



## Product

**ZERO001 - Zero Anti-Freeze Valve 1" Male**  
**ZERO114 - Zero Anti-Freeze Valve 1 1/4" Male**  
**ZERO28 - Zero Anti-Freeze Valve 28mm**  
**ZERO35 - Zero Anti-Freeze Valve 35mm**  
**ZERO1SW - Zero Anti-Freeze Valve 1" Male x 1" Female Swivel**  
**ZERO14SW - Zero Anti-Freeze Valve 1 1/4" Male x 1 1/4" Female Swivel**  
**ZEROGUARD - Anti-Freeze Valve Guard**

## Technical Specification

<b>Max Inlet Pressure (static):</b>	<b>10 Bar</b>
<b>Medium:</b>	<b>Water</b>
<b>Sensitivity:</b>	<b>± 1°C</b>
<b>Opening Temperature:</b>	<b>3°C</b>
<b>Closing Temperature:</b>	<b>4°C</b>
<b>Working Temperature Range:</b>	<b>0 to 80°C</b>
<b>Ambient Temperature Range:</b>	<b>-30 to 60°C</b>
<b>Max Discharge Flow Rate @ 3 Bar: Kv:</b>	<b>1.5 L/H</b>
	<b>ZERO001 (55m<sup>3</sup>/h)</b>
	<b>ZERO114 (70m<sup>3</sup>/h)</b>
	<b>ZERO28 (64m<sup>3</sup>/h)</b>
	<b>ZERO35(70m<sup>3</sup>/h)</b>
	<b>ZERO1SW (33m<sup>3</sup>/h)</b>
	<b>ZERO14SW (52m<sup>3</sup>/h)</b>

## Insulating

The patented Inta Zero Anti-Freeze Valves have been specifically designed to quickly and accurately react to the water temperature in the heat pump circuit and do not need the influence of the ambient temperature to operate.

Building regulations Part L states that all external fittings on an Air Source Heat Pump System must be fully insulated to reduce heat loss and maintain system efficiency. Inta Zero Anti-Freeze Valves will still maintain correct operation and discharge the water at the same temperature even when a system is correctly insulated.

The Inta Zero Anti-Freeze valves have been Independently tested using a controlled Ambient Temperature between -1°C to 1°C and starting water temperature 10°C to demonstrate the possibility of insulating the Inta Zero Valve without affecting the performance:

### Without Insulation

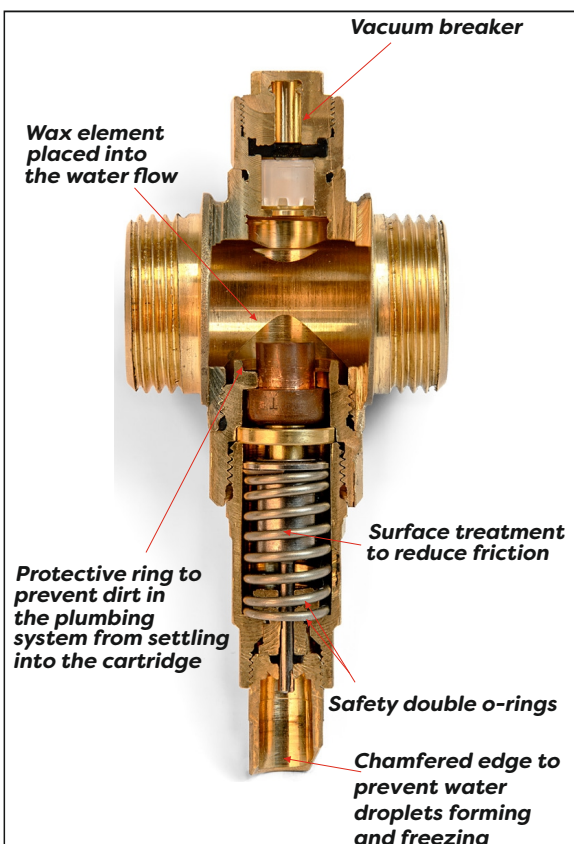
Water Discharge Temperature = 2.49°C  
Time taken to begin discharge = 1 hour 4mins

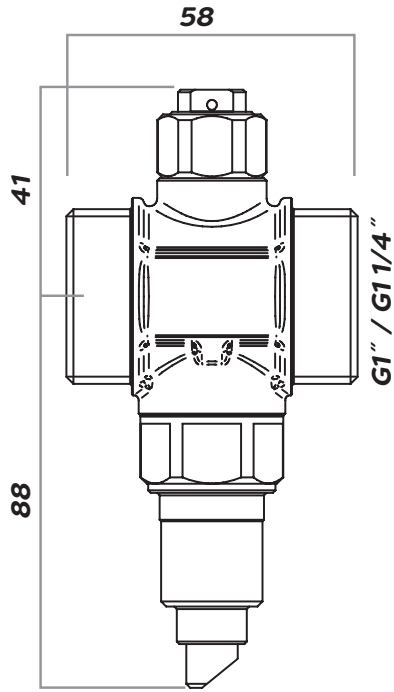
### With Insulation

Water Discharge Temperature = 2.03°C  
Time taken to begin discharge = 4hour 3mins

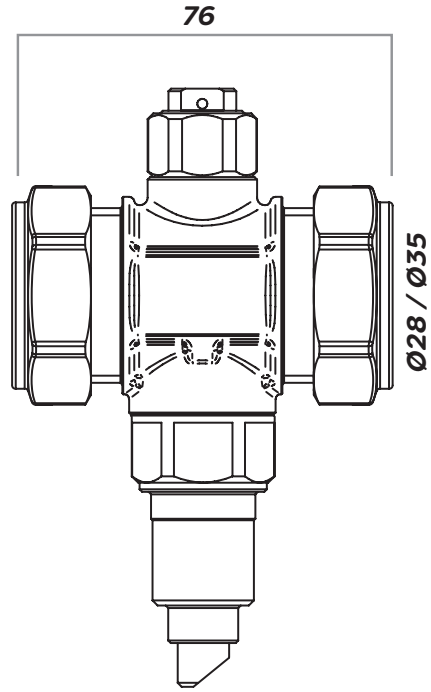
### Warning!

If the Inta Zero valves are insulated, then due care must be taken to ensure that all external pipework and fittings are fully and appropriately insulated and sealed. Failure to do so could prevent the proper operation of the Zero valve resulting in colder areas of a system being damaged by freezing. The Anti-vacuum valve must be kept clear at all times, Intatec recommend using the ZEROGUARD anti-vacuum cover (inspected on annual service).

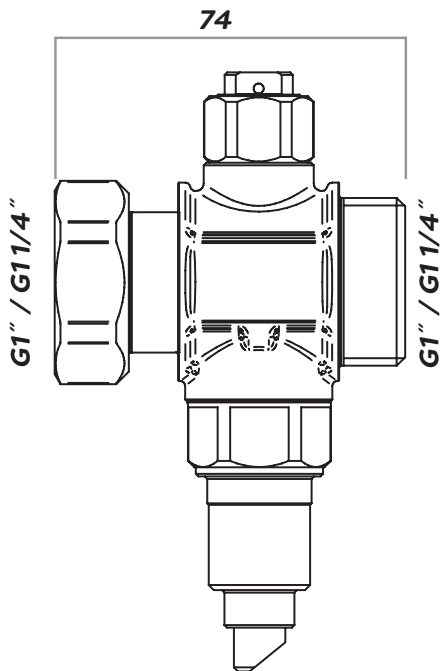




ZERO001 - ZERO114



ZERO28 - ZERO35



ZERO1SW - ZERO14SW

