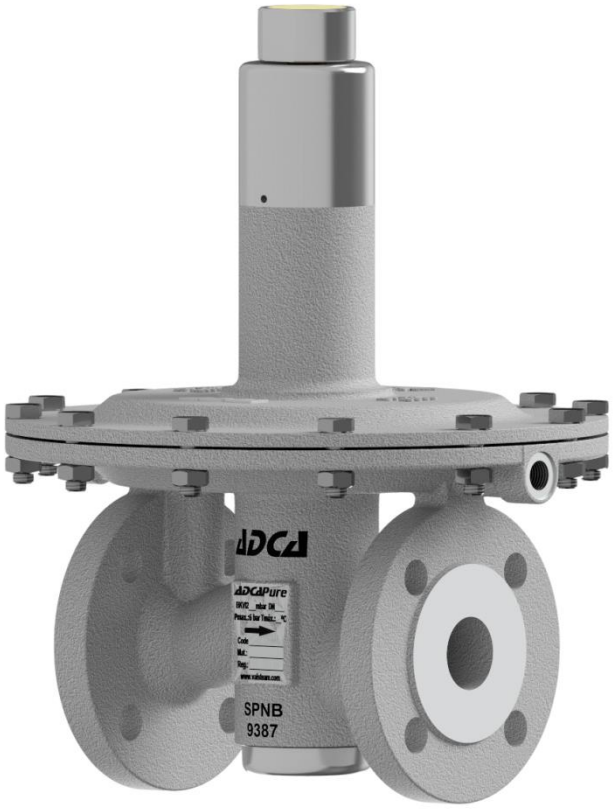
ISO 9001

STEAM EQUIPMENT

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 product 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).
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 (4000mbar 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)	
PN 16	**Category**
DN 15 to 25	SEP

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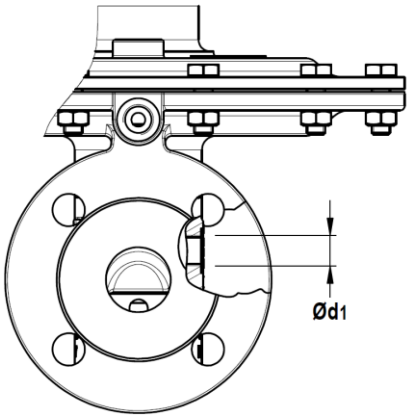
CAPACITIES in Nm3/h (air) Seat ø 21 mm							
DN	Set Pressure	Inlet Pressure mbar					
		10	20	40	100	200	500
15	25% Overpressure	4,5	10,5	16	27	45	95
15	50% Overpressure	4,5	10,5	16	27	45	95
15	75% Overpressure	4,5	10,5	16	27	45	95
15	100% Overpressure	4,5	10,5	16	27	45	95
25	25% Overpressure	5,3	11,8	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

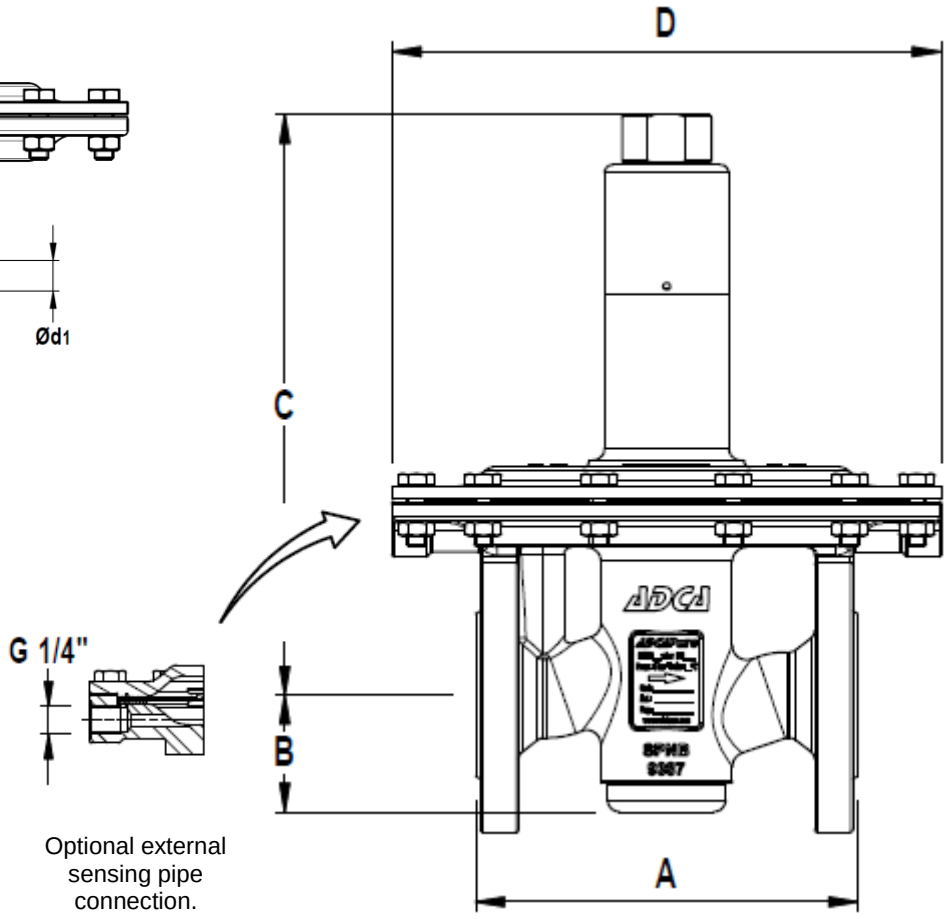
Spring ranges: 5-10; 10-50; 20-200; 50-500 mbar

LIMITING CONDITIONS	
Valve model	BKVI2
Body design conditions	PN 16
Max.operating pressure	6 bar
Min.upstream pressure	5 mbar
Max.upstream pressure	500 mbar
Max.design temperature *	130 ºC

*Other on request.

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





Optional external sensing pipe connection.

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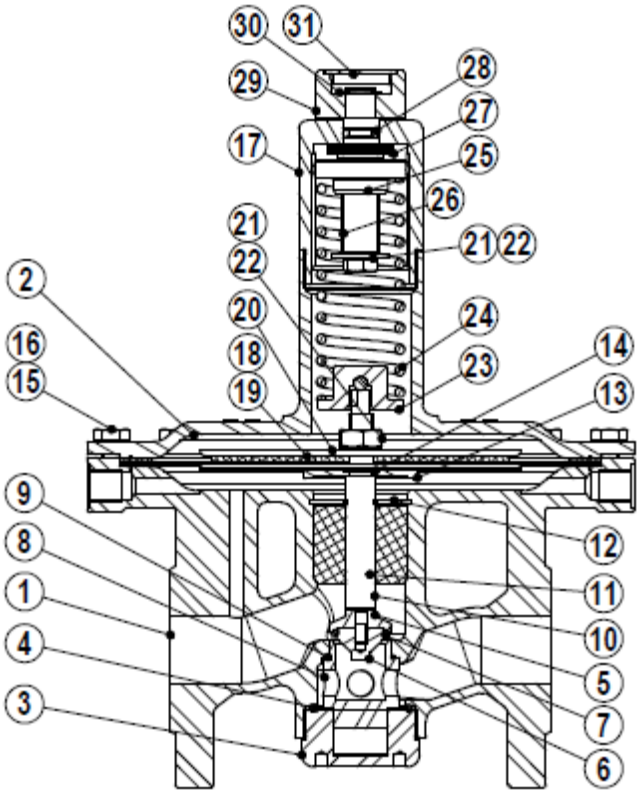
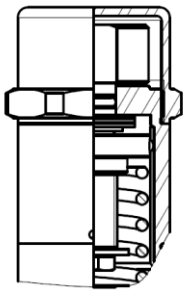
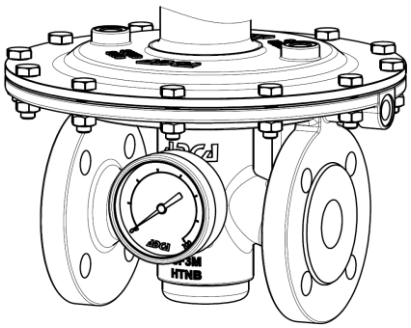
MATERIALS		
POS.	**DESIGNATION**	**MATERIAL**
1	Valve body	CF3M / 1.4409
2	Diaphragm top cover	CF3M / 1.4409
2A	Diaphragm lower	AISI316L / 1.4404
3	Seat cover	AISI316L / 1.4404
4	* O-ring	EPDM
5	Plug disc	AISI316L / 1.4404
6	* Valve head	AISI316L / 1.4404
7	* O-ring	EPDM
8	Seat	AISI316L / 1.4404
9	* O-ring	EPDM
10	Stem	AISI316L / 1.4404
11	Stem guide	PTFE
12	Retaining ring	St.steel A2
13	Diaphragm plate	AISI316L / 1.4404
14	* O-ring	EPDM
15	Bolts	St.steel A2-70
16	Nuts	St.steel A2-70
17	Spring cover	AISI316L / 1.4404
18	* Lower diaphragm	PTFE (Gylon)
19	* Upper diaphragm	EPDM
20	Diaphragm plate	AISI316L / 1.4404
21	Nut	St.steel A2-70
22	Washer	AISI316 / 1.4401
23	Lower spring guide	AISI316L / 1.4404
24	* Regulating spring	AISI302 / 1.4300
25	Top spring plate	AISI316L / 1.4404
26	Adjustment screw	Brass
27	Bearing	Corrosion res. Steel
28	* O-ring	NBR
29	Regulating nut	AISI316L / 1.4404
30	Ext. bowed shaft ring	Stainless steel
31	Cover nut	Plastic

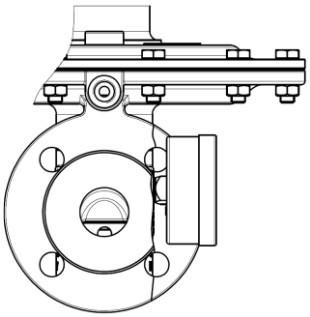
Remarks: FDA/USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.



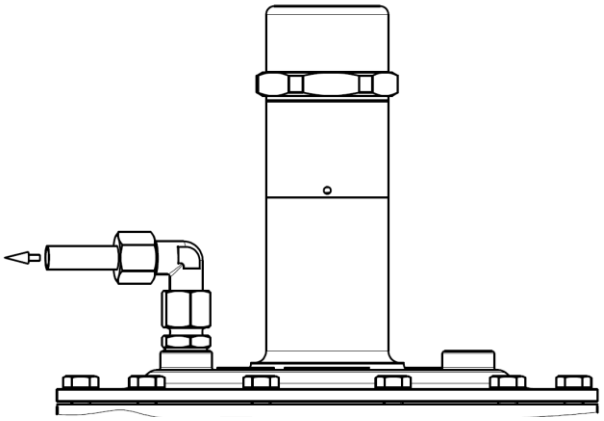


Optional top cap adjusting screw sealing.





Optional pressure gauge connection.



Optional 1/4” diaphragm leakage connection.

Blanketing valves are not substitute of safety valves or vacuum relief valves

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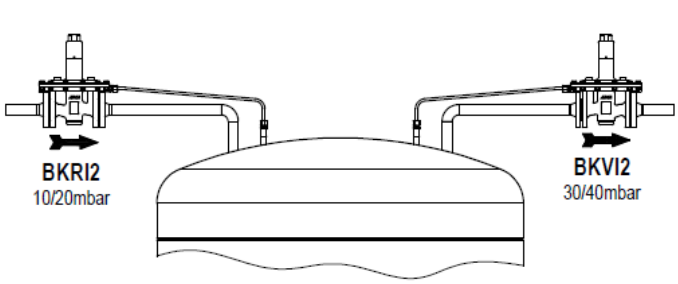
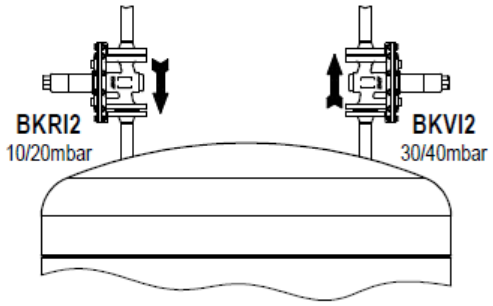
Typical installation





Blanketing with overpressure

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 21mm			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 /diaphragm cover leakage connection in case of diaph. failure						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, specal services and options													
None (fine machined)								X					
Mechanical polishing								P					
Electropolished								E					
Special features													
None									X				
External pulse line													
Internal pulse orifice (standard)										0			
External pulse line connection 1/4"										1			
Pipe connection													
Flanged EN1092-1 PN16											L		
Size													
DN 15												15	
DN 25												25	
…													
Special valves / Extras													
Full description or addicional codes have to be added in case of non-standard combination.													E

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