

## SANITARY VACUUM BREAKERS VBS17

### DESCRIPTION

The ADCAPure VBS17 is a series of sanitary vacuum breakers designed to automatically relieve or “break” an unwanted vacuum condition. Applications include venting and vacuum limiting in pipelines, reactors, heat exchangers, autoclaves, amongst others. These valves should not be used as vacuum control valves.

The device is kept close by means of a spring-loaded valve and the pressure which acts on the underside of the plug. When pressure drops below the adjusted set pressure, unbalancing of forces causes the valve to open, allowing atmospheric air to enter the system. With raise in differential pressure results an increase in valve stroke and air flow.

The units are available with an optional lift indicator to signal in case of opening, for monitoring or contamination detection purposes.

### MAIN FEATURES

Metallic wetted parts machined from 316L stainless steel bar stock.

Regulating ranges from -0,05 to -0,95 bar.

FDA / USP Class VI compliant seals.

Compact design with easy access for cleaning and inspection.

Reduced dead leg.

### STANDARD SURFACE FINISH

Internal wetted parts:  $\leq 0,51 \mu\text{m Ra} - \text{SF1}$ .

External:  $\leq 0,76 \mu\text{m Ra} - \text{SF3}$ .

Other surface conditions see TIS.GIA – General information ADCAPure.

Ultrasonic cleaning.

**OPTIONS:** Lift indicator.  
Compatible with NovAseptic® connectors.  
Different soft sealings for vapours and gases.  
Degreasing.  
Other construction materials on request.

**USE:** Clean steam and other vapours and gases compatible with the construction.

**AVAILABLE MODELS:** VBS17.

**SIZES:** 1/2" to 2" – DN 15 to DN 50.

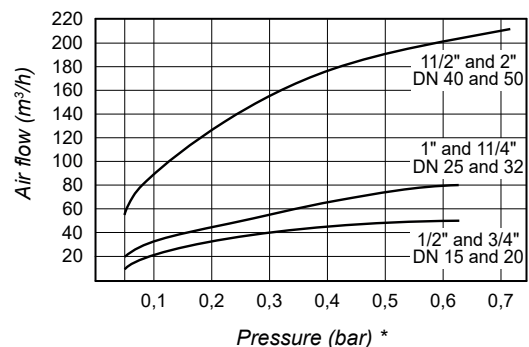
**CONNECTIONS:** ASME BPE, DIN and ISO clamp ferrules.  
Others on request.

**PACKAGING:** Assembling and packaging in a clean room certified according to ISO 14644-1.  
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

**INSTALLATION:** Vertical installation.  
See IMI – Installation and maintenance instructions.



### CAPACITY CHART



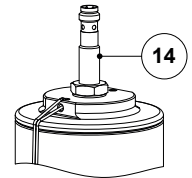
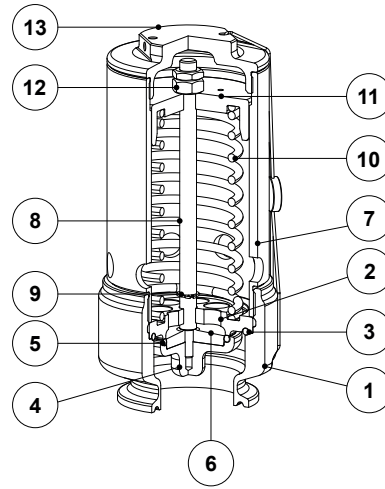
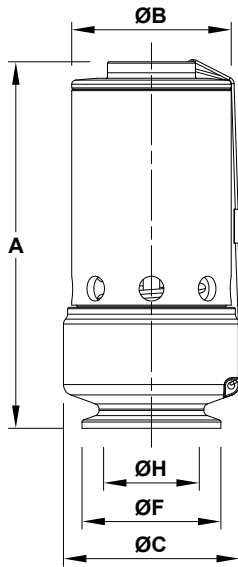
\* Values shown refer to the differential pressure between atmospheric pressure and the actual pressure inside the system.

CE MARKING – GROUP 2 (PED – EUROPEAN DIRECTIVE)	
PN 16	CATEGORY
1/2" to 2" – DN 15 to 50	SEP

LIMITING CONDITIONS *	
Maximum operating pressure	16 bar @ 120 °C
Maximum operating pressure (steam)	9 bar
Max. operating temperature **	180 °C @ 12 bar
Minimum operating temperature	-60 °C

\* Other limits on request. Maximum operating conditions may be limited by the valve end connections due to normative restrictions.

\*\* See “Ordering Codes” table for restrictions.



Optional lift indicator

### DIMENSIONS – BPE (mm)

SIZE	A	ØB	ØC	ØF	ØH	WEIGHT (kg)
1/2"	99,5	32,5	34	25	9,4	0,4
3/4"	99,5	32,5	34	25	15,75	0,4
1"	94,5	39,5	50,5	50	22,1	0,7
1 1/2"	133,3	58	64	50,5	34,8	1,3
2"	131,3	58	64	64	47,5	1,3

### DIMENSIONS – DIN (mm)

SIZE	A	ØB	ØC	ØF	ØH	WEIGHT (kg)
DN 15	99,5	32,5	34	34	16	0,4
DN 20	99,5	32,5	34	34	20	0,4
DN 25	94,5	39,5	50,5	50	26	0,7
DN 32	94,5	39,5	50,5	50	32	0,7
DN 40	133,3	58	64	50,5	38	1,3
DN 50	131,3	58	64	64	50	1,3

### DIMENSIONS – ISO (mm)

SIZE	A	ØB	ØC	ØF	ØH	WEIGHT (kg)
DN 15	99,5	32,5	50,5	36	18,1	0,5
DN 20	99,5	32,5	50,5	36	23,7	0,5
DN 25	94,5	39,5	50,5	50	29,7	0,7
DN 32	94,5	39,5	64	52	38,4	0,7
DN 40	131,3	58	64	64	44,3	1,3
DN 50	131,3	58	77,5	72	56,3	1,4

### MATERIALS

POS. No.	DESIGNATION	MATERIAL	POS. No.	DESIGNATION	MATERIAL
1	Body	AISI 316L / 1.4404	8	Stem	AISI 316L / 1.4404
2	* Seat	AISI 316L / 1.4404	9	* Circlip	Stainless steel A2
3	* O-ring	** EPDM; FPM	10	* Spring	AISI 302 / 1.4300
4	Plug	AISI 316L / 1.4404	11	Spring guide	AISI 316L / 1.4404
5	* Plug seal	** EPDM; FPM	12	Nut	Stainless steel A2-70
6	Plug disc	AISI 316L / 1.4404	13	Top cap	AISI 316L / 1.4404
7	Spring cover	AISI 316L / 1.4404	14	* Proximity sensor	AISI 303 / 1.4305

\* Available spare parts; \*\* Others on request.



ORDERING CODES VBS17											
VALVE MODEL	VBS17	X	1	E	X	X	XX	D	15	E	
VBS17 – Sanitary vacuum breakers	VBS17										
MATERIAL											
AISI 316L / 1.4404		X									
REGULATING RANGE											
-0,05 to -0,25 bar (available in sizes 1/2" and 3/4")			1								
-0,05 to -0,15 bar (available in sizes 1" to 2")			2								
-0,15 to -0,35 bar (available in sizes 1" and 1 1/4")			3								
-0,15 to -0,25 bar (available in sizes 1 1/2" to 2")			4								
-0,25 to -0,6 bar (available in sizes 1/2", 3/4", 1 1/2" and 2")			6								
-0,35 to -0,6 bar (available in sizes 1" and 1 1/4")			5								
-0,6 to -0,95 bar (available in all sizes)			8								
VALVE SEALS											
EPDM – Tmin -40 °C / Tmax 150 °C (180 °C with steam)				E							
FPM – Tmin -10 °C / Tmax 180 °C				V							
SURFACE FINISH (a)											
Standard surface finish					X						
Mirror mechanical polished external surfaces (SF1)					P						
Electropolished internal wetted parts (SF5)					E						
SPECIAL FEATURES											
None						X					
Degreased						O					
NovAseptic® (NA Connect) welding flange compatible						N					
OPTIONS											
None							XX				
Lift indicator (b)							LX				
PIPE CONNECTIONS											
Clamp ferrule ASME BPE								D			
Clamp ferrule DIN (DIN 32676-A)								F			
Clamp ferrule ISO (DIN 32676-B)								E			
SIZE											
1/2" or DN 15									15		
3/4" or DN 20									20		
1" or DN 25									25		
DN 32									32		
1 1/2" or DN 40									40		
2" or DN 50									50		
SPECIAL CONSTRUCTION / ADDITIONAL OPTIONS											
Full description or additional codes have to be added in case of non-standard combination										E	

(a) Consult TIS.GIA – General information ADCAPure – for further details and other surface finish options.

(b) 3 wire PNP sensor with NO contact (NC on request), M8 x 1 male connector and 10 to 30 V DC supply voltage. Others on request.