iStop®

compact antifreeze valve

altecnic
CALEFFI group

iStop® compact antifreeze valve

Application

The iStopPlus antifreeze valve allows the circuit medium to be drained when the temperature reaches an average of 3°C.

This prevents ice forming in the circuit of a system, generally with a heat pump, avoiding potential damage to equipment, valves and pipework.

The valves are suitable for a variety of fittings and pipes connected by a union.

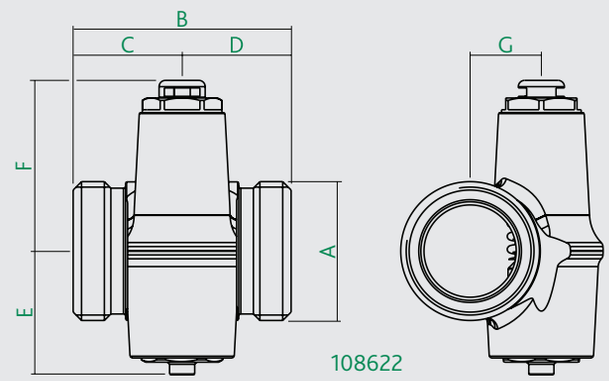
Construction Details

Component	Material	Grade
Body:	Brass	BS EN 12164 CW617N
Obturator:	Brass	BS EN 12164 CW617N
Springs:	Stainless steel	BS EN 10270-3 (AISI 302)
Seals:	EPDM	
Compression Nut:	Brass	BS EN 12165 CW617N
Olive:	Brass	BS EN 12164 CW614N

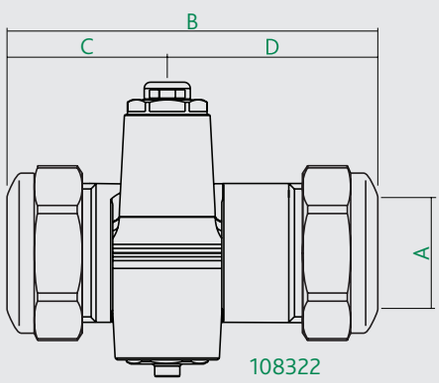
Technical Specification

Medium:		water
Maximum working pressure:		10 bar
Working temperature range:		0 to 90°C
Ambient temperature range:		-30 to 60°C
Medium temperature - opening:		3°C
Medium temperature - closing:		4°C
Accuracy:		±1°C
Connection - compression:		BS EN 1254
Connection threads:		BS EN ISO 228-1
Kv - straight path:	108622	39 m³/hr
	108322	32.5 m³/hr
Tightening torque - compression		80 Nm

Dimensions



108622

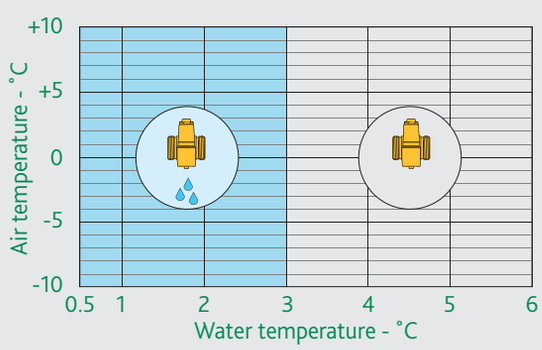


108322

Ref No	A	B	C	D	E	F	G
108622	G1	52	26	26	29.5	40.7	17
108322	28	88.3	38.2	50.1	29.5	40.7	17

Operating Principle

The antifreeze valve allows drainage of the liquid in the system when the temperature falls to a value of 3°C.



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Installation

The iStopPlus valve must only be installed in a vertical position, with the outlet facing downwards, to allow the draining water to flow out and free from obstructions.

It is recommended to install the antifreeze valves on both the flow and return pipes, otherwise water may be left in one pipe which could then freeze.

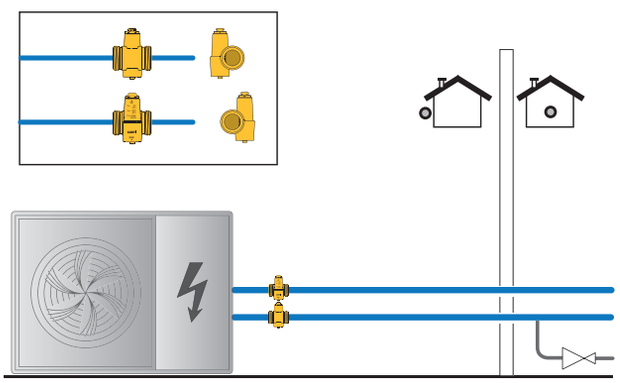
The antifreeze valves must be installed outdoors, where the lowest temperatures can be reached if the heat pump is not operating.

They must also not be placed close to heat sources which could interfere with their function.

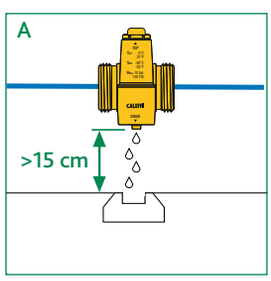
For the device to work properly, keep the system under pressure at all times, even when draining the antifreeze valve.

The off-centre valve body allows installation where space is extremely limited.

The valves should be installed as shown with outlets opposed so that the upper valve does not discharge over the lower valve.



Leave at least 15 cm clearance from the ground (fig. A) to prevent the block of ice which may form below from stopping water from draining from the valve.



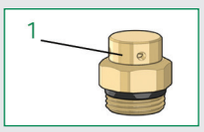
Route the drain to a suitable collection point.

The valve must be free of insulation for the system to work properly.

When installed outdoors, the antifreeze valve must be protected from rain, snow and direct sunlight.

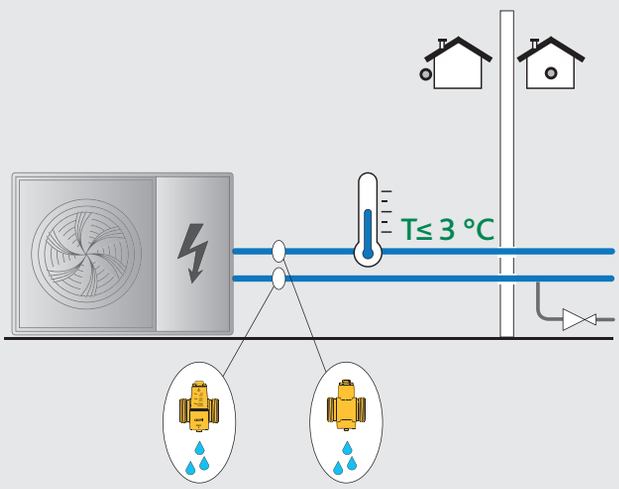
Vacuum Breaker Replacement

In the event of a malfunction, the vacuum breaker (1) can be replaced.



Application Diagram

Winter operation of the 108 antifreeze valve in the event of electrical supply failure.



Antifreeze valve

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