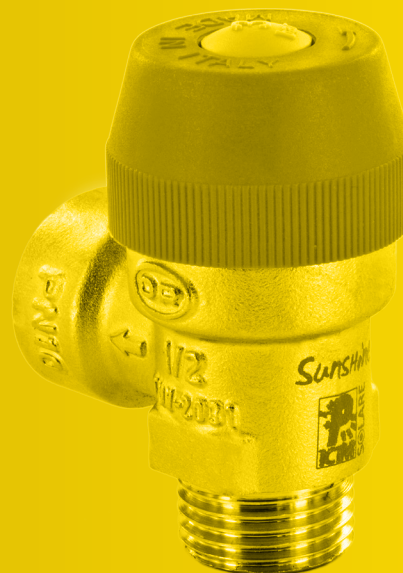




PRESET SAFETY VALVES WITH DIAPHRAGM AND HANDWHEEL ACTIVATION
FOR SOLAR SYSTEMS CE-1115 DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE



HYDRAULIC FEATURES

The "Sunshine" safety valve with manual handwheel is an automatic safety valve designed to open in the event the internal pressure of the system reaches a predetermined maximum pressure (Preset Nominal Pressure P_{nr}) allowing the water to be released through it. The safety valve resets automatically when the internal pressure of the system returns below the predetermined maximum pressure. All the moving parts of this safety valve, including the regulating spring, are isolated from heat-transfer fluids by an industrial rubber diaphragm. The "Sunshine" safety valve with manual handwheel satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PS)	10 bar
Preset nominal pressure (P_{nr})	1,5-2, 5-3-4-5-6-8 bar (factory set and sealed)
Minimum sealing pressure (P_s)	- 5 % of the P_{nr}
Overpressure (P_o)	10% of the P_{nr}
Reset value (P_r)	- 20 % of the P_{nr}
Temperature:	
maximum allowable	160 °C
Threading:	
Pipeline connection	Threads according to ISO 228/1
Compatible fluids:	
Generic fluids	water and Group 2 fluids
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Requirements and tests as per:	
Type Test (functional aspects) with reference to	ISO 4126-1 § 7.2
Solar thermal energy	EN 12976-2 Annex D par. 5.6.1.
Pressure test according to Annex I, Section 3.2.2 of the PED directive.	
PED operating limits:	
Maximum allowable temperature (TS)	160°C
Maximum allowable working pressure (PS)	10 bar
Conformity assessment procedures	modules B and D
PED risk category	IV (CE 1115)
Flow Coefficient (K) = 0.05 - Classified as an "Ordinary Valve" under EN 10412 § 11.4.2	

DESIGN

Brass Body EN 12165 - CW617N
Head valve in PA66-GF30 polyamide (nylon 66) reinforced with glass fibre
Handwheel in PA66 polyamide (nylon)
Diaphragm in 70 Sh preshaped EPDM rubber (peroxide cured)
Sm GALVANIZED STEEL spring - EN 10270-1
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)

PRODUCT CODES

0480.115 setting	1,5 bar 1/2" M/F	0480.150 setting	5 bar 1/2" M/F
0480.125 setting	2,5 bar 1/2" M/F	0480.160 setting	6 bar 1/2" M/F
0480.130 setting	3 bar 1/2" M/F	0480.180 setting	8 bar 1/2" M/F
0480.140 setting	4 bar 1/2" M/F		

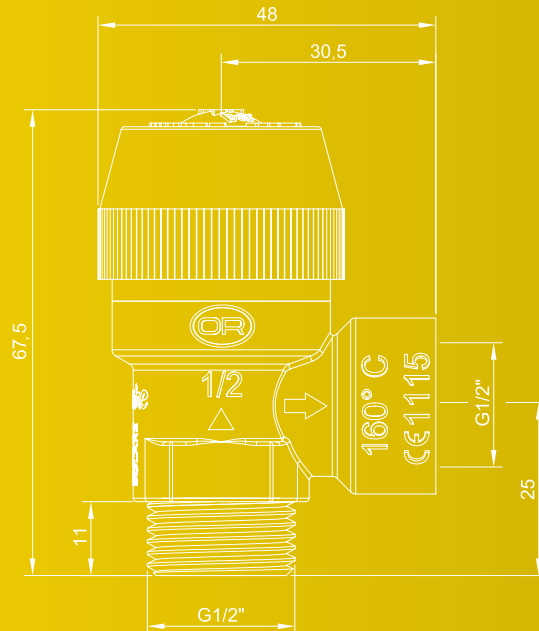


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CONNECTIONS: MALE-FEMALE



SETTINGS

P tar	Discharging flow		
	H ₂ O(L/h)	Steam (kg/h)	Gas (kg/h)
1,5	632,9	9	13,4
2,5	748,6	12,5	18,7
3	801,3	14,2	21,3
4	897	17,6	26,7
5	982,1	21,1	32
6	1059,7	24,5	37,3
8	1202,59	31,3	48