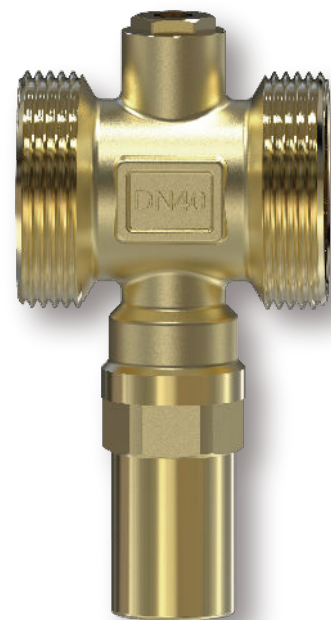


ANTI-FREEZE VALVES

910078NT



Anti-freeze valves are used in closed circulation system of heat pump, avoiding the freezing of water in the pipes and subsequent damage to the pipe and valve in case of unexpected power outages or system failures, When the water temperature in the system drops below 3°C, the anti-freeze valve automatically opens to drain the circulating water from the pipes.

TECHNICAL CHARACTERISTICS

Valve material: EN12165 CW617N/C46500

Medium: Water

Maximum working pressure: 10bar

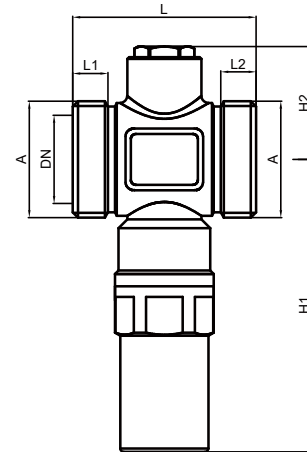
Working temperature range: 0°C-65°C

Ambient temperature range: -30°C-60°C

Medium temperature (Opening): 3°C

Medium temperature (Closing): 4°C

Control Accuracy: $\pm 1^\circ\text{C}$



DN	25	32	40
A(G)	1"	1 ¼"	1 ½"
L	52	59	62
L1	10	14	15.5
L2	10	14	15.5
H1	82.5	84.5	86
H2	32.5	34	35.5

KV TABLE

KV-Q			
A	G 1"	G 1¼"	G 1½"
DN	25	32	40
KV	55	70	88
Q3	0.3	0.3	0.3
Q0.5	3	3	3

(The valve pressure is 3 bar before test, the pressure difference is 1 bar after test)

KV: Flow rate when pressure loss is 1bar, measured in m³/h.

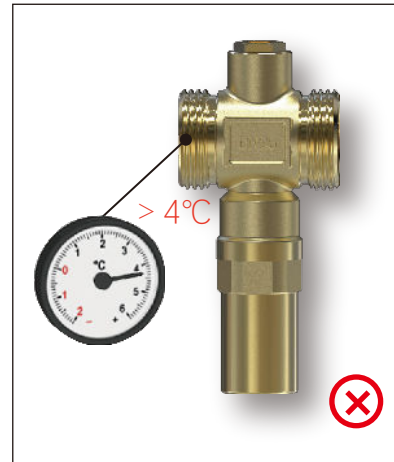
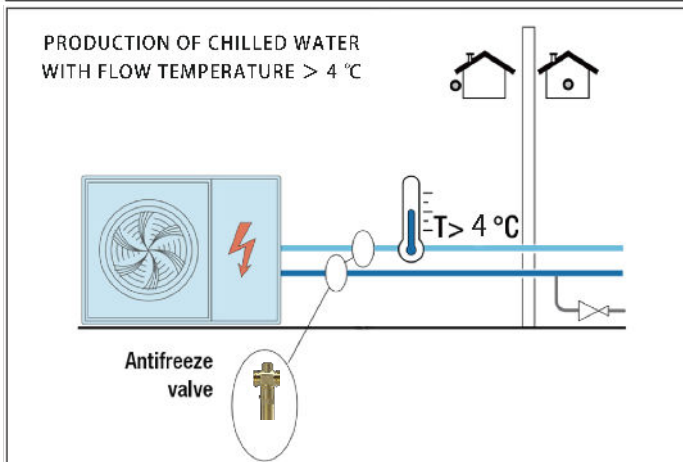
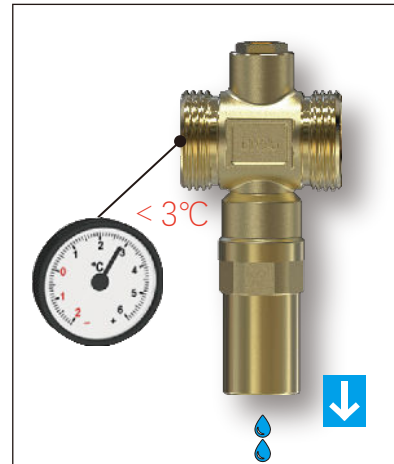
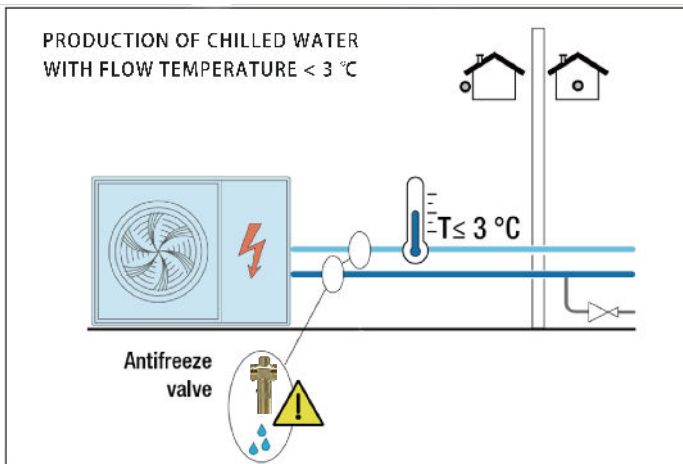
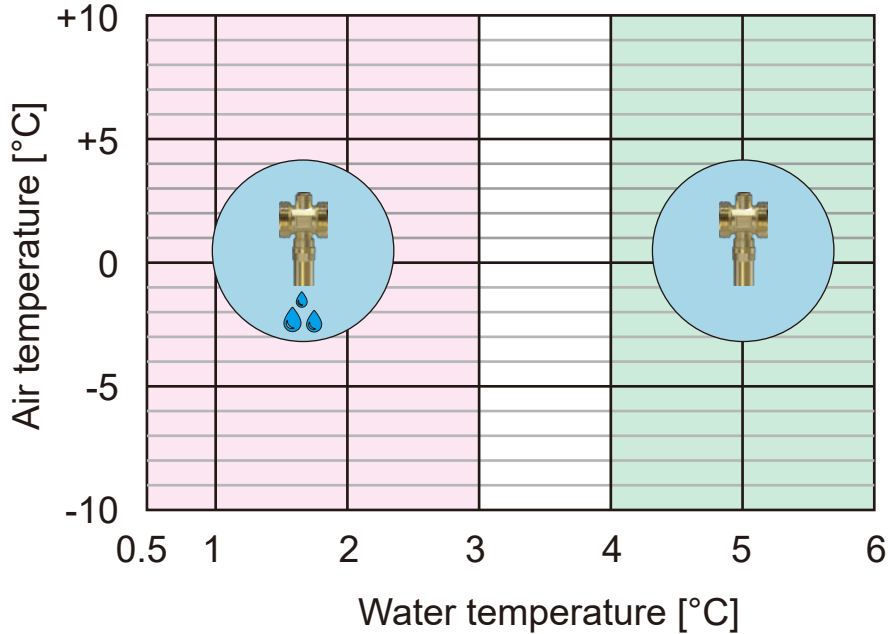
Q3: Water temperature 3°C, and the flow rate at a pipeline pressure of 3bar (l/h).

Q0.5: Water temperature 0.5°C, and the flow rate at a pipeline pressure of 3bar (l/h).

CHARACTERISTIC COMPONENTS

Operating Principles

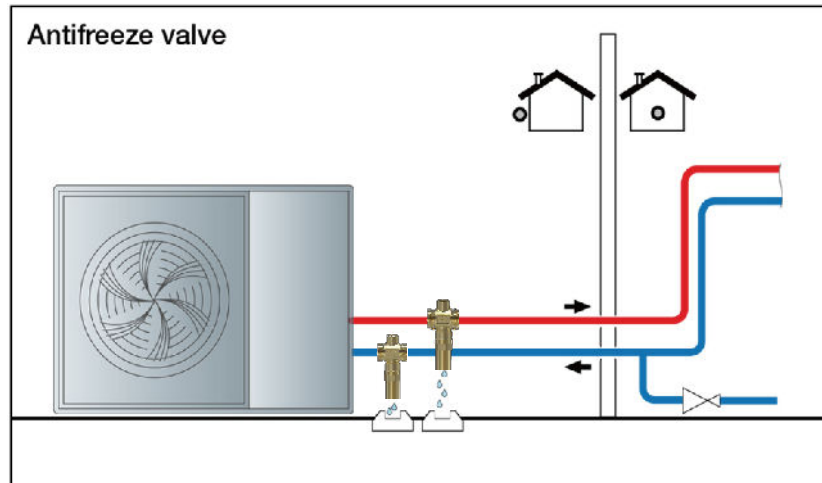
When the water temperature inside the valve drops below 3°C , the temperature-sensitive element automatically opens the piston for drainage. When the water temperature exceeds 4°C , the drainage piston automatically closes, stopping the drainage.



INSTALLATION

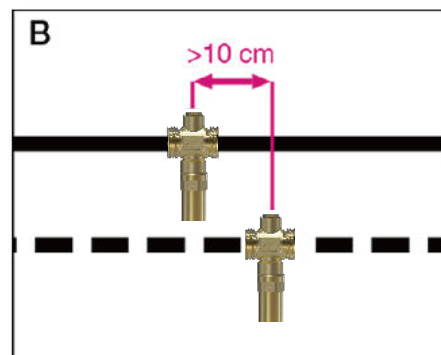
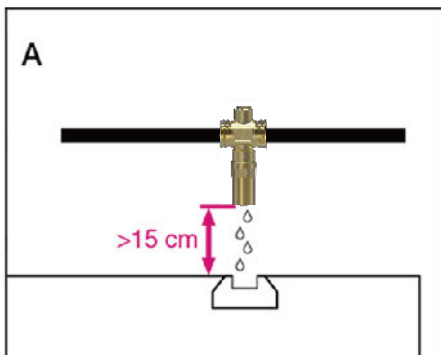
The valve must be installed vertically, with the outlet facing downwards, to allow the drained water to flow out smoothly and free from obstructions. It must be installed on the pipes connecting the outdoor heat pump to the indoor, which are the most easily frozen in case of power failure or system malfunction. The anti-freeze valve should be placed away from heat sources to keep them working properly. It is recommended to install anti-freeze valves on both pipes (flow and return) to avoid the risk of outdoor pipe freezing.

The system must maintain pressure at all times to ensure the proper functioning of the anti-freeze valve.



The outlet of the anti-freeze valve should be at least 15cm above the ground level to prevent ice accumulation from obstructing the outlet.

Keep a distance at least 10cm if two anti-freeze valve for flow and return are installed



Precautions:

1. There should be no trap connections in the pipe. The shape of the trap connection has the potential to lead to water accumulation, and frost protection will no longer be guaranteed.
2. The anti-freeze valve must be free of insulation
3. When installed outdoors, it's better to have a covering on the antifreeze valve to prevent from rain, snow and direct sunlight.