How Do You Use Cold Weather Heat Pumps at Home?

- Have you decided to invest in the best cold weather heat pumps? If so, you should look no further than Arctic Heat Pumps. You can use them for heating and cooling needs at home. Generally, these systems use a EcoULTRA Buffer Tank with backup heating element.
- The Arctic series heat pumps control the primary pump, selection of heating or cooling and switching of three way valve. Different demand zones like heating loops and cooling zones need their own pumps and controls. Arctic Heat Pumps can design the supply (heat pump) and the demand (radiant zones) for you at no extra cost.
- In addition, Arctic series cold weather heat pumps can be used for different applications at home. Different uses of Arctic Heat Pumps are discussed below:

- **Radiant Heating and Residential Hot Water**
- The buffer tank remains charged with hot water in this system. The water or glycol circulates as required through radiant floor loop around the house. There are zone temperature sensors in the system that will let you know the variable speed pump when to turn on or off supplying energy to different zones. This system can use multiple zones and manifolds.
- **Radiant Heating and Central Air Handler Cooling**
- Likewise radiant heating system, this design uses the same type of heating system. The heat pump controls the three way valve. During winter, the heat pump supplies hot water to the heating tanks for reisdnetial hot water through the internal heat exchanger.
- This system supplies cool water to the cooling tank through the central air handler. The handler has a separate pump to circulate the cooling water over the internal cooling coil. The cold air will be circulated throughout the house and removes the moisture from the air.

- **Fan Coil Heating and Cooling**
- Arctic Heat Pumps can use the buffer tanks to deliver fan coil heating and cooling. Individual room thermostats that are built into the fan coils, control the heating or cooling zone separately. There's a centralized zone relay that connects the fan coils to the zone pump.
- When any room zones require heating, they will close their connection and activate the heat pump. The heat pump starts drawing heat from the tank.
- When it comes to Fan Coil Cooling, the Fna Coil sends a signal to the 3 way valve that changes the direction. The heat pump draws from the cooling tank. Every fan coil has an internal 3-way valve so that the fan coils having the demand of heating or cooling will allow the flow.

- **Advanced Heating and Cooling**
- Arctic Heat Pumps can help you design larger residential and commercial systems by using a PAW Modular Hydronic Heating Solution and Resol MX Controller. They can combine different heating sources like solar systems to deliver more efficiency.
- **Pool and Hot Tub Heating and Cooling**
- In this design, the systems use an external heat exchanger to heat a pool or hot tub. When it's turned on, the heat from the pool can be taken from the buffer tank from the heat pump. You can add second loop and a heat exchanger.
- If the pool is large, it's recommended to use stand alone low temperature pool heat pumps that operate to – 10C (14F). These systems come with built-in Titanium heat exchanger.
- **Bottom Line –**
- Do you need help with cold weather heat pumps? If yes, then you should reach out to Arctic Heat Pumps team as soon as possible at +1 (866) 800-8123.

Contact us

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