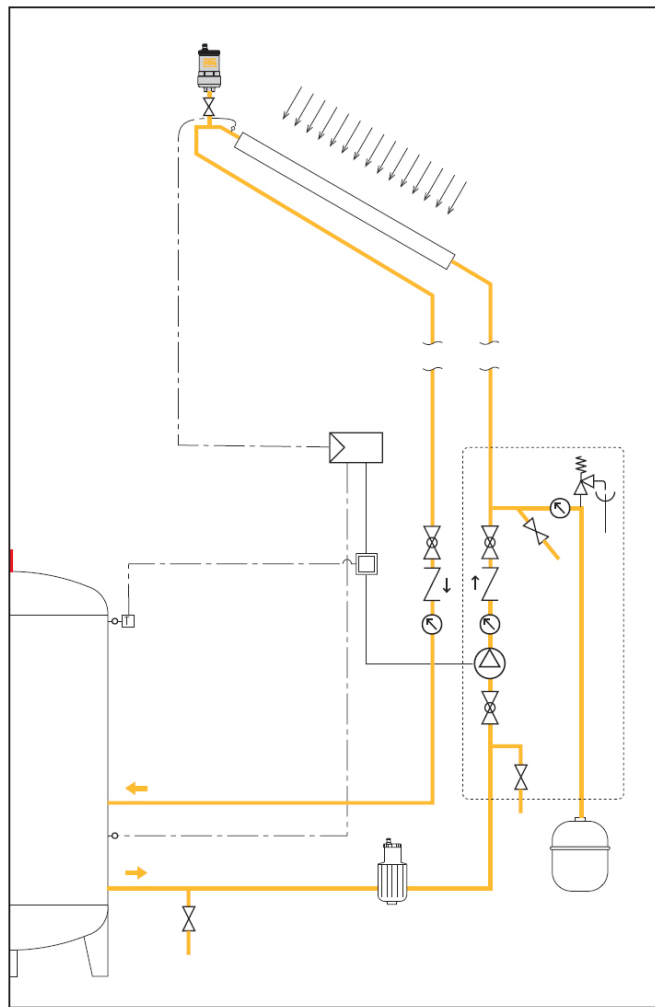


Application Diagram



Warranty

If any material defect arising from the manufacturing process is found in a new tap or valve Waterware Services Ltd. will undertake to repair or replace it (at its option). This undertaking will not apply if:

1. The defect is brought to Waterware's attention later than 5 years from the date of manufacture.
2. Failure by any person to follow installation instructions or installation in an environment outside the recommended limitations or relevant NZ and or Australian Standards and local plumbing codes. No installation should proceed without installation instructions and claims instructions were missing are not accepted as a means of avoiding this condition.
3. Evidence cannot be produced which confirms that the relevant tap or valve was purchased from a known customer of Waterware Services Ltd.
4. Repair work is undertaken without prior arrangement with Waterware Services Ltd.
5. Normal maintenance requirements, refer to specific product maintenance guides.

Waterware Services Ltd. shall in no way be liable for any loss, damage (direct, indirect or consequential), cost or expense suffered or incurred by the purchaser. Obligations accepted by Waterware Products Ltd. are.....

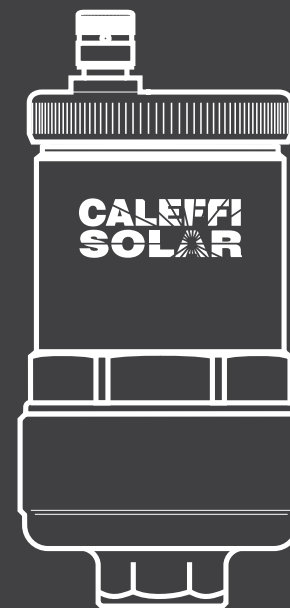
..... in addition to all other rights and remedies had by the Purchaser in law in respect of the valve and does not limit the right the Consumer may have under the Consumers Guarantee Act 1993.

..... subject to the exceptions and conditions previously listed. All expressed or implied conditions, statements or warranties as to the quality or fitness on any purpose of a tap or valve or otherwise are hereby expressly excluded to the fullest extent permitted by law except under conditions and warrants which cannot be legally excluded by law and which are intended in the contract for the supply of the valve by the Trade Practises and any other Act of Law.


WATERWARE

Solar Automatic Air Vent

AV251004 - 10BAR



Technical Installation Manual

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SOLAR AUTOMATIC AIR VENT - HIGH PERFORMANCE

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.

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 $\text{CE EN 12164 CW602N}$

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

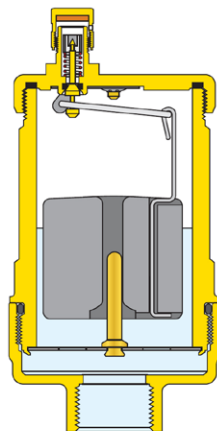
Max working pressure - 10bar

Max discharge pressure - 10bar

Connections - $\frac{1}{2}$ " Female

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.



Construction Details

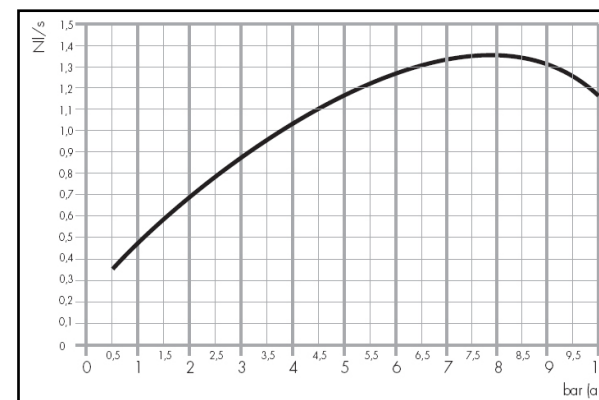
Resistance to heat and high discharge pressure

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 10bar.

Hydraulic characteristics

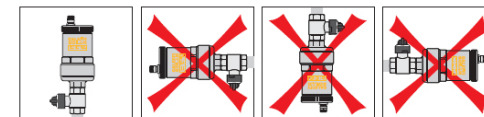
Discharge capacity in the phase of filling the system.



Installation

Discalair series 251 automatic air vent valves must be installed vertically 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.



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.

