





SANITARY TANK BLANKETING REGULATORS BKR2

(Low pressure reducing valve)

DESCRIPTION

Tank blanketing valves are commonly used in tank storage systems to prevent and protect against explosions (avoiding flammable liquids being vented from the 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.
Non-rising adjustment knob.
FDA / USP Class VI compliant seals.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 µm Ra – SF1.

Body external: $\leq 0.76 \ \mu m \ Ra - SF3$.

Cover: internal machined and external as casted.

Other surface conditions see TIS.GIA - General information

ADCAPure.

Ultrasonic cleaning.

OPTIONS: Leakage line connection.

Dome-loading.

Top cap (adjustment screw with cover).

Gauge connection on body.

External sensing line connection (recommended for low set pressures < 10 mbar or high flow).

Blanketing with vacuum.

Hastelloy wetted parts. ATEX (x) version.

USE: Air, nitrogen, argon and other gases compatible

with the construction.

AVAILABLE

MODELS: BKR2 – low pressure reducing valve.

SIZES: 1"; DN 25.

REGULATING

RANGES: 5 to 10 mbar; 10 to 50 mbar; 20 to 200 mbar; 50

to 500 mbar; 5 to 4000 mbar (dome-loading).

CONNECTIONS: ASME BPE, DIN and ISO clamp ferrules.

Flanged EN 1092-1 PN 16. 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

drainage, or horizontal as close to the process as possible in order to prevent long pipe sections and flow restrictions. See IMI – Installation and

maintenance instructions.





	G – GROUP 2 ean Directive)
PN 16	Category
1" – DN 25	SEP

CE MARKING – ATEX VERSION (ATEX – European Directive)								
PN 16 Category								
1" – DN 25	Ex h IIB T6T3 Gb							

NDITIONS *	
	16 bar
Seat Ø5 mm	12 bar
Seat Ø8 mm	6 bar
ıre **	500 mbar
re	5 mbar
ure	130 °C
	Seat Ø5 mm Seat Ø8 mm Ire **

* Other limits on request. Maximum operating conditions may be limited by the valve end connections due to normative restrictions.

** 4000 mbar with dome-loading.







		М			ES (Nm³/h) 6 bar – Sea								
SIZE	OUTLET PRESSURE	INLET PRESSURE (barg)											
SIZE	(mbar) *	0,1	0,5	0,8	1	2	3	4	5	6			
	5 to 10	4	20	32	40	63	85	102	125	140			
1" – DN 25	10 to 50	4	20	32	40	63	85	102	125	140			
1 - DN 25	20 to 200	_	20	32	40	63	85	102	125	140			
	50 to 500	_	_	_	40	63	85	102	125	140			

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

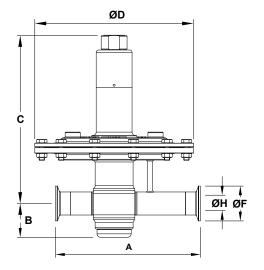
			AIR CAPACITIES (Nm nlet pressure 12 bar			
CLZE	OUTLET PRESSURE		IN	LET PRESSURE (bai	rg)	
SIZE	(mbar) * 2 4				8	12
	5 to 10	21	35	49	62	90
1" – DN 25	10 to 50	21	35	49	62	90
1 - DN 25	20 to 200	21	35	49	62	90
	50 to 500	21	35	49	62	90

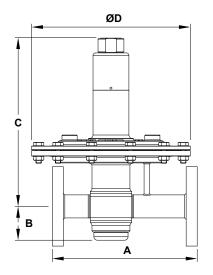
^{*} Outlet pressure should not be more than 50% of the inlet, in order to reach the mentioned flow rates.

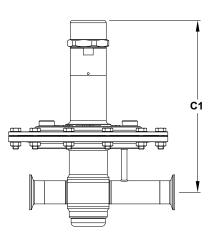
	OPTIONS	
LEAKAGE LINE CONNECTION	DOME-LOADING	TOP CAP
GAUGE CONNECTION	EXTERNAL SENSING LINE CONNECTION	ATEX COMPLIANT



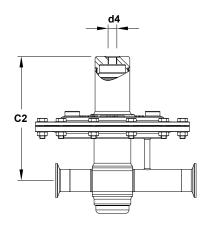




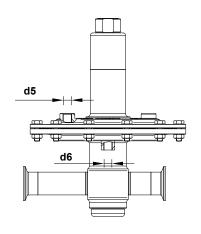




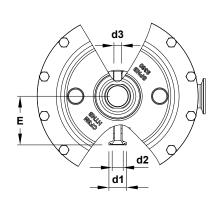
Optional top cap







Optional external sensing and leakage line connections



Optional gauge connection

					ı	DIMENS	IONS -	ASME B	PE (mm	1)						
SIZE	Α	В	С	C1	C2	ØD	d1	d2	d3	d4	d5	d6	E	ØF	ØН	WGT. (kg)
1"	210	49	244	249	186	230	25	15,75	1/4"	1/4"	1/4"	1/4"	70	50,4	22,1	8,5

			DIMENSIONS – DIN (mm)													
SIZE	Α	В	С	C1	C2	ØD	d1	d2	d3	d4	d5	d6	E	ØF	ØН	WGT. (kg)
DN 25	210	49	244	249	186	230	25	15,75	1/4"	1/4"	1/4"	1/4"	70	50,5	26	8,5

Remark: Clamp ferrules according to DIN 32676-A.

						DIME	ENSION	S – ISO	(mm)							
SIZE	Α	В	С	C1	C2	ØD	d1	d2	d3	d4	d5	d6	E	ØF	ØН	WGT. (kg)
DN 25	210	49	244	249	186	230	25	15,75	1/4"	1/4"	1/4"	1/4"	70	50,5	29,7	8,5

Remark: Clamp ferrules according to DIN 32676-B.

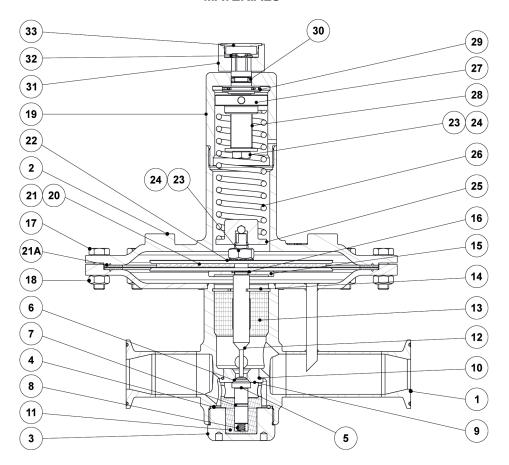
				DI	MENSIO	NS – FLA	NGED EI	N 1092-1	(mm)					
SIZE	Α	В	С	C1	C2	ØD	d1	d2	d3	d4	d5	d6	E	WGT. (kg)
DN 25	210	49	244	249	186	230	25	15,75	1/4"	1/4"	1/4"	1/4"	70	10,6

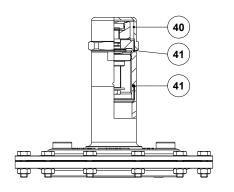




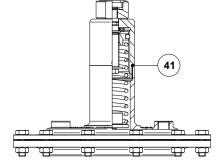


MATERIALS

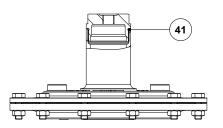




Optional top cap



Optional leakage line connection



Optional dome-loading

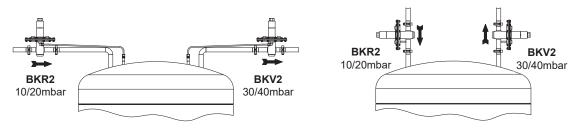




	MATERIA	LS
POS. N°	DESIGNATION	MATERIAL
1	Valva hadir	AISI 316L / 1.4404
1	Valve body	Hastelloy C22 / 2.4602
2	Cover	A351 CF3M / 1.4409
3	Bottom cover	AISI 316L / 1.4404
3		Hastelloy C22 / 2.4602
4	* O-ring	** EPDM
5	* Piston	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
6	* Valve seal	** EPDM; FPM
7	* O-ring	** EPDM; FPM
8	* Valve spring	AISI 316 / 1.4401 electropolished
_		Hastelloy C22 / 2.4602
9	* Seat	AISI 316L / 1.4404
		Hastelloy C22 / 2.4602
10	* O-ring	** EPDM
11	* Guide	** PTFE
12	Stem	AISI 316L / 1.4404
40	<u> </u>	Hastelloy C22 / 2.4602
13	Stem guide	** PTFE
14	Retaining ring	Stainless steel A2
		Hastelloy C22 / 2.4602
15	Diaphragm support plate	AISI 316L / 1.4404
16	* O-ring	Hastelloy C22 / 2.4602 ** EPDM
17	Bolt	Stainless steel A2-70
18	Nut	Stainless steel A2-70
19	Spring cover	AISI 316L / 1.4404
20	* Lower diaphragm	PTFE (Gylon)
21	* Upper diaphragm	EPDM
21A	* Gasket	** EPDM
22	Diaphragm plate	AISI 316L / 1.4404
23	Nut	Stainless steel A2-70
24	* Washer	Stainless steel A2
25	Lower spring guide	AISI 316L / 1.4404
26	* Adjustment spring	AISI 302 / 1.4300
27	Upper spring guide	AISI 316L / 1.4404
28	Adjustment screw	Brass
29	Bearing	Corrosion resistant steel
30	* O-ring	NBR
31	Adjustment knob	AISI 316L / 1.4404
32	Shaft ring	Stainless steel
33	Cover nut	Plastic
40	Тор сар	AISI 316L / 1.4404
41	* O-ring	NBR

* Available spare parts. ** Others on request.
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.

TYPICAL INSTALLATION



Blanketing with overpressure







ORDERING COD	DES BKR2												
Valve model	BR	Α	5	Т	Е	I	Х	X	X	0	D	25	I
BKR2 – AISI 316L / 1.4404 blanketing low pressure regulator	BR												
BKR2 – Hastelloy C22 / 2.4602 blanketing low pressure regulator	BRH												
Regulating range													
5 to 10 mbar		0]										
10 to 50 mbar		1	1			İ							
20 to 200 mbar		2	1										
50 to 500 mbar		3											
5 to 4000 mbar (dome-loading)		A	1										
Valve seat orifice		1	1										
Seat diameter 5 mm		-	5	1									l
Seat diameter 8 mm		-	8	1									
			0	ł									
Diaphragm Diaphragm				-	-								
PTFE (Gylon)				Т									
Valve sealing													
EPDM					Е								
FPM / Viton (USP Class VI on request)					V								
Adjustment knob, top cap and leakage line con	nection												
Stainless steel adjustment knob						1							
Top cap (adjustment screw with cover)						Т	1						
Stainless steel adjustment knob w/ ISO 228 G 1/4" leakage line connection						L	1						
Stainless steel adjustment knob w/ 1/4" NPT leakage line connection						М	1						
Top cap (adjustment screw with cover) w/ ISO 228 G 1/4" leakage line connect	tion a)					U	1						
Top cap (adjustment screw with cover) w/ 1/4" NPT leakage line connection a						V	1						
Dome-loading – ISO 228 G 1/4" b)	,					X	1						
						c	ł						
Dome-loading – 1/4" NPT b)						C	-						
Gauge connections							\ \ \	-					
Without gauge connections							X	-					
Tri-clamp gauge connection on the left side (relative to flow direction) – down							7						
Tri-clamp gauge connection on the right side (relative to flow direction) – dow	nstream pres	sure					6						
Tri-clamp gauge connection on both sides – downstream pressure							5]					
Threaded gauge connection on the left side (relative to flow direction) – downs	tream pressur	e – IS	0 22	28 G	1/4"		4						
Threaded gauge connection on the right side (relative to flow direction) – down	stream pressi	ıre –	ISO 2	228 C	3 1/4	"	3						
Threaded gauge connection on both sides – downstream pressure – ISO 228	3 G 1/4"						2						
Threaded gauge connection on the left side (relative to flow direction) – dowr	nstream press	ure –	1/4"	NPT			w]					
Threaded gauge connection on the right side (relative to flow direction) – dow							Υ	1					
Threaded gauge connection on both sides – downstream pressure – 1/4" NP							Z	1					
Surface finish c)	<u> </u>							i					
Standard surface finish								Х	1				
Mirror mechanical polished external surfaces (SF1)								Р	1				
Electropolished internal wetted parts (SF5)								E	1				
									1				
Special features None									Х	-			
External sensing line conne	ction												
Internal sensing line (standard)	otion									0	1		
										1	1		
External sensing line connection – ISO 228 G 1/4"										2	-		
External sensing line connection – 1/4" NPT											1		
Pipe connection											_	-	
Clamp ferrule ASME BPE											D	-	
Clamp ferrule DIN (DIN 32676-A)											F		
Clamp ferrule ISO (DIN 32676-B)											Е		
Flanged EN 1092-1 PN 16											L		
Size													
1" or DN 25												25	
Special construction / Add	ditional option	ns											1
· · · · · · · · · · · · · · · · · · ·													- 1
ATEX compliant version Full description or additional codes have to be added in case of non-standard													

a) Mandatory in case of ATEX compliant version. b) Mandatory in case of dome-loading. c) Consult TIS.GIA – General information ADCAPure – for further details and other surface finish options.

