

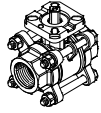
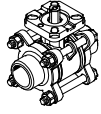
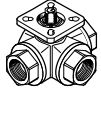

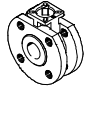
Ball valves

FESTO



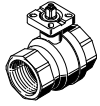
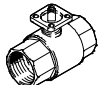

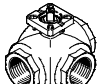

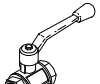
Ball valves

Key features and product range overview

Version		Type	Process valve connection	Nominal width DN	Flange hole pattern to ISO 5211	Process valve nominal pressure PN	→ Page/Internet	
Stainless steel	2-way, with pipe thread to EN 10226-1							
		VZBA...-GG	Rp1/4	8	F0304	63	5	
			Rp3/8	10	F0304			
			Rp1/2	15	F0304			
			Rp3/4	20	F0304			
			Rp1	25	F0405			
			Rp1 1/4	32	F0405			
			Rp1 1/2	40	F0507			
			Rp2	50	F0507			
			Rp2 1/2	65	F0710			
			Rp3	80	F0710			
	Rp4	100	F10					
	2-way, with welding ends to EN 12627							
		VZBA...-WW	Welding end	8	F0304	63	5	
				10	F0304			
				15	F0304			
				20	F0304			
				25	F0405			
				32	F0405			
				40	F0507			
				50	F0507			
				65	F0710			
				80	F0710			
	100	F10						
	3-way, L-hole with pipe thread to EN 10226-1							
		VZBA	Rp1/4	8	F0304	63	11	
			Rp3/8	10	F0304			
			Rp1/2	15	F0304			
			Rp3/4	20	F0405			
			Rp1	25	F0405			
			Rp1 1/4	32	F0405			
			Rp1 1/2	40	F0405			
			Rp2	50	F05			
3-way, T-hole with pipe thread to EN 10226-1								
	VZBA	Rp1/4	8	F0304	63	11		
		Rp3/8	10	F0304				
		Rp1/2	15	F0304				
		Rp3/4	20	F0405				
		Rp1	25	F0405				
		Rp1 1/4	32	F0405				
		Rp1 1/2	40	F0405				
		Rp2	50	F05				
2-way, compact design with flange to DIN EN 1092-1								
	VZBC...-FF	Ring housing with threaded flange	15	F0304	40	17		
			20	F0304				
			25	F0405				
			32	F0405				
			40	F0507				
			50	F0507				
			65	F07			16	
			80	F07				
100	F0710							

Ball valves

Key features and product range overview

Version		Type	Process valve connection	Nominal width DN	Flange hole pattern to ISO 5211	Process valve nominal pressure PN	→ Page/Internet
Brass	2-way, with pipe thread to EN 10226-1						
		VAPB	Rp $\frac{1}{4}$	8	F03	40	23
			Rp $\frac{3}{8}$	10	F03		
			Rp $\frac{1}{2}$	15	F03		
			Rp $\frac{3}{4}$	20	F03		
			Rp1	25	F0304		
			Rp1 $\frac{1}{4}$	32	F0405		
			Rp1 $\frac{1}{2}$	40	F0405	25	
			Rp2	50	F05		
			Rp2 $\frac{1}{2}$	65	F07		
	2-way, with pipe thread to EN 10226-1						
		VZBM	Rp $\frac{1}{4}$	8	F03	40	28
			Rp $\frac{3}{8}$	10	F03		
			Rp $\frac{1}{2}$	15	F03		
			Rp $\frac{3}{4}$	20	F03	25	
			Rp1	25	F03		
			Rp1 $\frac{1}{4}$	32	F03		
			Rp1 $\frac{1}{2}$	40	F0305		
			Rp2	50	F0305		
	3-way, L-hole with pipe thread to EN 10226-1						
		VZBM	Rp $\frac{1}{4}$	8	F03	40	34
			Rp $\frac{3}{8}$	10	F03		
			Rp $\frac{1}{2}$	15	F03		
			Rp $\frac{3}{4}$	20	F03		
			Rp1	25	F0304		
			Rp1 $\frac{1}{4}$	32	F0405		
			Rp1 $\frac{1}{2}$	40	F0405	25	
			Rp2	50	F05		
3-way, T-hole with pipe thread to EN 10226-1							
	VZBM	Rp $\frac{1}{4}$	8	F03	40	34	
		Rp $\frac{3}{8}$	10	F03			
		Rp $\frac{1}{2}$	15	F03			
		Rp $\frac{3}{4}$	20	F03			
		Rp1	25	F0304			
		Rp1 $\frac{1}{4}$	32	F0405			
		Rp1 $\frac{1}{2}$	40	F0405	25		
		Rp2	50	F05			
2-way, manual with pipe thread to EN 10226-1							
	VZBM	Rp $\frac{1}{4}$	8	-	50	40	
		Rp $\frac{3}{8}$	10				
		Rp $\frac{1}{2}$	15				
		Rp $\frac{3}{4}$	20				
		Rp1	25				
		Rp1 $\frac{1}{4}$	32				
		Rp1 $\frac{1}{2}$	40		40		
2-way, manual with pipe thread to ISO 228-1							
	QH	G $\frac{1}{4}$	10	-	-	45	
		G $\frac{3}{8}$	10				
		G $\frac{1}{2}$	15				
		G $\frac{3}{4}$	20				
		G1	25				
		G1 $\frac{1}{2}$	40				

Ball valves VZBA, 2-way

Type codes

FESTO

VZBA - 1/4 - G G - 63 - T - 22 - F0304 - V4 V4 - T

Type	
VZBA	Ball valve

Nominal size DN	
1/4"	DN8
3/8"	DN10
1/2"	DN15
3/4"	DN20
1"	DN25
1 1/4"	DN32
1 1/2"	DN40
2"	DN50
2 1/2"	DN65
3"	DN80
4"	DN100

Connection type 1	
G	Pipe thread to EN 10226-1
W	Welding end to EN 12627

Connection type 2	
G	Pipe thread to EN 10226-1
W	Welding end to EN 12627

Process valve nominal pressure PN	
63	63 bar

Design	
T	In three pieces

Valve function	
22	2/2-way

Flange connection to ISO 5211	
F0304	Hole pattern 03 and 04
F0405	Hole pattern 04 and 05
F0507	Hole pattern 05 and 07
F07	Hole pattern 07
F0710	Hole pattern 07 and 10
F10	Hole pattern 10

Housing material	
V4	Stainless steel 1.4408

Shut-off element material	
V4	Stainless steel 1.4408

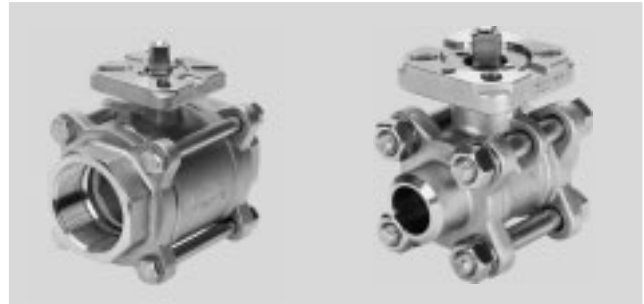
Sealing element material	
T	PTFE



Ball valves VZBA, 2-way

Technical data



- With pipe thread or welding end



-  - Connecting thread
Rp1/4 ... Rp4
-  - Flow rate
7 ... 1414 m³/h

General technical data												
Process valve pipe thread connection	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	Rp2 1/2	Rp3	Rp4	
Nominal width DN	8	10	15	20	25	32	40	50	65	80	100	
Valve function	2/2											
Design	2-way ball valve											
Sealing principle	Soft											
Actuation type	Mechanical											
Manual override	None											
Switching position display	Slot direction = flow direction											
Flow direction	Reversible											
Type of mounting	In-line installation											
Mounting position	Any											
Based on standard	ISO 5211											
	EN 10226-1											
	EN 558											
	EN 12627											
Actuation moment [Nm]	6	6	10	14	17	24	29	44	78	112	140	
Internal diameter [mm]	10	12	16	20	25	32	38	50	65	80	100	
Flow rate Kv [m ³ /h]	7	10	19.4	45.6	71.5	105	170	275	507	905	1414	

Operating and environmental conditions												
Process valve pipe thread connection	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	Rp2 1/2	Rp3	Rp4	
Medium ¹⁾	Compressed air to ISO 8573-1:2010 [-:--]											
	Neutral liquids											
	Inert gases											
	Water – no water vapour											
Process valve nominal pressure	PN 63											
Temperature of medium [°C]	-10 ... +200											
Corrosion resistance class CRC ²⁾	3											
CE marking (see declaration of conformity) → www.festo.com	-					To EU Pressure Equipment Directive						

1) Other media on request

2) Corrosion resistance class CRC 3 to Festo standard FN 940070

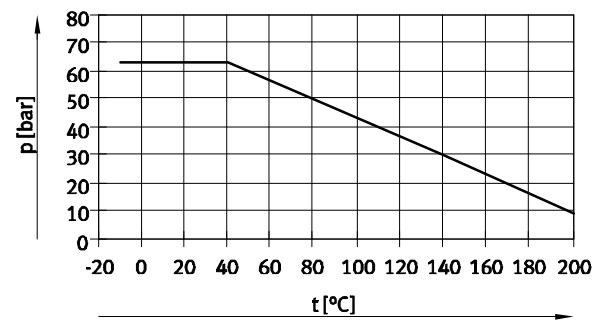
High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

Ball valves VZBA, 2-way

Technical data

Materials		Material number
Housing	High-alloy stainless steel	1.4408
Ball		1.4408
Shaft		1.4401
Seals	PTFE	
	PTFE-reinforced	
Note on materials	RoHS compliant	
	Contains paint-wetting impairment substances	

Permissible operating pressure p as a function of the temperature of the medium t



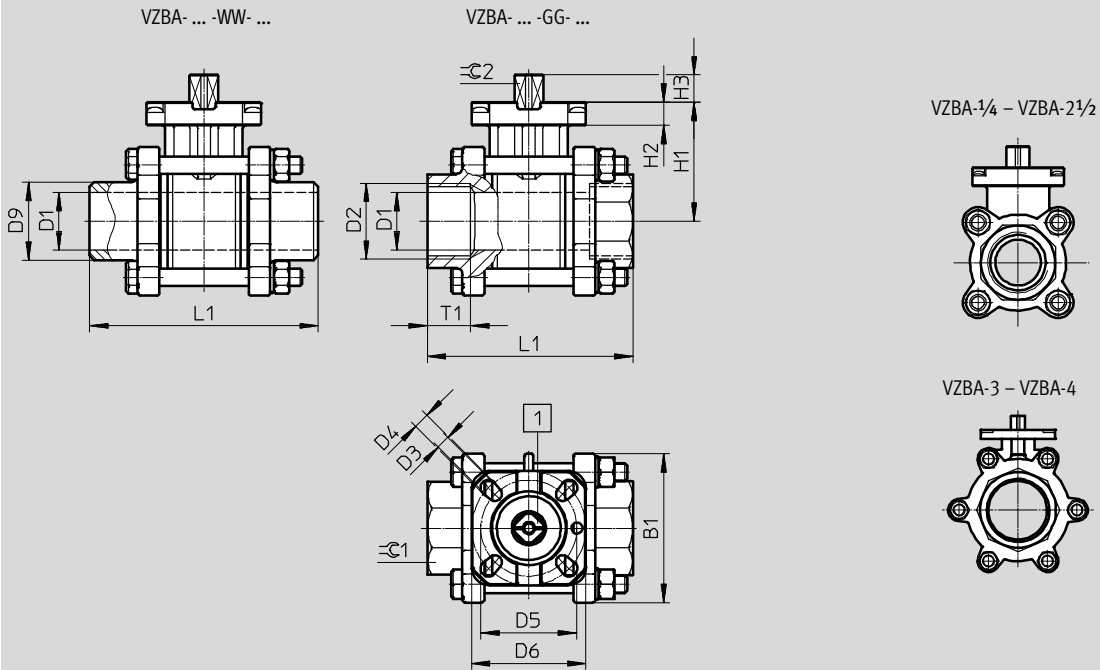
Ball valves VZBA, 2-way

Technical data

FESTO

Dimensions

Download CAD data → www.festo.com



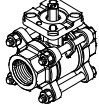
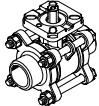
1 Switching position indication: the slot direction corresponds to the flow direction.

Type	B1	D1 ∅ ±0.15	D2	D3 ∅	D4 ∅	D5 ∅	D6 ∅	D9 ∅	H1	H2	H3 ±0.5	L1 ±2	L2	≈C 1	≈C 2 -0.1
VZBA-1/4"-GG-63-T-22-F0304-V4V4T	42	10	Rp1/4	6	6	36	42	-	40	9	8.5	65	14.5	24	9
VZBA-3/8"-GG-63-T-22-F0304-V4V4T	42	12	Rp3/8	6	6	36	42	-	40	9	8.5	65	14.5	24	9
VZBA-1/2"-GG-63-T-22-F0304-V4V4T	49	16	Rp1/2	6	6	36	42	-	40	9	8.5	75	16	29	9
VZBA-3/4"-GG-63-T-22-F0304-V4V4T	54	20	Rp3/4	6	6	36	42	-	44	9	8.5	80	17	35	9
VZBA-1"-GG-63-T-22-F0405-V4V4T	60.5	25	Rp1	6	7	42	50	-	52	10	11.5	90	19	41	11
VZBA-1 1/4"-GG-63-T-22-F0405-V4V4T	71.5	32	Rp1 1/4	6	7	42	50	-	58	10	11.5	110	23	50	11
VZBA-1 1/2"-GG-63-T-22-F0507-V4V4T	80.5	38	Rp1 1/2	7	9	50	70	-	68	13	15.5	120	24	58	14
VZBA-2"-GG-63-T-22-F0507-V4V4T	99.5	50	Rp2	7	9	50	70	-	77	13	15.5	140	25.8	73	14
VZBA-2 1/2"-GG-63-T-22-F0710-V4V4T	127	65	Rp2 1/2	9	11	70	102	-	98	13	18.5	185	34	90	17
VZBA-3"-GG-63-T-22-F0710-V4V4T	191	80	Rp3	9	11	70	102	-	110	13	18.5	205	36	105	17
VZBA-4"-GG-63-T-22-F10-V4V4T	222	100	Rp4	-	11	-	102	-	138	16	23.5	240	38	135	22
VZBA-1/4"-WW-63-T-22-F0304-V4V4T	42	10	-	6	6	36	42	16	40	9	8.5	70	-	-	9
VZBA-3/8"-WW-63-T-22-F0304-V4V4T	42	12	-	6	6	36	42	18	40	9	8.5	70	-	-	9
VZBA-1/2"-WW-63-T-22-F0304-V4V4T	49	16	-	6	6	36	42	22	40	9	8.5	75	-	-	9
VZBA-3/4"-WW-63-T-22-F0304-V4V4T	54	20	-	6	6	36	42	28	44	9	8.5	90	-	-	9
VZBA-1"-WW-63-T-22-F0405-V4V4T	60.5	25	-	6	7	42	50	35	52	10	11.5	100	-	-	11
VZBA-1 1/4"-WW-63-T-22-F0405-V4V4T	71.5	32	-	6	7	42	50	44	58	10	11.5	110	-	-	11
VZBA-1 1/2"-WW-63-T-22-F0507-V4V4T	80.5	38	-	7	9	50	70	50	68	13	15.5	125	-	-	14
VZBA-2"-WW-63-T-22-F0507-V4V4T	99.5	50	-	7	9	50	70	62	77	13	15.5	150	-	-	14
VZBA-2 1/2"-WW-63-T-22-F0710-V4V4T	127	65	-	9	11	70	102	77	98	13	18.5	190	-	-	17
VZBA-3"-WW-63-T-22-F0710-V4V4T	191	80	-	9	11	70	102	91	110	13	18.5	220	-	-	17
VZBA-4"-WW-63-T-22-F10-V4V4T	222	100	-	-	11	-	102	117	138	16	23.5	270	-	-	22

Ball valves VZBA, 2-way

Technical data

FESTO

Ordering data					
	Version	Process valve connection	Weight [g]	Part No.	Type
	With pipe thread	Rp1/4	650	1686625	VZBA-1/4"-GG-63-T-22-F0304-V4V4T
		Rp3/8	650	1686632	VZBA-3/8"-GG-63-T-22-F0304-V4V4T
		Rp1/2	650	1686636	VZBA-1/2"-GG-63-T-22-F0304-V4V4T
		Rp3/4	850	1686639	VZBA-3/4"-GG-63-T-22-F0304-V4V4T
		Rp1	1250	1686640	VZBA-1"-GG-63-T-22-F0405-V4V4T
		Rp1 1/4	1850	1686641	VZBA-1 1/4"-GG-63-T-22-F0405-V4V4T
		Rp1 1/2	2800	1686643	VZBA-1 1/2"-GG-63-T-22-F0507-V4V4T
		Rp2	4550	1686646	VZBA-2"-GG-63-T-22-F0507-V4V4T
		Rp2 1/2	9200	1686648	VZBA-2 1/2"-GG-63-T-22-F0710-V4V4T
		Rp3	13950	1686651	VZBA-3"-GG-63-T-22-F0710-V4V4T
	With welding ends	Welding end	650	1686656	VZBA-1/4"-WW-63-T-22-F0304-V4V4T
			650	1686662	VZBA-3/8"-WW-63-T-22-F0304-V4V4T
			650	1686663	VZBA-1/2"-WW-63-T-22-F0304-V4V4T
			850	1686665	VZBA-3/4"-WW-63-T-22-F0304-V4V4T
			1250	1686689	VZBA-1"-WW-63-T-22-F0405-V4V4T
			1850	1686696	VZBA-1 1/4"-WW-63-T-22-F0405-V4V4T
			2800	1686697	VZBA-1 1/2"-WW-63-T-22-F0507-V4V4T
			4550	1686699	VZBA-2"-WW-63-T-22-F0507-V4V4T
			9200	1686702	VZBA-2 1/2"-WW-63-T-22-F0710-V4V4T
			13950	1686704	VZBA-3"-WW-63-T-22-F0710-V4V4T
22300	1686705	VZBA-4"-WW-63-T-22-F10-V4V4T			

Ball valves VZBA, 2-way

Accessories

Hand lever VAOH

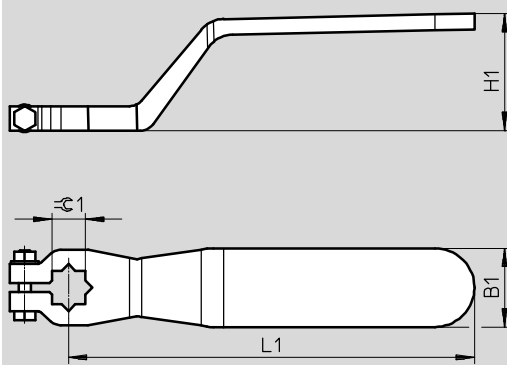
Information on materials:

- High-alloy stainless steel
- Free of copper and PTFE
- Contains paint-wetting impairment substances



Dimensions and ordering data

Download CAD data → www.festo.com



For connection	B1 ±5	H1 ±5	L1 ±10	≈∅1 ±0.5	Weight [g]	Part No.	Type
Rp1/4 ... Rp3/4	21	36	120	9	100	542702	VAOH-9-H9
Rp1 ... Rp1 1/4	26	40	140	11	200	542703	VAOH-11-H9
Rp1 1/2 ... Rp2	31	46	180	14	300	542704	VAOH-14-H9
Rp2 1/2 ... Rp3	36	55	240	17	450	542705	VAOH-17-H9
Rp4	36	70	280	22	750	542706	VAOH-22-H9

Ball valves VZBA, 3-way

Type codes

FESTO

VZBA - 1/4 - G G G - 63 - 32T - F0304 - V4 V4 T

Type	
VZBA	Ball valve

Nominal size DN	
1/4"	DN8
3/8"	DN10
1/2"	DN15
3/4"	DN20
1"	DN25
1 1/4"	DN32
1 1/2"	DN40
2"	DN50

Connection type 1	
G	Pipe thread to EN 10226-1

Connection type 2	
G	Pipe thread to EN 10226-1

Connection type 3	
G	Pipe thread to EN 10226-1

Process valve nominal pressure PN	
63	63 bar

Valve function	
32T	3/2-way, T-hole
32L	3/2-way, L-hole

Flange connection to ISO 5211	
F0304	Hole pattern 03 and 04
F0405	Hole pattern 04 and 05
F0507	Hole pattern 05 and 07

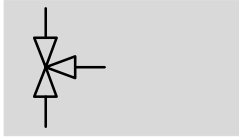
Housing material	
V4	Stainless steel 1.4408

Shut-off element material	
V4	Stainless steel 1.4408

Sealing element material	
T	PTFE-reinforced

Ball valves VZBA, 3-way

Technical data



- With L-hole or T-hole



- - Connecting thread
Rp $\frac{1}{4}$... Rp2
- - Flow rate
4.5 ... 100 m 3 /h

General technical data											
Process valve connection	Rp $\frac{1}{4}$		Rp $\frac{3}{8}$		Rp $\frac{1}{2}$		Rp $\frac{3}{4}$		Rp2		
Nominal width DN	8		10		15		20		25		
Valve function	3/2										
Design	3-way ball valve										
Sealing principle	Soft										
Actuation type	Mechanical										
Manual override	None										
Switching position indication	Slot direction = flow direction										
Flow direction	Reversible										
Type of mounting	In-line installation										
Mounting position	Any										
Based on standard	EN 10226-1 ISO 5211										
Actuation moment [Nm]	13		13		13		18		22		
Internal diameter [mm]	11.6		12.7		12.7		16		20		
Flow rate Kv	Type L ¹⁾	[m 3 /h]		4.5		4.5		4.7		5.1	
	Type T ²⁾	[m 3 /h]		8		8		8.3		8.3	
	Type T ³⁾	[m 3 /h]		4.5		4.5		4.8		4.8	
Flow rate tolerance Kv [%]	± 20										
Product weight [g]	700		700		700		1000		1600		

- 1) Ball with L-hole
- 2) Ball with T-hole, straight flow
- 3) Ball with T-hole, flow around corner

Operating and environmental conditions										
Process valve connection	Rp $\frac{1}{4}$		Rp $\frac{3}{8}$		Rp $\frac{1}{2}$		Rp $\frac{3}{4}$		Rp2	
Medium ¹⁾	Compressed air to ISO 8573-1:2010 [:-:-]									
	Neutral liquids									
	Inert gases									
	Water – no water vapour									
Process valve nominal pressure	PN 63									
Temperature of medium [°C]	-10 ... +200									
Corrosion resistance class CRC ²⁾	3									
CE marking (see declaration of conformity)	-								To EU Pressure Equipment Directive	
→ www.festo.com										

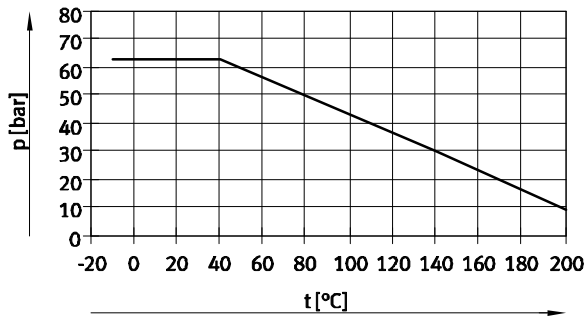
- 1) Other media on request
- 2) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

Ball valves VZBA, 3-way

Technical data

Materials		Material number
Housing	High-alloy stainless steel	1.4408
Ball		1.4408
Shaft		1.4401
Seals	PTFE	
	PTFE-reinforced	
Note on materials	RoHS compliant	
	Contains paint-wetting impairment substances	

Permissible operating pressure p as a function of the temperature of the medium t



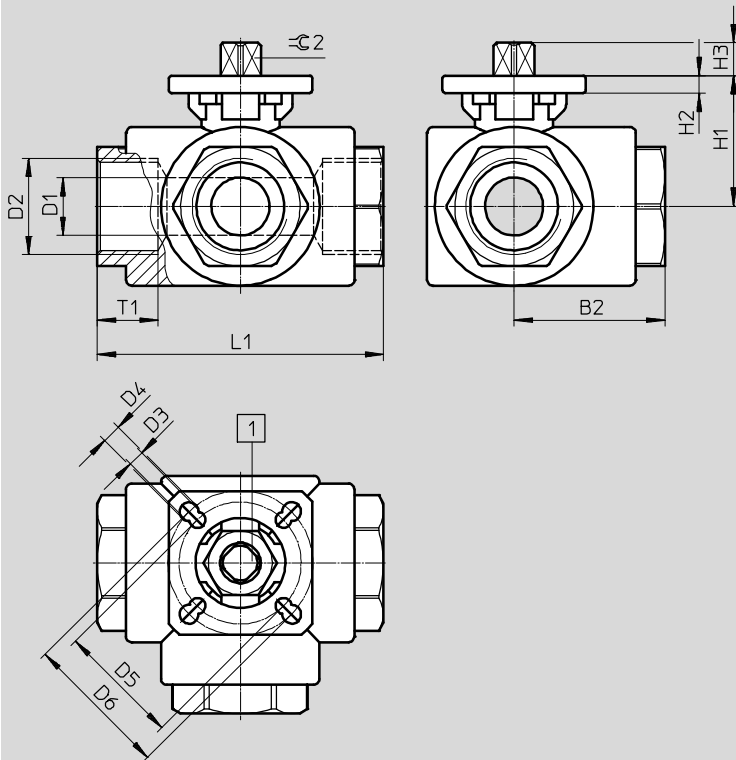
Ball valves VZBA, 3-way

Technical data

FESTO

Dimensions

Download CAD data → www.festo.com



1 Switching position indication: the slot direction corresponds to the flow direction → 14

Type	B2	D1 ∅	D2	D3 ∅	D4 ∅	D5 ∅	D6 ∅	H1	H2	H3	L1	L2	≈ 2
	±2	±0.15							±1		±1		-0.1
VZBA-1/4"-GGG-63-32L-F0304-V4V4T	40	11.6	Rp1/4	5.5	5.5	36	42	35.9	6	7.4	80	15	9
VZBA-1/4"-GGG-63-32T-F0304-V4V4T													
VZBA-3/8"-GGG-63-32L-F0304-V4V4T	40	12.7	Rp3/8	5.5	5.5	36	42	35.9	6	7.4	80	18	9
VZBA-3/8"-GGG-63-32T-F0304-V4V4T													
VZBA-1/2"-GGG-63-32L-F0304-V4V4T	40	12.7	Rp1/2	5.5	5.5	36	42	35.9	6	7.4	80	17.5	9
VZBA-1/2"-GGG-63-32T-F0304-V4V4T													
VZBA-3/4"-GGG-63-32L-F0405-V4V4T	43.8	16	Rp3/4	5.5	6.5	42	50	40.9	6	12.8	87.5	20	11
VZBA-3/4"-GGG-63-32T-F0405-V4V4T													
VZBA-1"-GGG-63-32L-F0405-V4V4T	50	20	Rp1	5.5	6.5	42	50	45.2	6	11.4	100	21	11
VZBA-1"-GGG-63-32T-F0405-V4V4T													
VZBA-1 1/4"-GGG-63-32L-F0405-V4V4T	61.5	25.4	Rp1 1/4	5.5	6.5	42	50	51	6	12.6	123	21	11
VZBA-1 1/4"-GGG-63-32T-F0405-V4V4T													
VZBA-1 1/2"-GGG-63-32L-F0405-V4V4T	71.1	31.8	Rp1 1/2	5.5	6.5	42	50	55.5	6	12.6	142.2	23	11
VZBA-1 1/2"-GGG-63-32T-F0405-V4V4T													
VZBA-2"-GGG-63-32L-F0507-V4V4T	85.3	38.1	Rp2	6.5	8.5	50	70	66	6	14.3	170.6	26	14
VZBA-2"-GGG-63-32T-F0507-V4V4T													

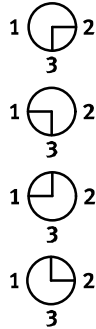
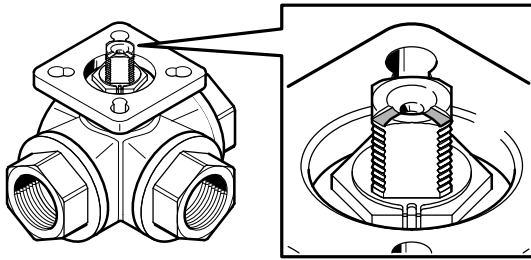
Ball valves VZBA, 3-way

Technical data

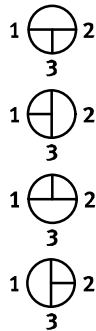
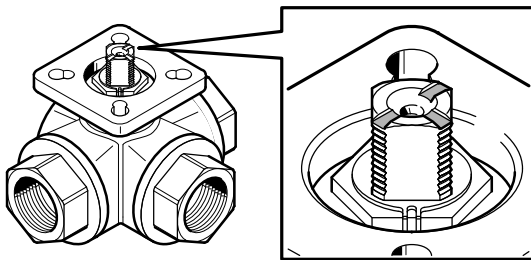
FESTO

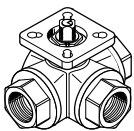
Switching position indication

L-hole



T-hole



Ordering data					
	Version	Connecting thread	Weight [g]	Part No.	Type
	L-hole	Rp1/4	700	1692210	VZBA-1/4"-GGG-63-32L-F0304-V4V4T
		Rp3/8	700	1692211	VZBA-3/8"-GGG-63-32L-F0304-V4V4T
		Rp1/2	700	1692212	VZBA-1/2"-GGG-63-32L-F0304-V4V4T
		Rp3/4	1000	1692214	VZBA-3/4"-GGG-63-32L-F0405-V4V4T
		Rp1	1600	1692215	VZBA-1"-GGG-63-32L-F0405-V4V4T
		Rp1 1/4	2800	1692217	VZBA-1 1/4"-GGG-63-32L-F0405-V4V4T
		Rp1 1/2	3800	1692218	VZBA-1 1/2"-GGG-63-32L-F0405-V4V4T
		Rp2	7400	1692219	VZBA-2"-GGG-63-32L-F0507-V4V4T
	T-hole	Rp1/4	700	1692220	VZBA-1/4"-GGG-63-32T-F0304-V4V4T
		Rp3/8	700	1692221	VZBA-3/8"-GGG-63-32T-F0304-V4V4T
		Rp1/2	700	1692224	VZBA-1/2"-GGG-63-32T-F0304-V4V4T
		Rp3/4	1000	1692226	VZBA-3/4"-GGG-63-32T-F0405-V4V4T
		Rp1	1600	1692227	VZBA-1"-GGG-63-32T-F0405-V4V4T
		Rp1 1/4	2800	1692228	VZBA-1 1/4"-GGG-63-32T-F0405-V4V4T
Rp1 1/2	3800	1692229	VZBA-1 1/2"-GGG-63-32T-F0405-V4V4T		
Rp2	7400	1692230	VZBA-2"-GGG-63-32T-F0507-V4V4T		

Ball valves VZBA, 3-way

Accessories

FESTO

Hand lever VAOH

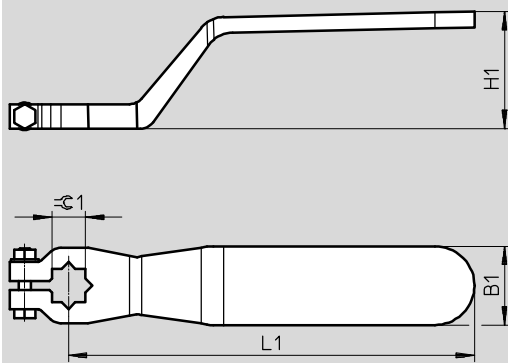
Information on materials:

- High-alloy stainless steel
- Free of copper and PTFE
- Contains paint-wetting impairment substances



Dimensions and ordering data

Download CAD data → www.festo.com



For connection	B1 ±5	H1 ±5	L1 ±10	rC1 ±0.5	Weight [g]	Part No.	Type
Rp ¹ / ₄ ... Rp ¹ / ₂	21	36	120	9	100	542702	VAOH-9-H9
Rp ³ / ₄ ... Rp ¹ / ₂	26	40	140	11	200	542703	VAOH-11-H9
Rp2	31	46	180	14	300	542704	VAOH-14-H9

Ball valves VZBC, 2-way, compact design

Type codes

VZBC – 15 – F F – 40 – 22 – F0304 – V4 V4 T

Type

VZBC	Ball valve
------	------------

Nominal width DN

15	DN15
20	DN20
25	DN25
32	DN32
40	DN40
50	DN50
65	DN65
80	DN80
100	DN100

Connection type 1

F	Flange to EN 1092-1
---	---------------------

Connection type 2

F	Flange to EN 1092-1
---	---------------------

Process valve nominal pressure PN

40	40 bar
16	16 bar

Valve function

22	2/2-way
----	---------

Flange connection to ISO 5211

F0304	Hole pattern 03 and 04
F0405	Hole pattern 04 and 05
F0507	Hole pattern 05 and 07
F07	Hole pattern 07
F0710	Hole pattern 07 and 10

Housing material

V4	Stainless steel 1.4408
----	------------------------

Shut-off element material

V4	Stainless steel 1.4408
----	------------------------

Sealing element material

T	PTFE-reinforced
---	-----------------

Ball valves VZBC, 2-way, compact design

Technical data



- 2-way ball valve made from stainless steel



- Ring housing
DN15 ... DN100
- Flow rate
19.4 ... 1414 m³/h

General technical data									
Process valve connection	Ring housing with threaded flange								
Nominal width DN	15	20	25	32	40	50	65	80	100
Valve function	2/2								
Design	2-way ball valve								
Sealing principle	Soft								
Actuation type	Mechanical								
Manual override	None								
Switching position indication	Slot direction = flow direction								
Flow direction	Reversible								
Type of mounting	In-line installation								
Mounting position	Any								
Based on standard	EN 1092-1 ISO 5211								
Actuation moment [Nm]	10	13	17	24	35	54	85	117	148
Internal diameter [mm]	15	20	25	32	38	50	64	76	96
Flow rate Kv [m ³ /h]	19.4	45.6	71.5	105	170	275	507	905	1414

Operating and environmental conditions									
Process valve connection	Ring housing with threaded flange								
Nominal width DN	15	20	25	32	40	50	65	80	100
Operating medium	Compressed air to ISO 8573-1:2010 [---]								
Process valve operating medium	Neutral liquids								
	Inert gases								
	Water – no water vapour								
Process valve nominal pressure	PN 40						PN 16		
Temperature of medium [°C]	-10 ... +200								
Corrosion resistance class CRC ¹⁾	3								
CE marking (see declaration of conformity)	-			To EU Pressure Equipment Directive					
→ www.festo.com									

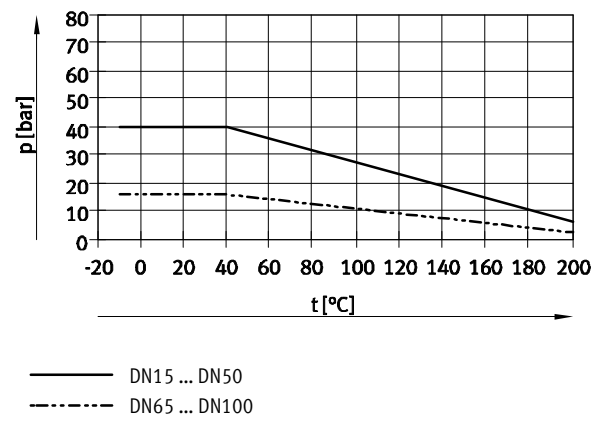
1) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

Ball valves VZBC, 2-way, compact design

Technical data

Materials	Material number	
Housing	High-alloy stainless steel	1.4408
Ball		1.4408
Shaft		1.4401
Seals	PTFE	
	PTFE-reinforced	
Note on materials	RoHS compliant	
	Contains paint-wetting impairment substances	

Permissible operating pressure p as a function of the temperature of the medium t



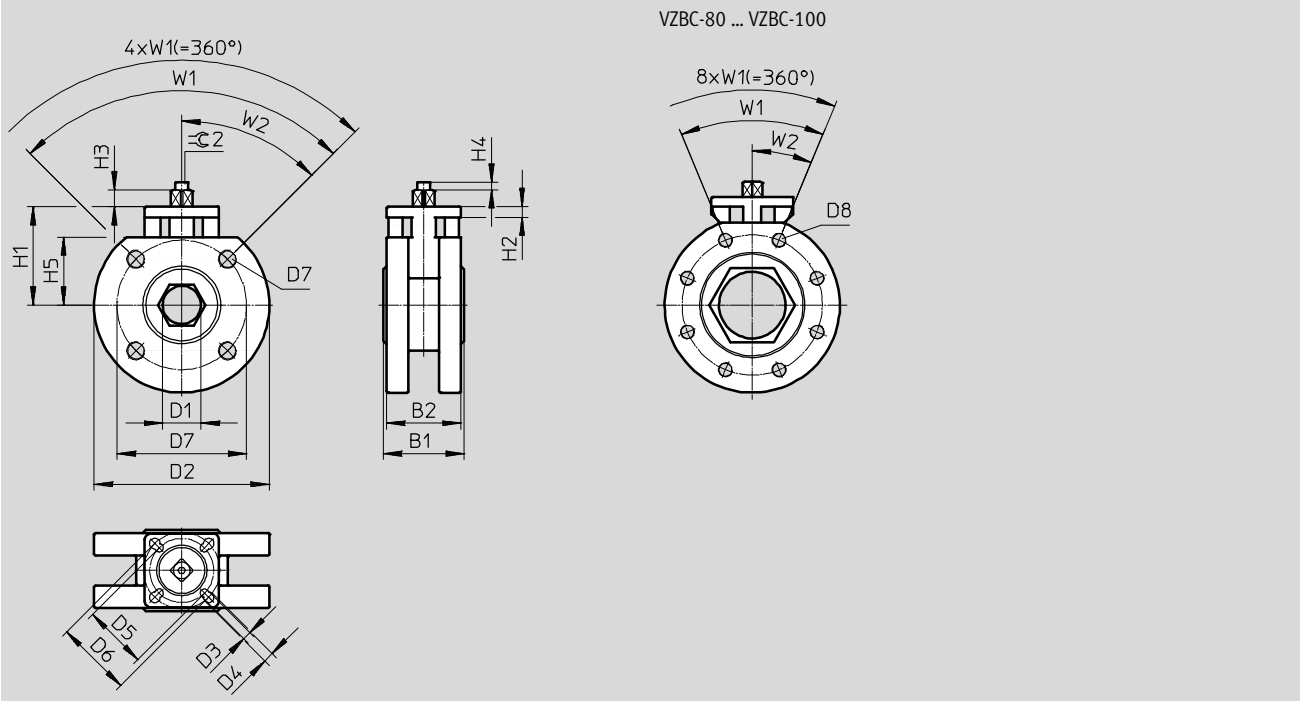
Ball valves VZBC, 2-way, compact design

Technical data

FESTO

Dimensions

Download CAD data → www.festo.com




Type	B1	B2	D1	D2	D3	D4	D5	D6	D7
	+1.6		∅	∅ +5	∅	∅	∅	∅	∅
VZBC-15-FF-40-22-F0304-V4V4T	40	43.5	15	95	6	5.5	36	42	65
VZBC-20-FF-40-22-F0304-V4V4T	44	43.5	20	105	6	5.5	36	42	75
VZBC-25-FF-40-22-F0405-V4V4T	53	48.5	25	115	5.5	7	42	50	85
VZBC-32-FF-40-22-F0405-V4V4T	58.4	49.5	32	140	5.5	7	42	50	100
VZBC-40-FF-40-22-F0507-V4V4T	62	62	38	150	7	8.5	50	70	110
VZBC-50-FF-40-22-F0507-V4V4T	78	70	50	165	7	8.5	50	70	125
VZBC-65-FF-16-22-F07-V4V4T	100	70	64	185	–	9	–	70	145
VZBC-80-FF-16-22-F07-V4V4T	120	70	76	200	–	9	–	70	160
VZBC-100-FF-16-22-F0710-V4V4T	152	96	96	220	9	10.5	70	102	180

Type	D8	H1	H2	H3	H4	H5	W1	W2	±0.2
				+1.5 -0.5					-0.1
VZBC-15-FF-40-22-F0304-V4V4T	M12	60	6.3	7.86	5	34.5	90°	45°	9
VZBC-20-FF-40-22-F0304-V4V4T	M12	64.3	7	11	5	38.5	90°	45°	9
VZBC-25-FF-40-22-F0405-V4V4T	M12	64.6	7	11	5	44.6	90°	45°	11
VZBC-32-FF-40-22-F0405-V4V4T	M16	69	7	11	–	51	90°	45°	11
VZBC-40-FF-40-22-F0507-V4V4T	M16	76.3	7.2	17	–	55	90°	45°	14
VZBC-50-FF-40-22-F0507-V4V4T	M16	85.5	7.2	15.3	–	63	90°	45°	14
VZBC-65-FF-16-22-F07-V4V4T	M16	105	10.6	14	–	73.5	90°	45°	17
VZBC-80-FF-16-22-F07-V4V4T	M16	123	10.6	18	–	94	45°	22.5°	17
VZBC-100-FF-16-22-F0710-V4V4T	M16	132	12.6	15	–	105	45°	22.5°	17

Ball valves VZBC, 2-way, compact design

FESTO

Technical data

Ordering data				
	Process valve connection	Weight [g]	Part No.	Type
	Ring housing with threaded flange	1500	1692198	VZBC-15-FF-40-22-F0304-V4V4T
		2100	1692200	VZBC-20-FF-40-22-F0304-V4V4T
		2600	1692201	VZBC-25-FF-40-22-F0405-V4V4T
		3700	1692202	VZBC-32-FF-40-22-F0405-V4V4T
		4400	1692204	VZBC-40-FF-40-22-F0507-V4V4T
		6200	1692206	VZBC-50-FF-40-22-F0507-V4V4T
		10000	1692207	VZBC-65-FF-16-22-F07-V4V4T
		14400	1692208	VZBC-80-FF-16-22-F07-V4V4T
		20600	1692209	VZBC-100-FF-16-22-F0710-V4V4T

Ball valves VZBC, 2-way, compact design

Accessories

Hand lever VAOH

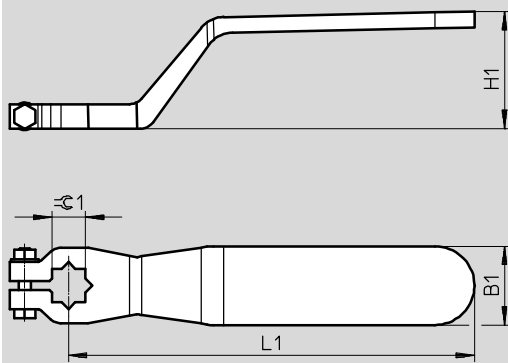
Information on materials:

- High-alloy stainless steel
- Free of copper and PTFE
- Contains paint-wetting impairment substances



Dimensions and ordering data

Download CAD data → www.festo.com



For connection	B1 ±5	H1 ±5	L1 ±10	rC1 ±0.5	Weight [g]	Part No.	Type
DN15 ... DN20	21	36	120	9	100	542702	VAOH-9-H9
DN25 ... DN32	26	40	140	11	200	542703	VAOH-11-H9
DN40 ... DN50	31	46	180	14	300	542704	VAOH-14-H9
DN65 ... DN100	36	55	240	17	450	542705	VAOH-17-H9

Ball valves VAPB, 2-way

Type codes

VAPB	-	1/2	-	F	-	40	-	F03	-	
Type										
VAPB	Ball valve									
Connection to EN 10226-1										
1/4	Barrel with female thread Rp1/4									
3/8	Barrel with female thread Rp3/8									
1/2	Barrel with female thread Rp1/2									
3/4	Barrel with female thread Rp3/4									
1	Barrel with female thread Rp1									
1 1/4	Barrel with female thread Rp1 1/4									
1 1/2	Barrel with female thread Rp1 1/2									
2	Barrel with female thread Rp2									
2 1/2	Barrel with female thread Rp2 1/2									
Connection type										
F	Female thread									
Process valve nominal pressure PN										
25	PN 25									
40	PN 40									
Flange hole pattern to ISO 5211										
F03	1 bolt hole circle diameter of \varnothing 36 mm									
F0304	2 bolt hole circle diameters of \varnothing 36 and 42 mm									
F0405	2 bolt hole circle diameters of \varnothing 42 and 50 mm									
F05	1 bolt hole circle diameter of \varnothing 50 mm									
F07	1 bolt hole circle diameter of \varnothing 70 mm									
Material										
-	Brass									


Ball valves VAPB, 2-way


Technical data



- Blow-out proof shaft assembled from inside



-  - Connecting thread
Rp1/4 ... Rp2 1/2

-  - Flow rate
5.9 ... 535 m³/h

General technical data									
Connecting thread	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	Rp2 1/2
Nominal width DN	15	15	15	20	25	32	40	50	63
Valve function	2/2								
Design	2-way ball valve								
Sealing principle	Soft								
Actuation type	Mechanical								
Switching position indication	Slot direction = flow direction								
Flow direction	Reversible								
Type of mounting	In-line installation								
Mounting position	Any								
Based on standard	ISO 5211 EN 10226-1								
Working port 1, 2	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Internal diameter [mm]	15	15	15	20	25	32	40	50	63
Flow rate Kv [m ³ /h]	5.9	9.4	17	41	70	121	200	292	535

Operating and environmental conditions										
Connecting thread	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	Rp2 1/2	
Medium	Compressed air to ISO 8573-1:2010 [:-:-] Neutral fluids Inert gases Water									
Process valve nominal pressure	PN 40	PN 40	PN 40	PN 40	PN 40	PN 40	PN 25	PN 25	PN 25	
Temperature of medium [°C]	-20 ... +150									
Breakaway torque at a differential pressure of 0 bar	3.1	3.1	3.1	4.6	6.5	10.8	13.5	20	30	
Breakaway torque at a differential pressure of 10 bar	3.5	3.5	3.5	5.1	7.2	11.9	14.9	22	33	
Breakaway torque at process valve differential pressure PN	5	5	5	6	8.5	15	19	29	45	
CE mark (see declaration of conformity) ¹⁾	-							To EU Pressure Equipment Directive		

1) Additional information www.festo.com/sp → Certificates.

Ball valves VAPB, 2-way

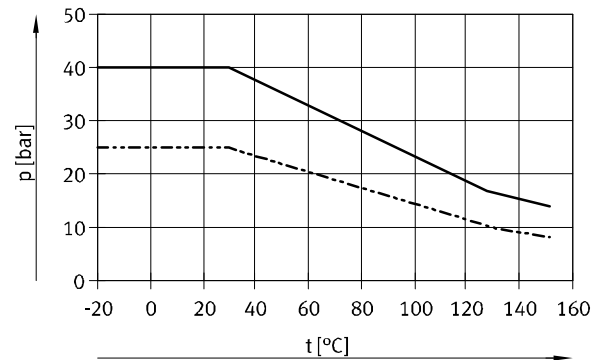
Technical data

Materials		Material number
Housing	Nickel-plated brass	CW617N
Ball	Brass, hard-chromium plated	Up to Rp1½ CW614N, from Rp¾ CW617N
Shaft	Nickel-plated brass	CW614N
Seals	Housing	PTFE
		HNBR
	Shaft	PTFE
Note on materials	RoHS compliant	
	Contains paint-wetting impairment substances	

Torque ¹⁾ [Nm]									
Connecting thread	Rp¼	Rp¾	Rp½	Rp¾	Rp1	Rp1¼	Rp1½	Rp2	Rp2½
$\Delta p = 0$ bar	3.1	3.1	3.1	4.6	6.5	10.8	13.5	20	30
$\Delta p = 10$ bar	3.5	3.5	3.5	5.1	7.2	11.9	14.9	22	33
$\Delta p = p_N$	5	5	5	6	8.5	15	19	29	45

1) Torque required for actuating the ball valve

Permissible operating pressure p as a function of the temperature of the medium t



— Rp¼ ... Rp1¼
 - - - Rp1½ ... Rp2½

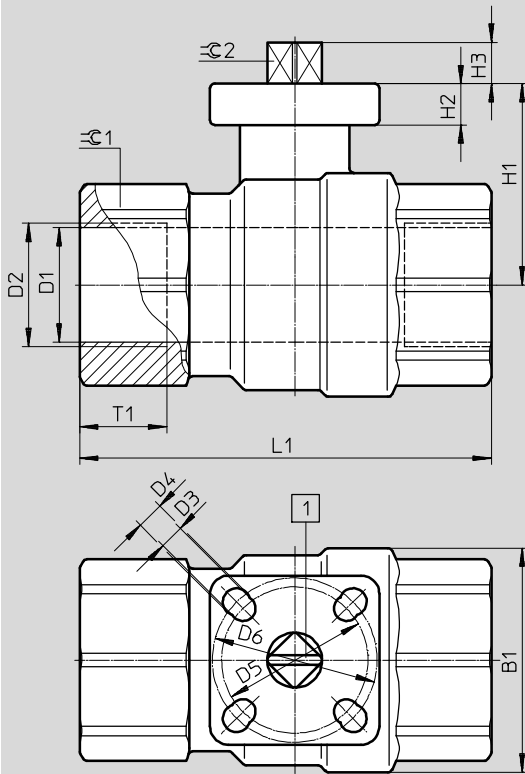
Ball valves VAPB, 2-way

Technical data

FESTO

Dimensions

Download CAD data → www.festo.com



1 Switching position indication: the slot direction corresponds to the flow direction.

Type	B1	D1 ∅ ±0.15	D2	D3 ∅	D4 ∅	D5 ∅	D6 ∅	H1	H2	H3	L1 ±2	T1	⊖C1 -0.1	⊖C2
VAPB-1/4-F-40-F03	35	15	Rp1/4	5.5	-	36	-	40	9	9	75	15	26	9
VAPB-3/8-F-40-F03	35	15	Rp3/8	5.5	-	36	-	40	9	9	75	15	26	9
VAPB-1/2-F-40-F03	35	15	Rp1/2	5.5	-	36	-	40	9	9	75	15	26	9
VAPB-3/4-F-40-F03	45	20	Rp3/4	5.5	-	36	-	45	9	9	80	16	32	9
VAPB-1-F-40-F0304	55	25	Rp1	5.5	-	36	42	45	9	9	90	19	41	9
VAPB-1 1/4-F-40-F0405	65	32	Rp1 1/4	5.5	6.5	42	50	60	10	11	110	21	50	11
VAPB-1 1/2-F-40-F0405	75	40	Rp1 1/2	5.5	6.5	42	50	65	10	11	120	21	55	11
VAPB-2-F-25-F05	90	50	Rp2	6.5	-	50	-	75	12	14	140	25	70	14
VAPB-2 1/2-F-25-F07	110	65	Rp2 1/2	8.5	-	70	-	85	10	15.5	143	24	83	14

Ordering data

Version	Process valve connection	Weight [g]	Part No.	Type
	Rp1/4	500	534302	VAPB-1/4-F-40-F03
	Rp3/8	500	534303	VAPB-3/8-F-40-F03
	Rp1/2	400	534304	VAPB-1/2-F-40-F03
	Rp3/4	500	534305	VAPB-3/4-F-40-F03
	Rp1	800	534306	VAPB-1-F-40-F0304
	Rp1 1/4	1300	534307	VAPB-1 1/4-F-40-F0405
	Rp1 1/2	1900	534308	VAPB-1 1/2-F-25-F0405
	Rp2	3100	534309	VAPB-2-F-25-F05
Rp2 1/2	3100	534310	VAPB-2 1/2-F-25-F07	

Ball valves VAPB, 2-way

Accessories



Hand lever VAOH

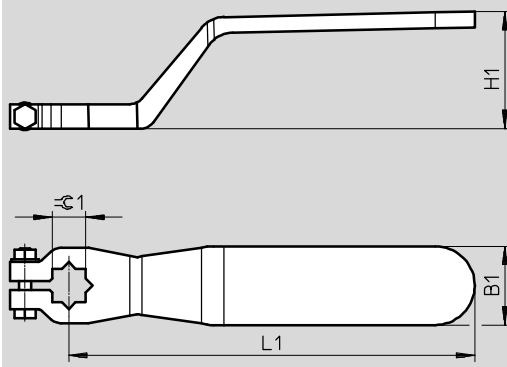
Information on materials:

- High-alloy stainless steel
- Free of copper and PTFE
- Contains paint-wetting impairment substances



Dimensions and ordering data

Download CAD data → www.festo.com



For connection	B1 ±5	H1 ±5	L1 ±10	≈C1 ±0.5	Weight [g]	Part No.	Type
Rp1/4 ... Rp1	21	36	120	9	100	542702	VAOH-9-H9
Rp1 1/4 ... Rp1 1/2	26	40	140	11	200	542703	VAOH-11-H9
Rp2 ... Rp2 1/2	31	46	180	14	300	542704	VAOH-14-H9

Ball valves VZBM, 2-way

Type codes

VZBM - 1/4 - RP - 40 - D - 2 - F03 - B2 B3

Type

VZBM	Ball valves
------	-------------

Nominal width DN

1/4"	DN8
3/8"	DN10
1/2"	DN15
3/4"	DN20
1"	DN25
1 1/4"	DN32
1 1/2"	DN40
2"	DN50

Process valve connection type

RP	Pipe thread to EN 10226-1
----	---------------------------

Nominal pressure

25	25 bar
40	40 bar

Design

D	Two-piece
---	-----------

Valve function

2	2/2-way
---	---------

Flanged connection to ISO 5211

F03	Hole pattern 03
F0305	Hole pattern 03 and 05

Housing material

B2	Nickel-plated brass
----	---------------------

Shut-off element material

B3	Chrome-plated brass
----	---------------------


Ball valves VZBM, 2-way


Technical data

Function

- 2-way ball valve made from brass



-  - Connecting thread
Rp $\frac{1}{4}$... Rp2

-  - Flow rate
5.9 ... 243 m³/h

General technical data								
Connecting thread	Rp $\frac{1}{4}$	Rp $\frac{3}{8}$	Rp $\frac{1}{2}$	Rp $\frac{3}{4}$	Rp1	Rp1 $\frac{1}{4}$	Rp1 $\frac{1}{2}$	Rp2
Nominal width DN	8	10	15	20	25	32	40	50
Valve function	2/2							
Design	2-way ball valve							
Sealing principle	Soft							
Actuation type	Mechanical							
Switching position indication	Slot direction = flow direction							
Flow direction	Reversible							
Type of mounting	In-line installation							
Mounting position	Any							
Based on standard	ISO 5211 EN 10226-1							
Breakaway torque at differential pressure, nominal pressure, process valve PN [Nm]	2	2	3	3.5	4	5	7	10
Inside diameter [mm]	10	10	15	20	25	32	40	50
Flow rate Kv [m ³ /h]	5.9	9.4	15	28	39	84	156	243

Operating and environmental conditions								
Connecting thread	Rp $\frac{1}{4}$	Rp $\frac{3}{8}$	Rp $\frac{1}{2}$	Rp $\frac{3}{4}$	Rp1	Rp1 $\frac{1}{4}$	Rp1 $\frac{1}{2}$	Rp2
Process valve nominal pressure PN	40	40	25	25	25	25	25	25
Temperature of medium [°C]	-15 ... +90							
Medium	Compressed air to ISO 8573-1:2010 [:-:-] Inert gases Water – no water vapour Neutral fluids							
CE mark (see declaration of conformity) ¹⁾	To EU Pressure Equipment Directive							

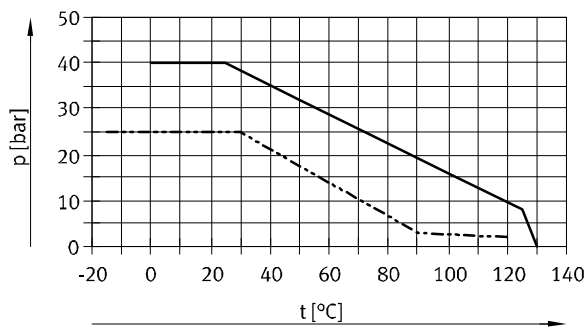
1) Additional information www.festo.com/sp → Certificates.

Ball valves VZBM, 2-way

Technical data

Materials		Material number
Housing	Nickel-plated brass	CW617N
Ball	Chrome-plated brass	CW614N
Shaft	Brass	CW617N
Seals	Rp $\frac{1}{4}$... Rp $\frac{3}{8}$	PTFE
	Rp $\frac{1}{2}$... Rp2	PTFE
		FPM
Note on materials	RoHS compliant	
	Contains paint-wetting impairment substances	

Permissible operating pressure p as a function of the temperature of the medium t



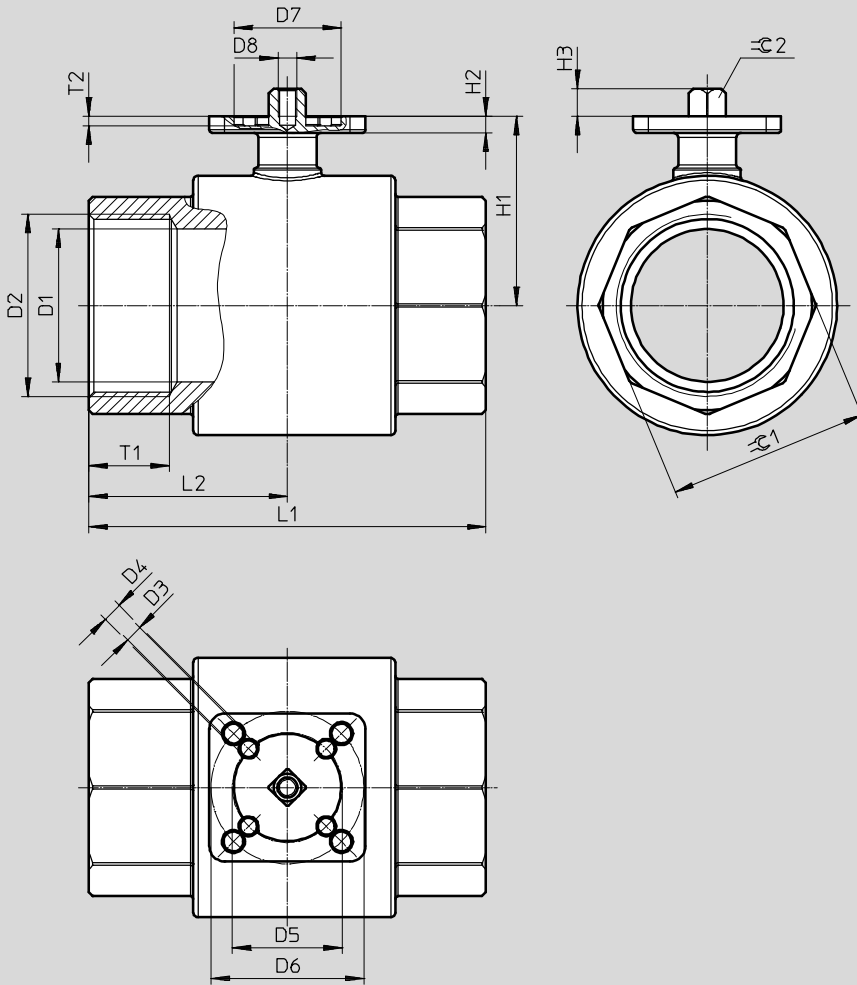
— Rp $\frac{1}{4}$... Rp $\frac{3}{8}$
 - - - - - Rp $\frac{1}{2}$... Rp2

Ball valves VZBM, 2-way

Technical data

Dimensions

Download CAD data → www.festo.com

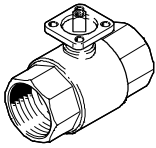


Type	D1 ∅ ±0.15	D2	D3 ∅ +0.2	D4 ∅ +0.2	D5 ∅ ±0.15	D6 ∅ ±0.15	D7 ∅	D8
VZBM-1/4-RP-40-D-2-F03-B2B3	10	Rp1/4	5.5	-	36	-	25 ^{H8}	M4
VZBM-3/8-RP-40-D-2-F03-B2B3	10	Rp3/8					25 ^{H8}	M4
VZBM-1/2-RP-25-D-2-F03-B2B3	15	Rp1/2					25.2±0.1	M6
VZBM-3/4-RP-25-D-2-F03-B2B3	20	Rp3/4					25.2±0.1	
VZBM-1-RP-25-D-2-F03-B2B3	25	Rp1					25.2±0.1	
VZBM-1 1/4-RP-25-D-2-F03-B2B3	32	Rp1 1/4					25.2±0.1	
VZBM-1 1/2-RP-25-D-2-F0305-B2B3	40	Rp1 1/2					35.2±0.1	
VZBM-2-RP-25-D-2-F0305-B2B3	50	Rp2	6.5	50	35.2±0.1			

Type	H1	H2	H3	L1 ±2	L2	T1 Min.	T2 ±0.1	⊖C1 ±1	⊖C2 h11
VZBM-1/4-RP-40-D-2-F03-B2B3	38	9	9	75	32.5	15	3.2	26	9
VZBM-3/8-RP-40-D-2-F03-B2B3	38	9		75	32.5				
VZBM-1/2-RP-25-D-2-F03-B2B3	32	5.5		61	30.5				
VZBM-3/4-RP-25-D-2-F03-B2B3	36			70	35	16.3			
VZBM-1-RP-25-D-2-F03-B2B3	44			84	42	19.1			
VZBM-1 1/4-RP-25-D-2-F03-B2B3	49			97	48.5	21.4			
VZBM-1 1/2-RP-25-D-2-F0305-B2B3	54			108	54	22			
VZBM-2-RP-25-D-2-F0305-B2B3	62			130	65	26.3			

Ball valves VZBM, 2-way

Technical data

Ordering data				
	Connecting thread	Weight [g]	Part No.	Type
	Rp1/4	412	4405646 ¹⁾	VZBM-1/4-RP-40-D-2-F03-B2B3
	Rp3/8	390	4405647 ¹⁾	VZBM-3/8-RP-40-D-2-F03-B2B3
	Rp1/2	206	4405648 ¹⁾	VZBM-1/2-RP-25-D-2-F03-B2B3
	Rp3/4	306	4405649 ¹⁾	VZBM-3/4-RP-25-D-2-F03-B2B3
	Rp1	473	4405650 ¹⁾	VZBM-1-RP-25-D-2-F03-B2B3
	Rp1 1/4	730	4405651 ¹⁾	VZBM-1 1/4-RP-25-D-2-F03-B2B3
	Rp1 1/2	1135	4405652 ¹⁾	VZBM-1 1/2-RP-25-D-2-F0305-B2B3
	Rp2	1770	4405653 ¹⁾	VZBM-2-RP-25-D-2-F0305-B2B3

1) Festo is only a retailer of this product, not the manufacturer.

Ball valves VZBM, 2-way

Accessories



Hand lever VAOH

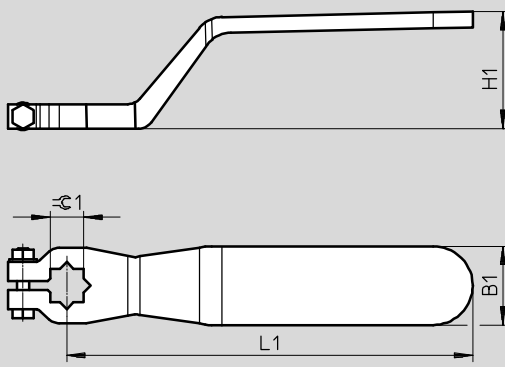
Information on materials:

- High-alloy stainless steel
- Free of copper and PTFE
- Contains paint-wetting impairment substances



Dimensions and ordering data

Download CAD data → www.festo.com



For connection	B1	H1	L1	⊖C1	Weight [g]	Part No.	Type
Rp ¹ / ₄ ... Rp1	±5	±5	±10	±0.5	100	542702	VAOH-9-H9

Ball valves VZBM, 3-way

Type codes

VZBM - 1/4 - RP - 40 - D - 2 - F03 - B2 B3

Type

VZBM	Ball valves
------	-------------

Nominal width DN

1/4"	DN8
3/8"	DN10
1/2"	DN15
3/4"	DN20
1"	DN25
1 1/4"	DN32
1 1/2"	DN40
2"	DN50

Process valve connection type

RP	Pipe thread to EN 10226-1
----	---------------------------

Nominal pressure

25	25 bar
40	40 bar

Design

F	Four-part
---	-----------

Valve function

3L	3/2-way, L-hole
3T	3/2-way, T-hole

Flanged connection to ISO 5211

F03	Hole pattern 03
F0304	Hole pattern 03 and 04
F0405	Hole pattern 04 and 05
F05	Hole pattern 05

Housing material

B2	Nickel-plated brass
----	---------------------

Shut-off element material

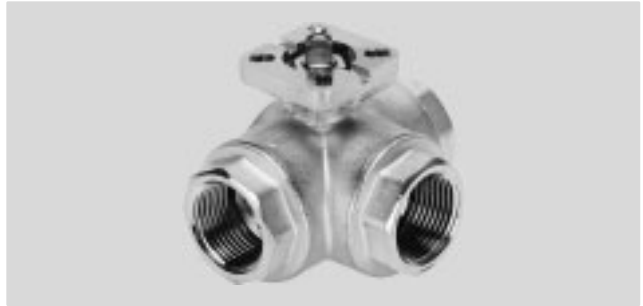
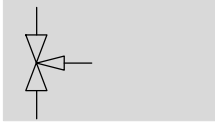
B3	Chrome-plated brass
----	---------------------


Ball valves VZBM, 3-way


Technical data

Function

- With L-hole or T-hole



-  - Connecting thread
Rp $\frac{1}{4}$... Rp2

-  - Flow rate
5.9 ... 292 m³/h

General technical data								
Connecting thread	Rp $\frac{1}{4}$	Rp $\frac{3}{8}$	Rp $\frac{1}{2}$	Rp $\frac{3}{4}$	Rp1	Rp1 $\frac{1}{4}$	Rp1 $\frac{1}{2}$	Rp2
Nominal width DN	8	10	15	20	25	32	40	50
Valve function	3/2							
Design	3-way ball valve							
Sealing principle	Soft							
Actuation type	Mechanical							
Switching position indication	Slot direction = flow direction							
Flow direction	Reversible							
Type of mounting	In-line installation							
Mounting position	Any							
Based on standard	ISO 5211 EN 10226-1							
Breakaway torque at differential pressure, nominal pressure, process valve PN [Nm]	5	5	5	6.5	9.5	15	25	30
Inside diameter [mm]	8	10	14.1	17.6	25	32	38	45
Flow rate Kv [m ³ /h]	5.9	9.4	17	41	70	121	200	292

Operating and environmental conditions								
Connecting thread	Rp $\frac{1}{4}$	Rp $\frac{3}{8}$	Rp $\frac{1}{2}$	Rp $\frac{3}{4}$	Rp1	Rp1 $\frac{1}{4}$	Rp1 $\frac{1}{2}$	Rp2
Process valve nominal pressure PN	40	40	40	40	40	40	25	25
Temperature of medium [°C]	-20 ... +130							
Medium	Compressed air to ISO 8573-1:2010 [:-:-] Inert gases Water – no water vapour Neutral fluids							
CE mark (see declaration of conformity) ¹⁾	To EU Pressure Equipment Directive							

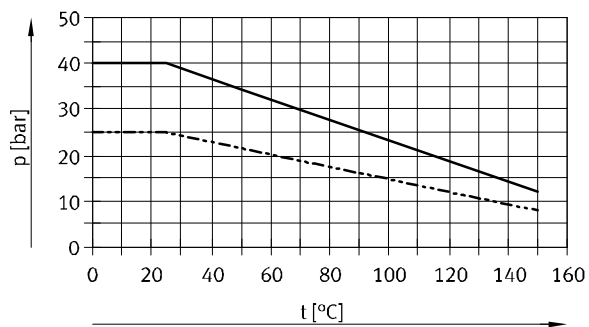
1) Additional information www.festo.com/sp → Certificates.

Ball valves VZBM, 3-way

Technical data

Materials		Material number
Housing	Nickel-plated brass	CW617N
Ball	Chrome-plated brass	CW614N
Shaft	Brass	CW614N
Seals	PTFE	
	HNBR	
Note on materials	RoHS compliant	
	Contains paint-wetting impairment substances	

Permissible operating pressure p as a function of the temperature of the medium t



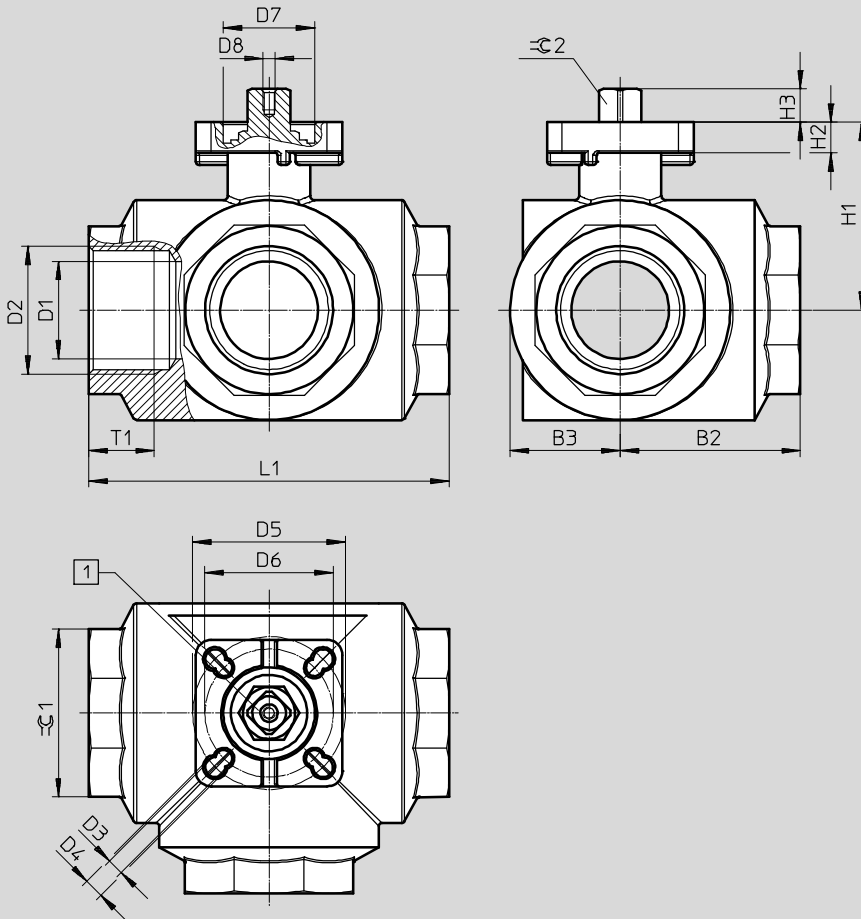
- Rp $\frac{1}{4}$... Rp1 $\frac{1}{4}$
- - - - Rp1 $\frac{1}{2}$... Rp2

Ball valves VZBM, 3-way

Technical data

Dimensions

Download CAD data → www.festo.com



1 Switching position indication: the slot direction corresponds to the flow direction → 37

Type	B1	B2	D1 ∅	D2	D3 ∅	D4 ∅	D5 ∅	D6 ∅	D7 ∅ H8	D8	
VZBM-1/4-RP-40-F-3...-F03-B2B3	32.5	17	8	Rp1/4	5.5	-	36	-	25	M4	
VZBM-3/8-RP-40-F-3...-F03-B2B3			10	Rp3/8							
VZBM-1/2-RP-40-F-3...-F03-B2B3			14.1	Rp1/2							
VZBM-3/4-RP-40-F-3...-F03-B2B3	38	21.5	17.6	Rp3/4		5.5	-	42	30		
VZBM-1-RP-40-F-3...-F0304-B2B3	48.5	26	25	Rp1							
VZBM-1 1/4-RP-40-F-3...-F0405-B2B3	59	36.5	32	Rp1 1/4		6.5	5.5	42	50		30
VZBM-1 1/2-RP-25-F-3...-F0405-B2B3	67.5	38	38	Rp1 1/2		6.5	6.5	50	-		35
VZBM-2-RP-25-F-3...-F05-B2B3	78.5	43	45	Rp2	M5						

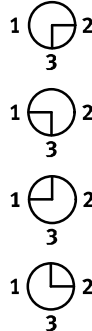
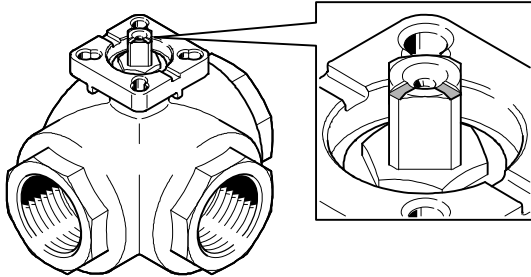
Type	H1	H2	H3	L1	T1	≈C1	≈C2
				±2	Min.		-0.1
VZBM-1/4-RP-40-F-3...-F03-B2B3	38	9	9	64.5	15	25	9
VZBM-3/8-RP-40-F-3...-F03-B2B3				76			
VZBM-1/2-RP-40-F-3...-F03-B2B3				97			
VZBM-3/4-RP-40-F-3...-F03-B2B3	42	10	11	118	21.4	55	11
VZBM-1-RP-40-F-3...-F0304-B2B3	46.5			134.5			
VZBM-1 1/4-RP-40-F-3...-F0405-B2B3	61.3	12	14	157	25.7	67	14
VZBM-1 1/2-RP-25-F-3...-F0405-B2B3	63.5						
VZBM-2-RP-25-F-3...-F05-B2B3	74						

Ball valves VZBM, 3-way

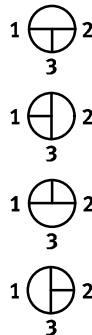
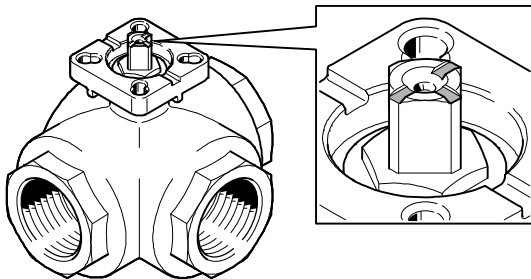
Technical data

Switching position indication

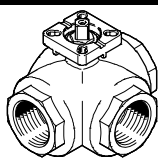
L-hole



T-hole



Ordering data

	Version	Connecting thread	Weight [g]	Part No.	Type
	L-hole	Rp1/4	530	4451869 ¹⁾	VZBM-1/4-RP-40-F-3L-F03-B2B3
		Rp3/8	500	4451868 ¹⁾	VZBM-3/8-RP-40-F-3L-F03-B2B3
		Rp1/2	460	4451867 ¹⁾	VZBM-1/2-RP-40-F-3L-F03-B2B3
		Rp3/4	720	4451866 ¹⁾	VZBM-3/4-RP-40-F-3L-F03-B2B3
		Rp1	1280	4451862 ¹⁾	VZBM-1-RP-40-F-3L-F0304-B2B3
		Rp1 1/4	3000	4451863 ¹⁾	VZBM-1 1/4-RP-40-F-3L-F0405-B2B3
		Rp1 1/2	3260	4451864 ¹⁾	VZBM-1 1/2-RP-25-F-3L-F0405-B2B3
		Rp2	4470	4451865 ¹⁾	VZBM-2-RP-25-F-3L-F05-B2B3
	T-hole	Rp1/4	530	4451861 ¹⁾	VZBM-1/4-RP-40-F-3T-F03-B2B3
		Rp3/8	460	4451854 ¹⁾	VZBM-3/8-RP-40-F-3T-F03-B2B3
		Rp1/2	460	4451855 ¹⁾	VZBM-1/2-RP-40-F-3T-F03-B2B3
		Rp3/4	710	4451856 ¹⁾	VZBM-3/4-RP-40-F-3T-F03-B2B3
		Rp1	1250	4451857 ¹⁾	VZBM-1-RP-40-F-3T-F0304-B2B3
		Rp1 1/4	2930	4451858 ¹⁾	VZBM-1 1/4-RP-40-F-3T-F0405-B2B3
Rp1 1/2		3190	4451859 ¹⁾	VZBM-1 1/2-RP-25-F-3T-F0405-B2B3	
	Rp2	4320	4451860 ¹⁾	VZBM-2-RP-25-F-3T-F05-B2B3	

1) Festo is only a retailer of this product, not the manufacturer.

Ball valves VZBM, 3-way

Accessories



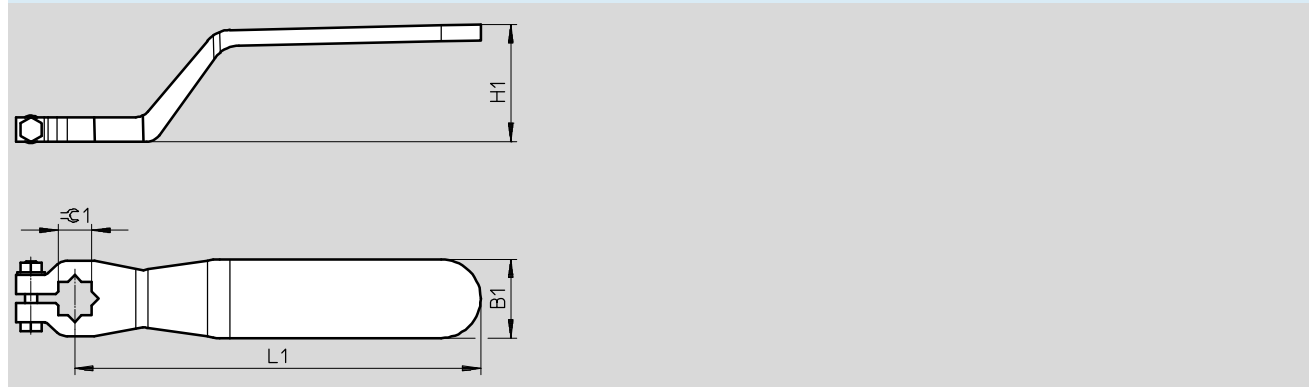
Hand lever VAOH

Information on materials:

- High-alloy stainless steel
- Free of copper and PTFE
- Contains paint-wetting impairment substances



Dimensions and ordering data Download CAD data → www.festo.com



For connection	B1 ±5	H1 ±5	L1 ±10	≈∅1 ±0.5	Weight [g]	Part No.	Type
Rp1/4 ... Rp1	21	36	120	9	100	542702	VAOH-9-H9
Rp1 1/4 ... Rp1 1/2	26	40	140	11	200	542703	VAOH-11-H9
Rp2	31	46	180	14	300	542704	VAOH-14-H9

Ball valves VZBM, manual

Type codes

		VZBM	-	1/4	-	RP	-	40	-	D	-	2	-	M	-	B2	B3
Type																	
VZBM	Ball valves																
Nominal width DN																	
1/4"	DN8																
3/8"	DN10																
1/2"	DN15																
3/4"	DN20																
1"	DN25																
1 1/4"	DN32																
1 1/2"	DN40																
Process valve connection type																	
RP	Pipe thread to EN 10226-1																
Nominal pressure																	
40	40 bar																
50	50 bar																
Design																	
D	Two-piece																
Valve function																	
2	2/2-way																
Flanged connection to ISO 5211																	
M	Without flanged connection, with hand lever																
Housing material																	
B2	Nickel-plated brass																
Shut-off element material																	
B3	Chrome-plated brass																


Ball valves VZBM, manual


Technical data

Function

- With hand lever



-  - Connecting thread
Rp1/4 ... Rp1 1/2

-  - Flow rate
6 ... 156 m³/h

General technical data							
Process valve connection	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2
Nominal width DN	8	10	15	20	25	32	40
Valve function	2/2						
Design	2-way ball valve						
Sealing principle	Soft						
Actuation type	Mechanical						
Switching position indication	Slot direction = flow direction						
Flow direction	Reversible						
Type of mounting	In-line installation						
Mounting position	Any						
Based on standard	EN 10226-1						
Actuation moment at differential pressure, nominal pressure, process valve [Nm]	4	4	6	8	10	15	25
Inside diameter [mm]	10	10	15	20	25	32	40
Flow rate Kv [m ³ /h]	6	8	15	28	39	84	156

Operating and environmental conditions							
Process valve connection	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2
Process valve nominal pressure PN	50	50	50	50	50	40	40
Temperature of medium [°C]	-15 ... +120						
Medium	Compressed air to ISO 8573-1:2010 [:-:-]						
	Inert gases						
	Water – no water vapour						
	Neutral fluids						
Certification	DVGW Gas						
	DVGW Water						
CE mark (see declaration of conformity) ¹⁾	To EU Pressure Equipment Directive						

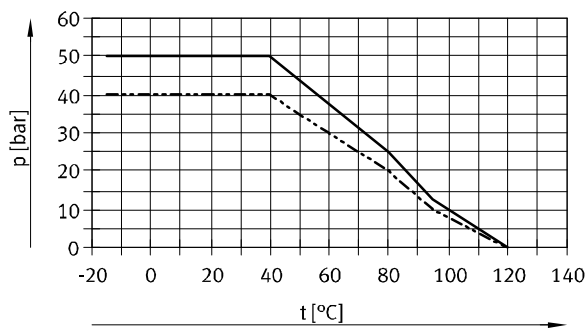
1) Additional information www.festo.com/sp → Certificates.

Ball valves VZBM, manual

Technical data

Materials	Material number	
Housing	Nickel-plated brass	CW617N
Ball	Chrome-plated brass	CW617N
Shaft	Brass	CW617N
Seals	PTFE	
	NBR	
Note on materials	RoHS compliant	
	Contains paint-wetting impairment substances	

Permissible operating pressure p as a function of the temperature of the medium t



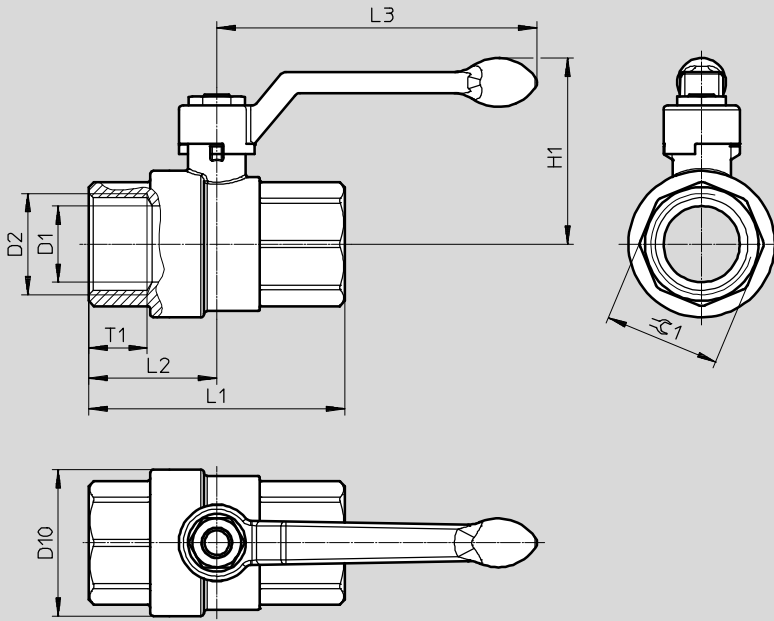
- Rp¹/₄ ... Rp¹
- - - - Rp^{1 1}/₄ ... Rp^{1 1}/₂


Ball valves VZBM, manual

Technical data

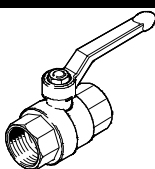
Dimensions

Download CAD data → www.festo.com



Type	D1 Ø	D2	D3 Ø	H1	L1	L2	L3	T1 Min.	
VZBM-1/4-RP-50-D-2-M-B2B3	10	Rp1/4	23	41	49	23	85	12	18
VZBM-3/8-RP-50-D-2-M-B2B3	10	Rp3/8	24	41	50.5	23.5	85	12	21
VZBM-1/2-RP-50-D-2-M-B2B3	15	Rp1/2	32	49	61	30.5	85	15	26
VZBM-3/4-RP-50-D-2-M-B2B3	20	Rp3/4	40	57	69.5	35	105	16.3	32
VZBM-1-RP-50-D-2-M-B2B3	25	Rp1	48	61	84	42	105	19.1	38
VZBM-11/4-RP-40-D-2-M-B2B3	32	Rp11/4	60	75	98	49	130	21.4	47
VZBM-11/2-RP-40-D-2-M-B2B3	40	Rp11/2	72.5	81	108	54	130	22	54

Ordering data

	Connecting thread	Weight [g]	Part No.	Type
	Rp1/4	130	4405684 ¹⁾	VZBM-1/4-RP-50-D-2-M-B2B3
	Rp3/8	120	4405685 ¹⁾	VZBM-3/8-RP-50-D-2-M-B2B3
	Rp1/2	200	4405686 ¹⁾	VZBM-1/2-RP-50-D-2-M-B2B3
	Rp3/4	335	4405687 ¹⁾	VZBM-3/4-RP-50-D-2-M-B2B3
	Rp1	480	4405689 ¹⁾	VZBM-1-RP-50-D-2-M-B2B3
	Rp11/4	770	4405690 ¹⁾	VZBM-11/4-RP-40-D-2-M-B2B3
	Rp11/2	1116	4405691 ¹⁾	VZBM-11/2-RP-40-D-2-M-B2B3

1) Festo is only a retailer of this product, not the manufacturer.

Ball valves VZBM, manual

Accessories

Hand lever VAOH

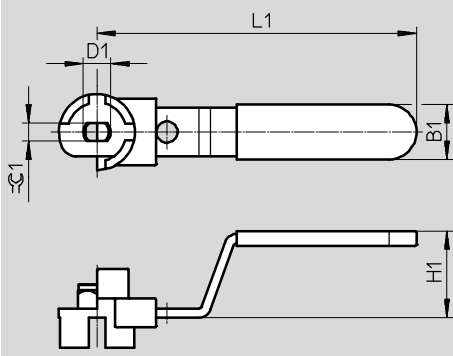
Information on materials:

- Galvanised steel
- Free of copper and PTFE
- Contains paint-wetting impairment substances
- RoHS compliant
- Lockable for VZBM, manual



Dimensions and ordering data

Download CAD data → www.festo.com



For connection	B1	D1 ∅	H1	L1	≈C 1	Weight [g]	Part No.	Type
Rp1/4 ... Rp1/2	16	7	24.5	89	5	50	4650069 ¹⁾	VAOH-F10-D7-H9-A
Rp3/4 ... Rp1	18	9	28.5	105	6	75	4650070 ¹⁾	VAOH-F10-D9-H9-A
Rp1 1/4 ... Rp1 1/2	22	12	32	130	8	145	4650071 ¹⁾	VAOH-F10-D12-H9-A

1) Festo is only a retailer of this product, not the manufacturer.

Ball valves QH, manual

Type codes

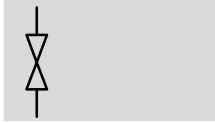
FESTO

		QH	-	1/4	-	
Type						
QH	Ball valve					
Pneumatic port 1						
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 port 2						
-	Same connection size as pneumatic port 1					

Ball valves QH, manual


Technical data


Function



- With hand lever
- Pipe thread to ISO 228-1




-  - Connecting thread
G $\frac{1}{4}$... G1 $\frac{1}{2}$

-  - Standard nominal flow rate
3400 ... 84000 l/min

General technical data						
Pneumatic port 1	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{3}{4}$	G1	G1 $\frac{1}{2}$
Pneumatic port 2	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{3}{4}$	G1	G1 $\frac{1}{2}$
Nominal width [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					
Actuation type	Manual					
Sealing principle	Soft					
Standard nominal flow rate [l/min] q _{nN}	3400	7500	11500	21000	33000	84000

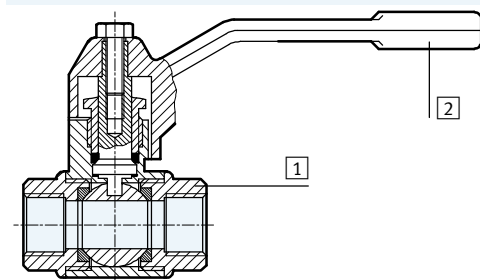
Operating and environmental conditions	
Medium ¹⁾	Compressed air according to ISO 8573-1:2010 [7:-:-] Water
Note on operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature [°C]	-20 ... +180

1) Other media on request

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

Materials

Sectional view



Ball valve		
1	Housing	Brass
2	Lever	Aluminium

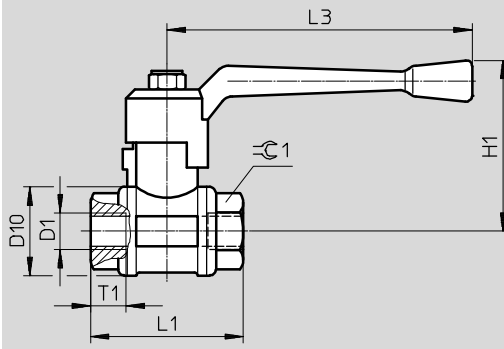
Ball valves QH, manual

Technical data – With hand lever

FESTO

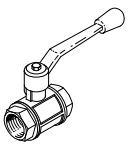
Dimensions – Female thread at both ends

Download CAD data → www.festo.com



Type	D1	D10 ∅	H1	L1	L3	T1	∠ 1
QH-1/4	G1/4	30	56	52	100	11.5	21.5
QH-3/8	G3/8	30	56	52	100	11.5	21.5
QH-1/2	G1/2	35	59	64	100	15	27
QH-3/4	G3/4	44	72	74	120	16.3	32
QH-1	G1	51	77	88	120	19.1	41
QH-1 1/2	G1 1/2	73	100	105.5	150	21.4	55

Ordering data

Version	Pneumatic port		Weight [g]	Part No.	Type
	1	2			
2/2-way valve					
	Female thread at both ends	G1/4	G1/4	175	9541 QH-1/4
		G3/8	G3/8	180	9542 QH-3/8
		G1/2	G1/2	340	9543 QH-1/2
		G3/4	G3/4	590	9544 QH-3/4
		G1	G1	815	9545 QH-1
		G1 1/2	G1 1/2	1750	6837 QH-11/2