

DISCALAIR high-performance automatic air vent

551 series



Function

DISCALAIR devices are able to release large quantities of air that has formed in the hydraulic circuits of heating and air conditioning systems, even against substantial pressure values.

This venting capacity is due to the particular geometry of the venting mechanism, identical to that of the DISCAL deaerators 551 series.

This prevents the appearance of negative phenomena that might prejudice the working life and performance of the heating system, such as:

- corrosive processes caused by oxygen;
- air pockets in the heating elements;
- cavitation in the circulating pumps.

Product range

Code 551004 High-performance automatic air vent

size 1/2" F

Technical specifications

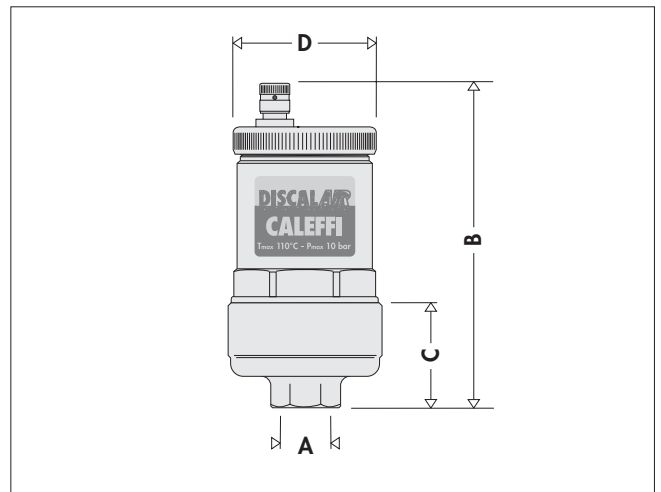
| | | |
|------------|--------------------|-----------------------|
| Materials: | - body: | brass EN 12165 CW617N |
| | - cover: | brass EN 12165 CW617N |
| | - float: | PP |
| | - float guide: | brass EN 12164 CW614N |
| | - obturator stem: | brass EN 12164 CW614N |
| | - float lever: | stainless steel |
| | - spring: | stainless steel |
| | - hydraulic seals: | EPDM |

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

Max. working pressure: 10 bar
 Max. discharge pressure: 10 bar
 Temperature range: 0–110°C

Connections: 1/2" F

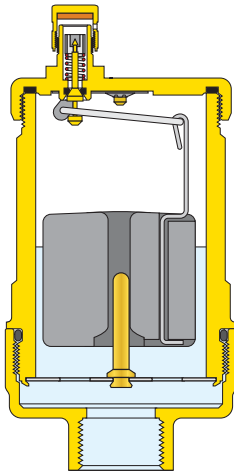
Dimensions



| Code | A | B | C | D | Weight (kg) |
|--------|------|-----|----|----|-------------|
| 551004 | 1/2" | 115 | 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.



Construction details

High discharge pressure

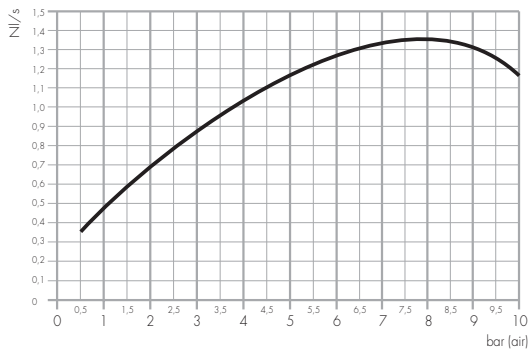
The valve is able to release large quantities of air up to a pressure of 10 bar, thanks to the particular internal geometry used in its design.

Operating chamber

The valve body is made in such a way as to have a long chamber for movement of the float controlling the obturator. This characteristic prevents impurities in the water from reaching the seal housing.

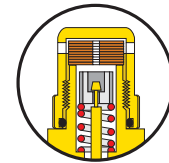
Hydraulic characteristics

Discharge capacity in the phase of filling the system



Installation

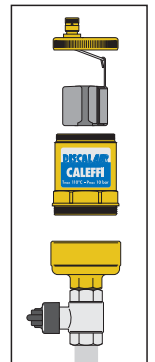
- DISCALAIR automatic air vent 551 series must be installed in a vertical position.
- We recommend installing a shut-off valve upstream of the DISCALAIR device to simplify any maintenance operations.
- During operation the upper cap must be loosened in the normal version, whereas it must be completely tightened in the hygroscopic version.
- The installation of the valve in places subject to freezing is not recommended; if this is the case, the automatic deaerator Caleffi MAXCAL 501 series should be used.
- It is recommended that **the venting valve cap be replaced by the Caleffi AQUASTOP hygroscopic safety cap code R59681 in all cases where inspection is not possible.**



The operating principle is based on the properties of the cellulose fibre disks forming the retaining cartridge. These disks increase their volume by 50% when they come into contact with water, thus closing the valve. This avoids any damage in the event of water leakage.

Maintenance

The DISCALAIR automatic air vent is designed to enable the inspection of the internal mechanism. Access to the moving parts that control the air outlet is obtained by simply removing the upper cover. The body moreover can be separated from the lower part connected to the pipe.



SPECIFICATION SUMMARIES

DISCALAIR 551 series

High-performance automatic air vent. 1/2" F connections. Brass body and cover. PP float. Brass float guide. Stainless steel float lever and spring. Brass obturator stem. EPDM hydraulic seals. Medium water and glycol solutions; maximum percentage of glycol 50%. Temperature range 0–110°C. Maximum working pressure 10 bar. Maximum discharge pressure 10 bar.

Code R59681

Hygroscopic safety cap. Brass body. EPDM hydraulic seals. Cellulose fibre disks seal cartridge; fibre volume increase on contact with water 50%. Maximum working pressure 10 bar. Maximum working temperature 110°C.

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

