2-QS-6	153 475	HE-3-QS-6 ¹⁾
			8	153 468	HE-2-QS-8	153 476	HE-3-QS-8 ¹⁾
			10	153 469	HE-2-QS-10	153 477	HE-3-QS-10 ¹⁾
			12	153 470	HE-2-QS-12	153 478	HE-3-QS-12 ¹⁾
	With PTFE-coated pipe thread and QS push-in connector	R1/8	6	153 471	HE-2-1/8-QS-6	153 479	HE-3-1/8-QS-6
		R1/4	8	153 472	HE-2-1/4-QS-8	153 480	HE-3-1/4-QS-8
		R3/8	10	153 473	HE-2-3/8-QS-10	153 481	HE-3-3/8-QS-10
		R1/2	12	153 474	HE-2-1/2-QS-12	153 482	HE-3-1/2-QS-12
	With PTFE-coated pipe thread at both ends	R1/8	-	-	-	153 296	HE-3-1/8-1/8
		R1/4	-	-	-	153 297	HE-3-1/4-1/4
		R3/8	-	-	-	153 298	HE-3-3/8-3/8

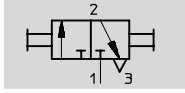
1) Free of copper, PTFE and silicone

Hand slide valves W

Technical data



Function



3/2-way

Flow rate
 280 ... 840 l/min

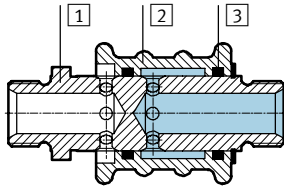
- Valve for pressurising and exhausting pneumatic control systems
- Suitable for a vacuum



Technical data							
Connecting thread		M5	G1/8	G1/4	G3/8	G1/2	G3/4
Nominal size	[mm]	2.5	3	7	9	12	18
Standard nominal flow rate 1 → 2	[l/min]	120	600	1,000	1,400	2,000	6,800
Pressure range	[bar]	-0.95 ... +8					
Actuating force at 6 bar operating pressure	[N]	10	10	20	20	20	30
Type of mounting		In-line installation					
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum					
Temperature range	[°C]	-10 ... +60 °C					
Weight	[g]	25	40	110	280	300	400

Materials

Sectional view



Hand slide valve		
1	Threaded plug	Nickel plated brass
2	Slide sleeve	Blue anodised aluminium
3	Seals	Nitrile rubber

Core Range

Hand slide valves W

Technical data

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Dimensions Download CAD data → www.festo.com/en/engineering



Connecting thread D	D1 Ø	L	L1	≡C
M5	20	46.4	5	9
G ¹ / ₈	24	51.3	6.5	14
G ¹ / ₄	34.5	70.4	8	17
G ³ / ₈	45	79.4	9	27
G ¹ / ₂	45	82.4	10.5	27
G ³ / ₄	50	99	12	32

Ordering data			
	Connecting thread	Part No.	Type
With metric thread at both ends	M5	4 451	W-3-M5
With pipe thread at both ends	G ¹ / ₈	2 339	W-3-1/8
	G ¹ / ₄	2 340	W-3-1/4
	G ³ / ₈	2 341	W-3-3/8
	G ¹ / ₂	2 342	W-3-1/2
	G ³ / ₄	4 052	W-3-3/4

Flow, non-return and regulating valves
Ball valves and shut-off valves

5.2


Core Range

Ball valves QH/QHS, manually actuated

Key features

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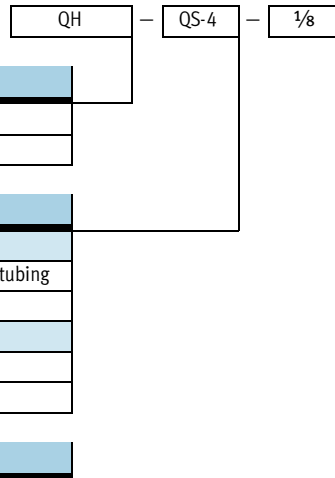
-  - Flow rate
148 ... 84,000 l/min

- Variants:
- With 2 push-in connectors
 - With connecting thread and push-in connector
 - With bulkhead connector
 - With external thread
R1/8, PTFE-coated
 - Via female thread
G1/4 ... G1 1/2

Air flow is fully blocked in both directions with these valves by turning the lever.

Ball valves QH/QHS, manually actuated

Type codes



Type	
QH	Ball valve
QHS	Ball valve with bulkhead fitting

Tubing connection	
Type of connection	
QS	Push-in connector for standard O.D. tubing
For tubing O.D.	
4	4 mm
6	6 mm

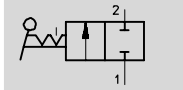
Screw-in and connecting thread	
1/8	Pipe thread R1/8
1/4	Pipe thread G1/4
3/8	Pipe thread G3/8
1/2	Pipe thread G1/2
3/4	Pipe thread G3/4
1	Pipe thread G1
1 1/2	Pipe thread G1 1/2

Ball valves QH/QHS, manually actuated

Technical data – with QS plug-in connector



Function



2/2-way

■ Suitable for a vacuum

Flow rate
148 ... 560 l/min

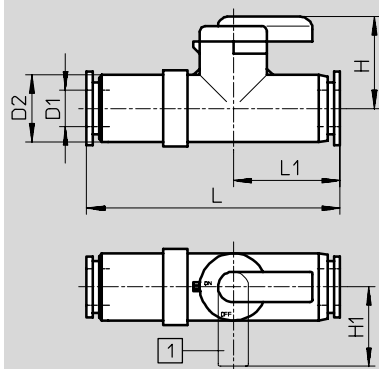


Technical data						
Pneumatic connection	Thread	–	–	R1/8	R1/8	–
	Tubing O.D.	[mm]	4	6	4	6
Design	Ball valve					
Valve function	2/2-way, bi-stable					
Sealing principle	Soft					
Type of mounting	In-line installation		Can be screwed in		Bulkhead fitting	
Actuation type	Manual					
Nominal size	[mm]	2.5	4	2.5	2.5	4
Standard nominal flow rate	[l/min]	148	533	235	560	528
Permissible tightening torque	[Nm]	–	–	7 ... 9	–	–
Materials	Housing: Polybutylene terephthalate					
	Threaded connection: Nickel-plated brass					
Weight	[g]	12	13	14	15	17

Operating and environmental conditions		
Operating pressure	[bar]	–1 ... +10
Operating medium	Filtered compressed air, lubricated or unlubricated	
Ambient temperature	[°C]	0 ... +60

Dimensions Download CAD data → www.festo.com/en/engineering

QS push-in connector, both ends



1 Closed

Tubing O.D. D1	D2 ∅	H	H1	L	L1
4	11	15	13	38	17
6	11	15	13	41.5	17.5

Ball valves QH/QHS, manually actuated

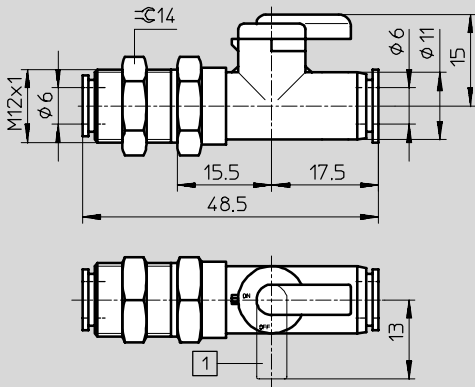
Technical data – with QS plug-in connector



Dimensions

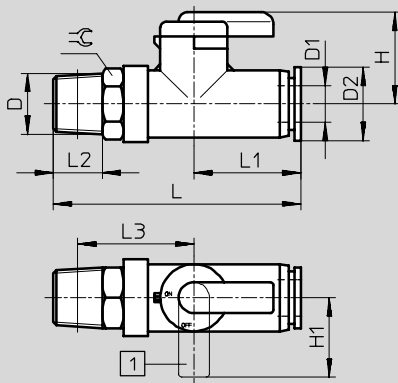
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QS push-in connector at both ends, bulkhead connector at one end



1 Closed

With PTFE-coated connecting thread and QS push-in connector



1 Closed

Tubing O.D. D1	D ∅	D2 ∅	H	H1	L	L1	L2	L3	⊘
4	R1/8	11	15	13	41.5	17	8	20	10
6	R1/8	11	15	13	42	17.5	8	20	10

Ordering data

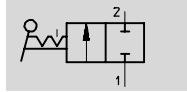
	Description	Connecting thread	For tubing O.D. [mm]	Part No.	Type
	QS push-in connector, both ends	-	4	153 483	QH-QS-4
			6	153 484	QH-QS-6
	QS push-in connector, both ends, bulkhead connector at one end	-	6	153 485	QHS-QS-6
	With PTFE-coated connecting thread and QS push-in connector	R1/8	4	153 486	QH-QS-4-1/8
			6	153 487	QH-QS-6-1/8

Ball valves QH/QHS, manually actuated

Technical data – with female thread

FESTO

Function



2/2-way

- Nominal size 10 ... 40 mm
- Female thread G $\frac{3}{4}$...G1 $\frac{1}{2}$
- Suitable for a vacuum

- - Flow rate
3,400 ... 84,000 l/min



Technical data							
Pneumatic connection		G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{3}{4}$	G1	G1 $\frac{1}{2}$
Design	Ball valve						
Valve function	2/2-way, bi-stable						
Sealing principle	Soft						
Type of mounting	In-line installation						
Actuation type	Manual						
Nominal size	[mm]	10	12	15	20	25	40
Standard nominal flow rate	[l/min]	3,400	7,500	11,500	21,000	33,000	84,000
Actuation torque	[Nm]	4	4	8	12	15	25
Weight	[g]	175	180	340	600	815	1,750

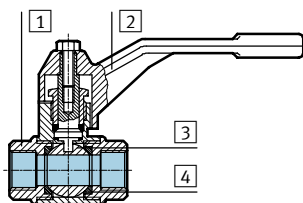
Operating and environmental conditions		
Operating pressure	[bar]	-0.95 ... +30
Operating medium	Filtered compressed air, lubricated or unlubricated, water, vacuum ¹⁾	
Ambient temperature	[°C]	-20 ... +180

1) Other media upon request

- - Note
Not permitted for poisonous gas such as natural gas.

Materials

Sectional view



Ball valve		
1	Housing	Brass
2	Lever	Painted aluminium
3	Ball	Hard chrome plated
4	Seals	Polytetrafluoroethylene

Flow, non-return and regulating valves
Ball valves and shut-off valves

5.2

Ball valves QH/QHS, manually actuated

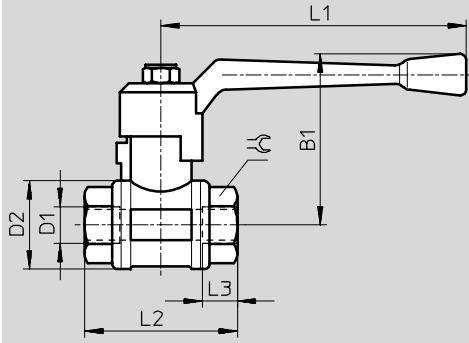
Technical data – with female thread



Flow, non-return and regulating valves
Ball valves and shut-off valves

5.2

Dimensions Download CAD data → www.festo.com/en/engineering



Connecting thread D1	B1	D2 Ø	L1	L2	L3	⌀
G ¹ / ₄	56	30	100	52	11.5	21.5
G ³ / ₈	56	30	100	52	11.5	21.5
G ¹ / ₂	59	35	100	64	15	27
G ³ / ₄	72	44	120	74	16.3	32
G1	77	51	120	88	19.1	41
G1 ¹ / ₂	100	73	150	105.5	21.4	55

Ordering data					
	Description	Connecting thread	For tubing O.D. [mm]	Part No.	Type
	With connecting thread at both ends	G ¹ / ₄	-	9 541	QH- ¹ / ₄
		G ³ / ₈		9 542	QH- ³ / ₈
		G ¹ / ₂		9 543	QH- ¹ / ₂
		G ³ / ₄		9 544	QH- ³ / ₄
		G1		9 545	QH-1
		G1 ¹ / ₂		6 837	QH-1 ¹ / ₂

- - Note
Not permitted for poisonous gas such as natural gas.