

CE 0100
INAIL


R140D

Description

The safety valves R140D 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. The valves comply with Directive "PED" 2014/68/UE, and are calibrated and approved by INAIL (in accordance with "R" collection - Technical application specifications of Title II of Ministerial Decree 1.12.75 - Italy).

Versions and product codes

Product code	Connections	Calibration pressure [bar]	Product code	Connections	Calibration pressure [bar]
R140DY104	1/2"F x 3/4"F	2,25	R140DY144	1"F x 1 1/4"F	2,25
R140DY105		2,5	R140DY145		2,5
R140DY106		2,7	R140DY146		2,7
R140DY107		3	R140DY147		3
R140DY109		3,5	R140DY149		3,5
R140DY110		4	R140DY150		4
R140DY111		4,5	R140DY151		4,5
R140DY112		5	R140DY152		5
R140DY113		5,4	R140DY153		5,4
R140DY115		6	R140DY155		6
R140DY117		7	R140DY157		7
R140DY119		8	R140DY159		8
R140DY124	3/4"F x 1"F	2,25	R140DY164	1 1/4"F x 1 1/2"F	2,25
R140DY125		2,5	R140DY165		2,5
R140DY126		2,7	R140DY166		2,7
R140DY127		3	R140DY167		3
R140DY129		3,5	R140DY169		3,5
R140DY130		4	R140DY170		4
R140DY131		4,5	R140DY171		4,5
R140DY132		5	R140DY172		5
R140DY133		5,4	R140DY173		5,4
R140DY135		6	R140DY175		6
R140DY137		7	R140DY177		7
R140DY139		8	R140DY179		8

Technical data

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

Materials

- Body in brass UNI EN 12165 CW617N
- Knob in ABS
- Spring in steel

Operation

When the thrust of the pressurised fluid triggers a return spring on the disc, 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.

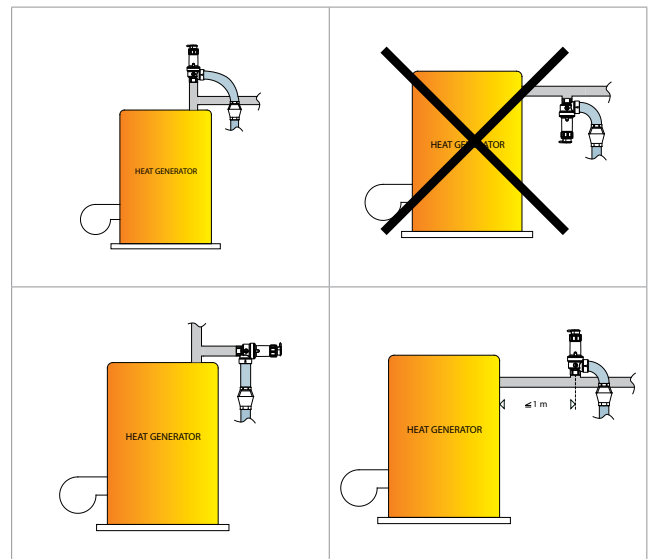
Installation

Before installing the safety valves, the personnel in charge must size them correctly, in accordance with the current regulations ("R" collection, Ch. R.2.A., 2.3.1). 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, 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.



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.



Setting

The R140D safety valves are calibrated in the factory. Each valve is supplied with an original copy of the calibration report; this document contains not only the technical data of the valve, but also the serial number (also shown on the top of the handwheel fixed to the valve body). The document is stamped and validated by the INAIL technician who witnessed the calibration operation. The user is responsible for maintaining the safety valve calibration, avoiding any type of intervention that could alter its correct functioning.


Note.

the calibration report must be stored with great care; copies cannot be issued if the original is lost.

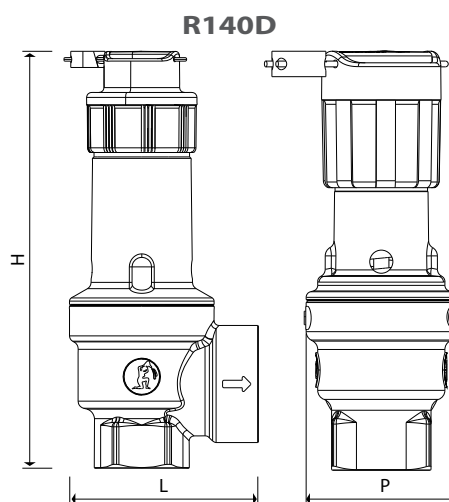
Performance

Product code	Connections	Orifice diameter [mm]	Net section [mm ²]	Calibration pressure [bar]	HEATING - HOT SANITARY WATER		
					Outflow coefficient K _d	Drainage capacity in accordance with "R" collection [kg/h]	Maximum generator potential [kW]
R140DY104	1/2"F x 3/4"F	15	176,71	2,25	0,736	210,91	122,3
R140DY105				2,5		229,52	133,1
R140DY106				2,7		243,86	141,4
R140DY107				3		263,04	152,6
R140DY109				3,5		296,34	171,9
R140DY110				4		329,73	191,2
R140DY111				4,5		360,16	208,9
R140DY112				5		396,79	230,1
R140DY113				5,4		425,65	246,9
R140DY115				6		450,20	261,1
R140DY117				7		520,23	301,7
R140DY119				8		585,26	339,5
R140DY124	3/4"F x 1"F	20	314,16	2,25	0,771	392,78	227,8
R140DY125				2,5		427,44	247,9
R140DY126				2,7		454,16	263,4
R140DY127				3		489,88	284,1
R140DY129				3,5		551,89	320,1
R140DY130				4		614,07	356,2
R140DY131				4,5		670,76	389,0
R140DY132				5		738,97	428,6
R140DY133				5,4		792,71	459,8
R140DY135				6		838,44	486,3
R140DY137				7		968,87	561,9
R140DY139				8		1089,98	632,2
R140DY144	1"F x 1 1/4"F	25	490,87	2,25	0,736	585,86	339,8
R140DY145				2,5		637,55	369,8
R140DY146				2,7		677,40	392,9
R140DY147				3		730,68	423,8
R140DY149				3,5		823,17	477,4
R140DY150				4		915,92	531,2
R140DY151				4,5		1000,47	580,3
R140DY152				5		1102,21	639,3
R140DY153				5,4		1182,37	685,8
R140DY155				6		1250,59	725,3
R140DY157				7		1445,12	838,2
R140DY159				8		1625,76	942,9
R140DY164	1 1/4"F x 1 1/2"F	32	804,24	2,25	0,723	1073,33	622,5
R140DY165				2,5		1168,04	677,5
R140DY166				2,7		1241,04	719,8
R140DY167				3		1338,65	776,4
R140DY169				3,5		1508,10	874,7
R140DY170				4		1678,03	973,3
R140DY171				4,5		1832,92	1063,1
R140DY172				5		2019,32	1171,2
R140DY173				5,4		2166,18	1256,4
R140DY175				6		2291,16	1328,9
R140DY177				7		2647,56	1535,6
R140DY179				8		2978,50	1727,5



Dimensions

Series	Product code	Connections	Dimensions (LxHxW) [mm]	Suitable relief funnel
R140D	R140DY104	1/2"F x 3/4"F	53 x 109 x 39	R141Y014 R141CY004
	R140DY105			
	R140DY106			
	R140DY107			
	R140DY109			
	R140DY110			
	R140DY111			
	R140DY112			
	R140DY113			
	R140DY115			
	R140DY117			
	R140DY119			
	R140DY124	3/4"F x 1"F	66 x 138 x 49	R141Y015 R141CY005
	R140DY125			
	R140DY126			
	R140DY127			
	R140DY129			
	R140DY130			
	R140DY131			
	R140DY132			
	R140DY133			
	R140DY135			
	R140DY137			
	R140DY139			
	R140DY144	1"F x 1 1/4"F	77 x 170 x 59	R141Y016 R141CY006
	R140DY145			
	R140DY146			
	R140DY147			
	R140DY149			
	R140DY150			
	R140DY151			
	R140DY152			
	R140DY153			
	R140DY155			
	R140DY157			
	R140DY159			
	R140DY164	1 1/4"F x 1 1/2"F	88 x 186 x 69	R141Y017
	R140DY165			
	R140DY166			
	R140DY167			
	R140DY169			
	R140DY170			
	R140DY171			
	R140DY172			
	R140DY173			
	R140DY175			
	R140DY177			
	R140DY179			



Accessories

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

Relief funnel R141	Relief funnel R141C	For safety valve with drainage of:
		
R141Y014	R141CY004	3/4"
R141Y015	R141CY005	1"
R141Y016	R141CY006	1 1/4"
R141Y017	-	1 1/2"


Note.

the use of the R141, R141C relief funnels (plus curved couplings R19 and R189 if necessary) prevents any spray from reaching the electric components.

Product specifications

R140D

Safety valve - INAIL compliant. Female-female threaded connections of 1/2" F x 3/4" F, 3/4" F x 1", 1" F x 1 1/4" F, 1 1/4" F x 1 1/2" F. Fluids: hot water, air. Body in brass UNI EN 12165 CW617N. Knob in ABS. Spring in steel. Temperature range 5÷110 °C. Nominal pressure 10 bar. Open overpressure 10%. Closure range 20%. Compliance with Directive "PED" 2014/68/UE (cat.IV). Factory calibration 2,25 - 2,5 - 2,7 - 3 - 3,5 - 4 - 4,5 - 5 - 5,4 - 6 - 7 - 8 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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