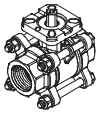
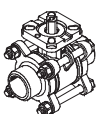
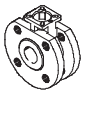
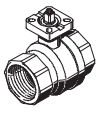


Ball valves VAPB, VZBA, VZBC



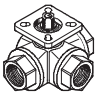

Ball valves VAPB, VZBA, VZBC, mechanically actuated

Key features and product range overview

Function	Design	Type	Process valve connection	Nominal size DN	Flange hole pattern to ISO 5211	Process valve nominal pressure PN	→ Page/Internet		
Ball valve, 2-way		Stainless steel, corrosion-resistant with pipe thread to EN 10226-1 (previously DIN 2999)						5	
		VZBA-...-GG	Rp1/4	8	F0304	63			
			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					
	Stainless steel, corrosion-resistant with welding ends						5		
		VZBA-...-WW	-	8	F0304	63			
				10	F0304				
				15	F0304				
				20	F0304				
				25	F0405				
				32	F0405				
				40	F0507				
				50	F0507				
				65	F0710				
				80	F0710				
				100	F10				
	Stainless steel, corrosion-resistant in compact design						11		
		VZBC-...-FF	Ring housing with threaded flange	15	F0304	40			
				20	F0304				
				25	F0405				
				32	F0405				
				40	F0507				
				50	F0507				
				65	F07			16	
				80	F07				
100				F0710					
Brass						17			
				VAPB	Rp1/4		8	F03	40
	Rp3/8	10	F03						
	Rp1/2	15	F03						
	Rp3/4	20	F03						
	Rp1	25	F0304						
	Rp1 1/4	32	F0405						
	Rp1 1/2	40	F0405						
	Rp2	50	F05						
	Rp2 1/2	65	F07						

Ball valves VAPB, VZBA, VZBC, mechanically actuated

Key features and product range overview

Function	Design	Type	Process valve connection	Nominal size DN	Flange hole pattern to ISO 5211	Process valve nominal pressure PN	→ Page/Internet	
Ball valve, 3-way		Stainless steel, corrosion-resistant						22 
		VZBA	Rp1/4	8	F0304	63		
			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			
			Rp1/4	8	F0304			
			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			

Ball valves VZBA, mechanically actuated

Type codes

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
Connection type 2	
G	Pipe thread to EN 10226-1
W	Welding end
Process valve nominal pressure PN	
63	63 bar
Design	
T	Three-piece
Directional control function	
22	2/2-way
Flange connection to ISO 5211	
F0304	2 pitch circle diameters of 36 mm and 42 mm
F0405	2 pitch circle diameters of 42 mm and 50 mm
F0507	2 pitch circle diameters of 50 mm and 70 mm
F07	1 pitch circle diameter of 70 mm
F0710	2 pitch circle diameters of 70 mm and 102 mm
F10	1 pitch circle diameter of 102 mm
Housing material	
V4	Stainless steel 1.4401, 1.4404 (AISI 316L), 1.4408
Material for shut-off element	
V4	Stainless steel 1.4401, 1.4404 (AISI 316L), 1.4408
Sealing material	
T	PTFE

Ball valves VZBA, mechanically actuated

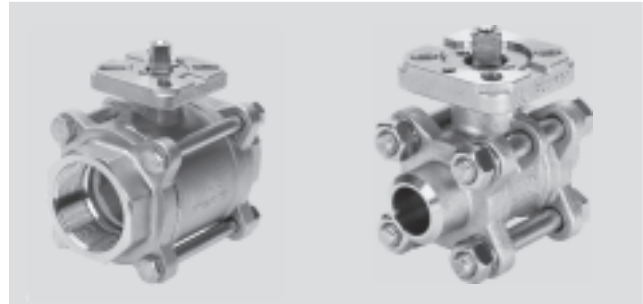
Technical data – Stainless steel design

FESTO


-N- Connecting thread
Rp1/4 ... Rp4

-  - Flow rate Kv
7 ... 1,414 m³/h

- 2-way ball valve made from stainless steel
- With pipe thread or welding end



General technical data											
Process valve connection	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp11/4	Rp11/2	Rp2	Rp21/2	Rp3	Rp4
Nominal size DN	8	10	15	20	25	32	40	50	65	80	100
Valve function	2/2-way										
Design	2-way ball valve										
Sealing principle	Soft										
Actuation type	Mechanical										
Manual override	None										
Approved for use in the food industry	No										
Switching position display	Slot direction = flow direction										
Direction of flow	Reversible										
Type of mounting	In-line installation										
Mounting position	Any										
Based on standard with pipe thread	ISO 5211										
	DIN 3202-M3										
	EN 10226-1										
Based on standard with welding end	ISO 5211										
	DIN 3202-S13										
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	1,414
Product weight [g]	650	650	650	850	1,250	1,850	2,800	4,550	9,200	13,950	22,300

Operating and environmental conditions												
Process valve connection	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp11/4	Rp11/2	Rp2	Rp21/2	Rp3	Rp4	
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 ¹⁾	PN 63											
Temperature of medium ²⁾ [°C]	-10 ... 200											
Corrosion resistance class CRC ³⁾	3											
CE marking (see declaration of conformity) → www.festo.com	-							To EU Pressure Equipment Directive				

1) PN class to DIN EN 1333

2) As a function of operating pressure → 6

3) Corrosion resistance class 3 according to Festo standard 940 070

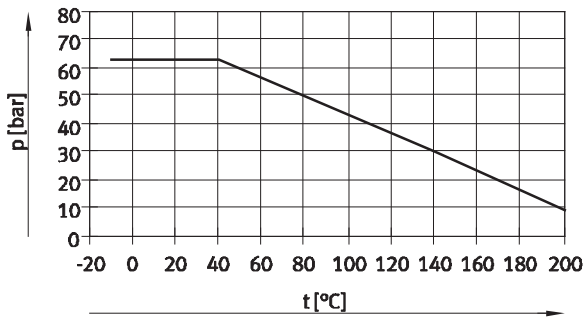
Components subject to high corrosion stress. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment or media such as solvents and cleaning agents.

Ball valves VZBA, mechanically actuated

Technical data – Stainless steel design

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

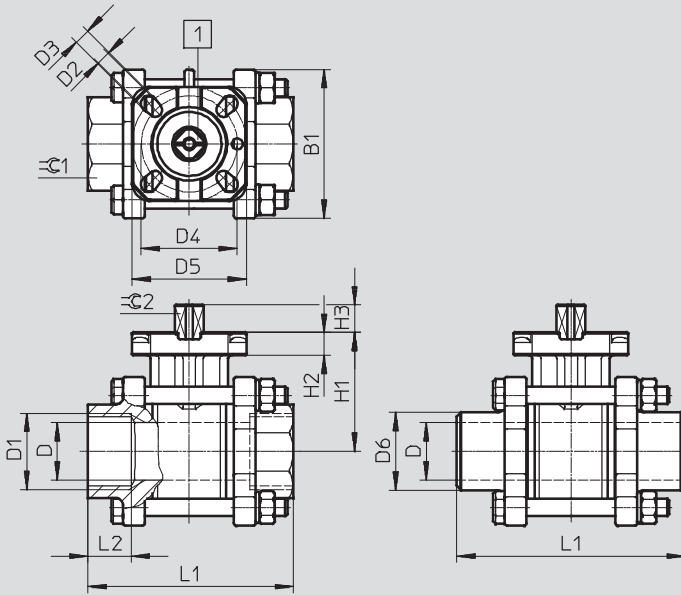
Permissible operating pressure p as a function of temperature of the medium t



Ball valves VZBA, mechanically actuated

Technical data – Stainless steel design

FESTO
Dimensions

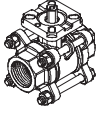
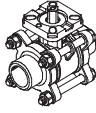
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Note

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

Type	B1	D ∅ ±0.15	D1	D2 ∅	D3 ∅	D4 ∅	D5 ∅	D6	H1	H2	H3	L1 ±2	L2	∅ 1	∅ 2 -0.1
VZBA-¼-GG-63-T-22-F0304-V4V4T	42	10	Rp¼	6	6	36	42	-	40	9	9	65	14.5	24	9
VZBA-⅜-GG-63-T-22-F0304-V4V4T	42	12	Rp⅜	6	6	36	42	-	40	9	9	65	14.5	24	9
VZBA-½-GG-63-T-22-F0304-V4V4T	49	16	Rp½	6	6	36	42	-	40	9	9	75	16	29	9
VZBA-¾-GG-63-T-22-F0304-V4V4T	54	20	Rp¾	6	6	36	42	-	44	9	9	80	17	35	9
VZBA-1-GG-63-T-22-F0405-V4V4T	60.5	25	Rp1	6	7	42	50	-	52	10	12	90	19	41	11
VZBA-1¼-GG-63-T-22-F0405-V4V4T	71.5	32	Rp1¼	6	7	42	50	-	58	10	12	110	23	50	11
VZBA-1½-GG-63-T-22-F0507-V4V4T	80.5	38	Rp1½	7	9	50	70	-	68	13	16	120	24	58	14
VZBA-2-GG-63-T-22-F0507-V4V4T	99.5	50	Rp2	7	9	50	70	-	77	13	16	140	25.8	73	14
VZBA-2½-GG-63-T-22-F0710-V4V4T	127	65	Rp2½	9	11	70	102	-	98	13	19	185	34	90	17
VZBA-3-GG-63-T-22-F0710-V4V4T	191	80	Rp3	9	11	70	102	-	110	13	19	205	36	105	17
VZBA-4-GG-63-T-22-F10-V4V4T	222	100	Rp4	-	11	-	102	-	138	16	24	240	38	135	22
VZBA-1/4"-WW-63-T-22-F0304-V4V4T	42	10	-	6	6	36	42	16	40	9	9	70	-	-	9
VZBA-3/8"-WW-63-T-22-F0304-V4V4T	42	12	-	6	6	36	42	18	40	9	9	70	-	-	9
VZBA-1/2"-WW-63-T-22-F0304-V4V4T	49	16	-	6	6	36	42	22	40	9	9	75	-	-	9
VZBA-3/4"-WW-63-T-22-F0304-V4V4T	54	20	-	6	6	36	42	28	44	9	9	90	-	-	9
VZBA-1"-WW-63-T-22-F0405-V4V4T	60.5	25	-	6	7	42	50	35	52	10	12	100	-	-	11
VZBA-1¼"-WW-63-T-22-F0405-V4V4T	71.5	32	-	6	7	42	50	44	58	10	12	110	-	-	11
VZBA-1½"-WW-63-T-22-F0507-V4V4T	80.5	38	-	7	9	50	70	50	68	13	16	125	-	-	14
VZBA-2"-WW-63-T-22-F0507-V4V4T	99.5	50	-	7	9	50	70	62	77	13	16	150	-	-	14
VZBA-2½"-WW-63-T-22-F0710-V4V4T	127	65	-	9	11	70	102	77	98	13	19	190	-	-	17
VZBA-3"-WW-63-T-22-F0710-V4V4T	191	80	-	9	11	70	102	91	110	13	19	220	-	-	17
VZBA-4"-WW-63-T-22-F10-V4V4T	222	100	-	-	11	-	102	117	138	16	24	270	-	-	22

Ball valves VZBA, mechanically actuated

Technical data – Stainless steel design

Ordering data			
Version with pipe thread	Process valve connection	Part No.	Type
	Rp $\frac{1}{4}$	1686625	VZBA- $\frac{1}{4}$ -GG-63-T-22-F0304-V4V4T
	Rp $\frac{3}{8}$	1686632	VZBA- $\frac{3}{8}$ -GG-63-T-22-F0304-V4V4T
	Rp $\frac{1}{2}$	1686636	VZBA- $\frac{1}{2}$ -GG-63-T-22-F0304-V4V4T
	Rp $\frac{3}{4}$	1686639	VZBA- $\frac{3}{4}$ -GG-63-T-22-F0304-V4V4T
	Rp1	1686640	VZBA-1-GG-63-T-22-F0405-V4V4T
	Rp1 $\frac{1}{4}$	1686641	VZBA-1 $\frac{1}{4}$ -GG-63-T-22-F0405-V4V4T
	Rp1 $\frac{1}{2}$	1686643	VZBA-1 $\frac{1}{2}$ -GG-63-T-22-F0507-V4V4T
	Rp2	1686646	VZBA-2-GG-63-T-22-F0507-V4V4T
	Rp2 $\frac{1}{2}$	1686648	VZBA-2 $\frac{1}{2}$ -GG-63-T-22-F0710-V4V4T
	Rp3	1686651	VZBA-3-GG-63-T-22-F0710-V4V4T
Rp4	1686654	VZBA-4-GG-63-T-22-F10-V4V4T	
Version with welding end	Process valve connection	Part No.	Type
	With welding end	1686656	VZBA-1/4"-WW-63-T-22-F0304-V4V4T
		1686662	VZBA-3/8"-WW-63-T-22-F0304-V4V4T
		1686663	VZBA-1/2"-WW-63-T-22-F0304-V4V4T
		1686665	VZBA-3/4"-WW-63-T-22-F0304-V4V4T
		1686689	VZBA-1"-WW-63-T-22-F0405-V4V4T
		1686696	VZBA-1 1/4"-WW-63-T-22-F0405-V4V4T
		1686697	VZBA-1 1/2"-WW-63-T-22-F0507-V4V4T
		1686699	VZBA-2"-WW-63-T-22-F0507-V4V4T
		1686702	VZBA-2 1/2"-WW-63-T-22-F0710-V4V4T
		1686704	VZBA-3"-WW-63-T-22-F0710-V4V4T
1686705	VZBA-4"-WW-63-T-22-F10-V4V4T		

Ball valves VZBA, mechanically actuated

Accessories

Hand lever VAOH

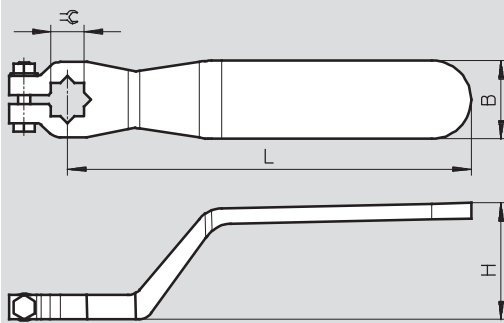
Information on materials:

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



Dimensions and ordering data

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



For connection	≅ ±0.5	L ±10	H ±5	B ±5	Weight [g]	Part No.	Type
Rp1¼ ... Rp¾	9	120	36	21	100	542702	VAOH-9-H9
Rp1 ... Rp1¼	11	140	40	26	200	542703	VAOH-11-H9
Rp1½ ... Rp2	14	180	46	31	300	542704	VAOH-14-H9
Rp2½ ... Rp3	17	240	55	36	450	542705	VAOH-17-H9
Rp4	22	280	70	36	750	542706	VAOH-22-H9

Ball valves VZBC, mechanically actuated

Type codes

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

Type	
VZBC	Ball valve
Nominal size 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
Directional control function	
22	2/2-way
Flange connection to ISO 5211	
F0304	2 pitch circle diameters of 36 mm and 42 mm
F0405	2 pitch circle diameters of 42 mm and 50 mm
F0507	2 pitch circle diameters of 50 mm and 70 mm
F07	1 pitch circle diameter of 70 mm
F0710	2 pitch circle diameters of 70 mm and 102 mm
Housing material	
V4	Stainless steel 1.4401, 1.4404 (AISI 316L), 1.4408
Material for shut-off element	
V4	Stainless steel 1.4401, 1.4404 (AISI 316L), 1.4408
Sealing material	
T	PTFE reinforced


Ball valves VZBC, mechanically actuated

Technical data – Stainless steel design

FESTO



-N- Ring housing
DN15 ... DN100

-  - Flow rate Kv
19.4 ... 1,414 m³/h

- 2-way ball valve made from stainless steel



General technical data									
Process valve connection	Ring housing with threaded flange								
Nominal size DN	15	20	25	32	40	50	65	80	100
Valve function	2/2-way								
Design	2-way ball valve								
Sealing principle	Soft								
Actuation type	Mechanical								
Manual override	None								
Approved for use in the food industry	No								
Switching position display	Slot direction = flow direction								
Direction of flow	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	1,414
Product weight [g]	1,500	2,100	2,600	3,700	4,400	6,200	10,000	14,400	20,600

Operating and environmental conditions									
Process valve connection	Ring housing with threaded flange								
Nominal size 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 ¹⁾	PN 40						PN 16		
Temperature of medium ²⁾ [°C]	-10 ... 200								
Corrosion resistance class CRC ³⁾	3								
CE marking (see declaration of conformity) ➔ www.festo.com	-				To EU Pressure Equipment Directive				

1) PN class to DIN EN 1333

2) As a function of operating pressure ➔ 12

3) Corrosion resistance class 3 according to Festo standard 940 070

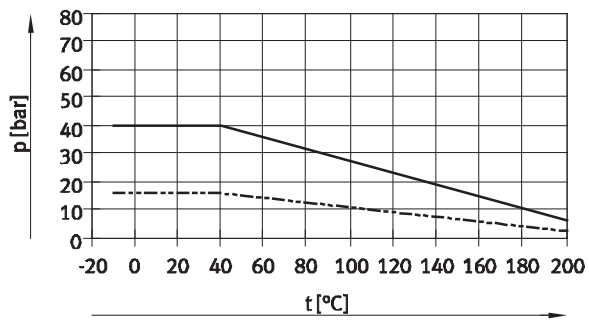
Components subject to high corrosion stress. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment or media such as solvents and cleaning agents.

Ball valves VZBC, mechanically actuated

Technical data – Stainless steel design

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

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



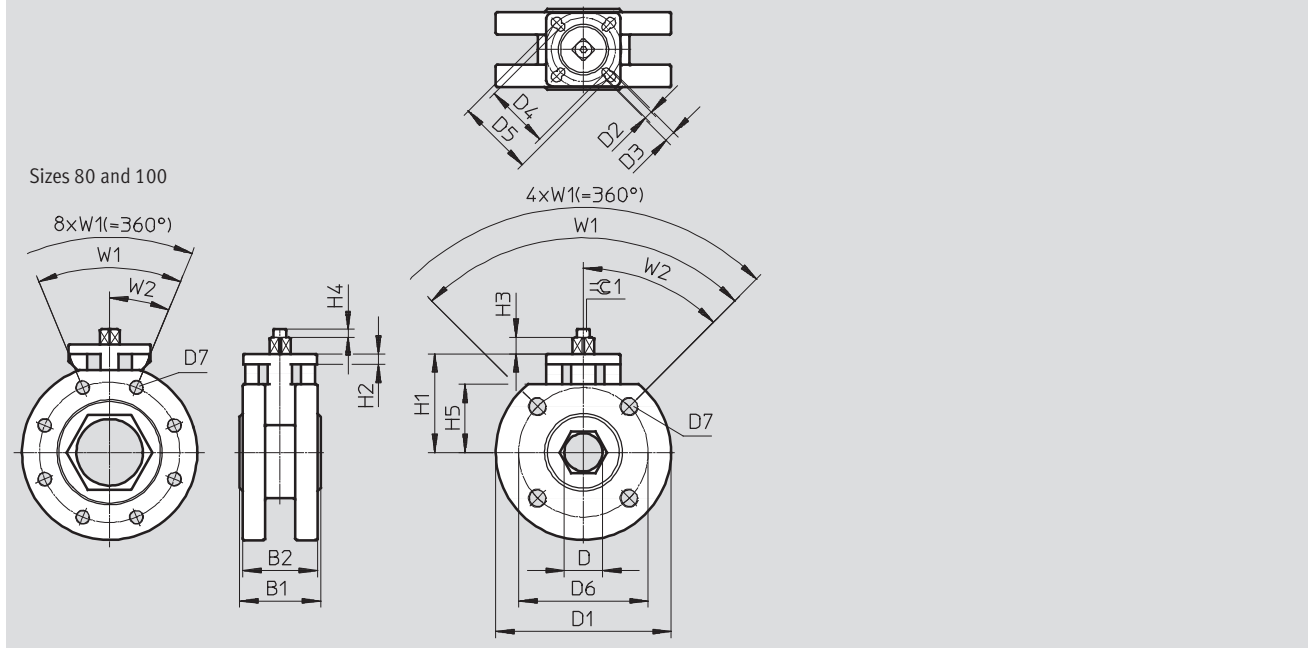
Ball valves VZBC, mechanically actuated

Technical data – Stainless steel design

FESTO

Dimensions


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Type	B1	B2	D	D1	D2	D3	D4	D5	D6	D7	H1	H2	H3	H4	H5	⊖1
	+1.6		∅	∅ +5	∅	∅	∅	∅	∅				+15 -0.5			-0.1
VZBC-15-FF-40-22-F0304-V4V4T	40	43.5	15	95	6	5.5	36	42	65	M12	60	6.3	7.86	5	34.5	9
VZBC-20-FF-40-22-F0304-V4V4T	44	43.5	20	105	6	5.5	36	42	75	M12	64.3	7	11	5	38.5	9
VZBC-25-FF-40-22-F0405-V4V4T	53	48.5	25	115	5.5	7	42	50	85	M12	64.6	7	11	5	44.6	11
VZBC-32-FF-40-22-F0405-V4V4T	58.4	49.5	32	140	5.5	7	42	50	100	M16	69	7	11	-	51	11
VZBC-40-FF-40-22-F0507-V4V4T	62	62	38	150	7	8.5	50	70	110	M16	76.3	7.2	17	-	55	14
VZBC-50-FF-40-22-F0507-V4V4T	78	70	50	165	7	8.5	50	70	125	M16	85.5	7.2	15.3	-	63	14
VZBC-65-FF-16-22-F07-V4V4T	100	70	64	185	-	9	-	70	145	M16	105	10.6	14	-	73.5	17
VZBC-80-FF-16-22-F07-V4V4T	120	70	76	200	-	9	-	70	160	M16	123	10.6	18	-	94	17
VZBC-100-FF-16-22-F0710-V4V4T	152	96	96	220	9	10.5	70	102	180	M16	132	12.6	15	-	105	17

Ball valves VZBC, mechanically actuated

Technical data – Stainless steel design

Ordering data			
	Process valve connection	Part No.	Type
	Ring housing with threaded flange	1692198	VZBC-15-FF-40-22-F0304-V4V4T
		1692200	VZBC-20-FF-40-22-F0304-V4V4T
		1692201	VZBC-25-FF-40-22-F0405-V4V4T
		1692202	VZBC-32-FF-40-22-F0405-V4V4T
		1692204	VZBC-40-FF-40-22-F0507-V4V4T
		1692206	VZBC-50-FF-40-22-F0507-V4V4T
		1692207	VZBC-65-FF-16-22-F07-V4V4T
		1692208	VZBC-80-FF-16-22-F07-V4V4T
		1692209	VZBC-100-FF-16-22-F0710-V4V4T

Ball valves VZBC, mechanically actuated

Accessories

Hand lever VAOH

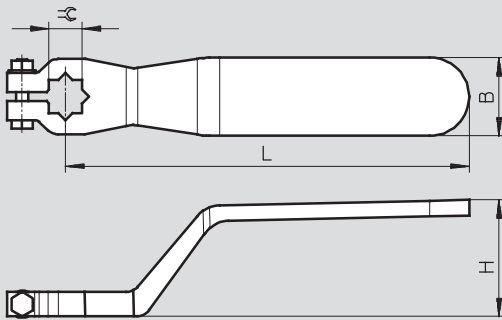
Information on materials:

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



Dimensions and ordering data

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



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

Ball valves VAPB, mechanically actuated

Type codes

FESTO

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

Type	
VZBA	Ball valve

Nominal size DN	
1/4	10
3/8	12
1/2	16
3/4	20
1	25
1 1/4	32
1 1/2	40
2	50
2 1/2	65
3	80
4	100

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

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

Max. operating pressure	
63	63 bar
40	40 bar
16	16 bar

Design	
D	Two-piece
T	Three-piece

Directional control function	
22	2/2-way

Flange connection to ISO 5211	
F0304	2 pitch circle diameters of 36 mm and 42 mm
F0405	2 pitch circle diameters of 42 mm and 50 mm
F0507	2 pitch circle diameters of 50 mm and 70 mm
F07	1 pitch circle diameter of 70 mm
F0710	2 pitch circle diameters of 50 mm and 70 mm
F10	1 pitch circle diameter of 102 mm

Housing material	
V4	Stainless steel 1.4401, 1.4404 (AISI 316L), 1.4408

Material for shut-off element	
V4	Stainless steel 1.4401, 1.4404 (AISI 316L), 1.4408

Sealing material	
T	PTFE

Ball valves VAPB, mechanically actuated

Technical data – Brass design



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

- K - Flow rate Kv
5.9 ... 535 m³/h

- Connecting thread to DIN 2999
- Mounting flange to ISO 5211
- PN class to DIN EN 1333
- Blow-out proof shaft assembled from inside
- Centring attachment for easy automation
- O-ring seal for use with a vacuum



General technical data									
Connection	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	Rp2 1/2
Nominal size DN	15	15	15	20	25	32	40	50	63
Valve function	2/2-way								
Design	2-way ball valve								
Sealing principle	Soft								
Actuation type	Mechanical								
Switching position display	Slot direction = flow direction								
Direction of flow	Reversible								
Type of mounting	In-line installation								
Mounting position	Any								
Working line 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
Product weight [g]	500	500	400	500	800	1,300	1,900	3,100	3,100

Operating and environmental conditions										
Connection	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	Rp2 1/2	
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [---]									
	Neutral liquids									
	Inert gases									
	Water									
Process valve nominal pressure ¹⁾	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	
Corrosion resistance class CRC ²⁾	1									
CE marking (see declaration of conformity) ➔ www.festo.com	-							As per EU Pressure Equipment Directive		
Food industry approval	No									

1) PN class to DIN EN 1333

2) Corrosion resistance class 1 according to Festo standard 940 070

Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Ball valves VAPB, mechanically actuated

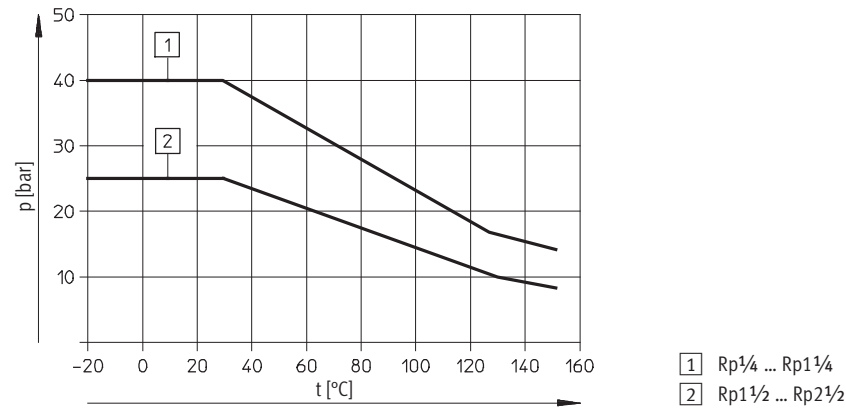
Technical data – Brass design

Materials		Information on materials	Material number
Housing		Nickel-plated brass	CW 617 N
Ball		Brass, hard-chromium plated	Up to Rp1½ CW 614 N, Rp¾ and above CW 617 N
Shaft		Nickel-plated brass	CW 614 N
Seals	Housing	PTFE, HNBR	
	Shaft	PTFE	
Note on materials		Contains PWIS (paint-wetting impairment substances), RoHS-compliant	

Torque ¹⁾ [Nm]									
Process valve connection	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
$\Delta p = pN$	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 temperature of the medium t



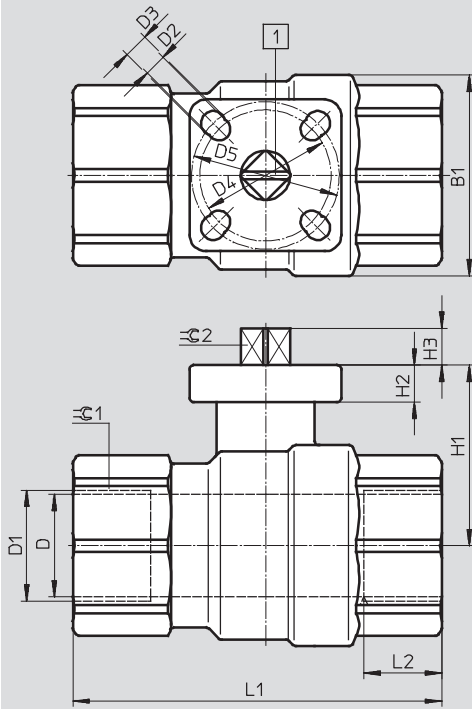
- 1 Rp¼ ... Rp1¼
- 2 Rp1½ ... Rp2½

Ball valves VAPB, mechanically actuated

Technical data – Brass design

Dimensions

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Note

Switching position display: the slot direction **1** corresponds to the flow direction.

Process valve connection D1 ¹⁾	B1	D ∅ ±0.15	D2 ∅	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	L1	L2	⊖C 1 -0.1	⊖C 2
Rp1/4	35	15	5.5	-	36	-	40	9	9	75	15	26	9
Rp3/8	35	15	5.5	-	36	-	40	9	9	75	15	26	9
Rp1/2	35	15	5.5	-	36	-	40	9	9	75	15	26	9
Rp3/4	45	20	5.5	-	36	-	45	9	9	80	16	32	9
Rp1	55	25	5.5	-	36	42	45	9	9	90	19	41	9
Rp1 1/4	65	32	5.5	6.5	42	50	60	10	11	110	21	50	11
Rp1 1/2	75	40	5.5	6.5	42	50	65	10	11	120	21	55	11
Rp2	90	50	6.5	-	50	-	75	12	14	140	25	70	14
Rp2 1/2	110	65	8.5	-	70	-	85	10	15.5	143	24	83	14

1) Cylindrical barrel with female thread to DIN 2999

Ordering data

Design	Process valve connection ¹⁾	Part No.	Type
	Rp1/4	534302	VAPB-1/4-F-40-F03
	Rp3/8	534303	VAPB-3/8-F-40-F03
	Rp1/2	534304	VAPB-1/2-F-40-F03
	Rp3/4	534305	VAPB-3/4-F-40-F03
	Rp1	534306	VAPB-1-F-40-F0304
	Rp1 1/4	534307	VAPB-1 1/4-F-40-F0405
	Rp1 1/2	534308	VAPB-1 1/2-F-25-F0405
	Rp2	534309	VAPB-2-F-25-F05
Rp2 1/2	534310	VAPB-2 1/2-F-25-F07	

1) Cylindrical barrel with female thread to DIN 2999

Ball valves VAPB, mechanically actuated

Accessories

FESTO

Hand lever VAOH

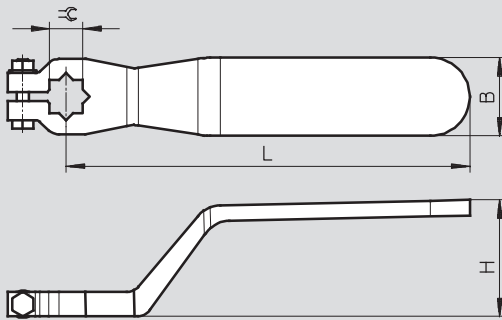
Information on materials:

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



Dimensions and ordering data

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



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

Ball valves VZBA, mechanically actuated

Type codes

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
----	--------

Directional control function

32T	3/2-way, T-shaped hole
32L	3/2-way, L-shaped hole

Flange connection to ISO 5211

F0304	2 pitch circle diameters of 36 mm and 42 mm
F0405	2 pitch circle diameters of 42 mm and 50 mm
F0507	2 pitch circle diameters of 50 mm and 70 mm

Housing material

V4	Stainless steel 1.4401, 1.4404 (AISI 316L), 1.4408
----	--

Material for shut-off element

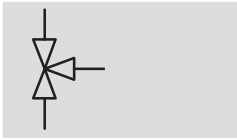
V4	Stainless steel 1.4401, 1.4404 (AISI 316L), 1.4408
----	--

Sealing material

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


Ball valves VZBA, mechanically actuated

Technical data – Stainless steel design



- Mounting flange to ISO 5211
- PN class to DIN EN 1333



- N- Connecting thread
Rp1/4 ... Rp2
-  - Flow rate Kv
4.5 ... 100 m³/h

General technical data		Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	
Process valve connection		Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	
Nominal size DN		8	10	15	20	25	32	40	50	
Valve function		3/2-way								
Design		3-way ball valve								
Sealing principle		Soft								
Actuation type		Mechanical								
Manual override		None								
Switching position display		Slot direction = flow direction								
Direction of flow		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	35	42	68	
Internal diameter	[mm]	11.6	12.7	12.7	16	20	25.4	31.8	38.1	
Flow rate Kv	Type L ¹⁾	[m ³ /h]	4.5	4.5	4.7	5.1	11.8	19.6	33.2	53.7
	Type T ²⁾	[m ³ /h]	8	8	8.3	8.3	22.4	36.5	62	100
	Type T ³⁾	[m ³ /h]	4.5	4.5	4.8	4.8	10.9	18	30	48.8
Flow rate tolerance Kv	[%]	± 20								
Product weight	[g]	700	700	700	1,000	1,600	2,800	3,800	7,400	

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

Operating and environmental conditions		Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	
Process valve connection		Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2	
Operating medium		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 ¹⁾		3								
CE marking (see declaration of conformity) → www.festo.com		-							To EU Pressure Equipment Directive	

- 1) Corrosion resistance class 3 according to Festo standard 940 070
Components subject to high corrosion stress. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment or media such as solvents and cleaning agents.

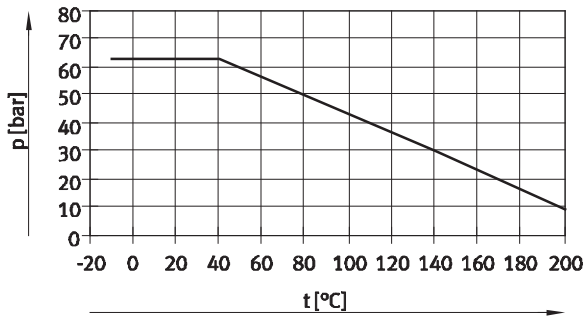
Ball valves VZBA, mechanically actuated

Technical data – Stainless steel design

FESTO

Materials		Material number
Housing, ball	High-alloy stainless steel	1.4408, 1.4401
Shaft	High-alloy stainless steel	1.4401
Seals	PTFE reinforced	–
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant	

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

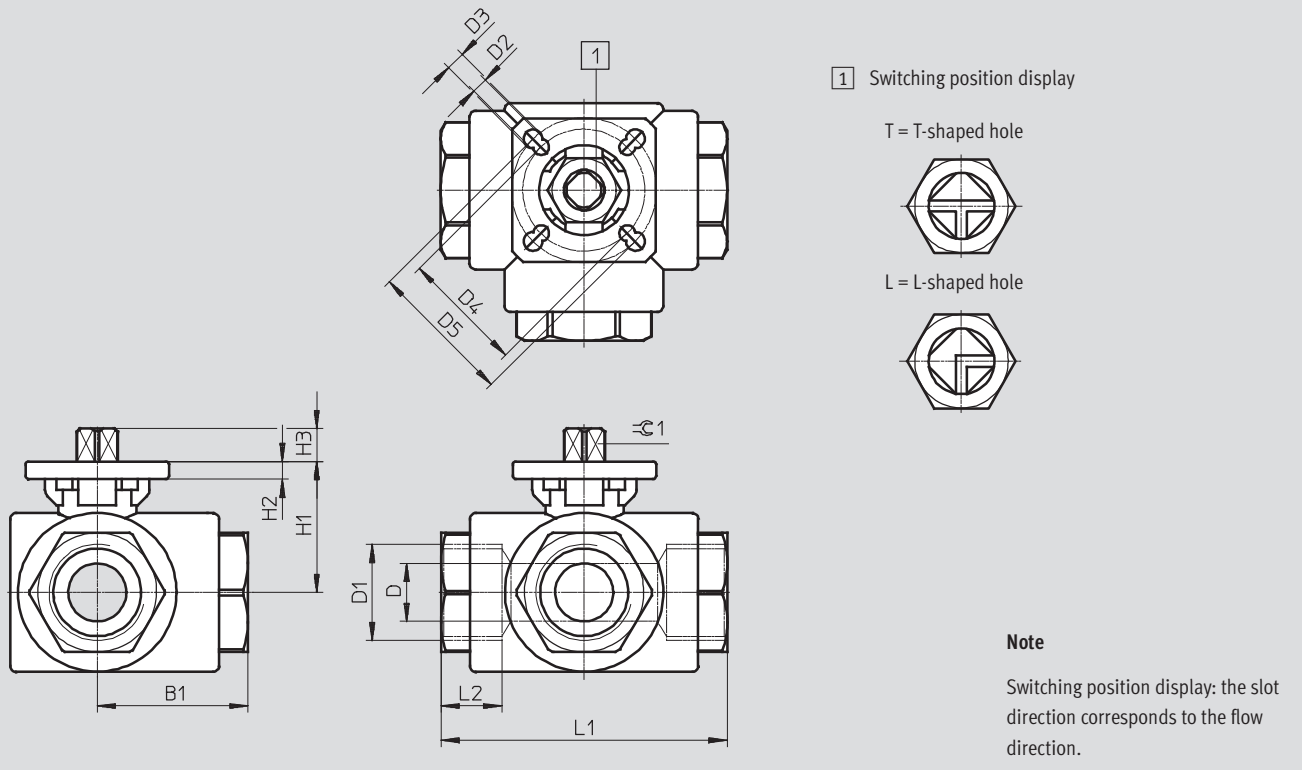


Ball valves VZBA, mechanically actuated

Technical data – Stainless steel design

Dimensions

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



1 Switching position display

T = T-shaped hole

L = L-shaped hole

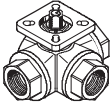
Note
Switching position display: the slot direction corresponds to the flow direction.

Process valve connection D1 ¹⁾	D ∅ ±0.15	D1	D2 ∅	D3 ∅	D4 ∅	D5 ∅	H1	H2 ±1	H3	L1 ±1	L2	B1 ±2	≈∅ 1 -0.1
VZBA-1/4"-GGG-63-32L-F0304-V4V4T	11.6	Rp1/4	5.5	5.5	36	42	35.9	6	7.4	80	15	40	9
VZBA-1/4"-GGG-63-32T-F0304-V4V4T													
VZBA-3/8"-GGG-63-32L-F0304-V4V4T	12.7	Rp3/8	5.5	5.5	36	42	35.9	6	7.4	80	18	40	9
VZBA-3/8"-GGG-63-32T-F0304-V4V4T													
VZBA-1/2"-GGG-63-32L-F0304-V4V4T	12.7	Rp1/2	5.5	5.5	36	42	35.9	6	7.4	80	17.5	40	9
VZBA-1/2"-GGG-63-32T-F0304-V4V4T													
VZBA-3/4"-GGG-63-32L-F0405-V4V4T	16	Rp3/4	5.5	6.5	42	50	40.9	6	12.8	87.5	20	43.75	11
VZBA-3/4"-GGG-63-32T-F0405-V4V4T													
VZBA-1"-GGG-63-32L-F0405-V4V4T	20	Rp1	5.5	6.5	42	50	45.15	6	11.4	100	21	50	11
VZBA-1"-GGG-63-32T-F0405-V4V4T													
VZBA-1 1/4"-GGG-63-32L-F0405-V4V4T	25.4	Rp1 1/4	5.5	6.5	42	50	51	6	12.6	123	21	61.5	11
VZBA-1 1/4"-GGG-63-32T-F0405-V4V4T													
VZBA-1 1/2"-GGG-63-32L-F0405-V4V4T	31.8	Rp1 1/2	5.5	6.5	42	50	55.5	6	12.6	142.2	23	71.1	11
VZBA-1 1/2"-GGG-63-32T-F0405-V4V4T													
VZBA-2"-GGG-63-32L-F0507-V4V4T	38.1	Rp2	6.5	8.5	50	70	66	6	14.3	170.6	26	85.3	14
VZBA-2"-GGG-63-32T-F0507-V4V4T													

Ball valves VZBA, mechanically actuated

FESTO

Technical data – Stainless steel design

Ordering data					
Design	Process valve connection ¹⁾	L-shaped ball valve		T-shaped ball valve	
		Part No.	Type	Part No.	Type
	Rp $\frac{1}{4}$	1692210	VZBA-1/4-GGG-63-32L-F0304-V4V4T	1692220	VZBA-1/4-GGG-63-32T-F0304-V4V4T
	Rp $\frac{3}{8}$	1692211	VZBA-3/8-GGG-63-32L-F0304-V4V4T	1692221	VZBA-3/8-GGG-63-32T-F0304-V4V4T
	Rp $\frac{1}{2}$	1692212	VZBA-1/2-GGG-63-32L-F0304-V4V4T	1692224	VZBA-1/2-GGG-63-32T-F0304-V4V4T
	Rp $\frac{3}{4}$	1692214	VZBA-3/4-GGG-63-32L-F0405-V4V4T	1692226	VZBA-3/4-GGG-63-32T-F0405-V4V4T
	Rp1	1692215	VZBA-1-GGG-63-32L-F0405-V4V4T	1692227	VZBA-1-GGG-63-32T-F0405-V4V4T
	Rp1 $\frac{1}{4}$	1692217	VZBA-11/4-GGG-63-32L-F0405-V4V4T	1692228	VZBA-11/4-GGG-63-32T-F0405-V4V4T
	Rp1 $\frac{1}{2}$	1692218	VZBA-11/2-GGG-63-32L-F0405-V4V4T	1692229	VZBA-11/2-GGG-63-32T-F0405-V4V4T
	Rp2	1692219	VZBA-2-GGG-63-32L-F0507-V4V4T	1692230	VZBA-2-GGG-63-32T-F0507-V4V4T

1) Cylindrical barrel with female thread to EN 10226-1 (previously DIN 2999)

Ball valves VZBA, mechanically actuated

Accessories

FESTO

Hand lever VAOH

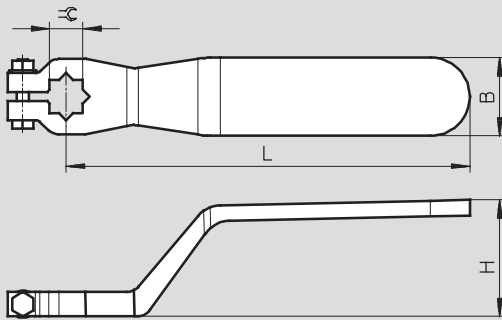
Information on materials:

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



Dimensions and ordering data

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



For connection	$\approx \varnothing$ ± 0.5	L ± 10	H ± 5	B ± 5	Weight [g]	Part No.	Type
Rp1¼ ... Rp1	9	120	36	21	100	542702	VAOH-9-H9
Rp1¼ ... Rp1½	11	140	40	26	200	542703	VAOH-11-H9
Rp2 ... Rp2½	14	180	46	31	300	542704	VAOH-14-H9

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To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



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