

DISCALAIR™ high-performance automatic air vent

551 series



Function

DISCALAIR automatic air vents release air that forms in the hydraulic circuits of heating and air conditioning systems, with pressures to 150 psi.

The venting air discharge capacity is very high capable of expelling over 4 standard cubic feet per minute (SCFM).

The circulation of fully de-aerated water or glycol-water mediums enables the equipment to operate under optimum conditions, free from noise, corrosion, localized overheating or mechanical damage.

Product range

Code 551004 High-performance automatic air vent _____ size 1/2"
 Code R59681 Hygroscopic safety vent cap _____

Technical specifications

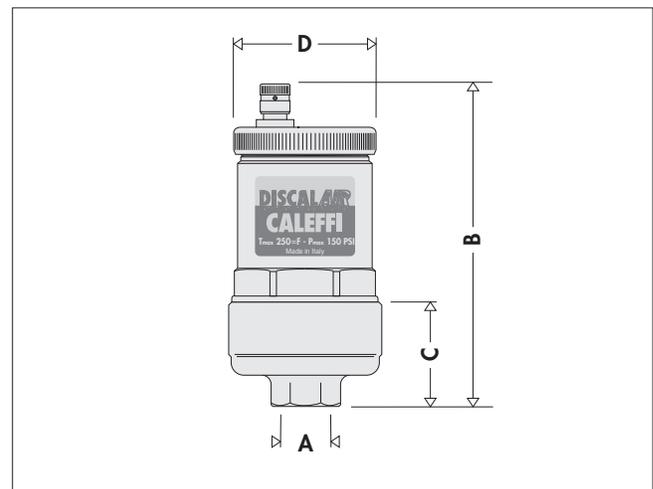
Materials: - body: brass
 - cover: brass
 - float: PP
 - float guide: brass
 - release valve stem: brass
 - float lever: stainless steel
 - spring: stainless steel
 - hydraulic seals: EPDM

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

Max. working pressure: 150 psi (10 bar)
 Max. discharge pressure: 150 psi (10 bar)
 Temperature range: 32–250°F (0–120°C)

Connections: 1/2" NPT female

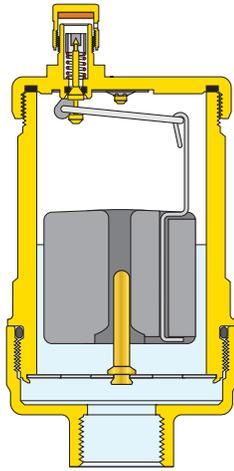
Dimensions



Code	A	B	C	D	Weight (lb)
551004	1/2"	4 3/8"	1 3/8"	2 3/16"	1.36

Operating principle

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

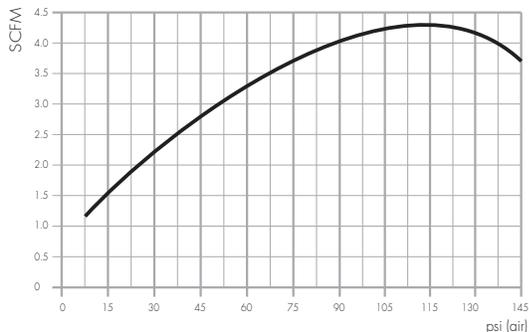
The automatic air vent releases large quantities of air up to a pressure of 150 psi, due to a large capacity internal venting mechanism.

Operating chamber

The vent body is a long chamber for the movement of the float, which prevents any debris present in the water from reaching the sealing seat in the automatic air release valve at the top of the chamber.

Hydraulic characteristics

Discharge capacity



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 vent to simplify any maintenance operations.
- During operation the standard supplied upper cap must be loosened in the normal version. If, however, the alternate hygroscopic safety cap (purchased separately) is installed, it must be completely tightened.
- The installation of the valve in places subject to freezing is not recommended.
- It is recommended that **the standard venting valve cap (part number 59119) be replaced by the Caleffi hygroscopic safety cap code R59681 in all cases where inspection is not possible.**

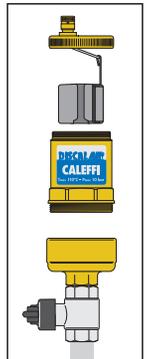


The hygroscopic safety vent operating principle is based on the properties of the cellulose fibre disks forming the retaining cartridge. These disks increase their volume by 50% when they come into contact with water, thus closing the valve. This avoids any damage in the event of water leakage.



Maintenance

The DISCALAIR automatic air vent is designed for easy 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" NPT female connections. Brass body and cover. PP float. Brass float guide. Stainless steel float lever and spring. Brass air release valve stem. EPDM hydraulic seals. Water and glycol (to 50% maximum) solutions. Temperature range 32–250°F (0–120°C). Maximum working pressure 150 psi (10 bar). Maximum discharge pressure 150 psi (10 bar).

Code R59681

Hygroscopic safety cap. Brass body. EPDM hydraulic seals. Cellulose fibre disks seal cartridge; fiber volume increase on contact with water 50%. Maximum working pressure 10 bar. Maximum working temperature 150 psi (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.

