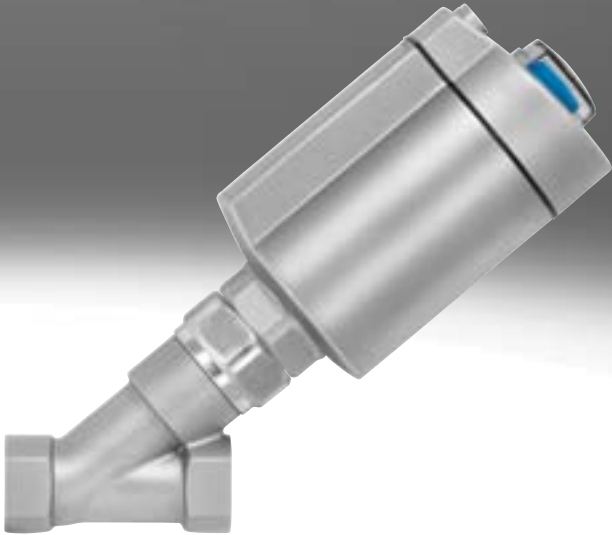


Angle seat valves VZXA



## Key features

### At a glance

The angle seat valves VZXA are externally actuated valves which are controlled by a direct supply of compressed air and are used to shut off gaseous or liquid media in pipe systems. In the process, a spindle with a soft-sealing valve disc is raised and lowered using a pneumatic actuator. In all the versions mentioned below, the valve seat is slanted at an angle of approx. 40° in relation to the medium flow. The flow direction is determined by the design of the valve (angle seat fitting and actuator).

### Product segmentation



#### Festo Core Range

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With the Festo Core Range, we have selected the most important products and functions from our broad product catalogue.

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- Easy and fast to select

### Flow direction

[A] Above valve seat for gaseous media



VZXA-A:

- For gaseous media, "closing in the direction of medium flow" is used
- Closed via reduced spring force, NC

[B] Below valve seat for gaseous and liquid media



VZXA-B:

- For gaseous and liquid media, "closing against the direction of medium flow" is used in order to prevent or reduce water hammer
- Closed by spring force, NC
- Opened via spring force, NO
- Double-acting, DA

### Line connection

[C] Clamp



- Available in connection sizes DN13, 1/2" to DN32, 1 1/4"

[T] Threaded collar



- Available in connection sizes DN13, 1/2" to DN65, 2 1/2"

[W] Welded end



- Available in connection sizes DN13, 1/2" to DN32, 1 1/4"

## Key features

## Connection standard

## [S1] ASME BPE

- Only in combination with line connection [C] or [W]

## [S3] DIN EN ISO 1127/ISO 4200

- Only in combination with line connection [W]
- Ideal for controlling material flows (gaseous) in systems that do not permit leakage

## [S6] G thread to DIN ISO 228

- Only in combination with line connection [T]
- Cylindrical Whitworth pipe threads to DIN ISO 228-1 do not have metal-to-metal seals. They must either be provided with an annular seal outside the thread or must be sealed by wrapping the thread with PTFE or hemp.

## [S13] Rc thread to DIN 10226

- Only in combination with line connection [T]
- Rc threads to DIN 10226-2 are pipe threads for fittings that seal on the thread. Both the female and male threads are tapered.

## [S2] DIN 11850 R2

- Only in combination with line connection [W]
- Ideal for controlling material flows (gaseous) in systems that do not permit leakage

## [S5] DIN 32676, series A

- Only in combination with line connection [C]
- Ideal for controlling material flows in systems that require a quick and easy to release connection

## [S7] NPT thread to ANSI/ASME B 1.20.1

- Only in combination with line connection [T]
- American, tapered NPT pipe threads to ANSI/ASME B 1.20.1 form a seal with sealing material on the thread. Both the female and male threads are tapered.

## [S15] DIN 32676, series B

- Only in combination with line connection [C]
- Ideal for controlling material flows in systems that require a quick and easy to release connection

## Actuator

## [K] Piston actuator

- With low space requirement
- Can close under pressure up to 10 bar

## [m] Diaphragm actuator

- No stick-slip effect
- Ideal for high force requirements and control applications

## Actuator size

## [46] 46 mm

- Pressure range 3 to 10 bar
- For connection sizes DN13 – 1/2" to DN25 – 1"

## [90] 90 mm

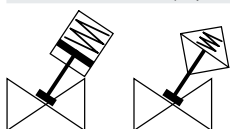
- Pressure range 3 to 7 bar
- For connection sizes DN32 – 1 1/4" to DN50 – 2"

## [75] 75 mm

- Pressure range 3 to 10 bar
- For connection sizes DN20 – 3/4" to DN40 – 1 1/2"

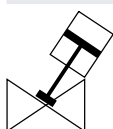
## Control function

## [ ] Closed by spring force, NC



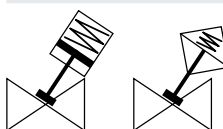
In the normal position, the valve is closed by springs. When the actuator is supplied with operating pressure, it raises the control piston and, at the same time, the valve disc too – this opens the valve.

## [D] Double-acting



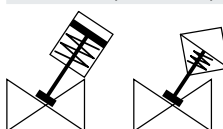
The control function is realised by alternately supplying the actuating chambers with compressed air. Only available for the piston actuator.

## [PR] Closed via reduced spring force, NC



In the normal position the valve is closed by a spring (reduced spring force for low operating pressures). When the actuator is supplied with operating pressure, it raises the control piston and, at the same time, the valve disc too – this opens the valve.

## [S] Opened via spring force, NO



In the normal position, the valve is opened by a spring. When the actuator is supplied with operating pressure, it lowers the control piston and, at the same time, the valve disc too – this closes the valve.

## Key features

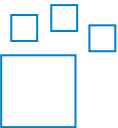
### EU certification<sup>1)</sup>

[EX4] II 2GD

- ATEX category for gas II 2G
- Type of ignition protection for gas c T6 ... T3 X
- ATEX category for dust II 2D
- Type of ignition protection for dust c T80°C ... T200°C X
- Explosion-proof temperature rating 0°C ≤ Ta ≤ +60°C

1) Selected types → [www.festo.com](http://www.festo.com)

### Ordering data – Product options

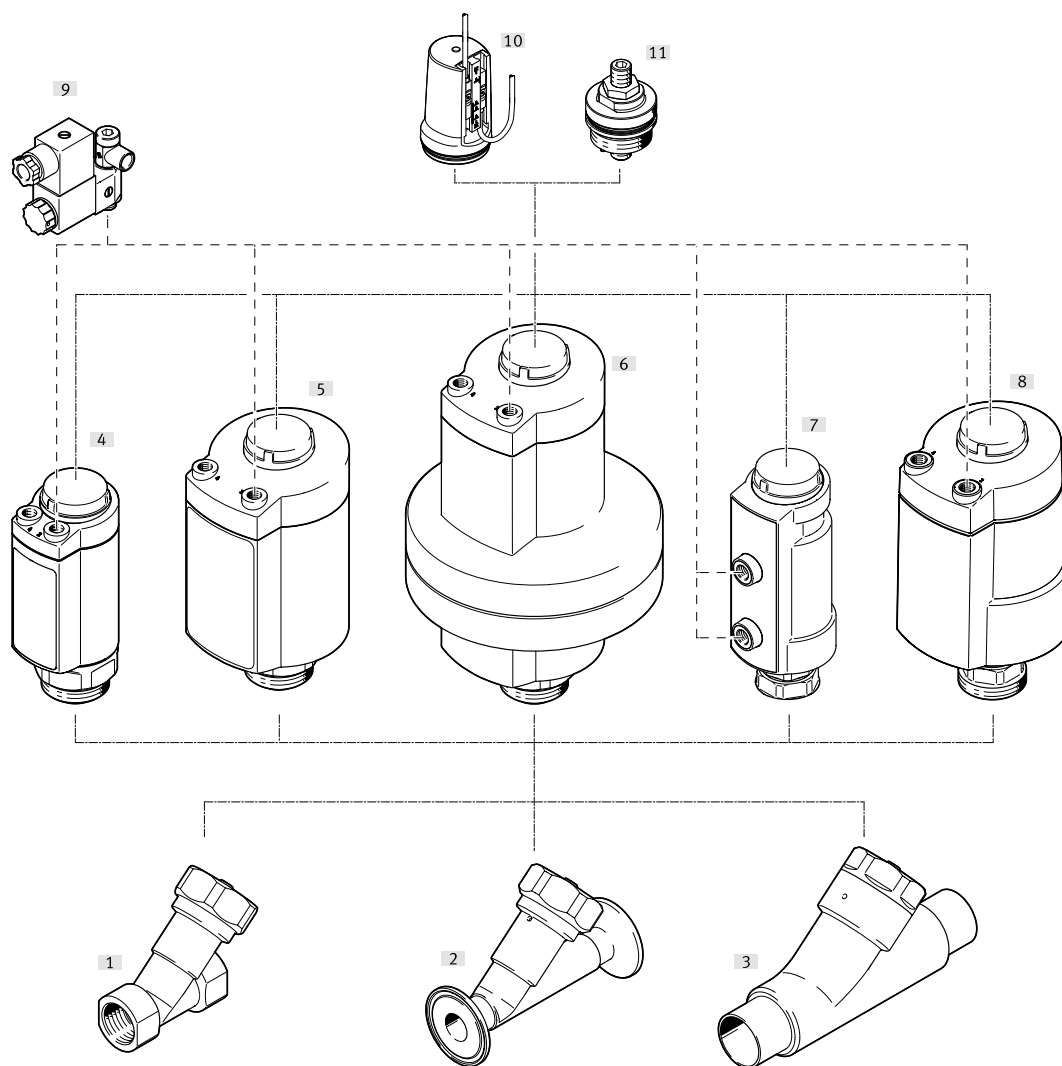


Configurable product  
This product and all its product options can be ordered using the configurator.

The configurator can be found under Products on the DVD or at  
→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

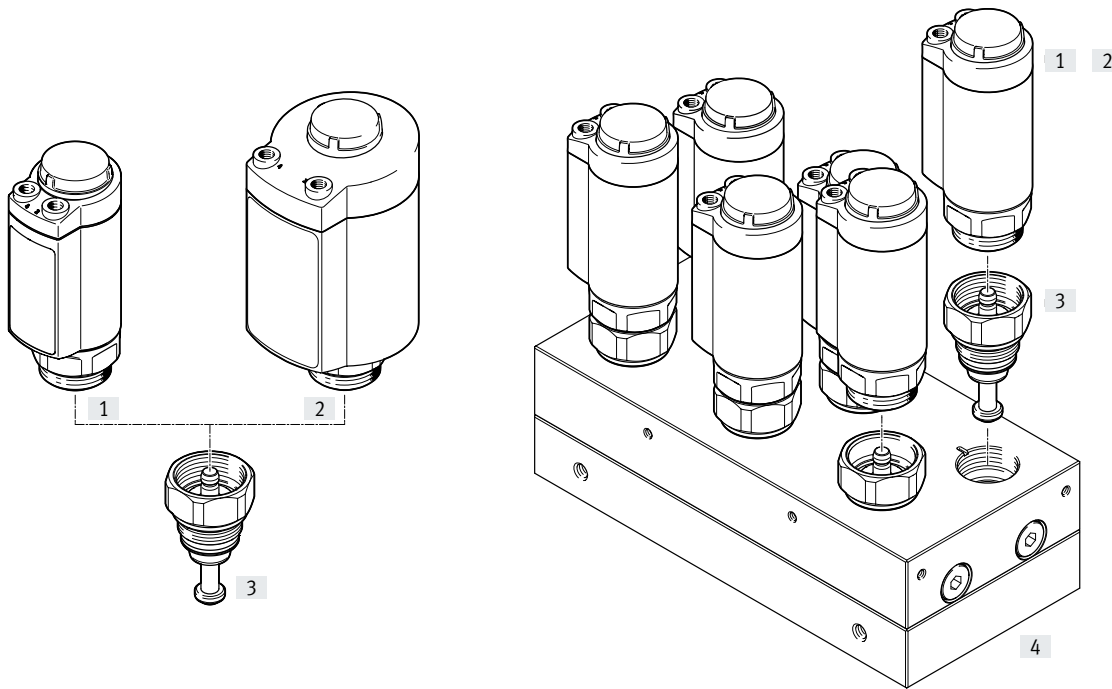
Part no.	Type
3539410	VZXA

Peripherals overview




Designation	Description	→ Page
Angle seat valve VZXA		
[1] Valve body VZXA	<ul style="list-style-type: none"> <li>• With line connection [T] threaded collar</li> </ul>	–
[2]	<ul style="list-style-type: none"> <li>• With line connection [C] clamp</li> <li>• Selected types → This product and all its product options can be ordered using the configurator.</li> </ul>	–
[3]	<ul style="list-style-type: none"> <li>• With line connection [W] welded end</li> <li>• Selected types → This product and all its product options can be ordered using the configurator.</li> </ul>	–
[4] Piston actuator DFPK	<ul style="list-style-type: none"> <li>• Stainless steel piston actuator, connection size 46 mm</li> </ul>	8
[5] Piston actuator DFPK	<ul style="list-style-type: none"> <li>• Stainless steel piston actuator, connection size 75 mm</li> </ul>	8
[6] Diaphragm actuator DFPM	<ul style="list-style-type: none"> <li>• Actuator size 90 mm</li> <li>• Without stick-slip effect, ideal for high force requirements and control applications</li> </ul>	18
[7] Piston actuator DFPK	<ul style="list-style-type: none"> <li>• Polymer piston actuator, connection size 46 mm</li> </ul>	25
[8] Piston actuator DFPK	<ul style="list-style-type: none"> <li>• Polymer piston actuator, connection size 75 mm</li> </ul>	25
[9] Pilot valve VOFX	<ul style="list-style-type: none"> <li>• Mounted directly on the actuator</li> <li>• Can be ordered separately as an accessory</li> </ul>	40
[10] Position indicator SAMH	<ul style="list-style-type: none"> <li>• Position indicator with two standard T-slots for mounting position sensors</li> <li>• Version with or without sensors</li> <li>• Can be ordered separately as an accessory</li> </ul>	43
[11] Stroke reducing kit VAVA	<ul style="list-style-type: none"> <li>• Piston rod stroke is reduced using a threaded pin or shock absorber</li> <li>• For angle seat valves VZXA with piston and diaphragm actuator</li> <li>• For piston actuators DFPK</li> <li>• Can be ordered separately as an accessory</li> </ul>	42

Peripherals overview



Designation	Description	→ Page
Parts available to purchase separately for customised valve block solutions		
[1] Piston actuator DFPK	<ul style="list-style-type: none"> <li>• Actuator size 46 mm, made from stainless steel</li> <li>• Can be ordered separately as an accessory</li> </ul>	36
[2] Piston actuator DFPK	<ul style="list-style-type: none"> <li>• Actuator size 75 mm, made from stainless steel</li> <li>• Can be ordered separately as an accessory</li> </ul>	36
[3] Cover kit VAVC	<ul style="list-style-type: none"> <li>• Includes spindles and sealing components</li> <li>• Can be ordered separately as an accessory</li> </ul>	38
[4] Manifold block	Requirements and dimensions for manufacturing → <a href="http://www.festo.com/catalogue/...">www.festo.com/catalogue/...</a> → Support/Downloads	-

 **Note**  
 Possible combinations and characteristic values of the medium or operating pressures, see page → 10

## Type codes

001 Series	
VZXA	Process valve
002 Flow direction	
A	Above valve seat, for gaseous media
B	Below valve seat, for gaseous and liquid media
003 Line connection	
C	Clamp
T	Threaded collar
W	Welded end
004 Connection standard	
S1	ASME BPE
S2	DIN 11850 R2
S3	DIN EN ISO 1127 / ISO 4200
S5	DIN 32676, series A
S6	G thread to DIN ISO 228
S7	NPT thread to ANSI/A SME B 1.20.1
S13	Rc thread to DIN 10226
S15	DIN 32676, series B
005 Connection size	
1/2"	1/2"
3/4"	3/4"
1"	1"
1 1/4"	1 1/4"
1 1/2"	1 1/2"
2"	2"
2 1/2"	2 1/2"
13	DN13
20	DN20
25	DN25
32	DN32
40	DN40
50	DN50
65	DN65
006 Temperature of medium	
M2	-10 ... +180°C
M3	-10 ... +200°C
M6	-10 ... +60°C
007 Valve housing material	
V13	Stainless steel 1.4409
V14	Stainless steel ASTM A351-CF3M
B1	Brass
008 Seat seal material	
T	PTFE
TP	PTFE modified

009 Medium pressure	
4	0 ... 4 bar
4.4	0 ... 4.4 bar
4.8	0 ... 4.8 bar
5.6	0 ... 5.6 bar
5.8	0 ... 5.8 bar
6	0 ... 6 bar
6.2	0 ... 6.2 bar
6.8	0 ... 6.8 bar
7.5	0 ... 7.5 bar
8	0 ... 8 bar
8.3	0 ... 8.3 bar
9.3	0 ... 9.3 bar
10	0 ... 10 bar
11.5	0 ... 11.5 bar
12.2	0 ... 12.2 bar
12.8	0 ... 12.8 bar
13.5	0 ... 13.5 bar
14.5	0 ... 14.5 bar
15.5	0 ... 15.5 bar
16	0 ... 16 bar
23	0 ... 23 bar
25	0 ... 25 bar
30	0 ... 30 bar
010 Drive	
K	Piston drive
M	Diaphragm actuator
011 Drive size	
46	46 mm
75	75 mm
90	90 mm
012 Stroke [mm]	
17	17
20	20
26	26
013 Control function	
	Closed via spring force, N/C
D	Double-acting
S	Opened via spring force, N/O
PR	Closed via reduced spring force, N/C
014 Drive housing material	
V4	Stainless steel 1.4408
PM	Polymer
015 EU certification	
	None
EX4	II 2GD

# Angle seat valves VZXA with stainless steel piston actuator

## Datasheet



- Poppet valve with piston actuator
- Line connection  
1/2" ... 2", DN13 ... DN50
- Stroke  
17 ... 20 mm



### General technical data

Line connection		DN13, 1/2"	DN20, 3/4"	DN25, 1"	DN32, 1 1/4"	DN40, 1 1/2"	DN50, 2"
Actuator		D46	D46	D75	D46	D75	D75
Flow rate Kv	VZXA-A-... [m <sub>3</sub> /h]	6.6	–	14.5	–	21.5	–
	VZXA-B-... [m <sub>3</sub> /h]	6	13.3	13.5	20.3	22.6	27.9
Design	Poppet valve with piston actuator						
Actuation type	Pneumatic						
Type of mounting	In-line installation						
Mounting position	Any						
Valve function	2/2						
Pneumatic connection	Female thread G1/8						
Flow direction	Not reversible						
Reset method	Mechanical spring						
Type of control	Externally actuated						
Position sensing	Via mechanical indicator						
Control of the medium	On/off operation						
Control function	VZXA-A-...	Closed via reduced spring force, NC					
	VZXA-B-...	Closed via spring force, NC					
Flow direction	VZXA-A-...	Over valve seat, for gaseous media					
	VZXA-B-...	Under valve seat, for gaseous and liquid media					



## Datasheet

Operating and environmental conditions			
Operating pressure <sup>1)</sup>	[MPa]	0.5 ... 1	
	[psi]	72.5 ... 145	
	[bar]	5 ... 10	
Ambient temperature	[°C]	0 ... +60	
Temperature of medium <sup>2)</sup>	[°C]	-10 ... +180	
Storage temperature	[°C]	-10 ... +60	
CE marking (see declaration of conformity) <sup>3)</sup>	To EU Machinery Directive		
Certification	CRN		
Certificate-issuing authority	CRNOC20829.5C		
Degree of protection	IP65		
	IP67		
Max. viscosity	[mm <sup>2</sup> /s]	600	
Medium	Steam		
	Inert gases		
	Filtered compressed air, grade of filtration 200 µm		
	VZXA-B-... additionally	Mineral oil-based hydraulic fluid	
		Mineral oil	
		Water	
Neutral fluids			
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]		
Safety integrity level (SIL)	SIL 2		
PFH	0.00000014		
PFD	0.000595		
Certificate-issuing authority	German Technical Control Board (TÜV) 968/V 1039.0 0/18		

- 1) See table with "Pressure of medium and operating pressure" with corresponding control function  
2) Temperature of medium -30 ... +200°C only in conjunction with modified PTFE seat seal (see modular product system)  
3) Additional information: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

ATEX <sup>1)</sup>		
ATEX category for gas	II 2G	
Type of (ignition) protection for gas	c T6 ... T3 X	
ATEX category for dust	II 2D	
Type of (ignition) protection for dust	c T80°C ... T200°C X	
Explosion ambient temperature	[°C]	0 °C ≤ Ta ≤ +60°C

- 1) Selected types → [www.festo.com](http://www.festo.com)

Materials	Material number	
Piston rod	High-alloy stainless steel	
Cover	Cast stainless steel	
Seals	FPM	
Spindle seal	PTFE	
Seat seal	PTFE	
Actuator housing	Cast stainless steel	1.4408
Valve housing	Cast stainless steel	1.4409
		ASTM A351-CF3M
Note on materials	Contains paint-wetting impairment substances	
	RoHS-compliant	

Datasheet

Pressure of medium and operating pressure for control function NC, VZXA-B (flow direction under the valve seat)						
Actuator size	Min. pressure of medium [bar]		Max. pressure of medium [bar]		Min. operating pressure [bar]	
	46 mm	75 mm	46 mm	75 mm	46 mm	75 mm
DN13, 1/2"	-0.9 <sup>1)</sup>	-	30 <sup>1)</sup>	-	4.8	-
DN20, 3/4"	-0.9 <sup>1)</sup>	-0.9 <sup>1)</sup>	12.8 <sup>1)</sup>	30 <sup>1)</sup>	4.8	4.6
DN25, 1"	-0.9 <sup>1)</sup>	-0.9 <sup>1)</sup>	8.3 <sup>1)</sup>	23 <sup>1)</sup>	4.8	4.6
DN32, 1 1/4"	-0.9 <sup>1)</sup>	-0.9 <sup>1)</sup>	4.4 <sup>1)</sup>	13.5 <sup>1)</sup>	4.8	4.6
DN40, 1 1/2"	-	-0.9 <sup>1)</sup>	-	9.3 <sup>1)</sup>	-	4.6
DN50, 2"	-	-0.9 <sup>1)</sup>	-	5.6 <sup>1)</sup>	-	4.6

1) Also suitable for vacuum applications

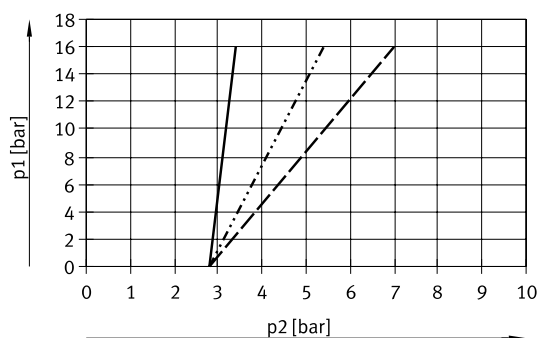
Pressure of medium and operating pressure for control function NC with reduced spring force, VZXA-B-...-PR (flow direction under the valve seat)				
Actuator size	Max. pressure of medium [bar]		Min. operating pressure [bar]	
	46 mm	75 mm	46 mm	75 mm
DN13, 1/2"	11.5	-	2.6	-
DN20, 3/4"	6	16	2.6	2.2
DN25, 1"	-	9.3	-	2.2
DN32, 1 1/4"	-	4.8	-	2.2
DN40, 1 1/2"	-	4	-	2.2

Pressure of medium and operating pressure for control function NO opened via spring force, VZXA-B-...-S (flow direction under the valve seat)				
Actuator size	Max. pressure of medium [bar]		Min. operating pressure [bar]	
	46 mm	75 mm	46 mm	75 mm
DN13, 1/2"	16	-	3.4	-
DN20, 3/4"	13.5	16	5	3.4
DN25, 1"	8.3	16	5	4
DN32, 1 1/4"	-	16	-	5
DN40, 1 1/2"	-	10	-	5
DN50, 2"	-	6.2	-	5

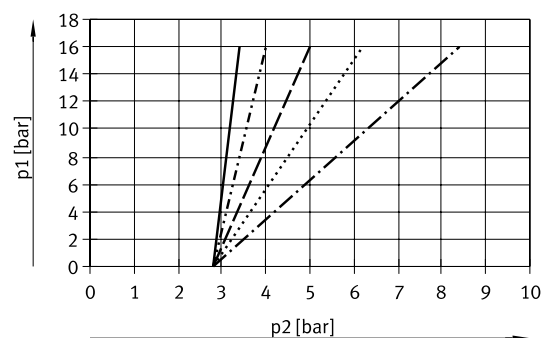
Pressure of medium p1 and operating pressure p2 for control function NO opened via spring force, VZXA-B-...-S (flow direction under the valve seat)

Piston actuator size 46 mm

Piston actuator size 75 mm



— DN13, 1/2"  
 - - - - - DN20, 3/4"  
 - - - - - DN25, 1"



— DN20, 3/4"  
 - - - - - DN25, 1"  
 - - - - - DN32, 1 1/4"  
 ..... DN40, 1 1/2"  
 - · - · - · DN50, 2"

Datasheet

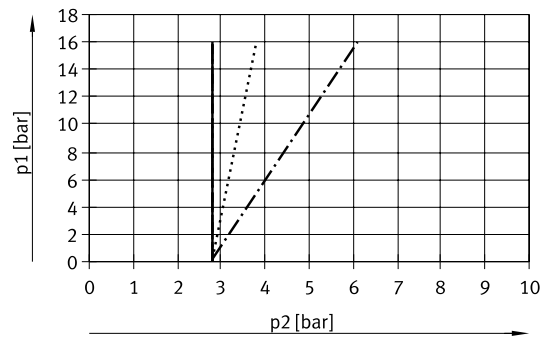
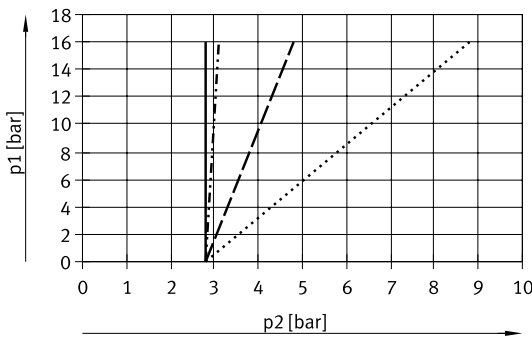
Pressure of medium and operating pressure for double-acting control function, VZXA-B-...-D (flow direction under the valve seat)

Actuator size	Max. pressure of medium [bar]		Min. operating pressure [bar]	
	46 mm	75 mm	46 mm	75 mm
DN13, 1/2"	16	–	2.8	–
DN20, 3/4"	16	16	3.1	2.8
DN25, 1"	16	16	4.8	2.8
DN32, 1 1/4"	6	16	5	2.8
DN40, 1 1/2"	–	16	–	3.8
DN50, 2"	–	10	–	5

Pressure of medium p1 and operating pressure p2 for double-acting control function, VZXA-B-...-D (flow direction under the valve seat)

Piston actuator size 46 mm

Piston actuator size 75 mm



- DN13, 1/2"
- ..... DN20, 3/4"
- - - DN25, 1"
- · - · DN32, 1 1/4"

- DN20, 3/4" and DN25, 1" and DN32, 1 1/4"
- ..... DN40, 1 1/2"
- · - · DN50, 2"

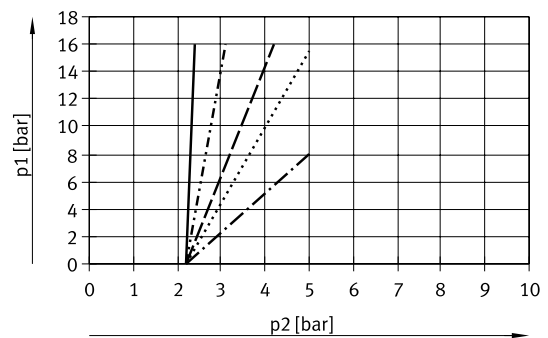
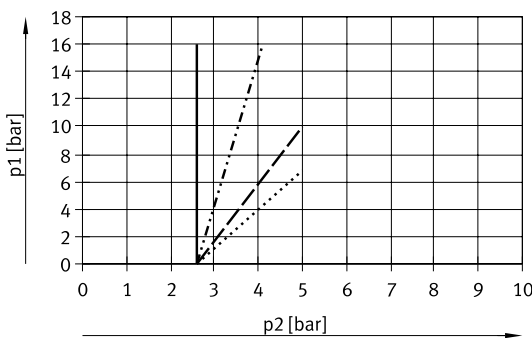
Pressure of medium and operating pressure for control function NC with reduced spring force, VZXA-A-...-PR (flow direction over the valve seat)

Actuator size	Max. pressure of medium [bar]		Min. operating pressure [bar]	
	46 mm	75 mm	46 mm	75 mm
DN13, 1/2"	16	–	2.6	–
DN20, 3/4"	16	16	4.1	2.4
DN25, 1"	10	16	5	3.1
DN32, 1 1/4"	6.8	16	5	4.2
DN40, 1 1/2"	–	15.5	–	5
DN50, 2"	–	8	–	5

Pressure of medium p1 and operating pressure p2 for control function NC with reduced spring force, VZXA-A-...-PR (flow direction over the valve seat)

Piston actuator size 46 mm

Piston actuator size 75 mm



- DN13, 1/2"
- ..... DN20, 3/4"
- - - DN25, 1"
- · - · DN32, 1 1/4"

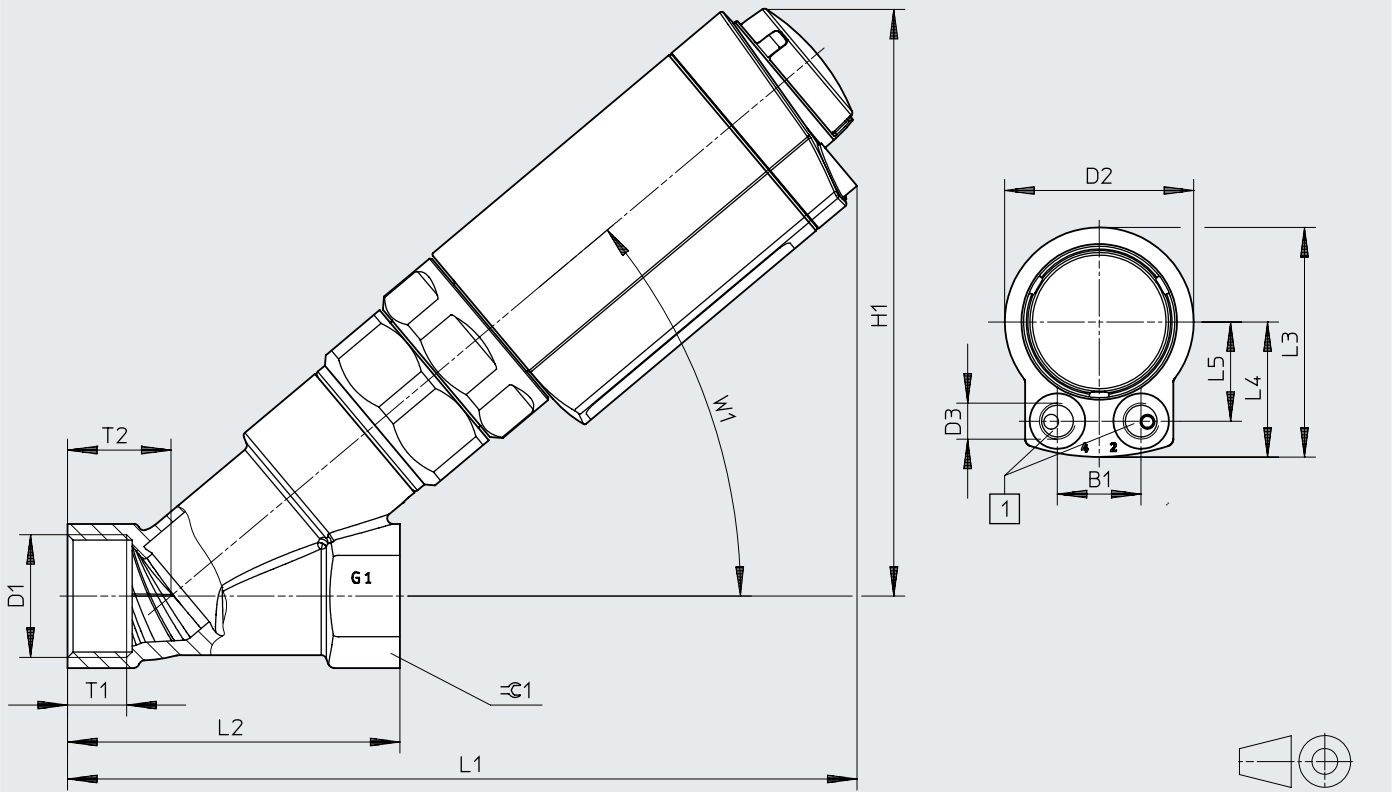
- DN20, 3/4"
- ..... DN25, 1"
- - - DN32, 1 1/4"
- · - · DN40, 1 1/2"
- · - · - · DN50, 2"

Datasheet

Dimensions

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

Threaded collar [T] with stainless steel piston actuator, connection size 46 and 75 mm



[1] Pneumatic connection

	B1	D1			D2 ∅	D3	H1 max.	L1 max.	L2
		S6	S7	S13 <sup>1)</sup>					
VZXA-A-...-13-...-16-...-46-17-...	22.6	G1/2	1/2 NPT	Rc1/2	51	G1/8	159	202	65
VZXA-A-...-20-...-16-...-75-20-...	41	G3/4	3/4 NPT	Rc3/4	82.6		187	234	75
VZXA-A-...-25-...-16-...-75-20-...	41	G1	1 NPT	Rc1	82.6		192	244	90
VZXA-B-...-13-...-30-...-46-17-...	22.6	G1/2	1/2 NPT	Rc1/2	51		159	202	65
VZXA-B-...-20-...-12.8-...-46-17-...	22.6	G3/4	3/4 NPT	Rc3/4	51		158	203	75
VZXA-B-...-20-...-30-...-75-20-...	41	G3/4	3/4 NPT	Rc3/4	82.6		187	234	75
VZXA-B-...-25-...-8.3-...-46-17-...	22.6	G1	1 NPT	Rc1	51		164	214	90
VZXA-B-...-25-...-23-...-75-20-...	41	G1	1 NPT	Rc1	82.6		192	244	90
VZXA-B-...-32-...-4.4-...-46-17-...	22.6	G1 1/4	1 1/4 NPT	Rc1 1/4	51		168	218	110
VZXA-B-...-32-...-13.5-...-75-20-...	41	G1 1/4	1 1/4 NPT	Rc1 1/4	82.6		198	248	110
VZXA-B-...-40-...-9.3-...-75-20-...	41	G1 1/2	1 1/2 NPT	Rc1 1/2	82.6		216	270	120
VZXA-B-...-50-...-5.6-...-75-20-...	41	G2	2 NPT	Rc2	82.6		215	286	150

	L3	L4	L5	T1			T2	W1	∠C1
				S6	S7	S13 <sup>1)</sup>			
VZXA-A-...-13-...-16-...-46-17-...	62.1	36.5	26.8	14	13.7	13.2	21.5	40°	25
VZXA-A-...-20-...-16-...-75-20-...	94.4	53.1	41	16	14	14.5	24	40°	32
VZXA-A-...-25-...-16-...-75-20-...	94.4	53.1	41	16	16.8	16.8	28	40°	41
VZXA-B-...-13-...-30-...-46-17-...	62.1	36.5	26.8	14	13.7	13.2	21.5	40°	25
VZXA-B-...-20-...-12.8-...-46-17-...	62.1	36.5	26.8	16	14	14.5	24	40°	32
VZXA-B-...-20-...-30-...-75-20-...	94.4	53.1	41	16	14	14.5	24	40°	32
VZXA-B-...-25-...-8.3-...-46-17-...	62.1	36.5	26.8	16	16.8	16.8	28	40°	41
VZXA-B-...-25-...-23-...-75-20-...	94.4	53.1	41	16	16.8	16.8	28	40°	41
VZXA-B-...-32-...-4.4-...-46-17-...	62.1	36.5	26.8	20	17.3	19.1	36	42°	50
VZXA-B-...-32-...-13.5-...-75-20-...	94.4	53.1	41	20	17.3	19.1	36	42°	50
VZXA-B-...-40-...-9.3-...-75-20-...	94.4	53.1	41	22	17.3	19.1	38	42°	55
VZXA-B-...-50-...-5.6-...-75-20-...	94.4	53.1	41	24	17.6	23.4	43	40°	65

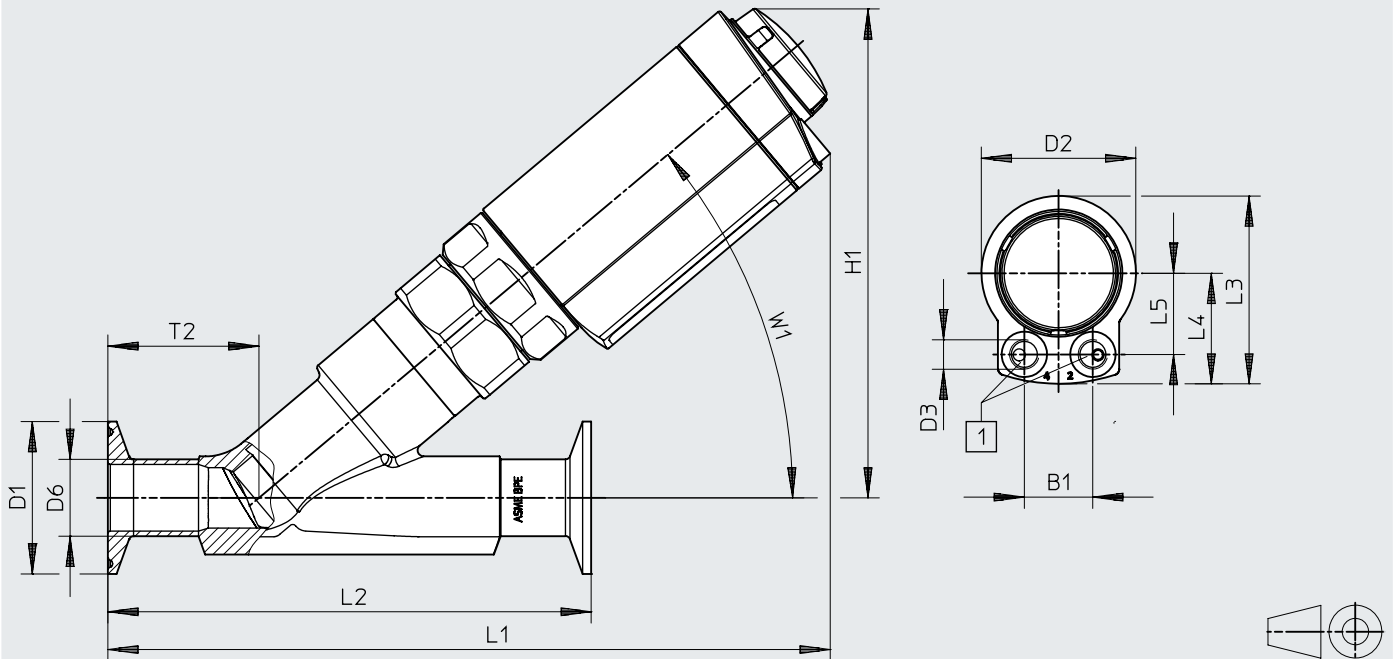
1) Selected types → [www.festo.com](http://www.festo.com)

Datasheet

Dimensions

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

Clamp [C] with stainless steel piston actuator, connection size 46 and 75 mm



[1] Pneumatic connection

Selected types → [www.festo.com](http://www.festo.com)

Angle seat valves VZXA with stainless steel piston actuator

Datasheet

	B1	D1	D2 ø	D3	D6 ø	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...-CS1-13-...-46-...	22.6	25 <sup>1)</sup>	51	G1/8	12.7 <sup>1)</sup>	161 <sup>1)</sup>	211 <sup>1)</sup>	130	62.1	36.5	26.8	28 <sup>1)</sup>	40
VZXA-...-CS1-20-...-46-...	22.6	25 <sup>1)</sup>	51		19.1 <sup>1)</sup>	161 <sup>1)</sup>	222 <sup>1)</sup>	150	62.1	36.5	26.8	39 <sup>1)</sup>	
VZXA-...-CS1-20-...-75-...	41	25 <sup>1)</sup>	82.6		19.1 <sup>1)</sup>	190 <sup>1)</sup>	252 <sup>1)</sup>	150	94.4	53.1	41	39 <sup>1)</sup>	
VZXA-...-CS1-25-...-46-...	22.6	50.4	51		25.4	166	239	160	62.1	36.5	26.8	50 <sup>1)</sup>	
VZXA-...-CS1-25-...-75-...	41	34	82.6		25.4	195	269	160	94.4	53.1	41	50	
VZXA-...-CS1-40-...-75-...	41	50.4	82.6		38.1	213	317	200	94.4	53.1	41	77	
VZXA-...-CS1-50-...-75-...	41	64	82.6		50.8	215	332	230	94.4	53.1	41	89.5	

	B1	D1	D2 ø	D3	D6 ø	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...-CS5-13-...-46-...	22.6	34	51	G1/8	19	159	208	130	62.1	36.5	26.8	28	40
VZXA-...-CS5-20-...-46-...	22.6	34	51		23	158	222	150	62.1	36.5	26.8	39	
VZXA-...-CS5-20-...-75-...	41	34	82.6		23	187	253	150	94.4	53.1	41	39	
VZXA-...-CS5-25-...-46-...	22.6	50.5	51		29	164	236	160	62.1	36.5	26.8	50	
VZXA-...-CS5-25-...-75-...	41	50.5	82.6		29	192	266	160	94.4	53.1	41	50	
VZXA-...-CS5-32-...-46-...	22.6	50.5	51		35	165	241	180	62.1	36.5	26.8	54	
VZXA-...-CS5-32-...-75-...	41	50.5	82.6		35	194	272	180	94.4	53.1	41	54	
VZXA-...-CS5-40-...-75-...	41	50.5	82.6		41	212	317	200	94.4	53.1	41	77	
VZXA-...-CS5-50-...-75-...	41	64	82.6		53	215	332	230	94.4	53.1	41	89.5	

	B1	D1	D2 ø	D3	D6 ø	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...-CS15-13-...-46-...	22.6	50.5	51	G1/8	21.3	159	208	130	62.1	36.5	26.8	28	40
VZXA-...-CS15-20-...-46-...	22.6	50.5	51		26.9	158	218	150	62.1	36.5	26.8	39	
VZXA-...-CS15-20-...-75-...	41	50.5	82.6		26.9	187	249	150	94.4	53.1	41	39	
VZXA-...-CS15-25-...-46-...	22.6	50.5	51		33.7	164	236	160	62.1	36.5	26.8	50	
VZXA-...-CS15-25-...-75-...	41	50.5	82.6		33.7	192	266	160	94.4	53.1	41	50	
VZXA-...-CS15-32-...-46-...	22.6	64	51		42.4	165	241	180	62.1	36.5	26.8	54	
VZXA-...-CS15-32-...-75-...	41	64	82.6		42.4	194	272	180	94.4	53.1	41	54	
VZXA-...-CS15-40-...-75-...	41	64	82.6		48.3	210	307	200	94.4	53.1	41	70	
VZXA-...-CS15-50-...-75-...	41	77.5	82.6		60.3	216	324	230	94.4	53.1	41	80	

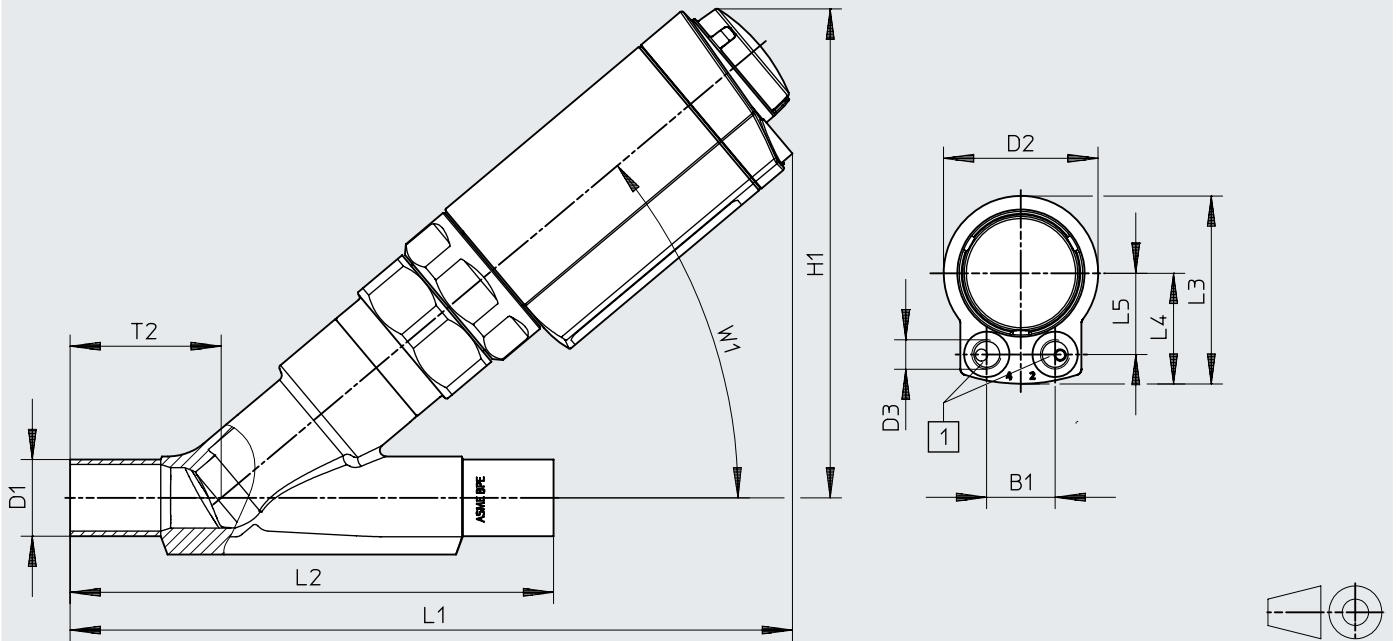
1) ASME-BPE, type A

Datasheet

Dimensions

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

Welded end [W] with stainless steel piston actuator, connection size 46 and 75 mm



[1] Pneumatic connection

Selected types → [www.festo.com](http://www.festo.com)

Datasheet

	B1	D1	D2 ø	D3	H1	L1	L2	L3	L4	L5	T2	W1
VZXA...WS1-13...-46...	22.6	12.7	51	G1/8	161	211	130	62.1	36.5	26.8	28	40
VZXA...WS1-20...-46...	22.6	19.1	51		161	222	150	62.1	36.5	26.8	39	
VZXA...WS1-20...-75...	41	19.1	82.6		190	252	150	94.4	53.1	41	39	
VZXA...WS1-25...-46...	22.6	25.4	51		166	239	160	62.1	36.5	26.8	50	
VZXA...WS1-25...-75...	41	25.4	82.6		195	269	160	94.4	53.1	41	50	
VZXA...WS1-40...-75...	41	38.1	82.6		213	317	200	94.4	53.1	41	77	
VZXA...WS1-50...-75...	41	50.8	82.6		215	332	230	94.4	53.1	41	89.5	

	B1	D1	D2 ø	D3	H1	L1	L2	L3	L4	L5	T2	W1
VZXA...WS2-13...-46...	22.6	19	51	G1/8	159	208	130	62.1	36.5	26.8	28	40
VZXA...WS2-20...-46...	22.6	23	51		158	222	150	62.1	36.5	26.8	39	
VZXA...WS2-20...-75...	41	23	82.6		187	253	150	94.4	53.1	41	39	
VZXA...WS2-25...-46...	22.6	29	51		164	236	160	62.1	36.5	26.8	50	
VZXA...WS2-25...-75...	41	29	82.6		192	266	160	94.4	53.1	41	50	
VZXA...WS2-32...-46...	22.6	35	51		165	241	180	62.1	36.5	26.8	54	
VZXA...WS2-32...-75...	41	35	82.6		194	272	180	94.4	53.1	41	54	
VZXA...WS3-40...-75...	41	41	82.6		212	317	200	94.4	53.1	41	77	
VZXA...WS3-50...-75...	41	53	82.6		215	332	230	94.4	53.1	41	89.5	

	B1	D1	D2 ø	D3	H1	L1	L2	L3	L4	L5	T2	W1
VZXA...WS3-13...-46...	22.6	21.3	51	G1/8	159	208	130	62.1	36.5	26.8	28	40
VZXA...WS3-20...-46...	22.6	26.9	51		158	218	150	62.1	36.5	26.8	39	
VZXA...WS3-20...-75...	41	26.9	82.6		187	249	150	94.4	53.1	41	39	
VZXA...WS3-25...-46...	22.6	33.7	51		164	236	160	62.1	36.5	26.8	50	
VZXA...WS3-25...-75...	41	33.7	82.6		192	266	160	94.4	53.1	41	50	
VZXA...WS3-32...-46...	22.6	42.4	51		165	241	180	62.1	36.5	26.8	54	
VZXA...WS3-32...-75...	41	42.4	82.6		194	272	180	94.4	53.1	41	54	
VZXA...WS3-40...-75...	41	48.3	82.6		210	307	200	94.4	53.1	41	70	
VZXA...WS3-50...-75...	41	60.3	82.6		216	324	230	94.4	53.1	41	80	







## Datasheet

## Ordering data

Key features:

- Control function closed via spring force, NC
- Without ATEX certification

VZXA-A-..., flow direction over the valve seat		Flow rate Kv [m <sup>3</sup> /h]	Pressure of medium [bar]	Weight [g]	Part no.	Type
G thread to DIN ISO 228-1						
	DN13, 46 mm actuator	6.6	0 ... 16	1775	8060513	VZXA-A-TS6-13-M2-V13T-16-K-46-17-PR-V4
	DN20, 75 mm actuator	14.5		3155	8060514	VZXA-A-TS6-20-M2-V13T-16-K-75-20-PR-V4
	DN25, 75 mm actuator	21.5		3395	8060515	VZXA-A-TS6-25-M2-V13T-16-K-75-20-PR-V4
NPT thread to ANSI/ASME B 1.20.1						
	1/2", 46 mm actuator	6.6	0 ... 16	1775	8060520	VZXA-A-TS7-1/2"-M2-V14T-16-K-46-17-PR-V4
	3/4", 75 mm actuator	14.5		3155	8060521	VZXA-A-TS7-3/4"-M2-V14T-16-K-75-20-PR-V4
	1", 75 mm actuator	21.5		3395	8060522	VZXA-A-TS7-1"-M2-V14T-16-K-75-20-PR-V4
VZXA-B-..., flow direction under the valve seat						
VZXA-B-..., flow direction under the valve seat		Flow rate Kv [m <sup>3</sup> /h]	Pressure of medium [bar]	Weight [g]	Part no.	Type
G thread to DIN ISO 228-1						
	DN13, 46 mm actuator	6	0 ... 30	1830	8060527	VZXA-B-TS6-13-M2-V13T-30-K-46-17-V4
	DN20, 46 mm actuator	13.3	0 ... 12.8	1910	8060528	VZXA-B-TS6-20-M2-V13T-12.8-K-46-17-V4
	DN20, 75 mm actuator	13.5	0 ... 30	3360	8060529	VZXA-B-TS6-20-M2-V13T-30-K-75-20-V4
	DN25, 46 mm actuator	20.3	0 ... 8.3	2150	8060530	VZXA-B-TS6-25-M2-V13T-8.3-K-46-17-V4
	DN25, 75 mm actuator	22.6	0 ... 23	3600	8060531	VZXA-B-TS6-25-M2-V13T-23-K-75-20-V4
	DN32, 46 mm actuator	27.9	0 ... 4.4	2480	8060533	VZXA-B-TS6-32-M2-V13T-4.4-K-46-17-V4
	DN32, 75 mm actuator	30.3	0 ... 13.5	3930	8060534	VZXA-B-TS6-32-M2-V13T-13.5-K-75-20-V4
	DN40, 75 mm actuator	41.4	0 ... 9.3	4610	8060536	VZXA-B-TS6-40-M2-V13T-9.3-K-75-20-V4
DN50, 75 mm actuator	50.1	0 ... 5.6	5430	8060538	VZXA-B-TS6-50-M2-V13T-5.6-K-75-20-V4	
NPT thread to ANSI/ASME B 1.20.1						
	1/2", 46 mm actuator	6	0 ... 30	1830	8060541	VZXA-B-TS7-1/2"-M2-V14T-30-K-46-17-V4
	3/4", 46 mm actuator	13.3	0 ... 12.8	1910	8060542	VZXA-B-TS7-3/4"-M2-V14T-12.8-K-46-17-V4
	3/4", 75 mm actuator	13.5	0 ... 30	3360	8060543	VZXA-B-TS7-3/4"-M2-V14T-30-K-75-20-V4
	1", 46 mm actuator	20.3	0 ... 8.3	2150	8060544	VZXA-B-TS7-1"-M2-V14T-8.3-K-46-17-V4
	1", 75 mm actuator	22.6	0 ... 23	3600	8060545	VZXA-B-TS7-1"-M2-V14T-23-K-75-20-V4
	1 1/4", 46 mm actuator	27.9	0 ... 4.4	2480	8060547	VZXA-B-TS7-1 1/4"-M2-V14T-4.4-K-46-17-V4
	1 1/4", 75 mm actuator	30.3	0 ... 13.5	3930	8060548	VZXA-B-TS7-1 1/4"-M2-V14T-13.5-K-75-20-V4
	1 1/2", 75 mm actuator	41.4	0 ... 9.3	4610	8060550	VZXA-B-TS7-1 1/2"-M2-V14T-9.3-K-75-20-V4
	2", 75 mm actuator	50.1	0 ... 5.6	5430	8060552	VZXA-B-TS7-2"-M2-V14T-5.6-K-75-20-V4

# Angle seat valves VZXA, with stainless steel diaphragm actuator

## Datasheet



- Poppet valve with diaphragm actuator
- Line connection  
1/2" ... 2 1/2", DN13 ... DN65
- Stroke  
26 mm



General technical data			DN25, 1"	DN32, 1 1/4"	DN40, 1 1/2"	DN50, 2"	DN65, 2 1/2"
Line connection							
Actuator size	[mm]	90					
Stroke	[mm]	26					
Flow rate Kv	VZXA-A-... [m <sub>3</sub> /h]	–	35.4	47.4	68.5	77.4	
	VZXA-B-... [m <sub>3</sub> /h]	23.6	33.1	49	60.4	77.9	
Design	Poppet valve with diaphragm actuator						
Actuation type	Pneumatic						
Type of mounting	In-line installation						
Mounting position	Any						
Valve function	2/2						
Pneumatic connection	Female thread G1/8						
Flow direction	Not reversible						
Reset method	Mechanical spring						
Type of control	Externally actuated						
Position sensing	Via mechanical indicator						
Control of the medium	On/off operation						
Control function	VZXA-A-...	–	Closed via reduced spring force, NC				
	VZXA-B-...	Closed via spring force, NC					
Flow direction	VZXA-A-...	–	Over valve seat, for gaseous media				
	VZXA-B-...	Under valve seat, for gaseous and liquid media					

## Datasheet

Operating and environmental conditions		
Operating pressure <sup>1)</sup>	[MPa]	0.5 ... 1
	[psi]	72.5 ... 145
	[bar]	5 ... 10
Ambient temperature	[°C]	0 ... +60
Temperature of medium <sup>2)</sup>	[°C]	-10 ... +180
Storage temperature	[°C]	-10 ... +60
CE marking (see declaration of conformity) <sup>3)</sup>		To EU Machinery Directive
Certification		CRN
Certificate-issuing authority		CRNOC20829.5C
Degree of protection		IP65
		IP67
Max. viscosity	[mm <sup>2</sup> /s]	600
Medium		Steam
		Inert gases
		Filtered compressed air, grade of filtration 200 µm
	VZXA-B-... additionally	Mineral oil-based hydraulic fluid
		Mineral oil
		Water
	Neutral fluids	
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Safety integrity level (SIL)		SIL 2
PFH		0.00000014
PFD		0.000595
Certificate-issuing authority		German Technical Control Board (TÜV) 968/V 1039.0 0/18

- 1) See table with "Pressure of medium and operating pressure" with corresponding control function  
 2) Temperature of medium -30 ... +200°C only in conjunction with modified PTFE seat seal (see modular product system)  
 3) Additional information: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

ATEX <sup>1)</sup>		
ATEX category for gas		II 2G
Type of (ignition) protection for gas		c T6 ... T3 X
ATEX category for dust		II 2D
Type of (ignition) protection for dust		c T80°C ... T200°C X
Explosion ambient temperature	[°C]	0°C ≤ Ta ≤ +60°C

- 1) Selected types → [www.festo.com](http://www.festo.com)

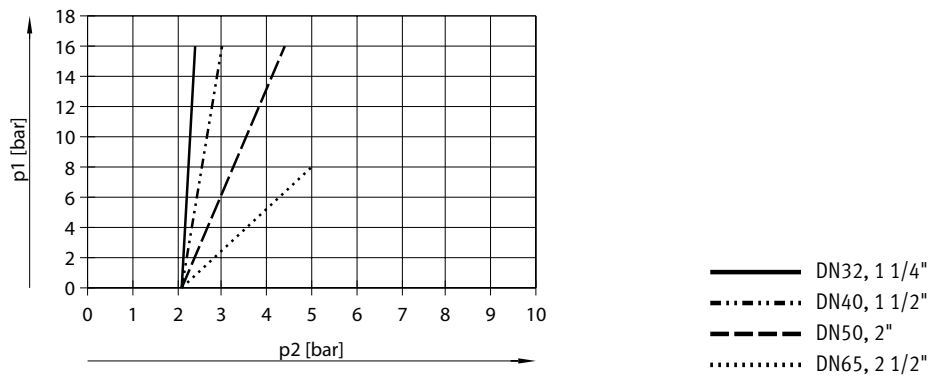
Datasheet

Materials		Material number
Piston rod	High-alloy stainless steel	
Cover	Cast stainless steel	
Seals	NBR	
Spindle seal	PTFE	
Seat seal	PTFE	
Actuator housing	Cast stainless steel	1.4408
Valve housing	Cast stainless steel	1.4409
		ASTM A351-CF3M
Note on materials	Contains paint-wetting impairment substances	
	RoHS-compliant	

Permissible operating pressure as a function of pressure of medium for control function NC, VZXA-B-...		
	Min. operating pressure [bar]	Max. pressure of medium [bar]
Actuator size	90 mm	
DN25, 1"	5	30
DN32, 1 1/4"	5	25
DN40, 1 1/2"	5	16
DN50, 2"	5	10
DN65, 2 1/2"	5	5.6

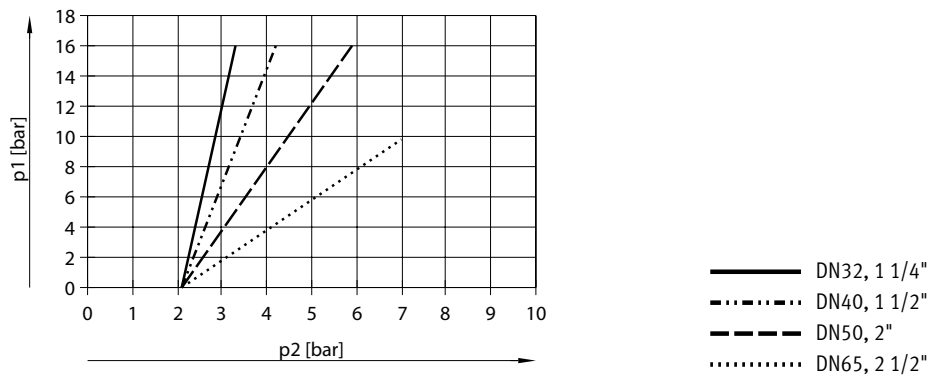
Pressure of medium p1 and operating pressure p2 for control function NC with reduced spring force, VZXA-A-...-PR (flow direction over the valve seat)

Diaphragm actuator size 90 mm



Pressure of medium p1 and operating pressure p2 for control function NO opened via spring force, VZXA-B-...-S (flow direction under the valve seat)

Diaphragm actuator size 90 mm

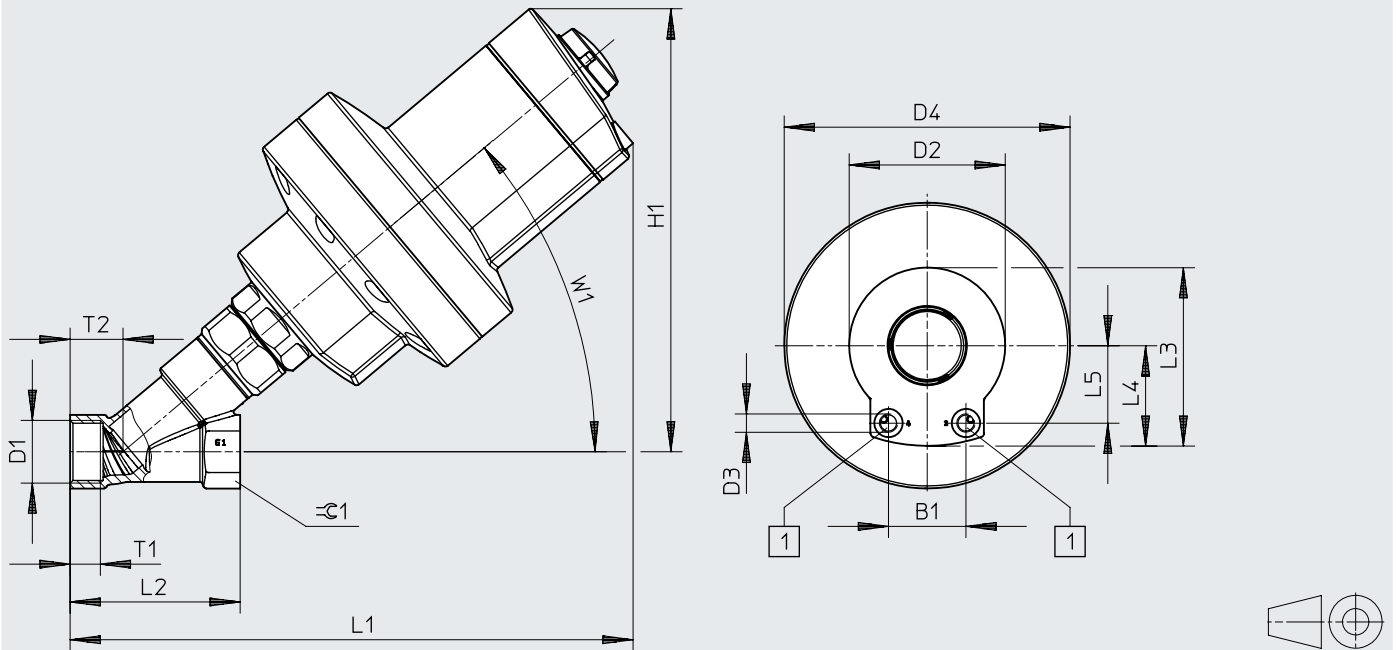


Datasheet

Dimensions

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

Threaded collar [T] with stainless steel diaphragm actuator, connection size 90 mm



[1] Pneumatic connection

	B1	D1			D2 ø	D3	D4 ø	H1 max.	L1 max.	L2
		S6	S7	S13 <sup>1)</sup>						
VZXA-A-...-32-...-16-...-PR-...	41	G1 1/4	1 1/4 NPT	Rc1 1/4	82.6	G1/8	151.3	245	300	110
VZXA-A-...-40-...-16-...-PR-...	41	G1 1/2	1 1/2 NPT	Rc1 1/2	82.6	G1/8	151.3	263	322	120
VZXA-A-...-50-...-16-...-PR-...	41	G2	2 NPT	Rc2	82.6	G1/8	151.3	260	340	150
VZXA-A-...-65-...-8-...-PR-...	41	G2 1/2	2 1/2 NPT	Rc2 1/2	82.6	G1/8	151.3	273	366	190
VZXA-B-...-25-...-30-...	41	G1	1 NPT	Rc1	82.6	G1/8	151.3	238	298	90
VZXA-B-...-32-...-25-...	41	G1 1/4	1 1/4 NPT	Rc1 1/4	82.6	G1/8	151.3	245	300	110
VZXA-B-...-40-...-16-...	41	G1 1/2	1 1/2 NPT	Rc1 1/2	82.6	G1/8	151.3	263	322	120
VZXA-B-...-50-...-10-...	41	G2	2 NPT	Rc2	82.6	G1/8	151.3	260	340	150
VZXA-B-...-65-...-5.6-...	41	G2 1/2	2 1/2 NPT	Rc2 1/2	82.6	G1/8	151.3	273	366	190

	L3	L4	L5	T1			T2	W1	∠S1
				S6	S7	S13 <sup>1)</sup>			
VZXA-A-...-32-...-16-...-PR-...	94.4	53.1	41	20	17.3	19.1	36	42°	50
VZXA-A-...-40-...-16-...-PR-...	94.4	53.1	41	22	17.3	19.1	38	42°	55
VZXA-A-...-50-...-16-...-PR-...	94.4	53.1	41	24	17.6	23.4	43	40°	65
VZXA-A-...-65-...-8-...-PR-...	94.4	53.1	41	27	24	27	53	40°	85
VZXA-B-...-25-...-30-...	94.4	53.1	41	16	16.8	16.8	28	40°	41
VZXA-B-...-32-...-25-...	94.4	53.1	41	20	17.3	19.1	36	42°	50
VZXA-B-...-40-...-16-...	94.4	53.1	41	22	17.3	19.1	38	42°	55
VZXA-B-...-50-...-10-...	94.4	53.1	41	24	17.6	23.4	43	40°	65
VZXA-B-...-65-...-5.6-...	94.4	53.1	41	27	24	27	53	40°	85

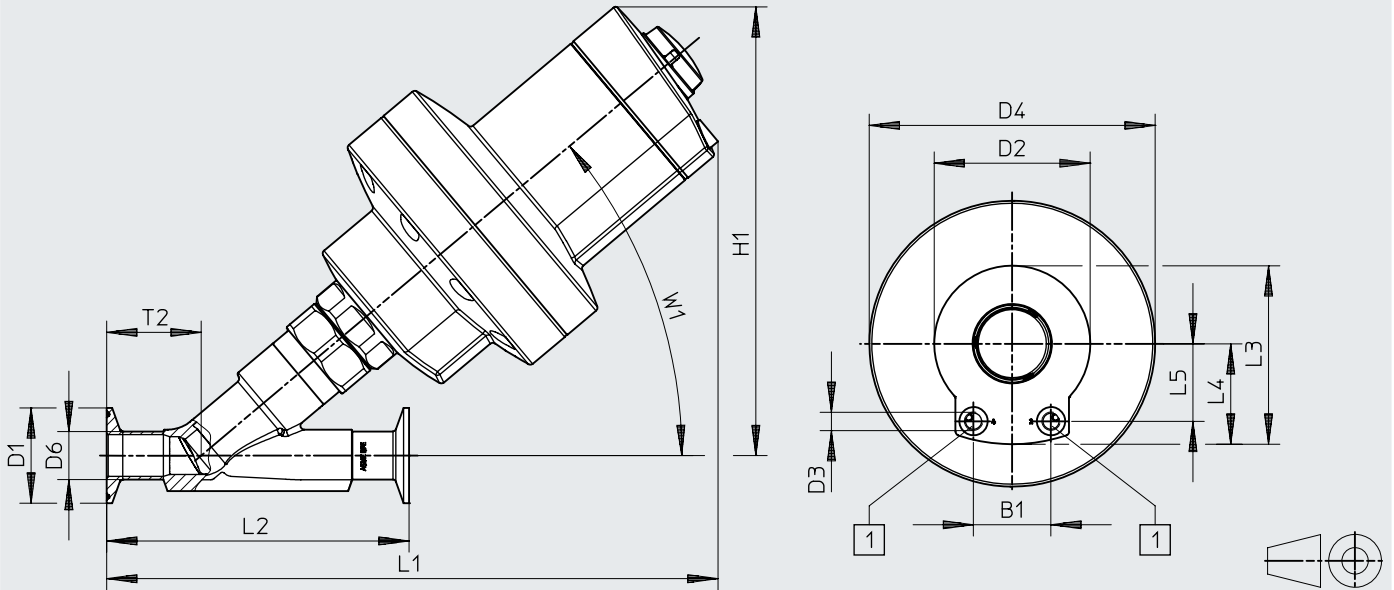
1) Selected types → [www.festo.com](http://www.festo.com)

Datasheet

Dimensions

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

Clamp [C] with stainless steel diaphragm actuator, connection size 90 mm



[1] Pneumatic connection

Selected types → [www.festo.com](http://www.festo.com)

	B1	D1	D2 ø	D3	D4 ø	D6 ø	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...-CS1-25-...-90-...	41	34	82.6	G1/8	151.3	25.4	240	323	160	94.4	53.1	41	50	40
VZXA-...-CS1-40-...-90-...		50.4				38.1	258	371	200				77	
VZXA-...-CS1-50-...-90-...		64				50.8	260	386	230				89.5	
VZXA-...-CS1-65-...-90-...		77.4				63.5	275	417	290				103	

	B1	D1	D2 ø	D3	D4 ø	D6 ø	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...-CS5-25-...-90-...	41	50.5	82.6	G1/8	151.3	29	238	320	160	94.4	53.1	41	50	40
VZXA-...-CS5-32-...-90-...		50.5				35	239	326	180				54	
VZXA-...-CS5-40-...-90-...		50.5				41	258	371	200				77	
VZXA-...-CS5-50-...-90-...		64				53	260	386	230				89.5	
VZXA-...-CS5-65-...-90-...		91				70	273	416	290				103	

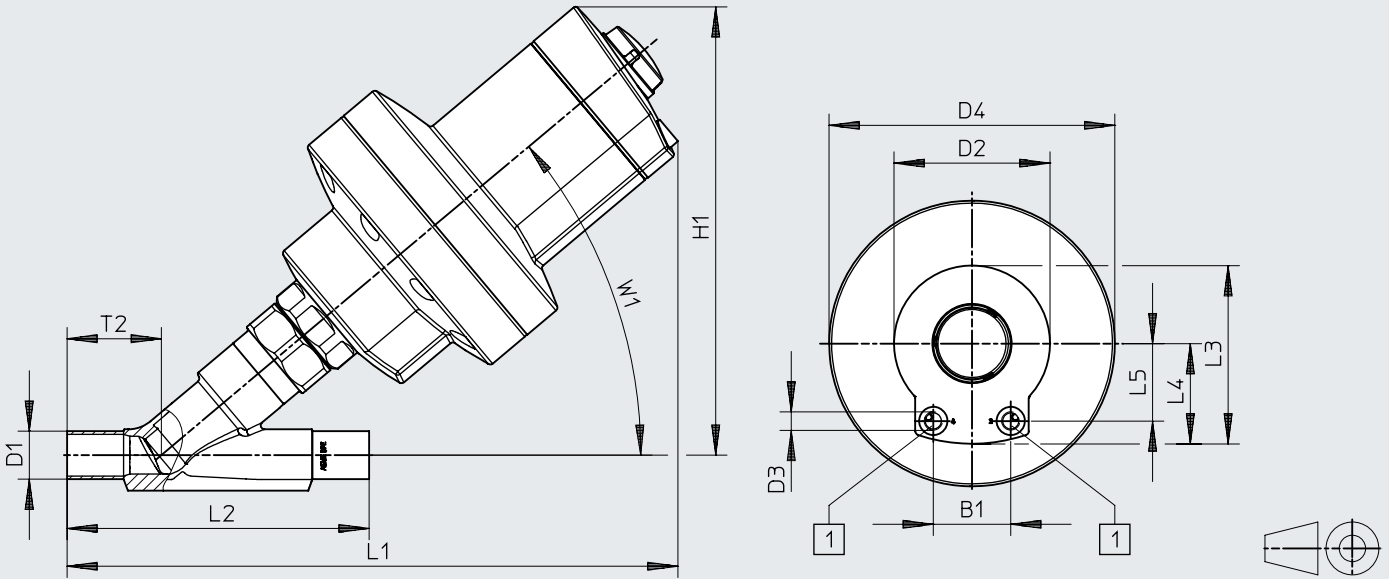
	B1	D1	D2 ø	D3	D4 ø	D6 ø	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...-CS15-25-...-90-...	41	50.5	82.6	G1/8	151.3	33.7	238	320	160	94.4	53.1	41	50	40
VZXA-...-CS15-32-...-90-...		64				42.4	239	326	180				54	
VZXA-...-CS15-40-...-90-...		64				48.3	255	361	200				70	
VZXA-...-CS15-50-...-90-...		77.5				60.3	261	378	230				80	
VZXA-...-CS15-65-...-90-...		91				76.1	273	416	290				103	

Datasheet

Dimensions

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

Welded end [W] with stainless steel diaphragm actuator, connection size 90 mm



[1] Pneumatic connection

Selected types → [www.festo.com](http://www.festo.com)

	B1	D1	D2 ∅	D3	D4 ∅	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...WS1-25-...-90-...	41	25.4	82.6	G1/8	151.3	240	323	160	94.4	53.1	41	50	40
VZXA-...WS1-40-...-90-...		38.1				258	371	200				77	
VZXA-...WS1-50-...-90-...		50.8				260	386	230				89.5	
VZXA-...WS1-65-...-90-...		63.5				275	417	290				103	

	B1	D1	D2 ∅	D3	D4 ∅	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...WS2-25-...-90-...	41	29	82.6	G1/8	151.3	238	320	160	94.4	53.1	41	50	40
VZXA-...WS2-32-...-90-...		35				239	326	180				54	
VZXA-...WS2-40-...-90-...		41				258	371	200				77	
VZXA-...WS2-50-...-90-...		53				260	386	230				89.5	
VZXA-...WS2-65-...-90-...		70				273	416	290				103	





	B1	D1	D2 ∅	D3	D4 ∅	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...WS3-25-...-90-...	41	33.7	82.6	G1/8	151.3	238	320	160	94.4	53.1	41	50	40
VZXA-...WS3-32-...-90-...		42.4				239	326	180				54	
VZXA-...WS3-40-...-90-...		48.3				255	361	200				70	
VZXA-...WS3-50-...-90-...		60.3				261	378	230				80	
VZXA-...WS3-65-...-90-...		76.1				273	416	290				103	

## Datasheet

### Ordering data

Key features:

- Control function closed via spring force, NC
- Without ATEX certification

VZXA-A-..., flow direction over the valve seat	Flow rate Kv [m <sup>3</sup> /h]	Pressure of medium [bar]	Weight [g]	Part no.	Type	
G thread to DIN ISO 228-1						
	DN32, 90 mm actuator	35.4	0 ... 16	6595	<b>8060516</b>	VZXA-A-TS6-32-M2-V13T-16-M-90-26-PR-V4
	DN40, 90 mm actuator	47.4	0 ... 16	7275	<b>8060517</b>	VZXA-A-TS6-40-M2-V13T-16-M-90-26-PR-V4
	DN50, 90 mm actuator	68.5	0 ... 16	8095	<b>8060518</b>	VZXA-A-TS6-50-M2-V13T-16-M-90-26-PR-V4
	DN65, 90 mm actuator	77.4	0 ... 8	10185	<b>8060519</b>	VZXA-A-TS6-65-M2-V13T-8-M-90-26-PR-V4
NPT thread to ANSI/ASME B 1.20.1						
	1 1/4", 90 mm actuator	35.4	0 ... 16	6595	<b>8060523</b>	VZXA-A-TS7-1 1/4"-M2-V14T-16-M-90-26-PR-V4
	1 1/2", 90 mm actuator	47.4	0 ... 16	7275	<b>8060524</b>	VZXA-A-TS7-1 1/2"-M2-V14T-16-M-90-26-PR-V4
	2", 90 mm actuator	68.5	0 ... 16	8095	<b>8060525</b>	VZXA-A-TS7-2"-M2-V14T-16-M-90-26-PR-V4
	2 1/2", 90 mm actuator	77.4	0 ... 8	10185	<b>8060526</b>	VZXA-A-TS7-2 1/2"-M2-V14T-8-M-90-26-PR-V4
VZXA-B-..., flow direction under the valve seat						
G thread to DIN ISO 228-1						
	DN25, 90 mm actuator	23.6	0 ... 30	6780	<b>8060532</b>	VZXA-B-TS6-25-M2-V13T-30-M-90-26-V4
	DN32, 90 mm actuator	33.1	0 ... 25	7110	<b>8060535</b>	VZXA-B-TS6-32-M2-V13T-25-M-90-26-V4
	DN40, 90 mm actuator	49	0 ... 16	7790	<b>8060537</b>	VZXA-B-TS6-40-M2-V13T-16-M-90-26-V4
	DN50, 90 mm actuator	60.4	0 ... 10	8610	<b>8060539</b>	VZXA-B-TS6-50-M2-V13T-10-M-90-26-V4
	DN65, 90 mm actuator	77.9	0 ... 5.6	10700	<b>8060540</b>	VZXA-B-TS6-65-M2-V13T-5.6-M-90-26-V4
NPT thread to ANSI/ASME B 1.20.1						
	1", 90 mm actuator	23.6	0 ... 30	6780	<b>8060546</b>	VZXA-B-TS7-1"-M2-V14T-30-M-90-26-V4
	1 1/4", 90 mm actuator	33.1	0 ... 25	7110	<b>8060549</b>	VZXA-B-TS7-1 1/4"-M2-V14T-25-M-90-26-V4
	1 1/2", 90 mm actuator	49	0 ... 16	7790	<b>8060551</b>	VZXA-B-TS7-1 1/2"-M2-V14T-16-M-90-26-V4
	2", 90 mm actuator	60.4	0 ... 10	8610	<b>8060553</b>	VZXA-B-TS7-2"-M2-V14T-10-M-90-26-V4
	2 1/2", 90 mm actuator	77.9	0 ... 5.6	10700	<b>8060554</b>	VZXA-B-TS7-2 1/2"-M2-V14T-5.6-M-90-26-V4



Datasheet



- Polymer piston actuator optionally with brass or stainless steel<sup>1)</sup> fitting housing
- Line connection  
1/2" ... 2", DN13 ... DN50
- Stroke  
17 ... 20 mm



**General technical data**

Line connection		DN13, 1/2"	DN20, 3/4"		DN25, 1"		DN32, 1 1/4"		DN40, 1 1/2"	DN50, 2"	
Actuator size	[mm]	46	46	75	46	75	46	75	75	75	
Stroke	[mm]	17	17	20	17	20	17	20	20	20	
Flow rate Kv	VZXA-A-...	[m <sub>3</sub> /h]	4.9	12 <sup>1)</sup>	12.7	18.7 <sup>1)</sup>	19.2	22.7 <sup>1)</sup>	25.3	34.5	40.1
	VZXA-B-...	[m <sub>3</sub> /h]	4.6	11.1	11.8	15.9	17.2	22.2	24.4	32.9	38.8
Design	Poppet valve with piston actuator										
Actuation type	Pneumatic										
Type of mounting	In-line installation										
Mounting position	Any										
Valve function	2/2										
Pneumatic connection	Female thread G1/8										
Flow direction	Not reversible										
Reset method	Mechanical spring										
Type of control	Externally actuated										
Position sensing	Via mechanical indicator										
Control of the medium	On/off operation										
Control function	VZXA-A-...	Closed via reduced spring force, NC									
	VZXA-B-...	Closed via spring force, NC									
Flow direction	VZXA-A-...	Over valve seat, for gaseous media									
	VZXA-B-...	Under valve seat, for gaseous and liquid media									

1) Selected types → [www.festo.com](http://www.festo.com)

Datasheet

Operating and environmental conditions		
Control function		VZXA-A-...   VZXA-B-...
Operating pressure <sup>1)</sup>	[MPa]	0.5 ... 0.7
	[psi]	72.5 ... 101.5
	[bar]	5 ... 7
Ambient temperature	[°C]	0 ... +60
Temperature of medium	[°C]	-10 ... +60   -10 ... +180
Storage temperature	[°C]	-10 ... +60
Outdoor applications	Weather-protected application areas Class C1 based on IEC 60654-1	
CE marking (see declaration of conformity) <sup>2)</sup>		
Connection size DN32 ... DN50	In accordance with EU Pressure Equipment Directive	
Degree of protection	IP65	
	IP67	
Max. viscosity	[mm <sup>2</sup> /s]	600
Medium	Steam	
	Inert gases	
	Filtered compressed air, grade of filtration 200 µm	
	-	Mineral oil-based hydraulic fluid
	-	Mineral oil
	-	Water
-	Neutral fluids	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]	

1) See table with "Pressure of medium and operating pressure" with corresponding control function

2) Additional information: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

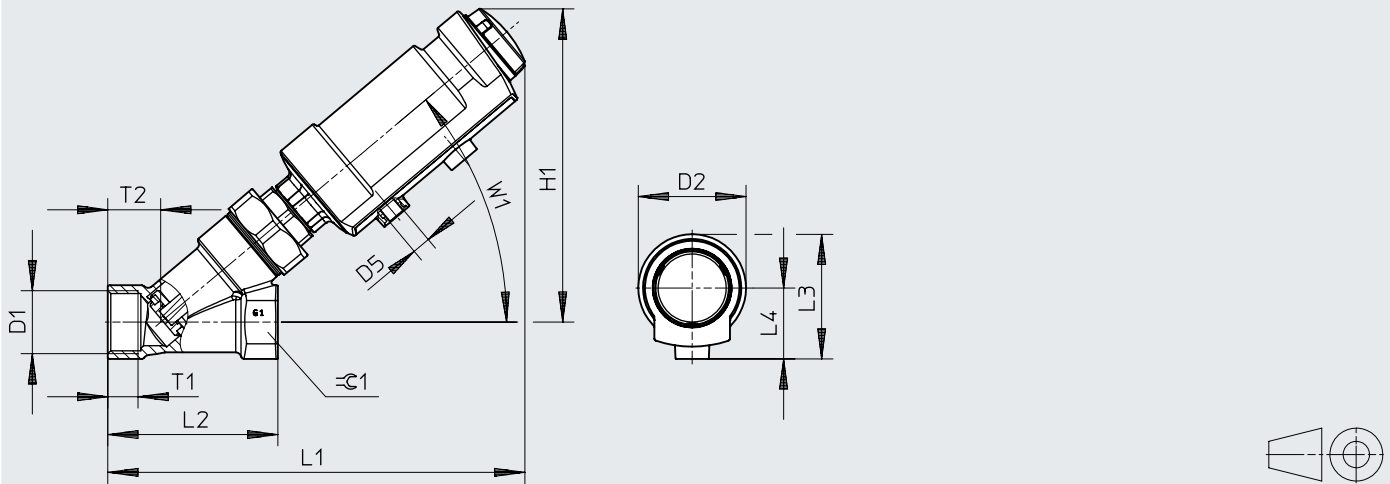
Materials	Material number
Piston rod	High-alloy stainless steel
Cover	Reinforced PA
Seals	FPM
Spindle seal	PTFE
Seat seal	PTFE
Actuator housing	Reinforced PA
Valve housing	Brass   CW724R
Note on materials	Contains paint-wetting impairment substances
	RoHS-compliant

Datasheet

Dimensions

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

Threaded collar [T] with polymer piston actuator, connection size 46 mm



[1] Pneumatic connection

	D1			D2 ø	D5	H1	L1	L2	L3	L4	T1			T2	W1	∠C1
	S6	S7	S13 <sup>1)</sup>								S6	S7	S13 <sup>1)</sup>			
VZXA-...-B1T-16-K-46-...-PM	G1/2	1/2 NPT	Rc1/2	57	G1/8	161	208	65	66	37.5	14	13.7	13.2	21.5	40°	25
VZXA-...-B1T-30-K-46-...-PM	G1/2	1/2 NPT	Rc1/2			161	208	65			14	13.7	13.2	21.5	40°	25
VZXA-...-B1T-12.8-K-46-...-PM	G3/4	3/4 NPT	Rc3/4			163	213	75			16	16	14.5	24	40°	32
VZXA-...-B1T-8.3-K-46-...-PM	G1	1 NPT	Rc1			166	221	90			16	16	16.8	28	40°	41
VZXA-...-B1T-4.4-K-46-...-PM	G1 1/4	1 1/4 NPT	Rc1 1/4			179	232	110			20	19	19.1	36	42°	50

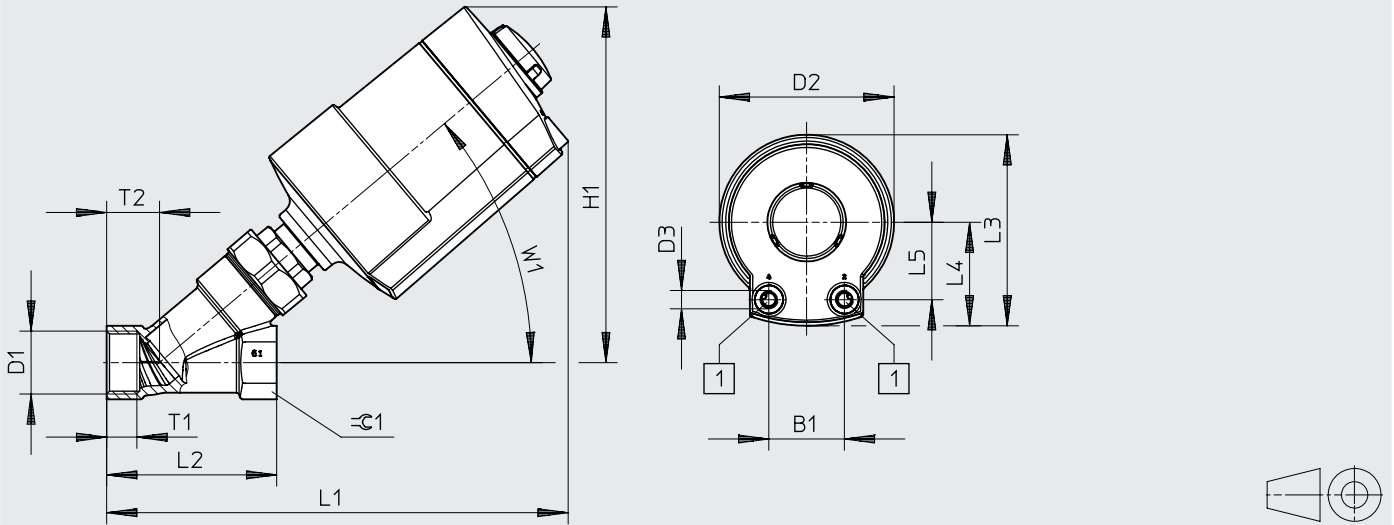
1) Selected types → [www.festo.com](http://www.festo.com)

Datasheet

Dimensions

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

Threaded collar [T] with polymer piston actuator, connection size 75 mm



[1] Pneumatic connection

Selected types → [www.festo.com](http://www.festo.com)

	B1	D1			D2 ∅	D3	H1	L1	L2	L3	L4	L5	T1			T2	W1	≈C1
		S6	S7	S13 <sup>1)</sup>									S6	S7	S13 <sup>1)</sup>			
		VZXA-A.T...-K-75-...	40	G3/4									3/4 NPT	Rc3/4	92.5			
		G1	1 NPT	Rc1			188	244	90				16	16	16.8	28	40°	41
		G1 1/4	1 1/4 NPT	Rc1 1/4			201	256	110				20	19	19.1	36	42°	50
		G1 1/2	1 1/2 NPT	Rc1 1/2			214	272	120				22	17.3	19.1	38	42°	55
		G2	2 NPT	Rc2			217	294	150				24	17.6	23.4	43	40°	65

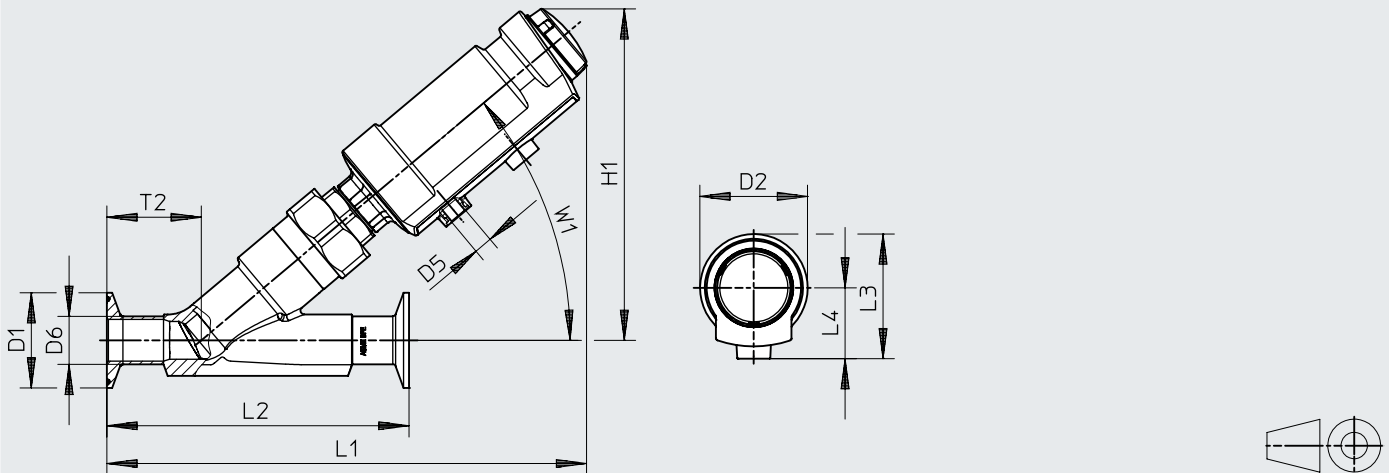
1) Selected types → [www.festo.com](http://www.festo.com)

Datasheet

Dimensions

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

Clamp [C] with polymer piston actuator, connection size 46 mm



[1] Pneumatic connection

Selected types → [www.festo.com](http://www.festo.com)

	D1	D2 ∅	D5 ∅	D6 ∅	H1	L1	L2	L3	L4	T2	W1
VZXA-...-CS1-13-...-46-...	25 <sup>1)</sup>	57	G1/8	12.7 <sup>1)</sup>	190 <sup>1)</sup>	250 <sup>1)</sup>	130	66	37.5	28 <sup>1)</sup>	40
VZXA-...-CS1-20-...-46-...	25 <sup>1)</sup>			19.1 <sup>1)</sup>	193 <sup>1)</sup>	264 <sup>1)</sup>	150			39 <sup>1)</sup>	
VZXA-...-CS1-25-...-46-...	50.4			25.4	195 <sup>1)</sup>	278 <sup>1)</sup>	160			50	

	D1	D2 ∅	D5 ∅	D6 ∅	H1	L1	L2	L3	L4	T2	W1
VZXA-...-CS5-13-...-46-...	34	57	G1/8	19	190	247	130	66	37.5	28	40
VZXA-...-CS5-20-...-46-...	34			23	193	261	150			39	
VZXA-...-CS5-25-...-46-...	50.5			29	195	275	160			50	
VZXA-...-CS5-32-...-46-...	50.5			35	201	280	180			-	54

	D1	D2 ∅	D5 ∅	D6 ∅	H1	L1	L2	L3	L4	T2	W1
VZXA-...-CS15-13-...-46-...	50.5	57	G1/8	21.3	190	247	130	66	37.5	28	40
VZXA-...-CS15-20-...-46-...				26.9	193	261	150			39	
VZXA-...-CS15-25-...-46-...				33.7	195	275	160			50	
VZXA-...-CS15-32-...-46-...				64	42.4	201	280			180	-

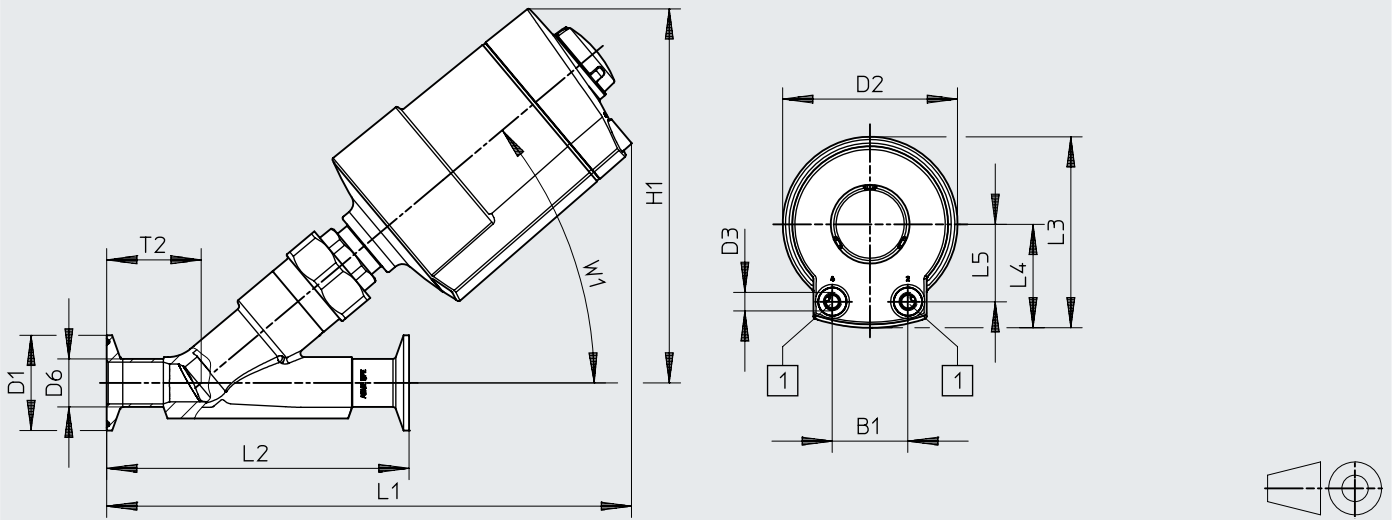
1) ASME-BPE, type A

Datasheet

Dimensions

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

Clamp [C] with polymer piston actuator, connection size 75 mm



[1] Pneumatic connection

Selected types → [www.festo.com](http://www.festo.com)

	B1	D1	D2 ∅	D3 ∅	D6 ∅	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...-CS1-20-...-75-...	40	25 <sup>1)</sup>	92.5	G1/8	19.1 <sup>1)</sup>	171 <sup>1)</sup>	241 <sup>1)</sup>	150	101	54.8	41	39 <sup>1)</sup>	40
VZXA-...-CS1-25-...-75-...		34			25.4	173 <sup>1)</sup>	254 <sup>1)</sup>	160				50	
VZXA-...-CS1-40-...-75-...		50.4			38.1	197	302 <sup>1)</sup>	200				77	
VZXA-...-CS1-50-...-75-...		64			50.8	195	317 <sup>1)</sup>	230				89.5	

	B1	D1	D2 ∅	D3 ∅	D6 ∅	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...-CS5-20-...-75-...	40	34	92.5	G1/8	23	171	238	150	101	54.8	41	39	40
VZXA-...-CS5-25-...-75-...		50.5			29	173	251	160				50	
VZXA-...-CS5-32-...-75-...		50.5			35	179	256	180				54	-
VZXA-...-CS5-40-...-75-...		50.5			41	197	302	200				77	40
VZXA-...-CS5-50-...-75-...		64			53	195	317	230				89.5	

	B1	D1	D2 ∅	D3 ∅	D6 ∅	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...-CS15-20-...-75-...	40	50.5	92.5	G1/8	26.9	171	238	150	101	54.8	41	39	40
VZXA-...-CS15-25-...-75-...		50.5			33.7	173	251	160				50	
VZXA-...-CS15-32-...-75-...		64			42.4	179	256	180				54	-
VZXA-...-CS15-40-...-75-...		64			48.3	197	292	200				70	40
VZXA-...-CS15-50-...-75-...		77.5			60.3	195	308	230				80	

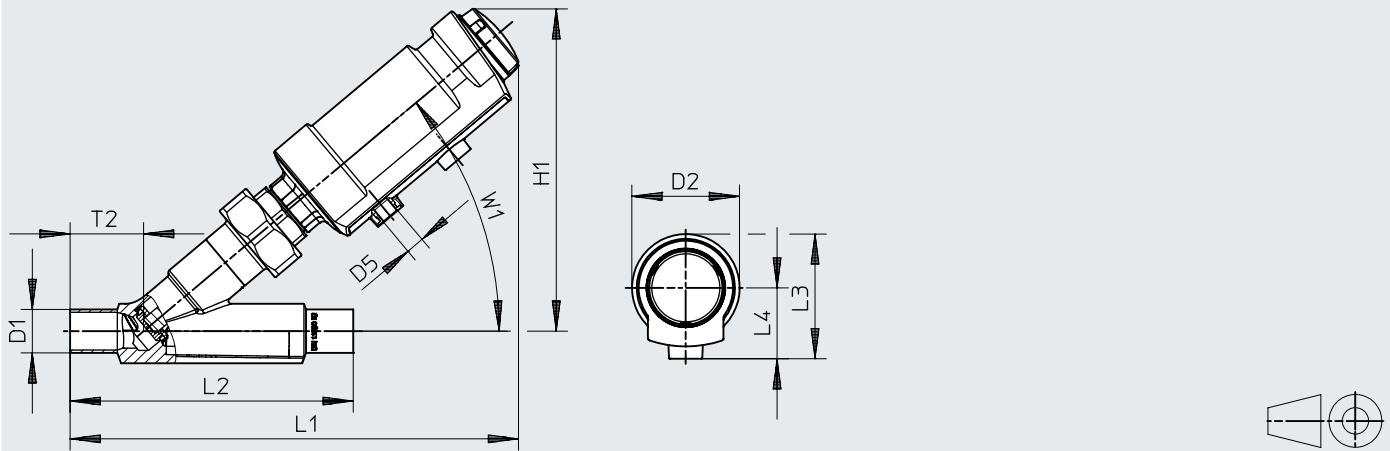
1) ASME-BPE, type A

Datasheet

Dimensions

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

Welded end [W] with polymer piston actuator, connection size 46 mm



[1] Pneumatic connection

Selected types → [www.festo.com](http://www.festo.com)

	D1	D2 ∅	D5 ∅	H1	L1	L2	L3	L4	T2	W1
VZXA-...WS1-13-...-46-...	12.7	57	G1/8	190	250	130	66	37.5	28	40
VZXA-...WS1-20-...-46-...	19.1			193	264	150			39	
VZXA-...WS1-25-...-46-...	25.4			195	278	160			50	

	D1	D2 ∅	D5 ∅	H1	L1	L2	L3	L4	T2	W1
VZXA-...WS2-13-...-46-...	19	57	G1/8	190	247	130	66	37.5	28	40
VZXA-...WS2-20-...-46-...	23			193	261	150			39	
VZXA-...WS2-25-...-46-...	29			195	275	160			50	
VZXA-...WS2-32-...-46-...	35			201	280	180		-	54	-

	D1	D2 ∅	D5 ∅	H1	L1	L2	L3	L4	T2	W1
VZXA-...WS3-13-...-46-...	21.3	57	G1/8	190	247	130	66	37.5	28	40
VZXA-...WS3-20-...-46-...	26.9			193	261	150			39	
VZXA-...WS3-25-...-46-...	33.7			195	275	160			-	
VZXA-...WS3-32-...-46-...	42.2			201	280	180		-	-	-

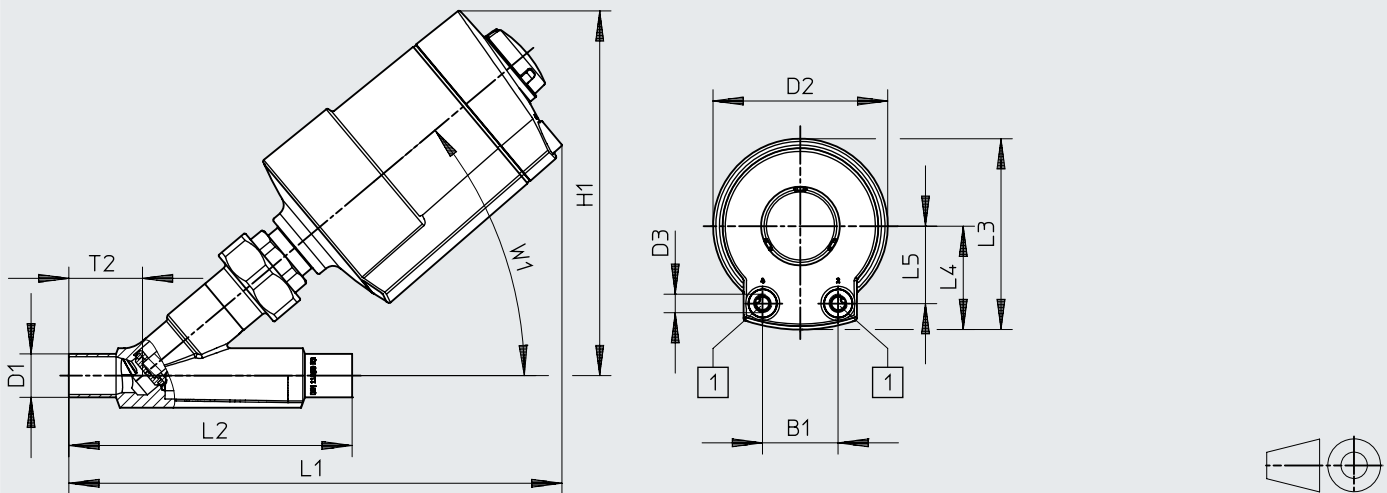
1) ASME-BPE, type A

Datasheet

Dimensions

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

Welded end [W] with polymer piston actuator, connection size 75 mm



[1] Pneumatic connection

Selected types → [www.festo.com](http://www.festo.com)

	B1	D1 ø	D2 ø	D3	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...WS1-20-...-75-...	40	19.1	92.5	G1/8	171	241	150	101	54.8	41	39	40
VZXA-...WS1-25-...-75-...		25.4			173	254	160				50	
VZXA-...WS1-40-...-75-...		38.1			196	302	200				77	
VZXA-...WS1-50-...-75-...		50.8			195	317	230				89.5	

	B1	D1 ø	D2 ø	D3	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...WS2-20-...-75-...	40	23	92.5	G1/8	171	238	150	101	54.8	41	39	40
VZXA-...WS2-25-...-75-...		29			173	251	160				50	
VZXA-...WS2-32-...-75-...		35			179	256	180				54	
VZXA-...WS2-40-...-75-...		41			197	302	200				77	
VZXA-...WS2-50-...-75-...		53			195	317	230				89.5	

	B1	D1 ø	D2 ø	D3	H1	L1	L2	L3	L4	L5	T2	W1
VZXA-...WS3-20-...-75-...	40	26.9	92.5	G1/8	171	238	150	101	54.8	41	39	40
VZXA-...WS3-25-...-75-...		33.7			173	251	160				-	
VZXA-...WS3-32-...-75-...		42.2			179	256	180				54	-
VZXA-...WS3-40-...-75-...		48.3			197	292	200				70	
VZXA-...WS3-50-...-75-...		60.3			195	308	230				80	



## Datasheet

## Ordering data

Key features:

- Control function closed via spring force, NC
- Without ATEX certification

VZXA-A... Flow direction: above the valve seat		Flow rate Kv [m <sup>3</sup> /h]	Pressure of medium [MPa]   [bar]		Weight [g]	Part no.	Type
G thread to DIN ISO 228-1							
	DN13, 46 mm actuator	4.9	0 ... 1.6	0 ... 16	1096	8111583	VZXA-A-TS6-13-M6-B1T-16-K-46-17-PR-PM
	DN20, 75 mm actuator	12.7	0 ... 1.6	0 ... 16	2321	8111584	VZXA-A-TS6-20-M6-B1T-16-K-75-20-PR-PM
	DN25, 75 mm actuator	19.2	0 ... 1.6	0 ... 16	2550	8111585	VZXA-A-TS6-25-M6-B1T-16-K-75-20-PR-PM
	DN32, 75 mm actuator	25.3	0 ... 1.6	0 ... 16	3001	8111586	VZXA-A-TS6-32-M6-B1T-16-K-75-20-PR-PM
	DN40, 75 mm actuator	34.5	0 ... 1.55	0 ... 15.5	3650	8111587	VZXA-A-TS6-40-M6-B1T-15.5-K-75-20-PR-PM
	DN50, 75 mm actuator	40.1	0 ... 0.8	0 ... 8	4627	8111588	VZXA-A-TS6-50-M6-B1T-8-K-75-20-PR-PM
NPT thread to ANSI/ASME B 1.20.1							
	1/2", 46 mm actuator	4.9	0 ... 1.6	0 ... 16	1096	8111598	VZXA-A-TS7-1/2"-M6-B1T-16-K-46-17-PR-PM
	3/4", 75 mm actuator	12.7	0 ... 1.6	0 ... 16	2321	8111599	VZXA-A-TS7-3/4"-M6-B1T-16-K-75-20-PR-PM
	1", 75 mm actuator	19.2	0 ... 1.6	0 ... 16	2550	8111600	VZXA-A-TS7-1"-M6-B1T-16-K-75-20-PR-PM
	1 1/4", 75 mm actuator	25.3	0 ... 1.6	0 ... 16	3001	8111601	VZXA-A-TS7-1 1/4"-M6-B1T-16-K-75-20-PR-PM
	1 1/2", 75 mm actuator	34.5	0 ... 1.55	0 ... 15.5	3650	8111602	VZXA-A-TS7-1 1/2"-M6-B1T-15.5-K-75-20-PR-PM
	2", 75 mm actuator	40.1	0 ... 0.8	0 ... 8	4627	8111603	VZXA-A-TS7-2"-M6-B1T-8-K-75-20-PR-PM
VZXA-B... Flow direction: below the valve seat							
VZXA-B... Flow direction: below the valve seat		Flow rate Kv [m <sup>3</sup> /h]	Pressure of medium [MPa]   [bar]		Weight [g]	Part no.	Type
G thread to DIN ISO 228-1							
	DN13, 46 mm actuator	4.6	0 ... 3	0 ... 30	1151	8111589	VZXA-B-TS6-13-M2-B1T-30-K-46-17-PM
	DN20, 46 mm actuator	11.1	0 ... 1.28	0 ... 12.8	1257	8111590	VZXA-B-TS6-20-M2-B1T-12.8-K-46-17-PM
	DN20, 75 mm actuator	11.8	0 ... 3	0 ... 30	2448	8111591	VZXA-B-TS6-20-M2-B1T-30-K-75-20-PM
	DN25, 46 mm actuator	15.9	0 ... 0.83	0 ... 8.3	1486	8111592	VZXA-B-TS6-25-M2-B1T-8.3-K-46-17-PM
	DN25, 75 mm actuator	17.2	0 ... 2.3	0 ... 23	2677	8111593	VZXA-B-TS6-25-M2-B1T-23-K-75-20-PM
	DN32, 46 mm actuator	22.2	0 ... 0.44	0 ... 4.4	1937	8111594	VZXA-B-TS6-32-M2-B1T-4.4-K-46-17-PM
	DN32, 75 mm actuator	24.4	0 ... 1.35	0 ... 13.5	3128	8111595	VZXA-B-TS6-32-M2-B1T-13.5-K-75-20-PM
	DN40, 75 mm actuator	32.9	0 ... 0.93	0 ... 9.3	3777	8111596	VZXA-B-TS6-40-M2-B1T-9.3-K-75-20-PM
	DN50, 75 mm actuator	38.8	0 ... 0.56	0 ... 5.6	4754	8111597	VZXA-B-TS6-50-M2-B1T-5.6-K-75-20-PM
NPT thread to ANSI/ASME B 1.20.1							
	1/2", 46 mm actuator	4.6	0 ... 3	0 ... 30	1151	8111604	VZXA-B-TS7-1/2"-M2-B1T-30-K-46-17-PM
	3/4", 46 mm actuator	11.1	0 ... 1.28	0 ... 12.8	1257	8111605	VZXA-B-TS7-3/4"-M2-B1T-12.8-K-46-17-PM
	3/4", 75 mm actuator	11.8	0 ... 3	0 ... 30	2448	8111606	VZXA-B-TS7-3/4"-M2-B1T-30-K-75-20-PM
	1", 46 mm actuator	15.9	0 ... 0.83	0 ... 8.3	1486	8111607	VZXA-B-TS7-1"-M2-B1T-8.3-K-46-17-PM
	1", 75 mm actuator	17.2	0 ... 2.3	0 ... 23	2677	8111608	VZXA-B-TS7-1"-M2-B1T-23-K-75-20-PM
	1 1/4", 46 mm actuator	22.2	0 ... 0.44	0 ... 4.4	1937	8111609	VZXA-B-TS7-1 1/4"-M2-B1T-4.4-K-46-17-PM
	1 1/4", 75 mm actuator	24.4	0 ... 1.35	0 ... 13.5	3128	8111610	VZXA-B-TS7-1 1/4"-M2-B1T-13.5-K-75-20-PM
	1 1/2", 75 mm actuator	32.9	0 ... 0.93	0 ... 9.3	3777	8111611	VZXA-B-TS7-1 1/2"-M2-B1T-9.3-K-75-20-PM
	2", 75 mm actuator	38.8	0 ... 0.56	0 ... 5.6	4754	8111612	VZXA-B-TS7-2"-M2-B1T-5.6-K-75-20-PM

Ordering data – Modular product system

Ordering table		Conditions	Code	Enter code
VZXA-...				
Module no.	<b>3539410</b>			
Product type	VZXA		<b>VZXA</b>	VZXA
Flow direction	Over valve seat, for gaseous media		<b>-A</b>	
	Under valve seat, for gaseous and liquid media		<b>-B</b>	
Control of the medium	On/off operation			
Line connection	Clamp	[9]	<b>-C</b>	
	Threaded collar		<b>-T</b>	
	Welded end	[9]	<b>-W</b>	
Connection standard	ASME BPE	[9], [10], [13]	<b>S1</b>	
	DIN 11850 R2	[9], [11]	<b>S2</b>	
	DIN EN ISO 1127/ISO 4200	[9], [11]	<b>S3</b>	
	DIN 32676, series A	[9], [12]	<b>S5</b>	
	G thread to DIN ISO 228	[14]	<b>S6</b>	
	NPT thread to ANSI/ASME B 1.20.1	[14]	<b>S7</b>	
	Rc thread to DIN 10226	[14]	<b>S13</b>	
Connection size	DIN 32676, series B	[9], [12]	<b>S15</b>	
	DN13	[4]	<b>-13</b>	
	DN20	[4]	<b>-20</b>	
	DN25	[4]	<b>-25</b>	
	DN32	[4]	<b>-32</b>	
	DN40	[4]	<b>-40</b>	
	DN50	[4]	<b>-50</b>	
	DN65	[4], [8]	<b>-65</b>	
	1/2"	[1]	<b>-1/2"</b>	
	3/4"	[1]	<b>-3/4"</b>	
	1"	[1]	<b>-1"</b>	
	1 1/4"	[1]	<b>-1 1/4"</b>	
	1 1/2"	[1]	<b>-1 1/2"</b>	
2"	[1], [8]	<b>-2"</b>		
2 1/2"	[1]	<b>-2 1/2"</b>		
Temperature of medium [°C]	-10 ... +180		<b>-M2</b>	
	-30 ... +200		<b>-M3</b>	
	-10 ... +60	[6]	<b>-M6</b>	
Process valve housing material	Brass	[7]	<b>-B1</b>	
	Stainless steel 1.4409	[2]	<b>-V13</b>	
	Stainless steel ASTM A351-CF3M	[3]	<b>-V14</b>	
Seat seal material	PTFE		<b>T</b>	
	PTFE modified	[5]	<b>TP</b>	

- [1] 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2"
- [2] V13
- [3] V14
- [4] DN13, DN20, DN25, DN32, DN40, DN50, DN65
- [5] TP
- [6] M6
- [7] B1
- [8] DN65, 2 1/2"
- [9] C, W, S1, S2, S3, S5, S15
- [10] S1
- [11] S2, S3
- [12] S5, S15
- [13] S1
- [14] S6, S7, S13

- Not with connection standard S6, S13
- Not with connection size in inch
- Not with connection size in mm
- Not with connection standard S7
- Only with temperature of medium M3
- Only with flow direction A, only with actuator housing material PM
- Not with connection size DN65, 2 1/2", only with seat seal material PTFE
- Only with combinations of actuator M and actuator size 90 mm
- Not with connection size DN40, 1 1/2", DN50, 2", DN65, 2 1/2"
- Not with connection type T
- Not with connection type C, T
- Not with connection type T, W
- Not with connection size DN32, 1 1/4"
- Not with connection type C, W

## Ordering data – Modular product system

Ordering table		Conditions	Code	Enter code
VZXA-...				
Pressure of medium	[bar] 0 ... 4	[1]	-4	
	[bar] 0 ... 4.4	[1]	-4.4	
	[bar] 0 ... 4.8	[1]	-4.8	
	[bar] 0 ... 5.6	[1]	-5.6	
	[bar] 0 ... 5.8	[1]	-5.8	
	[bar] 0 ... 6	[1]	-6	
	[bar] 0 ... 6.2	[1]	-6.2	
	[bar] 0 ... 6.8	[2]	-6.8	
	[bar] 0 ... 7.5	[1]	-7.5	
	[bar] 0 ... 8	[2]	-8	
	[bar] 0 ... 8.3	[1], [13]	-8.3	
	[bar] 0 ... 9.3	[1], [13]	-9.3	
	[bar] 0 ... 10	[1], [13]	-10	
	[bar] 0 ... 11.5	[1], [13]	-11.5	
	[bar] 0 ... 12.2	[1], [13]	-12.2	
	[bar] 0 ... 12.8	[1], [13]	-12.8	
	[bar] 0 ... 13.5	[1], [13]	-13.5	
	[bar] 0 ... 14.5	[1], [13]	-14.5	
	[bar] 0 ... 15.5	[2], [13]	-15.5	
	[bar] 0 ... 16	[21]	-16	
[bar] 0 ... 23	[3], [1]	-23		
[bar] 0 ... 25	[3], [1]	-25		
[bar] 0 ... 30	[4], [1]	-30		
Actuator	Piston actuator		-K	
	Diaphragm actuator		-M	
Actuator size	[mm] 46	[9]	-46	
	[mm] 75	[9]	-75	
	[mm] 90	[10]	-90	
Stroke	[mm] 17	[5]	-17	
	[mm] 20	[6]	-20	
	[mm] 26	[7]	-26	
Control function	Closed via spring force, NC			
	Double-acting	[9]	-D	
	Opened via spring force, NO		-S	
	Closed via reduced spring force, NC	[8]	-PR	
Position sensing	Via mechanical indicator			
Actuator housing material	Polymer	[11]	-PM	
	Stainless steel 1.4408		-V4	
EU certification	None			
	II 2GD	[12]	-EX4	

[1] 4 ... 6.2, 7.5, 8.3, 9.3, 11.5 ... 14.5, 23 ... 30

[2] 6.8, 8, 15.5

[3] 18, 20, 23, 25

[4] 30

[5] Stroke 17

[6] Stroke 20

[7] Stroke 26

[8] Control function PR

[9] Control function D, S

[10] Size 90

[11] PM

[12] EX4

[13] 11, 13, 13.2, 16

Not in conjunction with flow direction A

Not in conjunction with flow direction B

Not with connection size DN65, 2 1/2", DN50, 2", DN40, 1 1/2" or flow direction A

Not with connection size DN65, 2 1/2", DN50, 2" DN40, 1 1/2", DN32, 1 1/4" or flow direction A

Only with actuator K and size 46

Only with actuator K and size 75

Only with actuator M

Only with flow direction A

Only with flow direction B

Not in combination with actuator K

Only with actuator size 46 and 75, only with seat seal material PTFE

Not with combination of PM and V13, V14

Not with connection size DN65, 2 1/2"

Accessories

Piston actuator DFPK

- Actuator sizes  
46 mm with 17 mm stroke  
75 mm with 20 mm stroke




General technical data	
Size of valve actuator	46
	75
Stroke [mm]	17
	20
Mounting position	Any
Position sensing	Via mechanical indicator
Control function	Closed via spring force, NC
	Closed via reduced spring force, NC
	Opened via spring force, NO
	Double-acting
Pneumatic connection	Female thread G1/8

Operating and environmental conditions	
Operating pressure	[MPa] 0.5 ... 1
	[psi] 72.5 ... 145
	[bar] 5 ... 10
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Ambient temperature [°C]	0 ... 60
Storage temperature [°C]	-10 ... +60
Degree of protection	IP65
	IP67

ATEX	
ATEX category for gas	II 2G
Type of (ignition) protection for gas	Ex h IIC T6...T4 Gb
ATEX category for dust	II 2D
Type of (ignition) protection for dust	Ex h IIIC T80°C...T120°C Db
Explosion ambient temperature [°C]	0°C ≤ Ta ≤ +60°C

Materials	Material number
Housing	Cast stainless steel 1.4408
Piston rod	High-alloy stainless steel
Cover	Cast stainless steel
Seals	FPM
Note on materials	Contains paint-wetting impairment substances
	RoHS-compliant

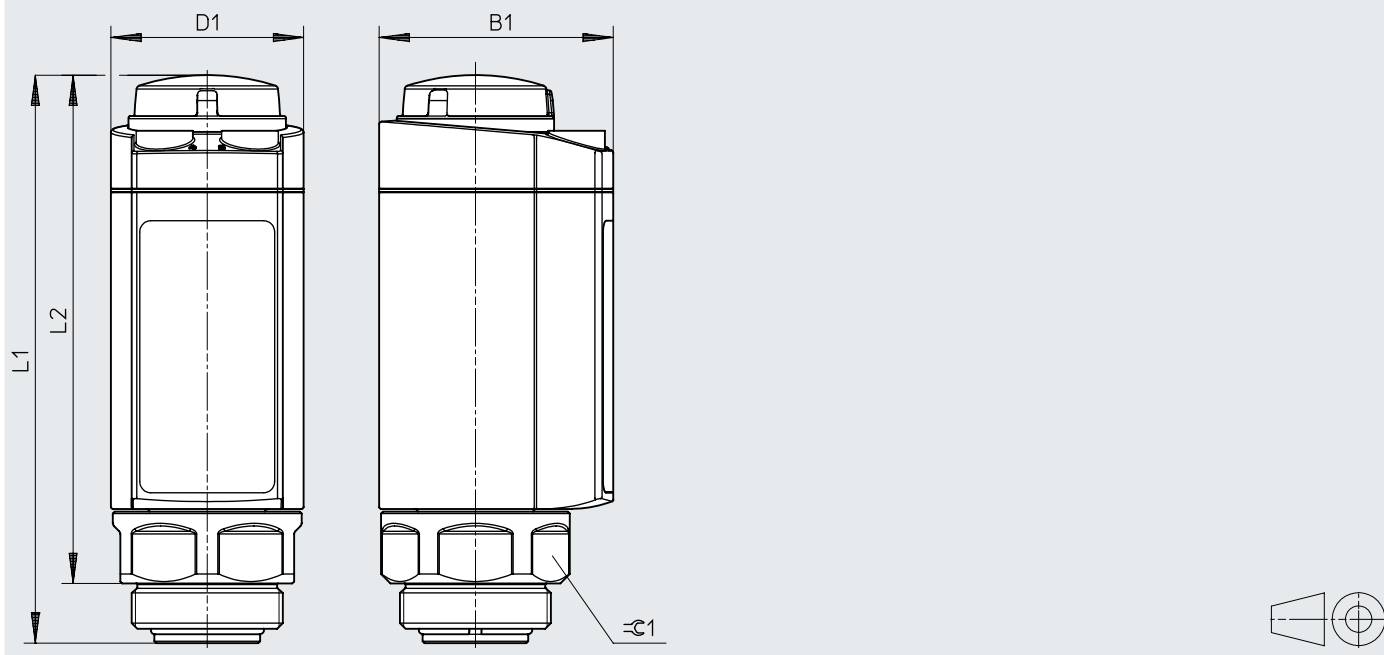
 - Note

Possible combinations and characteristic values of the medium or operating pressures, see page → 10

Accessories

Dimensions

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



	B1	D1 ø	L1	L2	☉1
DFPK-46-17-V4	62	51	150.3	134.5	46
DFPK-46-17-PR-V4					
DFPK-46-17-S-V4					
DFPK-46-17-D-V4					
DFPK-75-20-V4	94.4	82.5	181	165.2	
DFPK-75-20-PR-V4					
DFPK-75-20-S-V4					
DFPK-75-20-D-V4					

Ordering data

	Control function	Product weight [g]	Part no.	Type
	Closed by spring force, NC	1298	8083959	DFPK-46-17-V4
	Closed via reduced spring force, NC	1243	8083960	DFPK-46-17-PR-V4
	Opened via spring force, NO	1243	8083961	DFPK-46-17-S-V4
	Double-acting	1210	8083962	DFPK-46-17-D-V4
	Closed by spring force, NC	2746	8083963	DFPK-75-20-V4
	Closed via reduced spring force, NC	2539	8083964	DFPK-75-20-PR-V4
	Opened via spring force, NO	2539	8083965	DFPK-75-20-S-V4
	Double-acting	2412	8083966	DFPK-75-20-D-V4

Note

The cover kit VAVC can be combined with the piston actuator DFPK to form a valve block solution. In this case, the cover kits are installed together with the actuators in a valve block.

The valve block acts as a valve housing and must be manufactured individually. Requirements and dimensions for manufacturing can be found at → [www.festo.com/sp](http://www.festo.com/sp) (Expert knowledge)

## Accessories

Cover kit VAVC

- Nominal width DN 13 ... 50
- For piston actuators DFPK



### General technical data

Nominal width DN	13
	20
	25
	32
	40
	50
Mounting position	Any

### Operating and environmental conditions

Medium	Steam
	Mineral oil-based hydraulic fluid
	Inert gases
	Mineral oil
	Water
	Filtered compressed air, grade of filtration 200 µm
	Neutral fluids
Note on the medium	Gaseous media are only permitted with inflow over the valve seat
Temperature of medium [°C]	-30 ... +200
Ambient temperature [°C]	0 ... 60
Storage temperature [°C]	-10 ... +60

### Materials

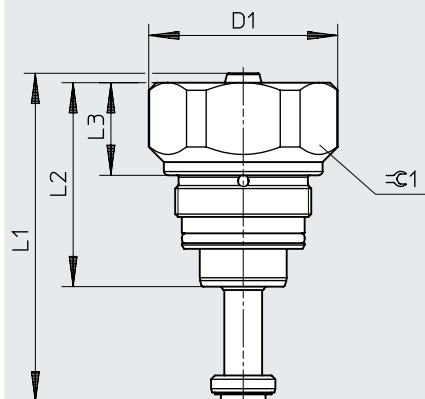
Cover	High-alloy stainless steel
Spindle seal	PTFE
Seat seal	PTFE, modified
Note on materials	Contains paint-wetting impairment substances
	RoHS-compliant

#### Note

Possible combinations and characteristic values of the medium or operating pressures, see page → 10

## Accessories

## Dimensions

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

	D1 ∅	L1	L2	L3	⊕1
VAVC-F12-SCC-13-TP	50	87	54	24.5	46
VAVC-F12-SCC-20-TP		85.6			
VAVC-F12-SCC-25-TP		94.4			
VAVC-F12-SCC-32-TP		94.4		17	
VAVC-F12-SCC-40-TP	55	121.5	80.1	32.2	
VAVC-F12-SCC-50-TP	67.5	129.7	85.9	21.5	

## Ordering data

	Nominal width DN	Product weight [g]	Part no.	Type
	13	358	8084035	VAVC-F12-SCC-13-TP
	20	363	8084036	VAVC-F12-SCC-20-TP
	25	385	8084042	VAVC-F12-SCC-25-TP
	32	424	8084034	VAVC-F12-SCC-32-TP
	40	846	8084032	VAVC-F12-SCC-40-TP
	50	1180	8084045	VAVC-F12-SCC-50-TP

**Note**

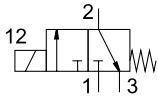
The cover kit VAVC can be combined with the piston actuator DFPK to form a valve block solution. In this case, the cover kits are installed together with the actuators in a valve block.

The valve block acts as a valve housing and must be manufactured individually. Requirements and dimensions for manufacturing can be found at

→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads

## Accessories

### Pilot valve VOFX



General technical data				
Type	VOFX...-1B2	VOFX...-3AA1	VOFX...-1A1-EX2-N	VOFX...-1-EX4-M
Width [mm]	22			
Nominal width DN [mm]	1.3			
Valve function	3/2-way, single solenoid, closed			
Actuation type	Electrical			
Design	Directly actuated poppet valve			
Exhaust function	Can be throttled			
Reset method	Mechanical spring			
Sealing principle	Soft			
Mounting position	Any			
Manual override	Detenting			
Type of control	Direct			
Pilot air supply	Internal			
Flow direction	Not reversible			
Pneumatic connection 1	G1/8			
Pneumatic connection 2	G1/8			
Pneumatic connection 3	M5			
Electrical connection	3-pin			–
	Form B	Form A	Form A	–
	Plug			–
	To EN 175301-803			–
				Cable (3 m)
Switching time off [ms]	46	39	39	39
Switching time on [ms]	31	33	27	26
Duty cycle [%]	24 V DC: 3,0 W	230 V AC: 6,2 W	24 V DC: 2,1 W	24 V DC: 2,6 W
Characteristic coil data	24 V DC: 3,0 W	230 V AC: 6,2 W	24 V DC: 2,1 W	24 V DC: 2,6 W
Permissible voltage fluctuations [%]	+/- 10			
Product weight [g]	160	160	160	418

Operating and environmental conditions		
Operating pressure [bar]	–0.9 ... 8	
Ambient temperature [°C]	–10 ... +50	
Temperature of medium [°C]	–10 ... +50	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]	
Degree of protection	IP65	
Standard nominal flow rate qnN [l/min]	50	
Corrosion resistance class CRC <sup>1)</sup>	2	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

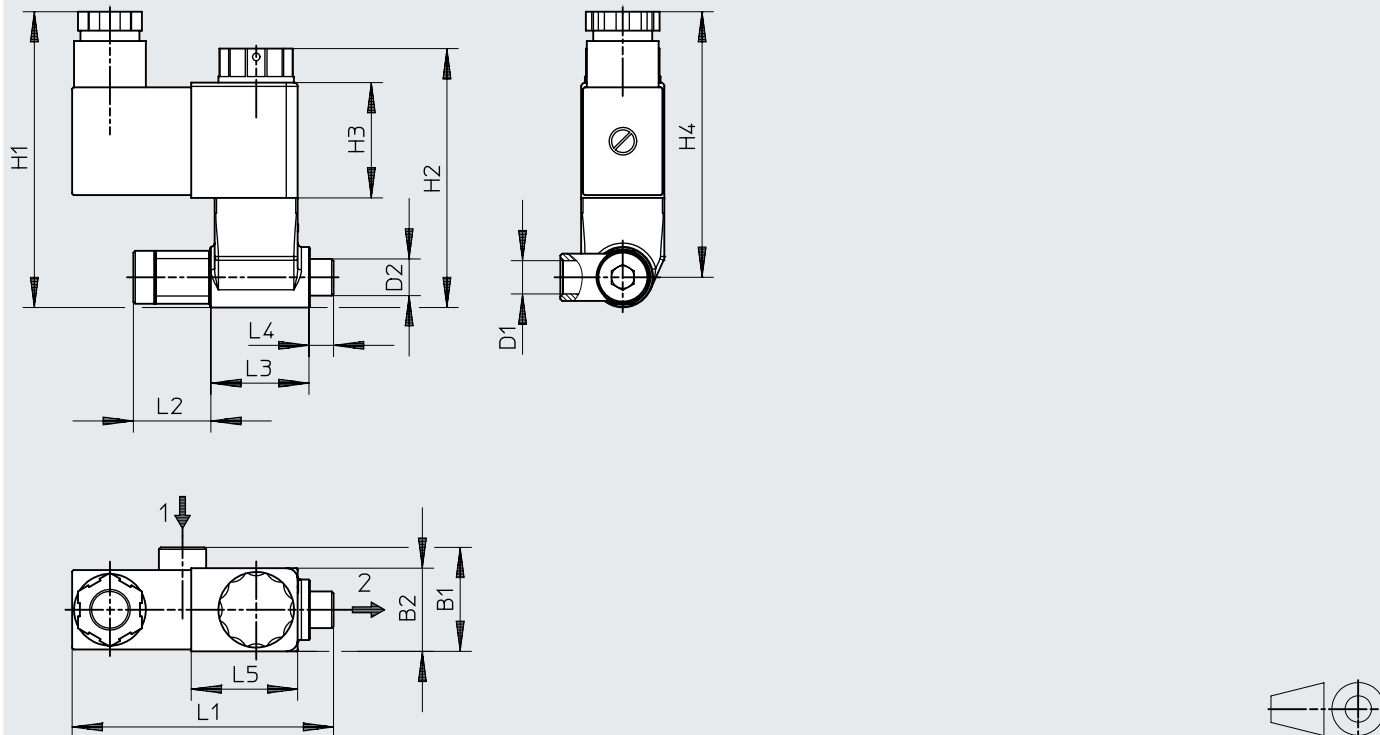
Materials	
Seals	NBR
Housing	PA
Note on materials	Contains paint-wetting impairment substances
	RoHS-compliant



Accessories

Dimensions

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




→ Flow direction

	B1	B2	D1	D2	H1	H2	H3	H4	L1	L2	L3	L4	L5
VOFX	27.5	22	G1/8	G1/8	~78.3	68.5	30.5	~70.3	69.2	20.5	26	6.5	28.2

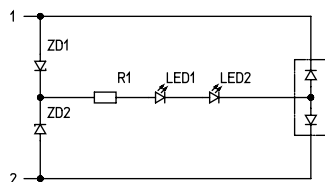
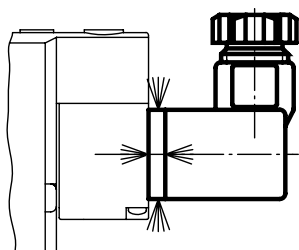
Ordering data

	Description	Part no.	Type
	Pilot valve, 3/2-way, closed, single solenoid	<b>8119587</b>	<b>VOFX-LT-M32C-MY-G18-SG18-1B2</b>

Ordering data – Illuminating seal

	Description	Product weight [g]	Max. tightening torque [Nm]	Operating voltage [V DC]	Part no.	Type
	<ul style="list-style-type: none"> <li>Illuminating seal for F solenoid coils</li> <li>Degree of protection to EN 60529 IP65 (in assembled state)</li> </ul>	1.6	0.6	12 ... 24	<b>19143</b>	<b>MF-LD-12-24DC</b>

Fitting the illuminating seal



- The existing seal must be removed before fitting the illuminating seal.
- The sealing surface of the illuminating seal must point towards the plug socket, and the sealing rim towards the solenoid coil.
- The illuminating seal is intended for one-time installation.
- Reusing illuminating seals can impair their function.

## Accessories

### Stroke reducing kit VAVA

- Opening stroke of the piston rod is reduced using a threaded pin or shock absorber
- For angle seat valves VZXA with piston and diaphragm actuator
- For piston actuators DFPK



General technical data		
	VAVA-F12-H-H1	VAVA-F12-H-H6
Design	Opening stroke limitation	Opening stroke limitation with cushioning
Application information	The SIL certification for the entire product is invalidated when used with angle seat valve VZXA.	
Mounting position	Any	
Product weight	253 g	249 g

Operating and environmental conditions		
	VAVA-F12-H-H1	VAVA-F12-H-H6
Ambient temperature [°C]	-50 ... +100	-10 ... +80
Storage temperature [°C]	-10 ... +60	
Degree of protection	IP6X	
Corrosion resistance class CRC <sup>1)</sup>	3	2

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Materials	
Seals	EPDM
Nut	High-alloy stainless steel
Screws	High-alloy stainless steel
Shock absorbers	High-alloy steel
Connector	High-alloy stainless steel
Note on materials	RoHS-compliant

Ordering data			
	Description	Part no.	Type
	Opening stroke limitation	8089993	VAVA-F12-H-H1
	Opening stroke limitation	8107369	VAVA-F12-H-H6

1) Special-purpose tool not required

## Accessories

### Position indicator SAMH

- Position indicator with two standard T-slots for mounting position sensors
- Version without sensors
- Version with sensors

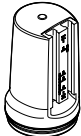
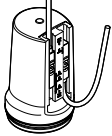


General technical data			
SAMH-F12-...	...-MK	...-MK-A1	...-MK-A2
Design	Without sensors	2 proximity switches with explosion protection	2 proximity switches with explosion protection and high level of IP protection
Mounting position	Any		
Application information	The SIL certification for the entire product is invalidated when used with angle seat valve VZXA.		
Product weight [g]	118	136	151

Operating and environmental conditions			
Ambient temperature [°C]	-20 - 60°C	-20 - 60°C	-20 - 60°C
Storage temperature [°C]	-10 - 60°C	-10 - 60°C	-10 - 60°C
Degree of protection	IP65 IP67		
Corrosion resistance class CRC <sup>1)</sup>	2		

1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

Materials	
Housing material	Aluminium Reinforced PA
Sealing material	EPDM
Note on materials	RoHS-compliant Contains paint-wetting impairment substances

Ordering data			
Description	Part no.	Type	
		Part no. 574383 CRSMT-8M-PS-24V-K-0.3-M8D	
Position indicator			
 <ul style="list-style-type: none"> <li>• Without sensors</li> </ul>		8092711	SAMH-F12-MK
 <ul style="list-style-type: none"> <li>• With 2 sensors with explosion protection and a high level of IP protection<sup>1)</sup></li> </ul>		8101084	SAMH-F12-MK-A2

1) Included in the scope of delivery