

# What is a heat pump?

# We're Glad You Asked!

A heat pump is an efficient method of cooling your home in summer and warming it in winter.

### WHY CHOOSE A NEW HEAT PUMP?

A new energy-efficient heat pump is a good investment, providing years of worry-free heating and cooling and significant year-round savings on your utility bill.

#### HOW A HEAT PUMP WORKS

A heat pump works by moving heat. In the summer, a heat pump collects heat from the air inside your home and expels it outside, just like a standard air conditioner.

In the winter, the process is reversed, collecting heat from the air outdoors to provide warm air inside your home.

#### **HOW DOES IT WORK IN WINTER?**

"You're saying that when it's 38 degrees outside, my heat pump can still take enough heat out of the air to warm my home?" Right. Even the coldest winter air contains some heat. It is not uncommon to use a modern heat pump on days when the temperature is near or below freezing (32 degrees Fahrenheit).

When it is too cold for a heat pump to keep you comfortable, a backup source of heat is often used, such as electric resistance heat strips or a gas furnace.

#### **HOW WELL DOES IT WORK?**

While many people find the winter operation of a heat pump the most difficult to understand, it is during the heating cycle that the heat pump produces the most significant savings.

Unlike a furnace that turns fossil fuel or electricity into heat, the heat pump collects heat that already exists in the outdoor air by means of its refrigeration cycle. Consequently, your heat pump will produce two to three times more heat than the energy it uses!



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## **HOW MUCH MONEY CAN I SAVE?**

Savings depend upon these factors:

- ◆ The efficiency of your old equipment
- The efficiency of your new heat pump
- Your climate
- Your electric rate

#### **SAVE ON COOLING!**

Cooling efficiency is rated by SEER (Seasonal Energy Efficiency Ratio). The higher the SEER, the higher the savings. If your home is over eight years old, your current air conditioner or heat pump probably has a SEER of 10.00 or lower. A new, higher efficiency heat pump can be as much as 56% more efficient.

#### **SAVE ON HEATING!**

Heat pumps are rated for heating efficiency by HSPF (Heating Seasonal Performance Factor). Heat pumps are available with HSPF ratings up to 9.70. Since a heat pump is more efficient than other forms of heating, the coefficient of performance (COP) is often more than one. This means, you may pay for a dollar's worth of electricity, but a heat pump can deliver as much as \$3.45 worth of heating. That's quite a bargain!

#### **DUAL-FUEL**

If you're looking for a new cooling system, but your old gas or oil furnace is still working, consider buying an add-on heat pump. With a dual-fuel system, the two systems share the heating load, but never at the same time. Each system operates when it is the most cost effective.

In a dual-fuel system, the heat pump will be your cooling system in the summer and your primary heat source in winter. But when the temperature drops below the heat pump's set point, your furnace will take over until the outside temperature rises enough for the heat pump to operate more efficiently than your furnace.

To find out what high-efficiency Lennox heat pumps can do for you, call your local Lennox Dealer.