

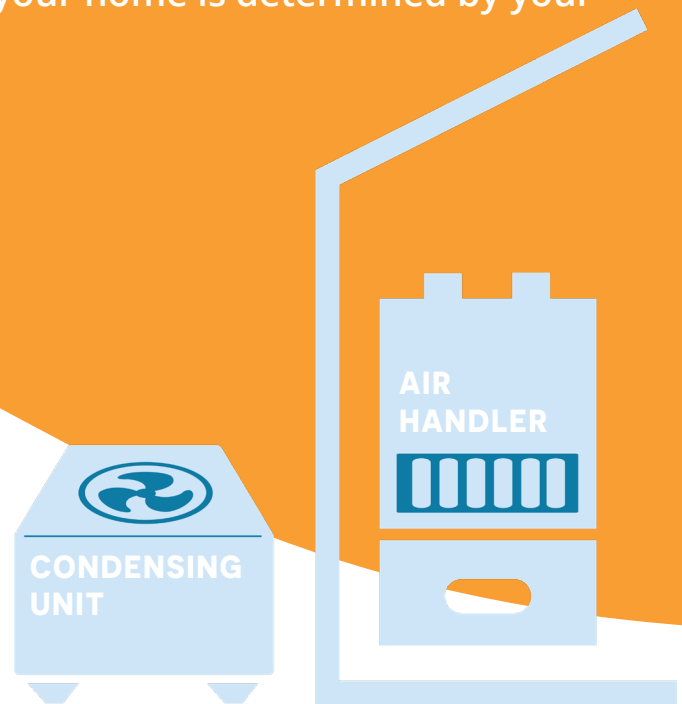
TYPES OF HEAT PUMP SYSTEMS

Homes are designed with either central heating or with a heat source in each room. The right heat pump for your home is determined by your current heating system design.

WHICH HEAT PUMP SYSTEM WILL WORK IN YOUR HOME?

Heat pumps can extract heat from air as low as -30°C . On the North Shore, you'll want a cold climate heat pump rated to a minimum of -7°C .

Beyond that, it's important to work with your contractor to select the right system for your home.



FORCED-AIR FURNACE → AIR-TO-AIR HEAT PUMP

In a central air-to-air heat pump the outdoor condensing unit supplies heat to an indoor air handler that blows warm or cool air through your duct work.

Your duct work needs to have return air and be sized correctly to ensure your home is comfortably heated.

Central heat pumps can be designed as dual fuel models, with natural gas or electric resistance back-up heating. In general, back-up heating isn't necessary on the North Shore.

RADIANT HEATING → AIR-TO-WATER HEAT PUMP

In air-to-water systems an outdoor condenser supplies heat to an indoor hot water tank that pumps hot water through heating loops in your floor or through radiant panels.

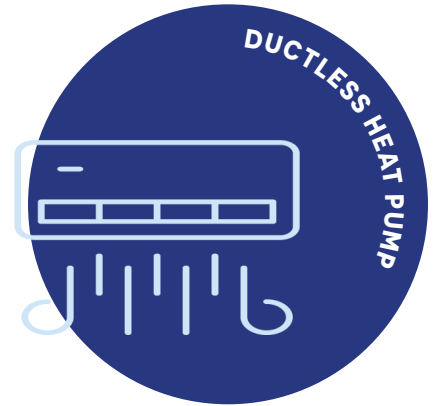
Air-to-water heat pumps operate at lower temperatures than boilers, so they work best with heating loops designed in parallel (dedicated heating loops for different areas of the house).

ELECTRIC BASEBOARD → DUCTLESS HEAT PUMPS

Ductless heat pumps can be installed in any home. In a **Mini-split**, the outdoor condensing unit supplies heat to one indoor unit. **Multi-splits** can heat up to eight different rooms with separate temperature controls for each room.

Indoor evaporator units are usually installed near the ceiling and supply warm or cool air to the room. Alternately slim duct units can be installed in the ceiling or wall with only the supply and return air vents visible.

Ductless heat pumps cost less than central heat pumps and are 2-3 times more efficient than electric baseboard heaters.



DOMESTIC HOT WATER

There are also air-to-water heat pumps for domestic hot water and combined heating and hot water systems. For domestic hot water systems consider a heat pump with a Carbon Dioxide (CO₂) refrigerant to further reduce your homes greenhouse gas impact.

