

Air Source Heat Pumps



Advice when you want it.
Help when you need it.

Efficient heating and cooling from just one unit.

Heating and cooling may be complete opposites, but an air-source heat pump is an all-electric system that heats and cools your home with the same unit. A heat pump can best be described as an air conditioner that also heats your home.

Cool and Comfortable

Outside your home, the heat pump compressor section will look like your air conditioner. In fact it works like any other air conditioner, using the refrigeration system to transfer heat from your home to the outdoor compressor section. The heat pump cools your home just like your present air conditioner, only 30-40% more efficiently.

Warmth Without Combustion

During the winter months, that same heat pump reverses itself. The outdoor compressor section extracts heat from the outdoor air, and transfers that heat into the indoor blower section. The blower section or "electric air handler" blows the room air across the indoor coil which is now hot. The indoor air is now being heated by the same coil that is cold in the summer. Transferring or pumping heat is why it's called an air-source heat pump, or more often called a heat pump.

Supplemental Heat

As the outdoor air gets colder, the heat pump extracts less and less heat from the air. While each house is different, somewhere around 20 to 25 degrees, the heat pump begins to run continuously and is able to produce just enough heat to match what is being lost from the home. This "thermal balance point" must not be confused with low efficiency. When the temperature falls below this thermal balance point, the heat pump needs some help keeping the home warm. Automatically the thermostat will activate electric supplemental heat when needed to keep the house at the desired temperature.

Warmth and Efficiency

Even at zero degrees, a good heat pump will still be producing heat at over 200% efficiency. At no point is a gas or oil furnace cheaper to operate. Even when the supplemental heat is added to the cost of operating the heat pump, the overall efficiency is over 250%. That is, it will produce 2,500 watts of heat for each 1,000 watts of electricity consumed. Simply stated, it's cheaper to transfer heat with a heat pump than it is to produce it with gas or oil.

SEER Rating

Heat pumps are sold in a wide range of efficiency. One method of determining their efficiency is with the SEER rating. The SEER number reflects the number of cooling BTU's produced from each watt or electric energy consumed. The higher the SEER number, the higher the efficiency, both summer and winter. Today's heat pumps range from a low of 13 SEER, to as high as 21 SEER. For greater economy, we recommend you choose a 14 SEER or higher efficiency rating.

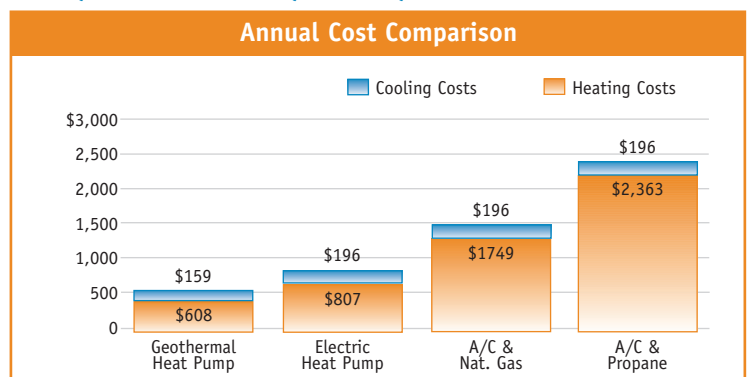
Can it replace a gas or oil furnace?

Yes! Provided the house is reasonably well insulated and energy efficient. In some cases, additional insulation and upgraded windows will help make the home easier to heat.

Reliability and Advanced Technology

Today's high-efficiency heat pump provides year-round comfort without the problems associated with the early models dating back 20 years or more. Today's heat pump has incorporated improvements such as: increased heat exchanger coil sizes; variable-speed blower; thermostatic expansion valves; ozone-friendly 410-A refrigerant; improved compressor motor designs; and sophisticated electronic thermostats. What once was known as a heating system that blew cold air; has now become a heating system known for its comfortable heat and reduced heating and cooling cost. The new generation of heat pump has become the heating system of choice.

Safe, comfortable, clean, and cost efficient!



Costs based on 2000 sq. ft. house with average insulation. Fuel costs: \$.065/kWh electricity; \$1.20/therm natural gas; \$1.50/gallon propane.

Wabash County REMC

A Touchstone Energy® Cooperative 

Contact your REMC for the most up-to-date cost comparisons.