

Proportional media valves VZQA



Proportional media valves VZQA

Key features and overview

Function

The proportional media valve is a 2/2-way valve for controlling material flows. It is open in normal position. The shut-off element is a tubular pinch element made from

elastomer. When the valve is pressurised, the tubular pinch element closes and the material flow is tightly shut off. The valve opens when pressurisation stops

due to the internal stress of the pinch element or the pressure of the medium. The valve can be used to shut off liquid and dusty media, solids (granulates) as well as

mixtures of substances. The free passage when the valve is opened ensures minimum flow resistance and prevents the valve becoming blocked or clogged.

General

-N- G $\frac{1}{2}$

-  - Standard nominal flow rate
12,800 l/min

Application

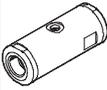
- The valve can be used to shut off media as well as mixtures of substances

Design

- Easy-to-clean, cylindrical housing
- Normally open
- Pinch element made from elastomer

Note

Pilot air connection 12: G $\frac{1}{8}$. Max. permissible thread length: 5 mm.

Version	Type	Process valve connection	Nominal size (DN)	Process valve nominal pressure (PN)	→ Page/Internet
	VZQA	G $\frac{1}{2}$	15	10	4

Note

The proportional media valve must only be used in systems where a damaged or leaking cartridge cannot pose a hazard to people or property. The media circuit must be

sized for the set pilot pressure. The designer and operator of the system are responsible for the suitability of the product in combination with the respective system as well as for the

resistance of the cartridge material to the operating medium used. Appropriate tests are generally required to assess the suitability. The risk of a leaking cartridge

together with the associated consequences must be taken into consideration when planning the system.

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Type codes

		VZQA	-	C	-	M22U	-	15	-	G	G	-	V4	V4	N	-	4
Type																	
VZQA	Proportional media valve, pneumatically actuated																
Product version																	
C	Easy-to-clean design																
Valve function																	
M22U	2/2-way valve, normally open																
Nominal size (DN)																	
15	DN 15																
Connection type 1																	
G	G thread, female																
Connection type 2																	
G	G thread, female																
Housing material																	
V4	Stainless steel																
Housing cover material																	
V4	Stainless steel																
Shut-off element material																	
N	NBR																
Pressure range of media																	
4	0 ... 4 bar																

Proportional media valves VZQA

Technical data

Function



 Standard nominal flow rate
12,800 l/min



-N- Connecting thread
G $\frac{1}{2}$

General technical data	
Process valve connection	G $\frac{1}{2}$
Pilot air connection 12	G $\frac{1}{8}$
Nominal size (DN)	15
Valve function	2/2-way, single solenoid, open
Design	Pinch valve, pneumatically actuated
Type of mounting	In-line installation
Actuation type	Pneumatic
Type of control	External
Reset method	Rebound resilience
Mounting position	Any
Sealing principle	Soft
Direction of flow	Reversible
Max. viscosity [mm ² /s]	4,000
Product weight [g]	440

Operating and environmental conditions	
Process valve connection	G $\frac{1}{2}$
Switching time on [ms]	250
Switching time off [ms]	250
Standard nominal flow rate [l/min]	12,800
Operating pressure [bar]	0 ... 4
Process valve nominal pressure (PN)	10
Overload pressure [bar]	7.8
Pilot pressure [bar]	1 ... 6.5
Differential pressure [bar]	2.5
Operating medium	Compressed air to ISO 8573-1:2010 [:-:-]
Pilot medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Ambient temperature [°C]	-5 ... 60
Temperature of medium [°C]	-5 ... 60
b value	0.85
C value [l/sbar]	33.44
Corrosion resistance class CRC ¹⁾	4

1) Corrosion resistance class 4 according to Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

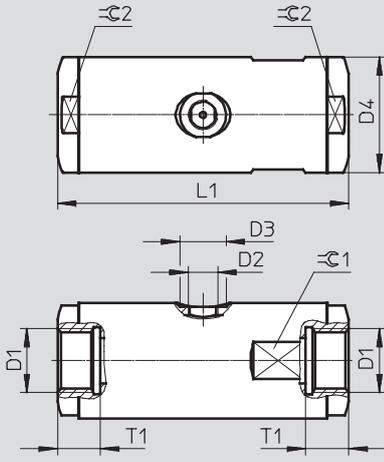
Materials		
Solenoid valves		Material number
1) Housing, housing cover	High-alloy stainless steel	1.4435
2) Seals	FPM	-
3) Shut-off element	NBR	-
- Note on materials	RoHS-compliant	-

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Technical data

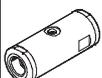
Dimensions

Download CAD Data → www.festo.com/us/cad



	D1	D2	D3	D4	L1	T1	⊖ C1	⊖ C2
VZQA-C-M22U-15-GG-V4V4N-4	G1/2	G1/8	15 ∅	38 ∅	95	14	36	36

Ordering data

	Process valve connection	Part No.	Type
	G1/2	1387297	VZQA-C-M22U-15-GG-V4V4N-4

Note

The hermetic separation between the media circuit and pilot circuit is no longer guaranteed if wear causes the pinch element to leak. The flow medium can then get into the pilot circuit, from where it can escape.

Any potential hazard (e.g. due to aggressive or hot media) must be ruled out. The compressed air supply to the control valve must be protected against the ingress of the flow medium using a suitable

non-return valve or a suitable protection against return flow must be integrated in the pilot line in the immediate vicinity of the media valve. Pilot medium can get into the

media circuit if the pinch element fails. The media circuit must therefore be sized for the set pilot pressure. Any potential hazard must be ruled out.

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