PROTEK
Processteknik GH AB

ADCA Pure

TANK BLANKETING REGULATORS
BKRI2
(Low pressure regulator)

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 (recommended for low set pressures < 10 mbar or high flow). 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:	BKRI2 – Low pressure regulator.
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. For an economical consumption of blanketing gas, the pressure must be adjusted to remain slightly above than atmospheric pressure, while filling and empting the vessel.
ORDER REQUIREMENTS:	Type of fluid. Maximum operating temperature. Inlet pressure and required outlet 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) Max. inlet pressure 6 bar - Seat ø 8 mm										
DN	Out. Press. mbar	Inlet Pressure barg								
		0,1	0,5	0,8	1	2	3	4	5	6
15	5 to 10	3,5	18	28	37	56	77	92	111	128
15	10 to 50	3,5	18	28	37	56	77	92	111	128
15	20 to 200	/	18	28	37	56	77	92	111	128
15	50 to 500	/	/	/	37	56	77	92	111	128
25	5 to 10	4	20	32	40	63	85	102	125	140
25	10 to 50	4	20	32	40	63	85	102	125	140
25	20 to 200	/	20	32	40	63	85	102	125	140
25	50 to 500	/	/	/	40	63	85	102	125	140

Outlet pressure should not be more than 50% of inlet ,
in order to reach the mentioned flow rates.

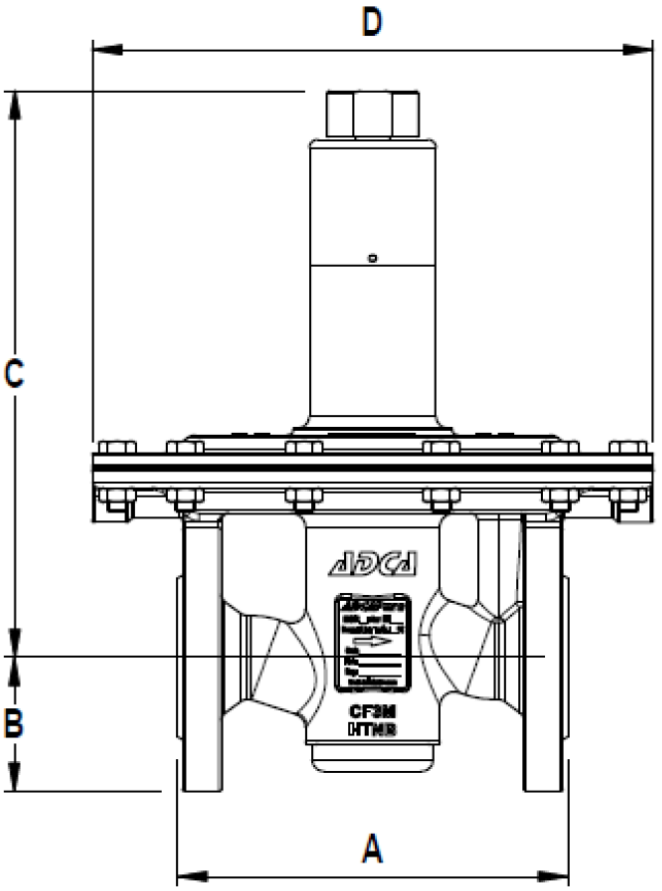
CAPACITIES in Nm3/h (air) Max. Inlet pressure 12 bar - Seat ø 5 mm							
DN	Out. Press. mbar	Inlet Pressure barg					
		2	4	6	8	12	16
15	5 to 10	18	32	43	54	81	106
15	10 to 50	18	32	43	54	81	106
15	20 to 200	18	32	43	54	81	106
15	50 to 500	18	32	43	54	81	106
25	5 to 10	21	35	49	62	90	118
25	10 to 50	21	35	49	62	90	118
25	20 to 200	21	35	49	62	90	118
25	50 to 500	21	35	49	62	90	118

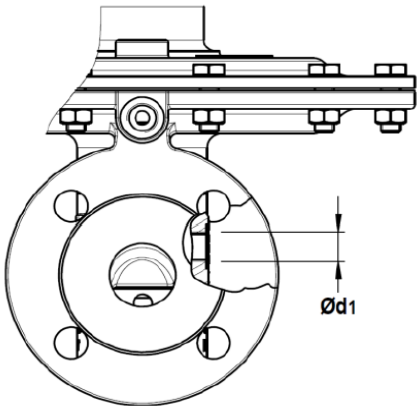
Outlet pressure should not be more than 50% of inlet ,
in order to reach the mentioned flow rates.

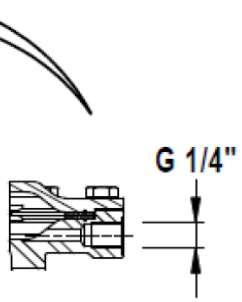
DIMENSIONS (mm) FLANGES EN PN16						
SIZE DN	A	B	C	D	d1	WGT. Kg
15	130	47,5	243,5	230	1/4"	9,7
25	160	57,5	243,5	230	1/4"	10,8

LIMITING CONDITIONS		
Valve model		BKRI2
Body design conditions		PN 16
Max.upstream pressure	Seat ø 5	12 bar
	Seat ø 8	6 bar
Max.downstream pressure		500 mbar
Min.downstream pressure		5 mbar
Max.design temperature *		130 °C

*Other on request.







Optional external
sensing pipe
connection.

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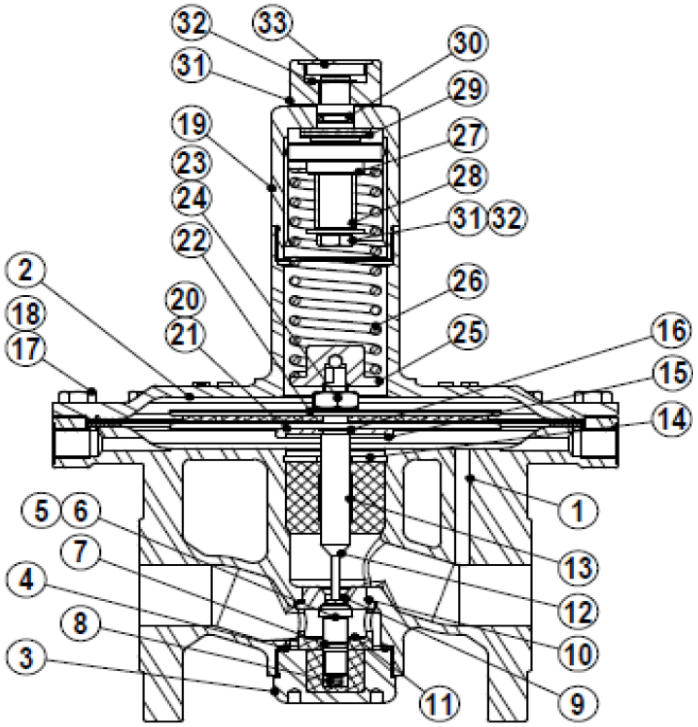
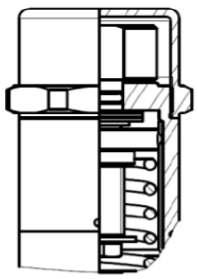
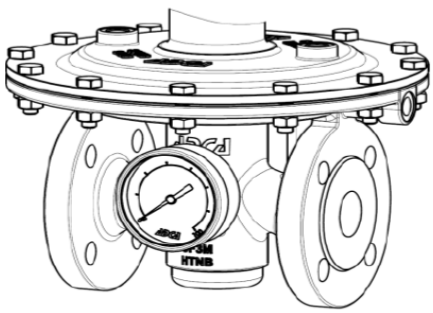
MATERIALS		
POS.	DESIGNATION	MATERIAL
1	Valve body	CF3M / 1.4409
2	Diaphragm top cover	CF3M / 1.4409
3	Seat cover	AISI316L / 1.4404
4	* O-ring	EPDM
5	*Piston	AISI316L / 1.4404
6	* Valve head	AISI316L / 1.4404
7	* O-ring	EPDM
8	*Valve spring	AISI302 / 1.4300 (Polished)
9	Seat	AISI316L / 1.4404
10	* O-ring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

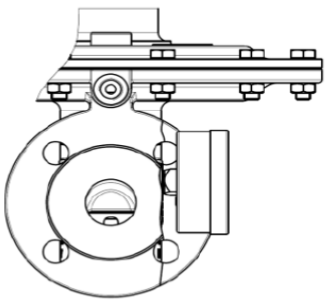
* Available spare parts.
Remarks: FDA/USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.



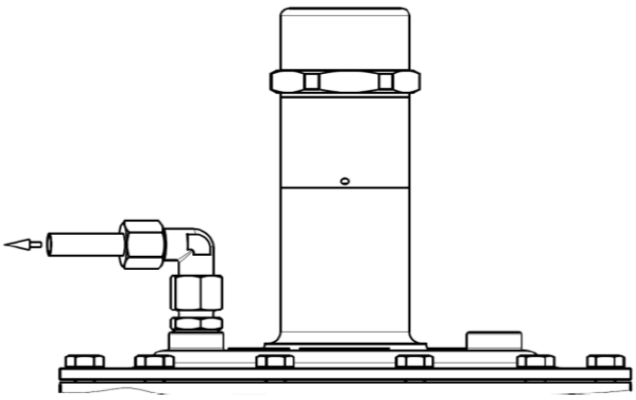


Optional top cap adjusting screw sealing.





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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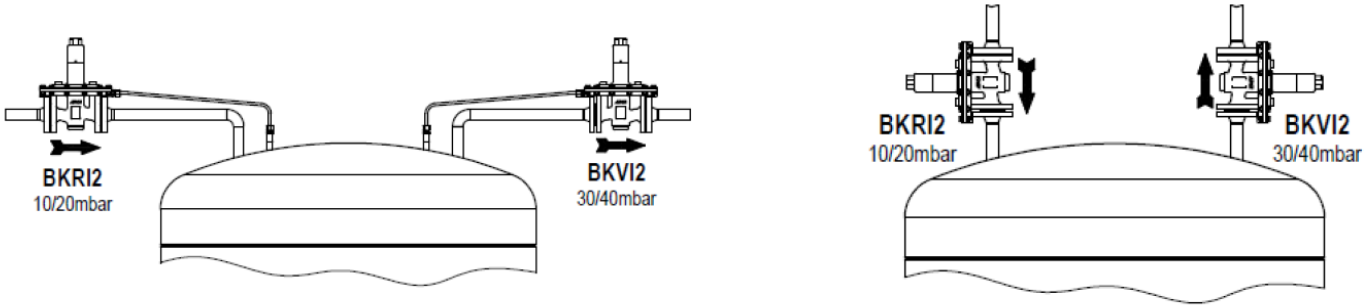
Typical installation



Blanketing with overpressure

ORDERING CODES BKRI2

Valve Model	BRI	A	5	T	E	I	X	X	X	0	L	15	E
BKRI2 - CF3M / 1.4409 Blanketing low pressure relulator	BRI												
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 5mm			5										
Seat diameter 8 mm			8										
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) - Downstream pressure							4						
Threaded gauge port on the right side (Rel. to the flow direction) - Downstream pressure							3						
Threaded gauge port on both sides - Downstream 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