Global Commander

A sister brand of OUELLET

Ductless Single Zone Heat Pump

HPG Series

How a heat pump works

Heat pumps use the principle of thermodynamics to transfer heat from one place to another. In winter they extract heat energy from the outside air and transfer it inside. The same happens in the summer, but in reverse: they extract heat from inside and transfer it outside. Heat pumps are therefore more efficient than traditional electric heating systems that use electrical resistance to generate heat. A high-performance heat pump system produces about four times more heat than a resistive system for the same energy consumption, as well as offering the comfort of air conditioning during hotter weather.

Ductless wall-mounted heat pumps versus Central heat pump systems

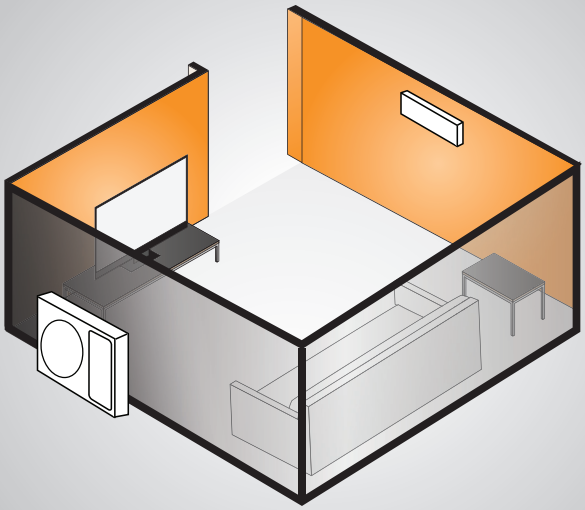
Ductless wall-mounted heat pumps, commonly known as "mini split" heat pumps, do not need air ducts like central systems. The outdoor unit (condenser) and the indoor unit (evaporator) are connected by refrigerant piping and electrical wires that pass through a small 3" opening in the wall.

Ductless wall-mounted heat pumps offer several advantages over central systems:

- They can be controlled individually and adapted to each room where they are located, thereby optimizing comfort while reducing energy consumption.
- They are more efficient because there is no energy loss due to air passing through ducts.

Single zone

A single zone system consists of an outdoor unit connected to an indoor unit. This system is ideal for providing heating and air conditioning to a predefined area, such as an open-concept kitchen/living room or a family room in the basement.



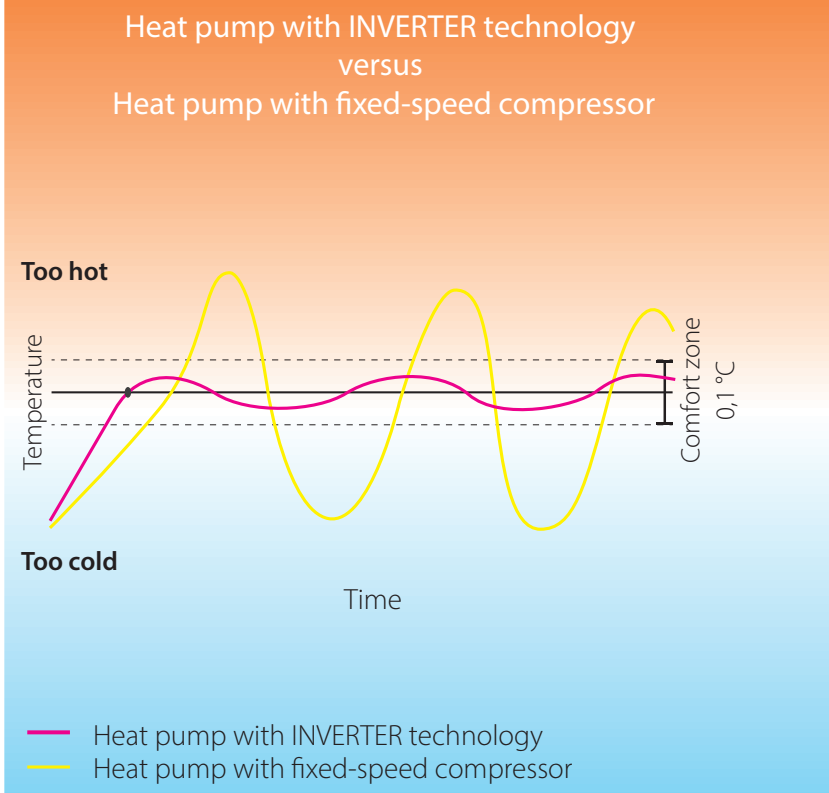
Technological performance for enhanced energy efficiency

Unlike traditional, fixed-speed compressors that use a start/stop cycle, the variable-speed rotary compressor (INVERTER) in our units adjusts its speed to the minimum load required to maintain the desired temperature.

Since it always takes more energy to start up a system than to operate it continuously, fixed-speed compressors waste energy and lead to significant temperature fluctuations.

Here are some of the benefits of our INVERTER technology systems:

- Energy savings
- Greater comfort thanks to constant temperatures
- Desired temperature reached more quickly
- Longer system lifespan
- Quieter operation



Performance ratings

Because a heat pump's performance is affected by the outside temperature, we use a heating seasonal performance factor (HSPF) to obtain a more realistic measurement of a heat pump's efficiency over an entire heating season in a given climatic zone. We obtain the HSPF by dividing the total heat output (BTU/hr) of the heat pump over the entire heating season by the total energy used (Wh) over the same period. **The higher the HSPF, the more efficient the heat pump is at heating.**

The equivalent of HSPF for air conditioning is the seasonal energy efficiency ratio (SEER). We calculate this by dividing the total cooling output (BTU/hr) of the unit during the cooling season by the total energy used (Wh) over the same period. Again, **the higher the SEER, the more efficient the heat pump is at cooling.**

And the more efficient the heat pump, the greater your cost savings!

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