

R89



Radiant Systems Energy Management

# High-performance automatic air vent with integrated filter and vertical vent

Datasheet  
1112EN 04/2025



The R89 automatic air vent performs the function of venting air formed in the hydraulic circuits of HVAC systems. It prevents the phenomena that may affect the duration and efficiency of the thermal system. The air vent effectively vents the system on a periodical basis during normal operation. The air vent consists of a fluid shut-off valve, an inspectionable filter, an adjustable vertical vent and a cap with hygroscopic gasket.

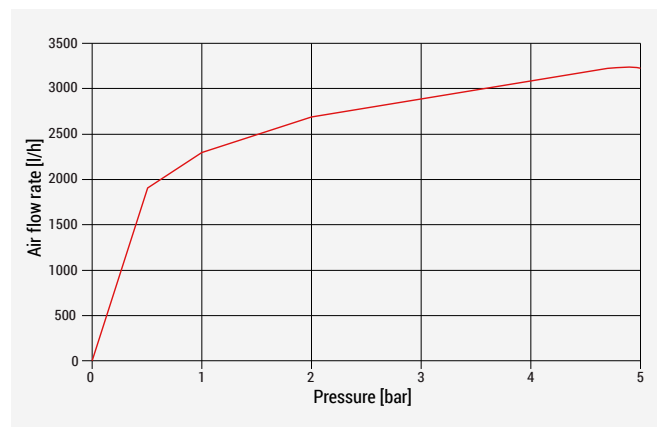
## Versions and product codes

SERIES	PRODUCT CODE	CONNECTIONS	MAIN CHARACTERISTICS
R89	R89Y012	G 3/8"M	• Integrated inspectionable filter • Adjustable vertical vent • Cap with hygroscopic gasket
	R89Y013	G 1/2"M	
	R89Y014	G 3/4"M	
	R89Y015	G 1"M	
	R89Y002	G 3/8"M	• Integrated shut-off valve • Integrated inspectionable filter • Adjustable vertical vent • Cap with hygroscopic gasket
	R89Y003	G 1/2"M	

## Technical data

### Performance

- Fluids of use: water with glycol for HVAC systems
- Max. glycol percentage: 50%
- Temperature range: 5÷110 °C
- Max working pressure: 16 bar
- Air venting max working pressure: 5 bar
- Integrated filter: filtering capacity 500 µm
- Venting air flow rate:



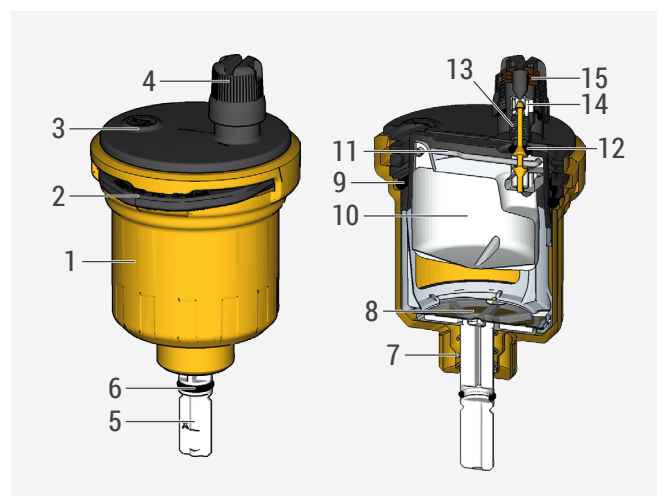
### Materials

- Body: UNI EN 12165 CW617N brass
- Body cap, air vent cap and fork: glass-fiber reinforced PA66
- O-Ring: EPDM
- Springs and filter: stainless steel
- Float: PP-H

**NOTE.** The diagram shows the maximum venting air flow rate as the relative pressure of the system changes.

PRESSURE [bar]	AIR FLOW RATE [l/h]
0,5	1900
1	2300
2	2700
3	2900
4	3100
5	3300

## Components



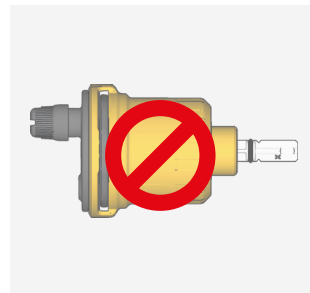
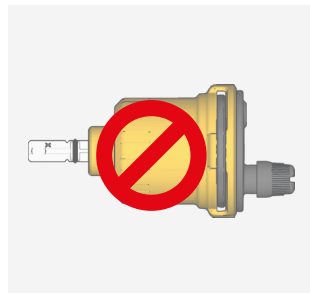
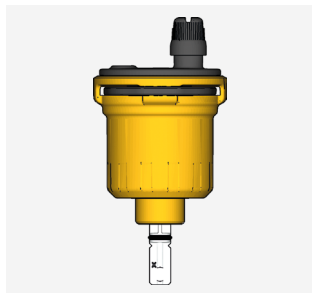
\* Only for R89 with integrated shut-off valve.

1	Air vent body
2	Locking fork
3	Body cap
4	Air vent cap
5	Paddle with shut-off valve *
6	O-Ring *
7	Spring *
8	Inspectionable filter
9	O-Ring
10	Float
11	Stem
12	O-Ring
13	Spring
14	Spring holder
15	Hygroscopic gasket

## ➤ Installation

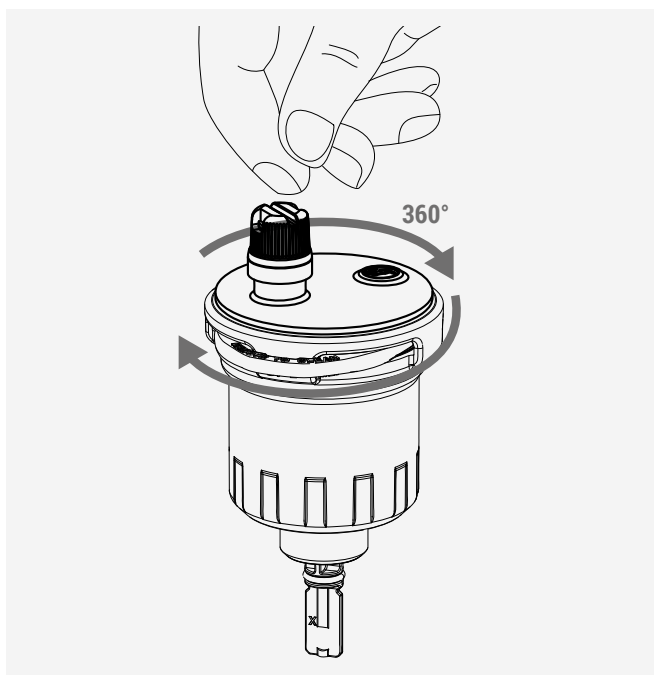
R8g automatic air vent can be installed in the highest point on any distribution manifold, pipes where air pockets may form, on wall-mount or base-mount boilers, near fan coils or heat exchangers.

The automatic air vents must be installed vertically with the body cap facing up and in points easy to access.



**NOTE.** Product codes with shut-off valve includes a paddle that extends 26 mm from the body valve. If needed, cut the exceeding part with a shear.

### Adjustable vertical vent



Manually turn the body cap (Components - Ref.3) to adjust the vertical vent according to installation needs.

## Operation

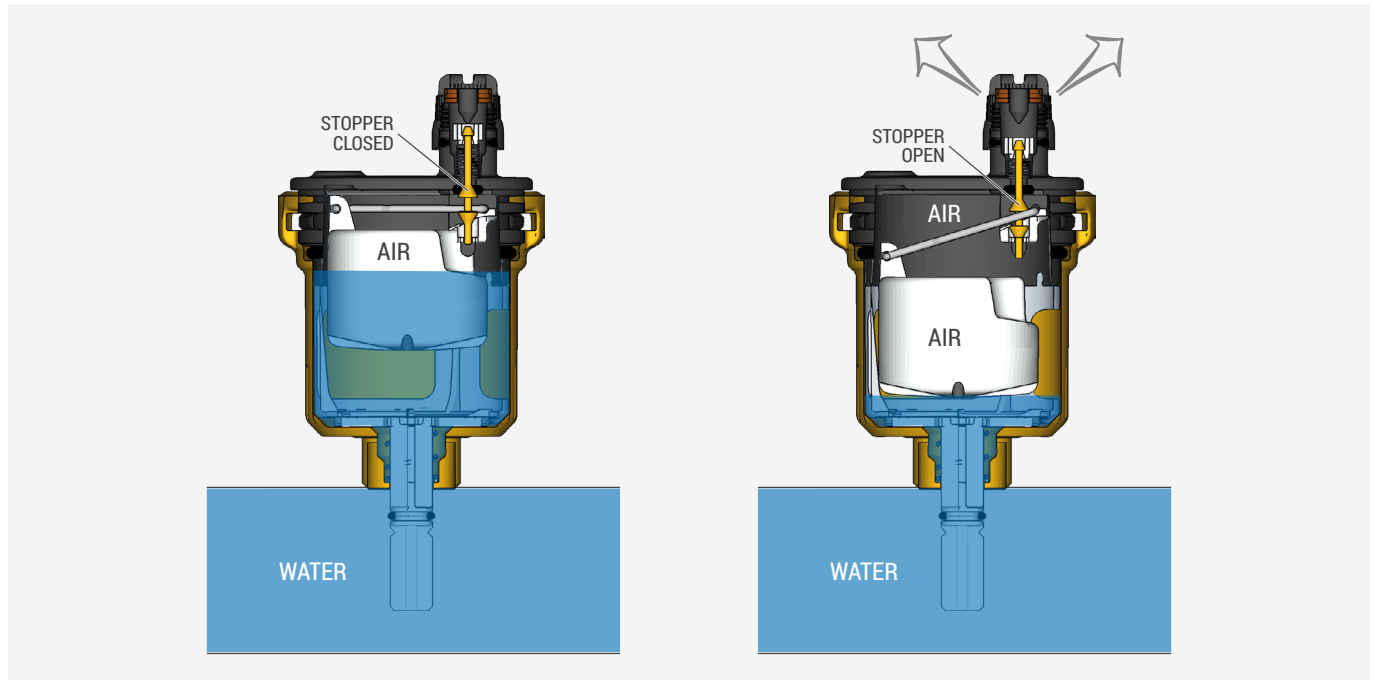
During normal operation, when there is no air in the body, the internal float is raised and a mechanical function keeps the vent stopper closed.

When the float lowers for the air trapped inside the body, the stopper will open to vent it completely.

Should there be a large quantity of air in the system, the float will lower completely to vent the air more rapidly.

The air vent can be blocked manually by tightening the air vent cap all the way through (Components - Ref.4).

Under normal working conditions, the air vent cap should be left open.



### Air vent cap with hygroscopic gasket (Components - Ref.4)

The air vent cap contains hygroscopic gaskets (Components - Ref.14).

In case of system malfunction resulting in a leak, the volume of the gaskets will increase when they touch the water, closing the vent and preventing water leaks.

### Shut-off valve (Components - Ref.5)

The threaded fitting contains a stopper with spring (Components - Ref.7) which is pushed down by the body cap (Components - Ref.3): in this situation the valve inlet is open.

The body cap (Components - Ref.3) can be removed during maintenance: the spring will close the valve inlet, hence shutting off the fluid.

**NOTE.** For maintenance operations, refer to "Cleaning and maintenance" paragraph.

**WARNING.** During normal operation of the system, to ensure the correct operation of the hygroscopic gaskets, it's recommended to fully close the air vent cap, then open it half a turn.



#### VIDEO

Frame the QR code with your smartphone or tablet to view the video tutorial.

## ➤ Cleaning and maintenance

### Cleaning the filter

Impurities may collect on the filter inside the air vent body during normal operation.

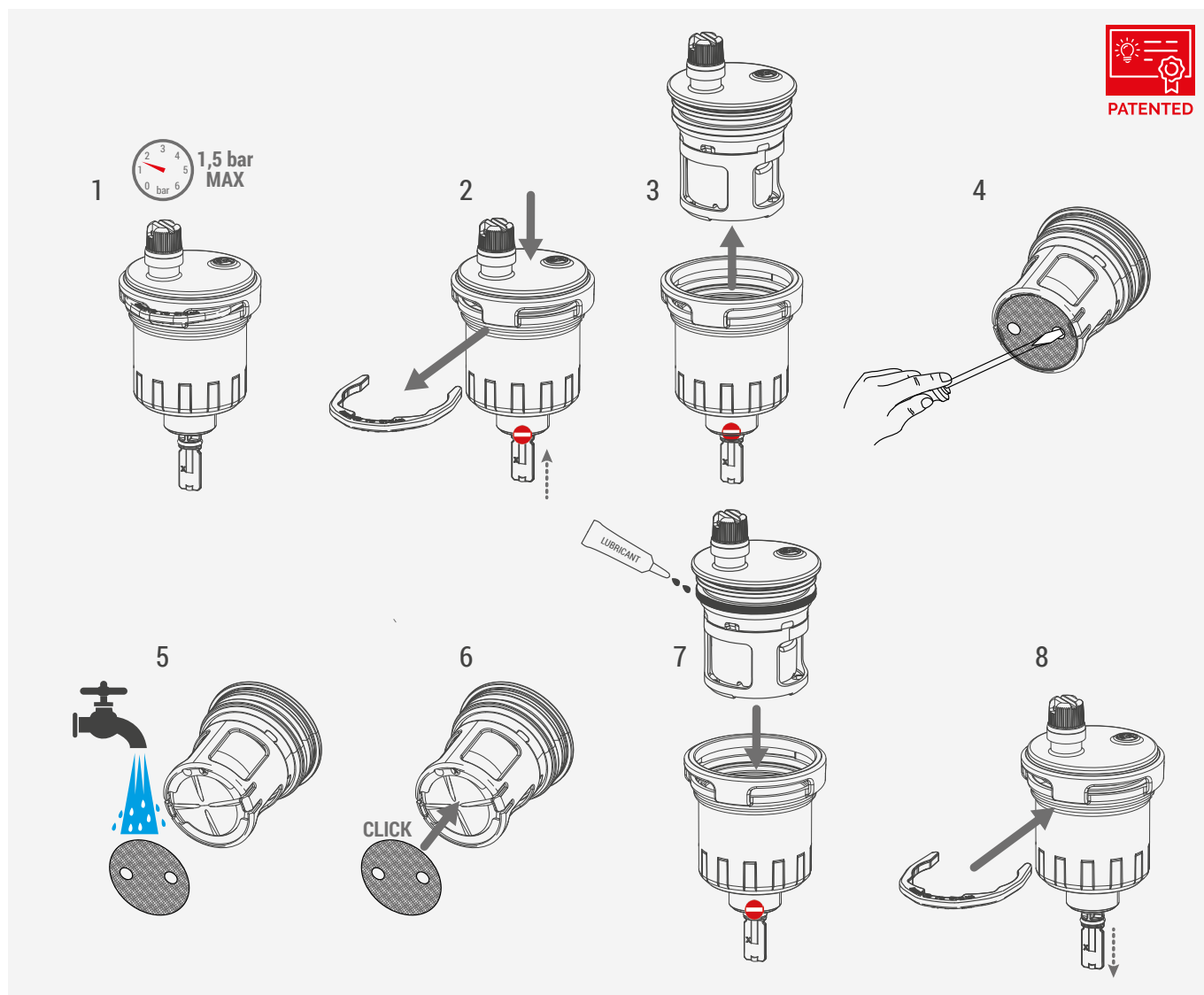
Filter cleaning can be carried out without emptying or turning off the system.

Follow the steps below to clean the filter and remove the debris:

- 1) reduce the system pressure to a maximum of 1,5 bar;
- 2) remove the locking fork by pushing the cap gently down;
- 3) remove the body cap from the air vent body;
- 4) remove the filter from its seat using a small screwdriver;
- 5) rinse the filter with running water;
- 6) replace the clean filter in its seat;
- 7) replace the body cap and, if necessary, lubricate the EPDM O-Ring (Components - Ref.9) with an adequate lubricant;
- 8) fit the fork in the proper seat to lock the cap- once locked, the shut-off valve will reopen to let the water flow in.

Normal operation of the system can now resume.

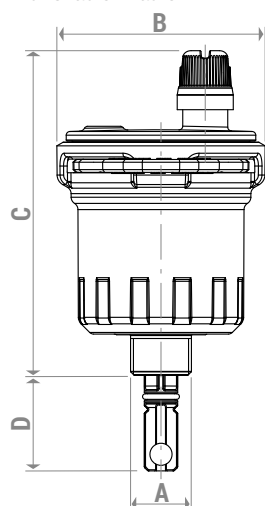
**⚠ WARNING FOR CODES WITHOUT SHUT-OFF VALVE.** Before servicing codes without shut-off valve, the air vent must be intercepted and removed from the point in the system where it is installed.



## ➤ Dimensioni

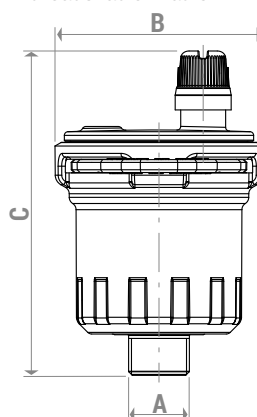
### R89

With shut-off valve



PRODUCT CODE	A [inch.]	B [mm]	C [mm]	D [mm]
R89Y002	G 3/8"M	57	91	26
R89Y003	G 1/2"M	57	91	26

Without shut-off valve



PRODUCT CODE	A [inch.]	B [mm]	C [mm]
R89Y012	G 3/8"M	57	91
R89Y013	G 1/2"M	57	91
R89Y014	G 3/4"M	57	93
R89Y015	G 1"M	57	93

## ➤ Product specifications

### R89

High-performance automatic air vent with adjustable vertical vent and hygroscopic gaskets, for HVAC systems. Available in size from G 3/8"M to G 1"M connections with or without integrated shut-off valve. Inspectionable filter with 500 µm filtering capacity included. Body: UNI EN 12165 CW617N brass. Body cap, air vent cap and fork: glass-fiber reinforced PA66. O-Ring: EPDM. Spring and filter: stainless steel. Float: PP-H. Fluids: water, glycol-based solutions (max 50%). Temperature range: 5÷110 °C. Max working pressure: 16 bar. Air venting max working pressure 5 bar.

#### NOTE. EUROPEAN DIRECTIVE 2014/68/UE.

The product illustrated in this technical specification satisfies the requirements of Directive 2014/68/UE and is exempt from CE marking, according to Article 4.3.

**⚠ Safety Warning.** Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

**♻ Package Disposal.** Carton boxes: paper recycling. Plastic bags and bubble wrap: plastic recycling.

**ℹ Additional information.** For more information, go to [giacomini.com](http://giacomini.com) or contact our technical assistance service. This document provides only general indications. Giacomini S.p.A. may change at any time, without notice and for technical or commercial reasons, the items included herewith. The information included in this technical sheet do not exempt the user from strictly complying with the rules and good practice standards in force.

**♻ Product Disposal.** Do not dispose of product as municipal waste at the end of its life cycle. Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.