

## Automatic air vent valves

Datasheet  
0159EN 03/2021



R99 and R99I automatic air vent valves can discharge the air that formed into the hydraulic circuits of the heating/cooling or domestic water systems.

This avoids the onset of negative phenomenon, that could compromise the lifetime and the efficiency of the thermal system.

The automatic air vent valves perform during the normal operation of the system, where the air discharge shall happen intermittently and not continuously, with modest air amounts to be discharged.

### Versions and product codes

SERIES	PRODUCT CODE	CONNECTIONS	FEATURE
R99	R99Y001	1/4" (G, ISO 228)	
	R99Y002	3/8" (G, ISO 228)	
	R99Y003	1/2" (G, ISO 228)	Without plastic paddle
	R99Y033	Ø 15 mm	With nut and ferrule
R99I	R99IY002	3/8" (G, ISO 228)	With R160 shut-off valve
	R99IY003	1/2" (R, EN10226)	

### Technical data

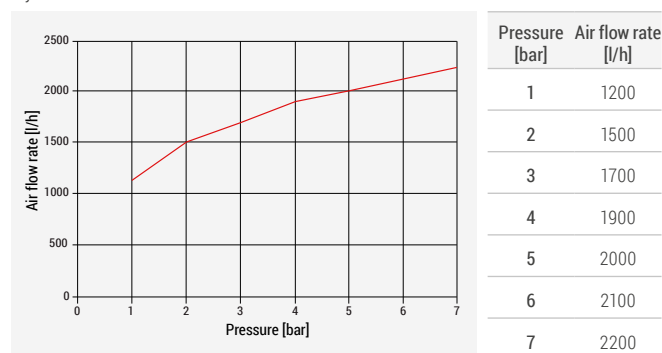
- Temperature range: 5÷120°C
- Max. working pressure: 14 bar
- Max. pressure of air vent operation: 7 bar
- Use fluids: water and glycol solutions (max. 50%)

#### Materials

- Body: UNI EN 12165 CW617N brass
- O-Ring: EPDM
- Stopper spring: stainless steel
- Internal float: PP-H

#### Performance

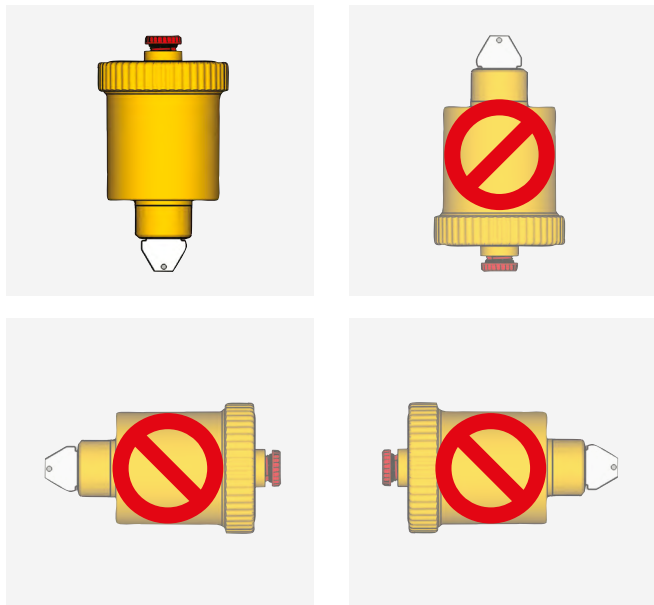
The table and the graph report the discharge air capacities, in standard conditions, at the change of the pressure of the system.



**NOTE.** The air discharge capacities of the R99 valve increase progressively at the pressure increase by showing the efficiency of the mechanism.

## ➤ Installation

R99 and R99I automatic air vent valves are usually installed on each type of manifolds, at "high points" of the pipes where an air pocket could form, on wall heating boilers or ground-floor boilers, near unit heaters or heat exchangers. The automatic air vent valves must be installed vertically, with the plug facing upwards. The installation is advisable in places that can be easily inspected.



**⚠ WARNING.** Close the cap of the air vent valve when rinsing out and filling the system, to prevent impurities from entering the mechanisms of the valve and damaging it.

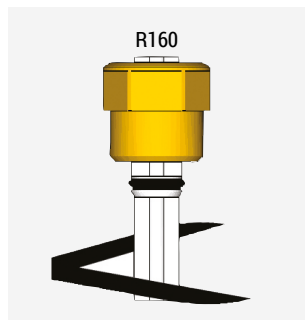
**🔧 NOTE.** It is possible combining a R160 shut-off valve in sizes 1/4"x3/8" and 1/4"x1/2", to the automatic valve R99.

R160 valve permits the disassembly of the valve for possible maintenance, without emptying the system.

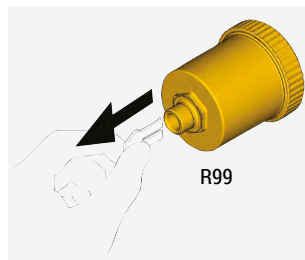
This combination (valve R99 + valve R160) can be also purchased and it is distinguished by the product series R99I in sizes 3/8" and 1/2".

## ➤ Mounting instruction: R99 + R160

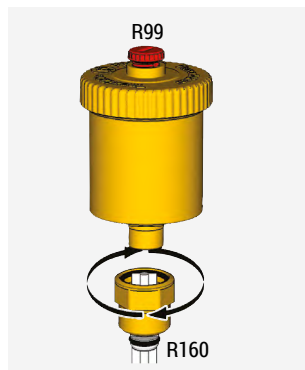
In order to equip the R99 valve with R160 shut-off valve, proceed as follows:



Before screwing the R160 valve, verify that the plastic paddle does not interfere with the parts inside the seat, it is necessary to have a free space of at least 35 mm. If any interference is present, cut the exceeding part of the paddle with a shear.



After the screwing of the R160 valve on the installation seat, remove the possible plastic paddle of the automatic air vent valve and proceed with the assembly.



Screw the automatic air vent valve to the R160 valve, by making the plastic paddle be guided by the hole of the body of the air vent valve.

## Operation

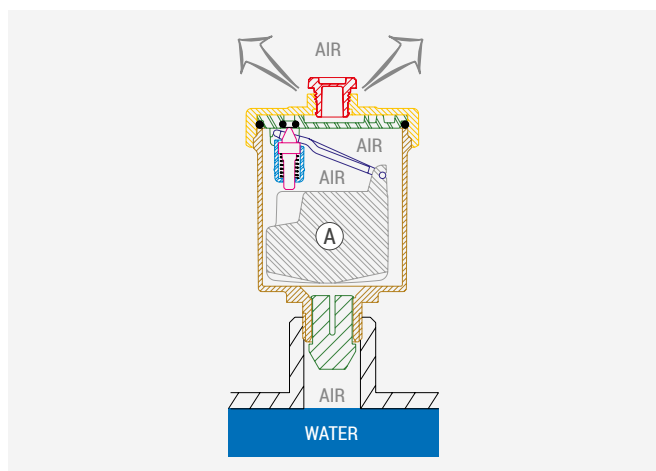
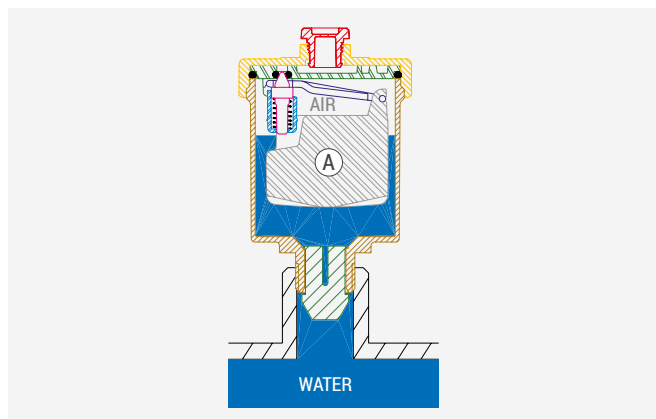
The operation of the automatic air vent valve is very simple and it is based on the principle of the floating of bodies immersed in a fluid.

When there is no air accumulation into the valve body, the float (A) is in raised position and through the mechanism, it keeps the stopper under closing.

The lowering of the floating level caused by the air accumulation into the valve body, involves the stopper opening and the consequent discharge that persists up to the reintroduction of the normal conditions.

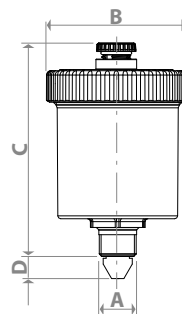
If there is a lot of air in the system, the float is completely lowered and allows the air to flow out more quickly.

The air discharge is prevented by screwing the lateral plug. In normal operation conditions, the plug shall be unscrewed.

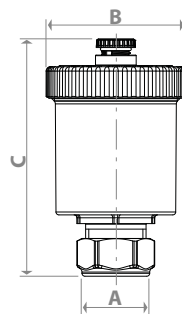


## Dimensions

### R99

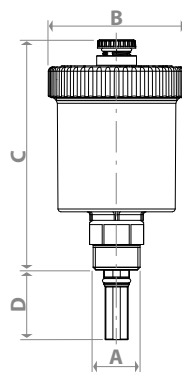


PRODUCT CODE	A	B [mm]	C [mm]	D [mm]
R99Y001	1/4" (G, ISO 228)	48	74	8
R99Y002	3/8" (G, ISO 228)	48	74	8
R99Y003	1/2" (G, ISO 228)	48	75	-



PRODUCT CODE	A	B [mm]	C [mm]
R99Y033	Ø 15	48	82

### R99I



PRODUCT CODE	A	B [mm]	C [mm]	D [mm]
R99IY002	3/8" (G, ISO 228)	48	81	25
R99IY003	1/2" (R, EN 10226)	48	81	25

## Product specifications


### **R99**


High performance automatic air vent for heating/cooling or domestic water systems. Body in UNI EN 12165 CW617N brass. O-Ring in EPDM. Stopper spring in stainless steel. Internal float in PP-H. Use fluids: water and glycol solutions (max. 50%). Temperature range 5÷120 °C. Max. working pressure 14 bar. Max. pressure of air vent operation 7 bar.


### **R99I**


High performance automatic air vent valve equipped with R160 shut-off valve, for heating/cooling or domestic water systems. Body in UNI EN 12165 CW617N brass. O-Ring in EPDM. Stopper spring in stainless steel. Internal float in PP-H. Use fluids: water and glycol solutions (max. 50%). Temperature range 5÷120 °C. Max. working pressure 14 bar. Max. pressure of air vent operation 7 bar.

---

 **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.

 **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.