Angle seat valves VZXF

Characteristics

Function

Angle seat valves are externally controlled valves. They are directly actuated using compressed air supply. In this process, the seat of the process valve is raised by a pneumatic actuator. In the normal position, the valve is closed by a spring. When the actuator is supplied with operating pressure, it raises the control piston as well as the valve disc – the valve opens. The valve seat is slanted at an angle of approx. 50° in relation to the media flow. The flow direction is determined by the design of the valve.

Angle seat valves are used in applications in which absolute purity of the medium cannot be ensured, in which high-viscosity media are to be controlled or in vapour applications.

Design

- Connecting thread G1/2 ... G2
- Flow rate Kv 3.3 ... 47.5 m^3/h

- Gunmetal (red brass) variant
- Stainless steel casting variant
- Stainless steel casting variant, nickel-plated actuator head

General information

- Angle seat valves are simple and sturdy and are thus perfectly suitable for almost all media with a viscosity of up to 600 mm^2/s
- Angle seat valves control suitable gaseous and liquid media in rigid piping systems without the need for any pressure differential
- No differential pressure required between the input and output
- Low flow resistance
- Insensitive to vapour or slightly contaminated media
- Long service life
- Low maintenance
- The valves have a high chemical and thermal resistance thanks to their design
- The NC function ensures that the valve is closed in the event of pressure loss in the control circuit
- Angle seat valves are available in different designs depending on the pressure of the medium
- There is a choice of two versions: "closing in the direction of media flow" is used for gaseous media. "Closing against the direction of media flow" is used for liquid media

PWIS-free

- PWIS-free is chosen for use in production areas in which the influence of paint-wetting impairment substances must be avoided at all costs

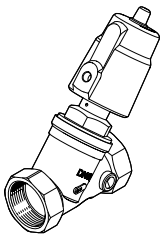
Vacuum version

- The version that is suitable for vacuum is used in packaging machines which need to generate a vacuum

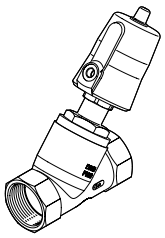
Characteristics

Examples of versions, each available with G or NPT thread

VZXF-L-...-M-A-...112-350-H3B1-50-8



VZXF-L-...-M-A-...112-350-M1-V4V4T-50-7



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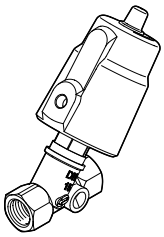
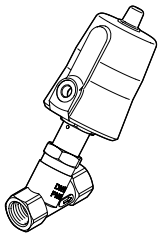
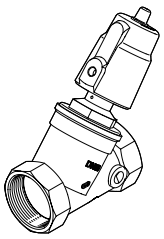


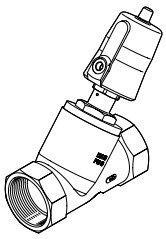
VZXF-L-...-M-B-...12-130-M1-V4V4T-50-40



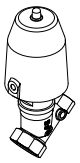
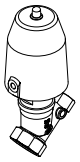
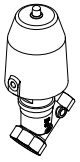
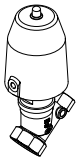
VZXF-L-...-M-B-...2-430-H3B1-50-3

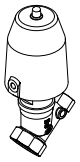


VZXF-L-...-M-B-...2-450-M1-V4V4T-50-3



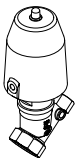
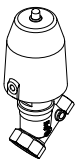
Product range overview

Version with G thread		Type	Valve connection	Nominal width DN	Temperature of medium [°C]	Flow rate Kv [m³/h]	Valve nom. pressure PN	→ Page/Internet
Gunmetal (red brass)	**Temperature of medium –10 ... +80°C**							
		VZXF-L-...-H3B1-...	G1/2	15	–10 ... +80	3.5 ... 28	16	7
			G3/4	20				
			G1	25				
			G1 1/4	32				
			G1 1/2	40				
			G2	50				
	Temperature of medium –40 ... +200°C							
		VZXF-L-...-H3B1T-..., VZXF-L-...-H3ALT-...	G1/2	15	–40 ... +200	3.5 ... 40	16	10
			G3/4	20				
			G1	25				
			G1 1/4	32				
			G1 1/2	40				
			G2	50				
	Vacuum version							
		VZXF-L-...-H3B1V-..., VZXF-L-...-H3ALV-...	G1/2	15	–10 ... +80	3.5 ... 40	16	14
			G3/4	20				
			G1	25				
			G1 1/4	32				
			G1 1/2	40				
			G2	50				
	PWIS-free							
		VZXF-L-...-H3B1V-...	G1/2	15	–10 ... +80	3.7 ... 16.5	16	16
			G3/4	20				
			G1	25				
			G1 1/2	40				

Version with NPT thread		Type	Valve connection	Nominal width DN	Temperature of medium [°C]	Flow rate Kv [m³/h]	Valve nom. pressure PN	→ Page/Internet
Gunmetal (red brass)	**Temperature of medium –10 ... +80°C**							
		VZXF-L-...-H3B1-...	1/2 NPT	15	–10 ... +80	3.5 ... 28	16	26
			3/4 NPT	20				
			1 NPT	25				
			1 1/4 NPT	32				
			1 1/2 NPT	40				
			2 NPT	50				

Product range overview

Version with G thread		Type	Valve connection	Nominal width DN	Temperature of medium [°C]	Flow rate Kv [m³/h]	Valve nom. pressure PN	→ Page/Internet
Stainless steel casting	**Temperature of medium –40 ... +200°C**							
		VZXF-L-...-V4V4T-...	G1/2	15	–40 ... +200	3.3 ... 43	40	18
			G3/4	20				
			G1	25				
			G1 1/4	32				
			G1 1/2	40				
			G2	50				
	Nickel-plated actuator head							
		VZXF-L-...-V4B2T-..., VZXF-L-...-V4ANT-...	G1/2	15	–40 ... +200	3.3 ... 43	40	21
			G3/4	20				
			G1	25				
			G1 1/4	32				
			G1 1/2	40				
			G2	50				
	Vacuum version							
		VZXF-L-...-V4B2V-..., VZXF-L-...-V4ANV-...	G1/2	15	–10 ... +80	3.8 ... 43	40	24
			G3/4	20				
			G1	25				
			G1 1/4	32				
			G1 1/2	40				
			G2	50				

Version with NPT thread		Type	Valve connection	Nominal width DN	Temperature of medium [°C]	Flow rate Kv [m³/h]	Valve nom. pressure PN	→ Page/Internet
Stainless steel casting	**Temperature of medium –40 ... +200°C**							
		VZXF-L-...-V4V4T-...	1/2 NPT	15	–40 ... +200	3.3 ... 43	40	28
			3/4 NPT	20				
			1 NPT	25				
			1 1/4 NPT	32				
			1 1/2 NPT	40				
			2 NPT	50				
	Nickel-plated actuator head							
		VZXF-L-...-V4B2T-...	1/2 NPT	15	–40 ... +200	3.3 ... 34.5	40	32
			3/4 NPT	20				
			1 NPT	25				
			1 1/4 NPT	32				
			1 1/2 NPT	40				
			2 NPT	50				

Type codes

001	Series	
VZXF	Angle seat valve	

002	Directional control valve type	
L	In-line valve	

003	Valve function	
M22C	2/2-way valve, normally closed	

004	Reset method for monostable/single solenoid valves	
M	Mechanical spring	

005	Flow direction	
A	Above valve seat, for gaseous media	
B	Below valve seat, for gaseous and liquid media	

006	Process valve connection	
G12	G1/2	
G34	G3/4	
G1	G1	
G114	G1 1/4	
G112	G1 1/2	
G2	G2	
N12	1/2 NPT	
N34	3/4 NPT	
N1	1 NPT	
N114	1 1/4 NPT	
N112	1 1/2 NPT	
N2	2 NPT	

007	Nominal width	
120	12 mm	
130	13 mm	
160	16 mm	
180	18 mm	
230	23 mm	
240	24 mm	
290	29 mm	
310	31 mm	
350	35 mm	
430	43 mm	
450	45 mm	

008	Temperature of medium	
	Standard	
M1	-40 ... 200°C	

009	Housing material	
H3	Gunmetal (red brass)	
V4	Stainless steel (chrome-nickel-molybdenum, austenitic/1.4401, 1.4404 (AISI 316L), 1.4408)	

010	Drive housing material	
AL	Aluminium	
AN	Aluminium, nickel-plated	
B1	Brass	
B2	Brass, nickel-plated	
V4	Stainless steel 1.4408	

011	Spindle seal material	
	Standard (NBR)	
T	PTFE	
V	FPM	

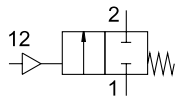
012	Drive size	
50	50 mm	
80	80 mm	

013	Medium pressure	
V	-0.9 ... 0 bar	
3	0 ... 3 bar	
4	0 ... 4 bar	
5	0 ... 5 bar	
6	0 ... 6 bar	
7	0 ... 7 bar	
8	0 ... 8 bar	
9	0 ... 9 bar	
10	0 ... 10 bar	
12	0 ... 12 bar	
16	0 ... 16 bar	
20	0 ... 20 bar	
22	0 ... 22 bar	
40	0 ... 40 bar	

014	PWIS content	
	Standard	
C	Free of PWIS	

Gunmetal (red brass), temperature of medium –10 ... +80°C

Function



- Flow rate Kv
  3.5 ... 28 m³/h

- Connecting thread
  G1/2 ... G2

General technical data								
Line connection			G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Nominal width DN		[mm]	12	16	23	29	35	43
Design			Poppet valve with piston drive					
Actuation type			Pneumatic					
Type of mounting			In-line installation					
Line connection			Threaded coupling to DIN ISO 228-1					
Sealing principle			Soft					
Mounting position			Any					
Valve function			2/2-way, closed, monostable					
Pneumatic connection			Female thread G1/8					
Flow direction			Non-reversible					
Type of control			Externally piloted					
Reset method			Mechanical spring					
Exhaust air function			Cannot be throttled					
Flow direction	VZXF-...-A-...		Over valve seat, for gaseous media					
	VZXF-...-B-...		Under valve seat, for gaseous and liquid media					

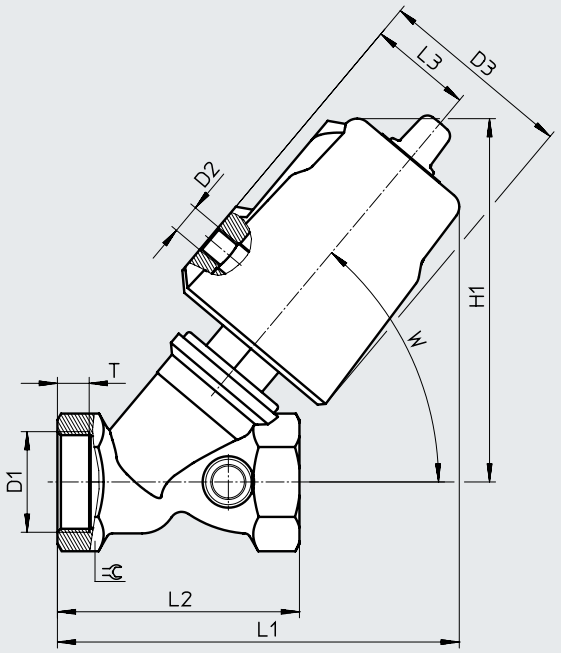
Operating and environmental conditions								
Line connection			G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Valve nominal pressure PN			16					
Operating medium			Compressed air to ISO 8573-1:2010 [7:4:4]					
Operating pressure		[MPa]	0.6 ... 1					
		[psi]	87 ...145					
		[bar]	6 ... 10					
Medium			Vapour					
			Inert gases					
			Filtered compressed air, grade of filtration 200 µm					
	VZXF-...-B-... additionally		Mineral oil-based hydraulic fluid					
			Mineral oil					
			Neutral fluids					
			Water					
Max. viscosity		[mm²/s]	600					
Ambient temperature		[°C]	–10 ... +60					
Temperature of medium		[°C]	–10 ... +80					
CE marking (see declaration of conformity)[1]			–			To EU Pressure Equipment Directive		
UKCA marking (see declaration of conformity)[1]			–			To UK regulations for pressure equipment		

1) Additional information is available at www.festo.com/sp → Certificates.

Materials		**Material number**
Valve housing	Gunmetal (red brass)	CC499K
Actuator housing	Brass	
Spindle seal	NBR	
Seat seal	PTFE	
Note on materials	Contains paint-wetting impairment substances	
	RoHS-compliant	

Gunmetal (red brass), temperature of medium –10 … +80°C

Dimensions Download CAD data ➔ www.festo.com

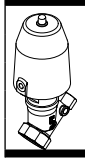


Type	D1	D2	D3 Ø	H1	L1	L2	L3	T	W	⫧
VZXF-L-...-G12-...	G1/2	G1/8	62	112	123	66	34	8	50°	27
VZXF-L-...-G34-...	G3/4			117	130	75		9		33
VZXF-L-...-G1-...	G1			121	133	80		10.5		41
VZXF-L-...-G114-...	G1 1/4			139	154	97		12.5		50
VZXF-L-...-G112-...	G1 1/2			145	161	107		14.5		56
VZXF-L-...-G2-...	G2			154	171	124		16.5		68

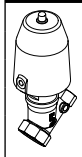
Gunmetal (red brass), temperature of medium –10 ... +80°C

★ Core product range

Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	G1/2	3.7	0 ... 16	1	1200	★ **1002501**	**VZXF-L-M22C-M-B-G12-120-H3B1-50-16**
	G3/4	5.2	0 ... 16		1300	★ **1002503**	**VZXF-L-M22C-M-B-G34-160-H3B1-50-16**
	G1	9.6	0 ... 10		1500	★ **1002505**	**VZXF-L-M22C-M-B-G1-230-H3B1-50-10**

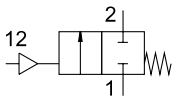
Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	G1/2	3.5	0 ... 16	1	1200	**1002500**	**VZXF-L-M22C-M-A-G12-120-H3B1-50-16**
	G3/4	6.7	0 ... 16		1300	**1002502**	**VZXF-L-M22C-M-A-G34-160-H3B1-50-16**
	G1	10.8	0 ... 16		1500	**1002504**	**VZXF-L-M22C-M-A-G1-230-H3B1-50-16**
	G1 1/4	6	0 ... 7		1900	**1002507**	**VZXF-L-M22C-M-B-G114-290-H3B1-50-7**
		19	0 ... 10			**1002506**	**VZXF-L-M22C-M-A-G114-290-H3B1-50-10**
	G1 1/2	16.5	0 ... 6		2300	**1002509**	**VZXF-L-M22C-M-B-G112-350-H3B1-50-6**
		23				**1002508**	**VZXF-L-M22C-M-A-G112-350-H3B1-50-8**
	G2	23	0 ... 3		2800	**1002511**	**VZXF-L-M22C-M-B-G2-430-H3B1-50-3**
		28	0 ... 4			**1002510**	**VZXF-L-M22C-M-A-G2-430-H3B1-50-4**

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Gunmetal (red brass), temperature of medium –40 ... +200°C

Function



- Flow rate Kv
  3.5 ... 40 m³/h

- Connecting thread
  G1/2 ... G2

General technical data

Line connection		G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Nominal width DN [mm]		12	16	23	29	35	43
Design		Poppet valve with piston drive					
Actuation type		Pneumatic					
Type of mounting		In-line installation					
Line connection		Threaded coupling to DIN ISO 228-1					
Sealing principle		Soft					
Mounting position		Any					
Valve function		2/2-way, closed, monostable					
Pneumatic connection		Female thread G1/8					
Flow direction		Non-reversible					
Type of control		Externally piloted					
Reset method		Mechanical spring					
Exhaust air function		Cannot be throttled					
Flow direction	VZXF-...-A-...	Over valve seat, for gaseous media					
	VZXF-...-B-...	Under valve seat, for gaseous and liquid media					

Gunmetal (red brass), temperature of medium –40 ... +200°C

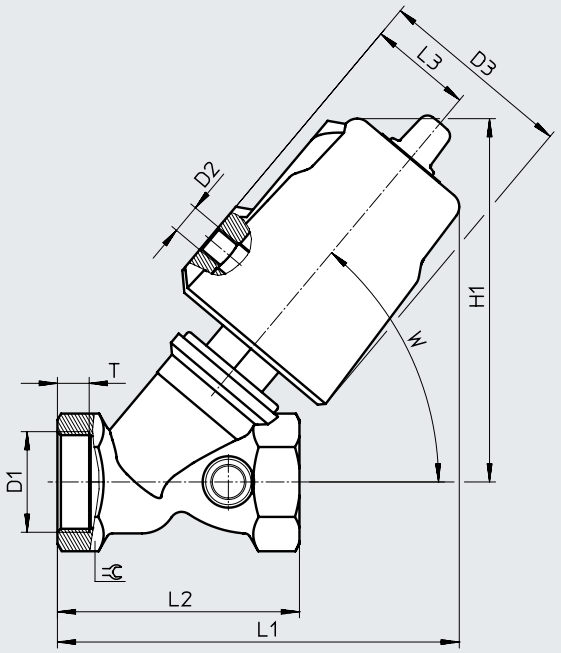
Operating and environmental conditions							
Line connection			G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Valve nominal pressure PN			16					
Operating medium			Compressed air to ISO 8573-1:2010 [7:4:4]					
Operating pressure		[MPa]	0.6 ... 1					
		[psi]	87 ...145					
		[bar]	6 ... 10					
Medium			Vapour					
			Inert gases					
			Filtered compressed air, grade of filtration 200 µm					
	VZXF-...-B-... additionally		Mineral oil-based hydraulic fluid					
			Mineral oil					
			Neutral fluids					
			Water					
Max. viscosity		[mm^2/s]	600					
Ambient temperature		[°C]	–10 ... +60					
Temperature of medium		[°C]	–40 ... +200					
CE marking (see declaration of conformity)[1]			–				To EU Pressure Equipment Directive	
UKCA marking (see declaration of conformity)[1]			–			To UK regulations for pressure equipment		

1) Additional information is available at www.festo.com/sp → Certificates.

Materials			**Material number**
Valve housing		Gunmetal (red brass)	CC499K
Actuator housing	...-H3ALT-...	Aluminium	
	...-H3B1T-...	Brass	
Spindle seal		PTFE	
Seat seal		PTFE	
Note on materials		Contains paint-wetting impairment substances	
		RoHS-compliant	

Gunmetal (red brass), temperature of medium –40 ... +200°C

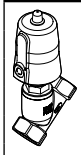
Dimensions Download CAD data ➔ www.festo.com



Type	D1	D2	D3 ø	H1	L1	L2	L3	T	W	⫧
VZXF-L-...-G12-...-H3B1T-50-...	G1/2	G1/8	62	130	135.5	66	34	13	50°	27
VZXF-L-...-G34-...-H3B1T-50-...	G3/4			130	140	75		14.5		32
VZXF-L-...-G1-...-H3B1T-50-...	G1			133	143	80		10.5		41
VZXF-L-...-G114-...-H3B1T-50-...	G1 1/4			148	160	97		12.5		50
VZXF-L-...-G114-...-H3ALT-80-...	G1 1/4		94	180	190	97	49	12.5		50
VZXF-L-...-G112-...-H3B1T-50-...	G1 1/2		62	152.5	167	107	34	14.5		55
VZXF-L-...-G112-...-H3ALT-80-...	G1 1/2		94	186	197	107	49	14.5		55
VZXF-L-...-G2-...-H3B1T-50-...	G2		62	162	178	124	34	16.5		67
VZXF-L-...-G2-...-H3ALT-80-...	G2		94	196	207.5	124	49	16.5		67

Gunmetal (red brass), temperature of medium –40 ... +200°C

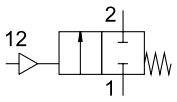
Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	G1/2	3.5	0 ... 16	1	1200	**3535619**	**VZXF-L-M22C-M-A-G12-120-M1-H3B1T-50-16**
		3.7				**3535620**	**VZXF-L-M22C-M-B-G12-120-M1-H3B1T-50-16**
	G3/4	5.2	0 ... 16	1	1300	**3535644**	**VZXF-L-M22C-M-B-G34-160-M1-H3B1T-50-16**
		6.7				**3535643**	**VZXF-L-M22C-M-A-G34-160-M1-H3B1T-50-16**
	G1	9.6	0 ... 10	1	1500	**3535665**	**VZXF-L-M22C-M-B-G1-230-M1-H3B1T-50-10**
		10.8	0 ... 16			**3535664**	**VZXF-L-M22C-M-A-G1-230-M1-H3B1T-50-16**
		14.5	0 ... 16	0	2000	**3540768**	**VZXF-L-M22C-M-B-G1-230-M1-H3ALT-80-16**
	G1 1/4	6	0 ... 7	1	1900	**3535689**	**VZXF-L-M22C-M-B-G114-290-M1-H3B1T-50-7**
		19	0 ... 10			**3535684**	**VZXF-L-M22C-M-A-G114-290-M1-H3B1T-50-10**
		19	0 ... 12	0	2300	**3535712**	**VZXF-L-M22C-M-B-G114-290-M1-H3ALT-80-12**
		21.5	0 ... 16			**3535711**	**VZXF-L-M22C-M-A-G114-290-M1-H3ALT-80-16**
	G1 1/2	16.5	0 ... 6	1	2300	**3535721**	**VZXF-L-M22C-M-B-G112-350-M1-H3B1T-50-6**
		23	0 ... 7			**3535720**	**VZXF-L-M22C-M-A-G112-350-M1-H3B1T-50-7**
		29.5	0 ... 8	0	2600	**3535825**	**VZXF-L-M22C-M-B-G112-350-M1-H3ALT-80-8**
		30.5	0 ... 16			**3535824**	**VZXF-L-M22C-M-A-G112-350-M1-H3ALT-80-16**
	G2	23	0 ... 3	1	2800	**3535838**	**VZXF-L-M22C-M-B-G2-430-M1-H3B1T-50-3**
		28	0 ... 4			**3535837**	**VZXF-L-M22C-M-A-G2-430-M1-H3B1T-50-4**
		30	0 ... 5	0	2900	**3536436**	**VZXF-L-M22C-M-B-G2-430-M1-H3ALT-80-5**
		40	0 ... 16			**3536435**	**VZXF-L-M22C-M-A-G2-430-M1-H3ALT-80-16**

1) Corrosion resistance class CRC 0 to Festo standard FN 940070
No corrosion stress. Applies to small, visually unimportant standard parts such as threaded pins, circlips and clamping sleeves which are usually only available on the market in a phosphated or burnished version (and possibly oiled) as well as to ball bearings (for components < CRC 3) and plain bearings.
Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Gunmetal (red brass), vacuum version

Function



- Flow rate Kv
  3.5 ... 40 m³/h

- Connecting thread
  G1/2 ... G2

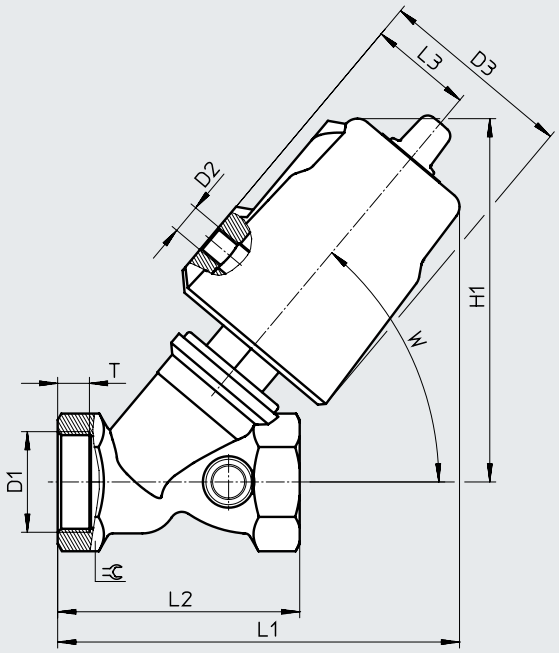
General technical data							
Line connection		G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Nominal width DN	[mm]	12	16	23	29	35	43
Design		Poppet valve with piston drive					
Actuation type		Pneumatic					
Type of mounting		In-line installation					
Line connection		Threaded coupling to DIN ISO 228-1					
Sealing principle		Soft					
Mounting position		Any					
Valve function		2/2-way, closed, monostable					
Pneumatic connection		Female thread G1/8					
Flow direction		Non-reversible					
Type of control		Externally piloted					
Reset method		Mechanical spring					
Exhaust air function		Cannot be throttled					
Flow direction		Over valve seat, for gaseous media					

Operating and environmental conditions							
Line connection		G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Valve nominal pressure PN		16					
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]					
Operating pressure	[MPa]	0.6 ... 1					
	[psi]	87 ...145					
	[bar]	6 ... 10					
Medium		Vapour					
		Inert gases					
		Filtered compressed air, grade of filtration 200 µm					
Max. viscosity	[mm²/s]	600					
Ambient temperature	[°C]	–10 ... +60					
Temperature of medium	[°C]	–10 ... +80					

Materials			Material number
Valve housing		Gunmetal (red brass)	CC499K
Actuator housing	...-H3ALV-...	Aluminium	
	...-H3B1V-...	Brass	
Spindle seal		FPM	
Seat seal		FPM	
Note on materials		Contains paint-wetting impairment substances	
		RoHS-compliant	

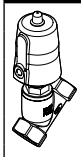
Gunmetal (red brass), vacuum version

Dimensions Download CAD data ➔ www.festo.com



Type	D1	D2	D3 ø	H1	L1	L2	L3	T	W	⫧
VZXF-L-...-G12-...-H3B1V-50-...	G1/2	G1/8	62	113.5	123	66	34	13	50°	27
VZXF-L-...-G34-...-H3B1V-50-...	G3/4			118	130	75	34	14.5		32
VZXF-L-...-G1-...-H3B1V-50-...	G1			121	133	80	34	10.5		41
VZXF-L-...-G1-...-H3ALV-80-...	G1		94	168	174.5	80	49	10.5		41
VZXF-L-...-G114-...-H3B1V-50-...	G1 1/4		62	138.5	153.5	97	34	12.5		50
VZXF-L-...-G114-...-H3ALV-80-...	G1 1/4		94	174.5	185	97	49	12.5		50
VZXF-L-...-G112-...-H3B1V-50-...	G1 1/2		62	146	160	107	34	14.5		55
VZXF-L-...-G112-...-H3ALV-80-...	G1 1/2		94	180.5	192	107	49	14.5		55
VZXF-L-...-G2-...-H3ALV-80-...	G2		94	190	202.5	124	49	16.5		68

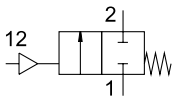
Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	G1/2	3.5	–0.9	1	1200	**3538869**	**VZXF-L-M22C-M-A-G12-120-H3B1V-50-V**
	G3/4	6.7		1	1300	**3539178**	**VZXF-L-M22C-M-A-G34-160-H3B1V-50-V**
	G1	10.8		1	1500	**3539247**	**VZXF-L-M22C-M-A-G1-230-H3B1V-50-V**
		12		0	2000	**3536819**	**VZXF-L-M22C-M-A-G1-230-H3ALV-80-V**
	G1 1/4	19		1	1900	**3539352**	**VZXF-L-M22C-M-A-G114-290-H3B1V-50-V**
		21.5		0	2300	**3536830**	**VZXF-L-M22C-M-A-G114-290-H3ALV-80-V**
	G1 1/2	23		1	2300	**3539367**	**VZXF-L-M22C-M-A-G112-350-H3B1V-50-V**
		30.5		0	2600	**3536850**	**VZXF-L-M22C-M-A-G112-350-H3ALV-80-V**
	G2	40		0	2900	**3540796**	**VZXF-L-M22C-M-A-G2-430-H3ALV-80-V**

1) Corrosion resistance class CRC 0 to Festo standard FN 940070
No corrosion stress. Applies to small, visually unimportant standard parts such as threaded pins, circlips and clamping sleeves which are usually only available on the market in a phosphated or burnished version (and possibly oiled) as well as to ball bearings (for components < CRC 3) and plain bearings.
Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Gunmetal (red brass), PWIS-free

Function



- Flow rate Kv
  3.7 ... 16.5 m^3/h

- Connecting thread
  G1/2 ... G1 1/2

General technical data					
Line connection		G1/2	G3/4	G1	G1 1/2
Nominal width DN	[mm]	12	16	23	35
Design		Poppet valve with piston drive			
Actuation type		Pneumatic			
Type of mounting		In-line installation			
Line connection		Threaded coupling to DIN ISO 228-1			
Sealing principle		Soft			
Mounting position		Any			
Valve function		2/2-way, closed, monostable			
Pneumatic connection		Female thread G1/8			
Flow direction		Non-reversible			
Type of control		Externally piloted			
Reset method		Mechanical spring			
Exhaust air function		Cannot be throttled			
Flow direction		Under valve seat, for gaseous and liquid media			

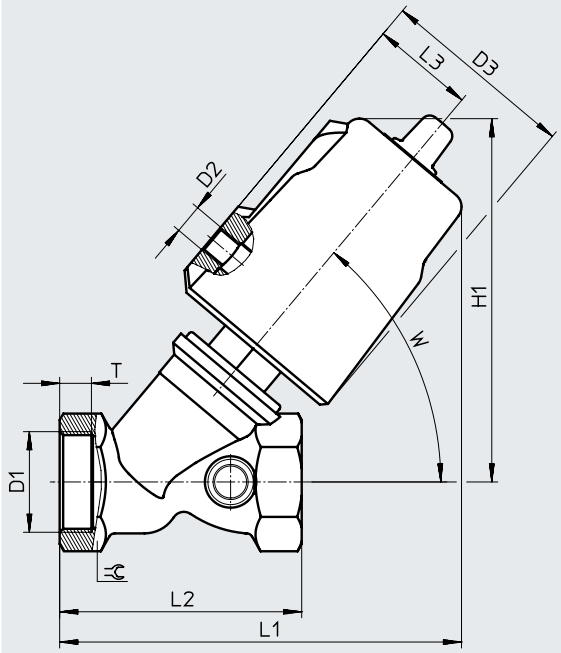
Operating and environmental conditions					
Line connection		G1/2	G3/4	G1	G1 1/2
Valve nominal pressure PN		16			
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]			
Operating pressure	[MPa]	0.6 ... 1			
	[psi]	87 ...145			
	[bar]	6 ... 10			
Medium		Vapour			
		Inert gases			
		Filtered compressed air, grade of filtration 200 µm			
		Mineral oil-based hydraulic fluid			
		Mineral oil			
		Neutral fluids			
		Water			
Max. viscosity	[mm^2/s]	600			
Ambient temperature	[°C]	–10 ... +60			
Temperature of medium	[°C]	–10 ... +80			
CE marking (see declaration of conformity)[1)]		–			To EU Pressure Equipment Directive
UKCA marking (see declaration of conformity)[1)]		–			To UK regulations for pressure equipment

1) Additional information is available at www.festo.com/sp → Certificates.

Materials		**Material number**
Valve housing	Gunmetal (red brass)	CC499K
Actuator housing	Brass	
Spindle seal	FPM	
Seat seal	FPM	
Note on materials	RoHS-compliant	

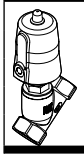
Gunmetal (red brass), PWIS-free

Dimensions Download CAD data ➔ www.festo.com



Type	D1	D2	D3 ø	H1	L1	L2	L3	T	W	⫧
VZXF-L-...-G12-...	G1/2	G1/8	62	113.5	123	66	34	13	50°	27
VZXF-L-...-G34-...	G3/4			118	130	75	34	14.5		32
VZXF-L-...-G1-...	G1			121	133	80	34	10.5		41
VZXF-L-...-G112-...	G1 1/2		62	146	160	107	34	14.5		55

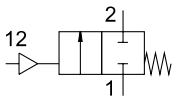
Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	G1/2	3.7	0 ... 16	1	1200	**3539036**	**VZXF-L-M22C-M-B-G12-120-H3B1V-50-16-C**
	G3/4	5.2	0 ... 16		1300	**3539179**	**VZXF-L-M22C-M-B-G34-160-H3B1V-50-16-C**
	G1	9.6	0 ... 10		1500	**3539248**	**VZXF-L-M22C-M-B-G1-230-H3B1V-50-10-C**
	G1 1/2	16.5	0 ... 6		2300	**3539368**	**VZXF-L-M22C-M-B-G112-350-H3B1V-50-6-C**

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Stainless steel casting, temperature of medium –40 ... +200°C

Function



- Flow rate Kv
  3.3 ... 43 m³/h

- Connecting thread
  G1/2 ... G2

General technical data

Line connection			G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Nominal width DN		[mm]	13	18	24	31	35	45
Design			Poppet valve with piston drive					
Actuation type			Pneumatic					
Type of mounting			In-line installation					
Line connection			Threaded coupling to DIN ISO 228-1					
Sealing principle			Soft					
Mounting position			Any					
Valve function			2/2-way, closed, monostable					
Pneumatic connection			Female thread G1/8					
Flow direction			Non-reversible					
Type of control			Externally piloted					
Reset method			Mechanical spring					
Exhaust air function			Cannot be throttled					
Flow direction	VZXF-...-A-...		Over valve seat, for gaseous media					
	VZXF-...-B-...		Under valve seat, for gaseous and liquid media					

Operating and environmental conditions

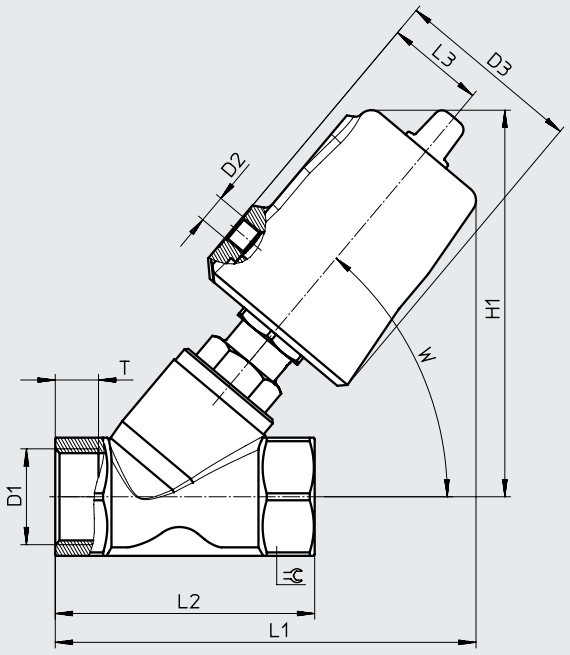
Line connection			G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Valve nominal pressure PN			40					
Operating medium			Compressed air to ISO 8573-1:2010 [7:4:4]					
Operating pressure		[MPa]	0.6 ... 1					
		[psi]	87 ...145					
		[bar]	6 ... 10					
Medium			Vapour					
			Inert gases					
			Filtered compressed air, grade of filtration 200 µm					
	VZXF-...-B-... additionally		Mineral oil-based hydraulic fluid					
			Mineral oil					
			Neutral fluids					
			Water					
Max. viscosity		[mm²/s]	600					
Ambient temperature		[°C]	–10 ... +60					
Temperature of medium		[°C]	–40 ... +200					
CE marking (see declaration of conformity)[1]			–			To EU Pressure Equipment Directive		
UKCA marking (see declaration of conformity)[1]			–			To UK regulations for pressure equipment		

1) Additional information is available at www.festo.com/sp → Certificates.

Materials		Material number
Valve housing	Stainless steel casting	1.4408
Actuator housing	High-alloy stainless steel	
Spindle seal	PTFE	
Seat seal	PTFE	
Note on materials	Contains paint-wetting impairment substances	
	RoHS-compliant	

Stainless steel casting, temperature of medium –40 ... +200°C

Dimensions Download CAD data ➔ www.festo.com

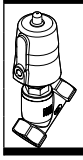


Type	D1	D2	D3 ø	H1	L1	L2	L3	T	W	⫷
VZXF-L-...-G12-...-V4V4T-50-...	G1/2	G1/8	62	129	135	65	34	12	50°	27
VZXF-L-...-G34-...-V4V4T-50-...	G3/4		62	130	138	75	34	13		32
VZXF-L-...-G1-...-V4V4T-50-...	G1		62	135	146	90	34	15		42
VZXF-L-...-G1-...-V4V4T-80-...	G1		94	177	184		48			
VZXF-L-...-G114-...-V4V4T-50-...	G1 1/4		62	151	155	110	34	17		50
VZXF-L-...-G114-...-V4V4T-80-...	G1 1/2		94	183	194		48			
VZXF-L-...-G112-...-V4V4T-50-...	G1 1/2		62	155	174	120	34	19		55
VZXF-L-...-G112-...-V4V4T-80-...	G1 1/2		94	187	202		48			
VZXF-L-...-G2-...-V4V4T-50-...	G2		62	167	193	150	34	21		70
VZXF-L-...-G2-...-V4V4T-80-...	G2		94	199	222		48			

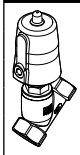
Stainless steel casting, temperature of medium –40 ... +200°C

★ Core product range

Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	G1/2	3.3	0 ... 40	3	1300	★ **1002513**	**VZXF-L-M22C-M-B-G12-130-M1-V4V4T-50-40**
	G3/4	6.5	0 ... 20		1400	★ **1002515**	**VZXF-L-M22C-M-B-G34-180-M1-V4V4T-50-20**
	G1	11	0 ... 10		1600	★ **1002517**	**VZXF-L-M22C-M-B-G1-240-M1-V4V4T-50-10**

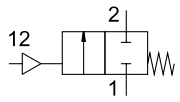
Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	G1/2	3.8	0 ... 16	3	1300	**1002512**	**VZXF-L-M22C-M-A-G12-130-M1-V4V4T-50-16**
	G3/4	7.5	0 ... 16		1400	**1002514**	**VZXF-L-M22C-M-A-G34-180-M1-V4V4T-50-16**
	G1	12	0 ... 16		1600	**1002516**	**VZXF-L-M22C-M-A-G1-240-M1-V4V4T-50-16**
		12	0 ... 22		3600	**1002526**	**VZXF-L-M22C-M-B-G1-240-M1-V4V4-T-80-22**
		12.5	0 ... 16			**1002525**	**VZXF-L-M22C-M-A-G1-240-M1-V4V4T-80-16**
	G1 1/4	10.7	0 ... 7		2200	**1002519**	**VZXF-L-M22C-M-B-G114-310-M1-V4V4T-50-7**
		17.5	0 ... 10		3800	**1002528**	**VZXF-L-M22C-M-B-G114-310-M1-V4V4T-80-10**
		18.5	0 ... 9		2200	**1002518**	**VZXF-L-M22C-M-A-G114-310-M1-V4V4T-50-9**
		19	0 ... 16		3800	**1002527**	**VZXF-L-M22C-M-A-G114-310-M1-V4V4T-80-16**
	G1 1/2	17.5	0 ... 6		2500	**1002521**	**VZXF-L-M22C-M-B-G112-350-M1-V4V4T-50-6**
		25	0 ... 7			**1002520**	**VZXF-L-M22C-M-A-G112-350-M1-V4V4T-50-7**
		28	0 ... 8		4300	**1002530**	**VZXF-L-M22C-M-B-G112-350-M1-V4V4T-80-8**
		29	0 ... 16			**1002529**	**VZXF-L-M22C-M-A-G112-350-M1-V4V4T-80-16**
	G2	19.5	0 ... 3		3500	**1002523**	**VZXF-L-M22C-M-B-G2-450-M1-V4V4T-50-3**
		34.5	0 ... 4			**1002522**	**VZXF-L-M22C-M-A-G2-450-M1-V4V4T-50-4**
		39	0 ... 5		5400	**1002532**	**VZXF-L-M22C-M-B-G2-450-M1-V4V4T-80-5**
		43	0 ... 12			**1002531**	**VZXF-L-M22C-M-A-G2-450-M1-V4V4T-80-12**

1) 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.

Stainless steel casting, nickel-plated actuator head

Function



- Flow rate Kv
  3.3 ... 43 m³/h

- G1/2 ... G2

General technical data								
Line connection			G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Nominal width DN		[mm]	13	18	24	31	35	45
Design			Poppet valve with piston drive					
Actuation type			Pneumatic					
Type of mounting			In-line installation					
Line connection			Threaded coupling to DIN ISO 228-1					
Sealing principle			Soft					
Mounting position			Any					
Valve function			2/2-way, closed, monostable					
Pneumatic connection			Female thread G1/8					
Flow direction			Non-reversible					
Type of control			Externally piloted					
Reset method			Mechanical spring					
Exhaust air function			Cannot be throttled					
Flow direction	VZXF-...-A-...		Over valve seat, for gaseous media					
	VZXF-...-B-...		Under valve seat, for gaseous and liquid media					

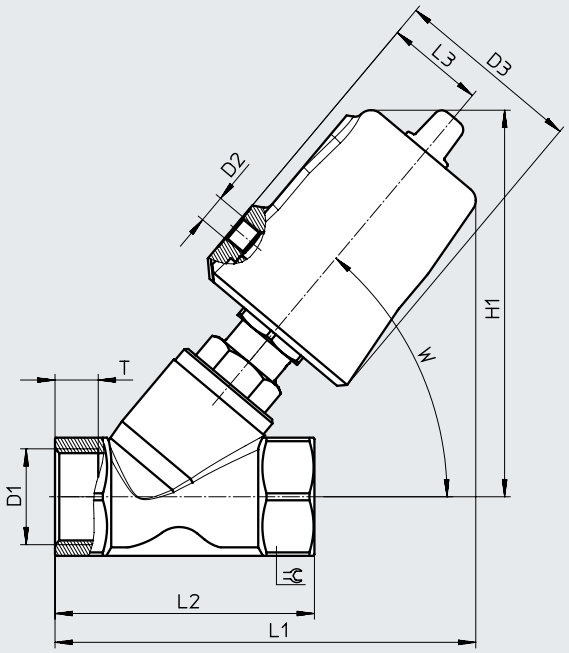
Operating and environmental conditions								
Line connection			G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Valve nominal pressure PN			40					
Operating medium			Compressed air to ISO 8573-1:2010 [7:4:4]					
Operating pressure		[MPa]	0.6 ... 1					
		[psi]	87 ...145					
		[bar]	6 ... 10					
Medium			Vapour					
			Inert gases					
			Filtered compressed air, grade of filtration 200 µm					
	VZXF-...-B-... additionally		Mineral oil-based hydraulic fluid					
			Mineral oil					
			Neutral fluids					
			Water					
Max. viscosity		[mm²/s]	600					
Ambient temperature		[°C]	–10 ... +60					
Temperature of medium		[°C]	–40 ... +200					
CE marking (see declaration of conformity)[1]			–			To EU Pressure Equipment Directive		
UKCA marking (see declaration of conformity)[1]			–			To UK regulations for pressure equipment		

1) Additional information is available at www.festo.com/sp → Certificates.

Materials		**Material number**
Valve housing	Stainless steel casting	1.4408
Actuator housing	...-V4ANT- ...	Nickel-plated aluminium
	...-V4B2T- ...	Nickel-plated brass
Spindle seal	PTFE	
Seat seal	PTFE	
Note on materials	Contains paint-wetting impairment substances	
	RoHS-compliant	

Stainless steel casting, nickel-plated actuator head

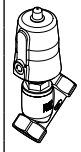
Dimensions Download CAD data ➔ www.festo.com



Type	D1	D2	D3 ø	H1	L1	L2	L3	T	W	⫧
VZXF-L-...-G12-...-V4B2T-50-...	G1/2	G1/8	62	128	133	65	34	12	50°	27
VZXF-L-...-G34-...-V4B2T-50-...	G3/4		62	128	136.5	75		13		32
VZXF-L-...-G1-...-V4B2T-50-...	G1		62	133	145	90		15		41
VZXF-L-...-G1-...-V4ANT-80-...			94	176.5	183	90	49	15		41
VZXF-L-...-G114-...-V4B2T-50-...	G1 1/4		62	150	163.5	110	34	17		50
VZXF-L-...-G114-...-V4ANT-80-...			94	183	193	110		17		50
VZXF-L-...-G112-...-V4B2T-50-...	G1 1/2		62	153	172	120		19		55
VZXF-L-...-G112-...-V4ANT-80-...			94	187	202	120		19		55
VZXF-L-...-G2-...-V4B2T-50-...	G2		62	167	193	150		21		70
VZXF-L-...-G2-...-V4ANT-80-...			94	199	221.5	150	49	21		70

Stainless steel casting, nickel-plated actuator head

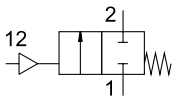
Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	G1/2	3.3	0 ... 40	2	1300	**3539720**	**VZXF-L-M22C-M-B-G12-130-M1-V4B2T-50-40**
	G3/4	6.5	0 ... 20	2	1400	**3538842**	**VZXF-L-M22C-M-B-G34-180-M1-V4B2T-50-20**
		7.5	0 ... 16			**3539745**	**VZXF-L-M22C-M-A-G34-180-M1-V4B2T-50-16**
	G1	11	0 ... 10	2	1600	**3539783**	**VZXF-L-M22C-M-B-G1-240-M1-V4B2T-50-10**
		12	0 ... 16	2	1600	**3539782**	**VZXF-L-M22C-M-A-G1-240-M1-V4B2T-50-16**
		12	0 ... 22	1	3600	**3540198**	**VZXF-L-M22C-M-B-G1-240-M1-V4ANT-80-22**
	G1 1/4	10.7	0 ... 7	2	2200	**3539816**	**VZXF-L-M22C-M-B-G114-310-M1-V4B2T-50-7**
		17.5	0 ... 10	1	3800	**3540818**	**VZXF-L-M22C-M-B-G114-310-M1-V4ANT-80-10**
		18.5	0 ... 9	2	2200	**3539815**	**VZXF-L-M22C-M-A-G114-310-M1-V4B2T-50-9**
		19	0 ... 16	1	3800	**3540817**	**VZXF-L-M22C-M-A-G114-310-M1-V4ANT-80-16**
	G1 1/2	17.5	0 ... 6	2	2500	**3539927**	**VZXF-L-M22C-M-B-G112-350-M1-V4B2T-50-6**
		25	0 ... 7	2	2500	**3539926**	**VZXF-L-M22C-M-A-G112-350-M1-V4B2T-50-7**
		28	0 ... 8	1	4300	**3540250**	**VZXF-L-M22C-M-B-G112-350-M1-V4ANT-80-8**
		29	0 ... 16	1	4300	**3540248**	**VZXF-L-M22C-M-A-G112-350-M1-V4ANT-80-16**
	G2	19.5	0 ... 3	2	3500	**3540146**	**VZXF-L-M22C-M-B-G2-450-M1-V4B2T-50-3**
		34.5	0 ... 4	2	3500	**3540145**	**VZXF-L-M22C-M-A-G2-450-M1-V4B2T-50-4**
		39	0 ... 5	1	5400	**3540277**	**VZXF-L-M22C-M-B-G2-450-M1-V4ANT-80-5**
		43	0 ... 12	1	5400	**3540276**	**VZXF-L-M22C-M-A-G2-450-M1-V4ANT-80-12**

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).
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 which are in direct contact with a normal industrial environment.

Stainless steel casting, vacuum version

Function



- Flow rate Kv
  3.8 ... 43 m³/h

- G1/2 ... G2

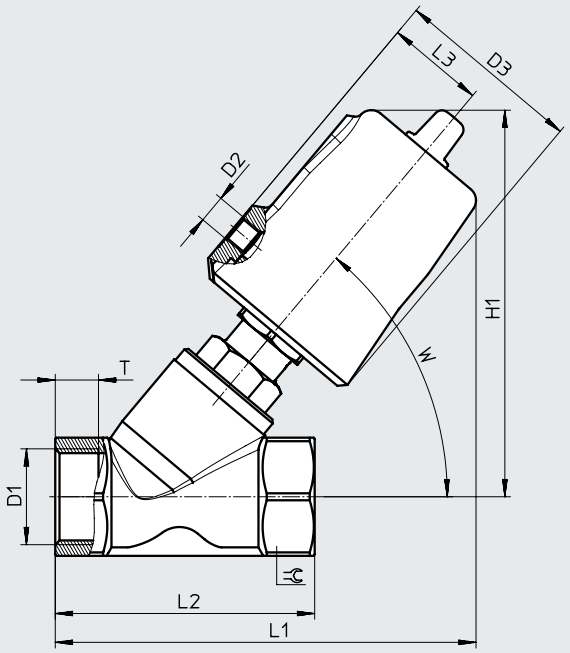
General technical data							
Line connection		G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Nominal width DN	[mm]	13	18	24	31	35	45
Design		Poppet valve with piston drive					
Actuation type		Pneumatic					
Type of mounting		In-line installation					
Line connection		Threaded coupling to DIN ISO 228-1					
Sealing principle		Soft					
Mounting position		Any					
Valve function		2/2-way, closed, monostable					
Pneumatic connection		Female thread G1/8					
Flow direction		Non-reversible					
Type of control		Externally piloted					
Reset method		Mechanical spring					
Exhaust air function		Cannot be throttled					
Flow direction		Over valve seat, for gaseous media					

Operating and environmental conditions							
Line connection		G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
Valve nominal pressure PN		40					
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]					
Operating pressure	[MPa]	0.6 ... 1					
	[psi]	87 ...145					
	[bar]	6 ... 10					
Medium		Vapour					
		Inert gases					
		Filtered compressed air, grade of filtration 200 µm					
Max. viscosity	[mm²/s]	600					
Ambient temperature	[°C]	–10 ... +60					
Temperature of medium	[°C]	–10 ... +80					

Materials			**Material number**
Valve housing		Stainless steel casting	1.4408
Actuator housing	...-V4ANV-...	Nickel-plated aluminium	
	...-V4B2V-...	Nickel-plated brass	
Spindle seal		FPM	
Seat seal		FPM	
Note on materials		Contains paint-wetting impairment substances	
		RoHS-compliant	

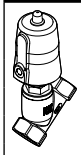
Stainless steel casting, vacuum version

Dimensions Download CAD data ➔ www.festo.com



Type	D1	D2	D3 Ø	H1	L1	L2	L3	T	W	⫧
VZXF-L-...-G12-...-V4B2V-50-...	G1/2	G1/8	62	112	119	65	34	12	50°	27
VZXF-L-...-G34-...-V4B2V-50-...	G3/4		62	118	126.5	75	34	13		32
VZXF-L-...-G1-...-V4B2V-50-...	G1		62	121.5	135	90	34	15		41
VZXF-L-...-G1-...-V4ANV-80-...			94	169	176	90	49	15		41
VZXF-L-...-G114-...-V4B2V-50-...	G1 1/4		62	142.5	156.5	110	34	17		50
VZXF-L-...-G114-...-V4ANV-80-...			94	177	188	110	49	17		50
VZXF-L-...-G112-...-V4B2V-50-...	G1 1/2		62	146	165	120	34	19		55
VZXF-L-...-G112-...-V4ANV-80-...			94	181	197	120	49	19		55
VZXF-L-...-G2-...-V4ANV-80-...	G2		94	193	216.5	150	49	21		70

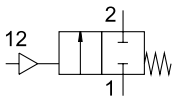
Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	G1/2	3.8	–0.9	2	1300	**3536502**	**VZXF-L-M22C-M-A-G12-130-V4B2V-50-V**
	G3/4	7.5		2	1400	**3536650**	**VZXF-L-M22C-M-A-G34-180-V4B2V-50-V**
	G1	12		2	1600	**3536659**	**VZXF-L-M22C-M-A-G34-180-V4B2V-50-V**
		12.5		1	3600	**3536677**	**VZXF-L-M22C-M-A-G1-240-V4ANV-80-V**
	G1 1/4	18.5		2	2200	**3536686**	**VZXF-L-M22C-M-A-G114-310-V4B2V-50-V**
		19		1	3800	**3536711**	**VZXF-L-M22C-M-A-G114-310-V4ANV-80-V**
	G1 1/2	25		2	2500	**3536717**	**VZXF-L-M22C-M-A-G112-350-V4B2V-50-V**
		29		1	4300	**3536771**	**VZXF-L-M22C-M-A-G112-350-V4ANV-80-V**
	G2	43		1	5400	**3536786**	**VZXF-L-M22C-M-A-G2-450-V4ANV-80-V**

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).
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 which are in direct contact with a normal industrial environment.

Gunmetal (red brass), temperature of medium –10 ... +80°C

Function



- Flow rate Kv
  3.5 ... 28 m³/h

- 1/2 NPT ... 2 NPT

General technical data								
Line connection			1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Nominal width DN		[mm]	12	16	23	29	35	43
Design			Poppet valve with piston drive					
Actuation type			Pneumatic					
Type of mounting			In-line installation					
Line connection			Threaded coupling to ANSI/ASME B 1.20.1					
Sealing principle			Soft					
Mounting position			Any					
Valve function			2/2-way, closed, monostable					
Pneumatic connection			Female thread G1/8					
Flow direction			Non-reversible					
Type of control			Externally piloted					
Reset method			Mechanical spring					
Exhaust air function			Cannot be throttled					
Flow direction	VZXF-...-A-...		Over valve seat, for gaseous media					
	VZXF-...-B-...		Under valve seat, for gaseous and liquid media					

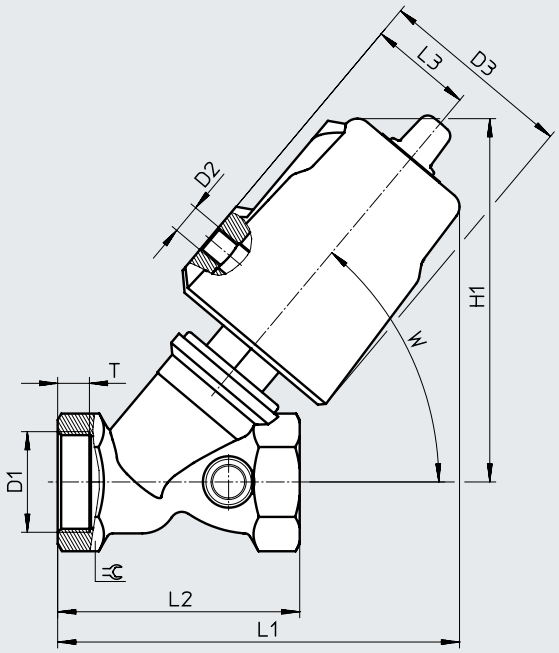
Operating and environmental conditions								
Line connection			1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Valve nominal pressure PN			16					
Operating medium			Compressed air to ISO 8573-1:2010 [7:4:4]					
Operating pressure		[MPa]	0.6 ... 1					
		[psi]	87 ...145					
		[bar]	6 ... 10					
Medium			Vapour					
			Inert gases					
			Filtered compressed air, grade of filtration 200 µm					
	VZXF-...-B-... additionally		Mineral oil-based hydraulic fluid					
			Mineral oil					
			Neutral fluids					
			Water					
Max. viscosity		[mm²/s]	600					
Ambient temperature		[°C]	–10 ... +60					
Temperature of medium		[°C]	–10 ... +80					
CE marking (see declaration of conformity)[1]			–			To EU Pressure Equipment Directive		
UKCA marking (see declaration of conformity)[1]			–			To UK regulations for pressure equipment		

1) Additional information is available at www.festo.com/sp → Certificates.

Materials		Material number
Valve housing	Gunmetal (red brass)	CC499K
Actuator housing	Brass	
Spindle seal	NBR	
Seat seal	PTFE	
Note on materials	Contains paint-wetting impairment substances	
	RoHS-compliant	

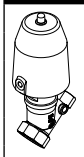
Gunmetal (red brass), temperature of medium –10 … +80°C

Dimensions Download CAD data ➔ www.festo.com



Type	D1	D2	D3 ø	H1	L1	L2	L3	T	W	⫧
VZXF-L-...-N12-...-H3B1-50-...	1/2 NPT	G1/8	62	112	123	66	34	8	50°	27
VZXF-L-...-N34-...-H3B1-50-...	3/4 NPT			117	130	75		9		33
VZXF-L-...-N1-...-H3B1-50-...	1 NPT			121	133	80		10.5		41
VZXF-L-...-N114-...-H3B1-50-...	1 1/4 NPT			139	154	97		12.5		50
VZXF-L-...-N112-...-H3B1-50-...	1 1/2 NPT			145	161	107		14.5		56
VZXF-L-...-N2-...-H3B1-50-...	2 NPT			154	171	124		16.5		68

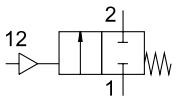
Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1]	Product weight [g]	Part no.	Type
	1/2 NPT	3.5	0 … 16	1	1200	**1002533**	**VZXF-L-M22C-M-A-N12-120-H3B1-50-16**
		3.7				**1002534**	**VZXF-L-M22C-M-B-N12-120-H3B1-50-16**
	3/4 NPT	6.7	0 … 16		1300	**1002535**	**VZXF-L-M22C-M-A-N34-160-H3B1-50-16**
		5.2				**1002536**	**VZXF-L-M22C-M-B-N34-160-H3B1-50-16**
	1 NPT	10.8	0 … 16		1500	**1002537**	**VZXF-L-M22C-M-A-N1-230-H3B1-50-16**
		9.6	0 … 10			**1002538**	**VZXF-L-M22C-M-B-N1-230-H3B1-50-10**
	1 1/4 NPT	19	0 … 10		1900	**1002539**	**VZXF-L-M22C-M-A-N114-290-H3B1-50-10**
		6	0 … 7			**1002540**	**VZXF-L-M22C-M-B-N114-290-H3B1-50-7**
	1 1/2 NPT	23	0 … 8		2300	**1002541**	**VZXF-L-M22C-M-A-N112-350-H3B1-50-8**
		16.5	0 … 6			**1002542**	**VZXF-L-M22C-M-B-N112-350-H3B1-50-6**
	2 NPT	28	0 … 4		2800	**1002543**	**VZXF-L-M22C-M-A-N2-430-H3B1-50-4**
		23	0 … 3			**1002544**	**VZXF-L-M22C-M-B-N2-430-H3B1-50-3**

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Stainless steel casting, temperature of medium –40 ... +200°C

Function



- Flow rate Kv
  3.3 ... 43 m³/h

- 1/2 NPT ... 2 NPT

General technical data								
Line connection			1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Nominal width DN		[mm]	13	18	24	31	35	45
Design			Poppet valve with piston drive					
Actuation type			Pneumatic					
Type of mounting			In-line installation					
Line connection			Threaded coupling to ANSI/ASME B 1.20.1					
Sealing principle			Soft					
Mounting position			Any					
Valve function			2/2-way, closed, monostable					
Pneumatic connection			Female thread G1/8					
Flow direction			Non-reversible					
Type of control			Externally piloted					
Reset method			Mechanical spring					
Exhaust air function			Cannot be throttled					
Flow direction	VZXF-...-A-...		Over valve seat, for gaseous media					
	VZXF-...-B-...		Under valve seat, for gaseous and liquid media					

Stainless steel casting, temperature of medium –40 ... +200°C

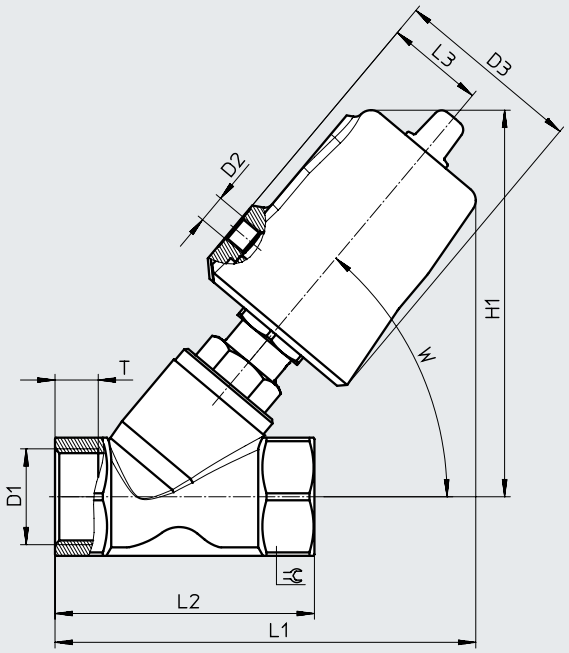
Operating and environmental conditions							
Line connection		1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Valve nominal pressure PN		40					
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]					
Operating pressure	[MPa]	0.6 ... 1					
	[psi]	87 ...145					
	[bar]	6 ... 10					
Medium		Vapour					
		Inert gases					
		Filtered compressed air, grade of filtration 200 µm					
VZXF-...-B-... additionally		Mineral oil-based hydraulic fluid					
		Mineral oil					
		Neutral fluids					
		Water					
Max. viscosity	[mm^2/s]	600					
Ambient temperature	[°C]	–10 ... +60					
Temperature of medium	[°C]	–40 ... +200					
CE marking (see declaration of conformity)[1]		–			To EU Pressure Equipment Directive		
UKCA marking (see declaration of conformity)[1]		–			To UK regulations for pressure equipment		

1) Additional information is available at www.festo.com/sp → Certificates.

Materials		**Material number**
Valve housing	Stainless steel casting	1.4408
Actuator housing	High-alloy stainless steel	
Spindle seal	PTFE	
Seat seal	PTFE	
Note on materials	Contains paint-wetting impairment substances	
	RoHS-compliant	

Stainless steel casting, temperature of medium –40 ... +200°C

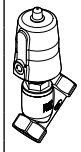
Dimensions Download CAD data ➔ www.festo.com



Type	D1	D2	D3 ø	H1	L1	L2	L3	T	W	⫩
VZXF-L-...-N12-...-V4V4T-50-...	1/2 NPT	G1/8	62	129	135	65	34	12	50°	27
VZXF-L-...-N34-...-V4V4T-50-...	3/4 NPT			130	138	75		13		32
VZXF-L-...-N1-...-V4V4T-50-...	1 NPT			135	146	90		15		42
VZXF-L-...-N1-...-V4V4T-80-...	1 NPT		94	177	184		48			
VZXF-L-...-N114-...-V4V4T-50-...	1 1/4 NPT		62	151	155	110	34	17		50
VZXF-L-...-N114-...-V4V4T-80-...	1 1/4 NPT		94	183	194		48			
VZXF-L-...-N112-...-V4V4T-50-...	1 1/2 NPT		62	155	174	120	34	19		55
VZXF-L-...-N112-...-V4V4T-80-...	1 1/2 NPT		94	187	202		48			
VZXF-L-...-N2-...-V4V4T-50-...	2 NPT		62	167	193	150	34	21		70
VZXF-L-...-N2-...-V4V4T-80-...	2 NPT		94	199	222		48			

Stainless steel casting, temperature of medium –40 ... +200°C

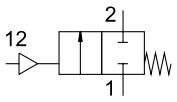
Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	1/2 NPT	3.8	0 ... 16	3	1300	**1002545**	**VZXF-L-M22C-M-A-N12-130-M1-V4V4T-50-16**
		3.3	0 ... 40			**1002546**	**VZXF-L-M22C-M-B-N12-130-M1-V4V4T-50-40**
	3/4 NPT	7.5	0 ... 16		1400	**1002547**	**VZXF-L-M22C-M-A-N34-180-M1-V4V4T-50-16**
		6.5	0 ... 20			**1002548**	**VZXF-L-M22C-M-B-N34-180-M1-V4V4T-50-20**
	1 NPT	12	0 ... 16		1600	**1002549**	**VZXF-L-M22C-M-A-N1-240-M1-V4V4T-50-16**
		11	0 ... 10			**1002550**	**VZXF-L-M22C-M-B-N1-240-M1-V4V4T-50-10**
		12.5	0 ... 16		3600	**1002551**	**VZXF-L-M22C-M-A-N1-240-M1-V4V4T-80-16**
		12	0 ... 22			**1002552**	**VZXF-L-M22C-M-B-N1-240-M1-V4V4T-80-22**
	1 1/4 NPT	18.5	0 ... 9		2200	**1002553**	**VZXF-L-M22C-M-A-N114-310-M1-V4V4T-50-9**
		10.7	0 ... 7			**1002554**	**VZXF-L-M22C-M-B-N114-310-M1-V4V4T-50-7**
		19	0 ... 16		3800	**1002555**	**VZXF-L-M22C-M-A-N114-310-M1-V4V4T-80-16**
		17.5	0 ... 10			**1002556**	**VZXF-L-M22C-M-B-N114-310-M1-V4V4T-80-10**
	1 1/2 NPT	25	0 ... 7		2500	**1002557**	**VZXF-L-M22C-M-A-N112-350-M1-V4V4T-50-7**
		17.5	0 ... 6			**1002558**	**VZXF-L-M22C-M-B-N112-350-M1-V4V4T-50-6**
		29	0 ... 16		4300	**1002559**	**VZXF-L-M22C-M-A-N112-350-M1-V4V4T-80-16**
		28	0 ... 8			**1002560**	**VZXF-L-M22C-M-B-N112-350-M1-V4V4T-80-8**
	2 NPT	34.5	0 ... 4		3500	**1002561**	**VZXF-L-M22C-M-A-N2-450-M1-V4V4T-50-4**
		19.5	0 ... 3			**1002562**	**VZXF-L-M22C-M-B-N2-450-M1-V4V4T-50-3**
		43	0 ... 12		5400	**1002563**	**VZXF-L-M22C-M-A-N2-450-M1-V4V4T-80-12**
		39	0 ... 5			**1002564**	**VZXF-L-M22C-M-B-N2-450-M1-V4V4T-80-5**

1) 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.

Stainless steel casting, nickel-plated actuator head

Function



- Flow rate Kv
  3.3 ... 34.5 m^3/h

- 1/2 NPT ... 2 NPT

General technical data							
Line connection		1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Nominal width DN	[mm]	13	18	24	31	35	45
Design		Poppet valve with piston drive					
Actuation type		Pneumatic					
Type of mounting		In-line installation					
Line connection		Threaded coupling to ANSI/ASME B 1.20.1					
Sealing principle		Soft					
Mounting position		Any					
Valve function		2/2-way, closed, monostable					
Pneumatic connection		Female thread G1/8					
Flow direction		Non-reversible					
Type of control		Externally piloted					
Reset method		Mechanical spring					
Exhaust air function		Cannot be throttled					
Flow direction	VZXF-...-A-...	Over valve seat, for gaseous media					
	VZXF-...-B-...	Under valve seat, for gaseous and liquid media					

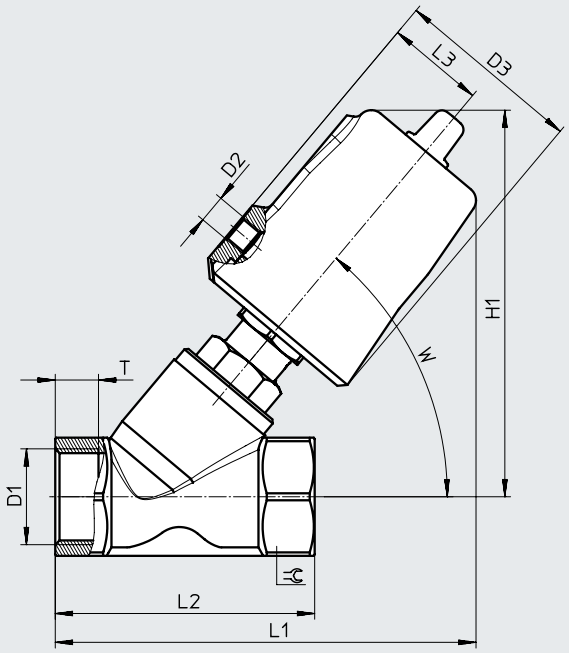
Operating and environmental conditions							
Line connection		1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Valve nominal pressure PN		40					
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]					
Operating pressure	[MPa]	0.6 ... 1					
	[psi]	87 ...145					
	[bar]	6 ... 10					
Medium		Vapour					
		Inert gases					
		Filtered compressed air, grade of filtration 200 µm					
	VZXF-...-B-... additionally	Mineral oil-based hydraulic fluid					
		Mineral oil					
		Neutral fluids					
		Water					
Max. viscosity	[mm^2/s]	600					
Ambient temperature	[°C]	–10 ... +60					
Temperature of medium	[°C]	–40 ... +200					
CE marking (see declaration of conformity)[1]		–			To EU Pressure Equipment Directive		
UKCA marking (see declaration of conformity)[1]		–			To UK regulations for pressure equipment		

1) Additional information is available at www.festo.com/sp → Certificates.

Materials		**Material number**
Valve housing	Stainless steel casting	1.4408
Actuator housing	Nickel-plated brass	
Spindle seal	PTFE	
Seat seal	PTFE	
Note on materials	Contains paint-wetting impairment substances	
	RoHS-compliant	

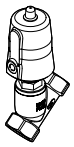
Stainless steel casting, nickel-plated actuator head

Dimensions Download CAD data ➔ www.festo.com



Type	D1	D2	D3 ø	H1	L1	L2	L3	T	W	⫩
VZXF-L-...-N12-...-V4B2T-50-...	1/2 NPT	G1/8	62	128	133	65	34	12	50°	27
VZXF-L-...-N34-...-V4B2T-50-...	3/4 NPT			128	136.5	75		13		32
VZXF-L-...-N1-...-V4B2T-50-...	1 NPT			133	145	90		15		41
VZXF-L-...-N114-...-V4B2T-50-...	1 1/4 NPT			150	163.5	110		17		50
VZXF-L-...-N112-...-V4B2T-50-...	1 1/2 NPT			153	172	120		19		55
VZXF-L-...-N2-...-V4B2T-50-...	2 NPT			167	193	150		21		70

Ordering data

	Line connection	Flow rate Kv [m³/h]	Pressure of medium [bar]	Corrosion resistance CRC[1)]	Product weight [g]	Part no.	Type
	1/2 NPT	3.3	0 ... 40	2	1300	**3539722**	**VZXF-L-M22C-M-B-N12-130-M1-V4B2T-50-40**
	3/4 NPT	7.5	0 ... 16		1400	**3539746**	**VZXF-L-M22C-M-A-N34-180-M1-V4B2T-50-16**
		6.5	0 ... 20			**3539747**	**VZXF-L-M22C-M-B-N34-180-M1-V4B2T-50-20**
	1 NPT	12	0 ... 16		1600	**3539784**	**VZXF-L-M22C-M-A-N1-240-M1-V4B2T-50-16**
		11	0 ... 10			**3539785**	**VZXF-L-M22C-M-B-N1-240-M1-V4B2T-50-10**
	1 1/4 NPT	18.5	0 ... 9		2200	**3539817**	**VZXF-L-M22C-M-A-N114-310-M1-V4B2T-50-9**
		10.7	0 ... 7			**3539818**	**VZXF-L-M22C-M-B-N114-310-M1-V4B2T-50-7**
	1 1/2 NPT	25	0 ... 7		2500	**3539928**	**VZXF-L-M22C-M-A-N112-350-M1-V4B2T-50-7**
		17.5	0 ... 6			**3539929**	**VZXF-L-M22C-M-B-N112-350-M1-V4B2T-50-6**
	2 NPT	34.5	0 ... 4		3500	**3540143**	**VZXF-L-M22C-M-A-N2-450-M1-V4B2T-50-4**
		19.5	0 ... 3			**3540144**	**VZXF-L-M22C-M-B-N2-450-M1-V4B2T-50-3**

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 which are in direct contact with a normal industrial environment.