

Check valves VBNF, piloted

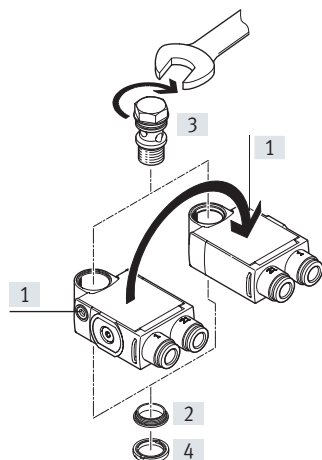
FESTO



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

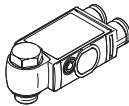
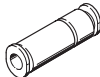
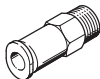
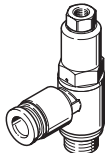
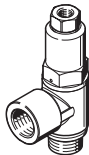


Note

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

- 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	→ Page/ Internet
						[l/min]	
Check valves	Flat design						
	Piloted non-return function		VBNF	QS-6, QS-8	G1/8, G1/4	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 ... 1715	h-qs
				M5, G1/8, G1/4, G3/8, G1/2, G3/4	M5, G1/8, G1/4, G3/8, G1/2, G3/4	115 ... 5900	h
	Non-return function		HA	M5, R1/8, R1/4, R3/8, R1/2	QS-4, QS-6, QS-8, QS-10, QS-12	138 ... 2230	ha
			HB	QS-4, QS-6, QS-8, QS-10, QS-12	M5, R1/8, R1/4, R3/8, R1/2	142 ... 2206	hb
Piloted checked valves	Compact design						
	Piloted non-return function		HGL	QS-4, QS-6, QS-8, QS-10, QS-12	M5, G1/8, G1/4, G3/8, G1/2	130 ... 1400	hgl
				M5, G1/8, G1/4, G3/8, G1/2	M5, G1/8, G1/4, G3/8, G1/2	130 ... 1600	hgl

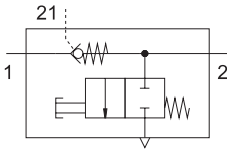
Type codes

001	Series	
VBNF	Check valve	
002	Design	
L	L-shape	
003	Non-return function	
B	Piloted non-return function	

004	Additional function 2	
A	Exhaust function, manual	
005	Pneumatic connection 1	
G18	G1/8	
G14	G1/4	
006	Pneumatic connection 2	
Q6	Push-in connector 6 mm	
Q8	Push-in connector 8 mm	

Datasheet

Piloted non-return function



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



The check 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 brief intermediate stop. The

exhaust air can escape when a control signal is applied. 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.

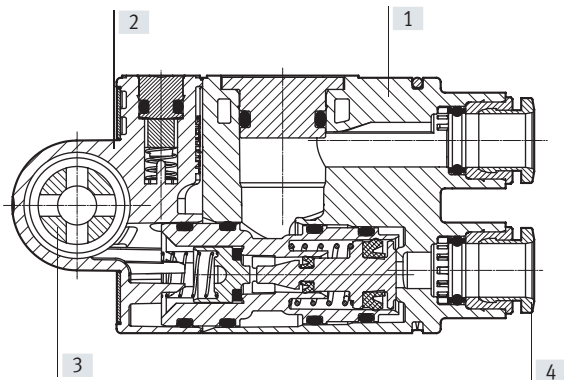
General technical data			
Valve function		Piloted non-return function	
Pneumatic connection 2		G1/8	G1/4
Pneumatic connection 1		QS-6	QS-8
Pilot air port 21		QS-6	QS-8
Actuation type, piloted non-return function		Pneumatic	
Manual exhaust function		Non-detenting	
Type of mounting		Screw-in	
Mounting position		Any	
Switching time	Off	[ms]	9
	On	[ms]	11
Nominal tightening torque		[Nm]	6 ±20%
Rotatability		[°]	10 ±20%
		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	

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

Materials

Sectional view



Check valve, piloted		
[1]	Housing	PBT
[2]	Cover	PBT
[3]	Hollow bolt	Wrought aluminium alloy
[4]	Releasing ring	POM
-	Covering	ES-BE
-	Seals	NBR
Note on materials		RoHS-compliant
LABS (PWIS) conformity		VDMA24364-B1/B2-L

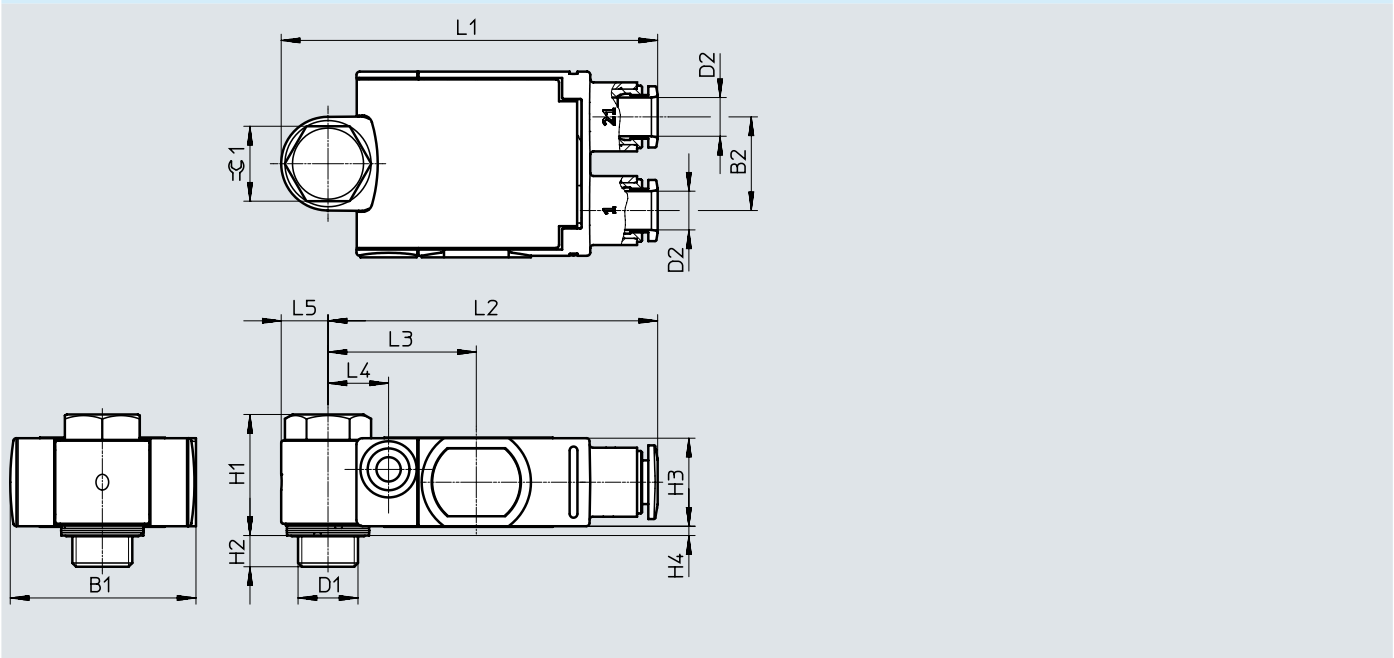
Datasheet

Minimum pilot pressure p21 as a function of operating pressure p1



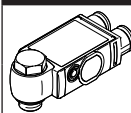
Dimensions

Download CAD data → www.festo.com



Type	Connection D1	Tubing O.D. D2	B1	B2	H1	H2	H3	H4	L1	L2	L3	L4	L5	$\varnothing 1$
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

Version	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	21	[l/min]	[l/min]			
	G1/8	QS-6	QS-6	260	500	27.3	8001460	VBNF-LBA-G18-Q6
	G1/4	QS-8	QS-8	620	1100	65.6	1927027	VBNF-LBA-G14-Q8

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