Air to water Heat Pumps

A sustainable and comfortable way to heat your home

RVR ENERGY TECHNOLOGY

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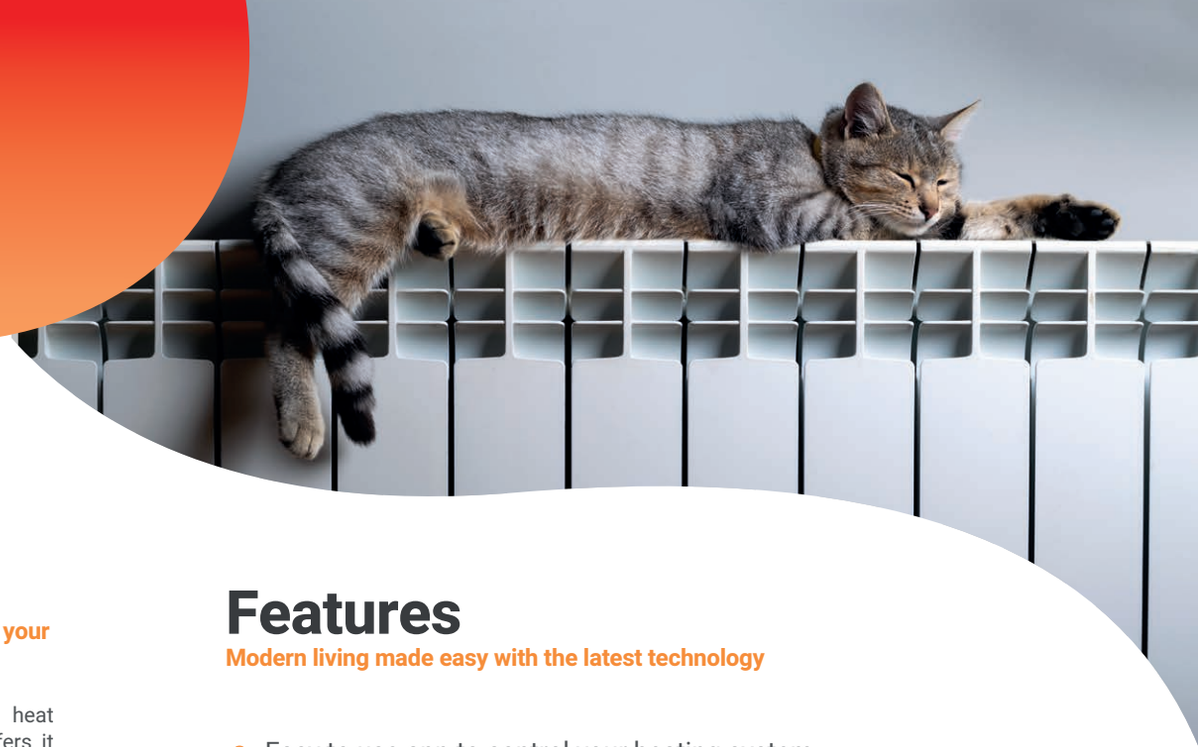


How do Heat Pumps work ?

A heat pump gathers heat from the air outside and transfers it into the heating system inside your home.

Ease of Use

The controls are easy to use and ensure your home is comfortable at all times. There are several control options available including controls built in on the heat pump or cylinder, remote panels for your home and an app for mobile devices. With the apps available you can control your heating system remotely - for example, if you are away for a few days or it is particularly cold and want to increase the heating temperature before you get home from work.

Efficiency

Highly efficient and better for the environment than other heating options. For every unit of electricity used multiple units of heating energy are created. In average heating conditions this will usually be about three to four units but varies depending on how much heat is available from the outside air.

Installation

How easy is it to install the system?

Installing the heat pump is straightforward and usually takes 2-3 days.
The rest of the system such as underfloor heating or radiators can sometimes be more complex.

Technology

An outdoor unit is connected to your electricity and water supply.

Powered by the electricity, it takes heat energy from the air outside and transfers it to your home.

Refrigerant within the heat pump is first evaporated using the heat from the outside air. It is then compressed.

The gas condenses back into a liquid and gives up heat. This heat is used to heat up the water in your heating system.

Following this the cooled liquid refrigerant passes through an expansion valve and the process starts again.

A heat pump can heat underfloor or radiators and your hot water cylinder.

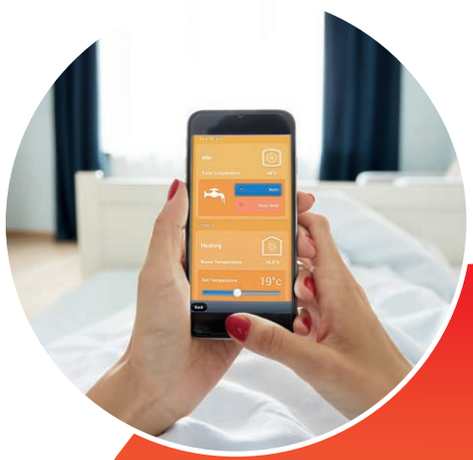
Did you know the first modern refrigeration technology was installed in 1902 at a printing plant in New York? This technology is now used in almost every home today in refrigerators and for air conditioning in cars. In heat pumps the same technology is used – but for heating instead of cooling.

Features

Modern living made easy with the latest technology

- Easy to use app to control your heating system
- Multi zone control
- Weather compensation
- Anti-legionella* control
- Energy monitoring
- Automatic hot water
- Anti-frost technology
- Holiday Mode
- Operation Reports
- Energy/Running Cost Reports
- Live Weather feed

*Heat pumps have technology called "anti-legionella" which allows them to sanitise the cylinder periodically using an immersion to prevent the growth of legionella bacteria.



Easy to use app to control your heating system

Why Choose RVR

RVR Energy Technology Ltd is a leading producer & distributor of heating equipment for domestic and commercial buildings. Origins of the business date back to the 1970s in Kenmare, Co. Kerry and it is still based there today.

- RVR's primary focus is driving the adoption of sustainable heating and cooling in Irish buildings
- We have over 40 years experience in supplying heating systems for many different types of buildings
- We pride ourselves on excellent technical competence and are happy to answer any queries you may have
- We guide you through the entire process of designing and installing a heating system in your home
- High quality products from a single reputable supplier brings peace of mind.

We will guide you through the entire process of designing, getting and installing a heating system in your home.

Our Services

Our friendly experts are on hand to offer support and technical know how from start to finish.

Begin with a consultation, a member of our professionally trained team will answer any initial questions and give you a comprehensive proposal for your home at no cost.

Purchasing the right heat pump, we will work with you to ensure you get the right heating system for your home.

Designing and installing a heating system can be daunting, we are happy to liaise with your contractors.

After-sales service, we have trained service technicians throughout the country and will always stand over our products and make sure they work correctly in your home

How affordable are Heat Pumps?

Air-to-water heat pumps a simple solution, they are also the least expensive way to heat your home. Your heating costs can be reduced by up to 30% - 50%.

- **Grants** There are grants available from the SEAI for those doing retro fits. There grants assist with upgrading insulation, getting BER assessments done, improving heating controls and installing heat pump systems, see the SEAI's website for more details www.seai.ie/grants/home-energy-grants/heat-pump-systems/
- **Cost Comparison** While the initial cost of the heat pump is higher then other traditional sources such as gas or oil boiler, the running cost of a heat pump is far less. Heat pumps generally require less maintenance and have a longer life span then other heating systems. We do recommend that you get your heat pump serviced annually to ensure it is running efficiently.
- **Finance options** are available, please contact us for details.

Space and water heating account for 80% of energy use in the typical Irish home. A heat pump can meet this demand in a more environmentally friendly way with lower running costs than gas, oil, solid fuel or electric storage heating.

Heat Pumps are Environmentally Friendly

One of the most exciting things about heat pumps is that they provide an environmentally friendly solution to heating your home. Below are the main reasons why we think they're a great way to cut your carbon emissions.

01

Energy Efficient

Heat pumps are one of the most energy efficient ways to provide heat in your home.

02

CO2 Emissions

Heat pumps emit far less $C0_2$ into the atmosphere than fossil fuels such as gas an oil.

03

Future Generations

Energy is sourced straight from the surrounding air. Reducing carbon emissions will have great benefits for future generations.

In a typical large house, a heat pump will save around 4.5 tonnes of CO_2 emissions every year vs using an oil boiler. That is the same as two people flying round-trip to Orlando. By the end of the decade, when much more electricity is predicted to come from renewable sources, it will save about 8 tonnes of CO_2 annually. That is similar to a round-trip flight for two to Hawaii.

Tech specs & Comparison

Features	Split	Monobloc	Split Hybrid with gas boiler	Heat Pump Water Heater
Easy to install	✓	✓	✓	✓
Pipe connections outside to inside	Refrigerant	Water	Refrigerant	Ducted air
Installer requirements	F-Gas certified	—	RGII and F-Gas	—
Needs glycol antifreeze in system	✗	✓	✓	✗
Simple Graphical Control	✓	✓	✓	✓
Works with Radiators	✓	✓	✓	✗
Works with Underfloor	✓	✓	✓	✗
Automatic hot water	✓	✓	✓	✓
Autometic anti-legionella control	✓	✓	✓	✓
Energy Monitoring	✓	✓	✗	✓
Weather Compensation	✓	✓	✓	✗
Works down to	-25°C	-25°C	-25°C	-25°C
Multi-zone control	✓	✓	✓	✗
Gas boiler backup built-in	✗	✗	✓	✗
Grants available (retro fit only)	✓	✓	✗	✗
App	✓	✓	✗	✗

Did you know ?

A monobloc heat pump has all the refrigeration components in the outside unit - so heating water flows between the outdoor unit and inside. A split heat pump has part of the refrigeration circuit outside and part inside, so refrigerant flows between the outdoor and indoor unit.

Monobloc

Split Heat Pumps

Heat Pump Water Heaters

FAQs

How does a heat pump work? A heat pump is just like a fridge but in reverse – it puts heat inside the space instead of taking it out! A heat pump uses refrigerant to gather heat from the outside air. It uses electricity to compress the refrigerant which increases its temperature, and this heat is then transferred into your heating or hot water system.

Does the heat pump go inside or outside the home? There will be a unit outside which gathers heat from the outside air and it will be connected to a unit inside which transfers the heat produced to your heating system and water heating cylinder. Sometimes the indoor unit will have the cylinder built in.

Does it work with radiators or underfloor heating? A heat pump can work with either radiators or underfloor. It delivers heat in the same way as a boiler except that heat pumps typically cannot exceed 55°C flow temperature. The lower the flow temperature the more efficient the unit is, so underfloor heating is ideal and will have the lowest running costs. However it can work efficiently with radiators too - as long as they have enough capacity at these lower flow temperatures.

What size Heat Pump do I need? This depends - a house built in the last ten years will usually require far less heat than house which is much older – but floor area and other factors mean this is not always the case. The only way to know for sure is to calculate the capacity required using the results of a Building Energy Rating assessment – the overall rating is not a good guide of suitability but the report will have a heat loss figure which allows the heat pump to be sized correctly. In some cases, it would be better to insulate the house further first.

Can I re-use my existing radiators? That depends on the size and capacity of the radiators. If they were designed for a boiler running at 80°C then they might not have enough capacity to heat the room properly at 45°C or 55°C. We are able to calculate if some radiators do not have enough capacity and need to be changed.

Will it heat my hot water? Yes, the heat pump will automatically keep a store of hot water in your cylinder ready to use at any time.

Will it work when the temperature is low? Yes. Heat pumps can run efficiently down to very low temperatures. Many are designed to work at outside temperatures as low as -25°C. This is far lower than we experience in Ireland. The average outdoor temperature during the heating season in Ireland is a far milder 8°C.

Will the heat pump be noisy? Heat pumps contain a moving fan and compressor and so will never be silent, however modern heat pumps are ultra-quiet in operation. The noise from the outdoor unit is minimal, especially in modern houses which are tightly sealed and have triple glazing and other measures.

How often does a heat pump need to be serviced? A heat pump should be serviced annually. Unlike a gas or oil boiler, a heat pump does not have combustion items which wear out or soot up. This means they are usually more reliable than a boiler. Everything should be checked by a trained technician at least once a year.

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Product package

A typical heating package consists of an outdoor unit, an indoor unit, controls, accessories that are required and the heat emitters of your choice.

Outdoor Unit

+

Indoor Unit

Controls

+

Accessory Options

Underfloor Heating

+

Radiators

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