



**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 will prevent ice forming in the system which could result in costly damage to the pipes, equipment and more. It closes again once the water reaches 4°C.

As the valve is installed on the system water flow, an O-ring has been fitted to prevent debris clogging up the valve, which could restrict its performance. In addition, it will avoid nuisance discharges from the effects of ambient temperatures.

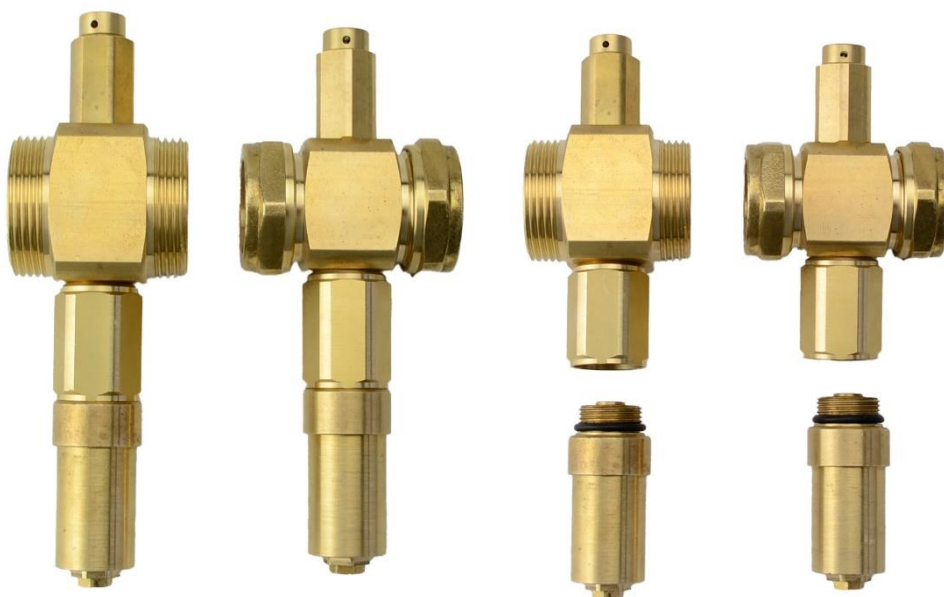
Please read the instructions carefully before installing the Tesla Anti-Freeze Valve.

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

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

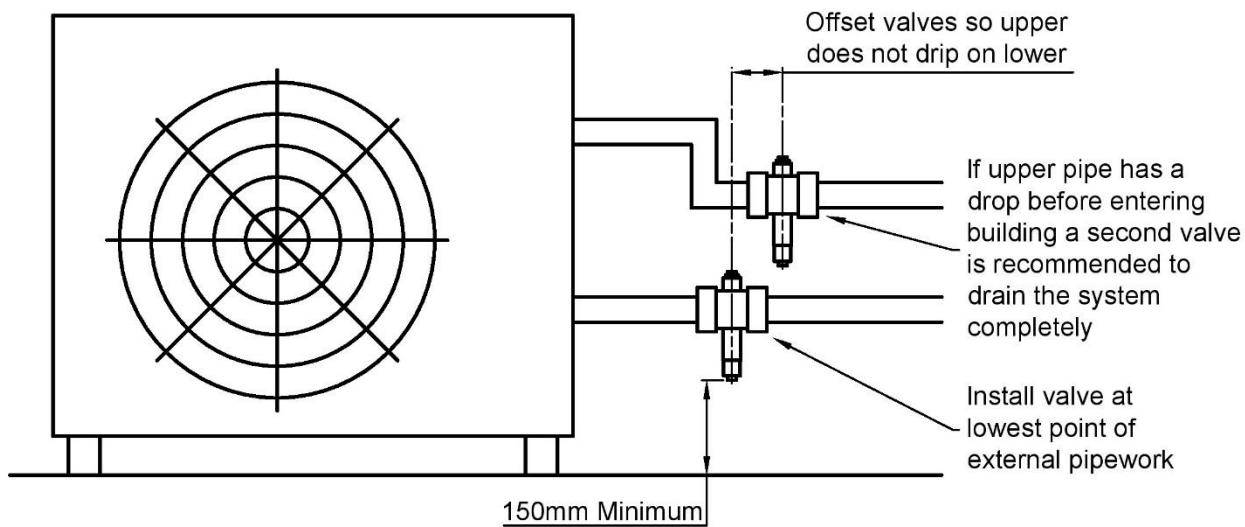
## Maintenance:

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              | ± °1   |
| Open Temperature      | 3°C    |
| Closed Temperature    | 4°C    |
| Max Water Temperature | 85°C   |

## Variations:

| Tesla Code | Size             |
|------------|------------------|
| AFV28      | 28mm Compression |
| AFV114     | 1¼" Male Thread  |