

CE 1115

R140
R140M

Description

The Giacomini safety valves of the R140/R140M range are used to avoid overpressure on the heat generators of the heating system, sanitary water system (protecting the hot water accumulation) and water systems (cold water drainage). The valves comply with Directive "PED" 2014/68/UE.

Versions and product codes

Series	Product code	Connections	Calibration pressure [bar]		
R140	R140Y002	1/2"F x 1/2"F	2,5		
	R140Y003		3		
	R140Y005		3,5		
	R140Y006		4		
	R140Y009		6		
	R140Y010		7		
	R140Y011		8		
	R140Y013		10		
	R140Y020		3/4"F x 3/4"F	2	
	R140Y022	2,5			
	R140Y023	3			
	R140Y025	3,5			
	R140Y026	4			
	R140Y029	6			
	R140Y031	8			
	R140Y032	10			
	R140Y040	1"F x 1"F		2	
	R140Y042		2,5		
	R140Y043		3		
	R140Y045		3,5		
	R140Y046		4		
	R140Y049		6		
	R140Y051		8		
	R140Y052		10		
	R140Y062		1 1/4"F x 1 1/4"F	2,5	
	R140Y063	3			
	R140Y065	3,5			
	R140Y066	4			
	R140Y069	6			
	R140M	R140MY003		1/2"M x 1/2"F	3

Technical data

- Fluids: hot water, cold water, air
- Temperature range: 5÷110 °C
- Nominal pressure: 10 bar
- Open overpressure 20%
- Closure range 20%
- PED cat.: IV

Materials

- Body: brass UNI EN 12165 CW617N
- Membrane: EPDM
- Membrane guide ring: IXEF
- Spring: steel
- Spring presser and separator: IXEF
- Knob: polyamide PA66

Operation

The safety valves are used in hot water thermal systems with a closed expansion tank, to ensure that the pressure of the fluid in the heat generator does not exceed the project limits; when the thrust of the pressurised fluid triggers a return spring on the shutter, the valve discharges a specific amount of fluid to prevent the defined pressure level from being exceeded, and then re-closes within the permitted closure range. They can also be used to drain off cold water in water systems. They are factory-calibrated and the drainage pressure value cannot be altered.

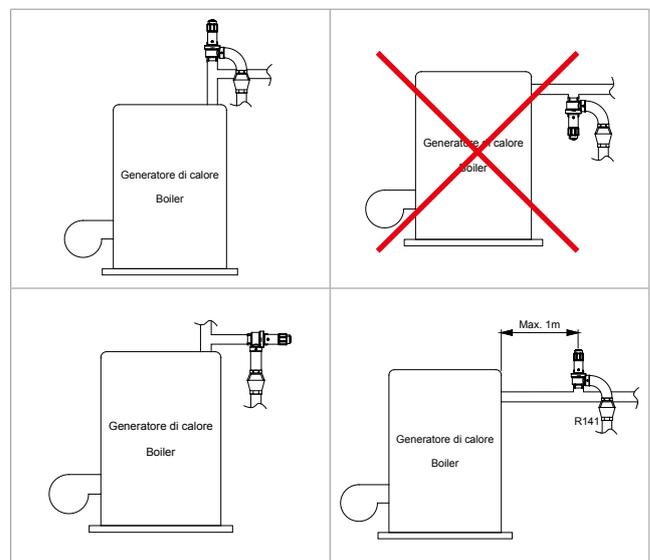
Installation

Before installing any safety valve, the technical personnel in charge of the system must size it correctly, in accordance with the current regulations. The safety valves must be installed in the highest part of the heat generator, or on the delivery pipe, no more than 1m from the generator. They must be clearly visible and easy to check. The pipe connecting the safety valve to the generator must be free of any interception and with a diameter no less than that of the valve itself. The safety valve drainage must be clearly visible and channelled into a pipe with a diameter no less than that of the valve itself, using a funnel (R141 or R141C) if necessary.



Warning.

The safety valves can be assembled vertically or horizontally, but not upside down (to prevent system impurities from settling); respect the flow direction indicated by the arrow on the body.





Performance

The Giacomini R140/R140M valves comply with the "R" collection regarding the safety of devices containing hot pressurised liquids: *"In the case of heating systems for water destined for consumption, the expansion system that protects the container can be made with a vent valve (i.e. a valve with a counter-weight or spring, whose hole diameter - in mm - is no less than $\sqrt{V/5}$ where V is the volume - in litres - of the heater, and anyway minimum 15 mm)."*

Product code	Connections	Orifice diameter [mm]	Calibration pressure [bar]	Boiler capacity [litres]	HEATING - HOT SANITARY WATER			WATER SYSTEMS		
					Outflow coefficient K_v	Drainage capacity [kg/h]	Max. generator potential [kW]	Outflow coefficient K_L	Drainage capacity [kg/h]	
R140Y002	1/2" F x 1/2" F	16	2,5	1200	0,69		455	264	0,45	7713
R140Y003			3				522	303		8449
R140Y005			3,5				588	341		9126
R140Y006			4				655	380		9756
R140Y009			6				922	535		11949
R140Y010			7				1112	645		12906
R140Y011			8				1253	727		13797
R140Y013			10				1537	891		15426
R140Y020	3/4" F x 3/4" F	20	2	2000	0,62		547	317	0,58	13655
R140Y022			2,5				641	372		15267
R140Y023			3				734	426		16724
R140Y025			3,5				828	480		18064
R140Y026			4				922	535		19311
R140Y029			6				1297	752		23651
R140Y031			8				1957	1135		27310
R140Y032			10				2400	1392		30534
R140Y040	1" F x 1" F	24	2	2880	0,62		852	494	0,62	21017
R140Y042			2,5				998	579		23498
R140Y043			3				1143	663		25741
R140Y045			3,5				1290	748		27803
R140Y046			4				1435	832		29723
R140Y049			6				2017	1170		36403
R140Y051			8				2820	1636		42035
R140Y052			10				3457	2005		46996
R140Y062	1 1/4" F x 1 1/4" F	31	2,5	4800	0,70		1703	988	0,58	36940
R140Y063			3				1952	1132		40466
R140Y065			3,5				2200	1276		43708
R140Y066			4				2450	1421		46726
R140Y069			6				3447	1999		57228
R140MY003	1/2" M x 1/2" F	16	3	1200	0,69		522	303	0,45	8449

Data calculated in accordance with UNI EN ISO 4126-1. Maximum generator power calculated as the product of the drainage capacity multiplied by the fluid vaporisation heat, at ambient pressure $W = 1,013$ bar

Accessories

It is a good idea to channel the fluids drained by the safety valves with the aid of a funnel R141 or R141C (to be ordered separately).

Relief funnel R141	Relief funnel R141C	For safety valve with drainage of:
		
R141Y003	R141CY003	1/2"
R141Y014	R141CY004	3/4"
R141Y015	R141CY005	1"
R141Y016	R141CY006	1 1/4"



Note.

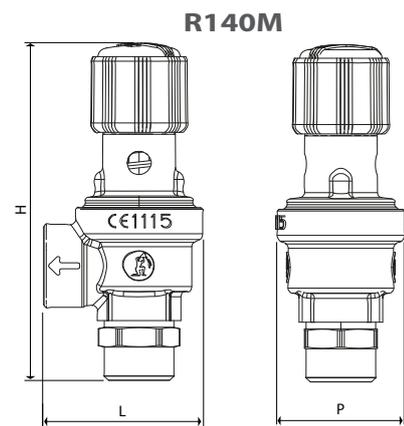
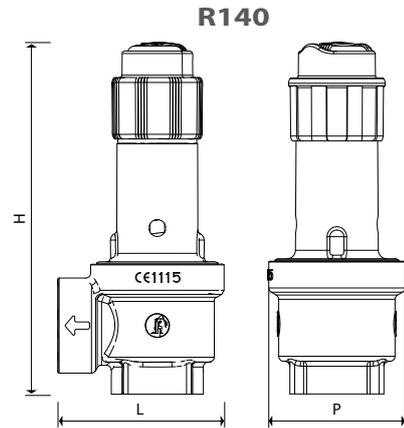
The use of the R141 relief funnels (plus curved couplings R19 and R189 if necessary) prevents any spray from reaching the electric components.

Maintenance

The valve must be checked at least once a year, by increasing the system pressure to induce drainage. If this is not possible, you can rotate the knob and check the drainage visually. Any impurities that form on the housing can be removed by means of regular purging.

Dimensions

Series	Product code	Connections	Dimensions (LxHxW) [mm]	Suitable relief funnel
R140	R140Y002	1/2"F x 1/2"F	48 x 84 x 38	R141Y003 R141CY003
	R140Y003			
	R140Y005			
	R140Y006			
	R140Y009			
	R140Y010			
	R140Y011			
	R140Y013			
	R140Y020	3/4"F x 3/4"F	58 x 94 x 47	R141Y014 R141CY004
	R140Y022			
	R140Y023			
	R140Y025			
	R140Y026			
	R140Y029			
	R140Y031			
	R140Y032			
	R140Y040	1"F x 1"F	69 x 146 x 55	R141Y015 R141CY005
	R140Y042			
	R140Y043			
	R140Y045			
	R140Y046			
	R140Y049			
	R140Y051			
	R140Y052			
	R140Y062	1 1/4"F x 1 1/4"F	86 x 151 x 69	R141Y016 R141CY006
	R140Y063			
	R140Y065			
	R140Y066			
R140Y069				
R140M	R140MY003	1/2"M x 1/2"F	48 x 102 x 38	R141Y003 R141CY003





Product specifications

R140

Ordinary membrane safety valve. Female-female connections of 1/2" F x 1/2" F, 3/4" F x 3/4" F, 1" F x 1" F, 1 1/4" F x 1 1/4" F. Fluids: hot water, cold water, air. Body in brass UNI EN 12165 CW617N. Membrane in EPDM. Separator in IXEF. Membrane guide ring in IXEF. Spring in steel. Spring presser in IXEF. Knob in polyamide PA66. Temperature range 5÷110 °C. Nominal pressure 10 bar. Open overpressure 20%. Closure range 20%. Compliance with Directive "PED" 2014/68/UE (cat.IV). Factory calibration: 2 - 2,5 - 3 - 3,5 - 4 - 6 - 7 - 8 - 10 bar.

R140M

Ordinary membrane safety valve. Male-female threaded connections of 1/2" M x 1/2" F. Fluids: hot water, cold water, air. Body in brass UNI EN 12165 CW617N. Membrane in EPDM. Separator in IXEF. Membrane guide ring in IXEF. Spring in steel. Spring presser in IXEF. Knob in polyamide PA66. Temperature range 5÷110 °C. Nominal pressure 10 bar. Open overpressure 20%. Closure range 20%. Compliance with Directive "PED" 2014/68/UE (cat.IV). Factory calibration: 3 bar.

Additional information

For additional information please check the website www.giacomini.com or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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Giacomini S.p.A. Via per Alzo, 39 - 28017 San Maurizio d'Opaglio (NO) Italy