

DISCALAIR® high-performance automatic air vent

551004A



01124/21 NA

Replaces 01124/09 NA



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 discharging over 4 standard cubic feet per minute (SCFM).

The circulation of fully de-aerated water or glycol-water fluids 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 3/4" male NPT and 1/2" female NPT
 Code R59681 Hygroscopic safety vent cap

Technical specifications

Materials:

- body: brass
- cover: brass
- float: polypropylene
- float guide: brass
- release valve stem: brass
- float lever: stainless steel
- spring: stainless steel
- hydraulic seals: peroxide-cured EPDM

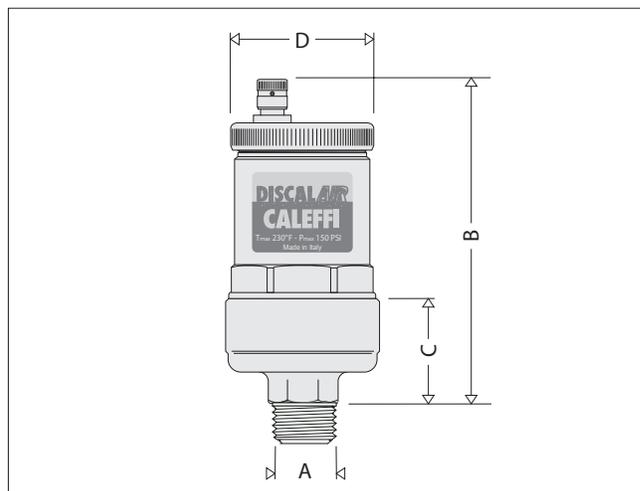
Suitable fluids: water, glycol solutions
 Max. percentage of glycol: 50%

Max. working pressure: 150 psi (10 bar)
 Max. discharge pressure: 150 psi (10 bar)
 Temperature range: 32–230°F (0–110°C)

Connections: 3/4" male NPT and 1/2" female NPT

NOTE: Maximum torque for connecting the 1/2" female NPT connection is 25 ft-lb (35 N-m).

Dimensions

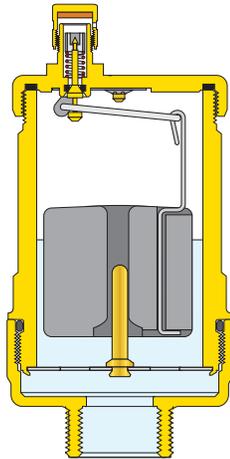


Code	A	B	C	D	Weight (lb)
551004	(1)	5"	1 3/4 "	2 3/16 "	0.8

(1) 3/4" male NPT and 1/2" female NPT

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.

Float and linkages

The anti-rotation, anti-vibration pinned float creates space between float and air vent wall to prevent float hang-up from debris. Robust stainless steel linkages resist corrosion for years of smooth trouble-free operation.

Operating chamber

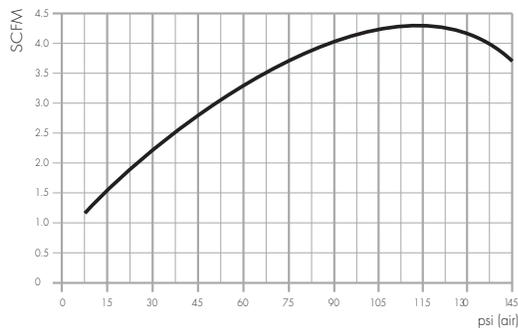
The vent body is a long chamber for the movement of the float, which prevents any debris present in the water from reaching the sealing seat in the automatic air release valve at the top of the chamber.

Flexible connection

3/4" male NPT AND 1/2" female NPT connection for easy installation.

Hydraulic characteristics

Discharge capacity



Installation

- DISCALAIR automatic air vent code 551004A 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.**

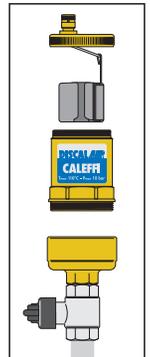


The hygroscopic safety vent operating principle is based on the properties of the cellulose fiber disks forming the retaining cartridge. These disks increase their volume by 50% when they come into contact with water, thus closing the valve. This avoids any damage in the event of water leakage.

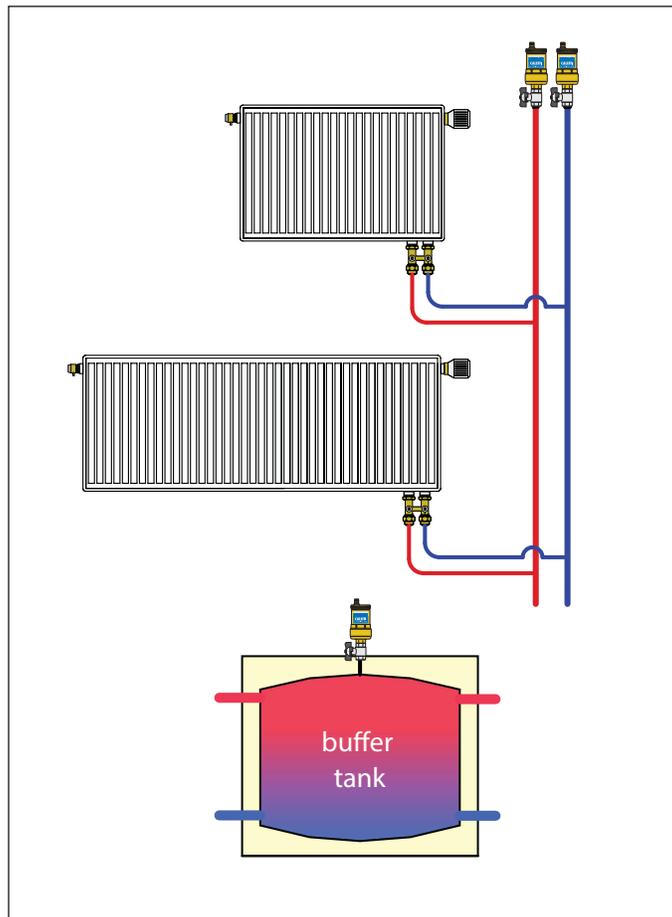


Maintenance

The DISCALAIR automatic air vent is designed for easy access and inspection of the internal moving parts that control the air outlet by simply removing the upper cover. In addition, the body can be separated from the lower section connected to the pipe.



Application Diagrams



DISCALAIR is a high-performance high-capacity vent for any high point location in hydronics applications.

SPECIFICATION SUMMARIES

DISCALAIR code 551004A

High-performance high capacity automatic air vent. 3/4" male NPT and 1/2" female NPT connection. Brass body and cover. Anti-rotation, anti-vibration pinned polypropylene float. Brass float guide. Stainless steel float lever and spring. Brass air release valve stem. Peroxide-cured EPDM hydraulic seals. Water and glycol (to 50% maximum) solutions. Temperature range 32–230°F (0–110°C). Maximum working pressure 150 psi (10 bar). Maximum discharge pressure 150 psi (10 bar).

Code R59681

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



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