AFV600 Series

Features

Brass Anti-Freeze Valve, M/M
Body Material: CW617N
O-Ring & Sealing: EPDM
Spring: S.S.304

Technical data

- Maximum working pressure: 10 Bar
- Working temperature range: 0-90°C(with French Vernet thermal sensor)
- The ambient temperature range is from -30°C to +60°C
- The fluid temperature (measured in water) to start the release opening is +3°C
- The fluid temperature(measured in water) to start the release closing is +4 °C (tolerance ±1°C)

Why Vernet Thermostatic Element better

	Vernet Thermostatic Element	Business & Application Impact)
Core Material	Proprietary high-purity wax for ultra-narrow temp range	Vernet ensures absolute triggering in freezing conditions due to linear volume expansion at the 3°C-4°C critical point.
Thermal Hysteresis	Minimal, <=0.5°C	Vernet achieves instant actuation, eliminating the risk of system frost damage caused by delayed response.
Seals & Elastomer	Aerospace-grade low-temp anti-fatigue elastomer	Determines lifespan under constant thermal cycling; Vernet guarantees "zero wax leakage" over hundreds of thousands of cycles.
Machining Precision	Micron-level coaxiality & ultra-low friction guidance	Lower mechanical friction ensures smoother spool return, preventing valve jamming.
Actuation Accuracy	Open: 3°C, Close: 4°C- Precise interception	Vernet minimizes heat loss from the heat pump main unit while ensuring anti-freeze safety.

Function

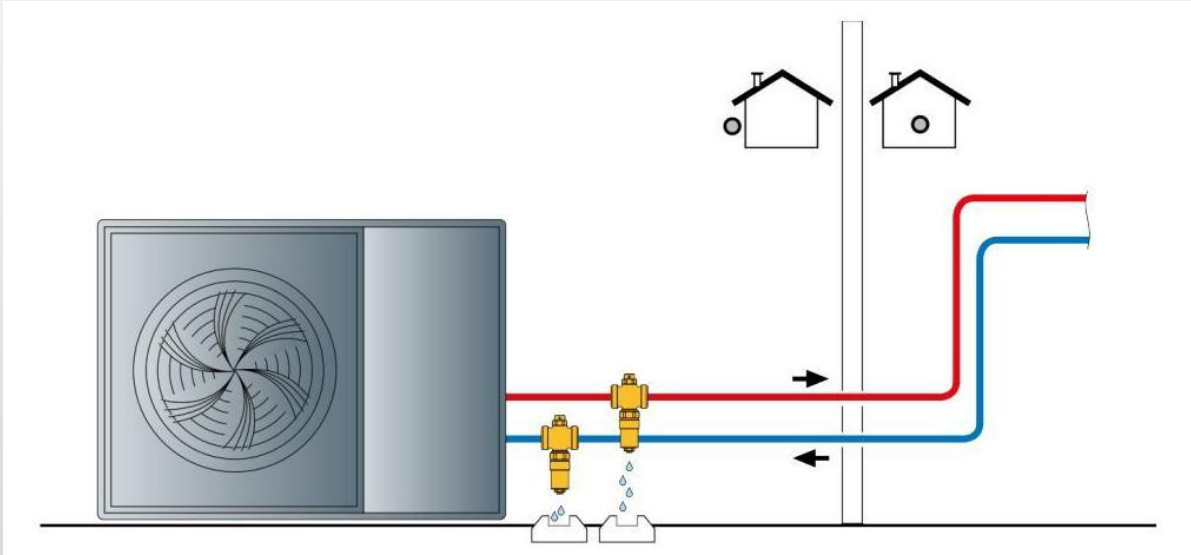
The main purpose of this valve is to prevent the formation of ice in piping systems and equipment,located in cold environments, releasing fluid from inside of the circuit or pipe where it is installed when the temperature reaches a value of +3ºC

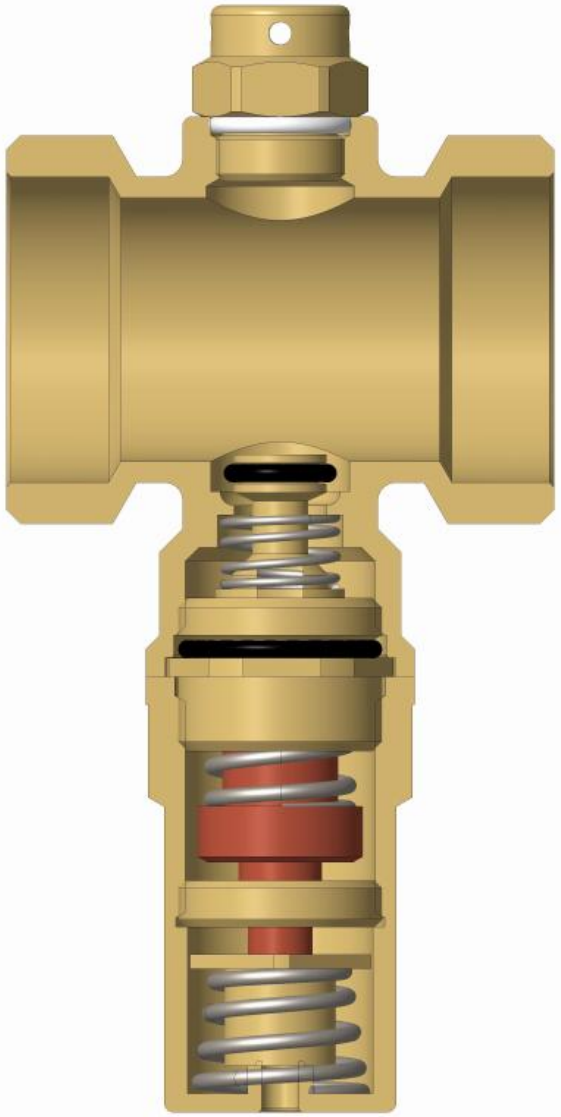
Application

1) The most recommended application is in aerothermal and heat-pump air conditioning systems.

2) These antifreeze valves must be installed in the section of pipes exposed to the outside, which connects to the external module in its supply and return circuits.

3) Due to their operation, these valves can also be installed in a general way, in circuits where it is desired to prevent the formation of ice inside the pipes.





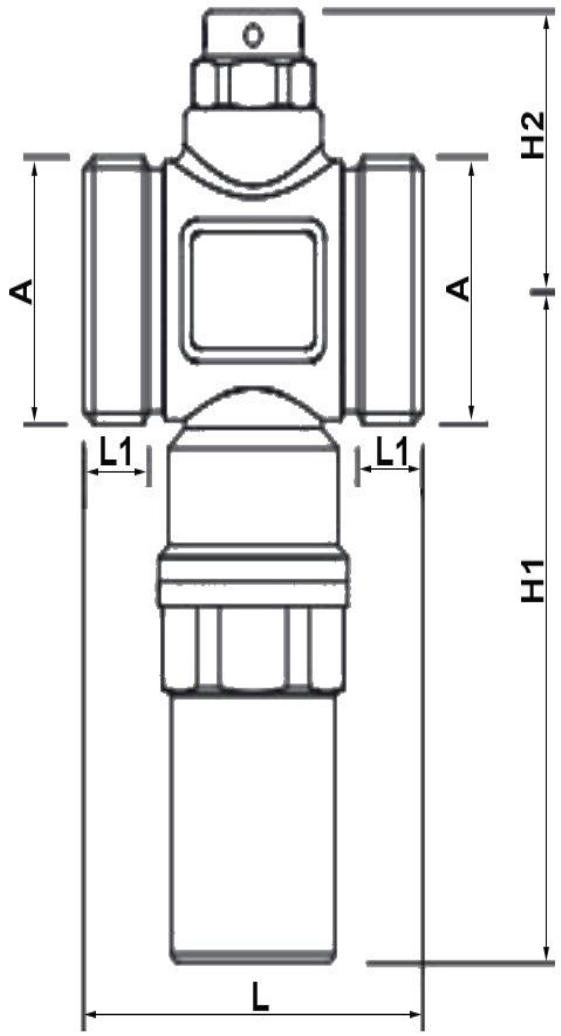
			KV Table
KV-Q			
A	G 1″	G 1 1/4″	G 1 1/2″
DN	25	28.5	32
KV	55	70	72

(Testing pressure before valve is 3 Bar, ▵P= 1 Bar)
KV: Flow rate when pressure loss is 1 bar, measured in m^3/h

Discharge flow rate

P (bar)	T outside(°C)	Flow rate(l/h)
3	-5	0.5
	-20	1

Test conditions:
- straight pipe (Ø 12 mm, length 1 m) exposed to the outside;
- water temperature inside building 18 °C.



AFV600 Series

A	DN	L	L1	H1	H2
1”	25	52	10	82.5	33.5
1 1/4”	28.5	59	14	84.5	35
1 1/2”	32	62	15.5	86	36.5