

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 consists 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

Body and internal wetted parts: ≤ 0,51 micron Ra – SF1.

Body external: ≤ 0,76 micron Ra – SF3.

Cover: internal machined; external as casted.

Other surface conditions see IS PV20.00-Technical information. 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:

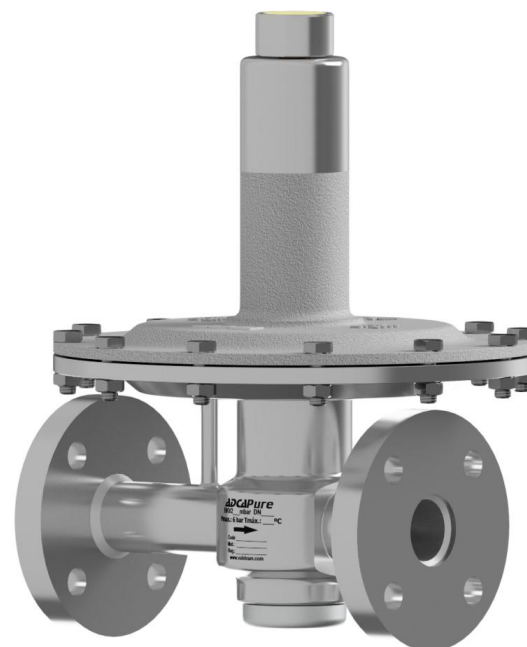
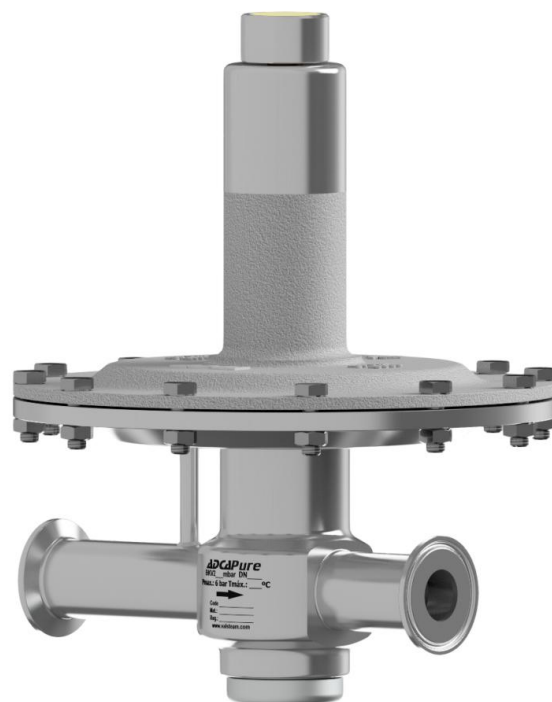
Assembling and packaging in a clean room certified according to ISO 14644-1. The product is end capped and vacuum sealed with recyclable plastic film to avoid contamination.

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)	
PN 16	Category
1" - 25	SEP

**CAPACITIES in Nm³/h (air)
Seat ø 21 mm**

Size	Set Pressure	Inlet Pressure mbar					
		10	20	40	100	200	500
1"-25	25% Overpressure	5,3	11,8	18	31	52	105
1"-25	50% Overpressure	7,2	14,5	26	40	66	125
1"-25	75% Overpressure	8,3	17	30	47	82	136
1"-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	A	B	C	D	F	H	d1	d2 *	WGT. Kg
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. Kg
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. Kg
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).

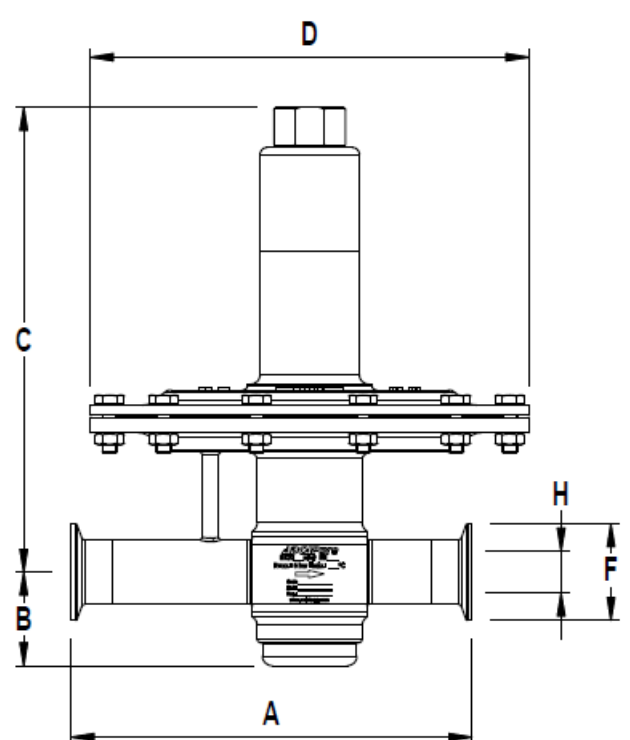
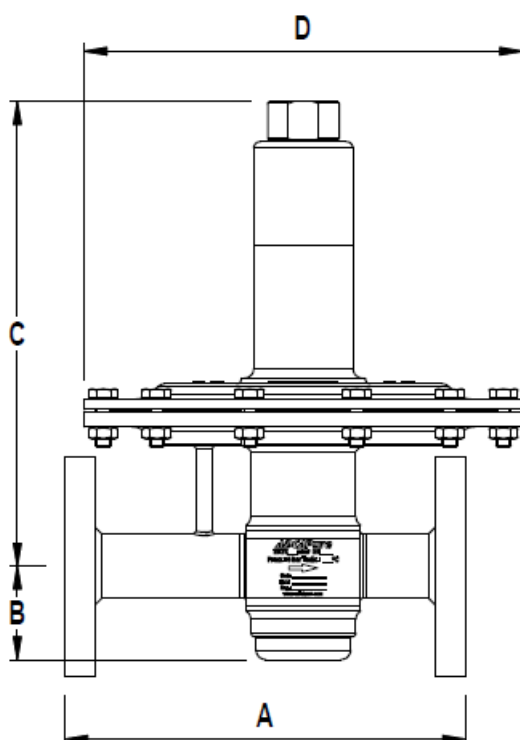
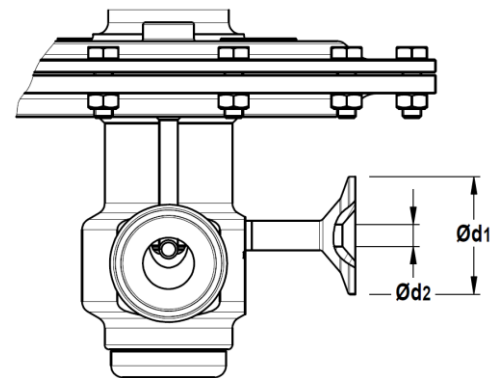
SIZE DN	A	B	C	D	d1	d2 *	WGT. Kg
25	210	49	244	230	50,5	22,1	10,6

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

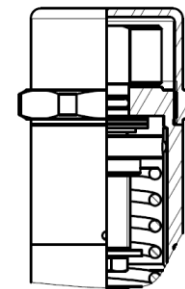
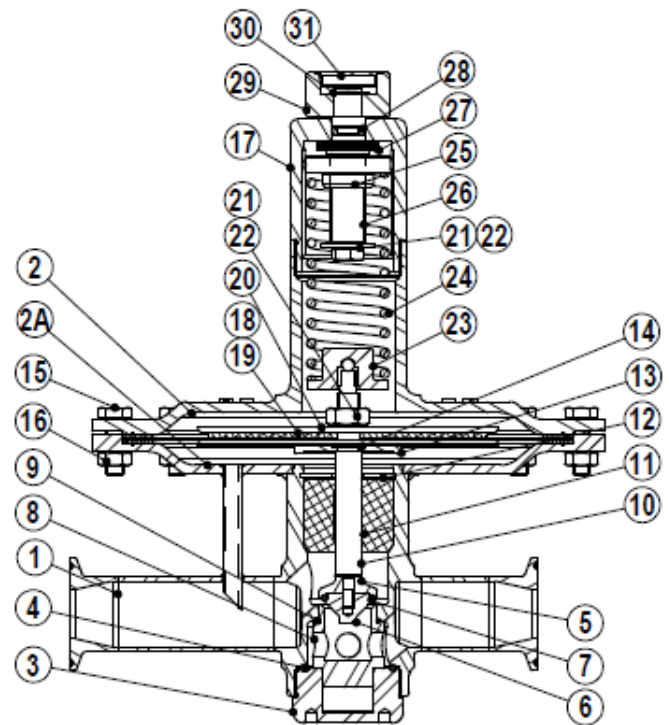
LIMITING CONDITIONS

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

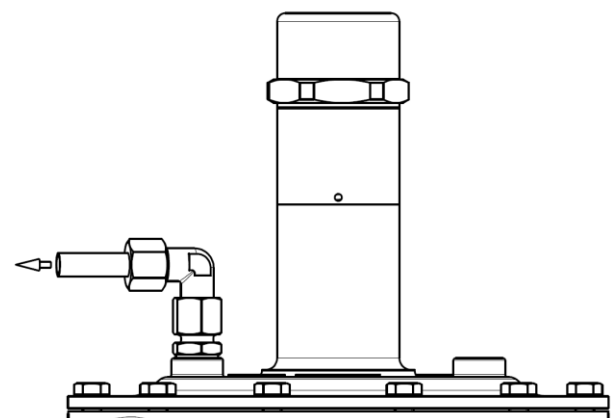
*Other on request.



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	Valve body	AISI316L / 1.4404
		Hastelloy C22 / 2.4602
2	Diaphragm top cover	CF3M / 1.4409
2A	Diaphragm lower 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	Lower 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. bowed shaft ring	Stainless steel
31	Cover nut	Plastic

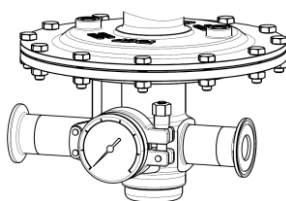


Optional top cap adjusting screw sealing.

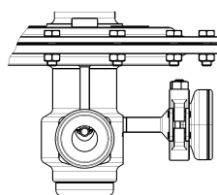


Optional 1/4" diaphragm leakage connection.

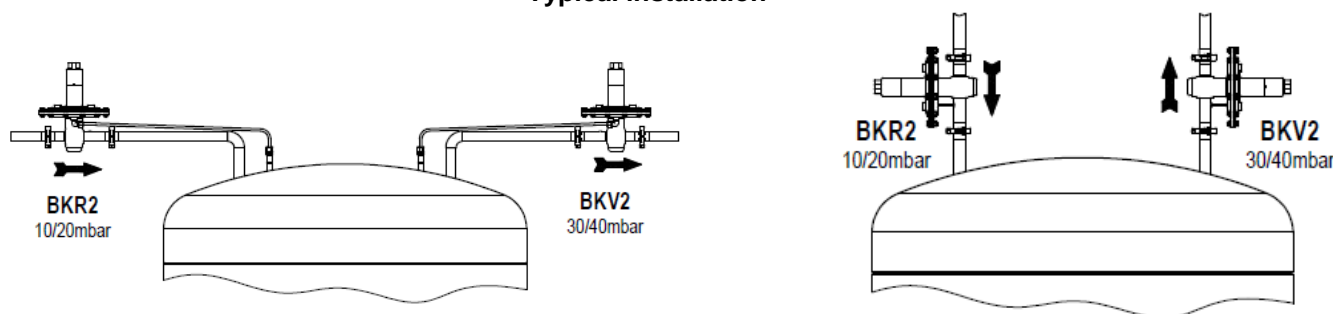
Remarks: FDA/USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.



Optional pressure gauge connection.



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

Typical installation

Blanketing with overpressure

ORDERING CODES BKV2										
Valve Model	BV	0	2	E	E				D	25
BKV2 - Blanketing vent valve	BV									
Body material										
AISI 316L - 1.4404	(*)									
Hastelloy C22 - 2.4602	H									
Outlet spring range										
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							
Top cap										
None				(*)						
Adjusting screw sealing				T						
Valve head										
EPDM					E					
Diaphragm material										
PTFE/EPDM					E					
Special services / options										
Standard surface finish								(*)		
Mechanical polish								1		
Electropolishing								2		
Gauge port										
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		
Leakage connection										
None								(*)		
Diaphragm cover leakage connection in case of diaphragm failure								R		
Dome loaded										
None								(*)		
Dome loaded for higher pressure control								A		
External pulse line										
Internal pulse orifice								(*)		
External pulse line								1		
Pipe connection										
Clamp ferrule ASME BPE									D	
Clamp ferrule DIN (DIN32676-A)									F	
Clamp ferrule ISO (DIN32676-B)									E	
Flanged EN1092-1 PN16									L	
Size										
1" or DN 25										25
...										
Special valves / Extras a)										E

(*) Omitted if a standard valve is requested

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