



MAXIMUM  
DISCHARGE  
PRESSURE **10 bar**



- Ensures system efficiency
- Can be mounted on vertical, horizontal and diagonal piping
- Large capacity discharge.

## PRODUCTION RANGE

Code	Size	Connections
<b>2649.05.00</b>	3/4"	F UNI-EN-ISO 228
<b>2649.06.00</b>	1"	F UNI-EN-ISO 228
<b>On request</b>	Ø 22	Copper compression pipe
<b>On request</b>	Ø 28	Copper compression pipe

## DESCRIPTION

### **THE PURPOSE:**

The *RBM Airterm UP* adjustable deaerators are devices suitable for eliminating micro-bubbles from systems.

They are essentially made up of two parts:

- **ACTIVE:** The area where microbubbles are formed as a result of strong turbulence and swirling motion. Microbubbles blend together becoming bubbles.
- **PASSIVE:** Float-operated air vent valve to eliminate air bubbles.

**Deaerators operate systems with air-depleted water,** therefore able to absorb the air bubbles nestled in the system critical areas.

By removing air from the system, unnecessary breakdowns and malfunctions can be reduced, helping to:

- Increase heating and cooling efficiency
- Reduce the formation of corrosion in all points of the system
- Reduce extraordinary maintenance work
- Reduce the effects causing system noise
- Lower the cost of system management

### **USE:**

*RBM Airterm UP deaerators* are used in **heating and cooling systems**. They ensure eliminating the air that is continuously formed in systems. For more specifications, please see the "USE / INSTALLATION" section of this data sheet.

### **CAUTIONS:**

To be always installed in a vertical position, with the air discharge device facing upwards.

The jointed part allows installation on:

- Vertical,
- Horizontal and
- Diagonal piping

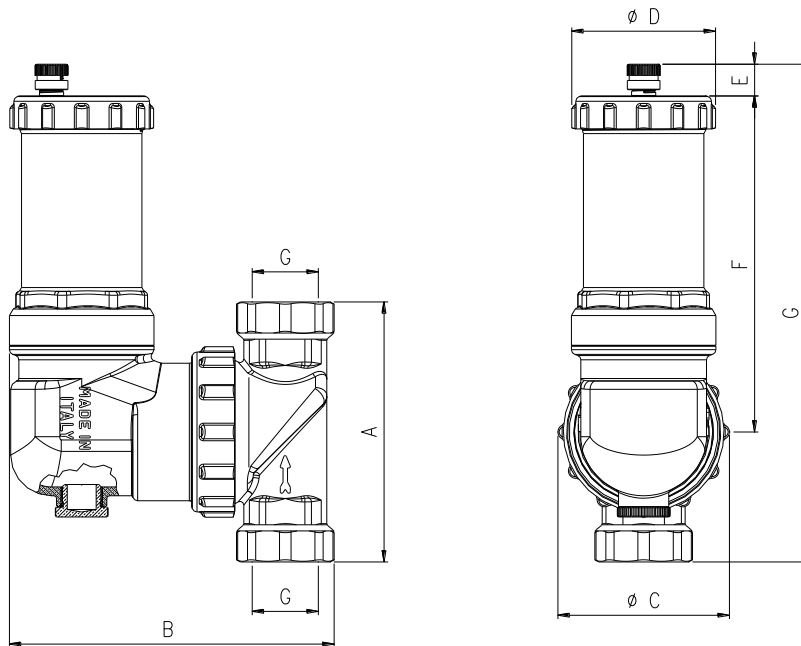
## CONSTRUCTION FEATURES

- Body: Brass CW 617N UNI EN 12165
- Float: With levers, made of polypropylene resin
- Cartridge: AISI 302 stainless steel
- Spring: AISI 302 stainless steel
- Connections: F UNI-EN-ISO-228 / Compression connection for copper pipe (depending on version)

## TECHNICAL FEATURES

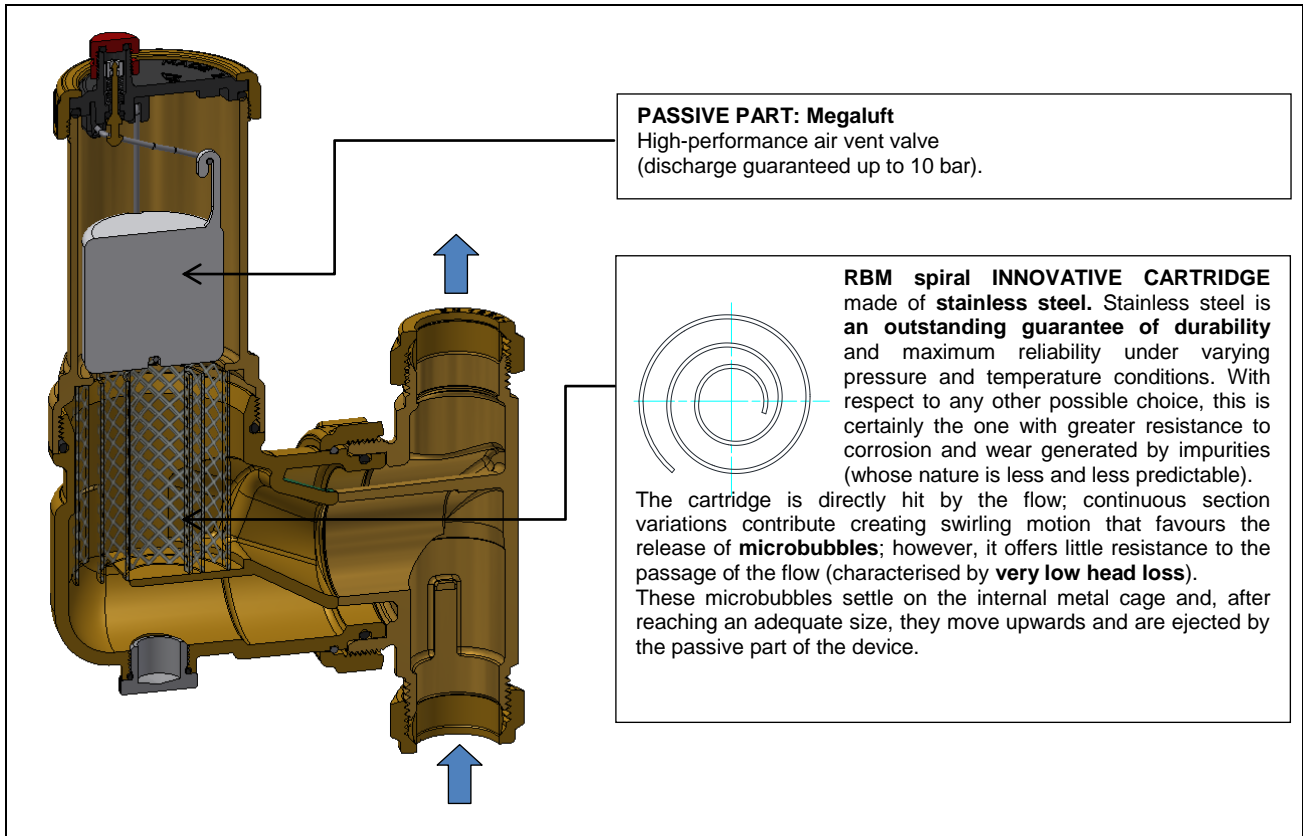
- Usable fluid: Water  
Water + Glycol 30%
- Maximum fluid temperature: 115°C
- Maximum operating pressure: 10 bar (1000 kPa)
- Maximum discharge pressure: 10 bar (1000 kPa)

## DIMENSIONAL FEATURES



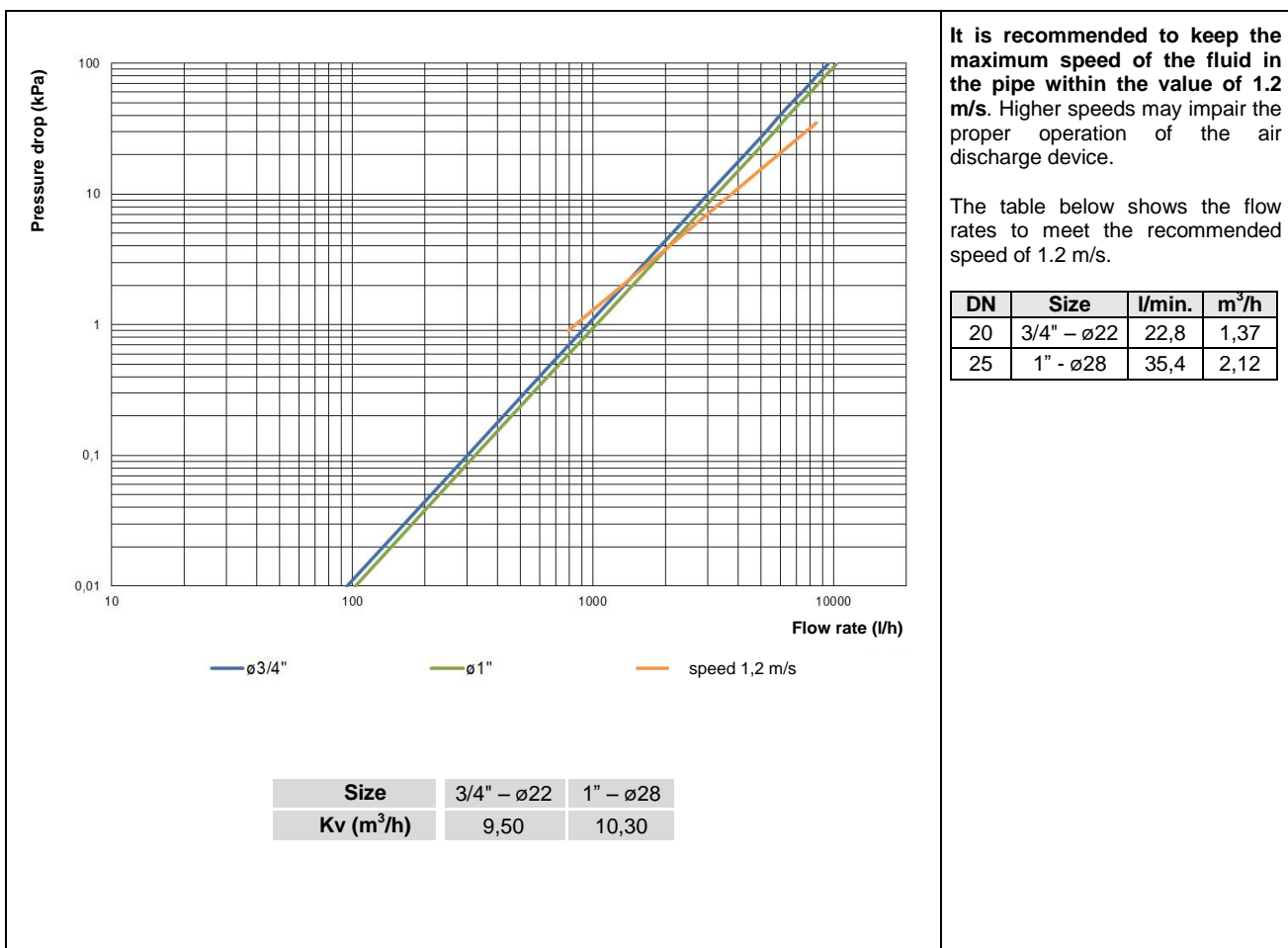
Code	G	A [mm]	B [mm]	Ø C [mm]	Ø D [mm]	E [mm]	F [mm]	G [mm]
2649.05.00	3/4"	104	126,5	68,2	57,2	12,7	134,4	199÷200
2649.06.00	1"	104	126,5	68,2	57,2	12,7	134,4	199÷200
On request	Ø 22	98	126,5	68,2	57,2	12,7	134,4	196÷200
On request	Ø 28	102	126,5	68,2	57,2	12,7	134,4	198÷202

## STRENGTHS / WORKING PRINCIPLE



## FLUID DYNAMICS FEATURES

Flow rate diagram - pressure drop

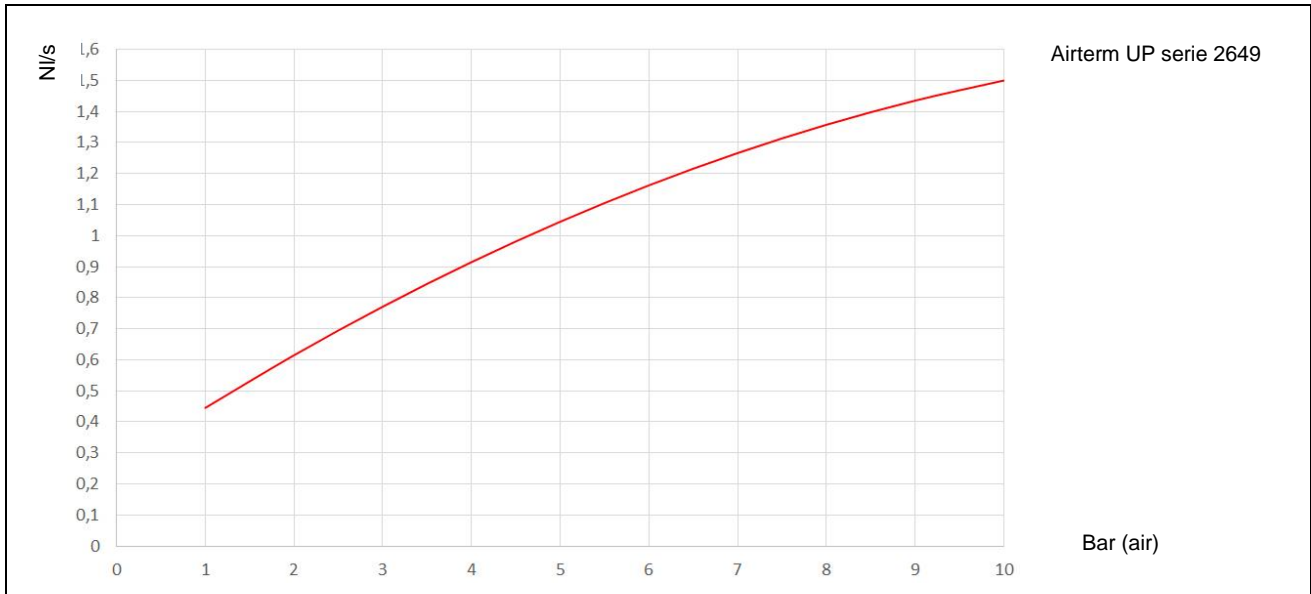


It is recommended to keep the maximum speed of the fluid in the pipe within the value of 1.2 m/s. Higher speeds may impair the proper operation of the air discharge device.

The table below shows the flow rates to meet the recommended speed of 1.2 m/s.

DN	Size	l/min.	m <sup>3</sup> /h
20	3/4" - ø22	22,8	1,37
25	1" - ø28	35,4	2,12

## Discharge capacity diagram



## USE / INSTALLATION

*Airterm UP deaerators operate systems with air-depleted water*, therefore they are able to absorb the air bubbles nestled in the system critical areas.

They can be used in **heating and cooling systems**. They ensure eliminating the air that is continuously formed in systems.

- To **be installed on the system warmest side**, as it is the area in which microbubbles form more.

Install them at the boiler output in case of heating systems; in the case of cooling systems, they must be installed on the return piping, at the cooling unit inlet (chillers).

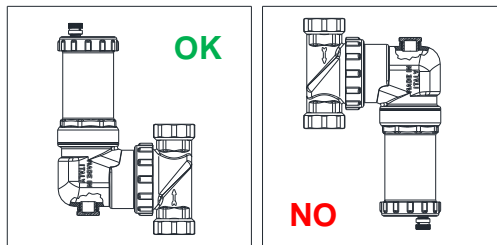
They are also commonly used upstream of circulators.

- Install **shut-off valves** upstream and downstream of the filter, in order to allow scheduled maintenance work and filter cleaning to be performed

- Important **Observe the direction indicated by the ARROW** on the body, to ensure a better performance.



- The *Airterm UP* deaerator must be installed with the **air vent valve facing upwards**.



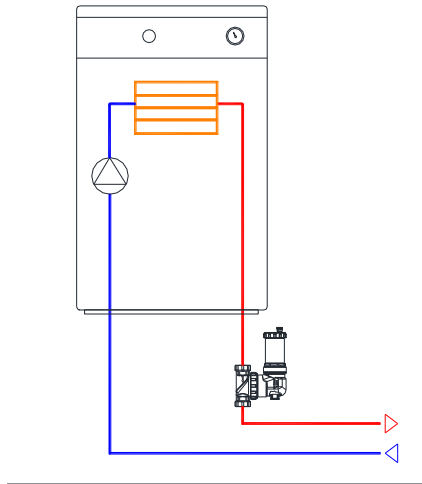
The jointed part allows installation on:

- Vertical,
- Horizontal and
- Diagonal piping

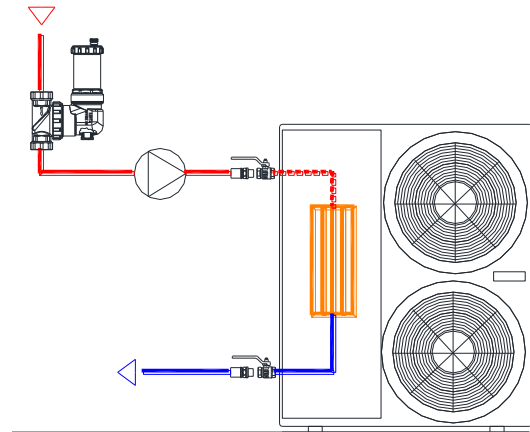
The sealing between the jointed part and the rest of the body does not depend on the strength with which the adjustment ring nut is tightened.

This because it is a telescopic sealing, and not a head sealing.

## APPLICATION DIAGRAMS



**Diagram 1:** Airterm UP installed on the system delivery pipe, on a vertical duct.

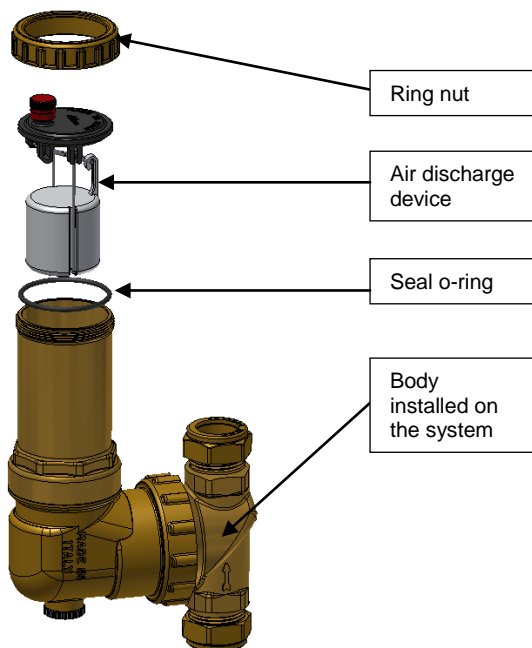


**Diagram 2:** Airterm UP installed on the system return pipe, at the cooling unit inlet.

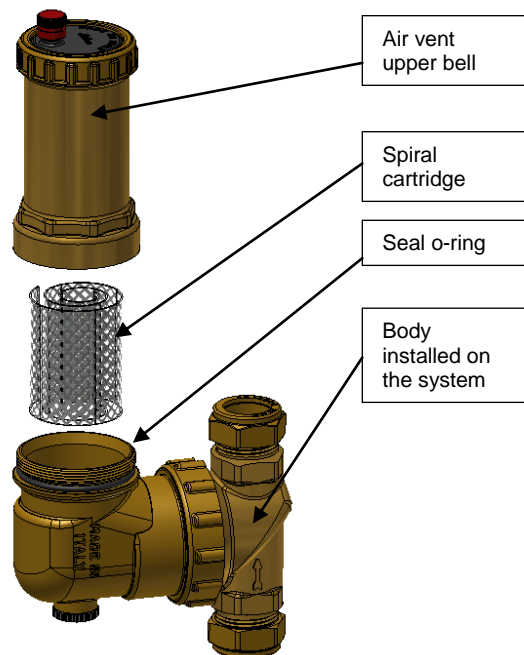
## MAINTENANCE INTERVENTIONS

Airterm UP has been designed in such a way that it can be dismantled and serviced. For cleaning operations, both the air discharge device and the cartridge can be easily accessed. **During these operations, the deaerator body remains always installed on the system.**

By simply unscrewing the upper ring nut, it is possible to access the air discharge device to check its functionality and perform any maintenance work.



By just unscrewing the upper bell that contains the air vent device, the cartridge can be accessed to perform any cleaning.



## SPECIFICATION ITEMS

### **SERIES 2649**

Airterm UP adjustable deaerator. Brass body. PP float. Float guide and brass rod. Float lever and stainless steel spring. AISI 304 steel spiral filtering cartridge. EPDM hydraulic seals. Threaded connections FF UNI-EN-ISO 228 (or compression ones for copper pipe). Maximum operating pressure 10 bar. Maximum operating temperature 110° C. Available sizes 1/2" + 3/4" (or compression for copper pipe ø22 and ø 28).



RBM spa reserves the right to improve and change the described products and related technical data at any moment and without prior notice; always refer to the instructions attached with the supplied components; this sheet is an aid, should the instructions be extremely schematic. Our technical department is always at your disposal for any doubt, problem or clarification.

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