

# Automatic air vent and shut-off valve for solar heating systems

## 250 series



cert. n° 0003  
ISO 9001

01133/07 GB

Replaces 01133/06 GB



### Function

Automatic air vents are used in the closed circuits of solar heating systems to allow air contained in the fluid to be released automatically by means of a valve operated by a float in contact with fluid in the system.

The shut-off valves are on the contrary typically used in combination with the automatic air vent valves to be able to cut them off after filling the circuit of solar heating systems.

These particular series of products have been specially made to work at high temperature with a glycol medium.



### Product range

Code 250031 Automatic air vent for solar systems \_\_\_\_\_ size 3/8" M  
Code R29284 Shut-off valve for automatic air vent \_\_\_\_\_ sizes 3/8" M x 3/8" F

### Technical specifications of 250 series valve

Materials: - body: brass EN 12165 CW617N, chrome plated  
- cover: brass EN 12165 CW617N, chrome plated  
- control spindle: alloy CR UNI EN 12164 CW602N  
- float and conveyor: high resistance polymer  
- seals: high resistance elastomer

Medium: water, glycol solutions  
Max. percentage of glycol: 50%

Working temperature range: -30-180°C

Max. working pressure: 10 bar

Max. discharge pressure: 5 bar

Connections: 3/8" M

### Technical specifications of valve code R29284

Materials: - body: brass EN 12165 CW 617N, chrome plated  
- ball: brass EN 12164 CW 614N, chrome plated  
- seals: high resistance elastomer

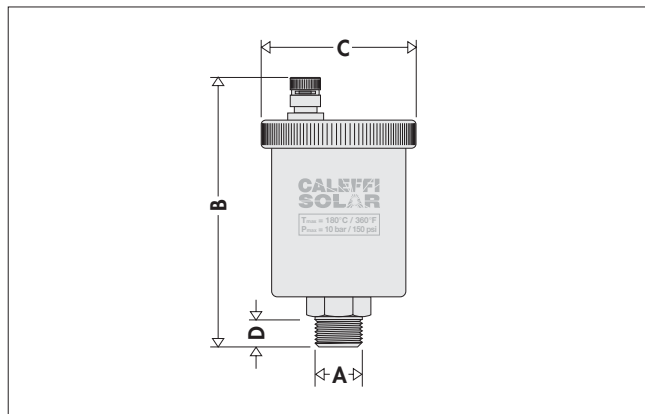
Medium: water, glycol solutions  
Max. percentage of glycol: 50%

Working temperature range: -30-200°C

Max. working pressure: 10 bar

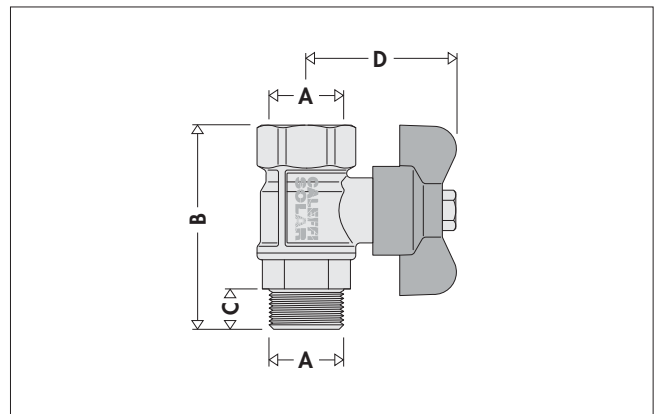
Connections: 3/8" F x 3/8" M

### Dimensions



Code	A	B	C	D	Weight (kg)
250031	3/8"	97	∅ 55	11	0,32

### Dimensions

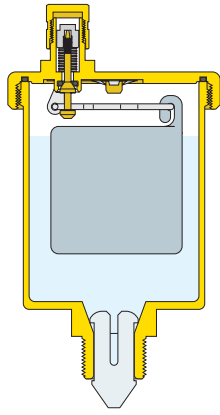


Code	A	B	C	D	Weight (kg)
R29284	3/8"	46	8,5	35	0,90

## Operating principle

The accumulation of air bubbles in the valve body causes the float to drop so that the air vent valve opens.

This phenomenon occurs, and consequently the valve functions correctly, as long as the water pressure remains below the maximum discharge pressure.

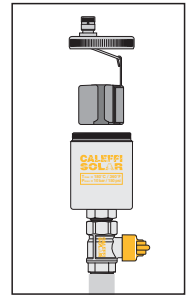


## Maintenance

250 series automatic air vent is made to allow checking of the internal mechanism.

Access to the moving parts that govern the air vent is attained by simply taking off the top cover.

A shut-off valve must be installed before the 250 series device in order to simplify any maintenance work and for shutting off after the phase of filling.



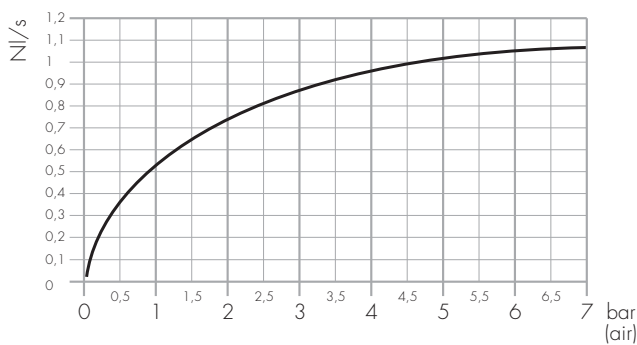
## Construction details

### Resistance to temperature

The high performance level of this series of automatic air vent valves, required moreover in solar heating systems, is ensured by using materials that are highly resistant to temperature. They allow maintaining the functional features of the valve with glycol water temperatures up to 180°C.

### Hydraulic characteristics

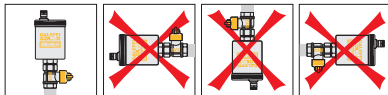
Discharge capacity when the system is being filled



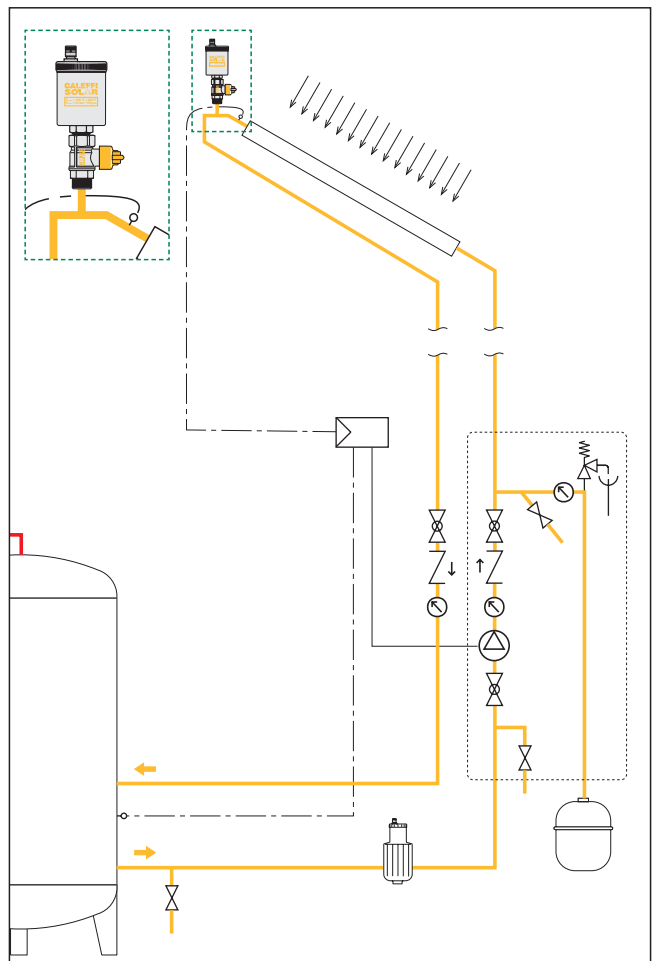
## Installation

250 series automatic air vents must be installed in vertical position, typically on the top of the solar heating system panels and at points in the circuit where air bubbles gather that need to be discharged.

They must always be installed in combination with a shut-off valve. This is necessary since the vent valves must be shut off after use to remove the air in the phase of filling and starting up the system.



## Application diagram



## SPECIFICATION SUMMARIES

### 250 series

Automatic air vent for solar heating systems. 3/8" M threaded connections. Brass body and cover. Chrome plated. Float in high resistance polymer. Seals in high resistance elastomer. Medium: water and glycol solutions. Maximum percentage of glycol: 50%. Working temperature range: -30-180°C. Maximum working pressure: 10 bar. Maximum discharge pressure: 5 bar.

### Code R29284

Shut-off valve for automatic air vent for solar heating systems. 3/8" F x 3/8" M threaded connections. Chrome plated brass body and ball. Seals in high resistance elastomer. Medium: water and glycol solutions. Maximum percentage of glycol: 50%. Working temperature range: -30-200°C. Maximum working pressure: 10 bar.

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice.

