Proportional media valves VZQA

FESTO

New

Proportional media valves VZQA

Key features

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. When pressurisation stops, the valve will open due to the inherent 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) and mixtures of substances. The free passage when the valve is opened ensures minimum flow resistance and prevents the valve becoming blocked or clogged.

General

- G¼, G½
  Clamp to DIN 32676
- Standard nominal flow rate
  1,550 l/min,
  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

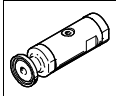
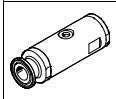
Pilot air port 12: G⅛ at DN15, M5 at DN6, max permissible thread length 5 mm.

Areas of application

The proportional media valve may only be used in systems where a damaged or leaking seal 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 seal cartridge material to the medium used. Appropriate examinations are generally required to evaluate suitability. The risks associated with a leaking seal cartridge and the corresponding consequences must be taken into account when planning the system.

Proportional media valves VZQA

Product range overview

Version	Type	Nominal width DN	Process valve connection	Nominal flow rate [l/min]	➔ Page/Internet
	VZQA	6	G¼ Clamp to DIN 32676	1,550	5
	VZQA	15	G½ Clamp to DIN 32676	12,800	7

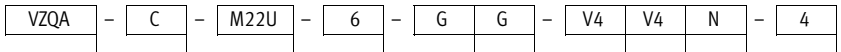
Note

The hermetic separation between the media circuit and control circuit is no longer guaranteed if wear causes the pinch valve sleeve to leak. The flow medium can then get into the control 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.

New

Proportional media valves VZQA

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	
6	6 mm
15	15 mm

Connection type 1	
G	G thread, female
S5	Clamp to DIN 32676

Connection type 2	
G	G thread, female
S5	Clamp to DIN 32676

Housing material	
V4	Stainless steel
Al	Aluminium

Housing cover material	
V4	Stainless steel
Al	Aluminium

Material, shut-off element	
N	NBR
E	EPDM

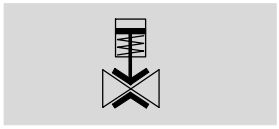
Pressure range of media	
4	0 ... 4 bar

Proportional media valves VZQA

Technical data process valve connection G¼ and clamp

FESTO

Function



Standard nominal flow rate
1,550 l/min

Connecting thread
G¼, clamp to DIN 32676

General technical data				
VZQA-...		... -GG-V4V4E-4	... -GG-ALV4N-4	... -S5S5-V4V4E-4
Nominal width DN		6		
Process valve connection		G¼		Clamp to DIN 32676
Auxiliary pilot air port 12		M5		
Valve function		2/2-way, monostable, open		
Design		Pinch valve, pneumatically actuated		
Type of mounting		In-line installation		
Actuation type		Pneumatic		
Type of control		Externally actuated		
Reset method		Rebound resilience		
Mounting position		Any		
Sealing principle		Soft		
Direction of flow		Reversible		
Max. viscosity	[mm²/s]	4000		
Product weight	[g]	157	105.5	215

Operating and environmental conditions				
VZQA-...		... -GG-V4V4E-4	... -GG-ALV4N-4	... -S5S5-V4V4E-4
Switching time ON	[ms]	125		
Switching time OFF	[ms]	125		
Standard nominal flow rate	[l/min]	1,550		
Medium pressure	[bar]	0 ... 4		
Nominal pressure of process valve 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 [-:-:1]	Compressed air to ISO 8573-1:2010 [-:-:-]	Compressed air to ISO 8573-1:2010 [-:-:1]
		Water		Water
Pilot medium		Compressed air to ISO 8573-1:2010 [7:4:1]	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 ... 100	–5 ... 60	–5 ... 100
b value		0.8		
C value	[l/sbar]	4.25		
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.

New

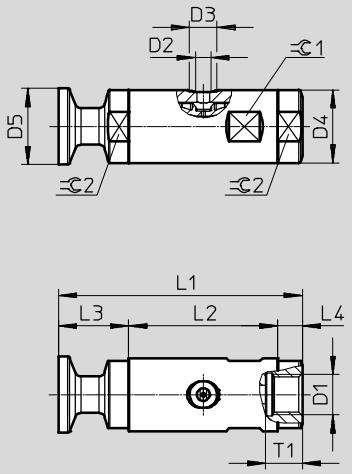
Proportional media valves VZQA

Technical data

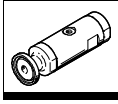
FESTO

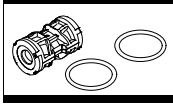
Materials				
VZQA-...	... -GG-V4V4E-4	... -GG-ALV4N-4	... -S5S5-V4V4E-4	Material number
Housing	High-alloy stainless steel	Wrought aluminium alloy	High-alloy stainless steel	1.4435
Housing cover	High-alloy stainless steel	High-alloy stainless steel	High-alloy stainless steel	1.4435
Seals	FPM			–
Shut-off element	EPDM	NBR	EPDM	–
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant			–

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



Type	D1	D2	D3 ∅	D4 ∅	D5 ∅	L1	L2	L3	L4	T1	⌀C 1	⌀C 2
VZQA-C-M22U-6-GG-V4V4E-4	G¼	M5	9	24	–	65	49	8	8	12	22	22
VZQA-C-M22U-6-GG-ALV4N-4												
VZQA-C-M22U-6-S5S5-V4V4E-4	–				25	95		23	23			

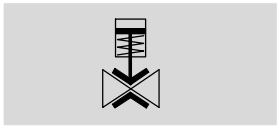
Ordering data			
	Process valve connection	Part No.	Type
	G¼	**2931678**	**VZQA-C-M22U-6-GG-V4V4E-4**
		2931679	**VZQA-C-M22U-6-GG-ALV4N-4**
		2931681	**VZQA-C-M22U-6-S5S5-V4V4E-4**

Ordering data					
Seal cartridge	Nominal size DN	Information on materials, shut-off element	Note on materials	Part No.	Type
	6	NBR	RoHS-compliant	**2392881**	**VAVC-Q2-M22U-6-N**
		EPDM		**2392882**	**VAVC-Q2-M22U-6-E**

Proportional media valves VZQA

Technical data process valve connection G½ and clamp

Function



Standard nominal flow rate
12,800 l/min

Connecting thread
G½, clamp to DIN 32676

General technical data					
VZQA-...		... -GG-ALV4N-4	... -GG-V4V4E-4	... -GG-V4V4N-4	... -S5S5-V4V4E-4
Nominal width DN		15			
Process valve connection		G½			Clamp to DIN 32676
Auxiliary pilot air port 12		G1/8			
Valve function		2/2-way, monostable, open			
Design		Pinch valve, pneumatically actuated			
Type of mounting		In-line installation			
Actuation type		Pneumatic			
Type of control		Externally actuated			
Reset method		Rebound resilience			
Mounting position		Any			
Sealing principle		Soft			
Direction of flow		Reversible			
Max. viscosity	[mm²/s]	4,000			
Product weight	[g]	265	431	431	559

Operating and environmental conditions					
VZQA-...		... -GG-ALV4N-4	... -GG-V4V4E-4	... -GG-V4V4N-4	... -S5S5-V4V4E-4
Switching time ON	[ms]	250			
Switching time OFF	[ms]	250			
Standard nominal flow rate	[l/min]	12,800			
Medium pressure	[bar]	0 ... 4			
Nominal pressure of process valve 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]	Compressed air to ISO 8573-1:2010 [-:-:-]	Compressed air to ISO 8573-1:2010 [-:-:1]
			Water		Water
Pilot medium		Compressed air to ISO 8573-1:2010 [7:4:4]	Compressed air to ISO 8573-1:2010 [7:4:1]	Compressed air to ISO 8573-1:2010 [7:4:4]	Compressed air to ISO 8573-1:2010 [7:4:4]
Ambient temperature	[°C]	–5 ... 60			
Temperature of medium	[°C]	–5 ... 60	–5 ... 100	–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.

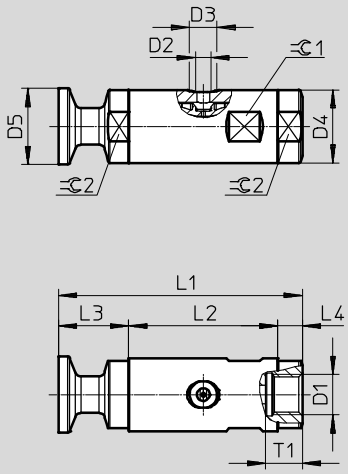
New

Proportional media valves VZQA

Technical data

Materials					
VZQA-...	... -GG-ALV4N-4	... -GG-V4V4E-4	... -GG-V4V4N-4	... -S5S5-V4V4E-4	Material number
Housing	Wrought aluminium alloy	High-alloy stainless steel			1.4435
Housing cover	High-alloy stainless steel				1.4435
Seals	FPM				–
Shut-off element	NBR	EPDM	NBR	EPDM	–
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant				

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

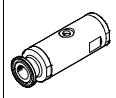


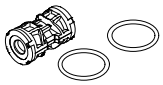
Type	D1	D2	D3 ∅	D4 ∅	D5 ∅	L1	L2	L3	L4	T1	⌀1	⌀2
VZQA-C-M22U-15-GG-V4V4E-4	G½	G⅛	15	38	–	95	81	7	7	14	36	36
VZQA-C-M22U-15-GG-V4V4N-4												
VZQA-C-M22U-15-GG-ALV4N-4												
VZQA-C-M22U-15-S5S5-V4V4E-4	–				34	130		24.5	24.5			

Proportional media valves VZQA

Technical data

FESTO

Ordering data			
	Process valve connection	Part No.	Type
	G½	**3022831**	**VZQA-C-M22U-15-GG-ALV4N-4**
		3022829	**VZQA-C-M22U-15-GG-V4V4E-4**
		3022830	**VZQA-C-M22U-15-GG-V4V4N-4**
	Clamp to DIN 32676	**3022833**	**VZQA-C-M22U-15-S5S5-V4V4E-4**

Ordering data					
Seal cartridge	Nominal size DN	Information on materials, shut-off element	Note on materials	Part No.	Type
	15	NBR	RoHS-compliant	**3019151**	**VAVC-Q2-M22U-15-N**
		EPDM		**3019148**	**VAVC-Q2-M22U-15-E**

Proportional media valves VZQA

Ordering data – Modular products

FESTO

M **Mandatory data** →

Module no.	Product type		Valve function		Process valve connection type 1
	Product version		Nominal diameter DN		
2037881	VZQA	C	M22U	6 mm 15 mm	– G thread, female – Clamp ferrule to DIN 32676
Order example					
2037881	**VZQA**	**C**			

Ordering table

A series VZQA		Conditions	Code		Entry code
M Module no.	**2037881**				
Product type	A series VZQA		**VZQA**		VZQA
Product version	Easy-to-clean design		**-C**		-
Valve function	2/2-way valve, normally open		**-M22U**		
Nominal diameter DN	6 mm		**-6**		
	15 mm		**-15**		
Process valve connection type 1	G thread, female		**-G**		
	Clamp ferrule to DIN 32676	1	**-S5**		

1 **S5** Only in combination with (housing cover material) stainless steel (austenitic chromium-nickel-molybdenum/1.4401, 1.4404 (AISI 316L), 1.4408 (V4)

Transfer order code

		–		–		–		–	

Proportional media valves VZQA

Ordering data – Modular products

FESTO

➔ M **Mandatory data**

Process valve connection type 2		Housing cover material		Pressure range of media
Housing material		**Material, shut-off element**		
– G thread, female – Clamp ferrule to DIN 32676	AL V4	AL V4	EPDM NBR	0 … 4
–	–	–	–	–

Ordering table

A series VZQA			Condi-tions	Code		Entry code
M	Process valve connection type 2	G thread, female		**-G**		
		Clamp ferrule to DIN 32676	1	**-S5**		
	Housing material	Aluminium		**-Al**		
		Stainless steel		**-V4**		
	Housing cover material	Aluminium		**-Al**		
		Stainless steel		**-V4**		
	Material, shut-off element	EPDM		**-E**		
		NBR		**-N**		
	Pressure range of media	0 … 4		**-4**		

Transfer order code

– – – – – –