

Heat and Cool with

Air Source Heat Pumps

Air source heat pumps (ASHPs) use electricity to heat and cool.

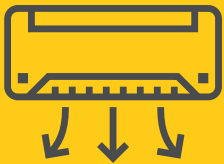
- ASHPs work like air conditioners to cool, and work in reverse to move warmth from outside air into your home to heat.
- ASHPs heat homes up to three times more efficiently than forced air and electric resistance heating systems.

Two Setups: Ductless or Central

WHICH IS THE BEST FIT FOR YOUR MINNESOTA HOME?



OUTDOOR UNIT
above snow depth



INDOOR UNIT
mounted on wall

DUCTLESS / MINI-SPLITS

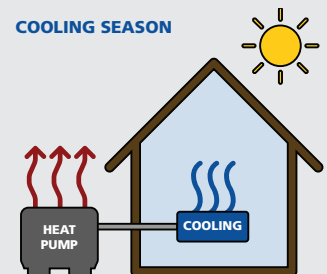
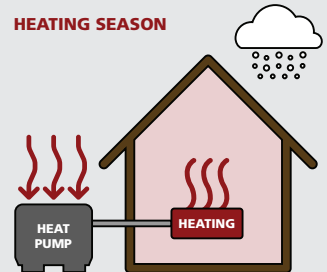
Ductless ASHPs don't require ductwork in your home. There is one outdoor condenser connected to one or more indoor air distribution units. Indoor units are typically mounted on the wall, floor or ceiling. The individually-controlled indoor units allow for zoned heating and cooling and maximize energy savings and comfort.

INSTALLED COST: \$2,500 - \$8,500

GOOD FIT WHEN:

- Already heating with radiators, in-floor, or electric baseboard
- Getting rid of window A/C units or adding home cooling

HOW IT WORKS



CENTRAL / DUCTED

Central ASHPs use existing ductwork to distribute heated and cooled air throughout your home. The outdoor condenser is connected to the indoor furnace's fan. Unlike central A/C units, central ASHPs provide both heating and cooling in a single system.

INSTALLED COST: \$4,000 - \$8,000

GOOD FIT WHEN:

- Already heating with forced air (with ductwork in place)
- Replacing central A/C or adding it for the first time



OUTDOOR UNIT
above snow depth

Efficiently Heat and Cool with Air Source Heat Pumps

WHAT LEVEL OF PERFORMANCE DO YOU NEED IN MINNESOTA?

HEATING WITH ASHPs



If you want an ASHP to be your primary heating system, you'll need a cold climate ASHP (ccASHP) and a back-up heating system. While ccASHPs are more expensive upfront than ASHPs, there is a potential for heating fuel cost savings if you already heat with electricity or propane. ASHP's heating performance is noted with its HSPF (heating season performance factor).

DID YOU KNOW?

It takes far less energy to move heat than it does to create heat, and you can even extract heat from really cold air!

COOLING WITH ASHPs



ASHPs and ccASHPs offer the same cooling benefit as an air conditioner (A/C). ASHP's cooling performance is noted with its SEER (seasonal energy efficiency ratio), same as you would see for A/C units. Look for SEER 15 or higher for improved energy efficiency.

| STANDARD PERFORMANCE Air Source Heat Pump (ASHP) | PREMIUM PERFORMANCE Cold Climate Air Source Heat Pump (ccASHP) |
|---|---|
| Meets cooling and some heating needs | Meets cooling and most heating needs |
| Highly efficient down to 32 °F | Highly efficient down to 5 °F |
| Look for HSPF 8.5 or higher | Look for HSPF 9 for Central or HSPF 10 for Ductless |

ESSENTIAL TIP: Before investing in a new heating system, get a home energy audit and improve your home's insulation and air sealing. Learn more at cleanenergyresourceteams.org/assessment

NEXT STEPS

- Determine which setup is right for you**
Consider whether a ductless or central ASHP will work best with your existing heating and cooling system.
- Check with your electric utility**
See what equipment they rebate and whether they require using one of their participating or qualified contractors.
- Find a few certified contractors**
If your utility does not suggest preferred contractors, find NATE-Certified HVAC technicians at cleanenergyresourceteams.org/hvac-help.
- Ask contractors the right questions**
 - Does the company have a state license for HVAC?
 - Are they insured?
 - How long have they been in business?
 - Can they send a NATE-Certified or other technician with education credits or experience on ASHPs to my home?
 - Tell the contractor your needs (cooling, heating, both). If heating through winter, ask for a "cold climate ASHP."

FIND MORE TIPS & RESOURCES

CleanEnergyResourceTeams.org/ASHP