‘ESCAPE TO THE COUNTRY’ TO A ‘GRAND DESIGNS’ STYLE HOME

BUILT TO YOUR OWN SPECIFICATION BY SKILLED TRADESMEN

ENVIRONMENTALLY CONSCIOUS WITH EXCEPTIONALLY LOW RUNNING COSTS

OPEN PLAN LIVING

Energy saving technology in your new home

- **TRIPLE GLAZING**

  High performance glazing for the best thermal performance available.

- **HEAT RECOVERY VENILATION SYSTEM**

  Providing filtered fresh air, heated through a recycling heat-exchanger, recovering 90% of heat usually lost in traditional buildings.

- **AIR SOURCE HEAT PUMP**

  This is in place of a boiler. It works as a fridge in reverse compressing gasses to produce heat. This provides energy efficient climate control utilising free heat from the environment.

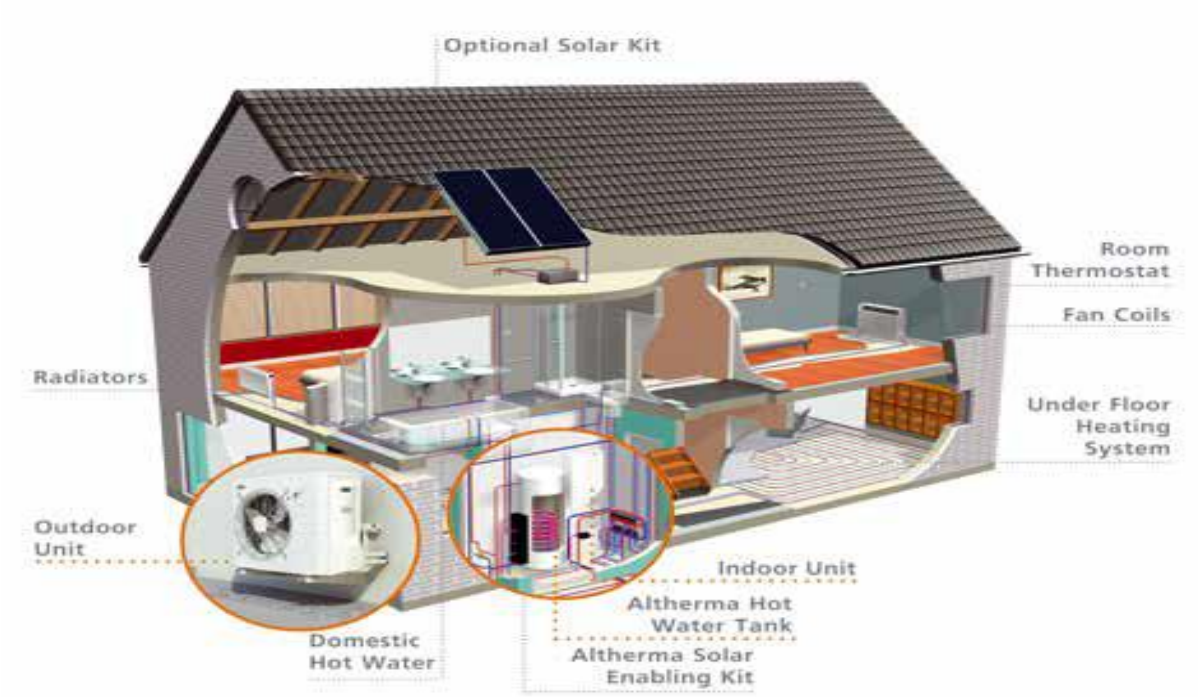
- **UNDER FLOOR HEATING**

  Under floor heating system to the ground floor providing uniform heat throughout the structure.

- **HIGH THERMAL PERFORMANCE STRUCTURE**

  These houses have a very high level of insulation in the structure. This stops the loss of energy throughout the structure and will reduce running costs of the house. (Houses of this size would normally need 12-16KW boiler, these houses have been sized at 4-5KW (excluding the heat recovery systems)) Heat pump 11KW for these houses as it is the smallest they do.

Air Source Heat Pumps



How They Work Air source heat pumps can extract latent heat from the outside air (even when the temperature outside is down to -20°C) and pump it inside to heat indoor spaces, making use of outside air as an infinitely renewable energy resource.

Extracting latent heat from the air Air source heat pumps represent a major step forward in energy efficient climate control, because they utilise free heat from the environment, rather than generating it solely from traditional fuel sources such as gas, oil or LPG.

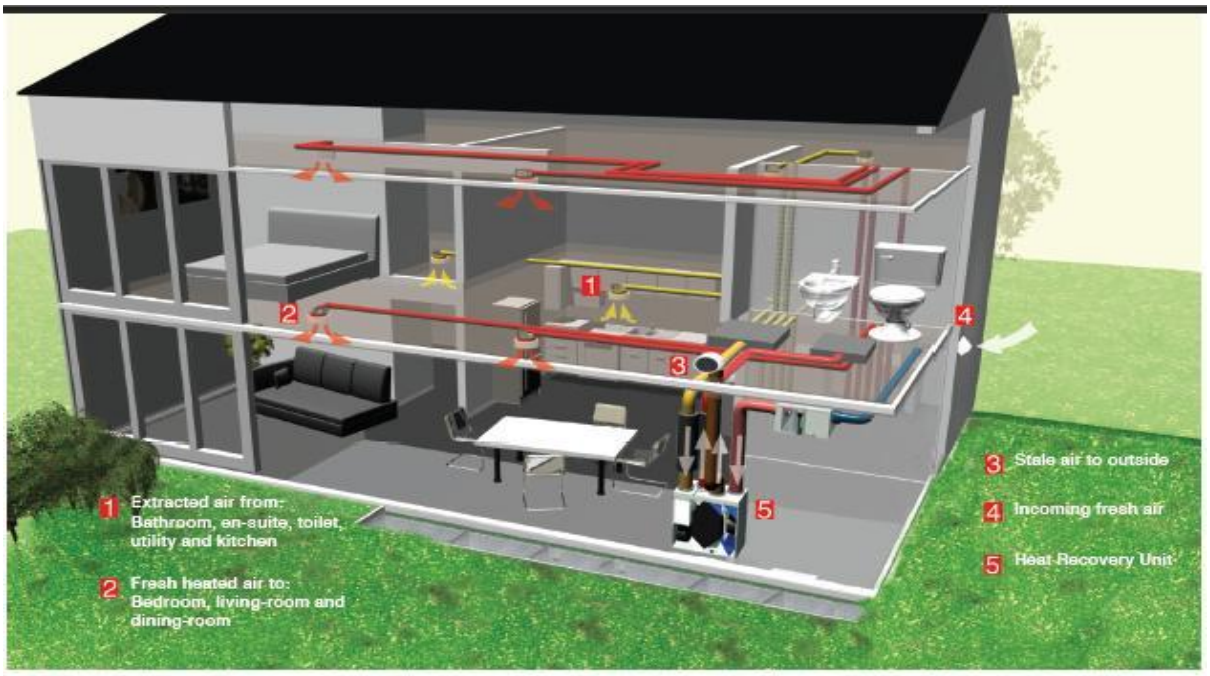
Reducing cost and CO2 emissions

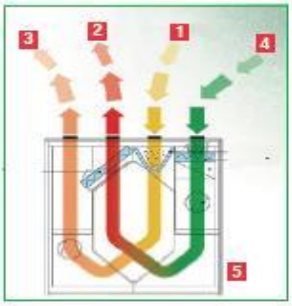
- Air source heat pumps have many environmental advantages thanks to their remarkable efficiency
- Recognised as a renewable heat technology
- Use less energy than traditional heating methods
- Reduce carbon emissions

Cost efficient operation

- Because they consume much less electricity than the heat they generate, heat pumps have significantly lower running costs than traditional energy sources
- Their status as a renewable energy technology also renders them eligible for many tax benefits and government support from the Domestic Renewable Heat Incentive scheme (domestic RHI).

Mechanical heat recovery and ventilation





How MHVR works

- Air is extracted from the house.
- The heat from that air is used to heat **fresh, filtered air** from the outside via a heat exchanger. This provides the best possible air quality available to your home. This has particular benefits for those with conditions which affect their breathing such as asthma and hay fever.
- Heated fresh air is circulated throughout the house.

- When there is no demand for heat (during the summer), the warm air is extracted and the heat from it allowed to dissipate and fresh filtered air at the ambient temperature is circulated.

<u>Saving Energy Using MVHR</u>

Let us consider the following scenario:

A family with 4 members in an open plan environment with a room temperature of 22°C

Minimum average ventilation requirement is 200m^2 approx. 300m^3/h fresh air.

Winter season ambient temperature of 2°C and a desired supply air temperature of 20°C

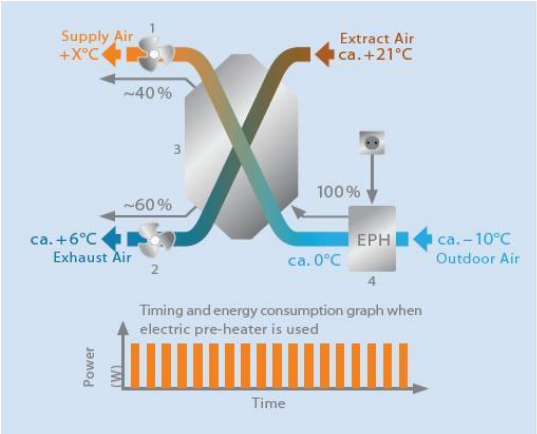
2400 kwh = Average additional winter heating cost of £330

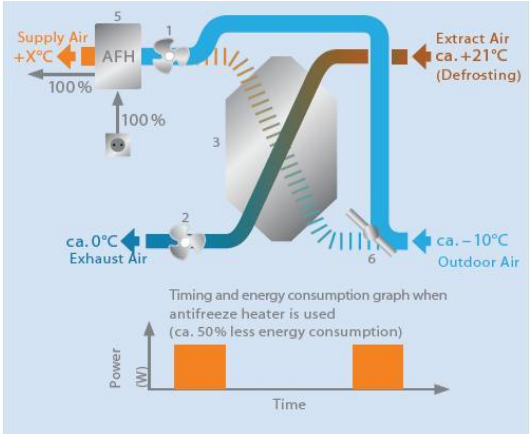
Apply Duplexvent high efficiency MVHR and that cost can be cut to £60 whilst maintaining a supply air temperature of 20°C

VS

Saving of approximately £270 per season

<u>New Smart Frost Protection</u>





Thanks to the new smart frost protection facility the heater works only when it is needed and therefore consumes much less energy. This way the unit fully benefits from the heater with less individual pulses but longer running cycles.

<u>Triple Filter</u>

Duplexvent Professional Line Units are the only MVHR units in the UK

to incorporate triple filter providing clean air to the dwelling at all times.

How important is the cleanliness of the air you and your family breaths in?