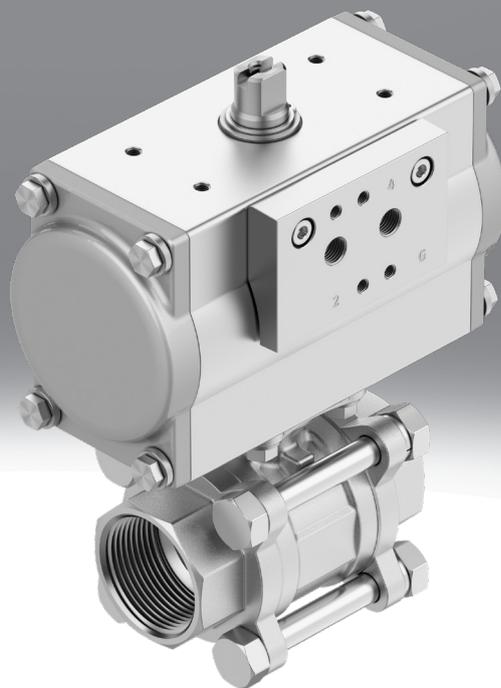


## Ball valve unit VZBE

**FESTO**



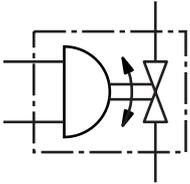
## Characteristics

### At a glance

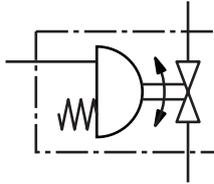
- Combination of a pneumatic quarter-turn actuator and a ball valve
- Threaded connection according to ASME B1.20.1
- Flange hole pattern according to ISO 5211
- Stainless steel design

### Drive

[PA] DFPD, double-acting



[PB] DFPD, single-acting



## Type code

<b>001</b>	Series	
<b>VZBE</b>	Ball valve	
<b>002</b>	Version	
<b>A</b>	Ball valve actuator unit	
<b>003</b>	Nominal diameter DN	
<b>1/4</b>	1/4"	
<b>3/8</b>	3/8"	
<b>1/2</b>	1/2"	
<b>3/4</b>	3/4"	
<b>1</b>	1"	
<b>1 1/4</b>	1 1/4"	
<b>1 1/2</b>	1 1/2"	
<b>2</b>	2"	
<b>2 1/2</b>	2 1/2"	
<b>3</b>	3"	
<b>4</b>	4"	
<b>004</b>	Process valve connection	
<b>T</b>	NPT female thread	
<b>005</b>	Nominal pressure [bar]	
<b>63</b>	63	
<b>006</b>	Design type	
<b>T</b>	Three-part	
<b>007</b>	Valve function	
<b>2</b>	2/2-way	

<b>008</b>	Flanged connection	
<b>F0304</b>	Hole pattern 03 and 04	
<b>F0405</b>	Hole pattern 04 and 05	
<b>F0507</b>	Hole pattern 05 and 07	
<b>F0710</b>	Hole pattern 07 and 10	
<b>F1012</b>	Hole pattern 10 and 12	
<b>009</b>	Housing material	
<b>V15</b>	Stainless steel ASTM A351-CF8M	
<b>010</b>	Shut-off element material	
<b>V15</b>	Stainless steel ASTM A351-CF8M	
<b>V16</b>	Stainless steel ASTM A240--316 / 1.4401	
<b>011</b>	Drive	
<b>PA</b>	DFPD, double-acting	
<b>PB</b>	DFPD, single-acting	
<b>012</b>	Size	
<b>10</b>	10	
<b>20</b>	20	
<b>40</b>	40	
<b>60</b>	60	
<b>80</b>	80	
<b>120</b>	120	
<b>160</b>	160	
<b>240</b>	240	
<b>300</b>	300	
<b>480</b>	480	

## Datasheet

General technical data												
Connection Process valve	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT	2 1/2 NPT	3 NPT	4 NPT	
Nominal size DN	8	10	15	20	25	32	40	50	65	80	100	
Valve function	2/2											
Design	2-way ball valve, Semi-rotary drive											
Sealing principle	Soft											
Type of actuation	Pneumatic											
Switching position indicator	Slot direction = flow direction											
Flow direction	Reversible											
Type of mounting	In-line installation											
Mounting position	optional											
Based on standard	ASME B1.20.1, ISO 5211											
Flange hole pattern	F0304				F0405			F0507		F0710		F1012
Breakaway torque at differential pressure, nominal pressure, process valve PN	7 Nm			9 Nm	15 Nm	23 Nm	30 Nm	44 Nm	79 Nm	103 Nm	138 Nm	
Flow rate Kv	19 m³/h	22 m³/h	32 m³/h	59 m³/h	94 m³/h	160 m³/h	247 m³/h	420 m³/h	684 m³/h	995 m³/h	1,637 m³/h	
Product weight	1,485 ... 1,930 g	1,490 ... 1,935 g	1,480 ... 1,920 g	1,940 ... 2,880 g	2,180 ... 4,170 g	3,350 ... 4,650 g	4,050 ... 6,080 g	5,700 ... 8,610 g	9,700 ... 14,870 g	13,490 ... 20,185 g	22,480 ... 35,400 g	

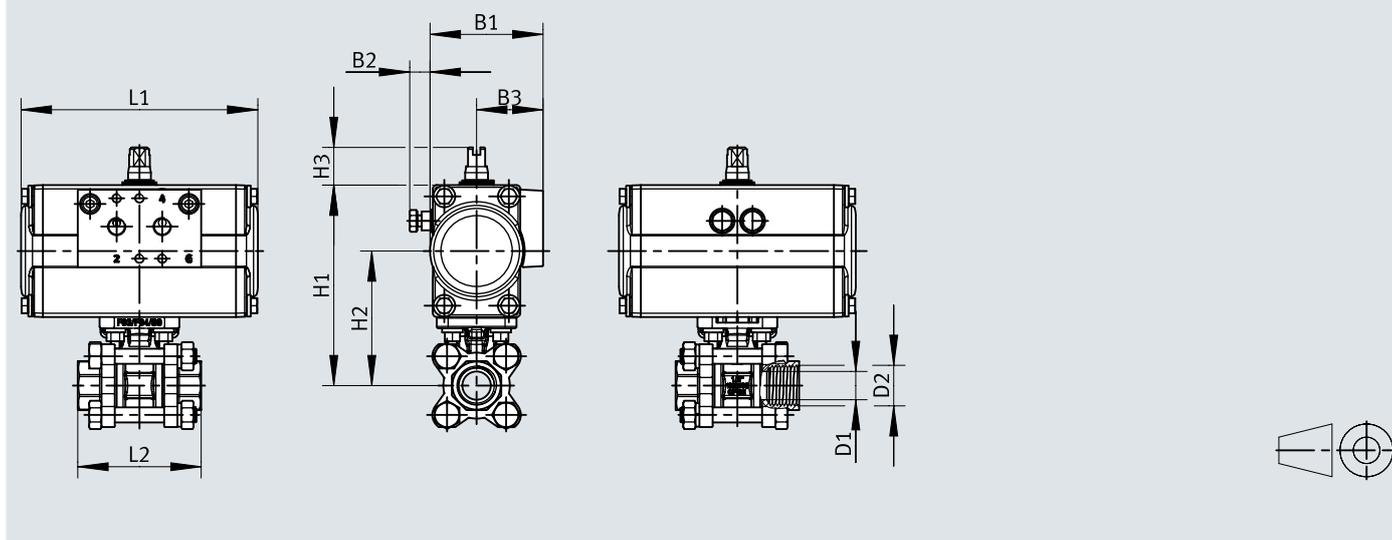
Operating and ambient conditions	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Media temperature	-10 ... 200°C
Operating pressure	5.5 ... 8 bar
Operating pressure	0.55 ... 0.8 MPa
Operating pressure	79.75 ... 116 psi
Nominal pressure PN	63
Medium	Compressed air to ISO 8573-1:2010 [:-:], Inert gases, Water – no water vapour, Neutral fluids, Other media on request
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Corrosion resistance class CRC	1 - Low corrosion stress

ATEX	
Max. surface temperature assembly	+105°C...+280°C, T4...T2
explosion group assembly	IIC, IIIC
Explosion ambient temperature	-10°C ≤ Ta ≤ +80°C

Materials	
Material housing	Stainless steel casting
Material number housing	1.4408
Material ball	Stainless steel casting, High-alloy stainless steel
Material number ball	1.4401, 1.4408
Material shaft	High-alloy stainless steel
Material seat seal	PTFE
Material seals	FPM, PTFE
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

## Dimensions

Dimensions – DFPD, double-acting

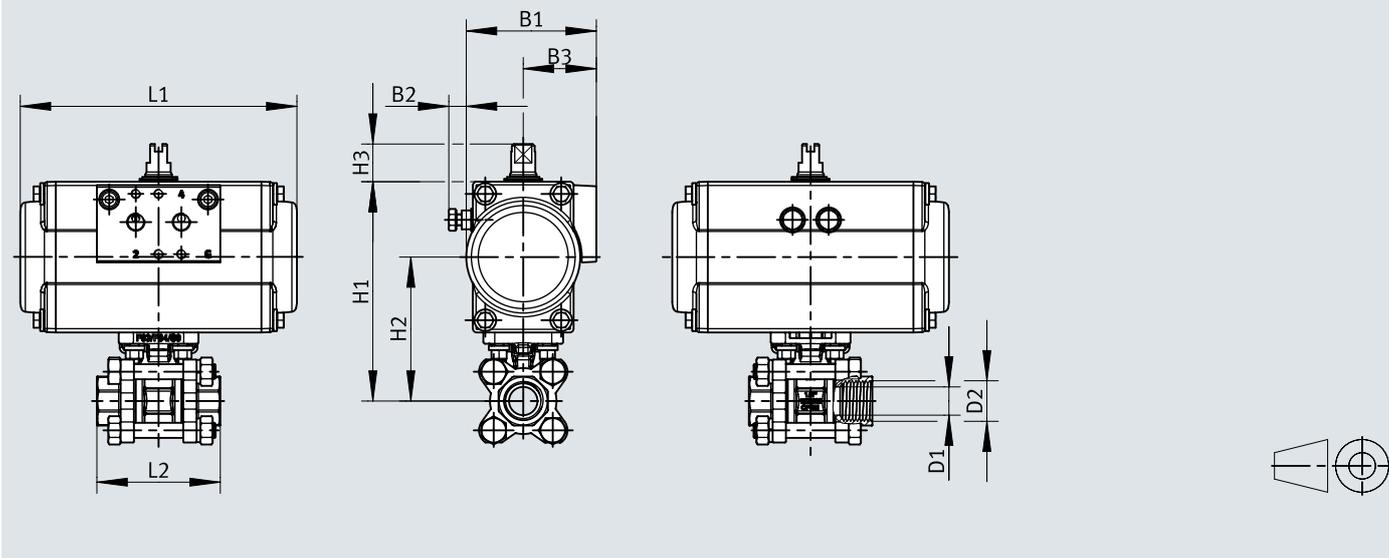
Download CAD data [www.festo.com](http://www.festo.com)

	B1	B2	B3	D1 ∅	D2	H1	H2	H3	L1	L2
VZBE-A-1/4-T-63-T-2-F0304-V15V15-PA10	59,5	10,7	35	11,6	1/4 NPT	105,3	70,3	20	124,7	65
VZBE-A-3/8-T-63-T-2-F0304-V15V15-PA10	59,5	10,7	35	12,5	3/8 NPT	105,3	70,3	20	124,7	65
VZBE-A-1/2-T-63-T-2-F0304-V15V15-PA10	59,5	10,7	35	15	1/2 NPT	106,4	71,4	20	124,7	65
VZBE-A-3/4-T-63-T-2-F0304-V15V15-PA20	68,5	9,2	38,5	20	3/4 NPT	119,5	79,5	20	133,3	75
VZBE-A-1-T-63-T-2-F0405-V15V15-PA20	68,5	9,2	38,5	25	1 NPT	129	89	20	133,3	85
VZBE-A-11/4-T-63-T-2-F0405-V15V15-PA40	81,5	8,2	45	32	1 1/4 NPT	146,2	100,2	20	151,4	101
VZBE-A-11/2-T-63-T-2-F0507-V15V15-PA40	81,5	8,2	45	38	1 1/2 NPT	156,6	110,6	20	151,4	112
VZBE-A-2-T-63-T-2-F0507-V15V15-PA60	93,5	11	50,5	50	2 NPT	177,5	125	20	170	130
VZBE-A-21/2-T-63-T-2-F0710-V15V16-PA120	111,5	12,3	60,5	63	2 1/2 NPT	215	153,5	20	213,7	162
VZBE-A-3-T-63-T-2-F0710-V15V16-PA160	120	13,4	63,5	76	3 NPT	234	167	20	230,9	188
VZBE-A-4-T-63-T-2-F1012-V15V16-PA240	135,5	18,5	71,5	96	4 NPT	280	205	30	257	224

## Dimensions

Dimensions – DFPD, single-acting

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



	B1	B2	B3	D1 ∅	D2	H1	H2	H3	L1	L2
VZBE-A-1/4-T-63-T-2-F0304-V15V15-PB20	68,5	9,2	38,5	11,6	1/4 NPT	115,3	75,3	20	145,7	65
VZBE-A-3/8-T-63-T-2-F0304-V15V15-PB20	68,5	9,2	38,5	12,5	3/8 NPT	115,3	75,3	20	145,7	65
VZBE-A-1/2-T-63-T-2-F0304-V15V15-PB20	68,5	9,2	38,5	15	1/2 NPT	116,4	76,4	20	145,7	65
VZBE-A-3/4-T-63-T-2-F0304-V15V15-PB40	81,5	8,2	45	20	3/4 NPT	131,5	85,5	20	170,4	75
VZBE-A-1-T-63-T-2-F0405-V15V15-PB60	93,5	11	50,5	25	1 NPT	154	101,5	20	201	85
VZBE-A-11/4-T-63-T-2-F0405-V15V15-PB60	93,5	11	50,5	32	1 1/4 NPT	159,2	106,7	20	201	101
VZBE-A-11/2-T-63-T-2-F0507-V15V15-PB80	99	9	53	38	1 1/2 NPT	174,6	119,6	20	223,1	112
VZBE-A-2-T-63-T-2-F0507-V15V15-PB120	111,5	12,3	60,5	50	2 NPT	195,5	134	20	252,3	130
VZBE-A-21/2-T-63-T-2-F0710-V15V16-PB240	135,5	18,5	71,5	63	2 1/2 NPT	242	167	30	301,4	162
VZBE-A-3-T-63-T-2-F0710-V15V16-PB300	144	17	74,5	76	3 NPT	262	181	30	334,4	188
VZBE-A-4-T-63-T-2-F1012-V15V16-PB480	163	19,3	83	96	4 NPT	314	122	30	374,2	224

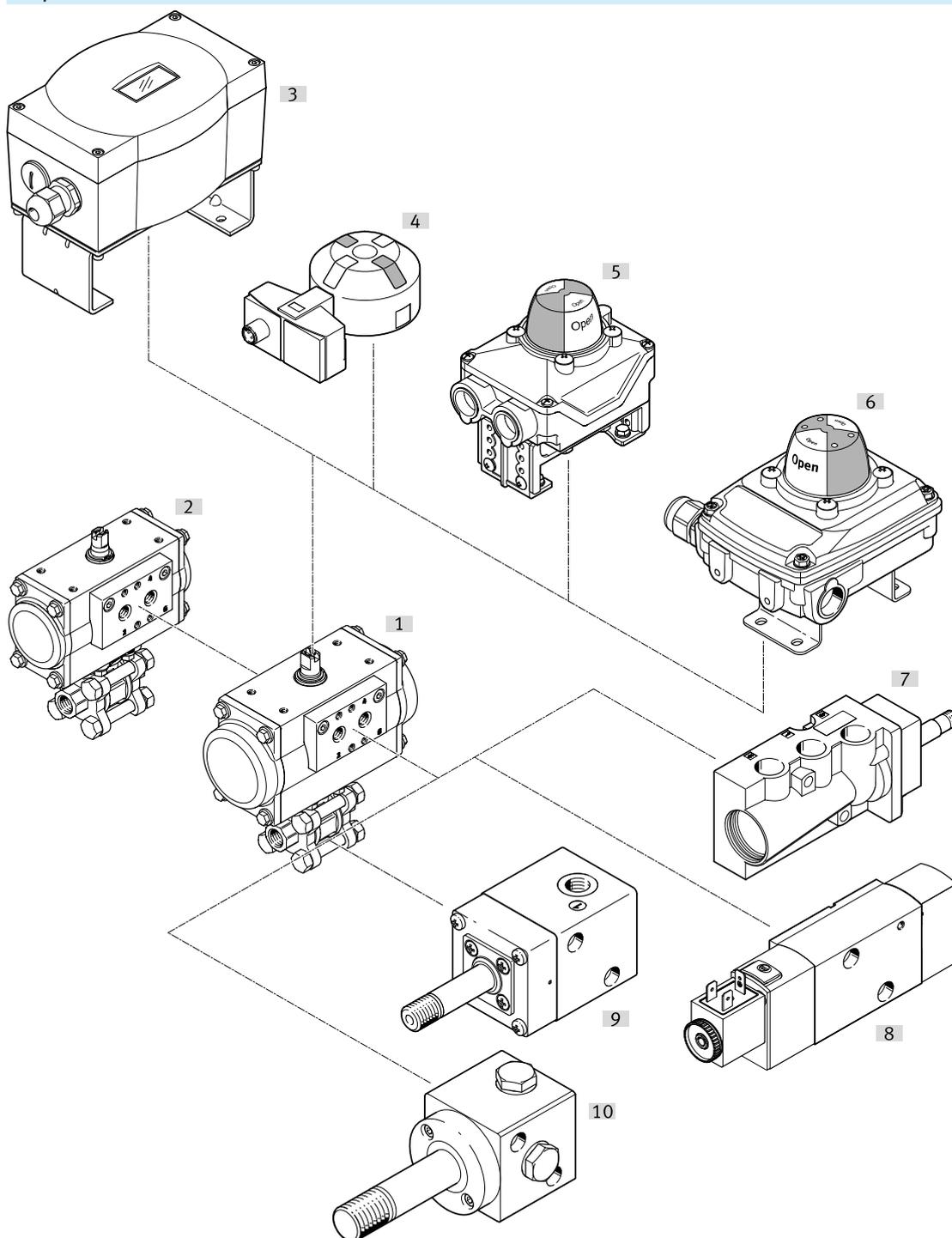
## Ordering data

DFPD, double-acting				
	Nominal size DN	Connection Process valve	Part no.	Type
	8	1/4 NPT	8191895	VZBE-A-1/4-T-63-T-2-F0304-V15V15-PA10
	10	3/8 NPT	8191896	VZBE-A-3/8-T-63-T-2-F0304-V15V15-PA10
	15	1/2 NPT	8191897	VZBE-A-1/2-T-63-T-2-F0304-V15V15-PA10
	20	3/4 NPT	8191898	VZBE-A-3/4-T-63-T-2-F0304-V15V15-PA20
	25	1 NPT	8191899	VZBE-A-1-T-63-T-2-F0405-V15V15-PA20
	32	1 1/4 NPT	8191900	VZBE-A-11/4-T-63-T-2-F0405-V15V15-PA40
	40	1 1/2 NPT	8191901	VZBE-A-11/2-T-63-T-2-F0507-V15V15-PA40
	50	2 NPT	8191902	VZBE-A-2-T-63-T-2-F0507-V15V15-PA60
	65	2 1/2 NPT	8191903	VZBE-A-21/2-T-63-T-2-F0710-V15V16-PA120
	80	3 NPT	8191904	VZBE-A-3-T-63-T-2-F0710-V15V16-PA160
100	4 NPT	8191905	VZBE-A-4-T-63-T-2-F1012-V15V16-PA240	

DFPD, single-acting				
	Nominal size DN	Connection Process valve	Part no.	Type
	8	1/4 NPT	8191906	VZBE-A-1/4-T-63-T-2-F0304-V15V15-PB20
	10	3/8 NPT	8191907	VZBE-A-3/8-T-63-T-2-F0304-V15V15-PB20
	15	1/2 NPT	8191908	VZBE-A-1/2-T-63-T-2-F0304-V15V15-PB20
	20	3/4 NPT	8191909	VZBE-A-3/4-T-63-T-2-F0304-V15V15-PB40
	25	1 NPT	8191910	VZBE-A-1-T-63-T-2-F0405-V15V15-PB60
	32	1 1/4 NPT	8191911	VZBE-A-11/4-T-63-T-2-F0405-V15V15-PB60
	40	1 1/2 NPT	8191912	VZBE-A-11/2-T-63-T-2-F0507-V15V15-PB80
	50	2 NPT	8191913	VZBE-A-2-T-63-T-2-F0507-V15V15-PB120
	65	2 1/2 NPT	8191914	VZBE-A-21/2-T-63-T-2-F0710-V15V16-PB240
	80	3 NPT	8191915	VZBE-A-3-T-63-T-2-F0710-V15V16-PB300
100	4 NPT	8191916	VZBE-A-4-T-63-T-2-F1012-V15V16-PB480	

## Peripherals

### Peripherals overview



Accessories		→ Link
Type/order code	Description	
[1] Ball valve actuator unit VZBE	Single-acting	<a href="#">vzbe</a>
[2] Ball valve actuator unit VZBE	Double-acting	<a href="#">vzbe</a>
[3] Positioner CMSX	For controlling the position of quarter turn actuators in process automation systems	<a href="#">cmsx</a>
[4] Sensor boxes SRBG	For electrical feedback and control of the position of process valves operated by quarter turn actuators	<a href="#">srbg</a>
[5] Limit switch box SRBK	<ul style="list-style-type: none"> <li>• Pre-assembled mounting flange adapter for ease of installation</li> <li>• 3D OPEN/CLOSED position indicator</li> </ul>	<a href="#">srbk</a>
[6] Sensor boxes SRBC	For electrical feedback and control of the position of process valves operated by quarter turn actuators	<a href="#">srbk</a>
[7] Solenoid valve NVF3	For F solenoid coil and explosion-proof F solenoid coil	<a href="#">nvf3</a>
[8] Solenoid valves VSNC	For single-acting and double-acting quarter turn actuators with plug pattern VDI/VDE 3845	<a href="#">vsnc</a>

## Peripherals

Accessories		→ Link
Type/order code	Description	
[9] Solenoid valves VOFC	Solenoid valve with solenoid coil, NAMUR connection pattern	<a href="#">vofc</a>
[10] Solenoid valves VOFD	Solenoid valve with solenoid coil, NAMUR connection pattern	<a href="#">vofd</a>