

One-way flow control valves VFOF

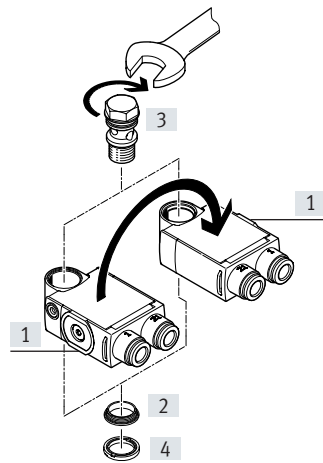
FESTO



Key features and product range overview

Key features

- Minimal height
- High flow rate
- Can be rotated horizontally by 360° in assembled state
- Universal actuation direction [1] by converting the housing
- More functionality – Function combinations



Note

When assembling the individual components, please note the following sequence as follows:

- 1) Press thrust ring [2] into the housing for a positive fit.
- 2) Insert hollow bolt [3] into the opening.
- 3) Slide sealing ring OK [4] over the thread of the hollow bolt.

Product range overview

Function	Valve function	Version	Type	Pneumatic connection 1	Pneumatic connection 2	qnN ¹⁾ [l/min]	Adjusting element	→ Page/ Internet
One-way flow control valves	Function combination							
	Exhaust air one-way flow control function		VFOF	QS-6, QS-8	G1/8, G1/4	240 ... 590	Internal hex	3

1) Standard nominal flow rate in flow control direction.

Type codes

001	Series
VFOF	One-way flow control valve, flat design

002	Design
L	L-shape

003	Function
E	One-way flow control valve for exhaust air

004	Additional function 1
B	Piloted non-return function

005	Additional function 2
A	Exhaust function, manual

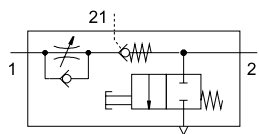
006	Adjusting component
H	Integrated hex




007	Pneumatic connection
G14	G1/4
G18	G1/8

008	Pneumatic connection 1
Q6	Push-in connector 6 mm
Q8	Push-in connector 8 mm

Datasheet

One-way flow control function
Exhaust air



-  - Standard nominal flow rate
240 ... 590 l/min
-  - Temperature range
-10 ... +60°C
-  - Operating pressure
0.2 ... 10 bar



The one-way flow control valve VFOF-LE-BAH is a valve with a function combination consisting of an exhaust air one-way flow control function and a piloted non-return function with manual exhaust function.

The exhaust air one-way flow control function is used for manually adjusting

the speed at which the piston rod of a pneumatic drive advances/retracts. The flow control function is realised by an adjustable annular gap in the housing. This gap can be increased or decreased by turning the adjusting screw with internal hex.

The piloted non-return function can be used for a temporary intermediate stop. If a control signal is applied, the exhaust air flow control takes effect. If no control signal is applied, the valve shuts off the exhaust air from the drive and the drive stops temporarily.

By actuating the integrated manual exhaust function, it is possible to manually exhaust the pneumatic drive.

General technical data

Valve function	Exhaust air one-way flow control function	
Pneumatic connection 2	G1/8	G1/4
Pneumatic connection 1	QS-6	QS-8
Pilot air port 21	QS-6	QS-8
Adjusting element	Internal hex	
Actuation type	Manual	
Actuation type, piloted non-return function	Pneumatic	
Manual exhaust function	Non-detenting	
Type of mounting	Screw-in	
Mounting position	Any	
Switching time	Off [ms]	9
	On [ms]	6
Nominal tightening torque	[Nm]	6 ±20%
		10 ±20%
Permissible actuation torque for adjusting screw	[Nm]	1
Rotatability	[°]	360 (continuous rotation not permitted)

Operating and environmental conditions

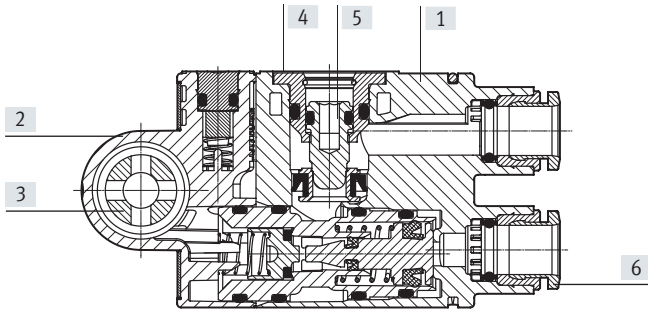
Operating pressure	[bar]	0.2 ... 10
Pilot pressure	[bar]	2 ... 10
Operating medium/control medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on the operating/pilot medium		Lubricated operation possible (in which case lubrication will always be required)
Ambient temperature	[°C]	-10 ... +60
Temperature of medium	[°C]	-10 ... +60
Storage temperature	[°C]	-20 ... +70
Corrosion resistance class CRC ¹⁾		2 - Moderate corrosion stress

1) More information www.festo.com/x/topic/crc

Datasheet

Materials

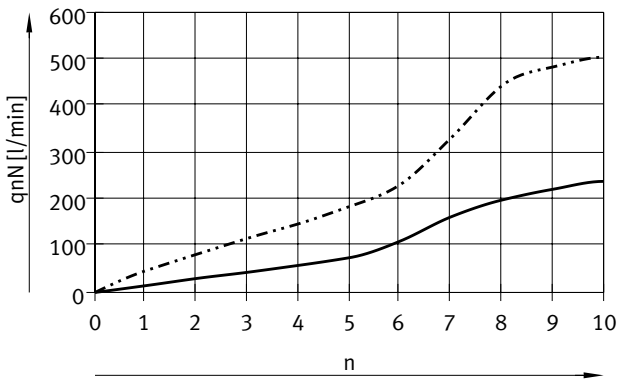
Sectional view



One-way flow control valve

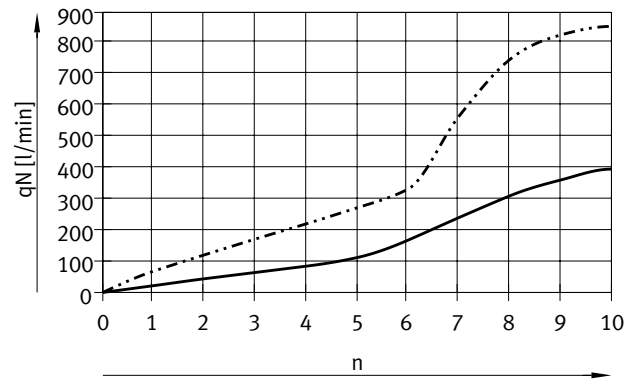
[1]	Housing	PBT
[2]	Cover	PBT
[3]	Hollow bolt	Wrought aluminium alloy
[4]	Sleeve	Wrought aluminium alloy
[5]	Adjusting screw	Brass
[6]	Releasing ring	POM
-	Covering	ES-BE
-	Seals	NBR
Note on materials		RoHS-compliant
LABS (PWIS) conformity		VDMA24364-B1/B2-L

Standard nominal flow rate q_{nN} in flow control direction at $p_6 > 5$ bar as a function of turns of the adjusting screw n



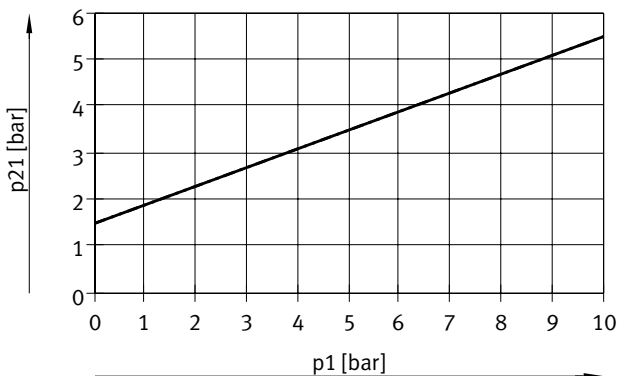
— VFOF...-G18-Q6 Flow rate value tolerance: $\pm 20\%$
 - - - - - VFOF...-G14-Q8

Standard flow rate q_n in flow control direction at $p_6 > 0$ bar as a function of turns of the adjusting screw n



— VFOF...-G18-Q6 Flow rate value tolerance: $\pm 20\%$
 - - - - - VFOF...-G14-Q8

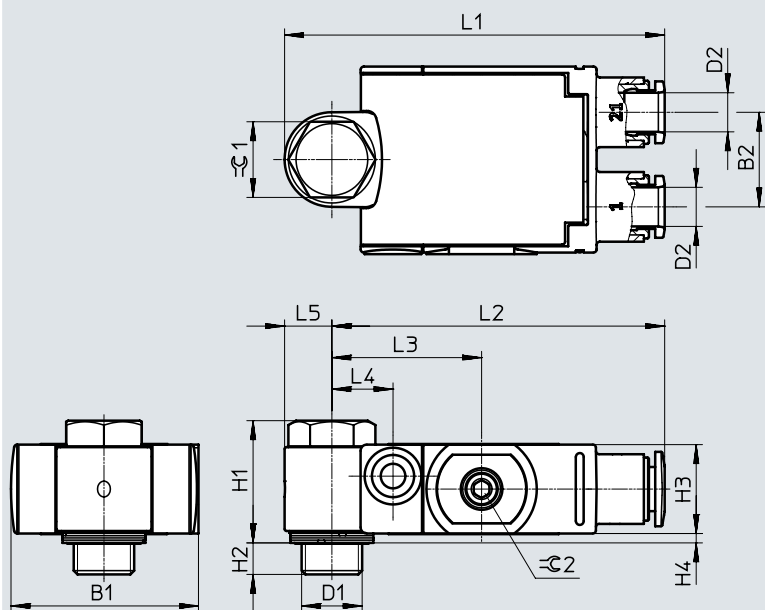
Minimum pilot pressure p_{21} as a function of operating pressure p_1



Datasheet

Dimensions

Download CAD data → www.festo.com



Type	Connection D1	Tubing O.D. D2	B1	B2	H1	H2	H3	H4	L1	L2	L3	L4	L5	⊙ 1	⊙ 2
VFOF...-G18-Q6	G1/8	QS-6	29.5	15	19.4	5	14.1	1.5	60.3	52.8	23.8	9.7	7.5	12	2.5
VFOF...-G14-Q8	G1/4	QS-8	39.5	20.5	28.2	5.6	21	2	76.8	66.8	30	11.1	10	15	2.5

Ordering data – Exhaust air one-way flow control function

	Pneumatic connection		Pilot air port	Standard nominal flow rate qnN at 6 bar → 5 bar		Standard flow rate qn at 6 bar → 0 bar		Weight [g]	Part no.	Type
	2	1		In flow control direction	In non-return direction	In flow control direction	In non-return direction			
				[l/min]	[l/min]	[l/min]	[l/min]			
	G1/8	QS-6	QS-6	240	150 ... 230 120 ... 220 ¹⁾	420	400 ... 460 400 ... 460 ¹⁾	28.6	8001459	VFOF-LE-BAH-G18-Q6
	G1/4	QS-8	QS-8	590	315 ... 540 310 ... 540 ¹⁾	940	830 ... 1000 840 ... 1000 ¹⁾	73.9	1927030	VFOF-LE-BAH-G14-Q8

1) Unactuated

Festo - Your Partner in Automation



1 Festo Inc.
5300 Explorer Drive
Mississauga, ON L4W 5G4
Canada

Festo Customer Interaction Center
Tel: 1 877 463 3786
Fax: 1 877 393 3786
Email: customer.service.ca@festo.com



2 Festo Pneumatic
Av. Ceylán 3,
Col. Tequesquináhuac
54020 Tlalneantla,
Estado de México

Multinational Contact Center
01 800 337 8669
ventas.mexico@festo.com



3 Festo Corporation
1377 Motor Parkway
Suite 310
Islandia, NY 11749

Festo Customer Interaction Center
1 800 993 3786
1 800 963 3786
customer.service.us@festo.com



4 Regional Service Center
7777 Columbia Road
Mason, OH 45040

Connect with us



www.festo.com/socialmedia



www.festo.com

Subject to change