

1810.1 • 1/4"-2"

1820.1 • 1/4"-2"

1830.1 • 1/4"-2"

SAFETY VALVES PRESET AND LEAD SEALED WITH FREE DISCHARGE
PURSUANT CE BRAND 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTION: MALE



HYDRAULIC FEATURES

The automatic safety valve with "free discharge" is a security measure against overpressure designed to open solely by the energy of the fluid in the event the internal pressure of the system reaches the valve's predetermined maximum pressure (Preset Nominal Pressure Pnr), thus releasing the fluid through the free discharge outlet into the air. This safety valve with free discharge closes automatically when the internal pressure of the system descends below the predetermined pressure. The preset pressure (Pnr) is fitted so that each external setting is sealed to prevent non-authorized adjustments. The safety valve with automatic free discharge satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:

Maximum allowable working pressure (PN) 16 bar
Preset nominal pressure (Pnr) may be requested for a field adjustable from 0.5 to 16 bar (Factory set and sealed and thus the above must be specified when ordering)

Minimum accumulation pressure - 5%
Overpressure 10%
Reclosing value 20%
Flow coefficient (K) = 0.05 - Classified as an "Ordinary Valve" by the ISPESL (Italian Institute for Occupational Safety Prevention)

Threading:

Pipeline connections Threads according to ISO 228/1

Requirements and tests as per:

Type test (functional aspects) with reference to ISO 4126-1 § 7.2
Acceptance test Preset pressure verification according to Italian national standards (UNI 10197) UNI 10197
Manufacturing test Pressure test in line with Annex I, Section 3.2.2 of the PED Directive.



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PED OPERATING LIMITS

Code	Obturator Material	Max. allowable Pressure PS	Max. allowable Temperature TS	PED Risk Category	PED Evaluation Procedure	PED supervisory body	Acceptable Fluids
1810	Brass	16 Bar	from 0° to 220 °C	I	Module B+D	1115	S Group 1 (subject to OR approval)
1820	SBR Rubber	16 Bar	from 0° to 70 °C	I	Module B+D	1115	G Group 1 (subject to OR approval)
1830	Teflon®	16 Bar	from 0° to 180 °C	I	Module B+D	1115	G-S Group 1 (subject to OR approval)

G: Gas – S: Steam

DESIGN

Brass Body EN 12165 - CW617N
Brass bonnet dimensions 1/4"-1"1/2 EN 12164 - CW614N
Cast brass bonnet dimensions 2" EN 1982-CB753S
Other components in brass EN 12164 - CW614N
Metal seat: obturator in brass EN 12165 - CW614N
Rubber seat: obturator gasket in NBR elastomer
Teflon seat: obturator gasket in pure PTFE (Teflon)
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

Metal seat product codes			Rubber seat product codes			PTFE seat product codes		
1810.108	metal seat	1/4" M	1820.108	rubber seat	1/4" M	1830.108	PTFE seat	1/4" M
1810.112	metal seat	3/8" M	1820.112	rubber seat	3/8" M	1830.112	PTFE seat	3/8" M
1810.115	metal seat	1/2" M	1820.115	rubber seat	1/2" M	1830.115	PTFE seat	1/2" M
1810.120	metal seat	3/4" M	1820.120	rubber seat	3/4" M	1830.120	PTFE seat	3/4" M
1810.125	metal seat	1" M	1820.125	rubber seat	1" M	1830.125	PTFE seat	1" M
1810.133	metal seat	1"1/4 M	1820.133	rubber seat	1"1/4 M	1830.133	PTFE seat	1"1/4 M
1810.142	metal seat	1"1/2 M	1820.142	rubber seat	1"1/2 M	1830.142	PTFE seat	1"1/2 M
1810.150	metal seat	2" M	1820.150	rubber seat	2" M	1830.150	PTFE seat	2" M

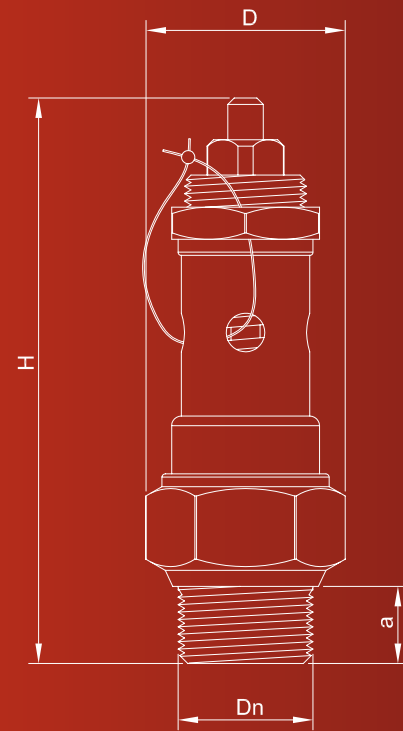
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FEATURES

Dn	D	H	a
1/4"	29	88	10
3/8"	30	87	11
1/2"	31	89	12
3/4"	43	109	15
1"	52	124	17
1"1/4	66	145	23
1"1/2	74	158	23
2"	88	177	25

SETTING

P	DISCHARGING FLOW STEAM (kg/h) 1810.1-1830.1							
	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
1	1,77	3,8	5,5	10,8	13,5	22,2	22,2	26,5
2	2,61	5,6	8,1	16	19,9	32,8	32,8	39,2
3	3,45	7,4	10,7	21,1	26,3	43,4	43,4	51,8
4	4,28	9,2	13,3	26,2	32,6	53,8	53,8	64,3
5	5,1	11	15,8	31,3	38,9	64,1	64,1	76,6
6	5,92	12,8	18,4	36,3	45,2	74,5	74,5	88,9
7	6,74	14,5	20,9	41,3	51,4	84,7	84,7	101,2
8	7,55	16,3	23,4	46,3	57,6	95	95	113,4
9	8,36	18	26	51,3	63,8	105,2	105,2	125,6
10	9,17	19,8	28,5	56,2	70	115,4	115,4	137,8
11	9,98	21,5	31	61,2	76,2	125,5	125,5	149,9
12	10,79	23,3	33,5	66,1	82,3	135,7	135,7	162,1
13	11,59	25	36	71,1	88,5	145,8	145,8	174,2
14	12,4	26,8	38,5	76	94,6	155,9	155,9	186,3
15	13,2	28,5	41	81	100,8	166,1	166,1	198,4
16	14,01	30,2	43,5	85,9	106,9	176,2	176,2	210,5

P	DISCHARGING FLOW GAS (kg/h) 1820.1-1830.1							
	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
1	2,9	6,3	9	17,8	22,2	36,6	36,6	43,7
2	4,4	9,4	13,5	26,7	33,3	54,9	54,9	65,5
3	5,8	12,6	18,1	35,7	44,4	73,2	73,2	87,4
4	7,3	15,7	22,6	44,6	55,5	91,4	91,4	109,2
5	8,7	18,8	27,1	53,5	66,6	109,7	109,7	131,1
6	10,2	22	31,6	62,4	77,7	128	128	152,9
7	11,6	25,1	36,1	71,3	88,8	146,3	146,3	174,8
8	13,1	28,2	40,6	80,2	99,9	164,6	164,6	196,6
9	14,5	31,4	45,2	89,2	111	182,9	182,9	218,5
10	16	34,5	49,7	98,1	122,1	201,2	201,2	240,3
11	17,4	37,7	54,2	107	133,2	219,5	219,5	262,2
12	18,9	40,8	58,7	115,9	144,3	237,8	237,8	284
13	20,4	43,9	63,2	124,8	155,3	256,1	256,1	305,9
14	21,8	47,1	67,7	133,7	166,4	274,3	274,3	327,7
15	23,3	50,2	72,2	142,6	177,5	292,6	292,6	349,6
16	24,7	53,3	76,8	151,6	188,6	310,9	310,9	371,4

