

# DUO, INT, INT/AV15 Series

New air vent valves with float

## Technical Data Sheet



## Description

The valves DUOVENT **DUO, DUO/R Series** e **INTERVENT INT, INT/R, INT/AV15 Series** are automatic and/or manual devices for discharging air from heating and air-conditioning systems. These devices should be used in close loop hydronic application only.

### DUO



#### DUOVENT

Automatic and manual air vent valve with removable cover for inspection. Body and cover in brass CW617N. Corrosion-resistant polyethylene float. PN 10.

Maximum working pressure: 8 bar.

Maximum working temperature: 115°C. Automatic venting capacity at 3 bar: 20 litres/min. Manual venting capacity at 3 bar: 100 litres/min.

Also suitable for water containing additive (glycol up to 30%).

Type	Part. no.	DN	Weight (g)	Box
DUO10	0248210	3/8"	140	1
DUO-K10	0248210-K10	3/8"	1450	10



### DUO/R

#### DUOVENT WITH RIA.

Air vent valve like DUO but complete with automatic shut-off valve RIA.

Type	Part. no.	DN	Weight (g)	Box
DUO10.R10	0248310	3/8"	165	1
DUO10.R10-K10	0248310-K10	3/8"	1700	10
DUO10.R15	0248311	1/2"	185	1
DUO10.R15-K10	0248311-K10	1/2"	1900	10

### INT

#### NEW INTERVENT.

Automatic air vent valve with removable cover for inspection. Body and cover in brass CW617N. Corrosion-resistant polyethylene float. PN 10.

Maximum working pressure: 8 bar. Maximum working temperature: 115°C.

Also suitable for water containing additive (glycol up to 50%).



Type	Part. no.	DN	Weight (g)	Box
INT10	0248010	3/8"	140	1
INT10-K10	0248010-K10	3/8"	1450	10



### INT/R

#### NEW INTERVENT WITH RIA.

Automatic air vent valve like INT but complete with automatic shut-off valve RIA.

Type	Part. no.	DN	Weight (g)	Box
INT10.R10	0248110	3/8"	165	1
INT10.R10-K10	0248110-K10	3/8"	1700	10
INT10.R15	0248111	1/2"	185	1
INT10.R15-K10	0248111-K10	1/2"	1900	10

## INT/AV15



### NEW INTERVENT ELBOW MODEL

Automatic air vent valve with removable cover for inspection and lateral connection. Body and cover in brass CW617N. Corrosion-resistant polyethylene float. PN 10. Maximum working pressure: 8 bar. Maximum working temperature: 115°C. Also suitable for water containing additive (glycol up to 50%).

Type	Part. no.	DN	Weight (g)	Box
INT10.AV15	0248016	1/2"	145	1
INT10.AV15-K10	0248016-K10	1/2"	1500	10



## RIA

Automatic shut-off valve for automatic air vent valves **INT, DUO Series** with device for quick and total drainage of water from the valve.

Type	Part. no.	DN	Weight (g)
RIA	0259112	3/8" x 3/8"	25
RIA	0259116	3/8" x 1/2"	45

## Application

These devices are used in all traditional heating systems (independent, central, radiant panel, etc.) for discharging air during the filling phase and the air released into the water during the heating phase, which obstructs the normal circulation of the heat carrier fluid above all at the points where it circulates at a low speed (heat emitters), thus reducing their thermal efficiency.

The air vent valves allow the air to be discharged at the points of the system where it accumulates (distribution manifolds, tops of the risers or directly in the boiler).

## Operation

The automatic operation of the air vent valves is based on a float system ensuring tight seal: valve opening and closing is determined by the float movement (up-down).

When there is air in the valve, the force of the float weight acts on the lever which is integral with the plug, thus causing it to move down. In such situation the seat is free and allows the air to be vented outside.

When filling the system with water, the air entrapped in the water circuit is pushed towards the outside via the valves. As soon as all the entrapped air is discharged, the water, entering the tank, pushes the float up. Consequently the lever moves the plug to press against the seat thus ensuring tight sealing of the system, thus preventing the heat carrier fluid from flowing out. The design feature of this device is that it enables air to be discharged from the system automatically while it is being emptied.

**RIA Series** check valves may be used to carry out maintenance work while the system is pressurized.

The operation of the check valve is based on a spring-activated device, sensitive to the pressure of the system, which ensures a seal by means of O-Rings made of EPDM when there is no air vent valve.

The reliability of the air vent valves is ensured by a series of tests carried out on 100% of products to check that the body and its components are watertight.

## DUOVENT

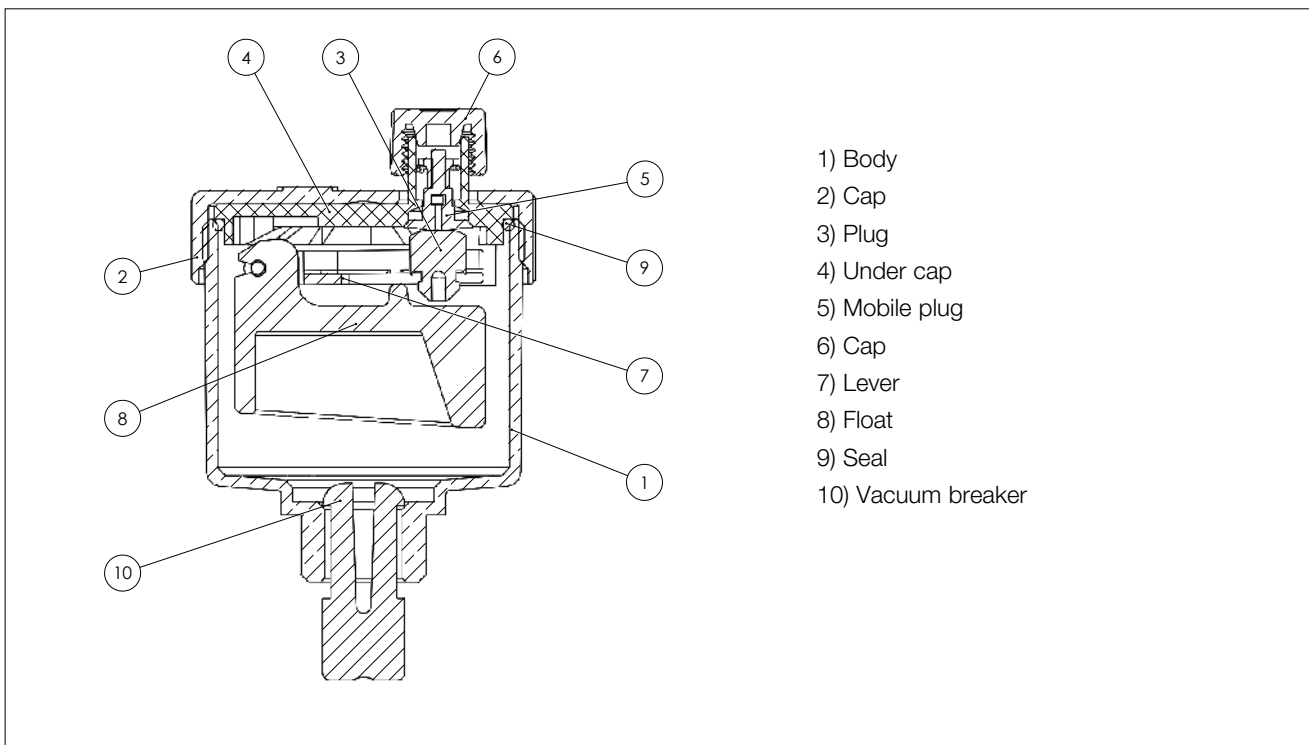
In addition to its automatic air venting feature, the **DUOVENT, DUO, DUO/R Series**, valve is provided with a device allowing manual air venting.

The manual air vent device offers the following advantages:

- a) it allows checking the valve for correct operation
- b) it allows reducing times for discharging air from the system by increasing the discharge flow rate
- c) easier cleaning of the orifice by forcing water to flow through it.

Manual venting is actuated by pushing down mobile plug (5); this can be done by exerting a pressure on the surface, for example with a screw driver. Such operation shifts mobile plug (5) to a position lower than the seat, thus allowing air and/or water to evacuate

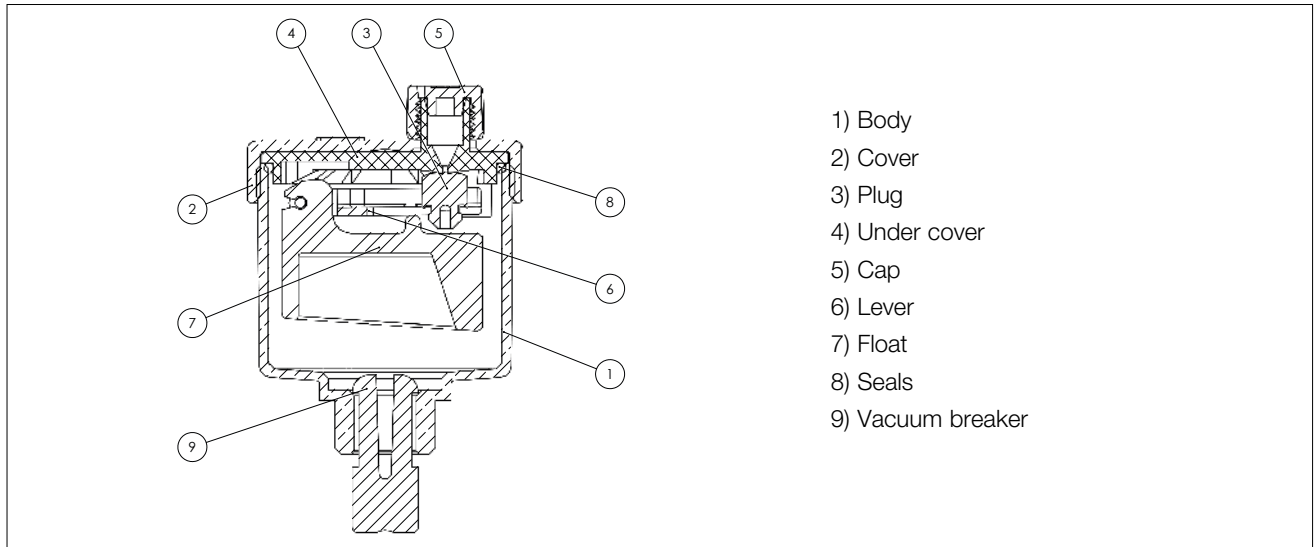
## DUOVENT- DUO



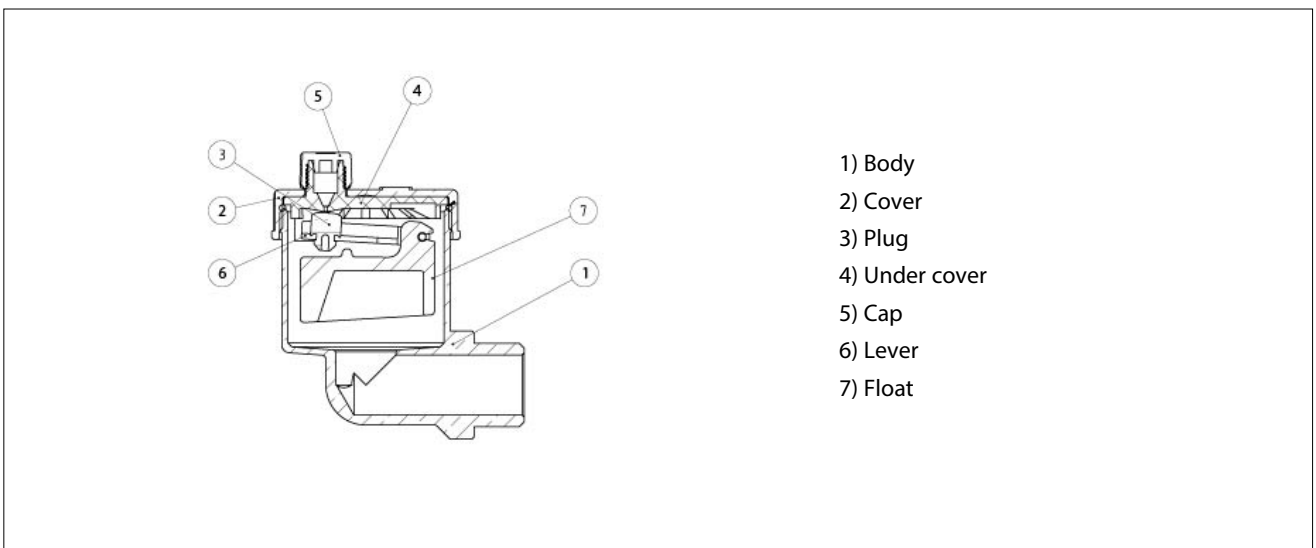
Technical features	
Maximum pressure	10 bar
Maximum working pressure	8 bar
Maximum working temperature	115°C

Design features	
Body	Brass CW617N
Cover	Brass CW617N
Plug	EPDM rubber
Cap	Polyamide
Lever	Polyacetal
Float	High density expanded polyethylene
Seal	NBR rubber
Connections	G 3/8" - DIN - ISO 228/1
Under cap	Polyamide

## NEW INTERVENT - INT



## NEW INTERVENT- INT/AV15



### Technical features

Maximum pressure	10 bar
Maximum working pressure	8 bar
Maximum working temperature	115°C

### Design features

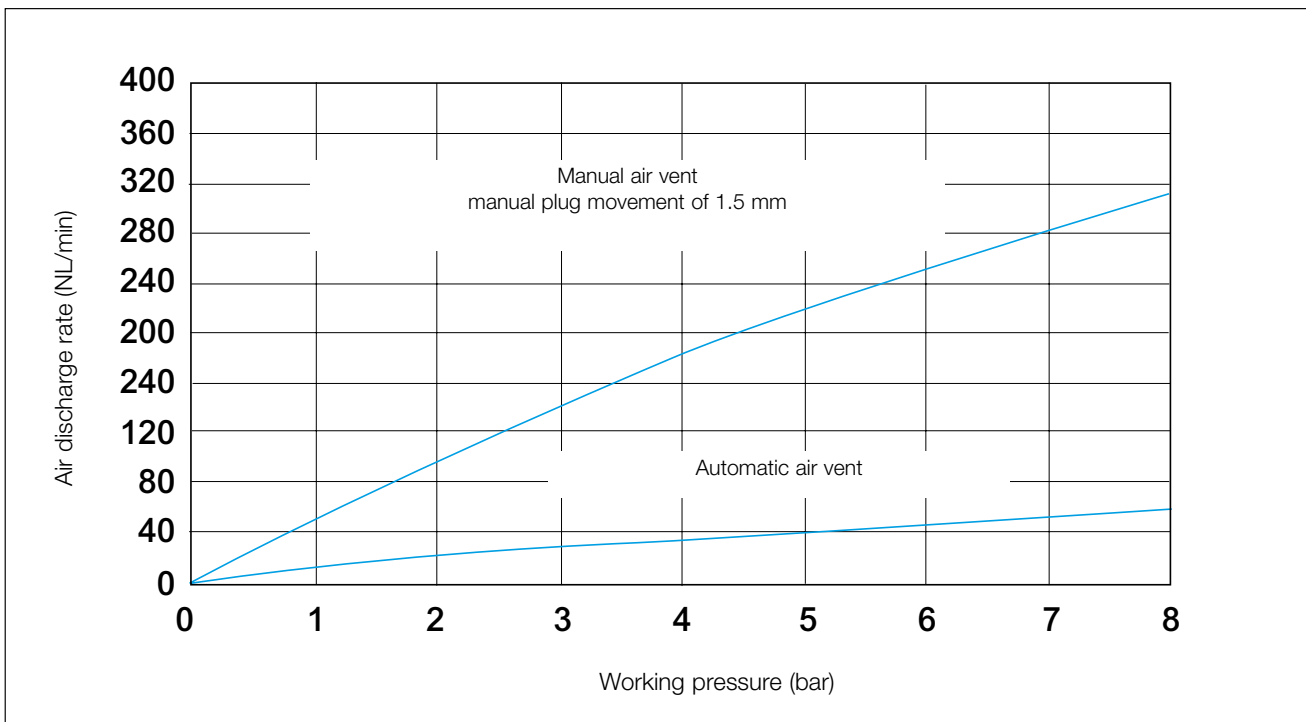
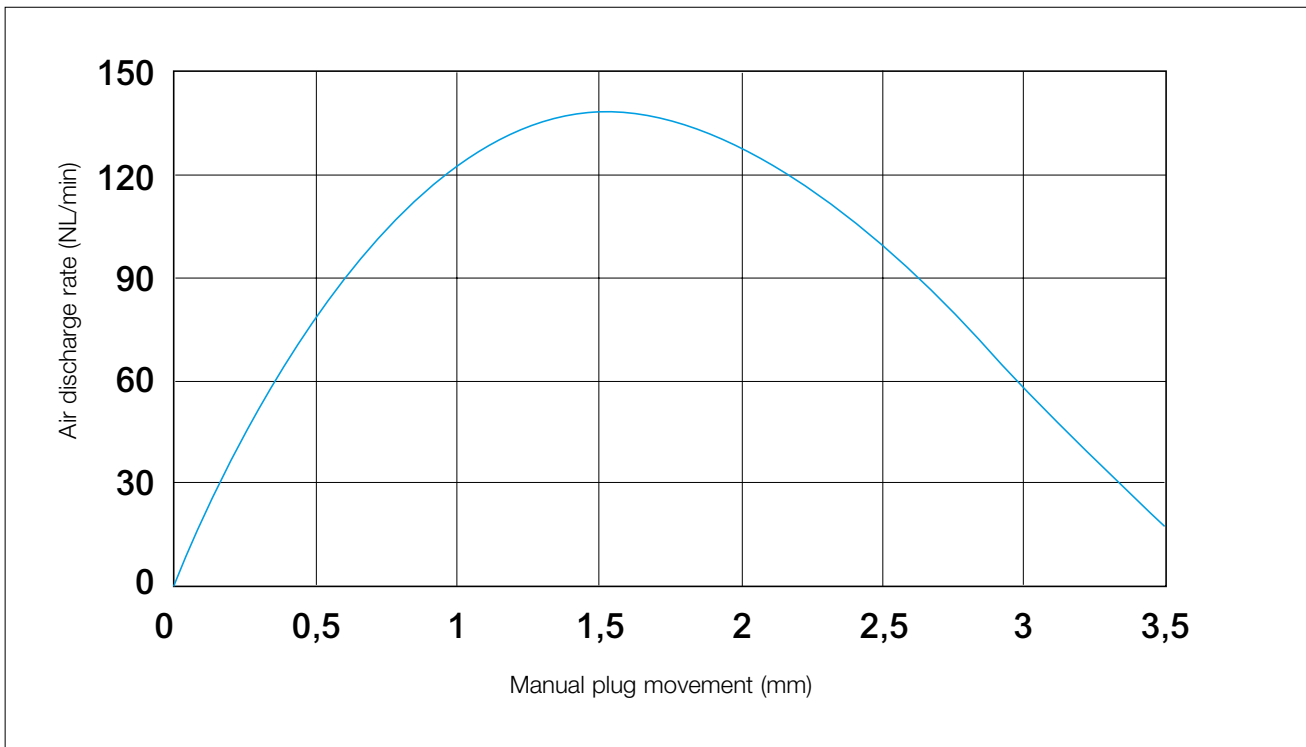
Body	Brass CW617N
Cover	Brass CW617N
Lever	Polyacetal
Float	High density expanded polyethylene
Plug	EPDM rubber
Seal	NBR rubber
Cap	Polyamide
Connections	G 3/8"- DIN - ISO 228/1
Under cap	Polyamide

## Charts

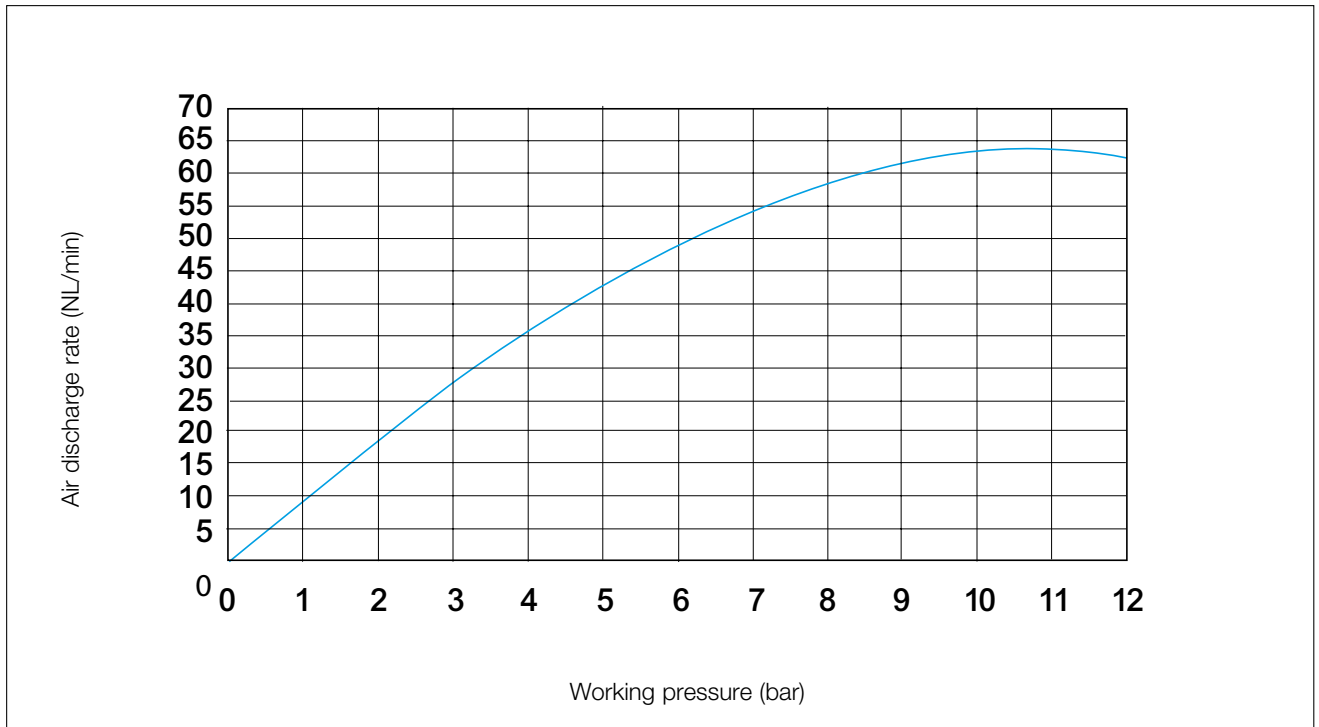
### DUOVENT

Air discharge rate - Operating pressure  
(comparison between manual and automatic venting)

The following diagram shows the automatic and manual venting curves in relation to pressure, assuming a manual plug movement of 1.5 mm. It is clear that the manual venting allows an appreciable increasing in the discharge rate of DUOVENT.



## NEW INTERVENT



## Installation

The **DUOVENT, NEW INTERVENT Series** air vent valves are normally installed:

- at the top of risers in heating systems with a closed expansion vessel;
- on distribution manifolds;
- directly in the boiler.

In order to ensure maximum air venting efficiency, it is advisable to install the valves in those points where water speed is relatively low. After installation, in order to allow perfect air venting, unscrew the protective cap by at least two turns (such condition ensures the vent characteristics as given in the previous diagram).

When it is necessary to mount a HYBRIVENT valve provided with vacuum breaker tongue on a RIA shut-off valve, merely lift out the tongue with two fingers.

## Maintenance

Normally the **DUOVENT, NEW INTERVENT Series** valves do not require maintenance.

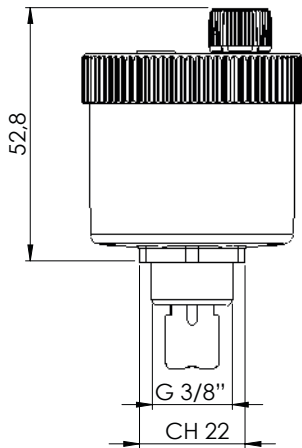
The valves may be inspected by unscrewing the cover from the tank. A tight seal between the tank and cover is ensured by the presence of an O-Ring; therefore it is also possible to clean the internal parts (float and lever) in case of ingress of foreign matter in the valve.

Long-term efficiency and performance of the vent movement is ensured by the valve design features. The seal system is designed to withstand vibrations, therefore it is unaffected by any external vibrations.

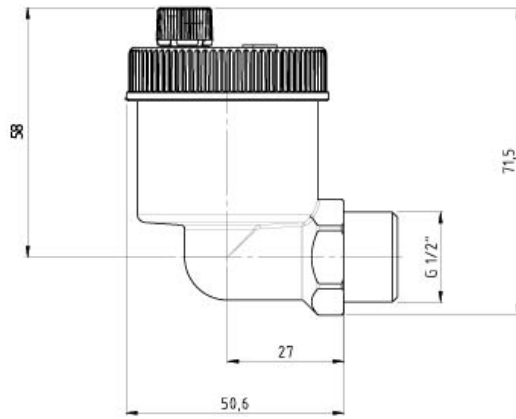
If the **DUO, INT, MHV, MHL Series** have to be replaced, the use of the Series RIA check valves allows this operation to be performed without the system having to be emptied.

## Overall dimensions (mm)

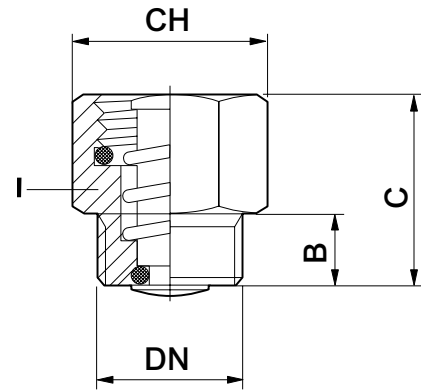
### DUO/INT



### INT/AV15



### RIA



DN	B	C	CH
3/8"	8	11	19
1/2"	8	11	24

## Specification text

### DUO Series

Automatic and manual air vent valve **DUO Series** brand WATTS with removable cover for inspection. Body and cover in brass CW617N. Corrosion-resistant polyethylene float. PN 10. Maximum working pressure: 8 bar. Maximum working temperature: 115°C. Automatic venting capacity at 3 bar: 20 litres/min. Manual venting capacity at 3 bar: 100 litres/min. Also suitable for water containing additive (glycol up to 30%).

### INT Series

Automatic and manual air vent valve **NEW INTERVENT Series** brand WATTS with removable cover for inspection. Body and cover in brass CW617N. Corrosion-resistant polyethylene float. PN 10. Maximum working pressure: 8 bar. Maximum working temperature: 115°C. Also suitable for water containing additive (glycol up to 50%).

### INT/AV15 Series

Automatic and manual air vent valve **NEW INTERVENT Series** brand WATTS for inspection and lateral connection. Body and cover in brass CW617N. Corrosion-resistant polyethylene float. PN 10. Pressione massima di esercizio: 8 bar. Maximum working pressure: 8 bar. Maximum working temperature: 115°C. Also suitable for water containing additive (glycol up to 50%).

The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding.

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