

Proportional media valves VZQA



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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

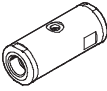
- The valve can be used to shut off media as well as mixtures of substances

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 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																
E	EPDM																
Pressure range of media																	
4	0 ... 4 bar																


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Technical data

Function



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



-N- Connecting thread
G1/2

General technical data		
VZQA-...	...-V4V4N-4	...-V4V4E-4
Process valve connection	G1/2	
Pilot air connection 12	G1/8	
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		
VZQA-...	...-V4V4N-4	...-V4V4E-4
Process valve connection	G1/2	
Switching time on	[ms]	250
Switching time off	[ms]	250
Standard nominal flow rate	[l/min]	12,800
Medium 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
Medium	Compressed air to ISO 8573-1:2010 [-:-:-]	Compressed air to ISO 8573-1:2010 [-:-:1], water
Pilot medium	Compressed air to ISO 8573-1:2010 [7:4:4]	Compressed air to ISO 8573-1:2010 [7:4:1]
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			
VZQA-...	...-V4V4N-4	...-V4V4E-4	Material number
1	Housing, housing cover	High-alloy stainless steel	1.4435
2	Seals	FPM	-
3	Shut-off element	NBR	EPDM
-	Note on materials	RoHS-compliant	-

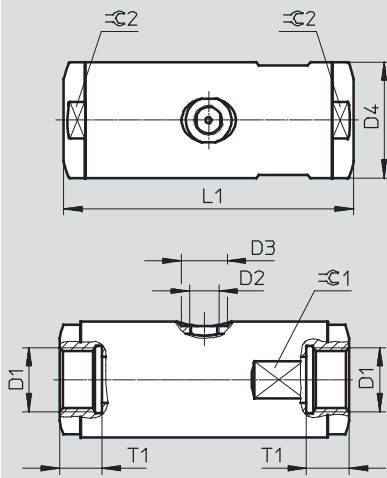
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Technical data

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Dimensions

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



	D1	D2	D3 Ø	D4 Ø	L1	T1	⇄ 1	⇄ 2
VZQA-C-M22U-15-GG-V4V4N-4	G½	G⅜	15	38	95	14	36	36
VZQA-C-M22U-15-GG-V4V4E-4								

Ordering data

	Process valve connection	Part No.	Type
	G½	1387297	VZQA-C-M22U-15-GG-V4V4N-4
		1387298	VZQA-C-M22U-15-GG-V4V4E-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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