

Non-return valves VBNF

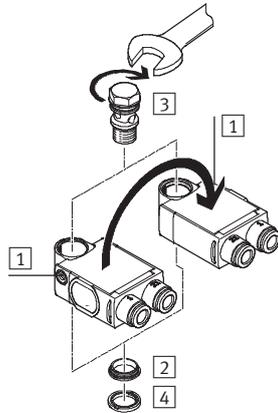


Non-return valves VBNF

Key features and product range overview

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 **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 ¹ / ₈ , G 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 ¹ / ₈ , G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂ , G ³ / ₄	M5, G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂ , G ³ / ₄	115 ... 5,900	h
	Non-return function		HA	M5, R ¹ / ₈ , R ¹ / ₄ , R ³ / ₈ , R 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 ¹ / ₈ , R ¹ / ₄ , R ³ / ₈ , R ¹ / ₂	142 ... 2,206	hb
	Piloted non-return function		HGL	QS-4, QS-6, QS-8, QS-10, QS-12	M5, G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂	130 ... 1,400	hgl
				M5, G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂	M5, G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈ , G ¹ / ₂	130 ... 1,600	hgl

Non-return valves VBNF

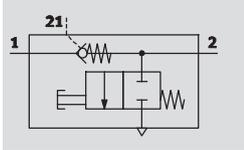
Type codes

		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 G $\frac{1}{8}$								
G14	Thread G $\frac{1}{4}$								
Pneumatic connection 1									
Q6	Push-in connector QS-6								
Q8	Push-in connector QS-8								

Non-return valves VBNF

Technical data

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.

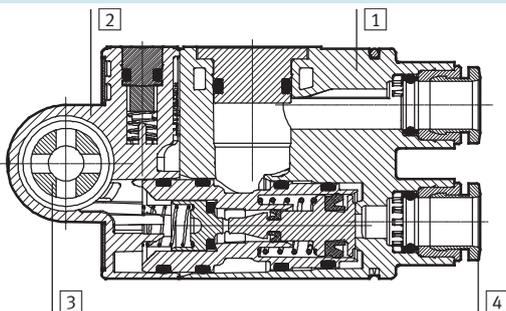
General technical data		
Valve function	Piloted non-return function	
Pneumatic connection 2	G $\frac{1}{8}$	G $\frac{1}{4}$
Pneumatic connection 1	QS-6	QS-8
Pilot air connection 21	QS-6	QS-8
Type of actuation, piloted non-return function	Pneumatic	
Manual exhaust function	Non-detenting	
Type of mounting	Screw-in	
Mounting position	Any	
Switching time	Off [ms]	9
	On [ms]	6
Nominal tightening torque	[Nm]	3 ±20%
		11 ±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



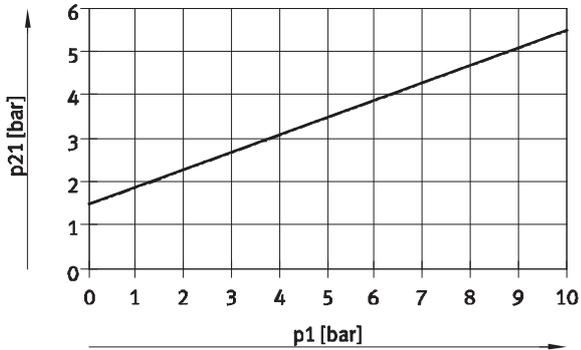
Non-return valve		
1	Housing	PBT
2	End cap	PBT
3	Hollow bolt	Wrought aluminium alloy
4	Releasing ring	POM
-	Cover	ES-BE
-	Seals	NBR
Note on materials		RoHS-compliant

Non-return valves VBNF

Technical data

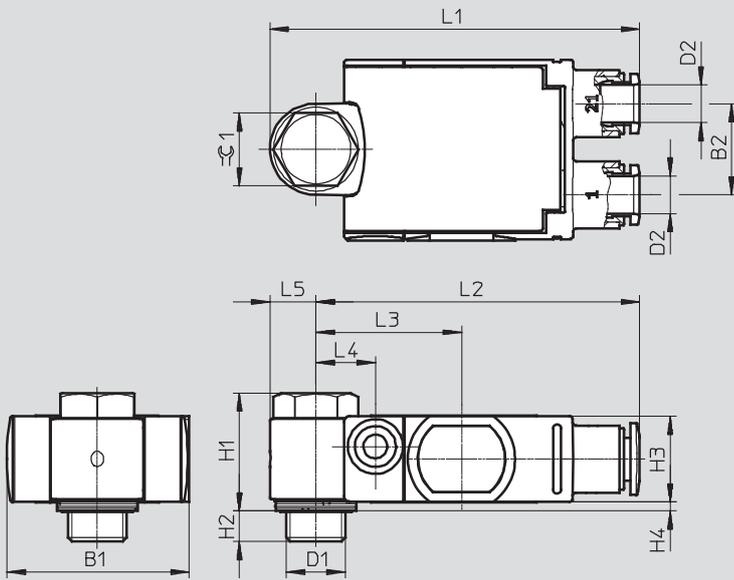
FESTO

Minimum pilot pressure p21 as a function of operating pressure p1



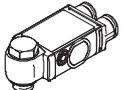
Dimensions

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	G $\frac{1}{8}$	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	G $\frac{1}{4}$	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 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]			
	G $\frac{1}{8}$	QS-6	QS-6	260	500	27.3	8001460	VBNF-LBA-G18-Q6
	G $\frac{1}{4}$	QS-8	QS-8	620	1,100	65.5	1927027	VBNF-LBA-G14-Q8

Product Range and Company Overview

A Complete Suite of Automation Services

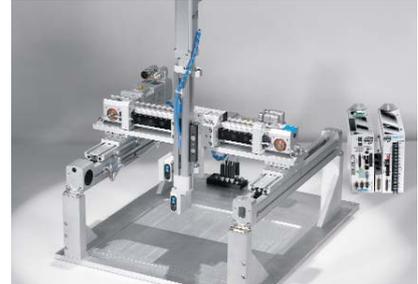
Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drives



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

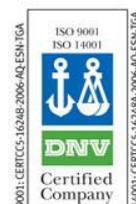
Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



© Copyright 2008, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. For Liability and Warranty conditions, refer to our "Terms and Conditions of Sale", available from your local Festo office. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Festo. All technical data subject to change according to technical update.



Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmentally friendly printing plant.

Festo North America

Festo Regional Contact Center

5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Canada

USA Customers:

For ordering assistance,

Call: 1.800.99.FESTO (1.800.993.3786)

Fax: 1.800.96.FESTO (1.800.963.3786)

Email: customer.service@us.festo.com

For technical support,

Call: 1.866.GO.FESTO (1.866.463.3786)

Fax: 1.800.96.FESTO (1.800.963.3786)

Email: product.support@us.festo.com

Canadian Customers:

Call: 1.877.GO.FESTO (1.877.463.3786)

Fax: 1.877.FX.FESTO (1.877.393.3786)

Email: festo.canada@ca.festo.com

USA Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788, USA
www.festo.com/us

USA Sales Offices

Appleton

North 922 Tower View Drive, Suite N
Greenville, WI 54942, USA

Boston

120 Presidential Way, Suite 330
Woburn, MA 01801, USA

Chicago

1441 East Business Center Drive
Mt. Prospect, IL 60056, USA

Dallas

1825 Lakeway Drive, Suite 600
Lewisville, TX 75057, USA

Detroit – Automotive Engineering Center

2601 Cambridge Court, Suite 320
Auburn Hills, MI 48326, USA

New York

395 Moreland Road
Hauppauge, NY 11788, USA

Silicon Valley

4935 Southfront Road, Suite F
Livermore, CA 94550, USA

United States



USA Headquarters, East: Festo Corp., 395 Moreland Road, Hauppauge, NY 11788

Phone: 1.631.435.0800; Fax: 1.631.435.8026;

Email: info@festo-usa.com

www.festo.com/us

Canada



Headquarters: Festo Inc., 5300 Explorer Drive, Mississauga, Ontario L4W 5G4

Phone: 1.905.624.9000; Fax: 1.905.624.9001;

Email: festo.canada@ca.festo.com

www.festo.ca

Mexico



Headquarters: Festo Pneumatic, S.A., Av. Ceylán 3, Col. Tequesquahuac,
54020 Tlalneantla, Edo. de México

Phone: 011 52 [55] 53 21 66 00; Fax: 011 52 [55] 53 21 66 65;

Email: festo.mexico@mx.festo.com

www.festo.com/mx

Central USA

Festo Corporation
1441 East Business
Center Drive
Mt. Prospect, IL 60056, USA
Phone: 1.847.759.2600
Fax: 1.847.768.9480



Western USA

Festo Corporation
4935 Southfront Road,
Suite F
Livermore, CA 94550, USA
Phone: 1.925.371.1099
Fax: 1.925.245.1286



Festo Worldwide

Argentina Australia Austria Belarus Belgium Brazil Bulgaria Canada Chile China Colombia Croatia Czech Republic Denmark
Estonia Finland France Germany Great Britain Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan Latvia
Lithuania Malaysia Mexico Netherlands New Zealand Norway Peru Philippines Poland Romania Russia Serbia Singapore
Slovakia Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United States Venezuela

www.festo.com