



TI-P019-02
CMGT Issue 12

VB14, VB21 and VB21 Food+ Vacuum Breakers

VB14

Description

The VB14 is a small purpose designed vacuum breaker for general purpose applications on condensing vapour (steam) or liquid systems.

Standards

This product fully complies with the requirements of the EU Pressure Equipment Directive/UK Pressure Equipment (Safety) Regulations. Shut-off conforms to EN 12266-1 Rate E

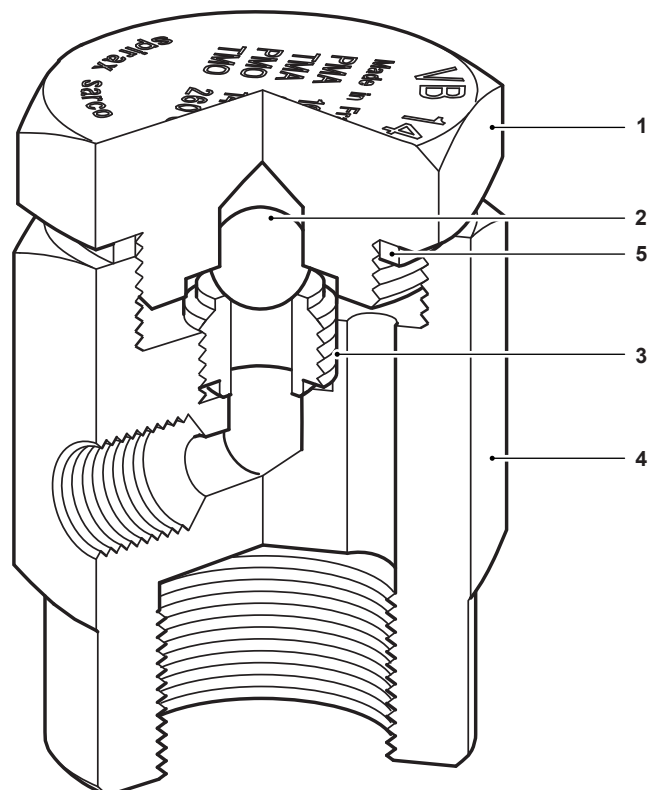
Certification

This product is available with a manufacturer's Typical Test Report.

Note: All certification/inspection requirements must be stated at the time of order placement.

Materials

No.	Part	Material	
1	Cap	Brass	Cu Zn 39 Pb3
2	Valve	Stainless steel	Z 100 CD 17
3	Valve seat	Stainless steel	Z15 CN 16 02
4	Body	Brass	Cu Zn 39 Pb3
5	Gasket	Stainless steel	AISI 304



For VB21 and VB21 Food+, please go to page 4

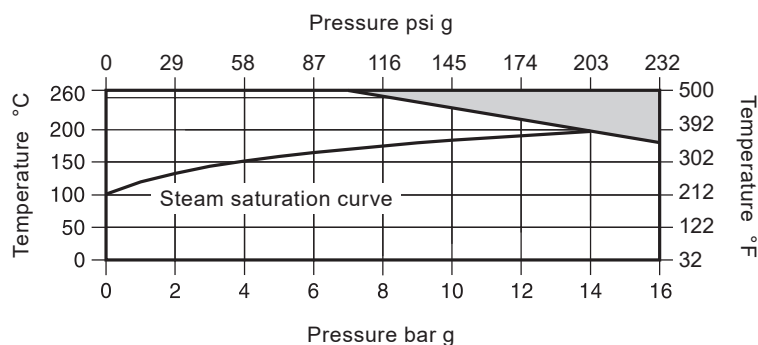
VB14

Sizes and pipe connections

1/2" (system connection) screwed BSP or NPT.

1/8" (air inlet connection) screwed BSP or NPT.

Pressure/temperature limits

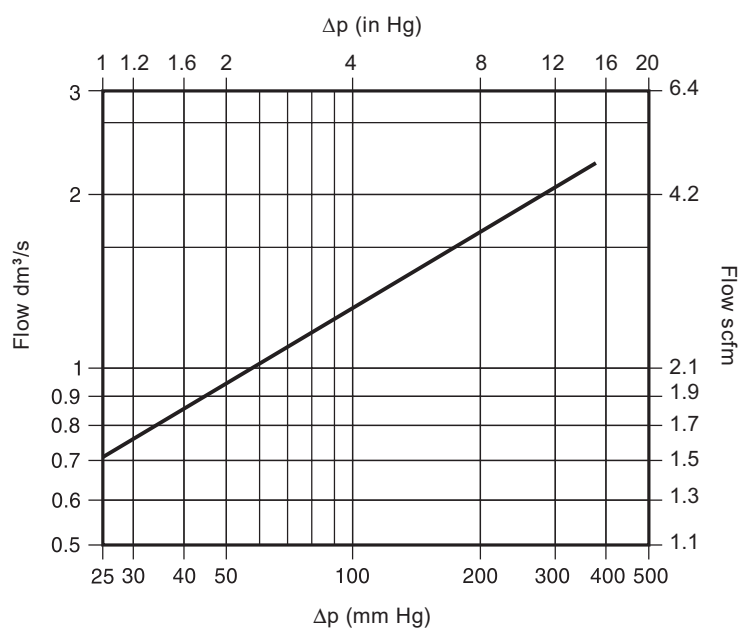


The product **must not** be used in this region.

Body design conditions		PN16	
PMA	Maximum allowable pressure	16 bar g @ 180 °C	232 psi g @ 356 °F
TMA	Maximum allowable temperature	260 °C @ 7 bar g	500 °F @ 102 psi g
Minimum allowable temperature		-196 °C	-321 °F
PMO	Maximum operating pressure for saturated steam service	14 bar g	203 psi g
TMO	Maximum operating temperature	260 °C @ 7 bar g	500 °F @ 102 psi g
Minimum operating temperature		0 °C	32 °F
Note: For lower operating temperatures consult Spirax Sarco			
Designed for a maximum cold hydraulic test pressure of :		24 bar g	348 psi g

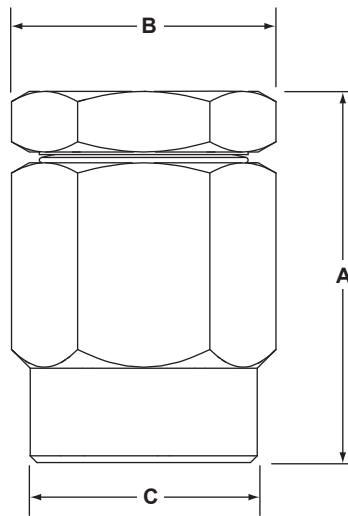
Capacity

Δp required to open vacuum breaker 4.6 mm Hg (0.2 in Hg)



VB14

Dimensions/weights (approximate) in mm (inches) and kg (lbs)



Size	A	B (A/F)	C	Kv	Weight
½"	55 (2.2)	34 (1.3)	34 (1.3)	0.52	0.35 (0.77)

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P019-05) supplied with the product.

Installation note

The VB14 vacuum breaker must be installed in a vertical position with the system connection at the bottom. On steam systems, the vacuum breaker should be installed at the highest point in the system where it will not be flooded with condensate.

How to order

Example: 1 off Spirax Sarco VB14 vacuum breaker having ½" screwed BSP connections.

VB21 and VB21 Food+

Description

The VB21 is a small purpose designed vacuum breaker for general purpose applications on condensing vapour (steam) or liquid systems.

VB21 Food+ ½" available with a food contact regulation Declaration of Compliance

Designed, manufactured and approved for Steam and Condensate applications, the VB21 Food+ product complies with:

- (EC)1935:2004 Materials and Articles Intended to come into Contact with Food
- (EC)2023:2006 Good Manufacturing Practice for Materials and Articles Intended to come into Contact with Food
- (EU)10/2011 Plastic Materials and Articles Intended to come into Contact with Food
- FDA Code of Federal Regulations - title 21 - Food and Drugs

This product is intended to be connected into a system that can operate a food contact compliant process.

A list of the materials that could come directly or indirectly into contact with foodstuffs can be found in the Declaration of Compliance available for this product.

Standards

This product fully complies with the requirements of the EU Pressure Equipment Directive/UK Pressure Equipment (Safety) Regulations. Shut-off conforms to EN 12266-1 Rate E

Certification

This product is available with a manufacturer's Typical Test Report.

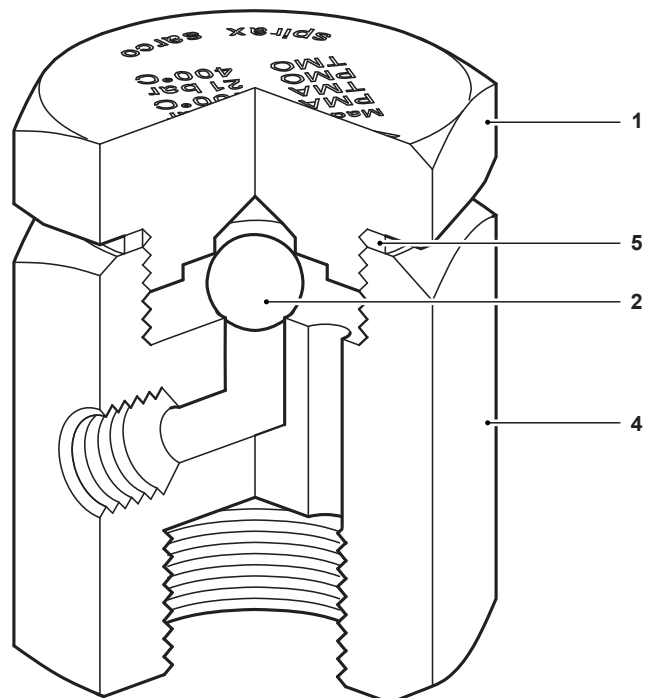
Note: All certification/inspection requirements must be stated at the time of order placement.

Food+ can be supplied with material Certification for all wetted parts at extra cost.

Note: All certification/inspection requirements must be stated at the time of order placement.

Materials

No.	Part	Material	
1	Cap	Stainless steel	AISI 303
2	Valve	Stainless steel	AISI 440 C
4	Body	Stainless steel	AISI 303
5	Gasket	Stainless steel	AISI 304



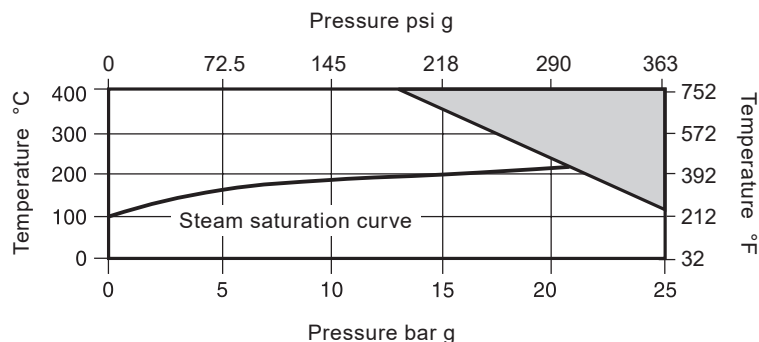
VB21 and VB21 Food+

Sizes and pipe connections

1/2" (system connection) screwed BSP or NPT.

1/8" (air inlet connection) screwed BSP or NPT.

Pressure/temperature limits

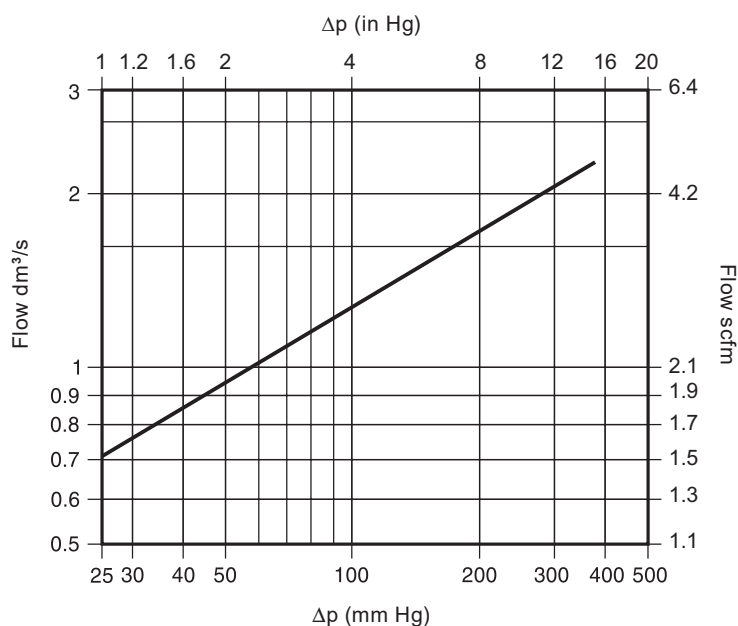


The product **must not** be used in this region.

Body design conditions		PN25	
PMA	Maximum allowable pressure	25 bar g @ 120 °C	363 psi g @ 248 °F
TMA	Maximum allowable temperature	400 °C @ 13 bar g	752 °F @ 189 psi g
Minimum allowable temperature		-48 °C	-54.4 °F
PMO	Maximum operating pressure for saturated steam service	21 bar g	305 psi g
TMO	Maximum operating temperature	400 °C @ 13 bar g	752 °F @ 189 psi g
Minimum operating temperature		0 °C	32 °F
Note: For lower operating temperatures consult Spirax Sarco			
Designed for a maximum cold hydraulic test pressure of:		38 bar g	551 psi g

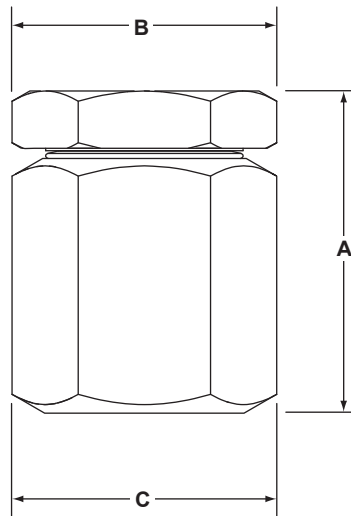
Capacity

Δp required to open vacuum breaker 4.6 mm Hg (0.2 in Hg)



VB21 and VB21 Food+

Dimensions/weights (approximate) in mm (inches) and kg (lbs)



Size	A	B (A/F)	C	Kv	Weight
½"	52 (2)	36 (1.4)	36 (1.4)	0.52	0.33 (0.73)

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P019-05) supplied with the product.

Installation note

The VB21 vacuum breaker must be installed in a vertical position with the system connection at the bottom. On steam systems, the vacuum breaker should be installed at the highest point in the system where it will not be flooded with condensate.

How to order

Example: 1 off Spirax Sarco VB21 vacuum breaker having ½" screwed BSP connections.