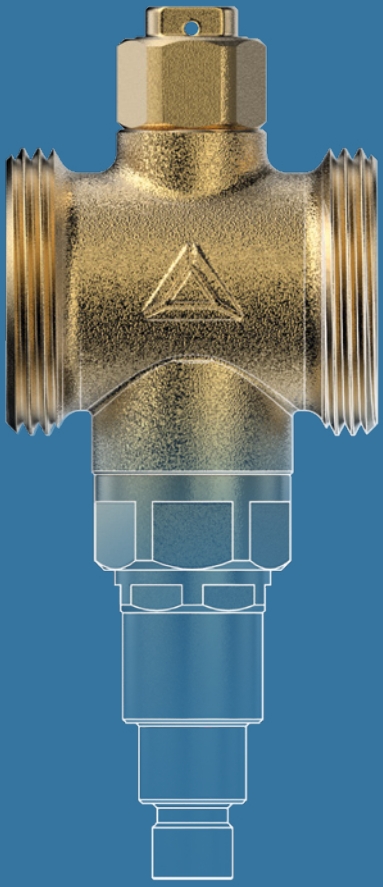
It does not fear the cold



RBM
zerofrost

Antifreeze valve for heat pumps

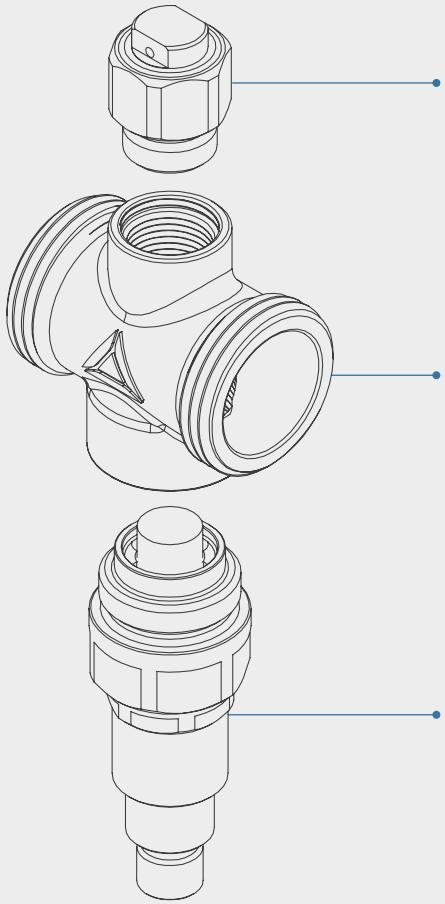
RBM

The only thing that freezes is maintenance

The **Zerofrost anti-freeze valve** is designed to allow a small amount of the fluid inside the system to drain **when its temperature drops below 3 °C**. It automatically intervenes to prevent the formation of ice within the single-block heat pump circuit, preventing blockages or obstructions in the system that can reduce its efficiency and cause damage to the system.

Zerofrost is an **environmentally friendly solution** because it eliminates the risks of using potentially polluting glycol. It is also an economical choice because it **saves on running and maintenance costs**, keeping the system in perfect working order.

Zerofrost is available in two sizes: **1"** and **1"1/4**.



Sensitivity	± 1 °C
Opening temperature (fluid)	3 °C
Closing temperature (fluid)	4 °C
Temperature range (fluid)	0 - 80 °C
Ambient temperature range	-30 °C / +60 °C
Maximum working pressure	10 bar
Maximum discharge at 3 bar	1,5 l/h

Scan the qr code
and **discover Zerofrost**

The advantages

The advantages of installing **Zerofrost**

- It protects heat pumps from freezing
- It is automatically activated when the fluid temperature drops below 3 °C
- No power supply required
- Maximum sensitivity (± 1 °C) and rapidity of intervention
- It discharges only what is necessary (max. 1.5 l/h) avoiding draining the system
- It avoids the use of glycol

1. **Bulb inserted directly into the flow**
   It avoids negative influences from low ambient temperatures, allowing accurate system drainage only when necessary.

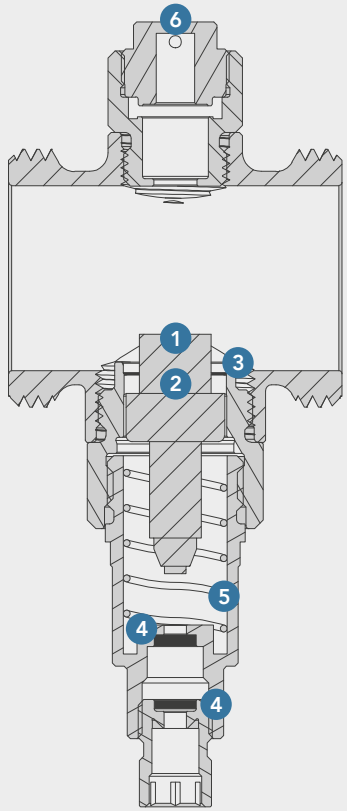
2. **High-performance bulb**
   Precision and speed of intervention guaranteed over time.

3. **Protection ring**
   It protects the bulb from any debris suspended in the water that could cause the drain to malfunction.

4. **Surface treatment of the operating device**
   It ensures proper operation and reliability over time.

5. **Very low discharge rate**
   (max. 1.5 l/h)
   The special design of the drain guarantees dripping only.
   Unlike other devices whose drains are made with the classic shutter system, Zerofrost discharges only what is necessary, avoiding emptying the system.

6. **Vacuum breaker valve**
   It prevents the creation of negative pressures in the system or piping generated during discharge.



Installation

Zerofrost automatically intervenes to prevent the formation of ice within the circuit of the single-block heat pumps. **Before installing the device, clean the piping thoroughly** to prevent circulating impurities from impairing its performance.

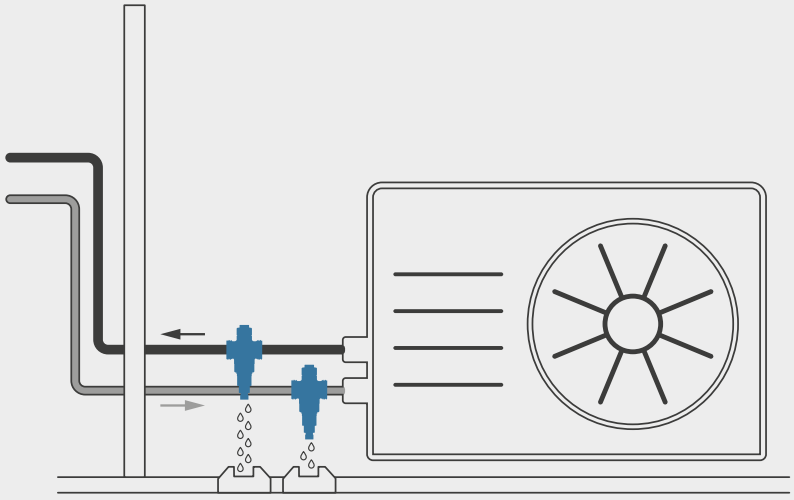
Antifreeze valves should be **installed outdoors**, where the lowest temperature can be reached. Furthermore, the valve **should not be placed near heat sources** that could interfere with operation.

Zerofrost **can only be installed in a vertical position**, with the outlet pointing downwards, to allow the discharged water to flow out correctly, unobstructed.

Installation must be carried out in such a way as to allow free access to the device in the event of a malfunction or for maintenance. It must be possible to replace both the vacuum breaker and the cartridge.

We recommend the **installation of a Zerofrost valve on the flow circuit and one on the return**, to prevent residual water from remaining in the piping and freezing.
It is also advisable to **provide an adequate drainage system** to prevent the formation of ice on the ground. **Avoid overlapping the valves** and position them at a suitable distance from the ground (as shown in the drawing).

Warnings:
- Do not insulate;
- Avoid direct exposure to sunlight and severe weather conditions.



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