

Heating Hot water Renewables

# Heat pumps: Discover the energy of the future



# Great reasons why a heat pump could deliver comfort for your home

## Saves cost



A heat pump can bring lower heating costs than gas and oil-fired heating systems, saving you money over the lifetime of the system.

## Connectivity



The entire system can be conveniently controlled with an app. This means that the system can also be integrated into a smart home system when installed with a VR 920 gateway.

## Super quiet



Vaillant heat pumps are among the quietest on the market. The Sound Safe system ensures that you or your neighbours are not disturbed by noise.

## Ideal for newbuilds and modernisation projects



Heat pumps are ideal for newbuilds and modernisation projects.

## Government cash back



All Vaillant heat pumps are eligible for the Renewable Heat Incentive (RHI) when installed by an MCS registered engineer. The RHI scheme could give you quarterly payments for seven years if you install, or have already installed, renewable technology to heat your home.

## Saves CO<sub>2</sub>



A heat pump can lower your CO<sub>2</sub> emissions compared to gas and oil-fired heating systems, reducing reliance on fossil fuels.

# aroTHERM plus air source heat pumps



Whether in a new house or in an older property - a heat pump is almost always the right choice. These days, new systems such as the aroTHERM plus can be combined with both underfloor heating and radiators.

	aroTHERM plus
Heat source	Air
Output range (kW)	3.5, 5, 7, 10, 12
Usage	New buildings, renovation, replacement
Heat emitters	Underfloor heating and radiators
House size	Up to 300m <sup>2</sup> in new build
Voltage	230V
Decibel level (sound power)	As low as 54dB
Energy efficiency	Heating: A+++ / A++ (A+++ - D)
SCoP rating	up to 4.88

## The benefits of the aroTHERM plus



- Outstanding comfort with 75°C flow temperature
- Suitability of aroTHERM plus for modernisation projects
- Exceptionally efficient: highest energy efficiency rating
- Extremely low noise emissions - 3.5, 5, 7 and 12 kW outputs accredited with the Quiet Mark

## Compatible with smart heating controls



sensoCOMFORT



VRC 700



Smartphone app

# aroTHERM split air source heat pumps



The aroTHERM split has the additional benefit that the outdoor unit can be installed up to 25m away from your property. Plus, as the external pipe work is transferring refrigerant rather than water it removes any risk of freezing in extreme weather.

	aroTHERM split
Heat source	Air
Output range (kW)	3.5, 5, 7, 10, 12
Usage	New buildings, renovation, replacement
Heat emitters	Underfloor heating and radiators
House size	Up to 300m <sup>2</sup> in new build
Voltage	230V
Decibel level (sound power)	As low as 54dB
Energy efficiency	Heating: A+++ / A++ (A+++ - D)
SCoP rating	up to 4.69

## The benefits of the aroTHERM split

- The outdoor unit can be discreetly installed, wall-mounted or floor-standing
- The wall-hung indoor module has a similar footprint to a standard combi boiler
- Available in various outputs to suit different types of properties.
- Extremely low noise emissions - all outputs accredited with the Quiet Mark



## Compatible with smart heating controls



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# flexoTHERM exclusive heat pumps



The flexoTHERM heat pump can be connected to any of three thermal sources: water, air or ground source. It comes in outputs from 5kW to 19kW, is supremely efficient and quiet, and can be cascaded for larger properties.

	flexoTHERM exclusive
Heat source: earth	Sufficiently large plot of land with vehicular access
Output range (kW)	5*, 8*, 11*, 15, 19
Usage	New buildings, renovation, replacement
Heat emitters	Underfloor heating, radiators possible
House size	Up to 475 m <sup>2</sup>
Voltage	230V*, 400V
Decibel level (sound power)	As low as 44dB
Hot water	Up to 8 people - depending on storage system
Energy efficiency	Heating: A+++ / A++ (A+++ - D)
SCoP rating	up to 4.73

## The benefits of flexoTHERM exclusive

- For all sources - ground, groundwater or air
- Distinguished with the Vaillant Green iQ label for the highest levels of efficiency and connectivity
- Extremely low noise emissions - all outputs accredited with Quiet Mark



### What is Green iQ?

Scan the QR with your smartphone to find out more



## Compatible with smart heating controls



sensoCOMFORT



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# aroSTOR domestic hot water air source heat pump cylinder



The aroSTOR range of domestic hot water heat pump cylinders include 200 and 270 litre models. It is perfect for additional hot water requirements in larger homes or small businesses where there is a high hot water demand.

This heat pump cylinder is incredibly efficient and sustainable, using thermal energy to heat hot water. This thermal energy can be collected via an external air duct, or it can recycle hot air from within the room where it's installed, provided there is sufficient ventilation. The only other energy needed is the electricity to run the appliance.

	aroSTOR domestic hot water heat pump
Heat source	Air
Usage	New buildings, renovation, replacement
Size	200 and 270ltr
Amount of usable hot water	367 and 495ltrs *based on stored water at 65°C
Energy efficiency	A+

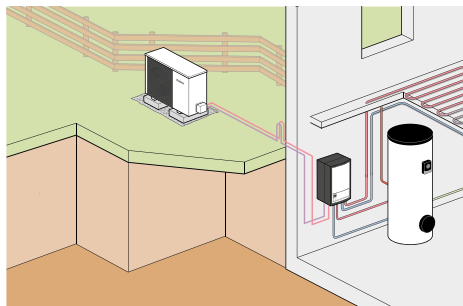
## The benefits of aroSTOR

- Highly efficient heat pump cylinder has the best possible ErP label of A+
- The stainless steel tank comes with a five year guarantee (two years for other components)
- A small footprint and range of 360° air duct accessories offers flexible options for siting of the appliance
- Extremely quiet operation, advance insulation and use of rubber on the compressor for quiet operation
- Self managing hot water comfort with electrical back up heater for hot water boost (and Legionella protection)
- aroSTOR heat pumps cylinders come with their own control fixed to the unit. This is a simple turn dial and push button control that has been specifically designed for the aroSTOR.

# How heat pump technology works

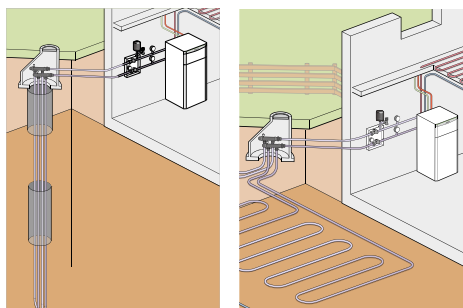
Heat pumps use environmental energy to generate heating and hot water for your home. Heat pumps extract thermal energy (heat) from the air, ground or a local water source.

## Three energy sources



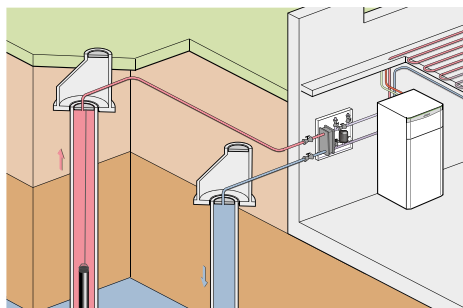
Air

Air source (also known as air-to-water) heat pumps have an outdoor unit that extracts thermal energy (heat) from the surrounding air and converts this into heating and hot water. Air source heat pumps require a small amount of outdoor space connected to an indoor module and a cylinder if hot water is required. As air is an easily accessible source of energy it is a less expensive option than using ground or water source heat pumps and is suitable for most property types in the UK.



Earth

Ground source heat pumps extract thermal energy (heat) from the ground via horizontal or vertical collectors buried in the ground. Ground source heat pumps are highly efficient and require more planning considerations than air source heat pumps. Horizontally installed collectors require a large amount of land to bury the refrigerant pipes, collecting the thermal energy, approximately 1.2m below the surface. Vertical collectors, on the other hand, require a deep borehole to be drilled to extract the heat from around 100m deep into the earth.



Water




Water source heat pumps can draw thermal energy (heat) from water. Extracting heat from water requires access to lakes, wells or streams. The temperature of water is constant regardless of the season and the outside temperature making this heat source highly efficient although, like the ground source heat pump, requires more planning considerations than an air source heat pump.

### FAQ

Heat pump outputs are sized for just the heating requirement of the individual property, which is why they have smaller outputs than combi boilers (that produce hot water and heating).

# Rely on Vaillant for sound advice



 Heating  Hot water  Renewables

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With its first-rate service, Vaillant can make life more comfortable before your new heating system has even been installed.

The first person to contact is, of course, your renewable heating engineer, who will provide expert advice on all of the requirements and technical aspects for your system.

To find a renewables heating engineer near you, please visit: **[vaillant.co.uk/findaninstaller](http://vaillant.co.uk/findaninstaller)** and ensure to select a renewable installer.

If you would like details of the latest products and comprehensive information about heating in general, you can visit us online at any time: **[vaillant.co.uk](http://vaillant.co.uk)**

