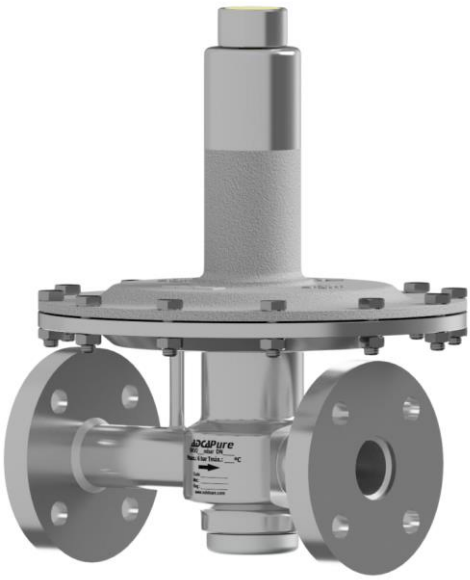
SANITARY TANK BLANKETING REGULATORS
BKV2 (Low pressure vent valve)

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, 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
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 E – 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. ATEX Ex version.
USE:	Compressed air, nitrogen and other gases compatible with the construction.
AVAILABLE MODELS:	BKV2 – Low pressure venting valve.
SIZES:	1” – DN 25.
OUTLET SPRING RANGES:	5 to 500 mbar (4000 mbar 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 sealed with recyclable thermo-shrinkable 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)	
PN16	**Category**
1” – DN 25	SEP

CE MARKING – ATEX VERSION (ATEX – European Directive)	
PN16	**Category**
DN 25	Ex h IIB T6...T3 Gb

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

Spring ranges: 5-10 mbar; 10-50 mbar; 20-200 mbar; 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	25	15,75	8,5

DIMENSIONS (mm) CLAMP FERRULES DIN									
SIZE	A	B	C	D	F	H	d1	d2 *	WGT. (kg)
DN 25	210	49	244	230	50,5	26	25	15,75	8,5

Clamp ferrules DIN 32676 Series A;
Tube weld DIN 11866 Series A (DIN 11850 Series 2).

DIMENSIONS (mm) CLAMP FERRULES ISO									
SIZE	A	B	C	D	F	H	d1	d2 *	WGT. (kg)
DN 25	210	49	244	230	50,5	29,7	25	15,75	8,5

Clamp ferrules DIN 32676 Series B;
Tube weld DIN 11866 Series B (ISO 1127 Series 1).

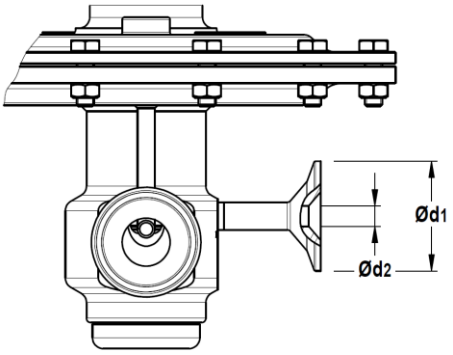
DIMENSIONS (mm) FLANGES DIN EN PN16							
SIZE	A	B	C	D	d1	d2 *	WGT. (kg)
DN 25	210	49	244	230	25	15,75	10,6

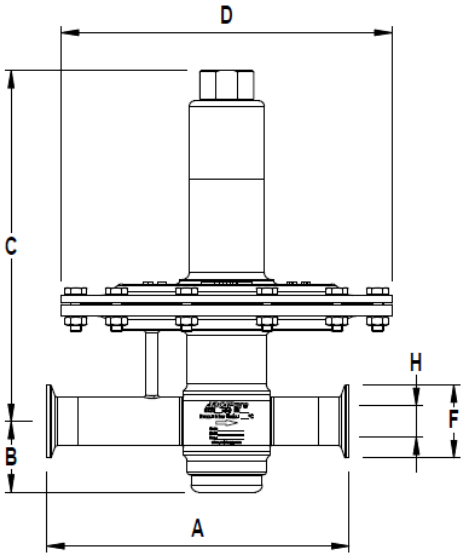
* Special versions or non standard sanitary clamp ferrules are available on request. 1/4" also available for the flanged version.

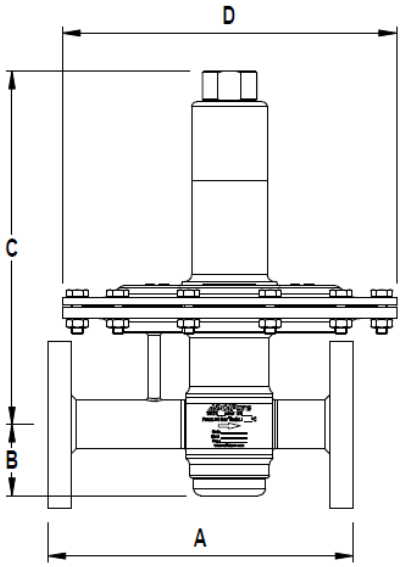
LIMITING CONDITIONS	
Valve model	BKV2
Body design conditions	PN16
Max. operating pressure	6 bar
Min. upstream pressure	5 mbar
Max. upstream pressure	500 mbar
Max. design temperature *	130 ºC

* Other on request.

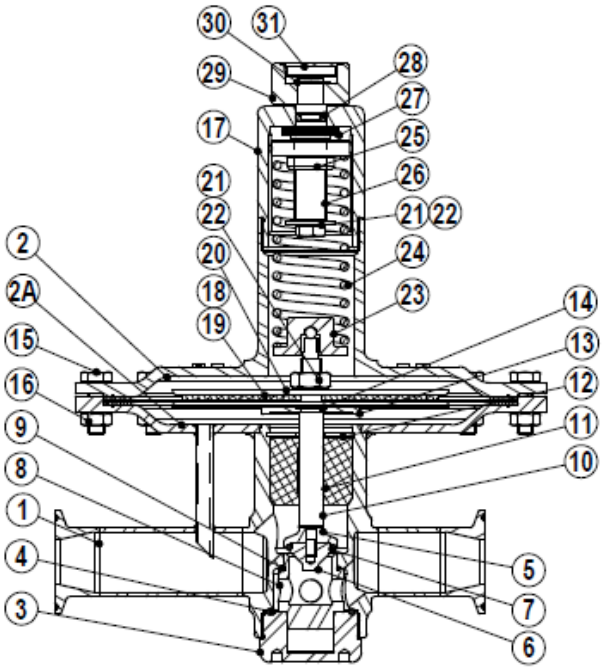
Warning: Blanketing valves are not substitute for safety valves or vacuum relief valves.

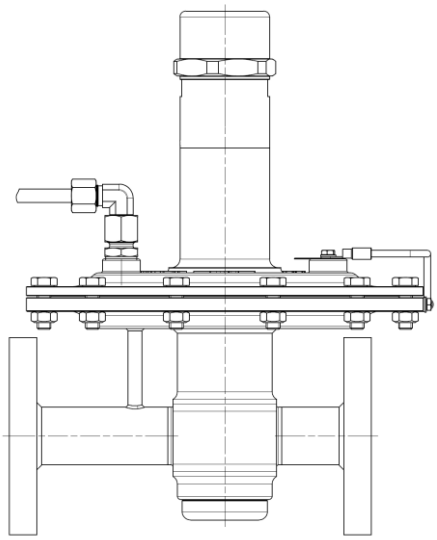






MATERIALS		
POS. Nº	**DESIGNATION**	**MATERIAL**
1	Valve body	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
2	Diaphragm top cover	CF3M / 1.4409
2A	Diaphragm lower cover	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
3	Seat cover	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
4	* O-ring	EPDM
5	Plug disc	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
6	* Valve head	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
7	* O-ring	EPDM
8	Seat	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
9	* O-ring	EPDM
10	Stem	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
11	Stem guide	PTFE
12	Retaining ring	Stainless steel A2
		Hastelloy C22 / 2.4602
13	Diaphragm plate	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
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



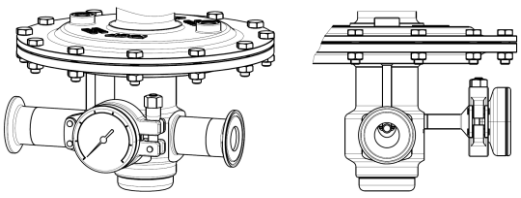


ATEX compliant version.

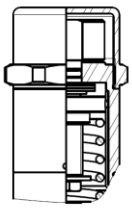
* Available spare parts;

FDA / USP Class VI seals certificate on request.

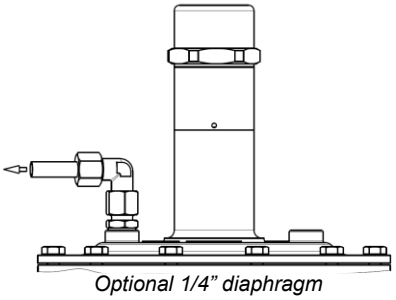
All valves have a serial number. In case of non standard valves, this number must be supplied if spare parts are ordered.



Optional pressure gauge connection.

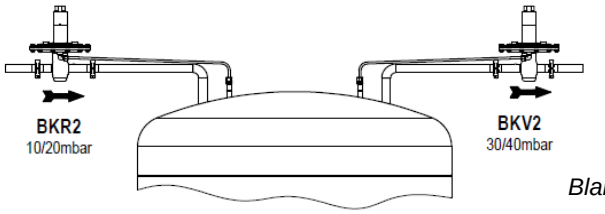


Optional top cap adjusting screw sealing.

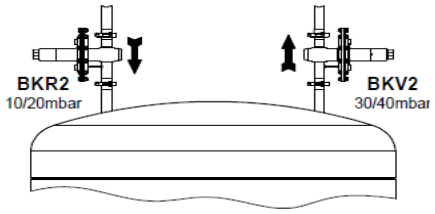


Optional 1/4" diaphragm leakage connection.

TYPICAL INSTALLATION



Blanketing with overpressure



ORDERING CODES BKV2													
Valve model	**BV**	**A**	**2**	**T**	**E**	**I**	**X**	**X**	**X**	**0**	**D**	**25**	**E**
BKV2 – AISI 316L / 1.4404 Blanketing low pressure vent valve	**BV**												
BKV2 – Hastelloy C22 / 2.4602 Blanketing low pressure vent valve	**BVH**												
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 connect. in case of diaphragm failure **(a)**						**U**							
Gauge port options													
Without gauge ports							**X**						
Tri-clamp gauge port on the left side (rel. to the flow direction) – Upstream pressure							**7**						
Tri-clamp gauge port on the right side (rel. to the flow direction) – Upstream pressure							**6**						
Tri-clamp gauge port on both sides - Upstream pressure							**5**						
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 (fine machined)								**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													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Flanged EN 1092-1 PN16											**L**		
Size													
1" or 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 if you are ordering an ATEX compliant version.