

Proportional media valves VZQA, NPT

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Proportional media valves VZQA, NPT

Key features and product range overview

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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 valve sleeve made from

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

the internal stress of the pinch valve sleeve 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

 NPT $\frac{1}{2}$

 Standard nominal flow rate
12,800 l/min

Application

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

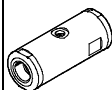
Design

- Easy-to-clean, cylindrical housing
- Normally open
- Pinch valve sleeve 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	NPT $\frac{1}{2}$	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

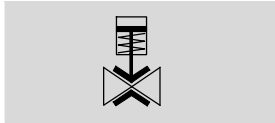
		VZQA	-	C	-	M22U	-	15	-	T	T	-	V4	V4	N	-	4
Type																	
VZQA	Proportional media valve, pneumatically actuated																
Product version																	
C	Easy-to-clean design																
Valve function																	
M22U	2/2-way valve, normally open																
Nominal size (DN)																	
15	DN 15																
Connection type 1																	
T	NPT thread, female																
Connection type 2																	
T	NPT 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

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Function



 Standard nominal flow rate
12,800 l/min

 Connecting thread
NPT $\frac{1}{2}$



General technical data		
VZQA-...	...-V4V4N-4	...-V4V4E-4
Process valve connection	NPT $\frac{1}{2}$	
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		
VZQA-...	...-V4V4N-4	...-V4V4E-4
Process valve connection	NPT $\frac{1}{2}$	
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
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 to Festo standard 940 070
Components subject to 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		–

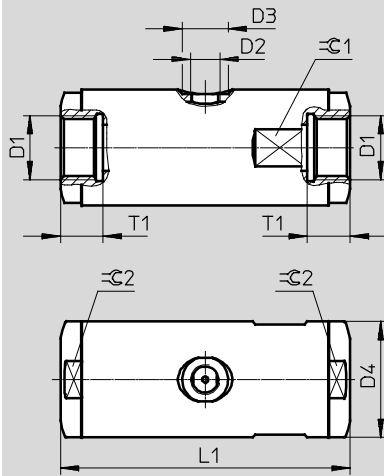
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Technical data

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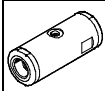
Dimensions

Download CAD data → www.festo.com



	D1	D2	D3	D4	L1	T1	1	2
VZQA-C-M22U-15-TT-V4V4N-4	NPT $\frac{1}{2}$	G $\frac{1}{8}$	15	38	95	14	36	36
VZQA-C-M22U-15-TT-V4V4E-4								

Ordering data

	Process valve connection	Part No.	Type
	NPT $\frac{1}{2}$	1387299	VZQA-C-M22U-15-TT-V4V4N-4
		1387300	VZQA-C-M22U-15-TT-V4V4E-4

Note

The hermetic separation between the media circuit and pilot circuit is no longer guaranteed if wear causes the pinch valve sleeve 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 valve sleeve fails. The media circuit must therefore be sized for the set pilot pressure. Any potential hazard must be ruled out.