

High-performance automatic air vent valves for solar heating systems

DISCALAIR SOLAR



251 series



cert. n° 0003
ISO 9001

01135/07 GB

Replaces 01135/06 GB



Function

DISCALAIR devices are used in air-conditioning systems or in the phase of filling and starting solar heating systems to discharge even large quantities of air that has formed in the circuits. This function is performed even when there is considerable pressure thanks to the special geometry of the discharge mechanism, which is identical to the one on DISCAL 551 series deaerators.

This particular series of automatic air vent valves has been specifically designed to work at high temperature with a glycol medium, which is typical of solar heating systems.

Product range

Code 251004 High-performance automatic air vent valve for solar heating systems size 1/2" F

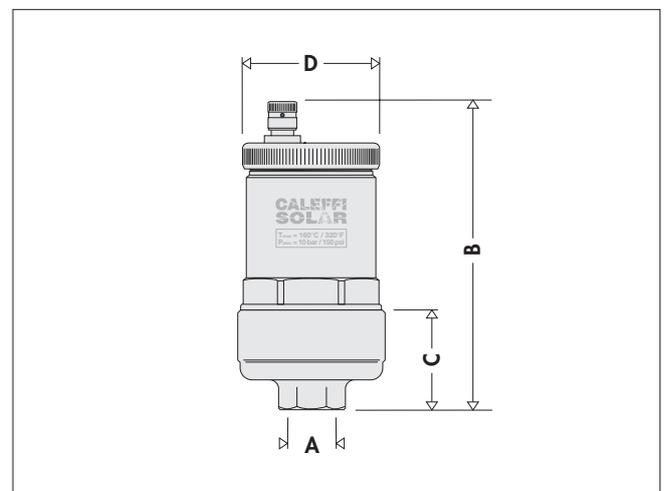
Technical specifications

- Materials: - body brass EN 12165 CW617N, chrome plated
- cover: brass EN 12165 CW617N, chrome plated
- float: high resistance polymer
- float guide: brass EN 12164 CW614N
- obturator stem: dezincification resistant alloy
- CR** EN 12164 CW602N
- float lever: stainless steel
- spring: stainless steel
- hydraulic seals: high resistance elastomer

Medium: water, glycol solutions
 Max percentage of glycol: 50%
 Temperature range: -30-160°C
 Max working pressure: 10 bar
 Max discharge pressure: 10 bar

Connections: 1/2" F

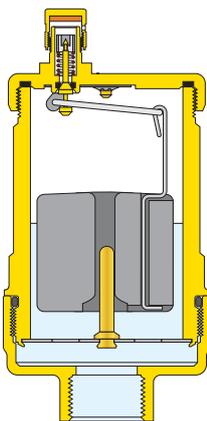
Dimensions



Code	A	B	C	D	Weight (kg)
251004	1/2"	114,5	35	55	0,62

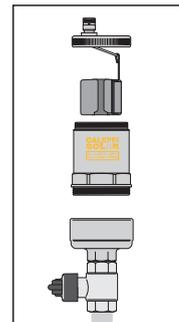
Operating principle

The accumulation of air bubbles in the valve body causes the float to drop so that the obturator opens. This action, and therefore correct valve operation, is ensured as long as the water pressure remains under the maximum discharge pressure.



Maintenance

The DISCALAIR automatic air vent valve is built to permit inspecting the internal mechanism. Access to the moving parts that govern the air vent is attained by simply taking off the top cover. The body moreover can be separated from the bottom portion connected to the pipe. A shut-off valve must be installed before the DISCALAIR device in order to simplify any maintenance work and for shutting off after the phase of filling.



Construction details

Resistance to heat and high discharge pressure

The high performance of this series of automatic air vent valves, moreover required in solar heating systems, is ensured by the use of particularly heat resistant materials.

They allow maintaining the functional features of the valve with glycol water temperatures up to 160°C. The internal geometry of the valve has been designed to be able to discharge the air up to a pressure of 10 bar.

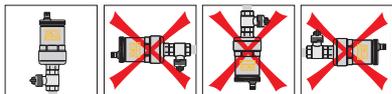
Hydraulic characteristics

Discharge capacity in the phase of filling the system



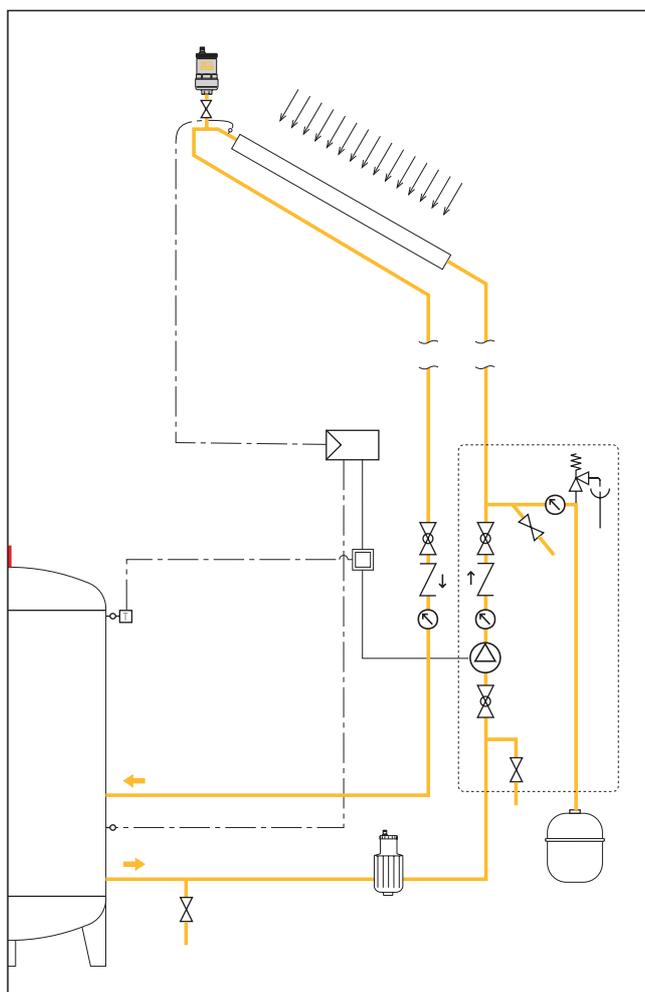
Installation

DISCALAIR series 251 automatic air vent valves must be installed vertically, typically on the top of solar heating system panels and at points in the circuit where bubbles of air that must be discharged gather.



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

DISCALAIR SOLAR 251 series

High-performance automatic air vent valve for solar heating systems. Connections 1/2" F. Brass body, chrome plated. High resistance polymer float. Stainless steel float lever and spring. Brass float guide. Dezincification resistant alloy obturator stem. High resistance elastomer hydraulic seals. Medium water and glycol solutions; maximum percentage of glycol 50%. Temperature range -30–160°C. Maximum working pressure 10 bar. Maximum discharge 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.

