

Ball valve actuator units VZBA



Ball valve actuator units VZBA

Key features and product range overview



General	Design	Properties
<ul style="list-style-type: none"> Connecting thread Rp$\frac{1}{4}$... Rp4 Flow rate 7 ... 1,414 m³/h 	<ul style="list-style-type: none"> 2-way ball valve actuator units made from stainless steel with pipe thread¹⁾ or with weld-on ends 2-way ball valve actuator units made from stainless steel in compact design 3-way ball valve actuator units made from stainless steel Port pattern to NAMUR VDI/VDE 3845 	<ul style="list-style-type: none"> Combination of a pneumatic quarter turn actuator and a ball valve Flow is fully opened or closed in both directions Limit switch attachments for end-position sensing can be mounted directly on the unit

Valves with port pattern to NAMUR
→ Internet: namur

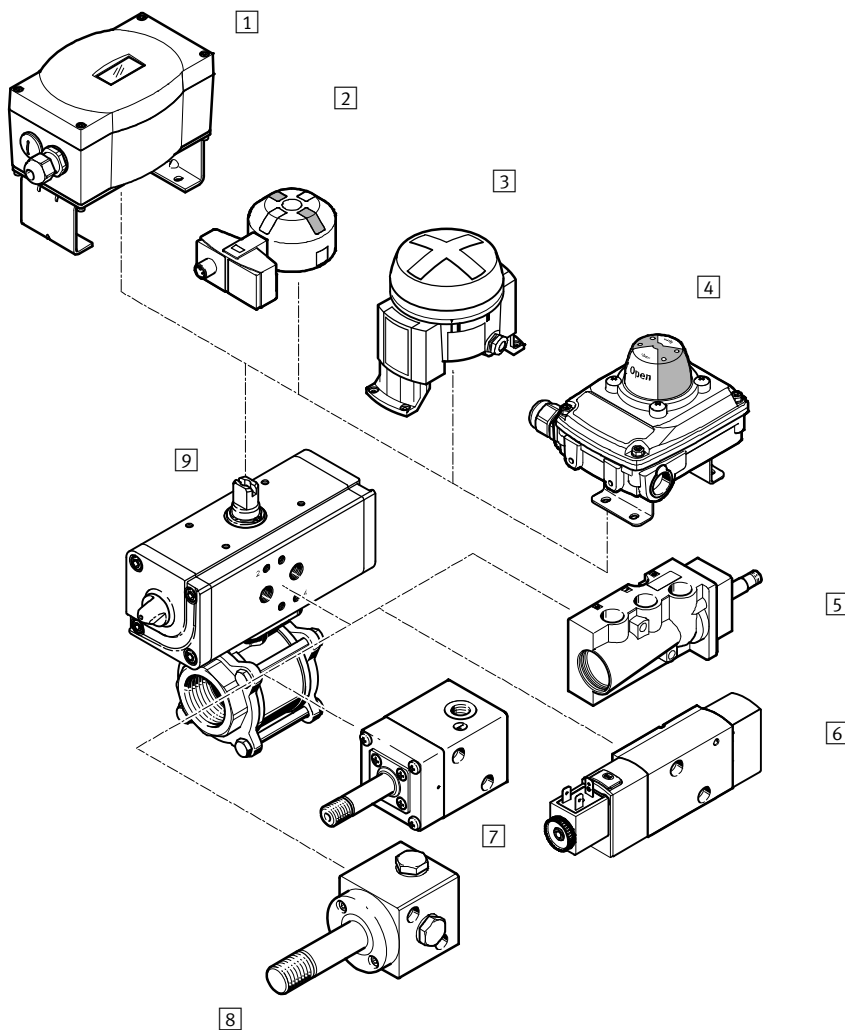
Limit switch attachments with port pattern to NAMUR
→ Internet: dapz

Design	Type	Quarter turn actuator	Nominal size DN	Process valve nominal pressure	→ Page/Internet
2-way ball valve actuator units, stainless steel					
	VZBA...-WW (with weld-on ends)	DAPS, double-acting	8 ... 100	PN 63	6
	VZBA...-WW (with weld-on ends)	DAPS, single-acting			
	VZBA...-GG (with connecting thread ¹⁾)	DAPS, double-acting			
	VZBA...-GG (with connecting thread ¹⁾)	DAPS, single-acting			
2-way ball valve actuator units in compact design, stainless steel					
	VZBC...-FF	DAPS, double-acting	15 ... 50	PN 40	14
			65 ... 100	PN 16	
	VZBC...-FF	DAPS, single-acting	15 ... 50	PN 40	
			65 ... 100	PN 16	
3-way ball valve actuator units, with L or T-shaped hole, stainless steel					
	VZBA...-GGG	DAPS, double-acting	8 ... 50	PN 63	20
	VZBA...-GGG	DAPS, single-acting			

1) Pipe thread to DIN EN 10226-1 (previously DIN 2999)

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Peripherals overview



Mounting components and accessories		
	Brief description	→ Page/Internet
1	Positioner CMSX	For position control of quarter turn actuators in process automation systems cmsx
2	Sensor boxes SRBG	For electrical feedback and position monitoring of process valves which are actuated with quarter turn actuators srbg
3	Limit switch attachments DAPZ	Round design, variant AR Electrical, inductive or inductive and explosion-proof sensing dapz
4	Sensor boxes SRBC	For electrical feedback and position monitoring of process valves which are actuated with quarter turn actuators srbc
5	Solenoid valve NVF3	For F solenoid coil and explosion-proof F solenoid coil nvf3
6	Solenoid valves VSNC	For single- and double-acting quarter turn actuators with a connection pattern to VDI/VDE 3845 vsnc
7	Solenoid valves VOFC	Solenoid valve with solenoid coil, connection pattern to Namur vofc
8	Solenoid valves VOFD	Solenoid valve with solenoid coil, connection pattern to Namur vofd
9	Ball valve actuator unit VZBA	Combination of quarter turn actuator and ball valve 6

Ball valve actuator units VZBA

Type codes

FESTO

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

Type	
VZBA	Ball valve

Size (nominal diameter 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 DIN EN 10226-1 (previously DIN 2999)
W	Weld-on end

Connection type 2	
G	Pipe thread to DIN EN 10226-1 (previously DIN 2999)
W	Weld-on end

Process valve nominal pressure PN	
63	63 bar

Design	
T	In three pieces

Directional control function	
22	2/2-way

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

Ball valve actuator units VZBA

Type codes

V4 V4 T - PS 15 - R - 90 - 4 - C

Housing material

V4	Stainless steel 1.4401/1.4404 (AISI 316L)/1.4408
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Shut-off element material

V4	Stainless steel 1.4401/1.4404 (AISI 316L)/1.4408
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Sealing material

T	Reinforced PTFE
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Actuator

PP	DAPS, double-acting
PS	DAPS, single-acting

Torque

15	15 Nm
30	30 Nm
53	53 Nm
60	60 Nm
90	90 Nm
106	106 Nm
120	120 Nm
180	180 Nm
240	240 Nm

Swivel direction

R	Right
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Nominal swivel angle

90	90°
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Spring index

-	Omitted for double-acting
1	Spring strength for connection pressure 2.8 bar
2	Spring strength for connection pressure 3.5 bar
3	Spring strength for connection pressure 4.2 bar
4	Spring strength for connection pressure 5.6 bar

End-position adjustment

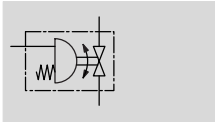
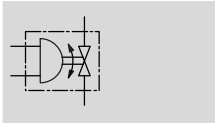
C	Closed
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Ball valve actuator units VZBA, 2-way

Technical data

FESTO

Function



-  Swivel angle
0 ... 90°
-  Flow rate
7 ... 1,414 m³/h
-  Connecting thread
Rp¹/₄ ... Rp₄



General technical data												
Nominal size DN	8	10	15	20	25	32	40	50	65	80	100	
Quarter turn actuator												
Type of mounting	In-line installation											
Mounting position	Any											
Swivel angle	[°]	90										
Closing direction	Right-closing											
Ball valve												
Design	2-way ball valve, quarter turn actuator											
Actuation type	Pneumatic											
Switching position display	Slot direction = flow direction											
Process valve nominal pressure PN ¹⁾	63											
Flow rate Kv	[m ³ /h]	7	10	19.4	45.6	71.5	105	170	275	507	905	1,414

Operating and environmental conditions	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Operating pressure	[bar] 6 ... 8.4
Ambient temperature	[°C] -10 ... +80
Temperature of medium ²⁾	[°C] -10 ... +200
Food industry approval	No
Medium	Compressed air to ISO 8573-1:2010 [:-:-] Inert gases Neutral fluids Water (no water vapour)
Note on operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant
Corrosion resistance class CRC ³⁾	3

1) PN class to DIN EN 1333

2) As a function of operating pressure → 7

3) CRC3: Corrosion resistance class to Festo standard 940 070

Components with heavy corrosion exposure. Externally visible components in direct contact with normal industrial atmosphere or media such as solvents and cleaning agents, where the surface requirement is predominantly functional.

Ball valve actuator units VZBA, 2-way

Technical data

ATEX	
ATEX category for gas	II 2G
ATEX category for dust	II 2D
Max. surface temperature assembly	TX
Explosion group assembly	II C
Explosion-proof temperature rating	-10°C ≤ Ta ≤ +60°C

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

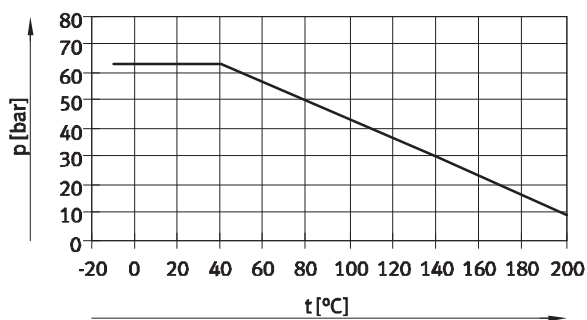
Weight [g] – Double-acting			
Nominal size DN	Process valve connection		
8	Rp1/4	Weld-on ends	1,450
10	Rp3/8		1,450
15	Rp1/2		1,450
20	Rp3/4		1,900
25	Rp1		2,300
32	Rp1 1/4		3,800

Nominal size DN	Process valve connection		
40	Rp1 1/2	Weld-on ends	4,800
50	Rp2		6,600
65	Rp2 1/2		11,700
80	Rp3		18,200
100	Rp4		27,700

Weight [g] – Single-acting			
Nominal size DN	Process valve connection		
8	Rp1/4	Weld-on ends	2,000
10	Rp3/8		2,000
15	Rp1/2		2,000
20	Rp3/4		3,100
25	Rp1		3,500
32	Rp1 1/4		5,150

Nominal size DN	Process valve connection		
40	Rp1 1/2	Weld-on ends	6,100
50	Rp2		10,000
65	Rp2 1/2		16,300
80	Rp3		22,900
100	Rp4		33,500

The permissible medium pressure sinks as a function of the temperature of the medium



Ball valve actuator units VZBA, 2-way

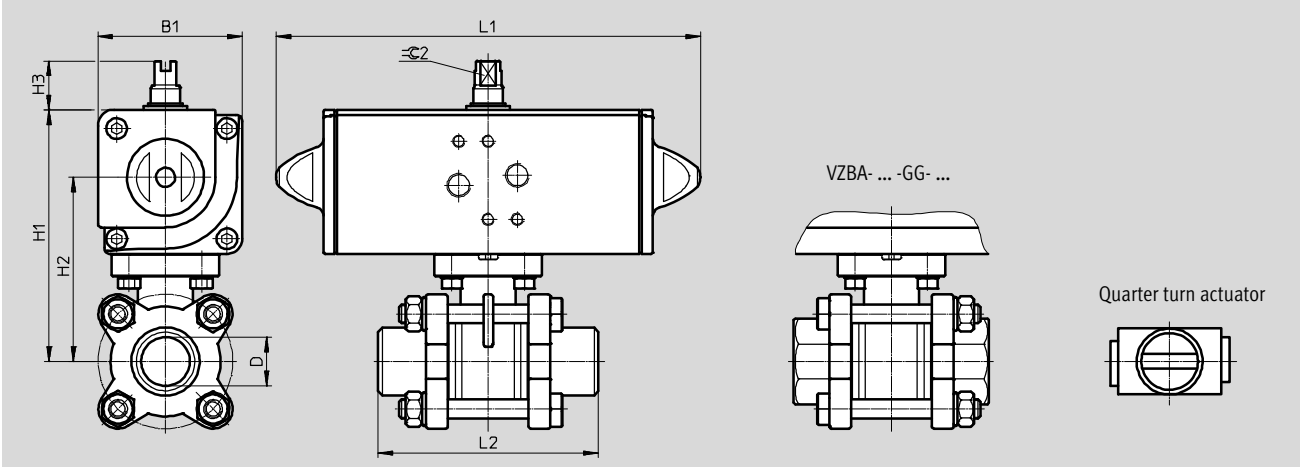
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

DAPS – Double-acting



Type	B1	D ∅	H1	H2	H3	L1	L2	≈ 2
VZBA-1/4"-WW-63-T-22-F0304-V4V4T-PP15-R-90-C	52.2	10	92.2	68	20	159	70	8
VZBA-3/8"-WW-63-T-22-F0304-V4V4T-PP15-R-90-C	52.2	12	92.2	68	20	159	70	8
VZBA-1/2"-WW-63-T-22-F0304-V4V4T-PP15-R-90-C	52.2	16	92.2	68	20	159	75	8
VZBA-3/4"-WW-63-T-22-F0304-V4V4T-PP30-R-90-C	59.2	20	103.2	75.5	20	174	90	9
VZBA-1"-WW-63-T-22-F0405-V4V4T-PP30-R-90-C	59.2	25	111.2	83.5	20	174	100	9
VZBA-1 1/4"-WW-63-T-22-F0405-V4V4T-PP60-R-90-C	70.4	32	128.4	95.7	20	198	110	10
VZBA-1 1/2"-WW-63-T-22-F0507-V4V4T-PP60-R-90-C	70.4	38	138.4	105.7	20	198	125	10
VZBA-2"-WW-63-T-22-F0507-V4V4T-PP60-R-90-C	70.4	50	147.7	114.7	20	198	150	10
VZBA-2 1/2"-WW-63-T-22-F0710-V4V4T-PP106-R-90-C	83.3	65	181.3	142.8	20	237.1	190	12
VZBA-3"-WW-63-T-22-F0710-V4V4T-PP180-R-90-C	107.5	80	217.5	166.5	30	289.9	220	15
VZBA-4"-WW-63-T-22-F10-V4V4T-PP240-R-90-C	111.1	100	249.1	198.1	30	313.6	270	15

Type	B1	D ∅	H1	H2	H3	L1	L2	≈ 2
VZBA-1/4"-GG-63-T-22-F0304-V4V4T-PP15-R-90-C	52.2	10	99.2	68	20	159	65	8
VZBA-3/8"-GG-63-T-22-F0304-V4V4T-PP15-R-90-C	52.2	12	99.2	68	20	159	65	8
VZBA-1/2"-GG-63-T-22-F0304-V4V4T-PP15-R-90-C	52.2	16	99.2	68	20	159	75	8
VZBA-3/4"-GG-63-T-22-F0304-V4V4T-PP30-R-90-C	59.2	20	103.2	75.5	20	174	80	9
VZBA-1"-GG-63-T-22-F0405-V4V4T-PP30-R-90-C	59.2	25	111.2	83.5	20	174	90	9
VZBA-1 1/4"-GG-63-T-22-F0405-V4V4T-PP60-R-90-C	70.4	32	128.4	95.7	20	198	110	10
VZBA-1 1/2"-GG-63-T-22-F0507-V4V4T-PP60-R-90-C	70.4	38	138.4	105.7	20	198	120	10
VZBA-2"-GG-63-T-22-F0507-V4V4T-PP60-R-90-C	70.4	50	147.7	114.7	20	198	140	10
VZBA-2 1/2"-GG-63-T-22-F0710-V4V4T-PP106-R-90-C	83.3	65	181.3	142.8	20	237.1	185	12
VZBA-3"-GG-63-T-22-F0710-V4V4T-PP180-R-90-C	107.5	80	217.5	166.5	30	289.9	205	15
VZBA-4"-GG-63-T-22-F10-V4V4T-PP240-R-90-C	111.1	100	249.1	198.1	30	313.6	240	15

Ball valve actuator units VZBA, 2-way

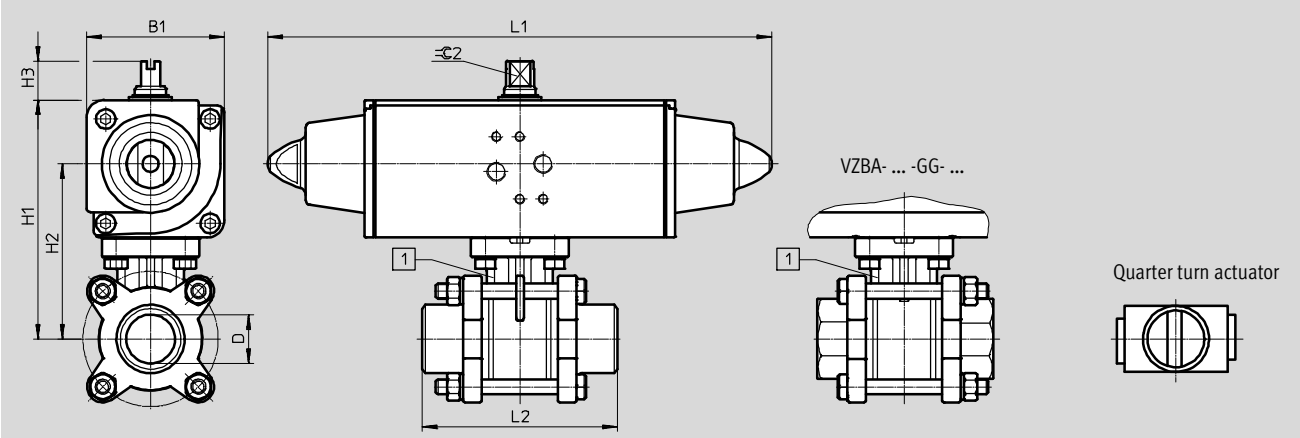
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

DAPS – Single-acting

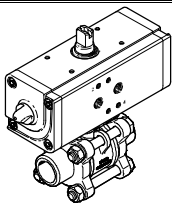
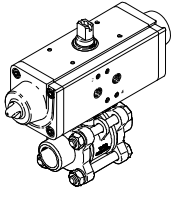


Type	B1	D ∅	H1	H2	H3	L1	L2	∅ 2
VZBA-1/4"-WW-63-T-22-F0304-V4V4T-PS15-R-90-4-C	59.2	10	99.2	71.5	20	233.3	70	9
VZBA-3/8"-WW-63-T-22-F0304-V4V4T-PS15-R-90-4-C	59.2	12	99.2	71.5	20	233.3	70	9
VZBA-1/2"-WW-63-T-22-F0304-V4V4T-PS15-R-90-4-C	59.2	16	99.2	71.5	20	233.3	75	9
VZBA-3/4"-WW-63-T-22-F0304-V4V4T-PS30-R-90-4-C	70.4	20	114.4	81.7	20	259	90	10
VZBA-1"-WW-63-T-22-F0405-V4V4T-PS30-R-90-4-C	70.4	25	122.4	89.7	20	259	100	10
VZBA-1 1/4"-WW-63-T-22-F0405-V4V4T-PS53-R-90-4-C	83.3	32	141.3	102.8	20	304.3	110	12
VZBA-1 1/2"-WW-63-T-22-F0507-V4V4T-PS53-R-90-4-C	83.3	38	151.3	112.8	20	304.3	125	12
VZBA-2"-WW-63-T-22-F0507-V4V4T-PS90-R-90-4-C	107.5	50	184.5	133.5	30	393.7	150	15
VZBA-2 1/2"-WW-63-T-22-F0710-V4V4T-PS120-R-90-4-C	111.1	65	209.1	158.1	30	409.6	190	15
VZBA-3"-WW-63-T-22-F0710-V4V4T-PS180-R-90-4-C	118	80	228	172	30	474	220	19
VZBA-4"-WW-63-T-22-F10-V4V4T-PS240-R-90-4-C	134.9	100	272.9	210.9	30	520.5	270	19

Type	B1	D ∅	H1	H2	H3	L1	L2	∅ 2
VZBA-1/4"-GG-63-T-22-F0304-V4V4T-PS15-R-90-4-C	59.2	10	99.2	71.5	20	233.3	65	9
VZBA-3/8"-GG-63-T-22-F0304-V4V4T-PS15-R-90-4-C	59.2	12	99.2	71.5	20	233.3	65	9
VZBA-1/2"-GG-63-T-22-F0304-V4V4T-PS15-R-90-4-C	59.2	16	99.2	71.5	20	233.3	75	9
VZBA-3/4"-GG-63-T-22-F0304-V4V4T-PS30-R-90-4-C	70.4	20	114.4	81.7	20	259	80	10
VZBA-1"-GG-63-T-22-F0405-V4V4T-PS30-R-90-4-C	70.4	25	122.4	89.7	20	259	90	10
VZBA-1 1/4"-GG-63-T-22-F0405-V4V4T-PS53-R-90-4-C	83.3	32	141.3	102.8	20	304.3	110	12
VZBA-1 1/2"-GG-63-T-22-F0507-V4V4T-PS53-R-90-4-C	83.3	38	151.3	112.8	20	304.3	120	12
VZBA-2"-GG-63-T-22-F0507-V4V4T-PS90-R-90-4-C	107.5	50	184.5	133.5	30	393.7	140	15
VZBA-2 1/2"-GG-63-T-22-F0710-V4V4T-PS120-R-90-4-C	111.1	65	209.1	158.1	30	409.6	185	15
VZBA-3"-GG-63-T-22-F0710-V4V4T-PS180-R-90-4-C	118	80	228	172	30	474	205	19
VZBA-4"-GG-63-T-22-F10-V4V4T-PS240-R-90-4-C	134.9	100	272.9	210.9	30	520.5	240	19

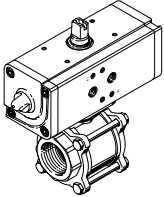
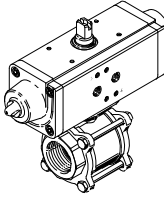
Ball valve actuator units VZBA, 2-way

Technical data

Ordering data – Ball valve actuator units with weld-on ends			
DAPS – Double-acting	Connection	Part No.	Type
	With weld-on ends	1810730	VZBA-1/4"-WW-63-T-22-F0304-V4V4T-PP15-R-90-C
		1810731	VZBA-3/8"-WW-63-T-22-F0304-V4V4T-PP15-R-90-C
		1810732	VZBA-1/2"-WW-63-T-22-F0304-V4V4T-PP15-R-90-C
		1810733	VZBA-3/4"-WW-63-T-22-F0304-V4V4T-PP30-R-90-C
		1810734	VZBA-1"-WW-63-T-22-F0405-V4V4T-PP30-R-90-C
		1810735	VZBA-1 1/4"-WW-63-T-22-F0405-V4V4T-PP60-R-90-C
		1810736	VZBA-1 1/2"-WW-63-T-22-F0507-V4V4T-PP60-R-90-C
		1810737	VZBA-2"-WW-63-T-22-F0507-V4V4T-PP60-R-90-C
		1810738	VZBA-2 1/2"-WW-63-T-22-F0710-V4V4T-PP106-R-90-C
		1810739	VZBA-3"-WW-63-T-22-F0710-V4V4T-PP180-R-90-C
		1810740	VZBA-4"-WW-63-T-22-F10-V4V4T-PP240-R-90-C
DAPS – Single-acting			
	With weld-on ends	1774103	VZBA-1/4"-WW-63-T-22-F0304-V4V4T-PS15-R-90-4-C
		1774104	VZBA-3/8"-WW-63-T-22-F0304-V4V4T-PS15-R-90-4-C
		1774105	VZBA-1/2"-WW-63-T-22-F0304-V4V4T-PS15-R-90-4-C
		1774106	VZBA-3/4"-WW-63-T-22-F0304-V4V4T-PS30-R-90-4-C
		1774107	VZBA-1"-WW-63-T-22-F0405-V4V4T-PS30-R-90-4-C
		1774108	VZBA-1 1/4"-WW-63-T-22-F0405-V4V4T-PS60-R-90-4-C
		1774109	VZBA-1 1/2"-WW-63-T-22-F0507-V4V4T-PS60-R-90-4-C
		1774110	VZBA-2"-WW-63-T-22-F0507-V4V4T-PS60-R-90-4-C
		1774111	VZBA-2 1/2"-WW-63-T-22-F0710-V4V4T-PS106-R-90-4-C
		1774112	VZBA-3"-WW-63-T-22-F0710-V4V4T-PS180-R-90-4-C
		1774113	VZBA-4"-WW-63-T-22-F10-V4V4T-PS240-R-90-4-C

Ball valve actuator units VZBA, 2-way

Technical data

Ordering data – Ball valve actuator units with connecting thread			
DAPS – Double-acting	Connecting thread	Part No.	Type
	Rp $\frac{1}{4}$	1809651	VZBA-1/4"-GG-63-T-22-F0304-V4V4T-PP15-R-90-C
	Rp $\frac{3}{8}$	1809652	VZBA-3/8"-GG-63-T-22-F0304-V4V4T-PP15-R-90-C
	Rp $\frac{1}{2}$	1809653	VZBA-1/2"-GG-63-T-22-F0304-V4V4T-PP15-R-90-C
	Rp $\frac{3}{4}$	1809654	VZBA-3/4"-GG-63-T-22-F0304-V4V4T-PP30-R-90-C
	Rp1	1809655	VZBA-1"-GG-63-T-22-F0405-V4V4T-PP30-R-90-C
	Rp1 $\frac{1}{4}$	1809656	VZBA-1 1/4"-GG-63-T-22-F0405-V4V4T-PP60-R-90-C
	Rp1 $\frac{1}{2}$	1809657	VZBA-1 1/2"-GG-63-T-22-F0507-V4V4T-PP60-R-90-C
	Rp2	1809658	VZBA-2"-GG-63-T-22-F0507-V4V4T-PP60-R-90-C
	Rp2 $\frac{1}{2}$	1809659	VZBA-2 1/2"-GG-63-T-22-F0710-V4V4T-PP106-R-90-C
	Rp3	1809660	VZBA-3"-GG-63-T-22-F0710-V4V4T-PP180-R-90-C
	Rp4	1809661	VZBA-4"-GG-63-T-22-F10-V4V4T-PP240-R-90-C
DAPS – Single-acting			
	Rp $\frac{1}{4}$	1758069	VZBA-1/4"-GG-63-T-22-F0304-V4V4T-PS15-R-90-4-C
	Rp $\frac{3}{8}$	1758070	VZBA-3/8"-GG-63-T-22-F0304-V4V4T-PS15-R-90-4-C
	Rp $\frac{1}{2}$	1758071	VZBA-1/2"-GG-63-T-22-F0304-V4V4T-PS15-R-90-4-C
	Rp $\frac{3}{4}$	1758072	VZBA-3/4"-GG-63-T-22-F0304-V4V4T-PS30-R-90-4-C
	Rp1	1758073	VZBA-1"-GG-63-T-22-F0405-V4V4T-PS30-R-90-4-C
	Rp1 $\frac{1}{4}$	1758074	VZBA-1 1/4"-GG-63-T-22-F0405-V4V4T-PS53-R-90-4-C
	Rp1 $\frac{1}{2}$	1758075	VZBA-1 1/2"-GG-63-T-22-F0507-V4V4T-PS53-R-90-4-C
	Rp2	1758076	VZBA-2"-GG-63-T-22-F0507-V4V4T-PS90-R-90-4-C
	Rp2 $\frac{1}{2}$	1758077	VZBA-2 1/2"-GG-63-T-22-F0710-V4V4T-PS120-R-90-4-C
	Rp3	1758078	VZBA-3"-GG-63-T-22-F0710-V4V4T-PS180-R-90-4-C
	Rp4	1758079	VZBA-4"-GG-63-T-22-F10-V4V4T-PS240-R-90-4-C

Ball valve actuator units VZBC, 2-way, compact design

Type codes

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

Type

VZBC	Ball valve
------	------------

Size (nominal diameter 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 DIN EN 1092-1
---	-------------------------

Connection type 2

F	Flange to DIN EN 1092-1
---	-------------------------

Process valve nominal pressure PN

40	40 bar
16	16 bar

Directional control function

22	2/2-way
----	---------

Flanged connection to ISO 5211

F0304	2 pitch circle diameters of \varnothing 36 mm and \varnothing 42 mm
F0405	2 pitch circle diameters of \varnothing 42 mm and \varnothing 50 mm
F0507	2 pitch circle diameters of \varnothing 50 mm and \varnothing 70 mm
F07	1 pitch circle diameter of \varnothing 70 mm
F0710	2 pitch circle diameters of \varnothing 70 mm and \varnothing 102 mm

Housing material

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

Shut-off element material

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

Sealing material

T	Reinforced PTFE
---	-----------------

Ball valve actuator units VZBC, 2-way, compact design

Type codes

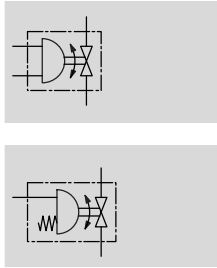
		PS	15	-	R	-	90	-	4	-	C
Actuator											
PP	DAPS, double-acting										
PS	DAPS, single-acting										
Torque											
15	15 Nm										
30	30 Nm										
53	53 Nm										
60	60 Nm										
90	90 Nm										
106	106 Nm										
120	120 Nm										
180	180 Nm										
240	240 Nm										
Swivel direction											
R	Right										
Nominal swivel angle											
90	90°										
Spring index											
-	Omitted for double-acting										
1	Spring strength for connection pressure 2.8 bar										
2	Spring strength for connection pressure 3.5 bar										
3	Spring strength for connection pressure 4.2 bar										
4	Spring strength for connection pressure 5.6 bar										
End-position adjustment											
C	Closed										




Ball valve actuator units VZBC, 2-way, compact design

FESTO

Technical data

Function



-  Swivel angle
0 ... 90°
-  Flow rate
19.4 ... 1,414 m³/h
-  Connecting thread
Rp1/2 ... Rp4



General technical data									
Nominal size DN	15	20	25	32	40	50	65	80	100
Quarter turn actuator									
Type of mounting	In-line installation								
Mounting position	Any								
Swivel angle [°]	90								
Closing direction	Right-closing								
Ball valve									
Design	2-way ball valve								
Actuation type	Pneumatic								
Switching position display	Slot direction = flow direction								
Type of mounting	In-line installation								
Process valve nominal pressure PN ¹⁾	40						16		
Flow rate Kv [m ³ /h]	19.4	45.6	71.5	105	170	275	507	905	1,414

Operating and environmental conditions	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Operating pressure [bar]	6 ... 8.4
Ambient temperature [°C]	-10 ... +80
Temperature of medium ²⁾ [°C]	-10 ... +200
Food industry approval	No
Medium	Compressed air to ISO 8573-1:2010 [:-:-] Inert gases Neutral liquids Water (no water vapour)
Note on operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant
Corrosion resistance class CRC ³⁾	3

1) PN class to DIN EN 1333

2) As a function of operating pressure → 15

3) CRC3: Corrosion resistance class to Festo standard 940 070

Components with heavy corrosion exposure. Externally visible components in direct contact with normal industrial atmosphere or media such as solvents and cleaning agents, where the surface requirement is predominantly functional.

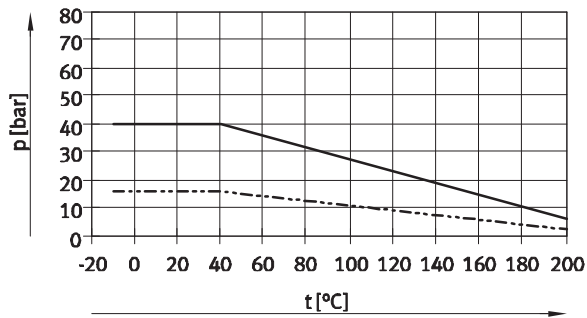
ATEX	
ATEX category for gas	II 2G
ATEX category for dust	II 2D
Max. surface temperature assembly	TX
Explosion group assembly	IIC
Explosion-proof temperature rating	-10°C ≤ Ta ≤ +60°C

Ball valve actuator units VZBC, 2-way, compact design

Technical data

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

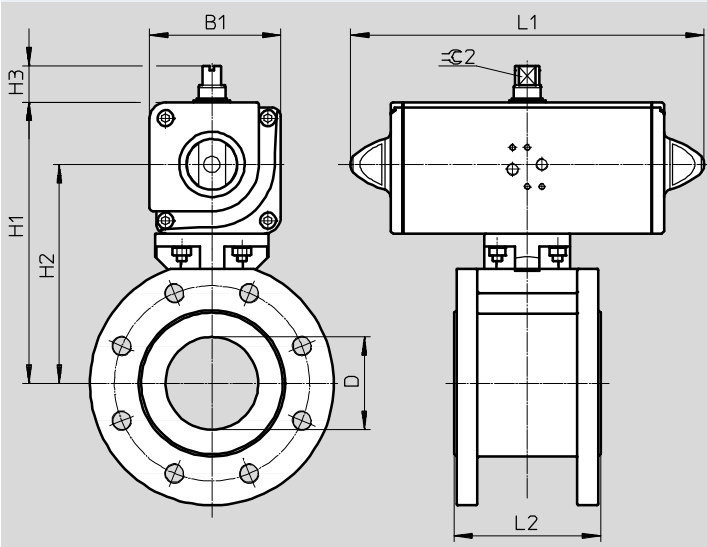
The permissible medium pressure sinks as a function of the temperature of the medium



Dimensions

Download CAD data → www.festo.com

DAPS – Double-acting

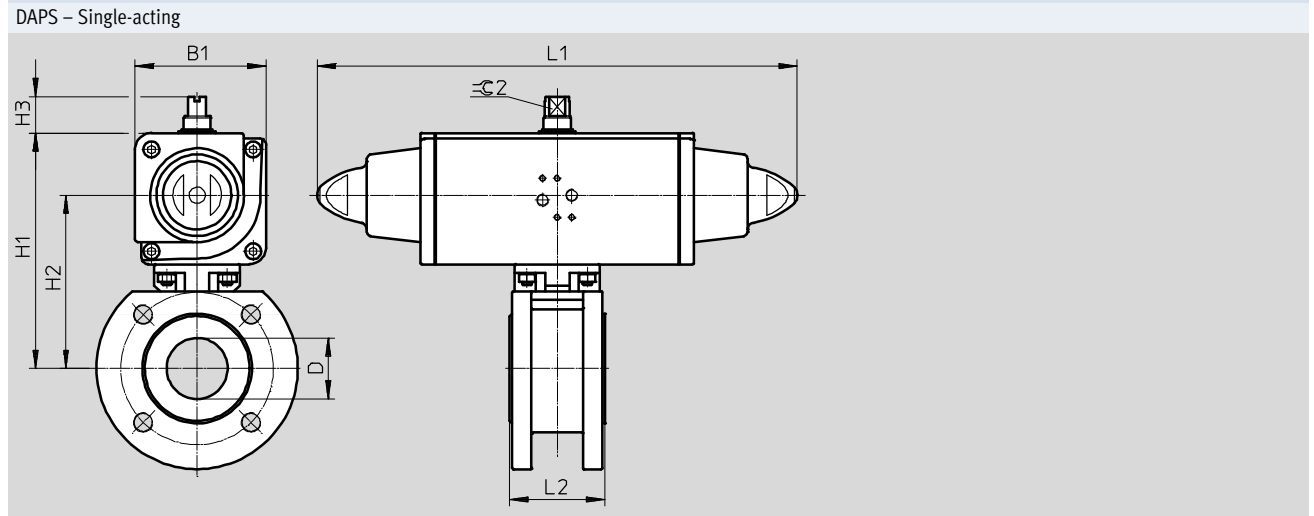


Type	B1	D ∅	H1	H2	H3	L1	L2	±0.2
VZBC-15-FF-40-22-F0304-V4V4T-PP15-R-90-C	52.2	15	112.2	88	20	159	40	8
VZBC-20-FF-40-22-F0304-V4V4T-PP30-R-90-C	59.2	20	123.5	95.8	20	174	44	9
VZBC-25-FF-40-22-F0405-V4V4T-PP30-R-90-C	59.2	25	123.8	96.1	20	174	53	9
VZBC-32-FF-40-22-F0405-V4V4T-PP60-R-90-C	70.4	32	139.4	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

Ball valve actuator units VZBC, 2-way, compact design

Technical data

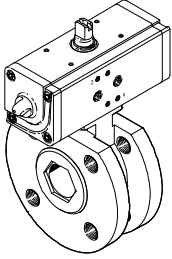
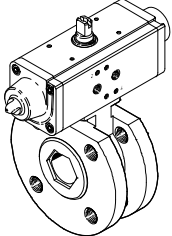
Dimensions Download CAD data → www.festo.com



Type	B1	D Ø	H1	H2	H3	L1	L2	±0.2
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

Ball valve actuator units VZBC, 2-way, compact design

Technical data

Ordering data – Ball valve actuator units in compact design made from stainless steel				
DAPS – Double-acting	Process valve connection	Weight [g]	Part No.	Type
	Ring housing with threaded flange	2,300	1913365	VZBC-15-FF-40-22-F0304-V4V4T-PP15-R-90-C
		3,200	1913367	VZBC-20-FF-40-22-F0304-V4V4T-PP30-R-90-C
		3,700	1913368	VZBC-25-FF-40-22-F0405-V4V4T-PP30-R-90-C
		5,700	1913369	VZBC-32-FF-40-22-F0405-V4V4T-PP60-R-90-C
		6,400	1913370	VZBC-40-FF-40-22-F0507-V4V4T-PP60-R-90-C
		8,600	1913371	VZBC-50-FF-40-22-F0507-V4V4T-PP106-R-90-C
		14,300	1913372	VZBC-65-FF-16-22-F07-V4V4T-PP180-R-90-C
		18,700	1913373	VZBC-80-FF-16-22-F07-V4V4T-PP180-R-90-C
		26,000	1913374	VZBC-100-FF-16-22-F0710-V4V4T-PP240-R-90-C
DAPS – Single-acting	Process valve connection	Weight [g]	Part No.	Type
	Ring housing with threaded flange	2,850	1915401	VZBC-15-FF-40-22-F0304-V4V4T-PS15-R-90-4-C
		4,350	1915402	VZBC-20-FF-40-22-F0304-V4V4T-PS30-R-90-4-C
		4,850	1915403	VZBC-25-FF-40-22-F0405-V4V4T-PS30-R-90-4-C
		7,000	1915404	VZBC-32-FF-40-22-F0405-V4V4T-PS53-R-90-4-C
		7,700	1915406	VZBC-40-FF-40-22-F0507-V4V4T-PS53-R-90-4-C
		11,800	1915407	VZBC-50-FF-40-22-F0507-V4V4T-PS90-R-90-4-C
		18,900	1915408	VZBC-65-FF-16-22-F07-V4V4T-PS180-R-90-4-C
		23,300	1915409	VZBC-80-FF-16-22-F07-V4V4T-PS180-R-90-4-C
		31,900	1915410	VZBC-100-FF-16-22-F0710-V4V4T-PS240-R-90-4-C

Ball valve actuator units VZBA, 3-way

Type codes

VZBA - 2 - G G G - 63 - 32L - F0507 -

Type

VZBA	Ball valve
------	------------

Size (nominal diameter 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 DIN EN 10226-1 (previously DIN 2999)
---	--

Connection type 2

G	Pipe thread to DIN EN 10226-1 (previously DIN 2999)
---	--

Connection type 3

G	Pipe thread to DIN EN 10226-1 (previously DIN 2999)
---	--

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

Flanged connection to ISO 5211

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

Ball valve actuator units VZBA, 3-way

Type codes

V4 V4 T - PS 80 - 90 - 5 - C

Housing material

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

Shut-off element material

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

Sealing material

T	Reinforced PTFE
---	-----------------

Actuator

PP	DAPS, double-acting
PS	DAPS, single-acting

Torque

30	30 Nm
53	53 Nm
60	60 Nm
90	90 Nm
106	106 Nm

Nominal swivel angle

90	90°
----	-----

Spring index

-	Omitted for double-acting
3	Spring strength for connection pressure 3 bar
4	Spring strength for connection pressure 4 bar
5	Spring strength for connection pressure 5 bar

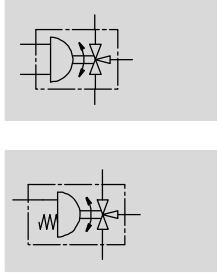
End-position adjustment




C	Closed
---	--------

Ball valve actuator units VZBA, 3-way

Technical data

Function



-  Swivel angle
0 ... 90°
-  Flow rate
4.5 ... 100 m³/h
-  Connecting thread
Rp¹/₄ ... Rp₄



General technical data								
Nominal size DN	8	10	15	20	25	32	40	50
Quarter turn actuator								
Type of mounting	In-line installation							
Mounting position	Any							
Swivel angle	[°]	90						
Closing direction	Right-closing							
Ball valve								
Design	3-way ball valve with L-shaped hole, T-shaped hole							
Actuation type	Pneumatic							
Switching position display	Slot direction = flow direction							
Type of mounting	In-line installation							
Process valve nominal pressure PN ¹⁾	63							
Flow rate Kv	[m ³ /h]	→ Page 24						

Operating and environmental conditions	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Operating pressure [bar]	6 ... 8.4
Ambient temperature [°C]	-10 ... +80
Temperature of medium ²⁾ [°C]	-10 ... +200
Food industry approval	No
Medium	Compressed air to ISO 8573-1:2010 [:-:-] Inert gases Neutral fluids Water (no water vapour)
Note on operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant
Corrosion resistance class CRC ³⁾	3

1) PN class to DIN EN 1333

2) As a function of operating pressure → 21

3) CRC3: Corrosion resistance class to Festo standard 940 070

Components with heavy corrosion exposure. Externally visible components in direct contact with normal industrial atmosphere or media such as solvents and cleaning agents, where the surface requirement is predominantly functional.

Ball valve actuator units VZBA, 3-way

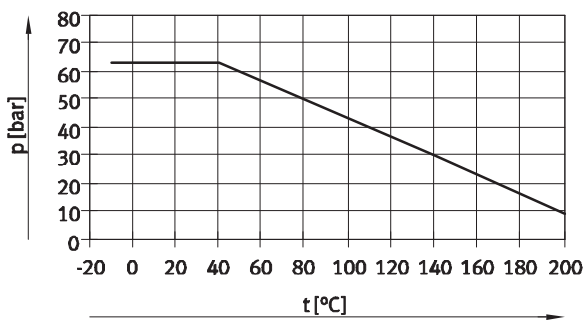
Technical data

ATEX	
ATEX category for gas	II 2G
ATEX category for dust	II 2D
Max. surface temperature assembly	TX
Explosion group assembly	IIC
Explosion-proof temperature rating	-10°C ≤ Ta ≤ +60°C

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

Weight [g]								
Process valve connection	Rp1/4	Rp3/8	Rp1/2	Rp3/4	Rp1	Rp1 1/4	Rp1 1/2	Rp2
Double-acting	1,750	1,750	1,750	2,050	2,650	4,750	5,750	9,800
Single-acting	2,950	2,950	2,950	3,250	3,850	6,070	10,812	12,900

The permissible medium pressure drops as a function of the temperature of the medium



Ball valve actuator units VZBA, 3-way

Technical data

FESTO

Dimensions Download CAD data → www.festo.com

DAPS – Double-acting

L = L-hole
T = T-hole
Quarter turn actuator

1 Delivery condition

Type	B1	D ∅	H1	H2	H3	L1	L2	±0.2
VZBA-1/4"-GGG-63-32L-F0304-V4V4T-PP30-R-90-C	59.2	11.6	95.1	67.4	20	174	80	9
VZBA-1/4"-GGG-63-32T-F0304-V4V4T-PP30-R-90-C	59.2	11.6	95.1	67.4	20	174	80	9
VZBA-3/8"-GGG-63-32L-F0304-V4V4T-PP30-R-90-C	59.2	12.7	95.1	67.4	20	174	80	9
VZBA-3/8"-GGG-63-32T-F0304-V4V4T-PP30-R-90-C	59.2	12.7	95.1	67.4	20	174	80	9
VZBA-1/2"-GGG-63-32L-F0304-V4V4T-PP30-R-90-C	59.2	12.7	95.1	67.4	20	174	80	9
VZBA-1/2"-GGG-63-32T-F0304-V4V4T-PP30-R-90-C	59.2	12.7	95.1	67.4	20	174	80	9
VZBA-3/4"-GGG-63-32L-F0405-V4V4T-PP30-R-90-C	59.2	16	100.1	72.4	20	174	87.5	9
VZBA-3/4"-GGG-63-32T-F0405-V4V4T-PP30-R-90-C	59.2	16	100.1	72.4	20	174	87.5	9
VZBA-1"-GGG-63-32L-F0405-V4V4T-PP30-R-90-C	59.2	20	104.35	76.65	20	174	100	9
VZBA-1"-GGG-63-32T-F0405-V4V4T-PP30-R-90-C	59.2	20	104.35	76.65	20	174	100	9
VZBA-1 1/4"-GGG-63-32L-F0405-V4V4T-PP60-R-90-C	70.4	25.4	121.4	88.7	20	198	123	10
VZBA-1 1/4"-GGG-63-32T-F0405-V4V4T-PP60-R-90-C	70.4	25.4	121.4	88.7	20	198	123	10
VZBA-1 1/2"-GGG-63-32L-F0405-V4V4T-PP60-R-90-C	70.4	31.8	125.9	93.2	20	198	142.2	10
VZBA-1 1/2"-GGG-63-32T-F0405-V4V4T-PP60-R-90-C	70.4	31.8	125.9	93.2	20	198	142.2	10
VZBA-2"-GGG-63-32L-F0507-V4V4T-PP106-R-90-C	83.3	38.1	149.3	110.8	20	237.1	170.6	12
VZBA-2"-GGG-63-32T-F0507-V4V4T-PP106-R-90-C	83.3	38.1	149.3	110.8	20	237.1	170.6	12

Ball valve actuator units VZBA, 3-way

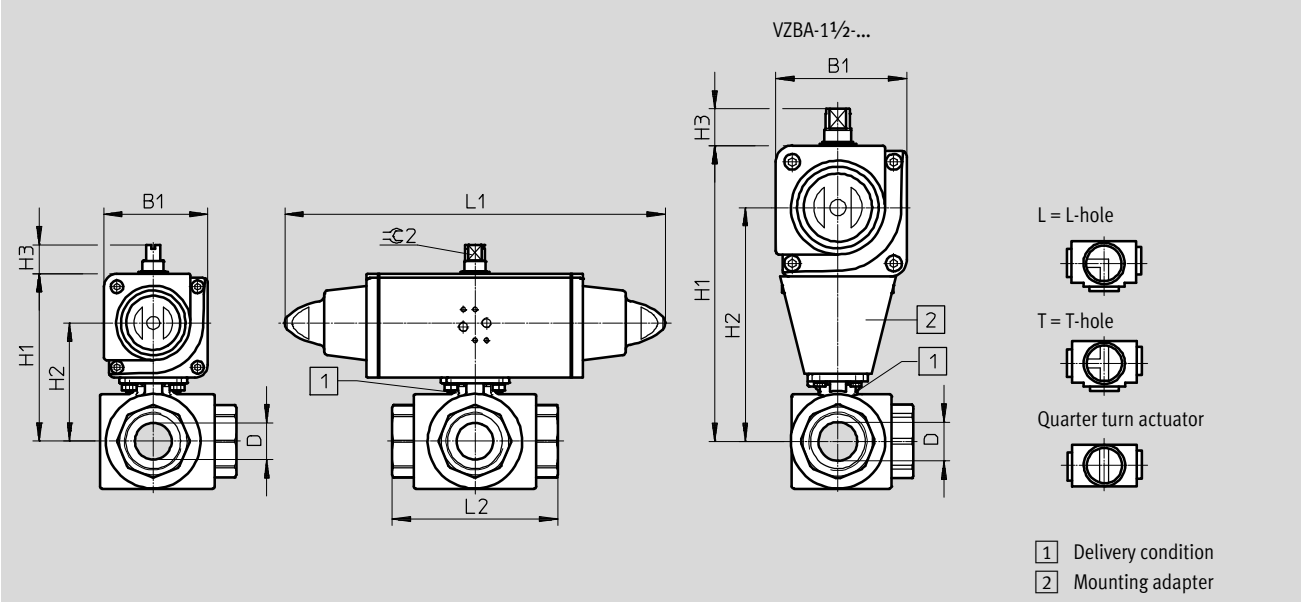
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

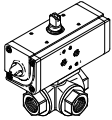
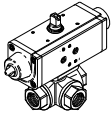
DAPS – Single-acting



Type	B1	D ∅	H1	H2	H3	L1	L2	≈ 2
VZBA-1/4"-GGG-63-32L-F0304-V4V4T-PS30-R-90-4-C	70.4	11.6	106.3	73.6	20	259	80	10
VZBA-1/4"-GGG-63-32T-F0304-V4V4T-PS30-R-90-4-C	70.4	11.6	106.3	73.6	20	259	80	10
VZBA-3/8"-GGG-63-32L-F0304-V4V4T-PS30-R-90-4-C	70.4	12.7	106.3	73.6	20	259	80	10
VZBA-3/8"-GGG-63-32T-F0304-V4V4T-PS30-R-90-4-C	70.4	12.7	106.3	73.6	20	259	80	10
VZBA-1/2"-GGG-63-32L-F0304-V4V4T-PS30-R-90-4-C	70.4	12.7	106.3	73.6	20	259	80	10
VZBA-1/2"-GGG-63-32T-F0304-V4V4T-PS30-R-90-4-C	70.4	12.7	106.3	73.6	20	259	80	10
VZBA-3/4"-GGG-63-32L-F0405-V4V4T-PS30-R-90-4-C	70.4	16	111.3	78.6	20	259	87.5	10
VZBA-3/4"-GGG-63-32T-F0405-V4V4T-PS30-R-90-4-C	70.4	16	111.3	78.6	20	259	87.5	10
VZBA-1"-GGG-63-32L-F0405-V4V4T-PS30-R-90-4-C	70.4	20	115.55	82.85	20	259	100	10
VZBA-1"-GGG-63-32T-F0405-V4V4T-PS30-R-90-4-C	70.4	20	115.55	82.85	20	259	100	10
VZBA-1 1/4"-GGG-63-32L-F0405-V4V4T-PS53-R-90-4-C	83.3	25.4	134.3	95.8	20	304.3	123	12
VZBA-1 1/4"-GGG-63-32T-F0405-V4V4T-PS53-R-90-4-C	83.3	25.4	134.3	95.8	20	304.3	123	12
VZBA-1 1/2"-GGG-63-32L-F0405-V4V4T-PS90-R-90-4-C	107.5	31.8	243	192	30	393.7	142.2	15
VZBA-1 1/2"-GGG-63-32T-F0405-V4V4T-PS90-R-90-4-C	107.5	31.8	243	192	30	393.7	142.2	15
VZBA-2"-GGG-63-32L-F0507-V4V4T-PS90-R-90-4-C	107.5	38.1	173.5	122.5	30	393.7	170.6	15
VZBA-2"-GGG-63-32T-F0507-V4V4T-PS90-R-90-4-C	107.5	38.1	173.5	122.5	30	393.7	170.6	15

Ball valve actuator units VZBA, 3-way

Technical data

Ordering data – Ball valve actuator units made from stainless steel								
DAPS – Double-acting	Process valve connection	Hole	Flow rate Kv [m ³ /h] Type			Part No.	Type	
			L	T right-angled	T straight			
	Rp1/4	L	4.5	–	–	1914785	VZBA-1/4"-GGG-63-32L-F0304-V4V4T-PP30-R-90-C	
	Rp3/8		4.5	–	–	1914786	VZBA-3/8"-GGG-63-32L-F0304-V4V4T-PP30-R-90-C	
	Rp1/2		4.7	–	–	1914787	VZBA-1/2"-GGG-63-32L-F0304-V4V4T-PP30-R-90-C	
	Rp3/4		5.1	–	–	1914788	VZBA-3/4"-GGG-63-32L-F0405-V4V4T-PP30-R-90-C	
	Rp1		11.8	–	–	1914789	VZBA-1"-GGG-63-32L-F0405-V4V4T-PP30-R-90-C	
	Rp1 1/4		19.6	–	–	1914790	VZBA-1 1/4"-GGG-63-32L-F0405-V4V4T-PP60-R-90-C	
	Rp1 1/2		33.2	–	–	1914791	VZBA-1 1/2"-GGG-63-32L-F0405-V4V4T-PP60-R-90-C	
	Rp2		53.7	–	–	1914792	VZBA-2"-GGG-63-32L-F0507-V4V4T-PP106-R-90-C	
	Rp1/4	T	–	4.5	8	1915072	VZBA-1/4"-GGG-63-32T-F0304-V4V4T-PP30-R-90-C	
	Rp3/8		–	4.5	8	1915073	VZBA-3/8"-GGG-63-32T-F0304-V4V4T-PP30-R-90-C	
	Rp1/2		–	4.8	8.3	1915074	VZBA-1/2"-GGG-63-32T-F0304-V4V4T-PP30-R-90-C	
	Rp3/4		–	4.8	8.3	1915075	VZBA-3/4"-GGG-63-32T-F0405-V4V4T-PP30-R-90-C	
	Rp1		–	10.9	22.4	1915076	VZBA-1"-GGG-63-32T-F0405-V4V4T-PP30-R-90-C	
	Rp1 1/4		–	18	36.5	1915077	VZBA-1 1/4"-GGG-63-32T-F0405-V4V4T-PP60-R-90-C	
	Rp1 1/2		–	30	62	1915078	VZBA-1 1/2"-GGG-63-32T-F0405-V4V4T-PP60-R-90-C	
	Rp2		–	48.8	100	1915079	VZBA-2"-GGG-63-32T-F0507-V4V4T-PP106-R-90-C	
	DAPS – Single-acting		Process valve connection	Hole	Flow rate Kv [m ³ /h] Type			Part No.
L		T right-angled			T straight			
	Rp1/4	L	4.5	–	–	1915543	VZBA-1/4"-GGG-63-32L-F0304-V4V4T-PS30-R-90-4-C	
	Rp3/8		4.5	–	–	1915544	VZBA-3/8"-GGG-63-32L-F0304-V4V4T-PS30-R-90-4-C	
	Rp1/2		4.7	–	–	1915545	VZBA-1/2"-GGG-63-32L-F0304-V4V4T-PS30-R-90-4-C	
	Rp3/4		5.1	–	–	1915546	VZBA-3/4"-GGG-63-32L-F0405-V4V4T-PS30-R-90-4-C	
	Rp1		11.8	–	–	1915547	VZBA-1"-GGG-63-32L-F0405-V4V4T-PS30-R-90-4-C	
	Rp1 1/4		19.6	–	–	1915548	VZBA-1 1/4"-GGG-63-32L-F0405-V4V4T-PS53-R-90-4-C	
	Rp1 1/2		33.2	–	–	1915549	VZBA-1 1/2"-GGG-63-32L-F0405-V4V4T-PS90-R-90-4-C	
	Rp2		53.7	–	–	1915550	VZBA-2"-GGG-63-32L-F0507-V4V4T-PS90-R-90-4-C	
	Rp1/4	T	–	4.5	8	1915744	VZBA-1/4"-GGG-63-32T-F0304-V4V4T-PS30-R-90-4-C	
	Rp3/8		–	4.5	8	1915745	VZBA-3/8"-GGG-63-32T-F0304-V4V4T-PS30-R-90-4-C	
	Rp1/2		–	4.8	8.3	1915746	VZBA-1/2"-GGG-63-32T-F0304-V4V4T-PS30-R-90-4-C	
	Rp3/4		–	4.8	8.3	1915747	VZBA-3/4"-GGG-63-32T-F0405-V4V4T-PS30-R-90-4-C	
	Rp1		–	10.9	22.4	1915748	VZBA-1"-GGG-63-32T-F0405-V4V4T-PS30-R-90-4-C	
	Rp1 1/4		–	18	36.5	1915749	VZBA-1 1/4"-GGG-63-32T-F0405-V4V4T-PS53-R-90-4-C	
	Rp1 1/2		–	30	62	1915750	VZBA-1 1/2"-GGG-63-32T-F0405-V4V4T-PS90-R-90-4-C	
	Rp2		–	48.8	100	1915751	VZBA-2"-GGG-63-32T-F0507-V4V4T-PS90-R-90-4-C	

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