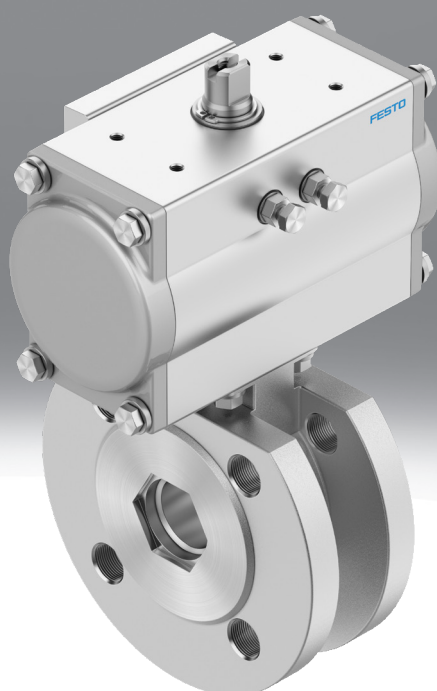


Ball valve actuator unit VZBC

FESTO



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-turn actuator 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	Nominal pressure [bar]	
16	16	
40	40	
007	Valve function	
22	2/2-way	
008	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	
009	Housing material	
V4	Stainless steel (chrome-nickel-molybdenum, austenitic/1.4401, 1.4404 (AISI 316L), 1.4408)	

010	Shut-off element material	
V4	Stainless steel (chrome-nickel-molybdenum, austenitic/1.4401, 1.4404 (AISI 316L), 1.4408)	
011	Sealant	
T	PTFE	
012	Drive	
PP	DAPS, double-acting	
PS	DAPS, single-acting	
PA	DFPD, double-acting	
PB	DFPD, single-acting	
013	Torque [Nm]	
15	15	
20	20	
30	30	
40	40	
53	53	
60	60	
80	80	
90	90	
106	106	
120	120	
160	160	
180	180	
240	240	
480	480	
014	Swivel direction	
R	Right	
015	Nominal swivel angle [°]	
90	90	
016	Spring ID	
	None	
4	4	
017	End-position adjustment	
C	Closing	

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	In-line installation								
Mounting position	optional								
Design	2-way ball valve, Semi-rotary drive								
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 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 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

General technical data, with quarter turn actuator DAPS, 2-way

Nominal size DN	15	20	25	32	40	50	65	80	100
Type of mounting	In-line installation								
Mounting position	optional								
Design	2-way ball valve, Semi-rotary drive								
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

Datasheet

Operating and environmental conditions, with quarter turn actuator DAPS, 2-way

Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Operating pressure	6 ... 8.4 bar
Ambient temperature	-10 ... 80°C
Media temperature ¹⁾	-10 ... 200°C
Medium	Compressed air to ISO 8573-1:2010 [:-:-], Inert gases, Water – no water vapour, Neutral fluids
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Corrosion resistance class CRC ²⁾	3 - high 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 DAPS, 2-way

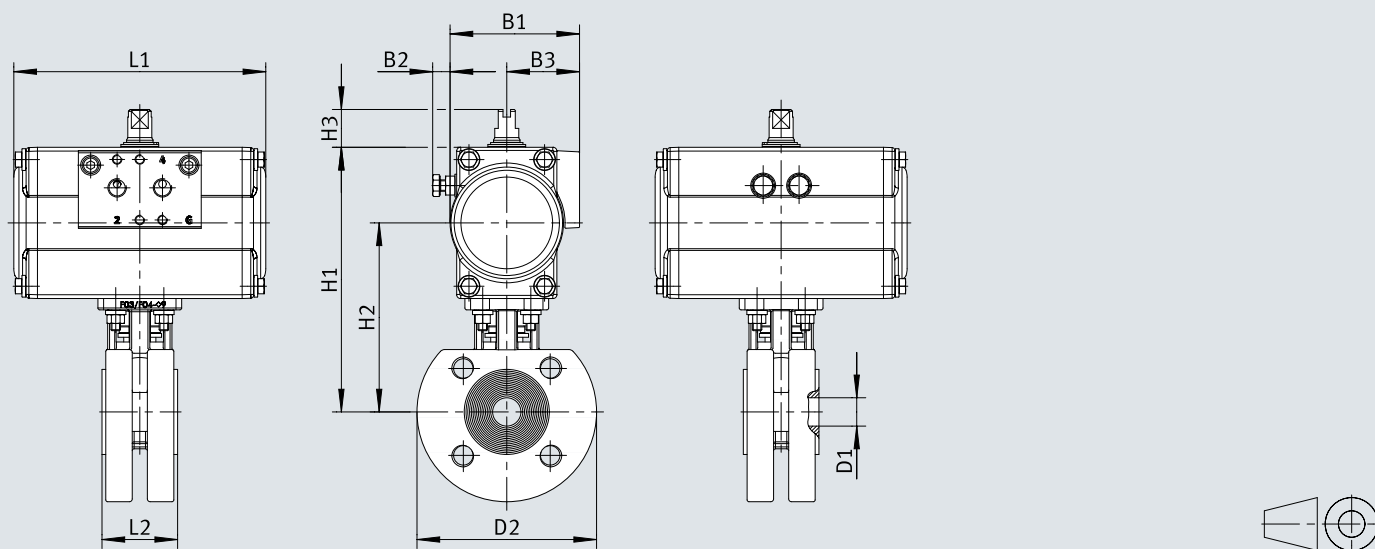
Max. surface temperature assembly	TX
explosion group assembly	IIC, IIIC
Explosion ambient temperature	-10°C ≤ Ta ≤ +60°C

Materials, with quarter turn actuator DAPS, 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, PTFE reinforced
Note on materials	RoHS-compliant

Dimensions

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

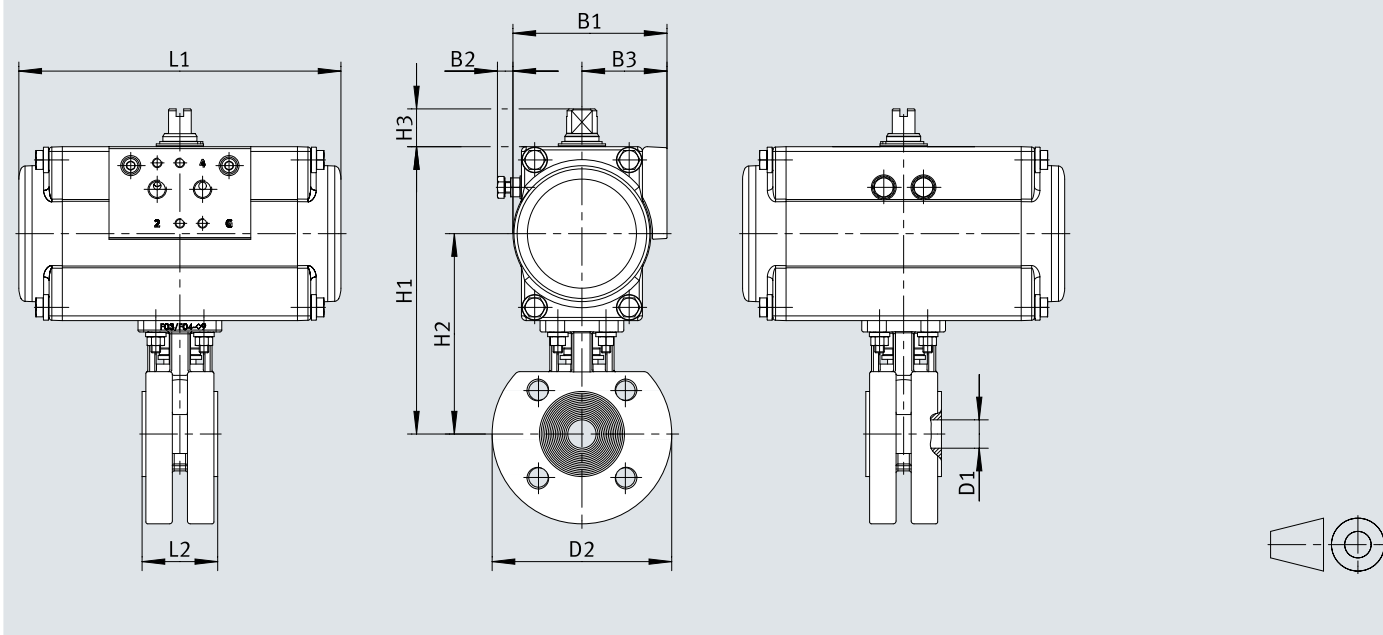
Download CAD data www.festo.com

	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

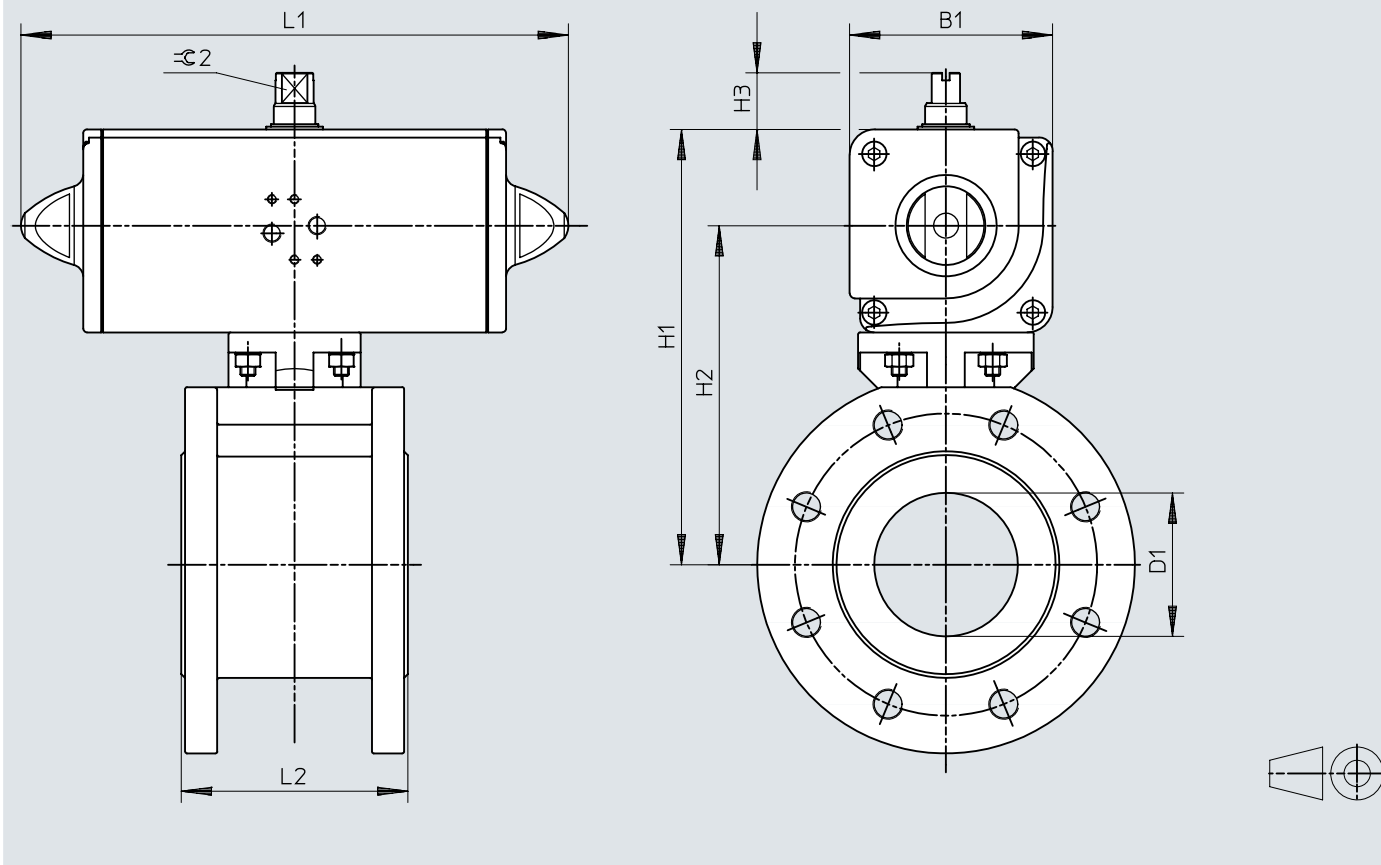
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	B1	B2	B3	D1 Ø	D2	H1	H2	H3	L1	L2
VZBC-A-15-FF-40-22-F0304-V4V4T-PB40	81,5	8,2	45	15	95	152	106	20	170,4	40
VZBC-A-20-FF-40-22-F0304-V4V4T-PB40	81,5	8,2	45	20	105	156,3	110,3	20	170,4	44
VZBC-A-25-FF-40-22-F0405-V4V4T-PB60	93,5	11	50,5	25	115	169,6	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

Dimensions

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

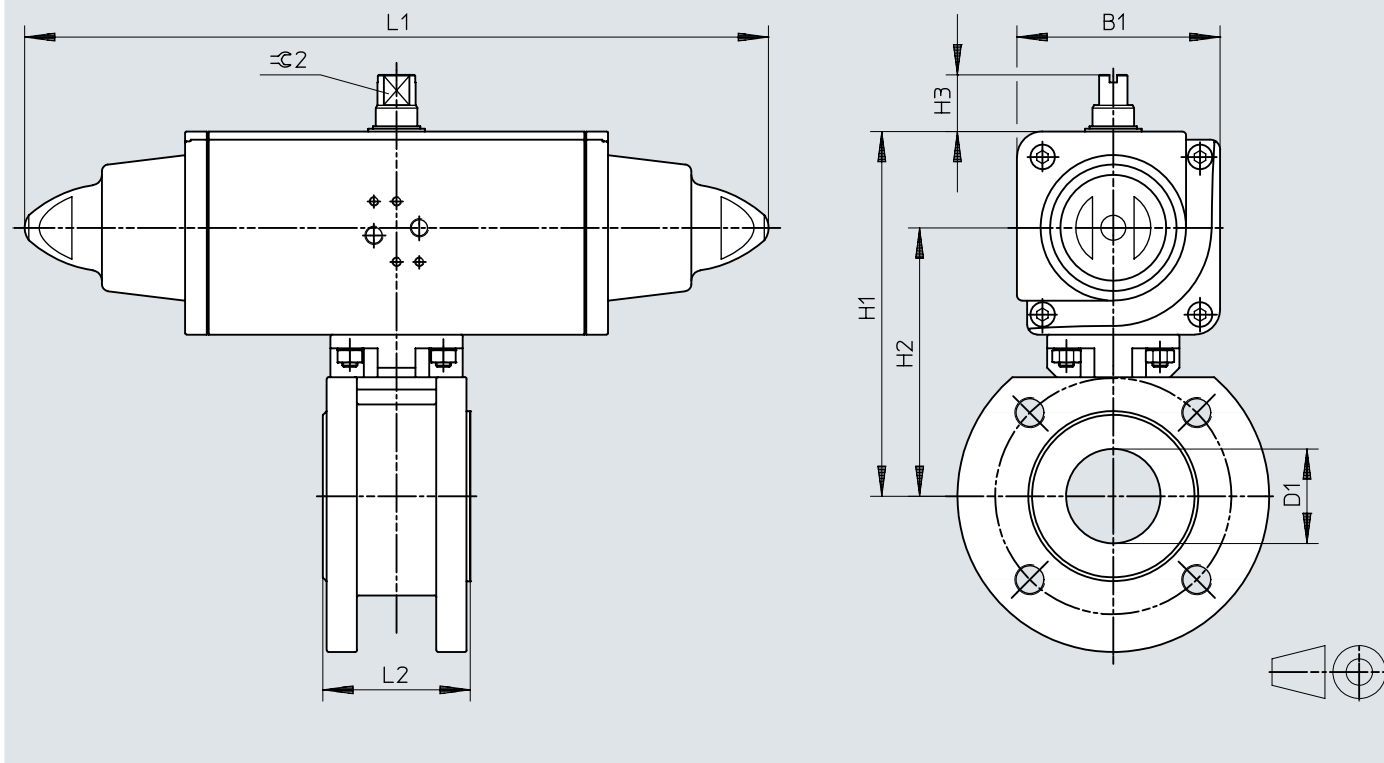
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	B1	D1 ø	H1	H2	H3	L1	L2	≙ 2
VZBC-15-FF-40-22-F0304-V4V4T-PP15-R-90-C	52,2	15	112,2	88	20	159	40	8
VZBC-20-FF-40-22-F0304-V4V4T-PP30-R-90-C	59,2	20	123,5	95,8	20	174	44	9
VZBC-25-FF-40-22-F0405-V4V4T-PP30-R-90-C	59,2	25	123,8	96,1	20	174	53	9
VZBC-32-FF-40-22-F0405-V4V4T-PP60-R-90-C	70,4	32	139,4	106,7	20	198	58,4	10
VZBC-40-FF-40-22-F0507-V4V4T-PP60-R-90-C	70,4	38	146,7	114	20	198	62	10
VZBC-50-FF-40-22-F0507-V4V4T-PP106-R-90-C	83,3	50	168,8	130,3	20	237,1	78	12
VZBC-65-FF-16-22-F07-V4V4T-PP180-R-90-C	107,5	64	212,5	161,5	30	289,9	100	15
VZBC-80-FF-16-22-F07-V4V4T-PP180-R-90-C	107,5	76	229,5	178,5	30	289,9	120	15
VZBC-100-FF-16-22-F0710-V4V4T-PP240-R-90-C	111,1	96	243,1	192,1	30	313,6	152	15

Dimensions

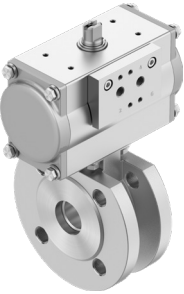
Dimensions – 2-way, stainless steel, DAPS, single-acting

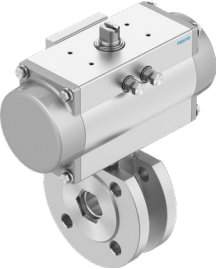
Download CAD data www.festo.com



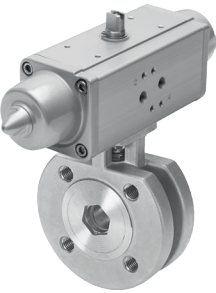
	B1	D1 Ø	H1	H2	H3	L1	L2	2
VZBC-15-FF-40-22-F0304-V4V4T-PS15-R-90-4-C	59,2	15	119,2	91,5	20	233,3	40	9
VZBC-20-FF-40-22-F0304-V4V4T-PS30-R-90-4-C	70,4	20	134,7	102	20	259	44	10
VZBC-25-FF-40-22-F0405-V4V4T-PS30-R-90-4-C	70,4	25	135	102,3	20	259	53	10
VZBC-32-FF-40-22-F0405-V4V4T-PS53-R-90-4-C	83,3	32	152,3	113,8	20	304,3	58,4	12
VZBC-40-FF-40-22-F0507-V4V4T-PS53-R-90-4-C	83,3	38	159,6	121,1	20	304,3	62	12
VZBC-50-FF-40-22-F0507-V4V4T-PS90-R-90-4-C	107,5	50	193	142	30	393,7	78	15
VZBC-65-FF-16-22-F07-V4V4T-PS180-R-90-4-C	118	64	223	167	30	474	100	19
VZBC-80-FF-16-22-F07-V4V4T-PS180-R-90-4-C	118	76	241	185	30	474	120	19
VZBC-100-FF-16-22-F0710-V4V4T-PS240-R-90-4-C	134,9	96	266,9	204,9	30	520,5	152	19

Ordering data

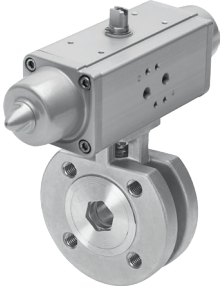
DFPD double-acting			
	Nominal size DN	Part no.	Type
	15	8191877	VZBC-A-15-FF-40-22-F0304-V4V4T-PA20
	20	8191878	VZBC-A-20-FF-40-22-F0304-V4V4T-PA20
	25	8191879	VZBC-A-25-FF-40-22-F0405-V4V4T-PA40
	32	8191880	VZBC-A-32-FF-40-22-F0405-V4V4T-PA40
	40	8191881	VZBC-A-40-FF-40-22-F0507-V4V4T-PA60
	50	8191882	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

DAPS double-acting			
	Nominal size DN	Part no.	Type
	15	1913365	VZBC-15-FF-40-22-F0304-V4V4T-PP15-R-90-C
	20	1913367	VZBC-20-FF-40-22-F0304-V4V4T-PP30-R-90-C
	25	1913368	VZBC-25-FF-40-22-F0405-V4V4T-PP30-R-90-C
	32	1913369	VZBC-32-FF-40-22-F0405-V4V4T-PP60-R-90-C
	40	1913370	VZBC-40-FF-40-22-F0507-V4V4T-PP60-R-90-C
	50	1913371	VZBC-50-FF-40-22-F0507-V4V4T-PP106-R-90-C
	65	1913372	VZBC-65-FF-16-22-F07-V4V4T-PP180-R-90-C
	80	1913373	VZBC-80-FF-16-22-F07-V4V4T-PP180-R-90-C
	100	1913374	VZBC-100-FF-16-22-F0710-V4V4T-PP240-R-90-C

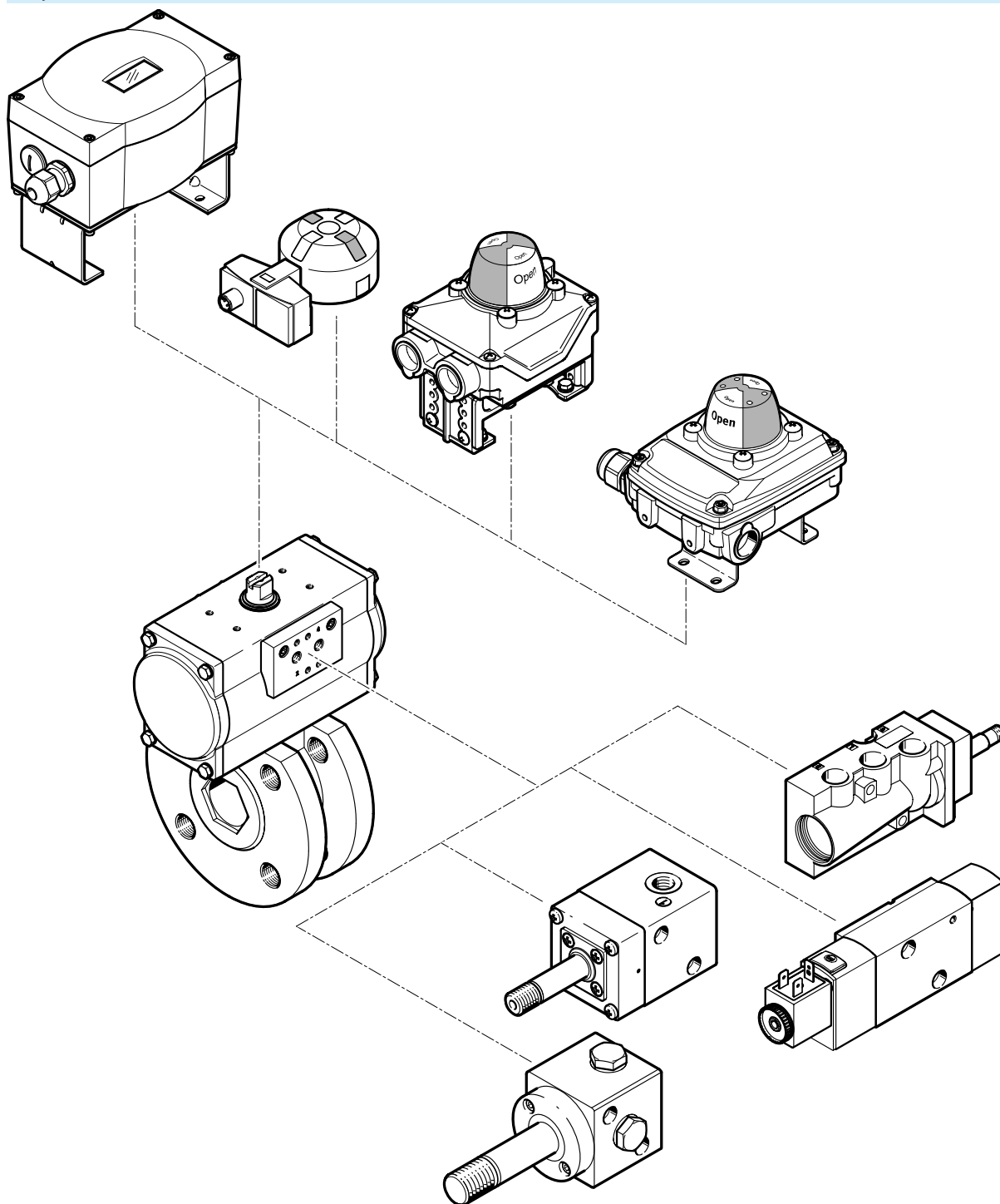
DAPS single-acting			
	Nominal size DN	Part no.	Type
	15	1915401	VZBC-15-FF-40-22-F0304-V4V4T-PS15-R-90-4-C

Ordering data

DAPS single-acting			
	Nominal size DN	Part no.	Type
	20	1915402	VZBC-20-FF-40-22-F0304-V4V4T-PS30-R-90-4-C
	25	1915403	VZBC-25-FF-40-22-F0405-V4V4T-PS30-R-90-4-C
	32	1915404	VZBC-32-FF-40-22-F0405-V4V4T-PS53-R-90-4-C
	40	1915406	VZBC-40-FF-40-22-F0507-V4V4T-PS53-R-90-4-C
	50	1915407	VZBC-50-FF-40-22-F0507-V4V4T-PS90-R-90-4-C
	65	1915408	VZBC-65-FF-16-22-F07-V4V4T-PS180-R-90-4-C
	80	1915409	VZBC-80-FF-16-22-F07-V4V4T-PS180-R-90-4-C
	100	1915410	VZBC-100-FF-16-22-F0710-V4V4T-PS240-R-90-4-C

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