

Non-return valves VBNF

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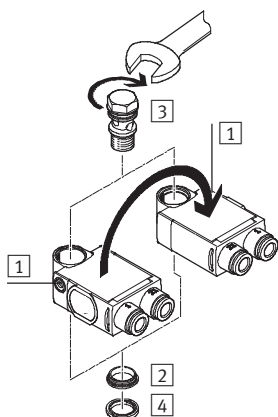
Non-return valves VBNF

Key features and product range overview

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Features

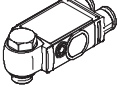




- Minimal height
- High flow rate
- Can be rotated horizontally through 360° in assembled state
- Actuation direction **1** can be changed by repositioning the housing



Note

The following sequence must be observed when assembling the individual components:

- 1) Press thrust ring **2** into the housing until it fits tightly.
- 2) Insert hollow bolt **3** into the opening.
- 3) Push sealing ring OK **4** over the thread of the hollow bolt.

Product range overview							
Function	Valve function	Design	Type	Pneumatic connection 1	Pneumatic connection 2	qnN [l/min]	→ Page/Internet
Non-return valves	Flat design						
	Piloted non-return function		VBNF	QS-6, QS-8	G $\frac{1}{8}$, G $\frac{1}{4}$	260 ... 620	3
	Compact design						
	Non-return function		H	QS-4, QS-6, QS-8, QS-10, QS-12	QS-4, QS-6, QS-8, QS-10, QS-12	136 ... 1,715	h-qs
				M5, G $\frac{1}{8}$, G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$	M5, G $\frac{1}{8}$, G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$	115 ... 5,900	h
	Non-return function		HA	M5, R $\frac{1}{8}$, R $\frac{1}{4}$, R $\frac{3}{8}$, R $\frac{1}{2}$	QS-4, QS-6, QS-8, QS-10, QS-12	138 ... 2,230	ha
			HB	QS-4, QS-6, QS-8, QS-10, QS-12	M5, R $\frac{1}{8}$, R $\frac{1}{4}$, R $\frac{3}{8}$, R $\frac{1}{2}$	142 ... 2,206	hb
	Piloted non-return function		HGL	QS-4, QS-6, QS-8, QS-10, QS-12	M5, G $\frac{1}{8}$, G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$	130 ... 1,400	hgl
				M5, G $\frac{1}{8}$, G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$	M5, G $\frac{1}{8}$, G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$	130 ... 1,600	hgl

Non-return valves VBNF

Type codes

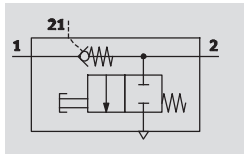
		VBNF	-	L	BA	-	G18	-	Q6
Type									
VBNF	Non-return valve, flat design								
Design									
L	L-shaped outlet								
Additional function									
BA	Piloted non-return function, manual exhaust function								
Pneumatic connection 2									
G18	Thread G1/8								
G14	Thread G1/4								
Pneumatic connection 1									
Q6	Push-in connector QS-6								
Q8	Push-in connector QS-8								

Non-return valves VBNF

Technical data

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Piloted non-return function



-M- Standard nominal flow rate
260 ... 620 l/min
Temperature range
-10 ... +60 °C
Pressure
0.2 ... 10 bar



The non-return valve VBNF-LBA is a valve with a piloted non-return function and a manual exhaust function.

The piloted non-return function can be used for a temporary intermediate stop. If a pilot signal is applied, the exhaust air can escape. If no pilot

signal is applied, the valve shuts off the exhaust air from the drive and the drive stops temporarily.

The integrated manual exhaust function can be used to manually vent a pneumatic drive.

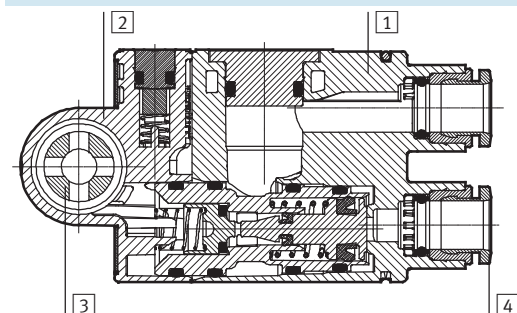
General technical data			
Valve function		Piloted non-return function	
Pneumatic connection 2		G $\frac{1}{8}$	G $\frac{1}{4}$
Pneumatic connection 1		QS-6	QS-8
Pilot air connection 21		QS-6	QS-8
Type of actuation, piloted non-return function		Pneumatic	
Manual exhaust function		Non-detenting	
Type of mounting		Screw-in	
Mounting position		Any	
Switching time	Off	[ms]	9
	On	[ms]	6
Nominal tightening torque		[Nm]	3 ±20%
Rotatability		[°]	360 (continuous rotation not permitted)

Operating and environmental conditions			
Operating pressure		[bar]	0.2 ... 10
Pilot pressure		[bar]	2 ... 10
Operating/pilot medium		Compressed air according to ISO 8573-1:2010 [7:4:4]	
Note on operating/pilot medium		Lubricated operation possible (in which case lubricated operation 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	

1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Materials

Sectional view

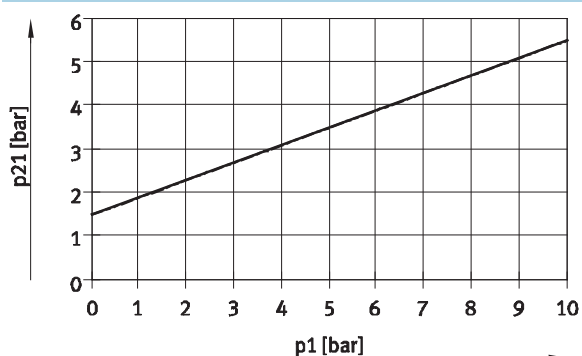


Non-return valve		
1	Housing	PBT
2	End cap	PBT
3	Hollow bolt	Wrought aluminium alloy
4	Releasing ring	POM
-	Cover	ES-BE
-	Seals	NBR
Note on materials		RoHS-compliant

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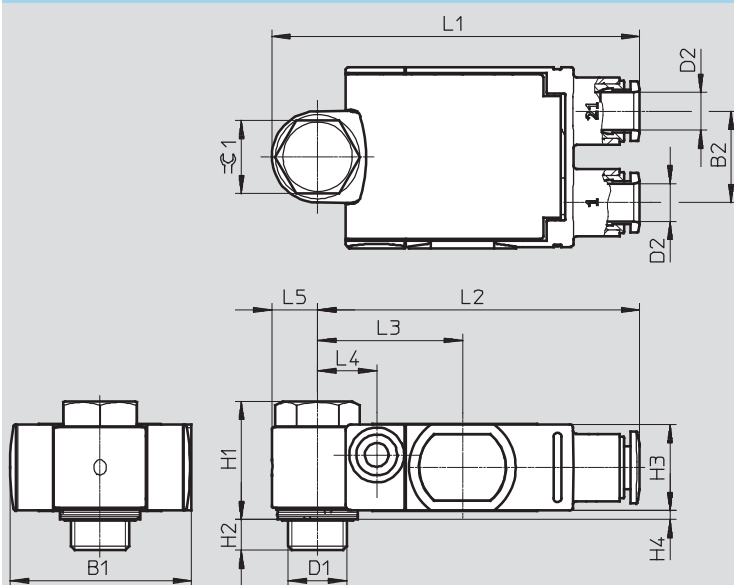
Technical data

Minimum pilot pressure p₂₁ as a function of operating pressure p₁



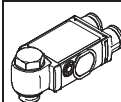
Dimensions

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



Type	Connection D1	Tubing O.D. D2	B1	B2	H1	H2	H3	H4	L1	L2	L3	L4	L5	$\varnothing C1$
VBNF-....-G18-Q6	G1/8	QS-6	29.8	15	19.4	5	14.1	1.5	60.3	52.8	23.8	9.7	7.5	12
VBNF-....-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

Ordering data

Design	Pneumatic connection		Pilot air connection	Standard nominal flow rate q _N at 6 bar → 5 bar	Standard flow rate q _N at 6 bar → 0 bar	Weight	Part No.	Type
	2	1	21	[l/min]	[l/min]	[g]		
	G1/8	QS-6	QS-6	260	500	27.3	8001460	VBNF-LBA-G18-Q6
	G1/4	QS-8	QS-8	620	1,100	65.5	1927027	VBNF-LBA-G14-Q8

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