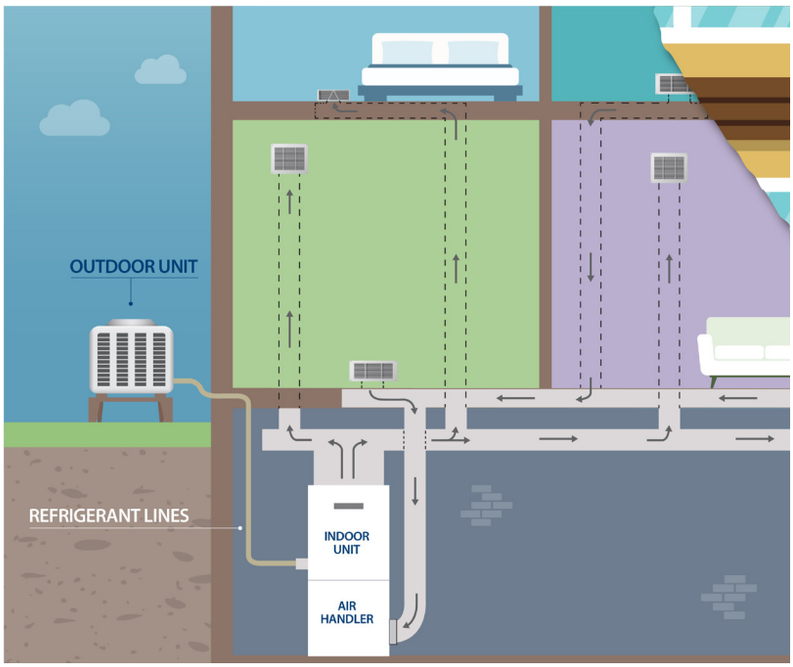
MI

HEAT PUMP COLLABORATIVE

What is a Heat Pump?

A heat pump is a device that transfers heat from one place to another used for heating and cooling buildings. It is an air conditioner that can run backwards without changing the physical location of the appliances, meaning that it can heat and cool the same space.



How does it work?

It works by extracting heat from a source, in this case the outside air, and moving it to a different location. In colder weather, the heat pump extracts heat from the outside air (even when it's cold) and transfers it indoors to warm the space. In warmer weather, the heat pump operates like an air conditioner, extracting heat from the indoor air and releasing it outside, cooling the space. Any air conditioning system can be replaced with a heat pump, even combining it with a fossil fuel furnace to offer a hybrid-style system. For all electric customers, the efficiency improvements of not having to rely on the electric heat strips in the air handler benefit greatly from lowered utility usage.

How will it impact my home heating?

During the heating season, a heat pump extracts heat from the outside air and transfers it indoors to warm the home. It operates efficiently by moving existing heat rather than generating it, resulting in lower energy consumption compared to traditional heating systems. This leads to consistent, energy-efficient heating, reducing energy bills while maintaining indoor comfort, even in cooler weather. However, in extremely cold temperatures, the heat pump may become less efficient, sometimes requiring a supplementary heating source such as a fossil fuel furnace or electric heat kit.

How do I operate it?

Operating the thermostat on a heat pump is straightforward, but it's essential to use the right settings for optimal performance. Heat pumps work best when they maintain a steady temperature. Constantly adjusting the temperature can reduce efficiency. Instead, choose a comfortable temperature and let the system maintain it. Heat pump thermostats Will have a "Cool" and "Heat" mode that will be selected for what is required for comfort. They have an "Emergency Heat" or "Aux Heat" setting. This is for extremely cold conditions when the heat pump alone can't provide enough warmth. It activates a backup heating source, such as electric resistance heating. Only use this if needed, as it is less energy efficient. For hybrid systems, the thermostat will pair with a sensor for outdoor temperate sensor that will automatically switch from using the heat pump to the fossil fuel furnace, which could be programmed to 20-45°F . This is adjusted based upon the economic balance point which is determined by the HVAC contractor for when it is just as efficient to operate the furnace as it is to operate the heat pump.

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