


R144ST

Description

The R144ST thermal safety relief valve is a device that limits the temperature of the water in multi-fuel or solid (non-pulverized) fuel generators equipped with a built-in storage tank or emergency heat exchanger (for immediate cooling). When the calibration temperature is reached, the valve begins discharging the right amount of water to keep the generator temperature within the safety limits.

The R144ST valve complies with EN 14597. It can be combined with solid (non-powdered) fuel generators with a power level lower than 100 kW, in accordance with the plant engineering layouts of the EN 12828 standards.

Versions and product codes

Product code	Connections	Calibration temperature [°C]
R144SY001	3/4"	95

Technical data

- Max. working pressure: 10 bar
- Calibration temperature: 95 °C
- Working temperature range: 92÷112 °C
- Ambient temperature range: 0÷80 °C
- Drainage flow rate with $\Delta p = 1$ bar: 3 m³/h
- Fluids: water
- Connections: female threaded connections G 3/4" (ISO 228/1)
- Probe housing: G 1/2"M
- Capillary pipe length: 1300 mm
- Dual safety sensor.
- Adjustable blower-holder support with drain button.

Materials

- Body: brass UNI EN 12165 CW617N
- Command stem: brass UNI EN 12164 CW614N
- Gaskets: EPDM
- Spring: carbon steel C70
- Blower-holder support and reset button: Nylon PA66

Operation

As the temperature of the water in the circuit rises, the liquid in the sensitive element (dual safety sensor) evaporates and, as it expands, it opens the valve shutter and thereby allows the water to circulate.

The sensor has two expansion elements to ensure the valve can work even if one sensitive part is faulty. The blower-holder support can be adjusted.

It has a manual button for drain operations.

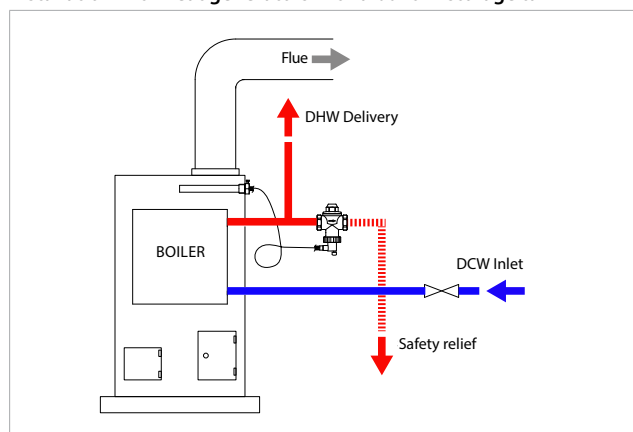
Installation

Before installing the valve, make sure there are no impurities in the system that could obstruct or damage the seal of the valve itself. Install a Y-filter on the cold water inlet and, if necessary, a pressure reducer calibrated at the required operating pressure. The valve temperature sensor should be assembled on the machine or on the delivery pipe, as close as possible to the heat generator or at least at a distance compatible with the reference standard.

The valve must be installed on a horizontal pipe with a diameter equal to the valve outlet (do not use reduction units); there must be no more than two bends. The drainage section must not have any upward facing parts; use a visible relief funnel in the connection with the drainage pipe.

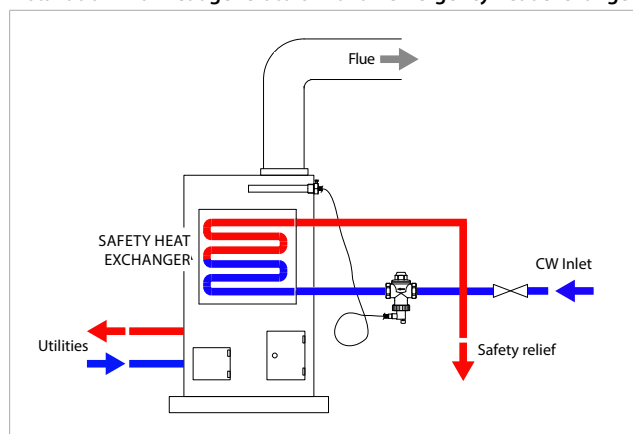
The drain button allows the device to drain off the water manually; this operation should be carried out at regular intervals (at least every time the system is restarted) to check the device is working properly.

Installation with heat generators with a built-in storage tank



When the calibration temperature is reached, the R144ST valve opens to discharge the hot water from the generator's built-in storage tank, in order to lower its temperature.

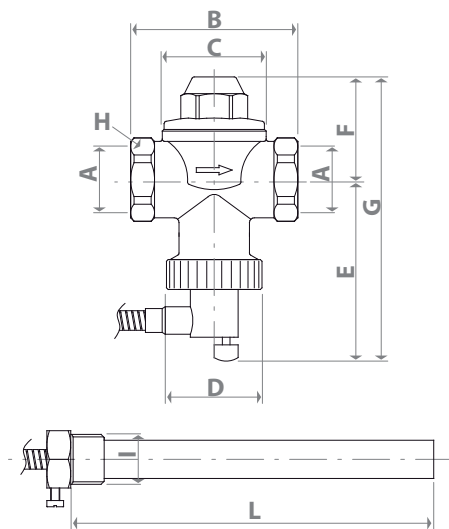
Installation with heat generators with an emergency heat exchanger



When the calibration temperature is reached, the R144ST valve opens to let cold water circulate in the safety heat exchanger, in order to lower its temperature.



Dimensions



Product code	A	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H	I	L [mm]
R144SY001	G3/4"	70	Ø 43	Ø 40	76	43	119	ex.32	G1/2"	152

Product specifications

R144ST

Thermal safety relief valve. With dual safety sensor. Complete with remote probe with housing and G 1/2" male connection. G 3/4" female connections. Capillary pipe length 1300 mm. Brass body, steel spring, EPDM gaskets. Max. working pressure 10 bar. Working fluid: water. Calibration temperature 95°C. Working range: 92 ÷ 112°C. Max. sensor temperature 122°C. Ambient temperature range: 0 ÷ 80°C.

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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