

# Ball valves VZBD, 2-way

Type codes

VZBD - 1/2 - W1 - 16 - T - 2 - F0304 - V14 V14

Type	
VZBD	Ball valve

Nominal width DN	
1/2	1/2"
3/4	3/4"
1	1"
1 1/2	1 1/2"
2	2"
2 1/2	2 1/2"
3	3"
4	4"

Process valve connection type	
S1	Clamp ferrule to ASME-BPE
S5	Clamp ferrule to DIN 32676-B
W1	Extended welded ends to ASME-BPE
W3	Extended welded ends to ISO 1127

Nominal pressure	
16	16 bar
63	63 bar

Design	
T	Three parts

Valve function	
2	2/2-way

Flanged connection to ISO 5211	
FH	Interface for hand lever
F0304	Hole pattern 03 and 04
F0405	Hole pattern 04 and 05
F0507	Hole pattern 05 and 07
F0710	Hole pattern 07 and 10
F1012	Hole pattern 10 and 12

Housing material	
V14	Stainless steel ASTM A351-CF3M/1.4409

Shut-off element material	
V14	Stainless steel ASTM A351-CF3M/1.4409

# Ball valves VZBD, 2-way


Technical data


Function



- 2-way ball valve made from stainless steel
- Optionally with extended welded ends to ISO 1127 or to ASME BPE or clamp ferrules to DIN 32676-B or to ASME BPE



 - Nominal width DN  
DN15 ... DN100

 - Flow rate  
3.5 ... 436.3 m<sup>3</sup>/h

General technical data									
Nominal width DN	15	20	25	32	40	50	65	80	100
Process valve connection	Welded end to ISO 1127								
	Welded end to ASME-BPE								
	Clamp ferrule to DIN 32676-B								
	Clamp ferrule to ASME-BPE								
Valve function	2/2								
Design	2-way ball valve								
Sealing principle	Soft								
Type of actuation	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								
	ISO 1127								
	DIN 32676-B								
	ASME BPE								
Welded end to ISO 1127 and clamp ferrule to DIN 32676-B									
Breakaway torque at differential pressure, nominal pressure, process valve PN [Nm]	7	9	15	22	25	45	82	-	-
Inside Ø [mm]	18.1	23.7	29.7	38.4	44.3	56.3	72.1	-	-
Flow rate Kv [m <sup>3</sup> /h]	12.2	21.9	35.9	61.2	83.3	141.5	238.5	-	-
Welded end to ASME-BPE and clamp ferrule to ASME-BPE									
Breakaway torque at differential pressure, nominal pressure, process valve PN [Nm]	7	9	15	-	18	35	55	70	90
Inside Ø [mm]	9.6	15.8	22.1	-	34.8	47.7	60.3	72.9	97.5
Flow rate Kv [m <sup>3</sup> /h]	3.5	9.7	19.8	-	50.1	96.8	161.7	243.8	436.3

# Ball valves VZBD, 2-way

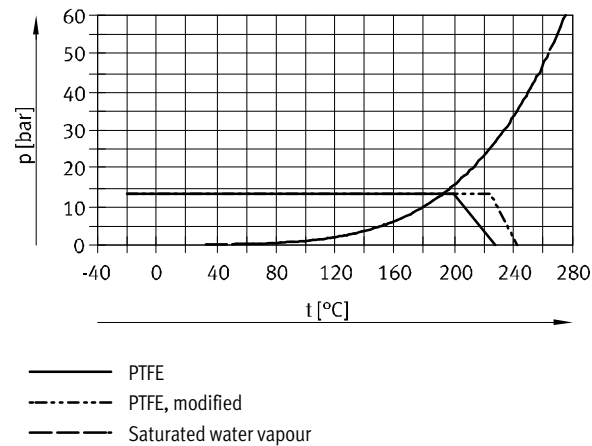
Technical data

Operating and environmental conditions									
Nominal width DN	15	20	25	32	40	50	65	80	100
Nominal pressure of process valve PN	63								
Temperature of medium [°C]	-20 ... +200								
Medium	Compressed air to ISO 8573-1:2010 [::-:]								
	Inert gases								
	Vapour								
	Water								
	Neutral fluids								
Certification	CRN								
Corrosion resistance class CRC <sup>1)</sup>	4								
CE marking (see declaration of conformity) <sup>2)</sup>	-				To EU Pressure Equipment Directive				

- 1) Corrosion resistance class CRC 4 to Festo standard FN 940070  
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.
- 2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

Materials	Material number	
Housing	Stainless steel casting	1.4409 (ASTM A351-CF3M)
Ball	Stainless steel casting	1.4409 (ASTM A351-CF3M)
Shaft	High-alloy stainless steel	1.4401 (ASTM A240-316)
Seat seal	PTFE, modified	
Seals	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



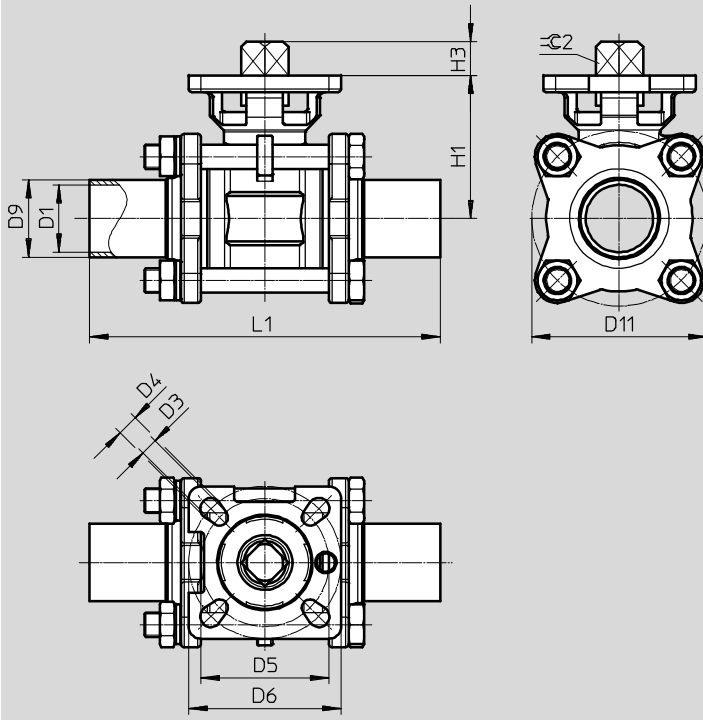
# Ball valves VZBD, 2-way

Technical data

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

With extended welded ends to ISO 1127 (W3) or to ASME BPE (W1)



Type	D1 ∅	D3 ∅	D4 ∅	D5 ∅	D6 ∅	D9 ∅	D11 ∅	H1	H3	L1 ±2	⊖C2
VZBD-1/2-W3-...	18.1	5.5	5.5	36	42	21.3	52	38.5	9	130	9
VZBD-3/4-W3-...	23.7	5.5	5.5	36	42	26.9	61.9	42.7	9	150	9
VZBD-1-W3-...	29.7	5.5	7	42	50	33.7	70	53.5	11	160	11
VZBD-11/4-W3-...	38.4	5.5	7	42	50	42.4	85	60.1	11	180	11
VZBD-11/2-W3-...	44.3	7	9	50	70	48.3	98.8	70.6	14	200	14
VZBD-2-W3-...	56.3	7	9	50	70	60.3	120	79.8	14	230	14
VZBD-21/2-W3-...	72.1	9	11	70	102	76.1	147	99.4	17	290	17

Type	D1 ∅	D3 ∅	D4 ∅	D5 ∅	D6 ∅	D9 ∅	D11 ∅	H1	H3	L1 ±2	⊖C2
VZBD-1/2-W1-...	9.6	5.5	5.5	36	42	12.7	45.5	34	9	90.7	9
VZBD-3/4-W1-...	15.8	5.5	5.5	36	42	19.1	47	35.3	11	103	9
VZBD-1-W1-...	22.1	5.5	7	42	50	25.4	57.5	47	11	115	11
VZBD-11/2-W1-...	34.8	7	9	50	70	38.1	83	63.5	14	139	14
VZBD-2-W1-...	47.7	7	9	50	70	50.8	100	72	14	158	14
VZBD-21/2-W1-...	60.3	9	11	70	102	63.5	126	90	17	197	17
VZBD-3-W1-...	72.9	9	11	70	102	76.2	148	99	17	228	17
VZBD-4-W1-...	97.5	11	13	102	125	101.6	183	127.5	22	241.8	22

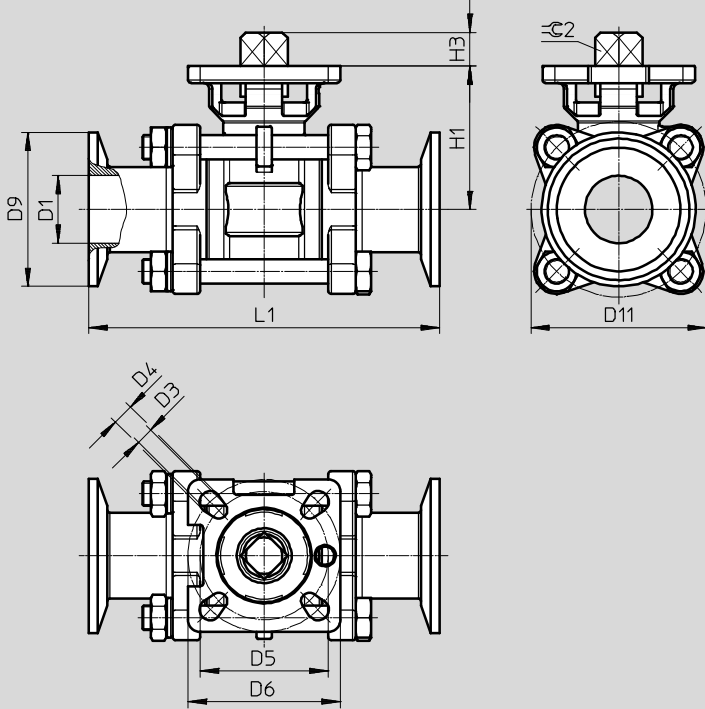
# Ball valves VZBD, 2-way

Technical data

**Dimensions**

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With clamp ferrule to DIN 32676-B (S5) or to ASME-BPE (S1)

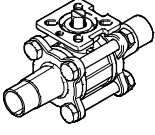
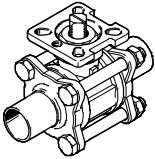
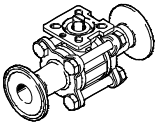
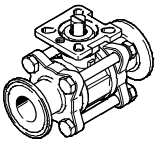


Type	D1 ∅	D3 ∅	D4 ∅	D5 ∅	D6 ∅	D9 ∅	D11 ∅	H1	H3	L1	∅2
VZBD-1/2-S5-...	18.1	5.5	5.5	36	42	50.5	52	38.5	9	130	±2
VZBD-3/4-S5-...	23.7	5.5	5.5	36	42	50.5	61.9	42.7	9	150	9
VZBD-1-S5-...	29.7	5.5	7	42	50	50.5	70	53.5	11	160	11
VZBD-11/4-S5-...	38.4	5.5	7	42	50	64	85	60.1	11	180	11
VZBD-11/2-S5-...	44.3	7	9	50	70	64	98.8	70.6	14	200	14
VZBD-2-S5-...	56.3	7	9	50	70	77.5	120	79.8	14	230	14
VZBD-21/2-S5-...	72.1	9	11	70	102	91	147	99.4	17	290	17

Type	D1 ∅	D3 ∅	D4 ∅	D5 ∅	D6 ∅	D9 ∅	D11 ∅	H1	H3	L1	∅2
VZBD-1/2-S1-...	9.6	5.5	5.5	36	42	25.4	45.5	34	9	90.7	±2
VZBD-3/4-S1-...	15.8	5.5	5.5	36	42	25.4	47	35.3	11	103	9
VZBD-1-S1-...	22.1	5.5	7	42	50	50.5	57.5	47	11	115	11
VZBD-11/2-S1-...	34.8	7	9	50	70	50.5	83	63.5	14	139	14
VZBD-2-S1-...	47.7	7	9	50	70	64	100	72	14	158	14
VZBD-21/2-S1-...	60.3	9	11	70	102	77.5	126	90	17	197	17
VZBD-3-S1-...	72.9	9	11	70	102	91	148	99	17	228	17
VZBD-4-S1-...	97.5	11	13	102	125	119	183	127.5	22	241.8	22

# Ball valves VZBD, 2-way

Technical data

Ordering data						
	Standard	Nominal width DN	Flange hole pattern	Weight [g]	Part No.	Type
<b>Extended welded ends</b>						
	ISO 1127	15	F0304	730	4783595 <sup>1)</sup>	VZBD-1/2-W3-16-T-2-F0304-V14V14
		20	F0304	930	4783596 <sup>1)</sup>	VZBD-3/4-W3-16-T-2-F0304-V14V14
		25	F0405	1350	4783597 <sup>1)</sup>	VZBD-1-W3-16-T-2-F0405-V14V14
		32	F0405	2050	4783598 <sup>1)</sup>	VZBD-11/4-W3-16-T-2-F0405-V14V14
		40	F0507	3270	4783599 <sup>1)</sup>	VZBD-11/2-W3-16-T-2-F0507-V14V14
		50	F0507	5470	4783600 <sup>1)</sup>	VZBD-2-W3-16-T-2-F0507-V14V14
		65	F0710	10080	4783601 <sup>1)</sup>	VZBD-21/2-W3-16-T-2-F0710-V14V14
	ASME-BPE	1/2"	F0304	430	4762847 <sup>1)</sup>	VZBD-1/2-W1-16-T-2-F0304-V14V14
		3/4"	F0304	530	4762848 <sup>1)</sup>	VZBD-3/4-W1-16-T-2-F0304-V14V14
		1"	F0405	950	4762849 <sup>1)</sup>	VZBD-1-W1-16-T-2-F0405-V14V14
		1 1/2"	F0507	1970	4762850 <sup>1)</sup>	VZBD-11/2-W1-16-T-2-F0507-V14V14
		2"	F0507	3070	4762851 <sup>1)</sup>	VZBD-2-W1-16-T-2-F0507-V14V14
		2 1/2"	F0710	6180	4762852 <sup>1)</sup>	VZBD-21/2-W1-16-T-2-F0710-V14V14
		3"	F0710	9080	4762853 <sup>1)</sup>	VZBD-3-W1-16-T-2-F0710-V14V14
		4"	F1012	16180	4762854 <sup>1)</sup>	VZBD-4-W1-16-T-2-F1012-V14V14
<b>Clamp ferrule</b>						
	DIN 32676-B	15	F0304	830	4802244 <sup>1)</sup>	VZBD-1/2-S5-16-T-2-F0304-V14V14
		20	F0304	1130	4802245 <sup>1)</sup>	VZBD-3/4-S5-16-T-2-F0304-V14V14
		25	F0405	1550	4802246 <sup>1)</sup>	VZBD-1-S5-16-T-2-F0405-V14V14
		32	F0405	2250	4802247 <sup>1)</sup>	VZBD-11/4-S5-16-T-2-F0405-V14V14
		40	F0507	3370	4802248 <sup>1)</sup>	VZBD-11/2-S5-16-T-2-F0507-V14V14
		50	F0507	5670	4802249 <sup>1)</sup>	VZBD-2-S5-16-T-2-F0507-V14V14
		65	F0710	10680	4802250 <sup>1)</sup>	VZBD-21/2-S5-16-T-2-F0710-V14V14
	ASME-BPE	1/2"	F0304	430	4795666 <sup>1)</sup>	VZBD-1/2-S1-16-T-2-F0304-V14V14
		3/4"	F0304	530	4795667 <sup>1)</sup>	VZBD-3/4-S1-16-T-2-F0304-V14V14
		1"	F0405	950	4795668 <sup>1)</sup>	VZBD-1-S1-16-T-2-F0405-V14V14
		1 1/2"	F0507	1970	4795669 <sup>1)</sup>	VZBD-11/2-S1-16-T-2-F0507-V14V14
		2"	F0507	3070	4795670 <sup>1)</sup>	VZBD-2-S1-16-T-2-F0507-V14V14
		2 1/2"	F0710	6180	4795671 <sup>1)</sup>	VZBD-21/2-S1-16-T-2-F0710-V14V14
		3"	F0710	9080	4795672 <sup>1)</sup>	VZBD-3-S1-16-T-2-F0710-V14V14
		4"	F1012	16180	4795673 <sup>1)</sup>	VZBD-4-S1-16-T-2-F1012-V14V14

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