

Reverse jet pulse valves VZWE, solenoid actuated

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Key features and product range overview

Function

Reverse jet pulse valves VZWE are piloted 2/2-way valves. They generate pulses of compressed air using a suitable solenoid coil for mechanically cleaning filters and dust filter systems. The valves are actuated using short electrical pulses.

These pulses generate short pulses of compressed air at the output of the valve, which travel through the filter against the normal direction of flow of the filter system to release adhering particles from the filter.

General information

-  - Connecting thread
G 3/4 ... G 2 1/2
-  - Flow rate Kv
15 ... 210 m³/h

Design

- 2/2-way NC valve with diaphragm

Advantages

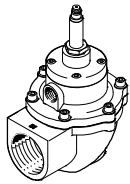
- High flow rates
- Fast opening and closing times
- Sturdy pilot system

Application

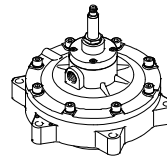
- Used in various filter systems for cleaning the filter elements
- Product filter systems
- Supply air filter systems
- Exhaust air filter systems

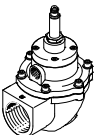
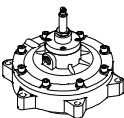
Variants

Angle valve, angle design



Flanged valve, straight design

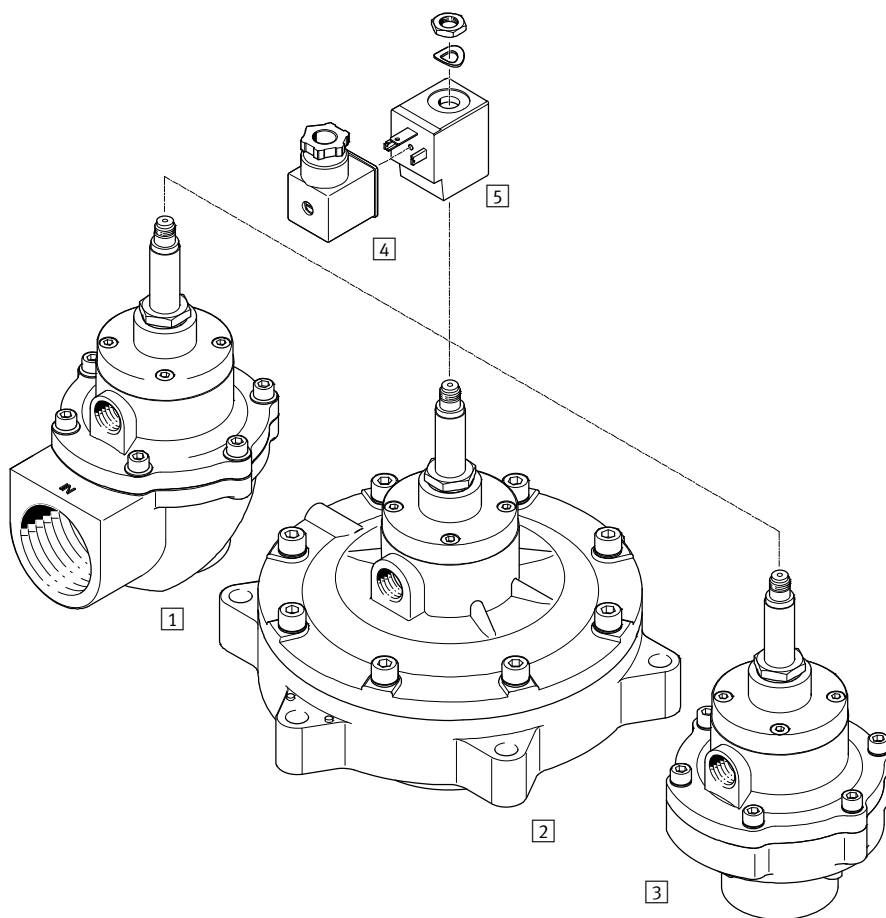


Design	Type	Process valve connection	Nominal size DN	→ Page/Internet
Angle valve, angle design				
	VZWE-E-...	G 3/4	20	5
		G 1	25	
		G 1 1/2	40	
		G 2	50	
		G 2 1/2	62	
Flanged valve, straight design				
	VZWE-F-...	G 1	25	8
		G 1 1/2	40	
		F600	50	
		F750	62	
		F890	76	

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Peripherals overview

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Mounting components and accessories		
	Brief description	→ Page/Internet
1	Angle valve VZWE-E-...-M-...-H	Angle design, 2/2-way valve, normally closed 5
2	Flanged valve VZWE-F-...-M-...-H	Straight design, 2/2-way valve, normally closed 8
3	Angle valve VZWE-E-...-M-...-H	Straight design, 2/2-way valve, normally closed 5
4	Plug socket MSSD-C	Plug socket for valves with N1 solenoid coils 13
5	Solenoid coil VACN	With connection to EN 175301-803 13

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Type codes

VZWE – E – M22C – M – G2 – 500 – H

Type

VZWE	Reverse jet pulse valves, solenoid actuated
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Type of directional control valve

E	Angle valve (angle design)
F	Flanged valve (straight design)

Valve function

M22C	2/2-way valve, single solenoid
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Reset method for single solenoid valves

M	Mechanical spring
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Process valve connection

Pipe thread to DIN ISO 228

G34	Thread G 3/4
G1	Thread G 1
G112	Thread G 1 1/2
G2	Thread G 2
G212	Thread G 2 1/2

Flange diameter

F600	60 mm
F750	75 mm
F890	89 mm

Nominal size

200	20 mm
250	25 mm
400	40 mm
500	50 mm
620	62 mm
760	76 mm

Electrical connection

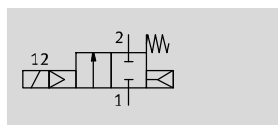
H	14 mm, with armature tube
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Technical data – Angle valve

Function



Flow rate Kv
15 ... 95 m³/h

Connecting thread
G 3/4 ... G 2 1/2



General technical data						
Nominal size	[mm]	20	25	40	50	62
Valve function		2/2-way, single solenoid, closed				
Manual override		None				
Design		Diaphragm valve, angle design				
Reset method		Mechanical spring				
Type of control		Piloted				
Actuation type		Electric				
Type of mounting		Via thread, screwed in				
Mounting position		Any				
Direction of flow		Non-reversible				
Switching time on	[ms]	≤30				
Switching time off	[ms]	≤100				
Flow rate Kv	[m ³ /h]	15	22	48	78	95
Process valve connection 1		G 3/4	G 1	G 1 1/2	G 2	G 2 1/2
Process valve connection 2		G 3/4	G 1	G 1 1/2	G 2	G 2 1/2

Operating and environmental conditions	
Medium	Compressed air according to ISO 8573-1:2010 [7:4:4]
Note about the operating/pilot medium	Lubricated operation not possible
Medium pressure	[bar] 0.35 ... 8
Differential pressure	[bar] 0.35
Ambient temperature	[°C] –20 ... 60
Protection class	IP65
Corrosion resistance class CRC ¹⁾	3

1) Corrosion resistance class 3 according to Festo standard 940 070

Components subject to high corrosion stress. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment or media such as solvents and cleaning agents.

Materials		
Reverse jet pulse valves		Material number
1 Valve housing	Die-cast aluminium	EN AC-47100D
2 Screws	High-alloy steel	1.4301
3 Armature tube	High-alloy steel	–
– Seal	Nitrile rubber	–
– Diaphragm	Nitrile rubber/polyamide	–
– Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant	–

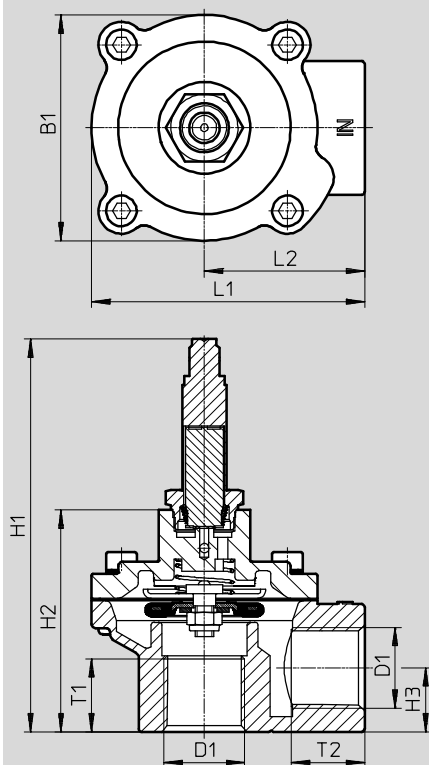
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Technical data – Angle valve

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Dimensions

Download CAD data → www.festo.com



Type	B1	D1	H1	H2	H3	L1	L2	T1	T2
VZWE-E-M22C-M-G34-200-H	74	G 3/4	128.8	72.8	21	89.5	52.5	24	24
VZWE-E-M22C-M-G1-250-H	74	G 1	128.8	72.8	21	89.5	52.5	24	21.5

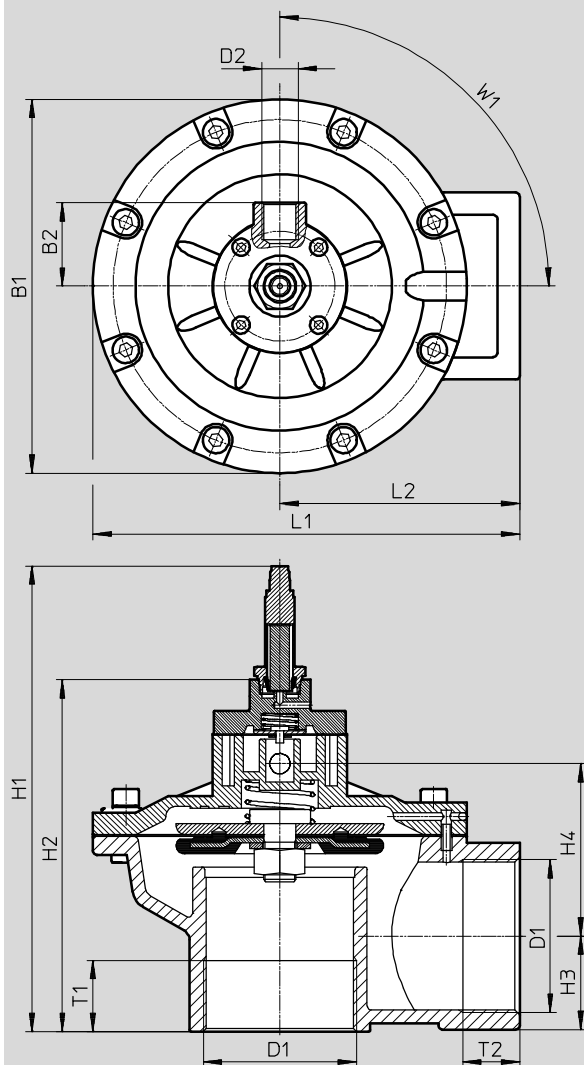
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Technical data – Angle valve

Dimensions

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Type	B1	B2	D1	D2	H1	H2	H3	H4	L1	L2	T1	T2	W1
VZWE-E-M22C-M-G112-400-H	112	39	G 1 1/2	G 3/8	187	131.5	31.5	59.8	124	74	34	34	0
VZWE-E-M22C-M-G2-500-H	184	41	G 2	G 3/8	210	154	40	72.8	205	92	25	25	90
VZWE-E-M22C-M-G212-620-H	184	41	G 2 1/2	G 3/8	229	173	47	131.8	210	92	35	28	90

Ordering data – Reverse jet pulse valves VZWE

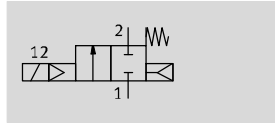
	Process valve connection	Weight [g]	Part No.	Type
	G 3/4	420	1794182	VZWE-E-M22C-M-G34-200-H
	G 1	420	1795142	VZWE-E-M22C-M-G1-250-H
	G 1 1/2	1300	1239565	VZWE-E-M22C-M-G112-400-H
	G 2	2800	1276955	VZWE-E-M22C-M-G2-500-H
	G 2 1/2	3100	1281702	VZWE-E-M22C-M-G212-620-H

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Technical data – Flanged valve

Function



Flow rate Kv
22 ... 210 m³/h

Connecting thread
Ø 92 ... 162



General technical data						
Nominal size	[mm]	25	40	50	62	76
Valve function		2/2-way, single solenoid, closed				
Manual override		None				
Design		Diaphragm valve, straight design with flange				
Reset method		Mechanical spring				
Type of control		Piloted				
Actuation type		Electric				
Type of mounting		Via thread, screwed in				
Mounting position		Any				
Direction of flow		Non-reversible				
Switching time on	[ms]	≤30				
Switching time off	[ms]	≤100				
Flow rate	[m³/h]	22	48	78	95	210
Process valve connection 1	[mm]	G 1	G 1 1/2	60	75	89
Process valve connection 2	[mm]	59	74	145.5	145.5	162

Operating and environmental conditions	
Medium	Compressed air according to ISO 8573-1:2010 [7:4:4]
Note about the operating/pilot medium	Lubricated operation not possible
Medium pressure	[bar] 0.35 ... 8
Differential pressure	[bar] 0.35
Ambient temperature	[°C] –20 ... 60
Protection class	IP65
Corrosion resistance class CRC ¹⁾	3

1) Corrosion resistance class 3 according to Festo standard 940 070
Components subject to high corrosion stress. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment or media such as solvents and cleaning agents.

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2 Screws	High-alloy steel	1.4301
3 Armature tube	High-alloy steel	–
– Seal	Nitrile rubber	–
– Diaphragm	Nitrile rubber/polyamide	–
– Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant	–

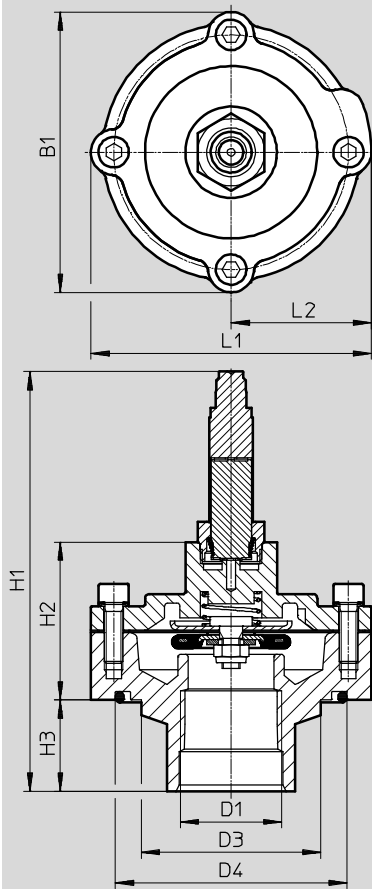
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Technical data – Flanged valve

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Dimensions

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Type	B1	D1	D3 Ø	D4 Ø	H1	H2	H3	L1	L2
VZWE-F-M22C-M-G1-250-H	92	G 1	59	76	137.8	51.8	30	92	46

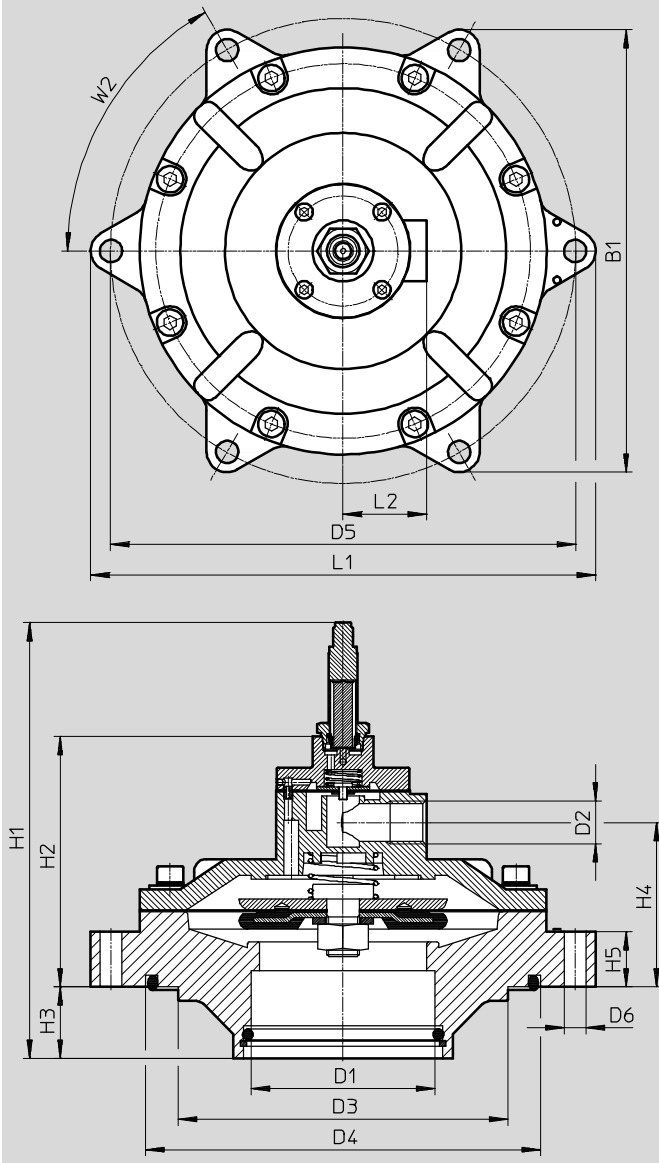
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Technical data – Flanged valve

Dimensions

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Type	B1	D1 Ø	D2	D3 Ø	D4 Ø	D5 Ø	D6 Ø	H1	H2	H3	H4	H5	L1	L2	W2
VZWE-F-M22C-M-F600-500-H	200	60	G 3/8	145.5	174	208	11	205	114	35	72.8	27	228	41	60
VZWE-F-M22C-M-F750-620-H	200	75	G 3/8	145.5	174	208	11	205	114	35	72.8	27	228	41	60
VZWE-F-M22C-M-F890-760-H	217	89	G 1/2	162	194	228	11	214	123	35	80.8	27	248	41	60

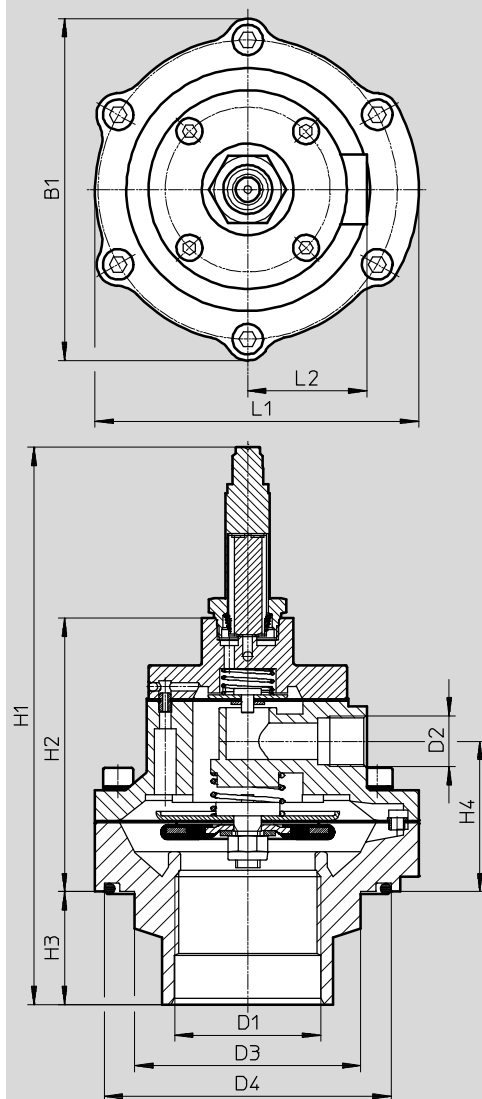
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Technical data – Flanged valve

Dimensions

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Type	B1	D1	D2	D3 Ø	D4 Ø	H1	H2	H3	H4	L1	L2
VZWE-F-M22C-M-G112-400-H	112	G 1 1/2	G 3/8	74	94	182.5	89.6	37	49.3	112	39

Ordering data – Reverse jet pulse valves VZWE

	Process valve connection	Weight [g]	Part No.	Type
	G 1	430	1795190	VZWE-F-M22C-M-G1-250-H
	G 1 1/2	950	1804475	VZWE-F-M22C-M-G112-400-H
	F600	3300	1808248	VZWE-F-M22C-M-F600-500-H
	F750	3100	1810664	VZWE-F-M22C-M-F750-620-H
	F890	3600	1214036	VZWE-F-M22C-M-F890-760-H

Solenoid coils VACN

Accessories

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Ordering data – Solenoid coils VACN					
	Description		Thread mounting nut	Part No.	Type
	Without plug socket, plug pattern to EN 175301-803, type A	24 V DC	G1/8	8022877	VACN-H1-A1-1
			M10x1	8049752	VACN-X-A1-1
		110 V AC	G1/8	8022878	VACN-H1-A1-2A
			M10x1	8049753	VACN-X-A1-2A
		230 V AC	G1/8	8022879	VACN-H1-A1-3A
			M10x1	8049754	VACN-X-A1-3A

Ordering data – Plug socket MSSD				
	Description		Cable connector	Part No. Type
	Plug socket for valves with N1 solenoid coils, 3-pin		Pg9	34583 MSSD-C

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