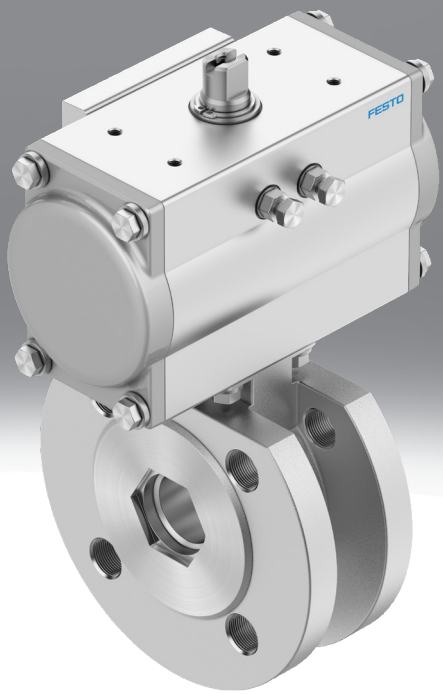
Ball valve actuator unit VZBC



Characteristics

At a glance

- Electric or pneumatic actuation
- Flange hole pattern according to ISO 5211
- Connection pattern to NAMUR VDI/VDE 3845
- Corrosion-resistant and acid-resistant versions
- Versions with ATEX certification
- Combination of a pneumatic quarter-turnactuator and a ball valve
- The flow is fully opened or closed in both directions
- Sensor boxes or limit switches for sensing the end positions can be mounted directly on the actuator unit

Design type

- 2-way ball valve actuator units made of stainless steel or brass with pipe thread or with weld ends
- 2-way ball valve actuator units made of stainless steel in compact design

Type code

001	Series	
VZBC	Ball valve	

002	Version	
A	Ball valve actuator unit	

003	Nominal diameter DN	
15	15 mm	
20	20 mm	
25	25 mm	
32	32 mm	
40	40 mm	
50	50 mm	
65	65 mm	
80	80 mm	
100	100 mm	

004	Process valve connection type 1	
F	Pipe fitting to DIN 2633/DIN 2501	

005	Process valve connection type 2	
F	Pipe fitting to DIN 2633/DIN 2501	

006	Valve function	
22	2/2-way	

007	Flanged connection	
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	

008	Housing material	
V4	Stainless steel (chrome-nickel-molybdenum, austenitic/1.4401, 1.4404 (AISI 316L), 1.4408)	

009	Shut-off element material	
V4	Stainless steel (chrome-nickel-molybdenum, austenitic/1.4401, 1.4404 (AISI 316L), 1.4408)	

010	Sealant	
T	PTFE	

011	Drive	
PA	DFPD, double-acting	
PB	DFPD, single-acting	

012	Torque [Nm]	
20	20	
40	40	
60	60	
80	80	
120	120	
160	160	
240	240	
480	480	

Datasheet

General technical data, with quarter turn actuator DFPD, 2-way									
Nominal size DN	15	20	25	32	40	50	65	80	100
Type of mounting	Inline installation								
Mounting position	Any								
Design	2-way ball valve, Quarter turn actuator								
Type of actuation	Pneumatic								
Switching position indicator	Slot direction = flow direction								
Nominal pressure PN	40						16		
Flow rate Kv	19.4 m³/h	45.6 m³/h	71.5 m³/h	105 m³/h	170 m³/h	275 m³/h	507 m³/h	905 m³/h	1,414 m³/h

Operating and environmental conditions, with quarter turn actuator DFPD, 2-way	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Operating pressure	5.5 ... 8 bar
Media temperature [1]	-10 ... 200°C
Medium	Compressed air to ISO 8573-1:2010 [-:-:-], Inert gases, Water – no steam, 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 [2]	1 - Low corrosion stress

1) As a function of operating pressure

2) Corrosion resistance class CRC 3 according to Festo standard FN 940070 Moderate corrosion resistance. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional surface requirements that are in direct contact with a normal industrial environment.

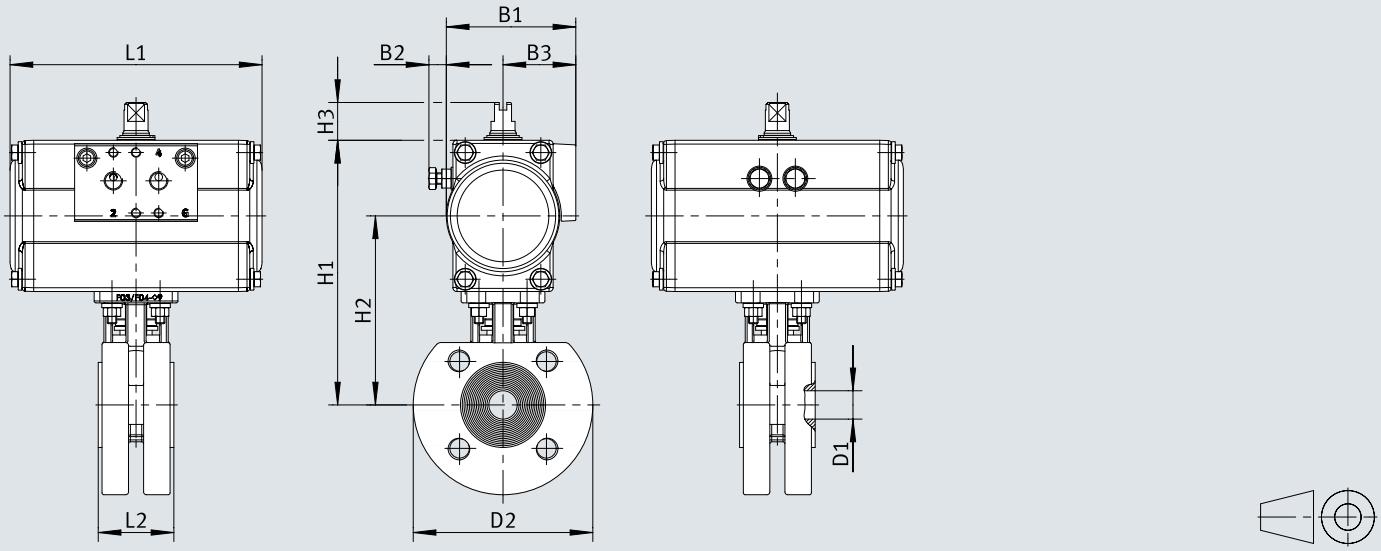
ATEX, with quarter turn actuator DFPD, 2-way	
Max. surface temperature assembly	+105°C...+280°C, T4...T2
explosion group assembly	IIC, IIIC
Explosion ambient temperature	-10°C <= Ta <= +80°C

Materials, with quarter turn actuator DFPD, 2-way	
Material housing	High-alloy stainless steel
Material number housing	1,4408
Material ball	High-alloy stainless steel
Material shaft	High-alloy stainless steel
Material number shaft	1,4401
Material seals	PTFE-reinforced
Note on materials	RoHS compliant

Dimensions

Dimensions – 2-way, stainless steel, DFPD double-acting

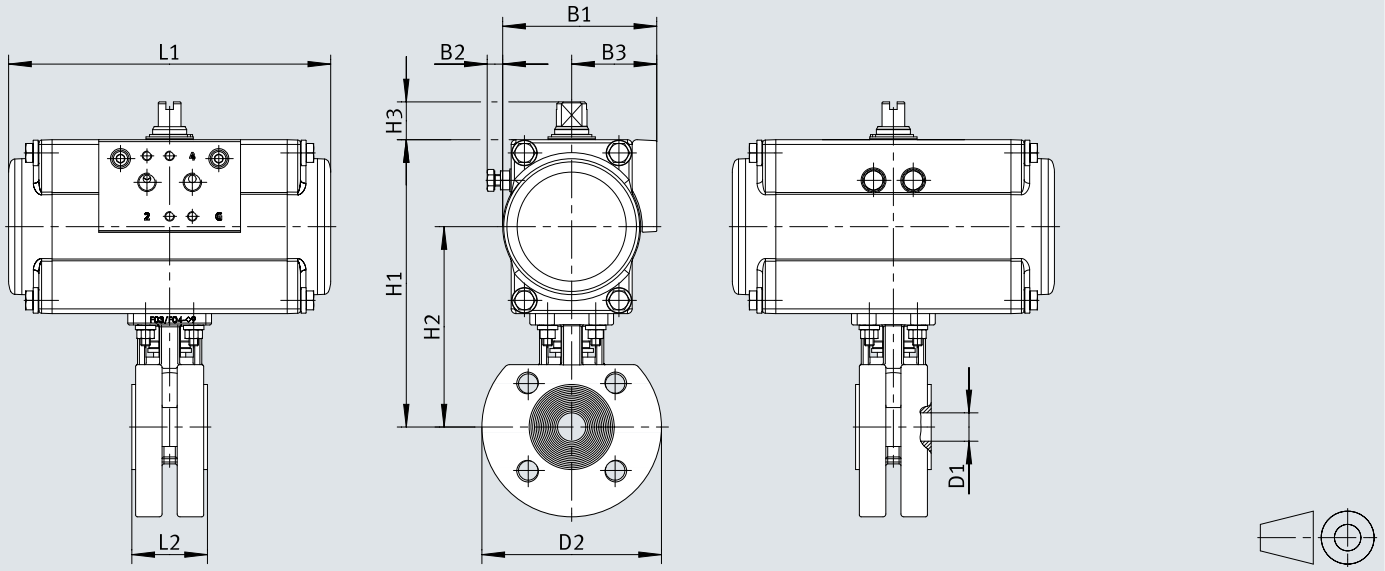
Download CAD data www.festo.com



	B1	B2	B3	D1 Ø	D2	H1	H2	H3	L1	L2
VZBC-A-15-FF-40-22-F0304-V4V4T-PA20	68,5	9,2	38,5	15	95	140	100	20	133,3	40
VZBC-A-20-FF-40-22-F0304-V4V4T-PA20	68,5	9,2	38,5	20	105	144,3	104,3	20	133,3	44
VZBC-A-25-FF-40-22-F0405-V4V4T-PA40	81,5	8,2	45	25	115	156,6	110,6	20	151,4	53
VZBC-A-32-FF-40-22-F0405-V4V4T-PA40	81,5	8,2	45	32	140	161	115	20	151,4	58,4
VZBC-A-40-FF-40-22-F0507-V4V4T-PA60	93,5	11	50,5	38	150	181,3	128,8	20	170	62
VZBC-A-50-FF-40-22-F0507-V4V4T-PA80	99	9	53	50	165	195,5	140,5	20	189,3	78
VZBC-A-65-FF-16-22-F07-V4V4T-PA120	111,5	12,3	60,5	64	185	228	166,5	20	213,7	100
VZBC-A-80-FF-16-22-F07-V4V4T-PA160	120	13,4	63,5	76	200	257	190	20	230,9	120
VZBC-A-100-FF-16-22-F0710-V4V4T-PA240	135,5	18,5	71,5	96	220	282	207	30	257	152

Dimensions

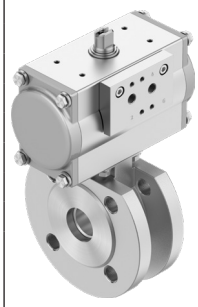
Dimensions – 2-way, stainless steel, DFPD single-acting Download CAD data www.festo.com



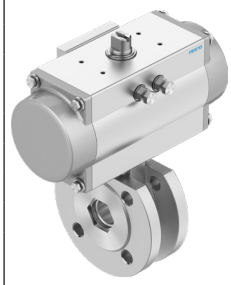
	B1	B2	B3	D1 Ø	D2	H1	H2	H3	L1	L2
VZBC-A-15-FF-40-22-F0304-V4V4T-PB40	81,5	8,2	45	15	95	152	106	20	170,4	40
VZBC-A-20-FF-40-22-F0304-V4V4T-PB40	81,5	8,2	45	20	105	156,3	110,3	20	170,4	44
VZBC-A-25-FF-40-22-F0405-V4V4T-PB60	93,5	11	50,5	25	115	169,6	117,1	20	201	53
VZBC-A-32-FF-40-22-F0405-V4V4T-PB60	93,5	11	50,5	32	140	174	121,5	20	201	58,3
VZBC-A-40-FF-40-22-F0507-V4V4T-PB120	111,5	12,3	60,5	38	150	199,3	137,8	20	252,3	62
VZBC-A-50-FF-40-22-F0507-V4V4T-PB160	120	13,4	63,5	50	165	219,5	152,5	20	270,9	78
VZBC-A-65-FF-16-22-F07-V4V4T-PB240	135,5	18,5	71,5	64	185	255	180	30	301,4	100
VZBC-A-80-FF-16-22-F07-V4V4T-PB480	163	19,3	83	76	200	382	290	30	374,2	120
VZBC-A-100-FF-16-22-F0710-V4V4T-PB480	163	19,3	83	96	220	316	224	30	374,2	152

Ordering data

DFPD double-acting

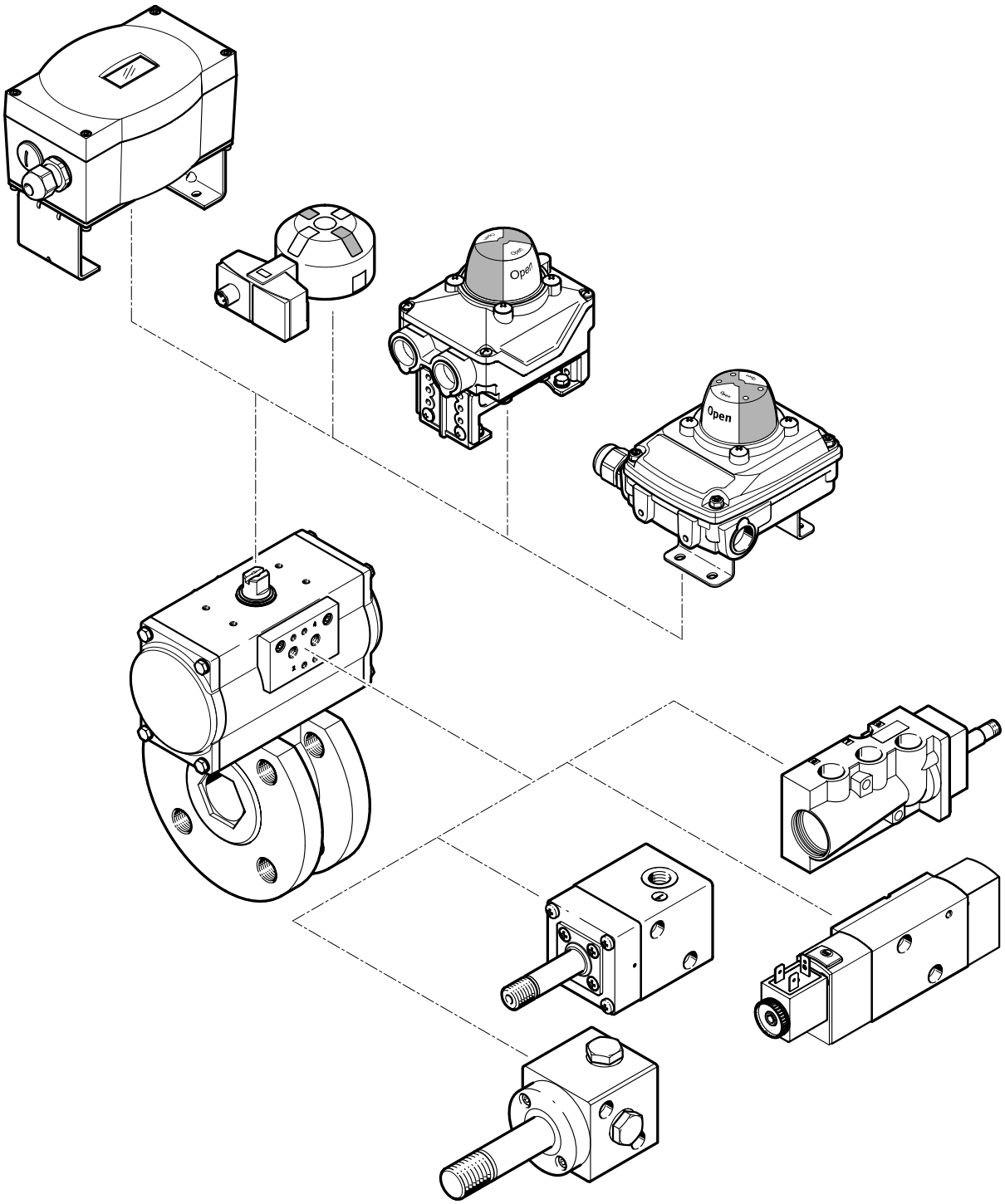
	Nominal size DN	Part no.	Type
	15	8191877	VZBC-A-15-FF-40-22-F0304-V4V4T-PA20
	20	8191878	VZBC-A-20-FF-40-22-F0304-V4V4T-PA20
	25	8191879	VZBC-A-25-FF-40-22-F0405-V4V4T-PA40
	32	8191880	VZBC-A-32-FF-40-22-F0405-V4V4T-PA40
	40	8191881	VZBC-A-40-FF-40-22-F0507-V4V4T-PA60
	50	8191882	VZBC-A-50-FF-40-22-F0507-V4V4T-PA80
	65	8191883	VZBC-A-65-FF-16-22-F07-V4V4T-PA120
	80	8191884	VZBC-A-80-FF-16-22-F07-V4V4T-PA160
	100	8191885	VZBC-A-100-FF-16-22-F0710-V4V4T-PA240

DFPD single-acting

	Nominal size DN	Part no.	Type
	15	8191886	VZBC-A-15-FF-40-22-F0304-V4V4T-PB40
	20	8191887	VZBC-A-20-FF-40-22-F0304-V4V4T-PB40
	25	8191888	VZBC-A-25-FF-40-22-F0405-V4V4T-PB60
	32	8191889	VZBC-A-32-FF-40-22-F0405-V4V4T-PB60
	40	8191890	VZBC-A-40-FF-40-22-F0507-V4V4T-PB120
	50	8191891	VZBC-A-50-FF-40-22-F0507-V4V4T-PB160
	65	8191892	VZBC-A-65-FF-16-22-F07-V4V4T-PB240
	80	8191893	VZBC-A-80-FF-16-22-F07-V4V4T-PB480
	100	8191894	VZBC-A-100-FF-16-22-F0710-V4V4T-PB480

Peripherals

Peripherals overview



Accessories			→ Link
	Type/order code	Description	
[1]	Ball valve actuator unit VZBC	Combination of double-acting or single-acting quarter turn actuator DFPD and 2-way stainless steel ball valve, compact design	vzbc
[2]	Positioner CMSX	For controlling the position of quarter-turn actuators in process automation systems	cmsx
[3]	Sensor boxes SRBG	For electrical feedback and position monitoring of process valves actuated by quarter turn actuators	srbg
[4]	Limit switch box SRBK	SRBK-CA4-... Variants with pre-assembled position	srbk
[5]	Sensor boxes SRBC	For electrical feedback and position monitoring of process valves actuated by quarter turn actuators	srbc
[6]	Solenoid valve NVF3	For F solenoid coil and explosion-proof F solenoid coil	nvf3
[7]	Solenoid valves VSNC	For single-acting and double-acting quarter turn actuators with a connection pattern to VDI/VDE 3845	vsnc
[8]	Solenoid valves VOFC	Solenoid valve with solenoid coil, NAMUR connection pattern	vofc

Peripherals

Accessories			→ Link
	Type/order code	Description	
[9]	Solenoid valves VOFD	Solenoid valve with solenoid coil, NAMUR connection pattern	vofd