Proportional media valves VZQA, NPT

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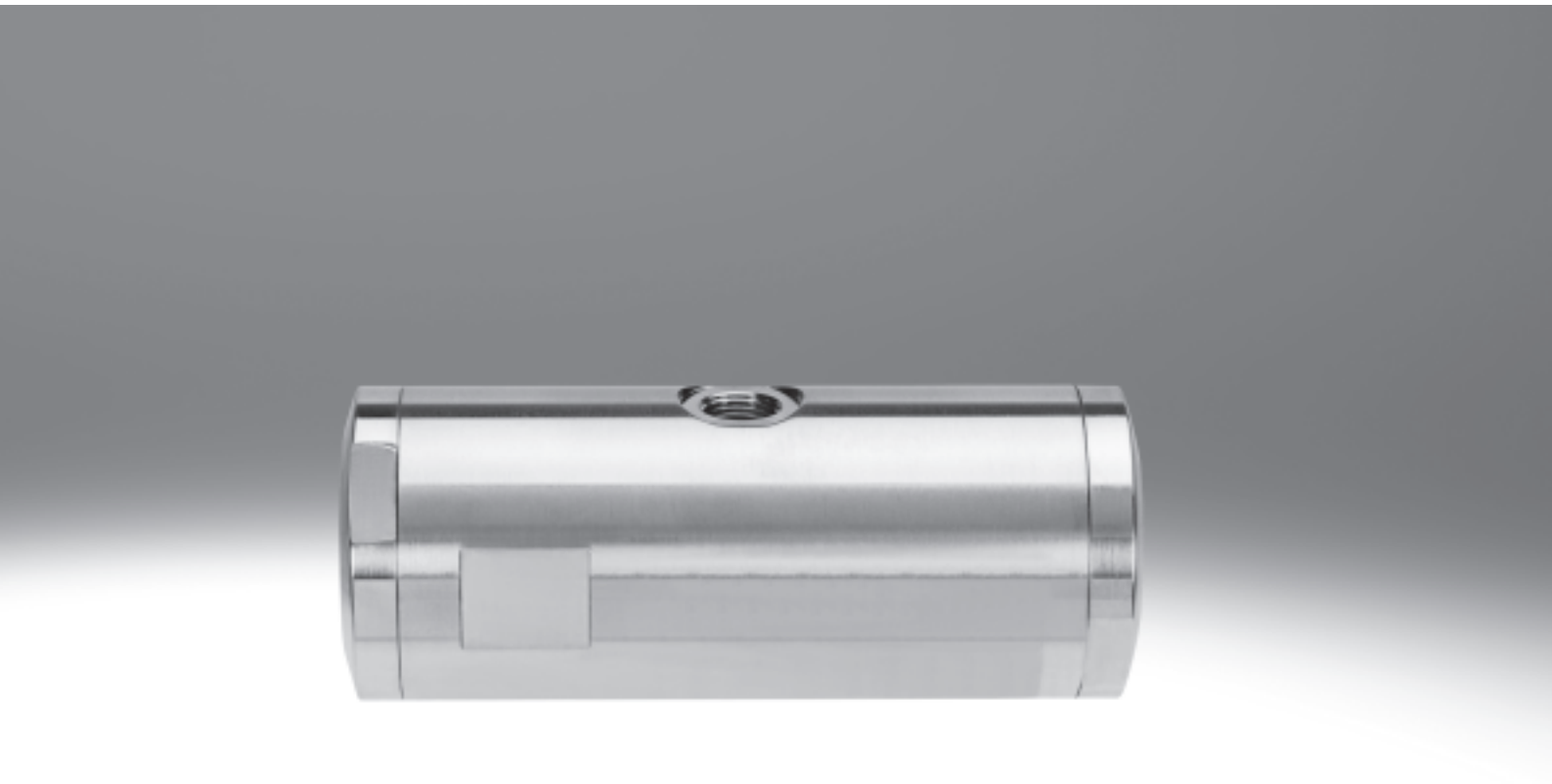


Proportional media valves VZQA, NPT

Key features and product range 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 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

- NPT½

- Standard nominal flow rate 12,800 l/min

Application

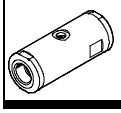
- The valve can be used to shut off media as well as mixtures of substances

Design

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

- Note

Pilot air connection 12: G⅛.
Max. permissible thread length: 5 mm.

Version	Type	Process valve connection	Nominal size (DN)	Process valve nominal pressure (PN)	➔ Page/Internet
	VZQA	NPT½	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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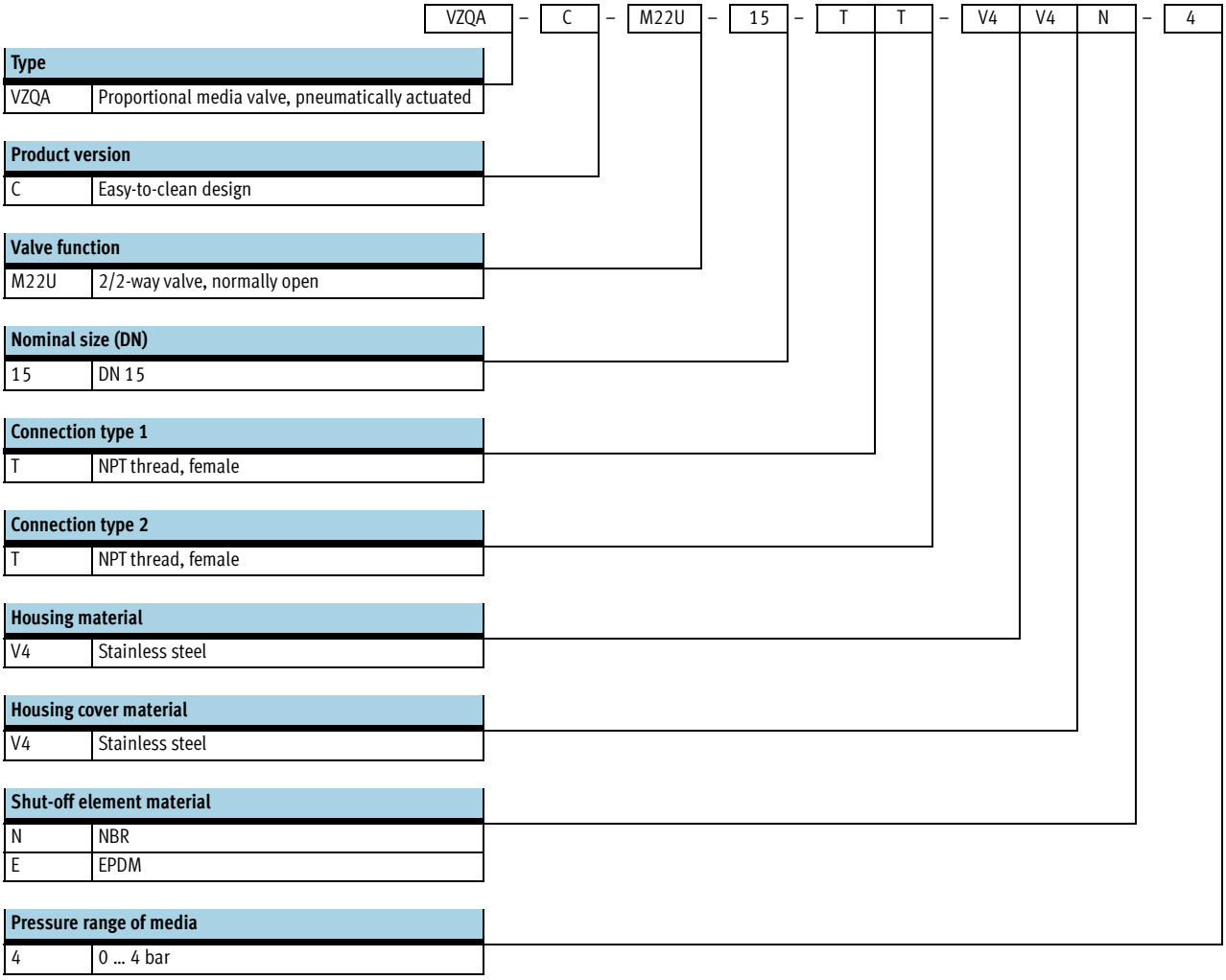
Type codes



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

Proportional media valves VZQA, NPT

Technical data

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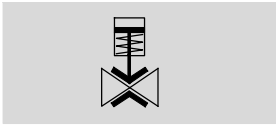
Function



- Standard nominal flow rate
  12,800 l/min

- Connecting thread
  NPT½

General technical data			
VZQA-...		...-V4V4N-4	...-V4V4E-4
Process valve connection		NPT½	
Pilot air connection 12		G⅛	
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	[mm²/s]	4,000	
Product weight	[g]	440	

Operating and environmental conditions			
VZQA-...		...-V4V4N-4	...-V4V4E-4
Process valve connection		NPT½	
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	–5 ... +100
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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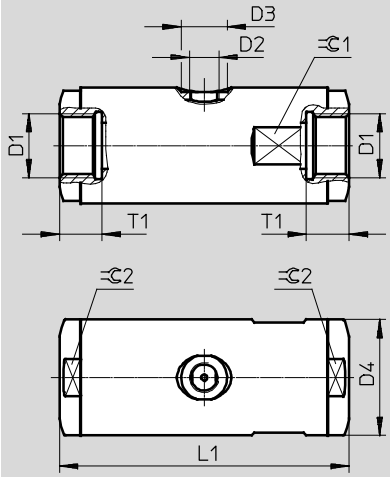
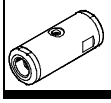
Technical data

Dimensions Download CAD data ➔ **www.festo.com**



	D1	D2	D3 ∅	D4 ∅	L1	T1	⊂ 1	⊂ 2
VZQA-C-M22U-15-TT-V4V4N-4	NPT½	G⅛	15	38	95	14	36	36
VZQA-C-M22U-15-TT-V4V4E-4								

Ordering data

	Process valve connection	Part No.	Type
	NPT½	**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.