MAXCAL
Automatic air vent for heating, air conditioning and refrigeration systems

series 501

01031/05 GB
Replaces 01031/00 GB

Function

Automatic air vent valves are designed to remove the air that accumulates in heating, air conditioning and refrigeration systems without the need for manual intervention. This prevents harmful phenomena that may compromise the life and the performance of the heating system and which include:
- corrosion due to the oxygen;
- pockets of air trapped in the heating emitters;
- cavitation in the circulation pumps;
- noise from air passing through the pipes.

These high capacity air vent valves are ideal for use in large piping systems and can also be installed in horizontal sections.

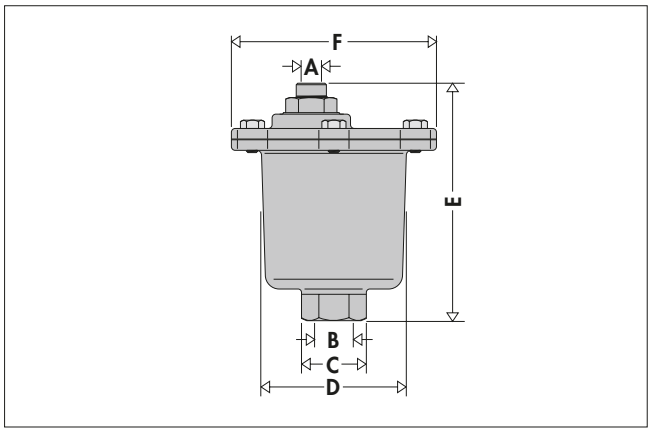
Product range

Code 501500 MAXCAL Automatic air vent for heating, air conditioning and refrigeration systems ____ Sizes 3/4" x 3/8"

Technical specification

Materials: - Body:	brass EN 12165 CW617N
- Cover:	brass EN 12165 CW617N
- Float:	stainless steel
- Obturator stem:	stainless steel
- Obturator:	VITON
- Hydraulic seals:	EPDM
- Filter:	stainless steel
- Screws:	stainless steel
- Spring:	stainless steel
Medium:	water, glycol solution non hazardous, therefore excluded from the guidelines of 67/548/EC Directive
Max. percentage of glycol:	50%
Max. working pressure:	16 bar
Max. discharge pressure:	6 bar
Temperature range:	-20 – 120°C
Connection: - Inlet:	3/4" F
- Discharge:	3/8" F

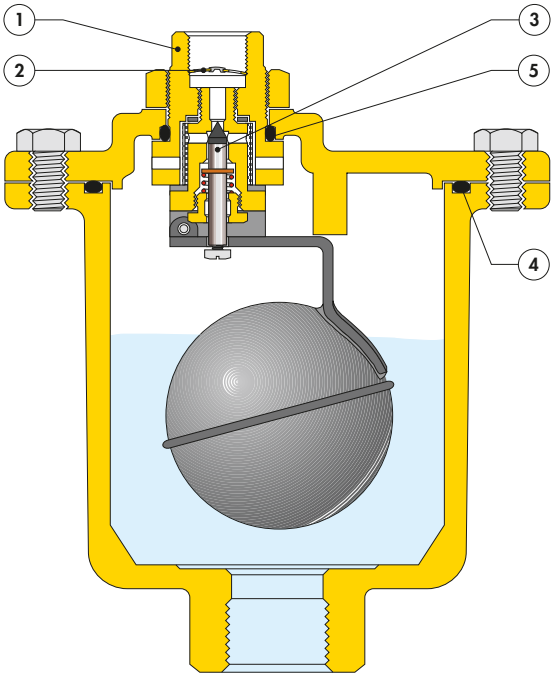
Dimensions



Code	A	B	C	D	E	F	Weight (kg)
501500	3/8"	3/4"	Hex. 40	Ø 97	158	135	3,00

Operating principle

The accumulation of air bubbles in the valve body causes the float to drop and thus the obturator to open. This phenomenon occurs, and consequently the valve functions correctly, as long as the water pressure remains below the maximum discharge pressure.



Construction details

Anticorrosive materials
The valve body and cover are made of hot forged brass whilst the filter, obturator stem, float and spring are all made of stainless steel to prevent rust from forming and later detaching and clogging the seal seat filter.

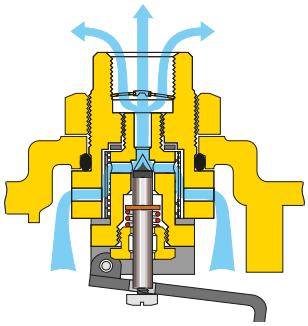
Threaded outlet
For installation at the top of risers and/or in attics, the air vent valve is equipped with a threaded outlet (1) that shall be connected to a vent pipe.

Protection against foreign objects
The vent outlet is equipped with a mechanism (2) to protect against dust and down, which may collect at the bottom of the valve over time and thus obstruct the vent.

Vent valve
The slide surfaces of the vent valve (3) have been ground to minimise friction and prevent the formation of harmful encrustations.

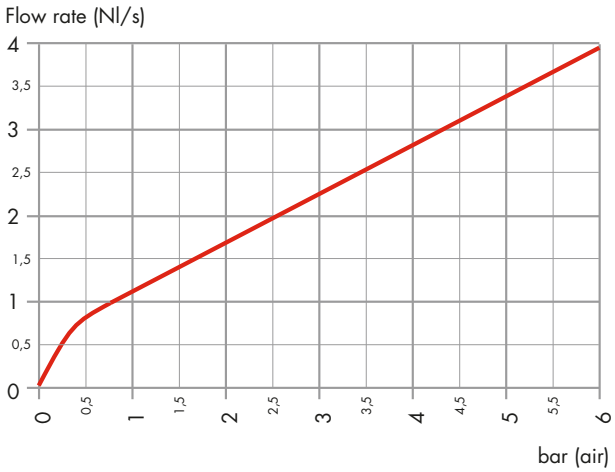
O-Rings
For maintenance purposes, the seals between the body and cover (4) and the vent unit and cover (5) are equipped with large cross-section O-rings.

Filter
As shown in the drawing, the air to be vented is forced through a fine mesh filter before arriving at the obturator. This device greatly reduces the risk of leakage from the seal due to metal chips, hemp fibres, plaster flakes, etc., becoming lodged between the seat and the obturator.



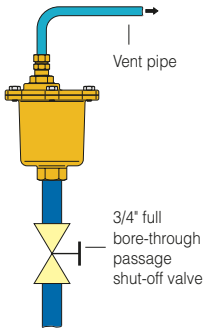
Flow curves

Air flow (when the system is being filled)



Maintenance

To facilitate maintenance of the deaerator, it is recommended to first install a 3/4" full bore-through passage shut-off valve as shown in the figure.



SPECIFICATION SUMMARIES

Code 501500
Automatic air vent valve for heating, air conditioning and refrigeration systems. Threaded connections, 3/4" F (inlet), 3/8" F (discharge). Brass body and cover. Stainless steel filter, spring, obturator stem, float and screws. VITON obturator. EPDM seals. Medium: water and glycol solutions. Maximum percentage of glycol 50%. Maximum working pressure 16 bar. Maximum discharge pressure 6 bar. Temperature range -20 –120°C.

CALEFFI

CALEFFI S.P.A. · I · 28010 FONTANETO D'AGOGNA (NO) · S.R. 229, N.25 · TEL. +39 0322 8491 R.A. · FAX +39 0322 863723
· Http://www.caleffi.com · E-mail: info@caleffi.it ·