Heat Pump Freeze Protection

Method

FP15GD-35 antifreeze valve set can accurately sense the ambient temperature and water temperature, intelligently drain circuit medium-water near 4°C without electricity power and manual interfere.

Application

Working with monoblock heat pump, the antifreeze valve can automatically judge the operation state of the system. When the system is shut down or power off unexpectedly,the antifreeze mode can be opened in time: when the water temperature drops to 3°C, the valve will drain to prevent system freezing.

With the decrease of water temperature, the antifreeze valve can automatically increase the drainage speed, effectively balance the heat loss in the system. The valve will be automatically closed when the water temperature rises to 5 °C.

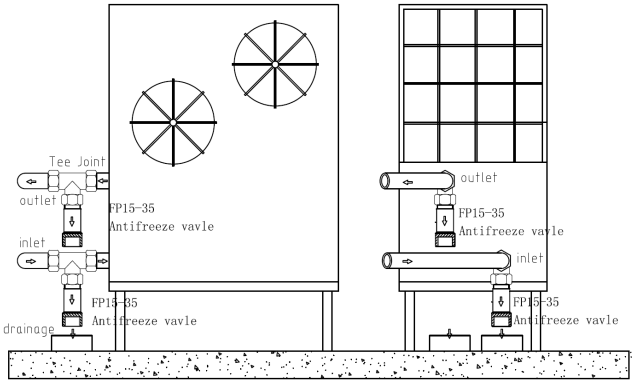
Inspection and maintenance of antifreeze valve:

Before winter, in order to ensure the normal operation of the antifreeze valve, a simple test can be carried out: *Immerse the antifreeze valve in the ice water mixture, the antifreeze valve will open automatically after a few minutes; After removing the ice water mixture, the antifreeze valve gradually closes. This indicates that the antifreeze valve is working properly.

The Installation of Antifreeze Valve

1) It is recommended to install antifreeze valves on both pipes (flow and return) of outdoor heat exchanger of the heat pump(as shown in the figure). Otherwise, freeze protecion may fail due to negitive pressure inside the water system when antifreeze valve drains water.
2) The antifreeze valve shall be installed vertically downward.
3) The antifreeze valve shall be installed at the position that can sense the lowest temperature of the system, and shall not be installed near the heat source which could interfere with proper function.
4) In order to reduce the water discharge by antifreeze valve, the pipeline and antifreeze valve shall be same insulated.
5) Do not make any trap connections.
6) It is not recommended to connect the drainage pipeline behind the antifreeze valve. This may cause the failure of antifreeze due to freezing and blocking the drainage pipeline.

(Please read carefully before installing the antifreeze valves)



Specifications

Product Name	Model	Port Size	Body Material	Open/Close Temp(°C)	Maximum Temp(°C)	Accuracy(°C)	Maximum Pressure(MPa)	Flow Rate(Cv)	Dimensions(mm)	Net Weight(g)
Freeze Protection Valve	FP15GD-35	Male/Female 1/2"	Brass	1~4	+95	±1	1.0	1.0	ϕ26*63	118