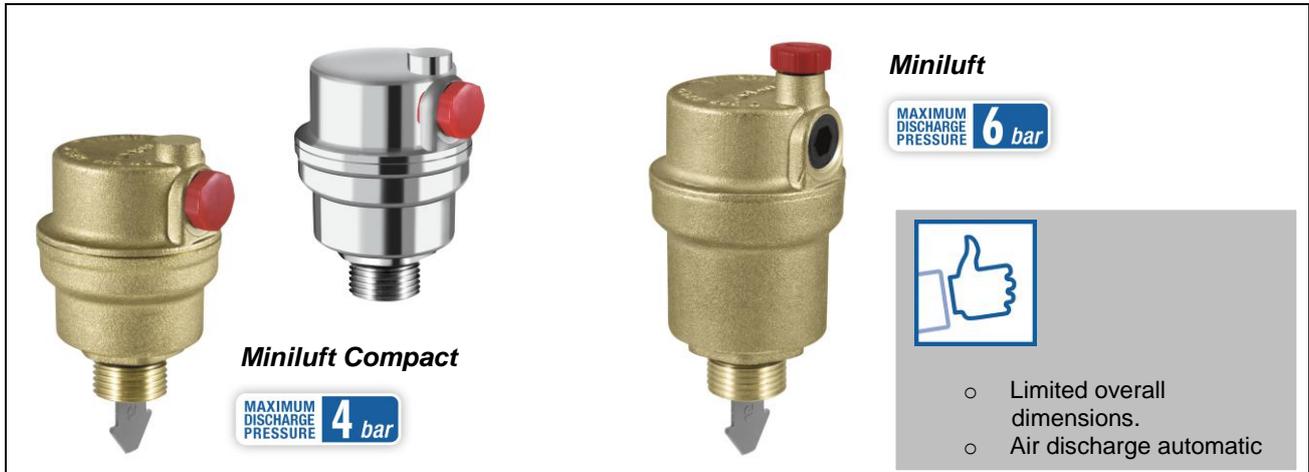


# MINILUFT

## SMALL SIZE AUTOMATIC AIR VENT VALVES FOR SMALL SYSTEMS



### PRODUCTION RANGE

#### AUTOMATIC AIR VENT VALVE COMPLETE WITH MANUAL CLOSING PAWL - LATERAL DISCHARGE

	Code	Size	Connection	Type
*	<b>2827.03.10</b> *	3/8"	M UNI-EN-ISO 228	Miniluft Compact - lateral discharge
	<b>2827.04.00</b>	1/2"	M UNI-EN-ISO 228	Miniluft Compact - lateral discharge
	<b>2827.03.90</b>	3/8"	M UNI-EN-ISO 228	Chrome-plated Miniluft Compact - lateral discharge
	<b>2827.04.90</b>	1/2"	M UNI-EN-ISO 228	Chrome-plated Miniluft Compact - lateral discharge

#### AUTOMATIC AIR VENT VALVE COMPLETE WITH MANUAL CLOSING PAWL - VERTICAL DISCHARGE

	Code	Size	Connection	Type
*	<b>2828.03.10</b> *	3/8"	M UNI-EN-ISO 228	Miniluft - vertical discharge
	<b>2828.04.00</b>	1/2"	M UNI-EN-ISO 228	Miniluft - vertical discharge
	<b>On request</b>	Ø15	Copper compression pipe	Miniluft - vertical discharge

\* Valve fitted with air pocket breaker

### DESCRIPTION

#### **THE PURPOSE:**

*Miniluft valves* are automatic, float-operated air vent valves whose function is removing air and gases from heating or cooling systems.

Their small size makes them ideal for applications in various types of collectors to be installed in distribution kits housed in containment boxes.

Despite their small size, they are very effective in removing air during both loading and emptying, and have a high venting capacity keeping the various system areas in which they are installed free of air.

*Chrome-plated Miniluft* air-venting valves are built with special attention to their aesthetic appearance, achieved through a polished chrome plating treatment of the components. The special finishing treatment makes this series of products particularly suitable for fulfilling the aesthetic requirements of heated towel rails. They are mainly used on the ends of heated towel rail elements.

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:**

*Miniluft valves* are used in areas where the formation of air bubbles is likely; they are particularly suitable for direct mounting on manifolds as well as in horizontal pillars (horizontal risers).

#### **CAUTIONS:**

To be always installed in a vertical position.

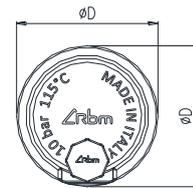
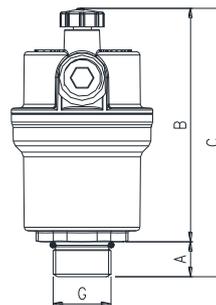
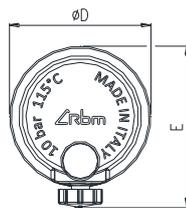
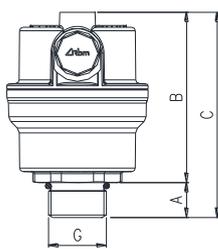
## CONSTRUCTION FEATURES

- Body / cap: Brass CW 617N UNI EN 12165
- Elastomers used: EPDM and NBR
- Float: With levers, made of polypropylene resin
- Spring: AISI 302 stainless steel
- Air pocket breaker: Polymer  
*(only available in size 3/8")*
- Connection: M 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:
  - Version with lateral discharge (series 2827) 4 bar (400 kPa)
  - Version with vertical discharge (series 2828) 6 bar (600 kPa)

## DIMENSIONAL FEATURES



Code	G	A [mm]	B [mm]	C [mm]	Ø D [mm]	E [mm]
2827.03.10	3/8"	10	45,8	55,8	40,4	46,3
2827.04.00	1/2"	11,5	45,8	57,3	40,4	46,3
2827.03.90	3/8"	10	45,8	55,8	40,4	46,3
2827.04.90	1/2"	11,5	45,8	57,3	40,4	46,3

Code	G	A [mm]	B [mm]	C [mm]	Ø D [mm]
2828.03.10	3/8"	10	66,9	76,9	40,4
2828.04.00	1/2"	11,5	66,9	78,4	40,4
On request	Ø 15	20,6	68	88,6	40,4

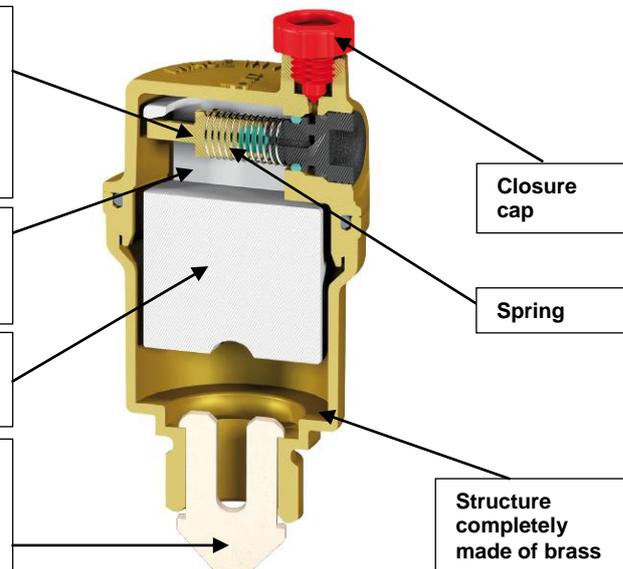
## STRENGTHS / COMPONENT DESCRIPTION

**Gas ejection device:** The ejection of gases (such as oxygen, hydrogen, carbon dioxide) prevents the latter, if retained, from forming corrosive acid solutions or activating galvanic drilling processes in the presence of stray currents. The gas ejection device can be closed by completely screwing the end pawl. Said component must be regarded as a system safety device thanks to its high functional properties.

**Air accumulation pressostatic chamber:** The pressostatic chamber is designed to prevent contact between the impurities present on the fluid free surface and the sealing device, especially when the circulation pump is started.

**Float:** Technopolymer float, fitted inside the body in such a way that its functionality cannot be influenced by external movements, including rotation and vibration.

**Air pocket breaker:** (only available in size 3/8") Prevents the formation of air pockets in the system that could block the drain flow. If combined with Series 38 check valve, remove the air pocket breaker from the valve.



## OPERATING PRINCIPLE

The accumulation of air bubbles in the upper part of the valve body (air accumulation pressostatic chamber) causes the float descent and, consequently, the gas ejection device opening.  
For the valve to properly operate, make sure that the water pressure remains lower than the maximum discharge pressure value (**4 bar** for the 2827 series - **6 bar** for the 2828 series).



Valve position **CLOSED**



Valve position **OPEN**

## USE / INSTALLATION AND AUXILIARY COMPONENTS

*MINILUFT* valves are used in areas where the formation of air bubbles is likely; they are particularly suitable for direct mounting on manifolds, in horizontal pillars.

**To be always installed in a vertical position.**

Precautions:

- Use the air vent valve with an open pawl during the system loading / unloading.
- If it is installed on manifolds close to bypasses, make sure that the pawl is fully screwed, so as to avoid any air suction when the by-pass assembly is used the most (closed distribution ways).
- To be installed on circuits with positive pumping pressures. For circuits with negative pumping pressures, always provide for the component manual shut-off by interposing a suitable ball valve.
- To facilitate any maintenance work and inspection of the air vent device without stopping the system, it is recommended to shut off the device with ball or check valves.

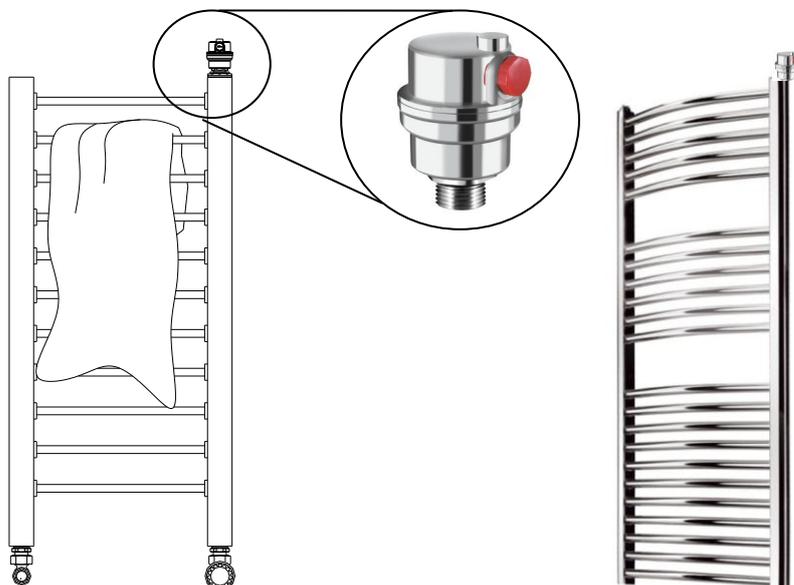


### CHROME-PLATED MINILUFT APPLICATION:

*CHROME-PLATED MINILUFT* air-venting valves are built with special attention to their aesthetic appearance, achieved through a polished chrome plating treatment of the components.

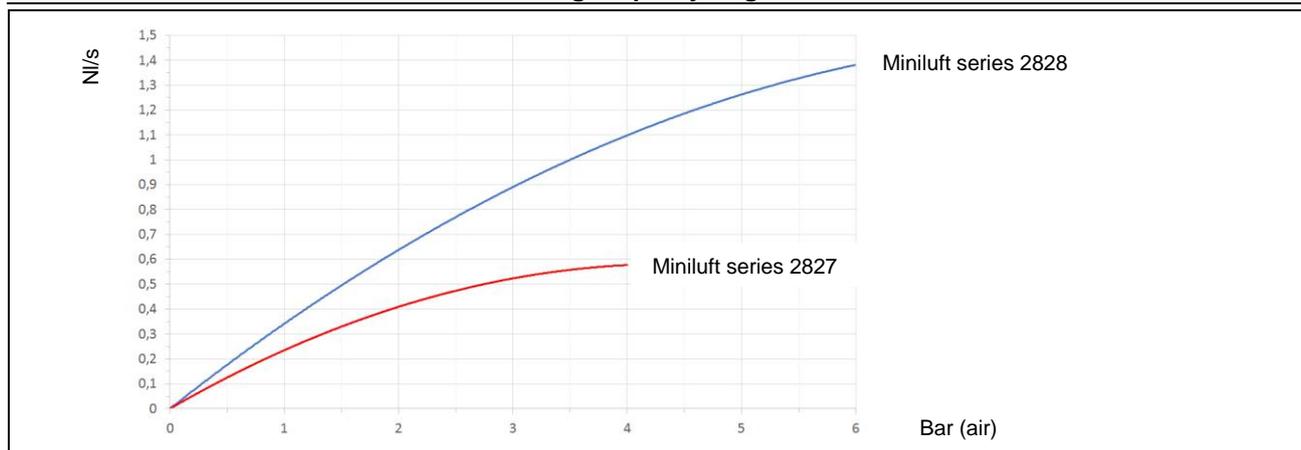
The special finishing treatment makes this series of products particularly suitable for fulfilling the aesthetic requirements of heated towel rails. They are mainly used on the ends of heated towel rail elements.

Installing *MINILUFT* makes it possible to automatically discharge air contained in the heating element and thereby resolve the common and bothersome phenomenon of radiators not being uniformly warm.



## FLUID DYNAMICS FEATURES

### Discharge capacity diagram



## SPECIFICATION ITEMS

### **SERIES 2827**

Automatic air vent valve complete with manual closing pawl model *Miniluft Compact*. 3/8" M (or 1/2" M) threaded connection. Brass body and cap. PP float. AISI 302 stainless steel spring. Nitrile elastomer and ethylene-propylene elastomer seals. Air pocket breaker in polymer. Usable fluid water - water+glycol 30%. Fluid maximum operating temperature 115°C. Maximum operating pressure 10 bar. Max. discharge pressure 4 bar. Lateral discharge.

### **SERIES 2827 CHROME-PLATED**

Automatic air vent valve for heated towel rail complete with manual closing pawl model *Miniluft Compact*. 3/8" M (or 1/2" M) threaded connection. Brass body and cap with special polished chrome-plated surface finish. PP float. AISI 302 stainless steel spring. Nitrile elastomer and ethylene-propylene elastomer seals. Usable fluid water - water+glycol 30%. Maximum fluid temperature 115°C. Maximum operating pressure 10 bar. Maximum discharge pressure 4 bar. Lateral discharge.

### **SERIES 2828**

Automatic air vent valve complete with manual closing pawl model *Miniluft*. Threaded connection 3/8" M (or 1/2" or compression connection for copper pipe  $\varnothing 15$ ). Brass body and cap. PP float. AISI 302 stainless steel spring. Nitrile elastomer and ethylene-propylene elastomer seals. Air pocket breaker in polymer. Usable fluid water - water+glycol 30%. Fluid maximum operating temperature 115°C. Maximum operating pressure 10 bar. Max. discharge pressure 6 bar. Vertical discharge.



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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