

TANK BLANKETING REGULATORS BKVI2 (Low pressure vent valve)

DESCRIPTION

Tank blanketing valves are commonly used in tank storage systems to prevent and protect against explosions (avoiding flammable liquids being vented from vessel), to control product contamination against external air that may fill the vapour space, to reduce evaporation losses (consequently, production losses), to reduce internal corrosion (caused by air and moisture) and to prevent vacuum condition.

The blanketing process consists in covering the stored medium, usually a liquid, with a gas (normally N₂).

MAIN FEATURES

Compact design.
No rising stem, except when supplied with top cap.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.

Body and cover

Internal: machined / as casted.

External: as casted.

Ultrasonic cleaning.

OPTIONS:

- Diaphragm leakage line connection.
- Gauge connection on body.
- External pulse line.
- Dome loaded (for higher pressure control).
- Blanketing with vacuum.
- Top cap (adjusting screw sealing).
- ATEX version.

USE: Compressed air, nitrogen and other gases compatible with the construction.

AVAILABLE

MODELS: BKVI – Low pressure venting valve.

SIZES: DN 15 and DN 25.

CONNECTIONS: Flanged EN 1092-1 PN16.

OUTLET SPRING

RANGES: 5 to 500 mbar (4000 mbar with dome load).

INSTALLATION: Vertical installation recommended (to allow draining) or horizontal as close to process as possible in order to prevent long pipe sections and flow restrictions.

ORDER

REQUIREMENTS: Type of fluid.
Maximum operating temperature.
Opening pressure.
Capacity (maximum and minimum).



CE MARKING (PED – European Directive)

PN16	Category
DN 15 and DN 25	SEP

CE MARKING – ATEX VERSION (ATEX – European Directive)

PN16	Category
DN 15 and DN 25	Ex h IIB T6...T3 Gb

AIR CAPACITIES (Nm ³ /h) Seat Ø 21 mm							
SIZE DN	SET PRESS.	INLET PRESSURE (mbar)					
		10	20	40	100	200	500
15	25% Overpressure	4,5	10,5	16	27	45	95
15	50% Overpressure	4,5	10,5	16	27	45	95
15	75% Overpressure	4,5	10,5	16	27	45	95
15	100% Overpressure	4,5	10,5	16	27	45	95
25	25% Overpressure	5,3	11,8	18	31	52	105
25	50% Overpressure	7,2	14,5	26	40	66	125
25	75% Overpressure	8,3	17	30	47	82	136
25	100% Overpressure	9,8	18	36	52	91	148

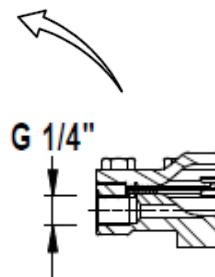
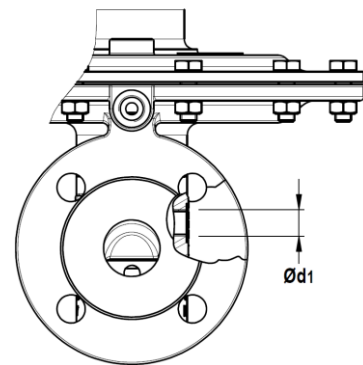
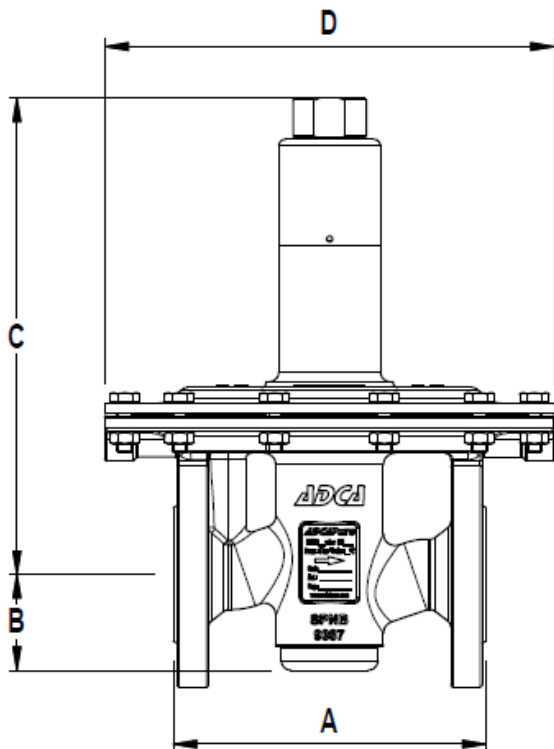
Spring ranges: 5-10 mbar; 10-50 mbar; 20-200 mbar; 50-500 mbar.

LIMITING CONDITIONS	
Valve model	BKVI2
Body design conditions	PN16
Max. operating pressure	6 bar
Min. upstream pressure	5 mbar
Max. upstream pressure	500 mbar
Max. design temperature *	130 °C

* Other on request.

Warning: Blanketing valves are not substitute of safety valves or vacuum relief valves.

DIMENSIONS (mm) FLANGES DIN EN PN16						
SIZE	A	B	C	D	d1	WGT. (kg)
DN 15	130	47,5	243,5	230	1/4"	9,7
DN 25	160	57,5	243,5	230	1/4"	10,8



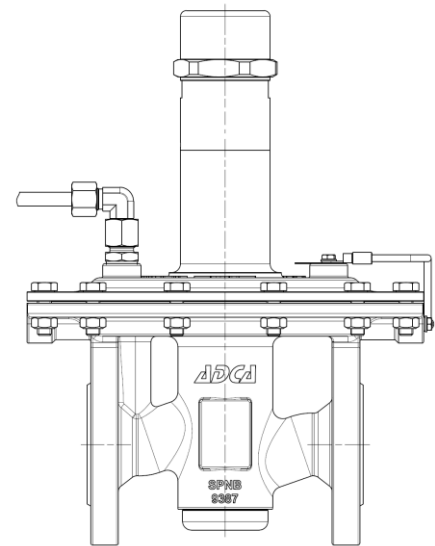
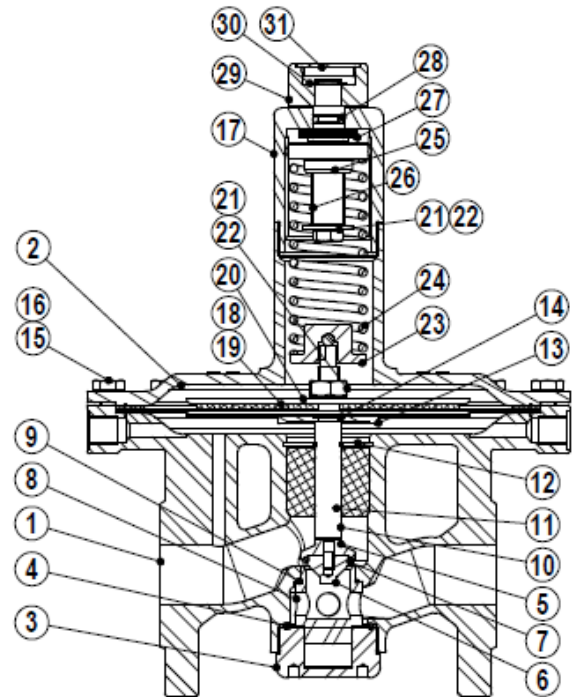
Optional external sensing pipe connection.

MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Valve body	CF3M / 1.4409
2	Diaphragm top cover	CF3M / 1.4409
2A	Diaphragm lower cover	AISI 316L / 1.4404
3	Seat cover	AISI 316L / 1.4404
4	* O-ring	EPDM
5	Plug disc	AISI 316L / 1.4404
6	* Valve head	AISI 316L / 1.4404
7	* O-ring	EPDM
8	Seat	AISI 316L / 1.4404
9	* O-ring	EPDM
10	Stem	AISI 316L / 1.4404
11	Stem guide	PTFE
12	Retaining ring	Stainless steel A2
13	Diaphragm plate	AISI 316L / 1.4404
14	* O-ring	EPDM
15	Bolts	Stainless steel A2-70
16	Nuts	Stainless steel A2-70
17	Spring cover	AISI 316L / 1.4404
18	* Lower diaphragm	PTFE (Gylon)
19	* Upper diaphragm	EPDM
20	Diaphragm plate	AISI 316L / 1.4404
21	Nut	Stainless steel A2-70
22	Washer	AISI 316 / 1.4401
23	Lower spring guide	AISI 316L / 1.4404
24	* Regulating spring	AISI 302 / 1.4300
25	Top spring plate	AISI 316L / 1.4404
26	Adjustment screw	Brass
27	Bearing	Corrosion resistant steel
28	* O-ring	NBR
29	Regulating nut	AISI 316L / 1.4404
30	Ext. bowed shaft ring	Stainless steel
31	Cover nut	Plastic

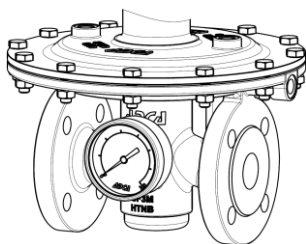
* Available spare parts;

FDA / USP Class VI seals certificate on request.

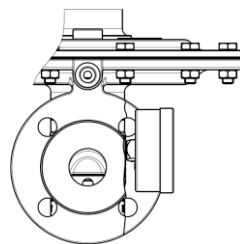
All valves have a serial number. In case of non standard valves, this number must be supplied if spare parts are ordered.



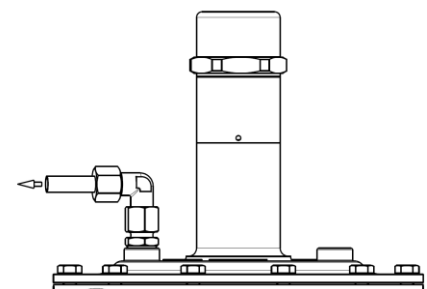
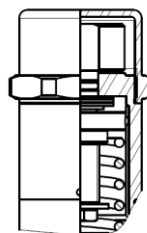
ATEX compliant version



Optional pressure gauge connection.

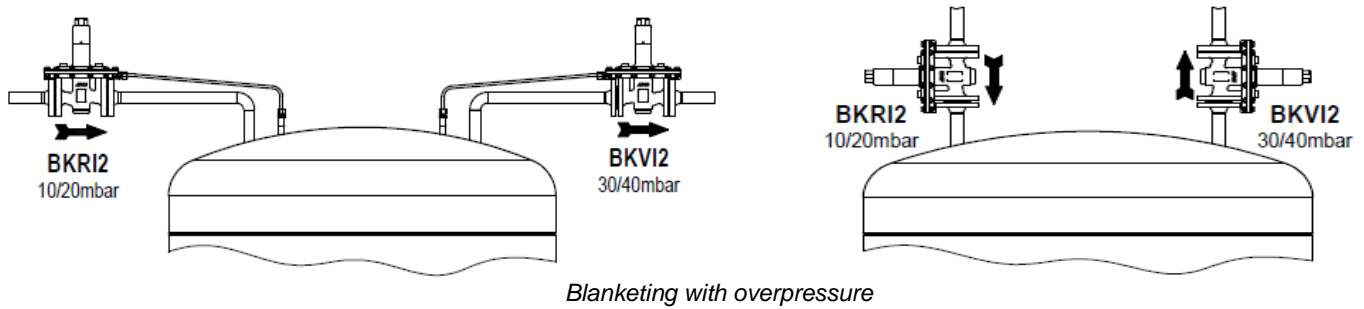


Optional top cap adjusting screw sealing.



Optional 1/4" diaphragm leakage connection.

TYPICAL INSTALLATION



ORDERING CODES BKVI2																							
Valve model										BVI	A	2	T	E	I	X	X	X	0	L	15	E	
BKVI2 – CF3M / 1.4409 Blanketing low pressure vent valve										BVI													
Outlet spring range																							
Dome loaded for higher pressure control										A													
5 to 10 mbar										0													
10 to 50 mbar										1													
20 to 200 mbar										2													
50 to 500 mbar										3													
Valve seat orifice																							
Seat diameter 21 mm											2												
Diaphragm material																							
PTFE (Gylon)													T										
Valve head																							
EPDM														E									
Regulating knob, top cap and captured vent																							
Stainless steel regulating knob															I								
Top cap (adjusting screw sealing)															T								
Stainless steel regulating knob w/ diaphragm cover leakage connection in case of diaphragm failure															L								
Top cap (adjusting screw sealing) w/ diaph. cover leakage connection in case of diaphragm failure (a)															U								
Gauge port options																							
Without gauge ports																X							
Threaded gauge port on the left side (rel. to the flow direction) – Upstream pressure																4							
Threaded gauge port on the right side (rel. to the flow direction) – Upstream pressure																3							
Threaded gauge port on both sides - Upstream pressure																2							
Surface finish, special services and options																							
None																	X						
Mechanical polishing																		P					
Electropolishing																		E					
Special features																							
None																			X				
External pulse line																							
Internal pulse orifice (standard)																				0			
External pulse line connection 1/4"																				1			
Pipe connection																							
Flanged EN 1092-1 PN16																					L		
Size																							
DN 15																						15	
DN 25																						25	
Special valves / Extras																							
ATEX compliant version																							EX
Full description or additional codes have to be added in case of a non standard combination																							E

(a) Choose this option in case of ATEX compliant version.