



ENERGY STAR® Certified Air Source Heat Pumps



A Highly Efficient, Tried-And-True Way to Comfortably Heat and Cool Your Home

Keeping your home at a comfortable temperature can be expensive. A typical household's energy bill is around \$1,900 annually, and almost half of that goes to heating and cooling! To cut these costs, an air source heat pump (ASHP) can be installed and connected to the conventional forced-air ductwork system that is typical of most American homes. (For homes without ductwork, see www.energystar.gov/minisplit). ASHPs that earn the ENERGY STAR label are independently certified to save energy, save money, and protect the climate.

Benefits of an Air Source Heat Pump

- **Cutting heating costs compared to conventional heating systems.** An ENERGY STAR certified ASHP can provide heating for approximately 1/3 the cost of traditional electric baseboard heating, depending on where you live, and approximately 1/2 the cost of oil heat. An ASHP is so efficient it can deliver up to three times more heat energy to a home than the electrical energy it consumes. This is possible because a heat pump moves heat rather than converting it from fuel, as combustion heating systems do.
- **Reducing cooling costs compared to conventional room air conditioners.** During the summer months, a central ASHP automatically becomes a central air conditioner, and with ENERGY STAR, you will have reduced cooling bills due to its highly efficient operation.
- **Reducing greenhouse gas emissions.** An ASHP is good for your home and good for the planet. ENERGY STAR certified models avoid more than 4,500lbs of greenhouse gas emissions, on average, over the course of their lifespan compared to standard systems.

What is an Air Source Heat Pump?

An ENERGY STAR certified ASHP provides highly efficient heating and cooling by extracting heat from outside into your home in winter and pulling the heat out of your home in the summer. For some, it may be helpful to think of a ducted ASHP as a central air conditioner that also works in reverse to provide whole-house space heating in winter. See Figure 1 below.

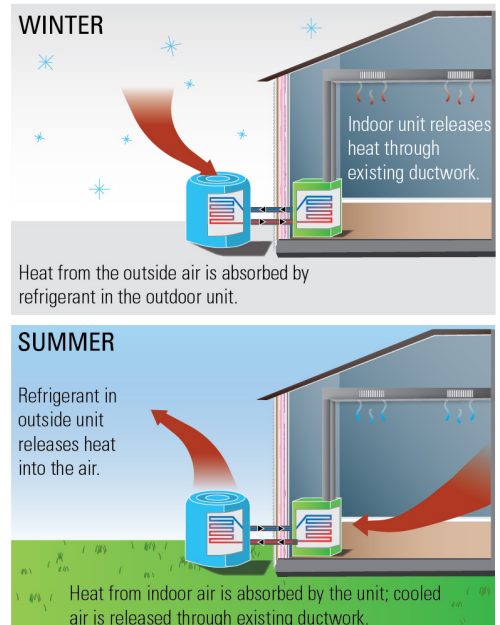


Figure 1. How an ASHP Works in Winter and Summer

ENERGY STAR® is the simple choice for energy efficiency. For more than 25 years, EPA's ENERGY STAR program has been America's resource for saving energy and protecting the environment. Learn more at energystar.gov/products/air_source_heat_pumps.



- **Easy installation.** A central ASHP uses existing ductwork in your home to deliver heating and cooling. In most climate zones, an ASHP can be installed as a drop-in replacement when either a central air conditioner or a furnace needs replacement.
- **Heating and cooling in one system.** ASHPs offer highly efficient heating and cooling in one integrated system.

Is an Air Source Heat Pump Right for You?

Where are central air source heat pumps commonly used?

- Homes with aging central heat and air conditioning. In most cases, your HVAC equipment shows signs that it is underperforming well before you reach the point of needing an emergency replacement. Recognizing the symptoms early can help you plan for a replacement. If your central heating and cooling system is more than 10 years old or needs frequent repairs, the age and condition of your equipment may have caused it to become less efficient.
- Homes with older or failing central air conditioners. In most cases, a central air conditioner can be replaced with a heat pump for a modest additional cost. This could allow you to eliminate or down-size your furnace.
- Homes in areas with high fuel costs, such as those heated by propane or oil. Homes in these areas of the country may benefit from a dual-fuel system. Dual fuel systems allow for the flexibility of heating with a heat pump or with a more traditional gas or oil furnace and enables you to use each system optimally based on costs and environmental benefits.

What if I live in a cold climate? Many new ENERGY STAR certified ASHPs excel at providing space heating even in the coldest of climates, as they use advanced compressors and refrigerants that allow for improved low temperature performance. If you live in a climate where winter temperatures regularly dip below freezing, talk to your contractor to choose an ENERGY STAR unit suited to your particular home.

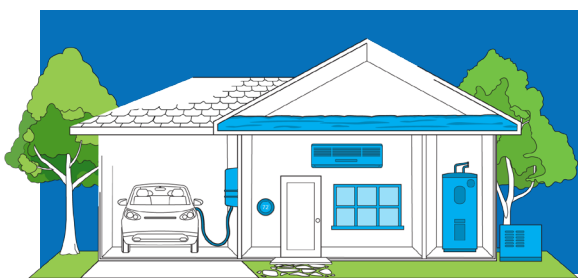
Don't have duct work? If your home doesn't have existing ductwork or you are planning an addition or renovation where running ductwork will be difficult, you can still install a heat pump to heat and cool a portion of your house. See Mini Split Heat Pumps at www.energystar.gov/minisplit, sometimes referred to as Ductless Heat Pumps.

Check out the **Clean Heating and Cooling** section of energystar.gov/homeupgrade to see if an ASHP is right for you. Learn the symptoms of aging heating and cooling equipment, calculate savings, and find product and rebate information.

Take Advantage of Incentives

Air source heat pumps that earn the ENERGY STAR are eligible for a \$300 federal tax credit if installed in a primary residence by December 31, 2022. Learn more at www.energystar.gov/taxcredits.

Many utilities offer incentives for installing ENERGY STAR certified ASHPs. Check with your local utility for more details or go to: www.energystar.gov/rebatefinder.



INTRODUCING ENERGY STAR HOME UPGRADE

Air Source Heat Pumps are one of six high-impact, energy efficiency improvements for your home that are designed to work together to deliver significant energy and cost savings. Count on ENERGY STAR to help you transition from fossil fuels to a cleaner, healthier, and more comfortable home.

energystar.gov/homeupgrade