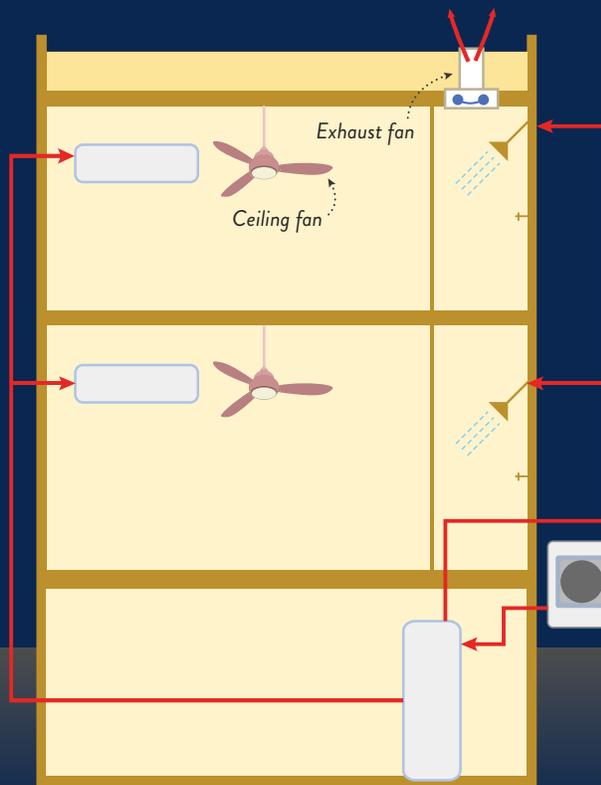
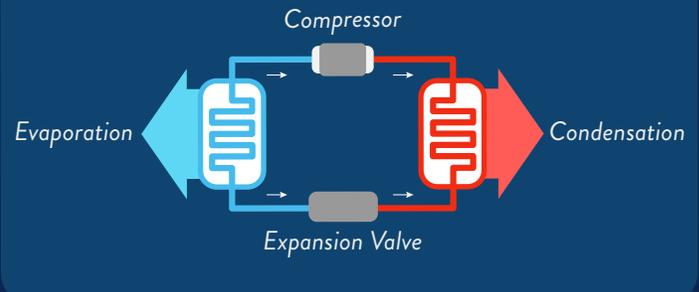


KNOW YOUR HEAT PUMPS

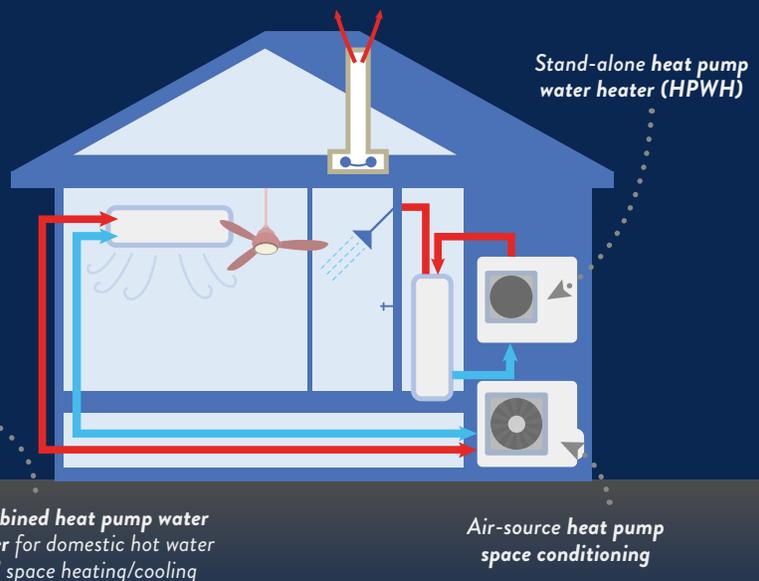
01 WHAT ARE HEAT PUMPS?

Heat pumps are appliances that **transfer heat** by circulating **refrigerant** via an **electric pump** and **compressor** through a cycle of **evaporation** and **condensation**. This system is used in **refrigeration, water heating, and space conditioning**. Common examples include **refrigerators, freezers, and air conditioners**.

Whereas most heat pumps supply either heating or cooling, space conditioning heat pumps provide both: in the summer, the system extracts heat from **inside** your home and releases it **outside**. In the winter, heat is extracted from the **outside** and released **inside**.



For single-family and multi-family housing: Space conditioning heat pumps can be used in conjunction with ceiling fans and exhaust fans for improved comfort and air quality while providing flexible loads.



02 HEAT PUMP TECHNOLOGIES

Ducted

- + Delivers heated or cooled air through a duct system
- + Provides stable air circulation, filtration, and humidity control

Split

- + A two-unit system with an indoor evaporator and outdoor condenser and compressor
- + Achieves higher efficiency than packaged systems

Ductless Mini-split

- + A two-unit system that uses indoor wall, floor, or ceilings units to heat/cool smaller spaces
- + Ideal for small space & additions, or when ductwork is not an option

Packaged Through-the-wall

- + A self-contained unit that slides into the wall for installation
- + Low installation costs
- + High maintenance & operating costs

03 TO BUY OR NOT TO BUY?

Pros

- + Energy-efficient
- + Lower running costs
- + Less maintenance
- + **Safer** than combustion-based heating systems
- + Superior **indoor air quality**
- + Fewer CO2 emissions
- + Year-round **climate control**
- + **Long life-span** (+50 years)

Cons

- + **Retrofit costs will vary** based on existing systems and panel capacity.
- + Cold weather can **damage the system**
- + Requires **electricity** to run