



**Product:** Anti-Freeze Valves  
**Code:** AFV114 & AFV28

## Product Overview:

The Tesla anti-freeze valve is designed for use on water filled heat pump systems.

The valve will discharge water when the ambient temperature falls to 3°C. By doing this, it allows the water to keep moving, pulling in warmer water from the heat pump or inside the property, preventing ice forming inside the pipe work. Once the ambient temperature reaches 4°C, the valve will close again.

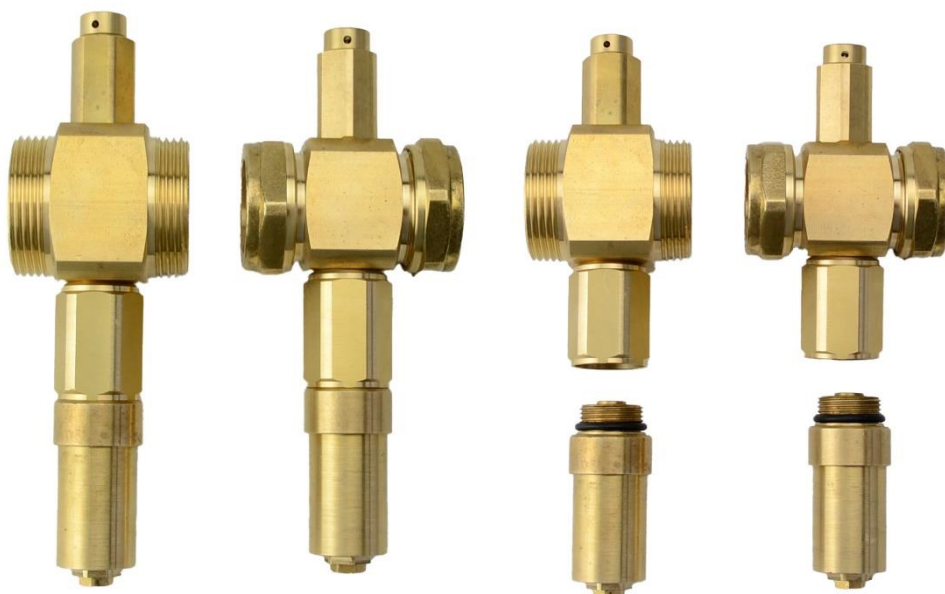
Please read the instructions carefully before installing the Tesla Anti-Freeze Valve.

It is advised to fit this valve on a system that has a water softener in place to reduce the risk of calcium deposits, which will have a negative effect on the performance of this valve, specifically in hard water areas.

## Features & Benefits:

- Extended vacuum breaker – no pooling water at risk of freezing
- Extended thermal cartridge/discharge point – this can be capped off for commissioning and servicing purposes

NB: Both extended parts allow for the correct installation of insulation without affecting its performance or need for additional components.



## Installation:

- The Tesla anti-freeze must be installed at the lowest point on the system, in a vertical position and outdoors with the outlet pointing down, at least 15cm from the ground
- It must not be installed near heat sources
- The valve must be protected from direct sunlight, rain and snow. Only the vacuum breaker and the discharge point should be exposed.
- Trap points should not be present in the system as these traps will not drain, leaving water in the system with a possibility to freeze and cause damage
- It is recommended to fit a Tesla anti-freeze valve on the flow and the return pipe as some water could be left in the system and potentially freeze
- Flush the system thoroughly, keeping it under the correct pressure at all times before installing the Tesla anti-freeze valve and do not let any debris enter the system
- You must install the valves at least 10cm apart and offset to ensure correct efficiency

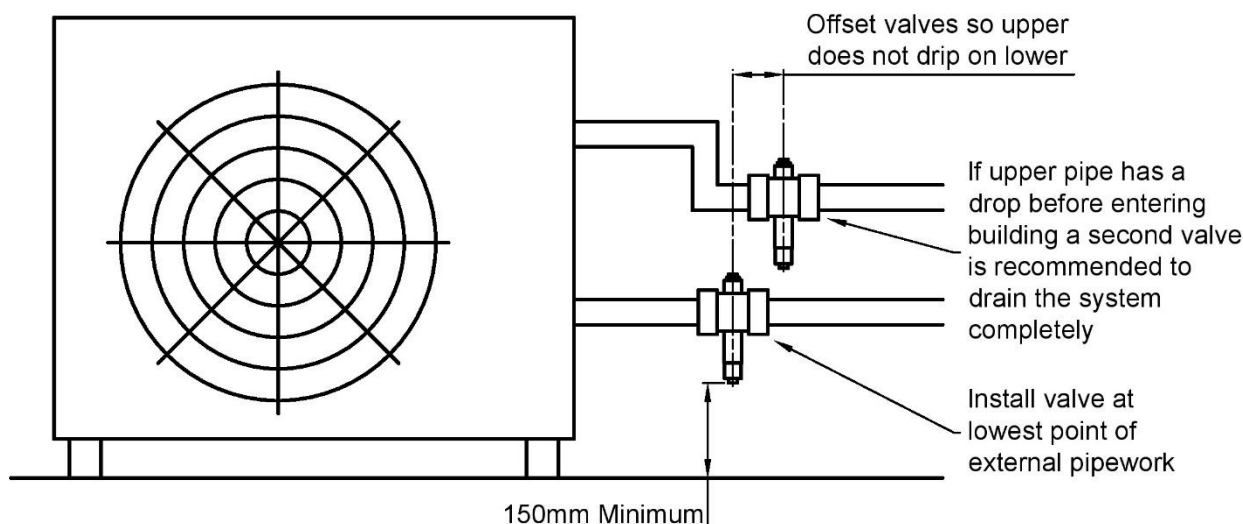
## Maintenance:

In the unlikely event the valve should malfunction, the vacuum breaker should be inspected:

Using a suitable spanner, remove the vacuum breaker from the body. Remove the sealing washer.

The plastic cap inside the cover should fall out freely. If it doesn't, remove it carefully and clean the whole area and components with clean water.

## Installation variations:



## Technical Specification:

|                       |         |
|-----------------------|---------|
| Maximum pressure      | 10 bar  |
| Medium                | Water   |
| Accuracy              | $\pm 1$ |
| Open Temperature      | 3°C     |
| Closed Temperature    | 4°C     |
| Max Water Temperature | 85°C    |

## Sizes Available:

| Code   | Size             |
|--------|------------------|
| AFV28  | 28mm Compression |
| AFV114 | 1-1/4" Male      |