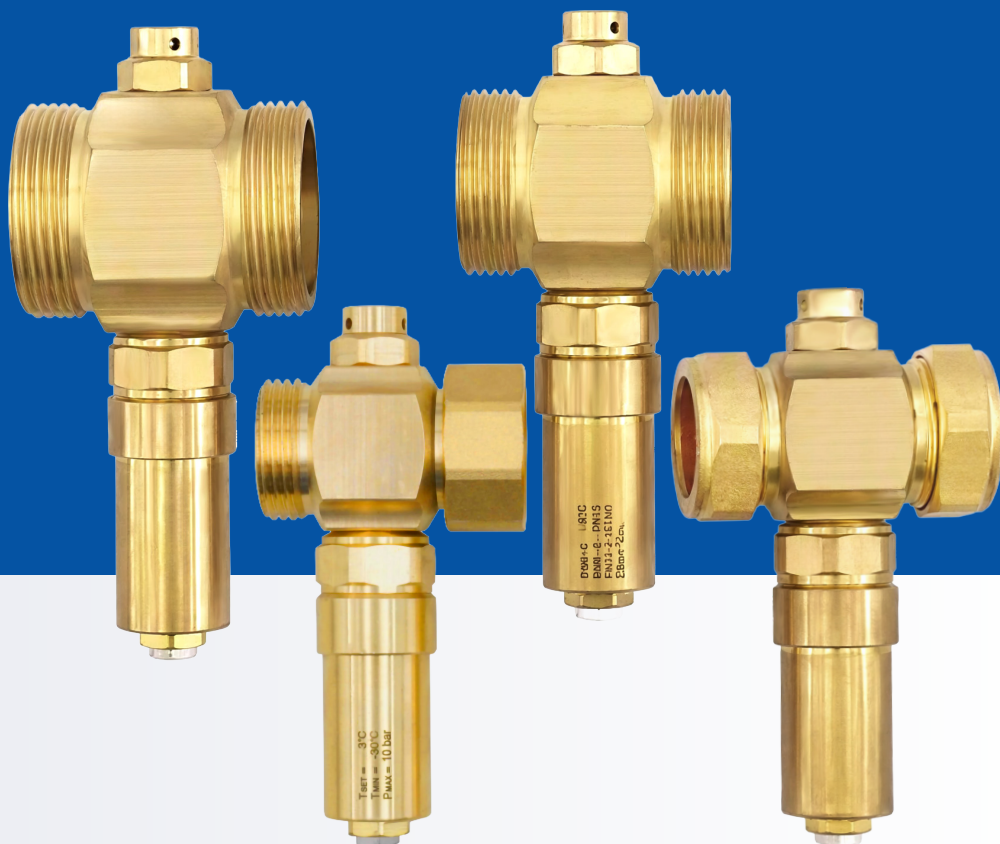


Collaboration and Innovation

ZL-7201 Data sheet

Antifreeze Valve



<https://www.bzvalve.com/>

+86 576-87411999

sales2@bzvalve.com

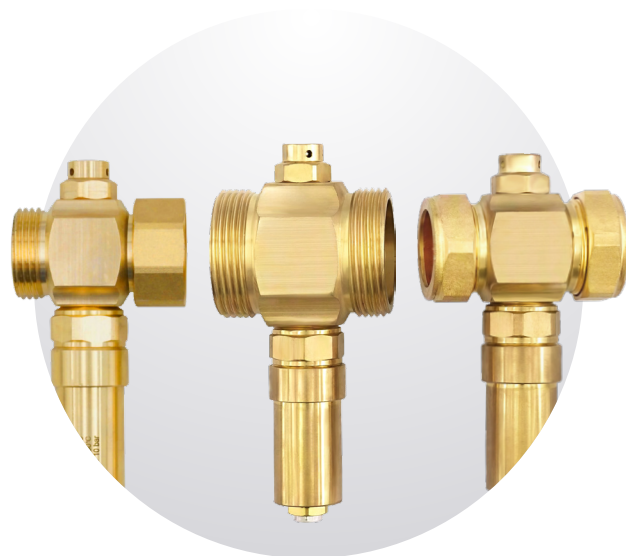
122 Qiutao West Road Qinggang, Yuhuan, Zhejiang,
317606 China

ZL-7201 Data sheet

Antifreeze Valve

Description

The antifreeze valve allows the circuit medium to be drained when its temperature reaches an average value of 3 °C. This prevents ice forming in the circuit of a system, generally with a heat pump, avoiding potential damage to the machine and to the pipes.



Product range

Code		Size
	ZL-7201-1M	Antifreeze Valve 1"
	ZL-7201-1 1/4M	Antifreeze Valve 1 1/4"
	ZL-7201-1 1/2M	Antifreeze Valve 1 1/2"
	ZL-7201-28MM	Antifreeze 28mm
	ZL-7201-1MF	Antifreeze Valve 1" Male to Female Swivel
	ZL-7201-1 1/4MF	Antifreeze Valve 1 1/4" Male to Female Swivel

Performance

Parameter	Value	Parameter	Value
Medium	water	Accuracy	±1°C
Maximum working pressure	10bar	Tightening torque	80 N.m
Working temperature range	0-65°C	Body	brass EN 12165 CW617N
Ambient temperature range	-30-60 °C	Springs	stainless steel EN 10270-3 (AISI 304)
Medium temperature (opening)	3°C	Seals	EPDM
Medium temperature (closing)	4°C	Enabling of antifreeze function with outside air temperature	<5°C
Connections	G 1"(ISO 228-1), G 1 1/4"(ISO 228-1), G 1 1/2"(ISO 228-1), Ø28 mm for copper pipe		
Kv (straight path)	ZL-7201-1M: 55 m³/h ZL-7201-28MM: 64 m³/h	ZL-7201-1 1/4M: 70 m³/h ZL-7201-1MF: 55 m³/h	ZL-7201-1 1/2M: 72 m³/h ZL-7201-1 1/4MF: 70 m³/h

ZL-7201 Data sheet

Antifreeze Valve

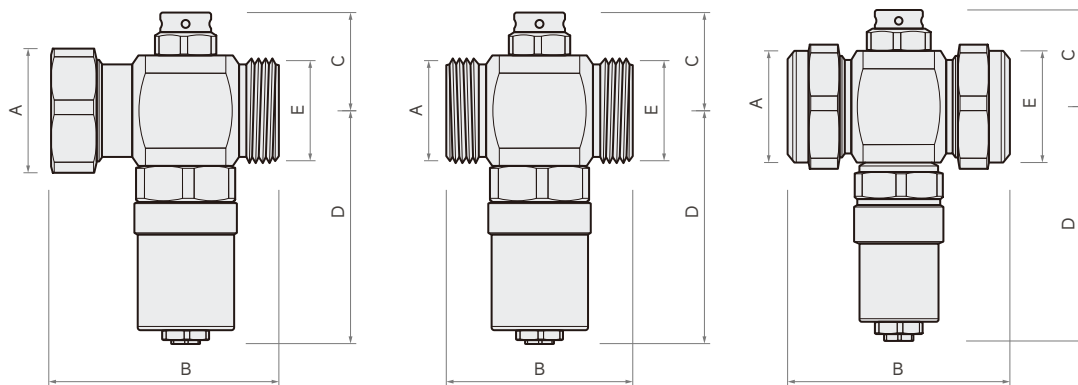
● Discharge flow rate

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

Test conditions:

1. straight pipe (12 mm, length 1 m) exposed to the outside.
2. water temperature inside building 18 °C.

● Dimensions

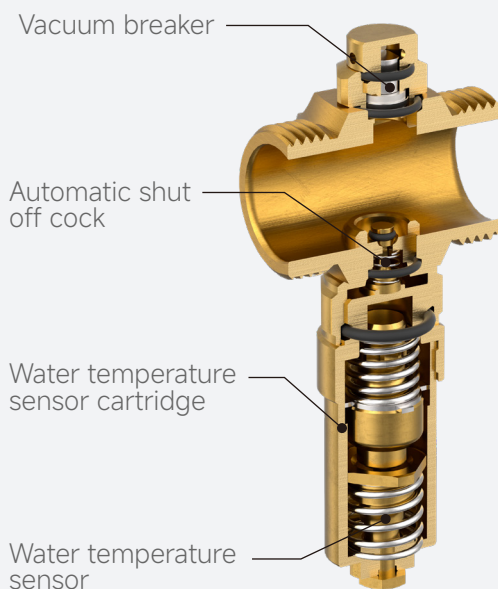


A	B	C	D	E
1"	52	79	32	1"
1 1/4"	59	83	36	1 1/4"
1 1/2"	62	83	36	1 1/2"
28MM	71	80	33	28MM
1" F	70	33	91.5	1" M
1 1/4" F	74	37.5	96	1 1/4" M
1 1/2" F	78	40.5	99	1 1/2" M

ZL-7201 Data sheet

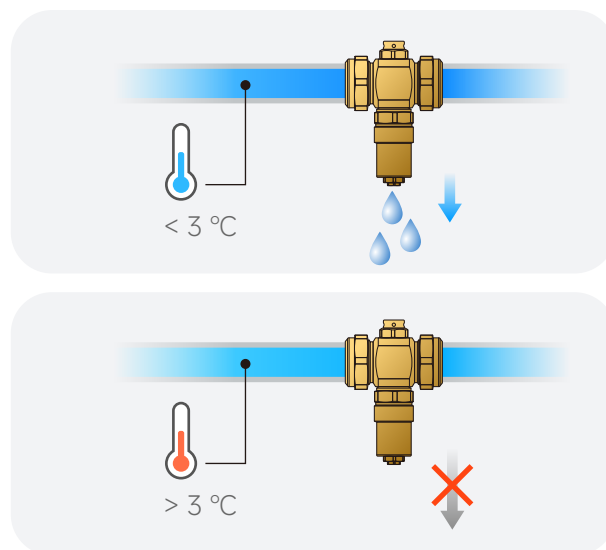
Antifreeze Valve

● Characteristic components



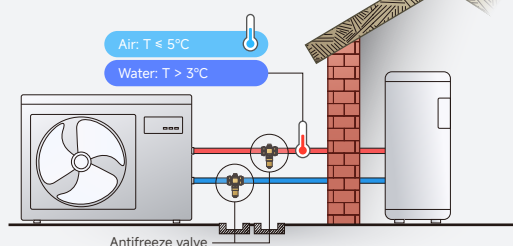
● Operating principle

The 7201 series antifreeze valve allows drainage of the medium in the circuit when the circuit temperature reaches a value of 3 °C.

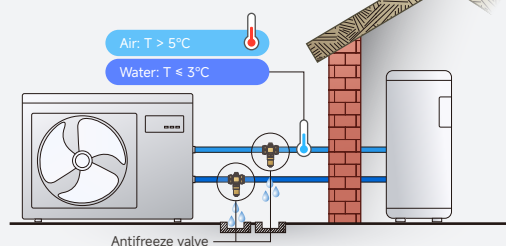


● Operation phases

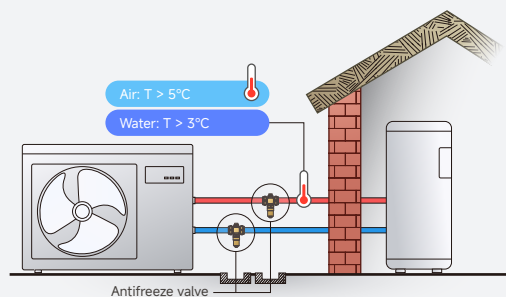
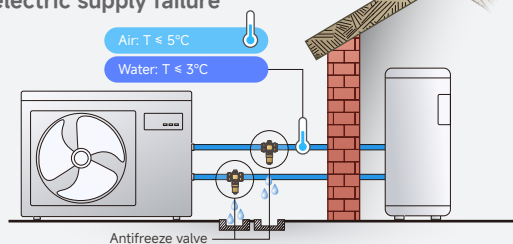
Winter operation in heating mode



Summer operation in cooling mode



Winter operation in the event of electric supply failure



ZL-7201 Data sheet

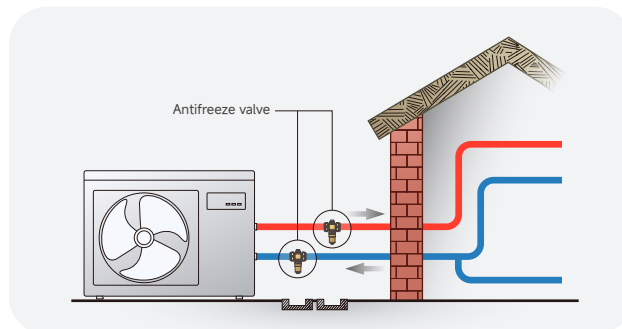
Antifreeze Valve

● Installation Guide

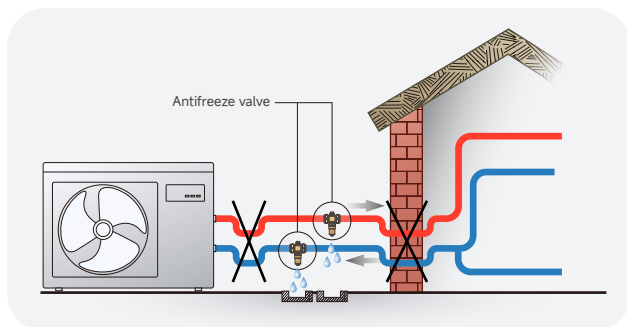
The device must only be installed in a vertical position, with the outlet facing downwards, to allow the drained water to flow out properly and free from obstructions.

The antifreeze valves must be installed outdoors, where the lowest temperatures can be reached if the heat pump is locked. The antifreeze valves must be positioned well away from sources of heat in order to keep them working properly.

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



We recommend always keeping the system pressurised, even while draining, to ensure the antifreeze device works properly.

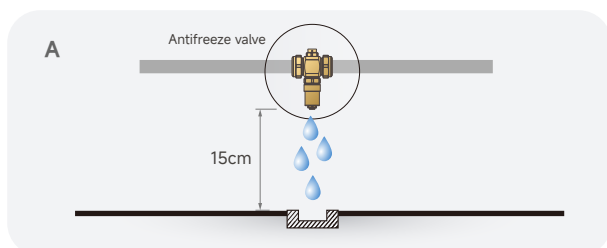


Presence of traps:

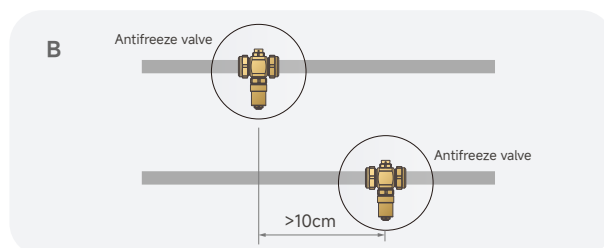
Do not make any trap connections. If the shape of the connection pipe has the potential to create a trap effect (as shown in the following figure), drainage is inhibited and frost protection will no longer be guaranteed.

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.



Keep a distance of at least 10 cm between the antifreeze valves (fig. B) and 20 cm between the antifreeze valves and the air sensor.



The antifreeze 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.