

## SANITARY TANK BLANKETING REGULATORS BKV2

( 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 consist in covering the stored medium , usually a liquid, with a gas (normally N2).

### MAIN FEATURES

Compact design.

Completely machined from barstock material, no castings or forgings are used on the standard version.

No rising stem, except when supplied with top cap.

### STANDARD SURFACE FINISH

Internal wetted parts:  $\leq 0,5$  micron Ra.

External :  $\leq 0,8$  micron Ra.

( 0,25 micron Ra and electro polished as option)

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).  
Hastelloy wetted parts.

### USE:

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

### AVAILABLE

### MODELS:

BKV2 – Low pressure venting valve.

### SIZES:

DN 1" – DN25

### OUTLET SPRING

### RANGES:

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

### CONNECTIONS:

Clamp ends or others on request.

### PACKAGING:

Assembling and packaging in a clean room certified according to ISO 14644-1.

The product is end capped and vacuum sealed with recyclable plastic film to avoid contamination.

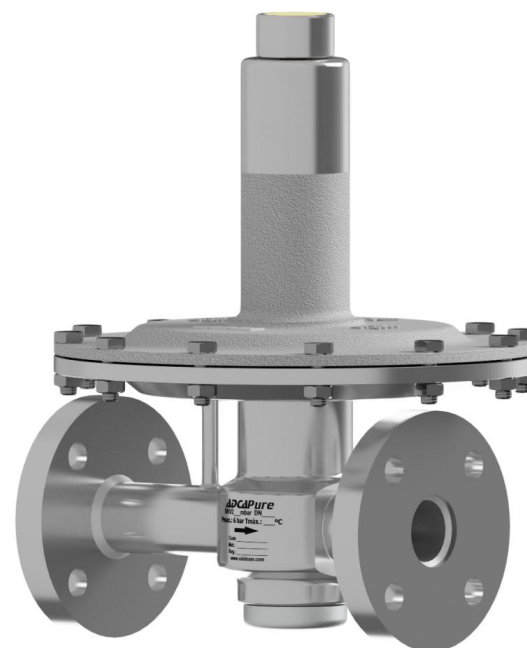
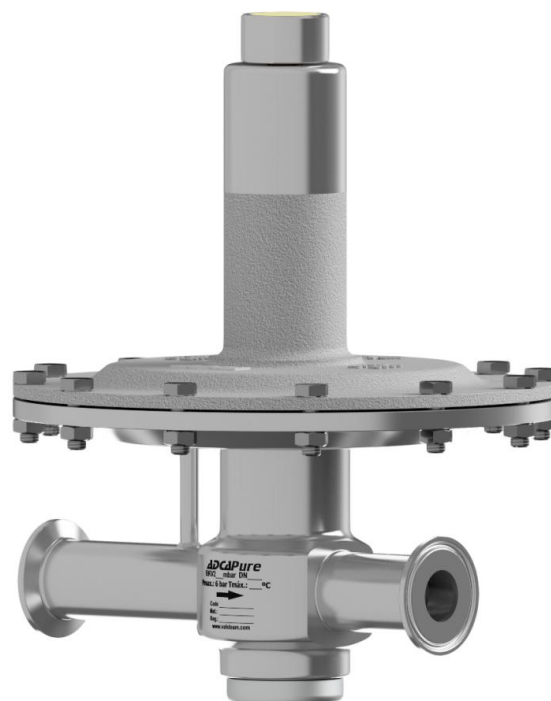
### INSTALLATION:

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

### ORDER

### REQUIREMENTS:

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



CE MARKING (PED - European Directive 97/23/EC)

PN 16

Category

DN 1" - 25

SEP - art. 3, paragraph3

**CAPACITIES in Nm<sup>3</sup>/h (air)**  
**Seat ø 21 mm**

DN	Set Pressure	Inlet Pressure mbar					
		10	20	40	100	200	500
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

**DIMENSIONS (mm) CLAMP FERRULES ASME BPE**

SIZE DN	A	B	C	D	F	H	d1	d2 *	WGT. Kgs
1"	210	49	244	230	50,5	22,1	50,5	22,1	8,5

**DIMENSIONS (mm) CLAMP FERRULES DIN**

SIZE DN	A	B	C	D	F	H	d1	d2 *	WGT. Kgs
25	210	49	244	230	50,5	26	50,5	22,1	8,5

Clamp ferrules DIN 32676 Series A;

Tube weld DIN 11866 Series A (DIN 11850 Series 2)

**DIMENSIONS (mm) CLAMP FERRULES ISO**

SIZE DN	A	B	C	D	F	H	d1	d2 *	WGT. Kgs
25	210	49	244	230	50,5	29,7	50,5	22,1	8,5

Clamp ferrules DIN 32676 Series B;

Tube weld DIN 11866 Series B (ISO 1127 Series 1)

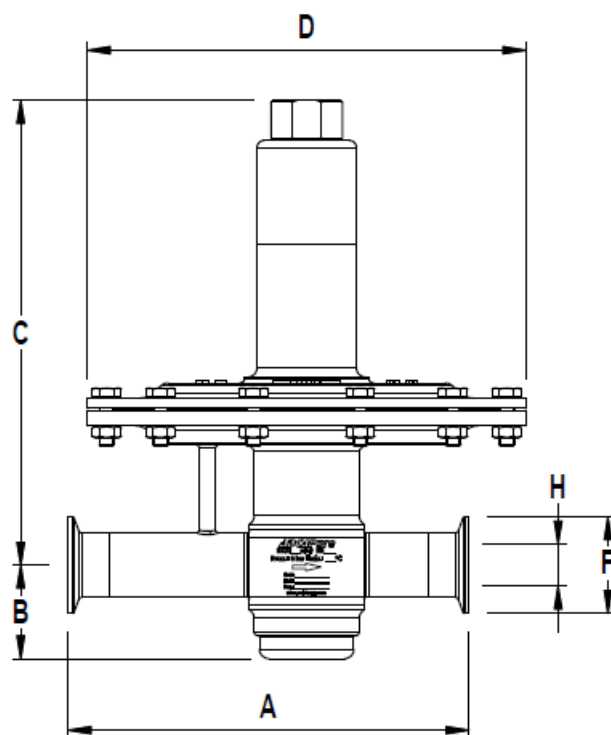
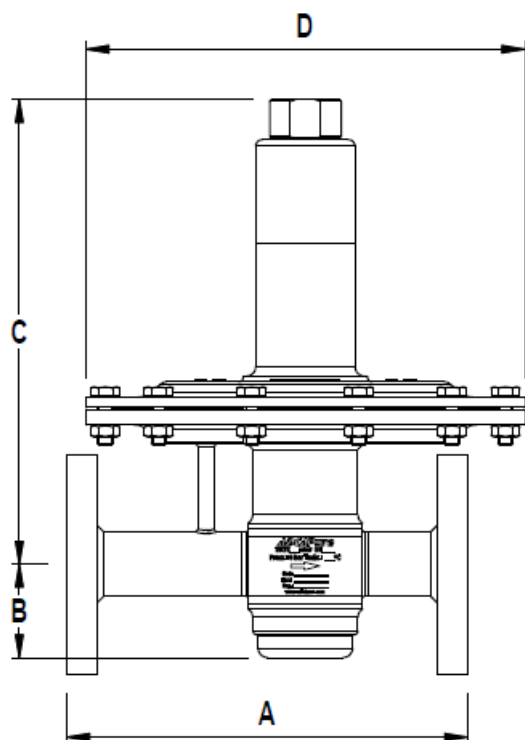
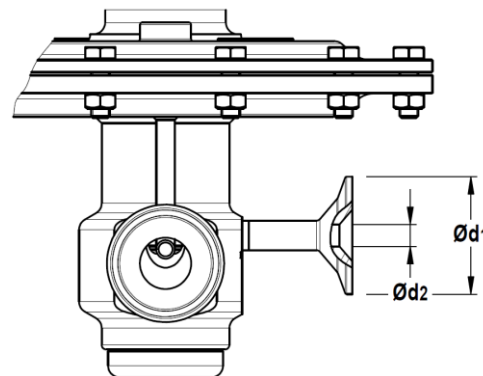
**DIMENSIONS (mm) FLANGES DIN EN PN 16**

SIZE DN	A	B	C	D	d1	d2 *	WGT. Kgs
25	210	49	244	230	50,5	22,1	10,6

\* Special versions or non-standard sanitary clamp ferrules are available on request. DN 1/4" also available for the flanged version.

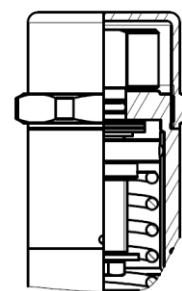
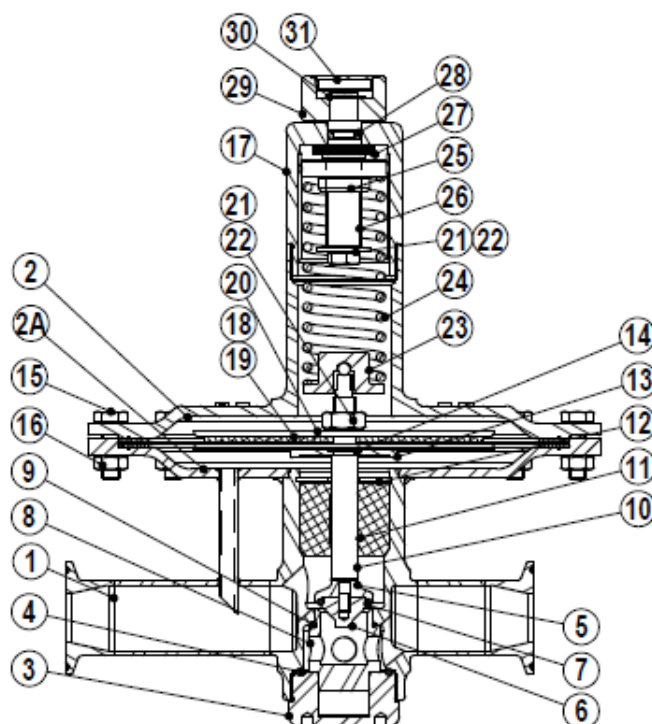
LIMITING CONDITIONS	
Valve model	BKV2
Body design conditions	PN 16
Max.operating pressure	6 bar
Min.upstream pressure	5 mbar
Max.upstream pressure	500 mbar
Max.design temperature *	130 °C

\*Other on request.

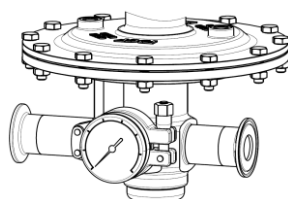


MATERIALS		
POS.	DESIGNATION	MATERIAL
1	Valve body	AISI316L / 1.4404 Hastelloy C22 / 2.4602
2	Diaphragm top cover	CF3M / 1.4409
2A	Diaphragm low er cover	AISI316L / 1.4404 Hastelloy C22 / 2.4602
3	Seat cover	AISI316L / 1.4404 Hastelloy C22 / 2.4602
4	* O-ring	EPDM
5	Plug disc	AISI316L / 1.4404 Hastelloy C22 / 2.4602
6	* Valve head	AISI316L / 1.4404 Hastelloy C22 / 2.4602
7	* O-ring	EPDM
8	Seat	AISI316L / 1.4404 Hastelloy C22 / 2.4602
9	* O-ring	EPDM
10	Stem	AISI316L / 1.4404 Hastelloy C22 / 2.4602
11	Stem guide	PTFE
12	Retaining ring	St. steel A2 Hastelloy C22 / 2.4602
13	Diaphragm plate	AISI316L / 1.4404 Hastelloy C22 / 2.4602
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
19	* Upper diaphragm	VITON
20	Diaphragm plate	AISI316L / 1.4404
21	Nut	St. steel A2-70
22	Washer	AISI316 / 1.4401
23	Low er spring guide	AISI316L / 1.4404
24	* Regulating spring	AISI302 / 1.4300
25	Top spring plate	AISI316L / 1.4404
26	Adjustment screw	AISI304 / 1.4301
27	Bearing	Corrosion res. Steel
28	* O-ring	EPDM
29	Regulating nut	AISI316L / 1.4404
30	Ext. bow ed shaft ring	Stainless steel
31	Cover nut	Plastic

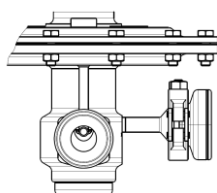
Remarks: FDA/USP Class VI seals certificate on request  
All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.



Optional top cap  
adjusting screw sealing



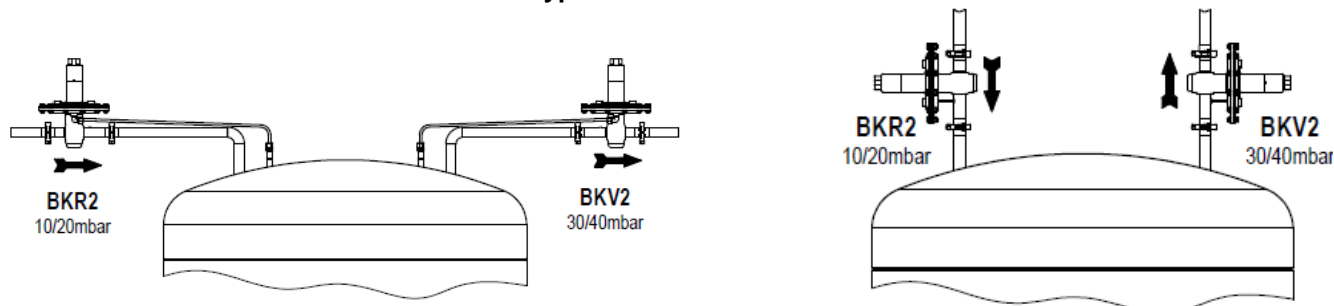
Optional pressure  
gauge connection



Optional 1/4" diaphragm  
leakage connection

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

### Typical installation



### Blanketing with overpressure

ORDERING CODES BKV2																
<b>Valve Model</b>	BV	0	2	E	E										D	25
BKV2 - Blanketing vent valve	BV															
<b>Body material</b>																
AISI 316L - 1.4404	(*)															
Hastelloy C22 - 2.4602	H															
<b>Outlet spring range</b>																
5 to 10 mbar		0														
10 to 50 mbar		1														
20 to 200 mbar		2														
50 to 500 mbar		3														
<b>Valve seat orifice</b>																
Seat diameter 21mm		2														
<b>Top cap</b>																
None	(*)															
Adjusting screw sealing	T															
<b>Valve head</b>																
EPDM				E												
<b>Diaphragm material</b>																
PTFE /EPDM				E												
<b>Special services / options</b>																
Standard surface finish	(*)															
Mechanical polish	1															
Electropolishing	2															
<b>Gauge port</b>																
Without gauge ports	(*)															
Tri-clamp gauge port on the left side (Rel. to the flow direction)	7															
Tri-clamp gauge port on the right side (Rel. to the flow direction)	6															
Tri-clamp gauge port on both sides	5															
Threaded gauge port on the left side (Rel. to the flow direction)	4															
Threaded gauge port on the right side (Rel. to the flow direction)	3															
Threaded gauge port on both sides	2															
<b>Leakage connection</b>																
None	(*)															
Diaphragm cover leakage connection in case of diaphragm failure	R															
<b>Dome loaded</b>																
None	(*)															
Dome loaded for higher pressure control	A															
<b>External pulse line</b>																
Internal pulse orifice	(*)															
External pulse line	1															
<b>Pipe connection</b>																
Clamp ferrule ASME BPE															D	
Clamp ferrule DIN (DIN32676-A)															F	
Clamp ferrule ISO (DIN32676-B)															E	
Flanged EN1092-1 PN16															L	
<b>Size</b>																
DN 1" or DN 25																25
...																
<b>Special valves / Extras a)</b>																E

(\*) Omitted if a standard valve is requested

a) Full description or additional codes have to be added in case of non-standard combination.