



Enviro-Heat

North West Ltd



Enviro-Heat

North West Ltd

Renewable & Energy Efficient Solutions



For a no obligation quotation please call 0845 689 6100
sales@enviroheatnw.co.uk www.enviroheatnw.co.uk



1. Air Source heat pump

Located outside the property, the air source heat pump is quiet and extracts heat from the ambient air – whatever the weather. Heat pumps are compact, self-contained units, with all the refrigeration components fully integrated. This means only water connections are required between the heat pump and the building.

2. Ground Source Heat Pumps

Ground source heat pumps use pipes which are buried in the garden to extract heat from the ground. This heat can then be used to heat radiators, underfloor or warm air heating systems and hot water in your home.

3. Underfloor heating

Underfloor heating is generally regarded as a good complement to heat pumps, as heat is emitted over a large surface area. This allows the water temperatures from the heat pump to be minimised, so optimising the efficiency and performance of the system.

4. Radiators

Heat pumps may be used with conventional radiators. But note, this may not be as efficient and the radiator sizing differs from that for fossil fuel systems such as gas and oil.

We recommend a flow temperature of 45-50°C to operate with our heat pumps – which may require an oversized radiator.

5. Domestic Hot water cylinder

Our cylinders are designed to operate seamlessly with our heat pumps for an efficient and environmentally friendly way to meet the home's domestic hot water needs.

We offer unvented pressurised hot water cylinders which provide plentiful hot water at mains pressure to all hot water outlets in the home.

The cylinders are highly insulated and use a large heat exchanger to maximise the transfer of heat generated by the heat pump to the stored water.

6. Solar Thermal panels

The perfect complement to heat pumps, our solar thermal panels are a cost-effective approach to energy and carbon saving. They use abundantly available, free solar energy to work alongside the heat pump as a way to heat the hot water cylinder, further reducing running costs.

7. Solar PV panels

Solar PV panels produce electricity from daylight and are an excellent companion to a heat pump system – which runs on electricity.

Solar PV installations benefit from the Feed-in Tariff and may offer returns of greater than 10% per annum. Additionally, the electricity they produce can be used effectively to help reduce the running costs of a heat pump / thermal system.

Gas Boilers

The efficiency of a boiler is assessed by their ability to turn fuel into heat. We offer the latest condensing boilers for all major manufacturers.

Condensing boilers have become an increasingly important choice in the UK to meet the current legislative requirements for boiler efficiency. These boilers have better operating efficiencies compared to conventional non-condensing boilers, due to their larger and more efficient heat exchangers. Efficiencies are often greater than 90% when in condensing mode.

They are available as both regular and combi boilers versions and can be installed with the latest solar thermal collectors for heating the domestic hot water, improving efficiencies further.

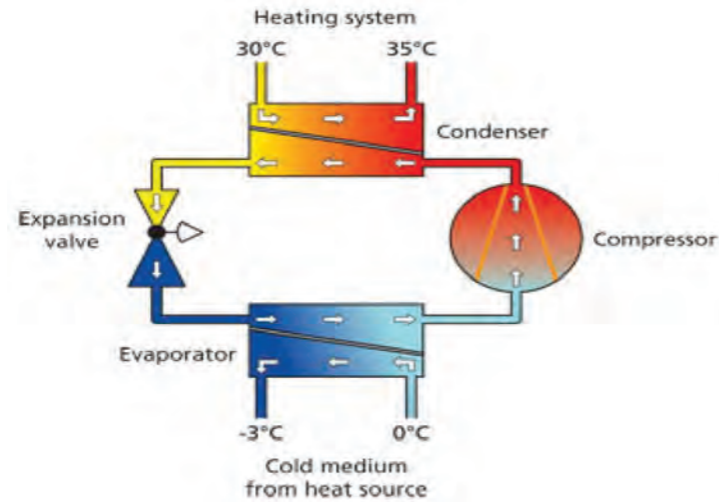


Enviro-Heat offers the latest condensing gas boilers from all the major manufacturers.

All our installations are carried out by Gas Safe Registered engineers

Heat Pumps

Heat Pumps can be up to 400% efficient which means for every 1kw of electricity input you will get 4.0 Kw of energy for your heating system and hot water.



Air to Water – Air Source Heat Pumps

Even cold air is full of energy and air source heat pumps use the freely available heat in the ambient air to provide efficient heating and hot water at air temperatures as low as -25°C. Because the source of heat - the air - is abundantly available all around us, air source heat pumps have the advantage of low installation costs and minimal space requirements, making them ideal for new build or retro fit applications, especially where space is limited. Air source heat pumps offer an affordable and practical renewable energy solution.



Ground Source Heat Pumps

The earth stores an enormous amount of solar energy from both solar radiation and rainfall, with ground source heat pumps extracting this freely available energy to provide low cost, low carbon, high efficiency heating and hot water.

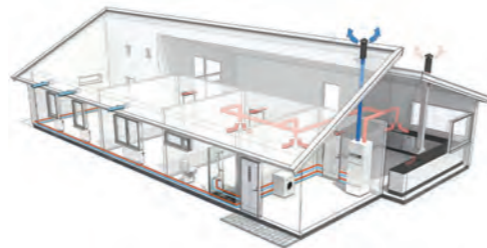
To extract the energy, ground source heat pumps use collectors filled with a mix of water and antifreeze buried in the earth, either horizontally – if a large enough land area is available; or vertically in a borehole where land space is limited. Although more costly to install, with consistent temperatures below the surface of the earth throughout the year, ground source heat pumps deliver high levels of efficiency all year round irrespective of seasonal variations in air temperature.



Air to Air – Air Source Heat Pumps

An air to air heat pump is an all-in-one heating and cooling system that's designed to provide year-round comfort.

Outside air, even on cold days, contains latent heat which can be converted to provide environmentally-friendly, low cost heating for a wide range of domestic and commercial properties. Using a similar principle to the refrigerator, but in reverse, outside air is drawn into the external unit where it meets a liquid refrigerant. The refrigerant absorbs free energy from the air and turns into a gas. This gas is compressed to form a high temperature gas which is then converted by the indoor unit into warm air to heat the property. It is an extremely efficient process which could produce up to 5 times more heat than the electrical energy it uses and, as an added benefit, this operating process can be reversed in the warmer months to provide cooling air.



Enviro-Heat offer the very best in Renewable Technologies and are MCS approved to install Solar panels (PV) Air source heat pumps, Ground source heat pumps and Solar thermal systems.

We also install traditional heating systems with the latest condensing gas boilers.

We are registered members of Renewable Energy Assurance Scheme (REAL) which aims to guarantee a high quality experience for consumers wishing to buy small generation units for their home, for a community building or for a small business.

REAL membership is a sign that the supplier has agreed to abide by the high standards as set out in our Consumer Code. The REAL logo is a symbol of professional excellence.



The MCS (microgeneration certificate scheme) gives recognition of top quality microgeneration products and services. It is a government accreditation that means you can be confident and assured of the service you receive. It also makes sure that you are eligible for the full payments of the Renewable Heat Premium (RHP), Renewable Heat Incentive (RHI) and feed in tariffs (FITs).



We are members of Gas Safe Register which is the official list of gas engineers who are qualified to work safely and legally on gas appliances. This gives you peace of mind that our workmanship is regulated to high standards.



Solar Thermal

It's about using the sun's energy to create free hot water for the home.

Solar thermal is a very effective way for producing the hot water requirements for the average family home. All that is required is a South East to South West facing orientation in which the solar collectors face and these will absorb the sun's rays to produce plenty of hot water.

Our systems can produce up to 70 % of your annual hot water requirements.

Benefits

- Solar energy is free and clean and safe.
- Environmentally friendly and produces no waste or pollution.
- Using solar energy enables you to reduce not only your carbon footprint and promoting sustainability but also your energy bills. Solar thermal offers an affordable and practical renewable energy solution.

Evacuated tube types

Vacuum tube solar thermal collectors are currently considered the premium product on the market. They are the most efficient solar thermal collectors available and are on average 30 percent more effective than 'traditional' flat plate panel equivalents.

Each vacuum tube solar thermal collector consists of a highly insulated manifold and a row of solar tubes. The vacuum inside each tube ensures the most effective transfer of energy into heat as well as providing perfect insulation. It protects the system from outside influences, such as cold, wet or windy weather, resulting in consistent high quality performance all-year-round.

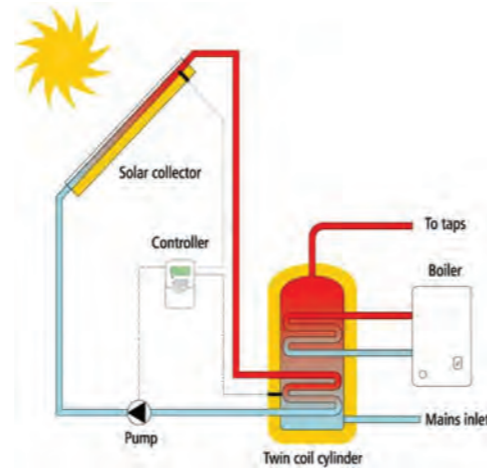
Vacuum tube collectors can provide up to 70% of annual hot water requirements with zero carbon emissions. They are also flexible for building integration, fitting perfectly on sloping roofs, flat roofs or even façades. They are quick and easy to install as the tubes can be carried and fixed onto the roof individually.

Flat plate types

Flat plate panels are the most popular solar thermal collectors on the market. They provide a cost-effective solution both in domestic and commercial applications and deliver excellent levels of efficiency and performance.

Each flat plate panel consists of a dark flat-plate absorber of solar energy, a transparent cover that allows solar energy to pass through and reduces heat losses, a heat-transport fluid (typically antifreeze) and a heat insulating backing.

They are robust, hard-wearing and flexible in installation with both 'in-roof' and 'on-roof' options.



Free Electricity from the Sun

Solar PV is a renewable energy system which uses photovoltaic modules on the roof of a building to convert light into electricity. Solar PV offers an affordable and practical renewable energy solution.

How does Solar PV work?

A Solar PV module is made up of mono-crystalline cells which consist of two or more thin layers of semi-conducting chemically treated silicon materials. The chemicals react when light hits the cell, creating an electric field across the layers, producing a direct current.

The greater the light intensity, the greater the flow of electricity.

This direct current (DC) is then fed into an inverter which changes it into a usable alternating current (AC) producing solar energy which can be used in your home.

Where can I install my Solar PV modules?

The location of the Solar PV is vitally important. The modules must receive the maximum amount of day light possible, so it is not advised to install the modules in situations where surrounding buildings or trees may cast shadows. The best location for a Solar PV module is on a south facing roof. There are various mounting arrangements including on-roof, in-roof and flat roof kits, both landscape and portrait.

What happens when the weather is cloudy or cold?

Solar PV Panels use light to generate electricity, so the modules still work when it is cloudy, although when it is overcast they are less efficient at producing solar energy. When it is slightly overcast, the panels may produce as much as half the power they would in sunny conditions. When the sky is heavily overcast, this could reduce further. Temperature is less important than how much light there is. What's more, a clear cold day is perfect, because Solar PV modules operate better at cooler temperatures.

What happens if the modules get dirty?

Solar PV modules are self-cleaning when mounted at an angle of at least 15°. The amount of dirt on the modules depends on their location. If the modules are in a heavily silted area (e.g. under trees) the buildup of dirt may reduce the power the panel generates by around 10%. Solar PV modules should be expected to last at least 25 years, since there are no moving parts. The Solar PV modules have a twenty-five year performance guarantee.

Can I sell the electricity I produce back to the energy supplier?

Most electricity suppliers will pay for power fed into the Grid (feed-in-Tariff) from domestic Solar PV systems. The easiest way to do this is by signing up to a 'Buy Back' or 'Feed-in Tariff' scheme with your power supplier. There are two main types of tariff available:

Generation: You are paid for all of the electricity that your Solar PV system generates even if you consume it in your home.

Export: You are paid for just the electricity that is exported back to the Grid and not for any electricity you have consumed.

