



R99S

Description

The R99S automatic air vent valve is ideal for use in solar thermal systems. It bleeds off the air that forms in the solar circuit, especially during the system filling phase. This avoids any negative effects that could jeopardise the efficiency and lifespan of the system. It is made of special materials that allow operation at high temperatures with glycol water.

Technical data

- Max. working pressure of air vent: 5 bar
- Max. working pressure: 10 bar
- Temperature range: -20÷180 °C
- Fluids: water and glycol solutions (max. 50 %)

Characteristics and materials

The R99S automatic air vent valves are designed to ensure a high output flow rate despite their relatively small dimensions; this means they can even be used in applications with limited space.

The components of the bleed mechanism are made of reliable, high-performance materials with special attention paid to the duration of the mechanical characteristics over time. The o-rings are made of solar EPDM. The internal spring of the shutter is made of stainless steel. The internal float is made of TPX, resistant to high temperatures.

Performance

The table and graph show the **outlet flow rates** in standard conditions, as the **relative system pressure** varies.

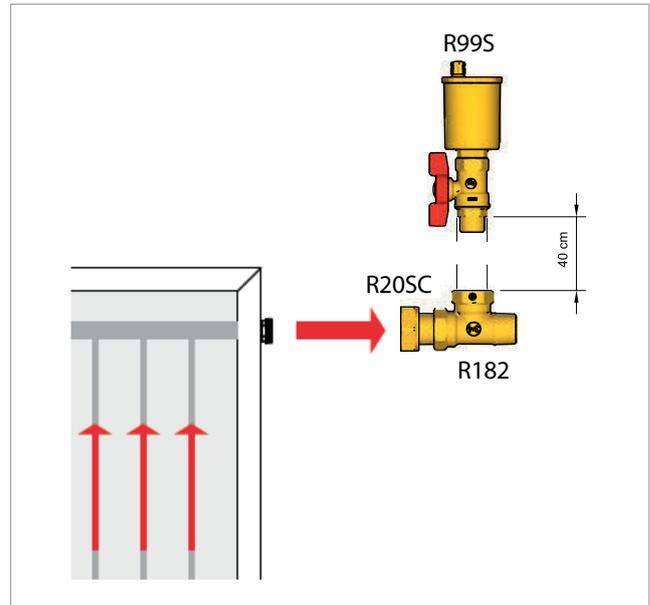


Installation

The R99S automatic air vent valves are usually installed on the top of the solar panels and in the parts of the pipes where air pockets could form.

For installation on solar panels, use the 3-piece straight fitting (R20SC) and the T-fitting (R182). You are advised to place a pipe of about 40 cm between the T-fitting and the R99S valve.

After bleeding the air during the system filling and start-up phase, the valve must be intercepted by a ball valve (supplied) to ensure that the internal components are not exposed to high temperatures and continuous operating conditions.



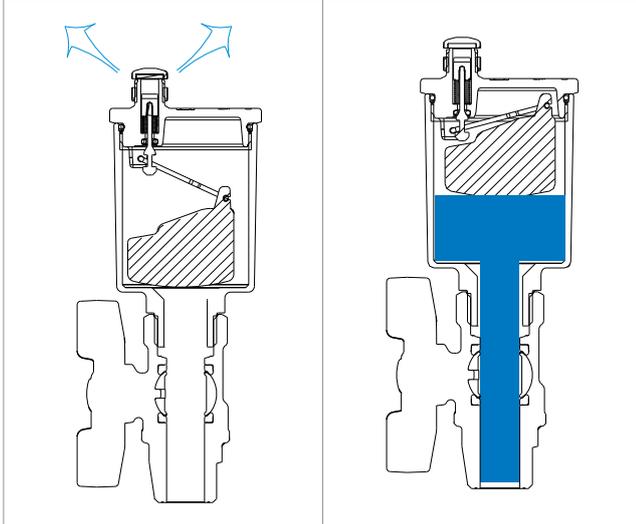
 **Warning.**
The automatic air vent valves must be installed vertically, with the cap facing upwards.
You are advised to install them in an easily accessible position.



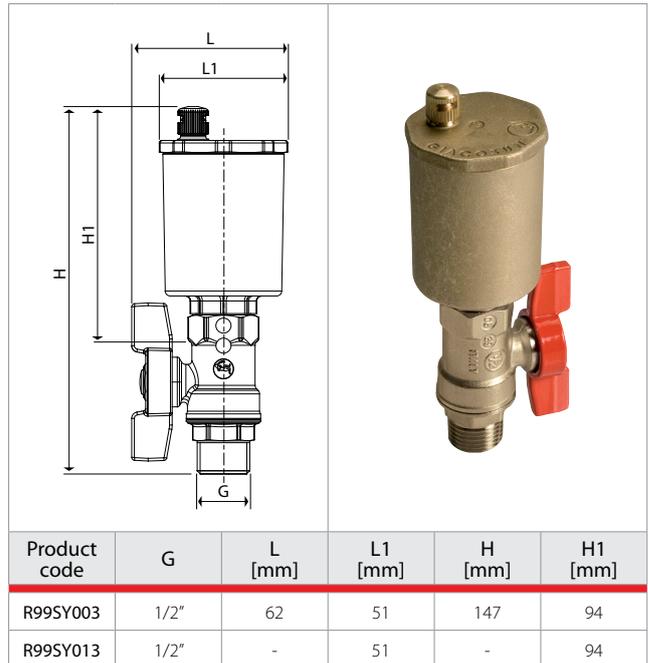
Operation

The operating principle of the automatic air vent valve is very simple, based on the concept of objects floating in a fluid.

When there is no air accumulation in the valve cylinder, the float is up and keeps the shutter closed thanks to the mechanism. The float lowers when air accumulates in the cylinder, and this causes the opening of the shutter and the subsequent venting (which continues until the initial conditions are restored). During the system filling phase, there is no water in the cylinder so the float is completely down, allowing the air to bleed off quickly.



Dimensions



Product specifications

R99SY003

Automatic air vent valve, ideal for solar thermal systems. Complete with ball valve. Body and cover in brass UNI EN 12165 CW617N. O-ring in EPDM. Internal shutter spring in stainless steel. Float in TPX. Fluids: water and glycol solutions (max. 50 %). Temperature range -20÷180 °C. Max. working pressure 10 bar. Max. operating pressure of air vent 5 bar.

R99SY013

Automatic air vent valve, ideal for solar thermal systems. Body and cover in brass UNI EN 12165 CW617N. O-ring in EPDM. Internal shutter spring in stainless steel. Float in TPX. Fluids: water and glycol solutions (max. 50 %). Temperature range -20÷180 °C. Max. working pressure 10 bar. Max. operating pressure of air vent 5 bar.

Additional information

For further information, visit the website www.giacomini.com or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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