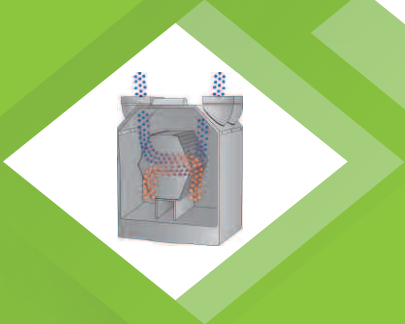
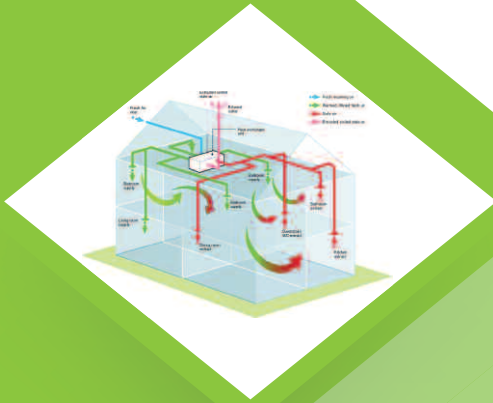




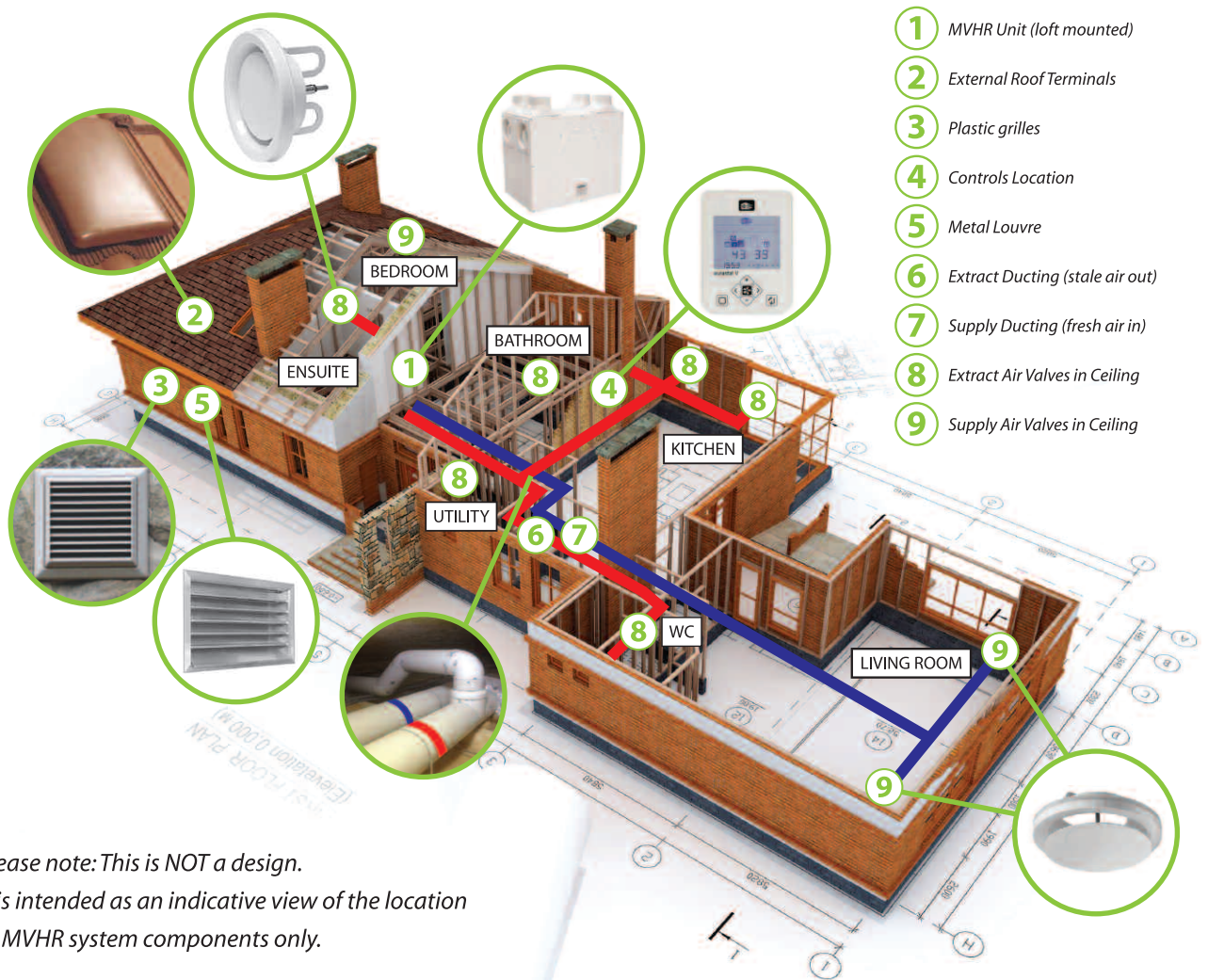
Independent Heat Recovery
Ventilation Specialists



Heat Recovery Ventilation (MVHR)

HEAT RECOVERY VENTILATION (MVHR)

It's important to note that heat recovery ventilation is NOT a heating system nor is it an air conditioning system. However, it can and does minimise the heat losses from within your property. Mechanical Ventilation with Heat Recovery (MVHR) is a balanced whole house ventilation system that both supplies fresh air and extracts stale air throughout a property.



Please note: This is NOT a design.

It is intended as an indicative view of the location of MVHR system components only.

It offers an efficient low energy solution primarily aimed at highly insulated airtight properties to improve or maintain good indoor air quality. Your MVHR ventilation system can be fitted into new self build homes or custom build homes as well as commercial properties such as care homes or offices. The system can also be successfully retrofitted during the renovation of your property. It eliminates the need for unsightly trickle vents and noisy extractor fans and increases the security of your property.

Your heat recovery ventilation system can recycle around 90% of the heat that would otherwise have been lost in your property and help reduce your carbon footprint. It is designed to run quietly and continuously in the background and will not be affected if you open your windows!

A compliant heat recovery ventilation system is generally made up of an MVHR unit, vent ducting, internal air control valves and external wall or roof vents, as well as all the necessary insulation and acoustic attenuation required.

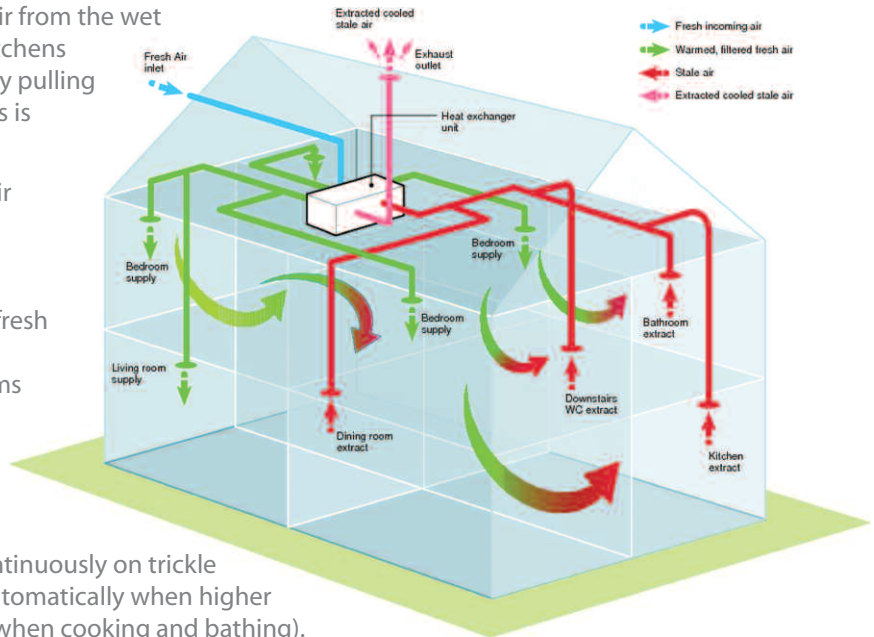
How Does MVHR Work?

A balanced mechanical heat recovery ventilation system (MVHR) works by continuously extracting air from the wet rooms within your property (e.g. kitchens and bathrooms) and simultaneously pulling in fresh filtered air from outside, this is achieved via a network of ducting.

The heat from the extracted stale air is drawn through an air-to-air heat exchanger located within the heat recovery ventilation unit itself and is used to warm the incoming fresh filtered air for the habitable rooms in your property such as living rooms and bedrooms. In some cases up to 90% of the heat generated within your property can be retained.

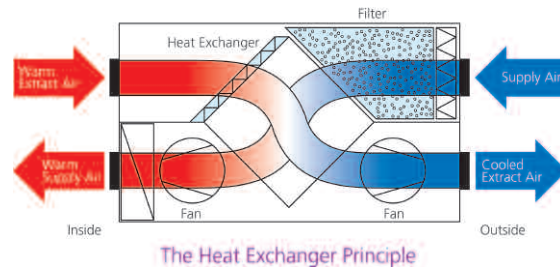
The system is designed to work continuously on trickle and can be boosted manually or automatically when higher levels of moisture are present (e.g. when cooking and bathing).

Some systems also offer a summer bypass facility which normally activates during the summer months and allows the heat to exit the property without passing through the heat exchanger. Depending on the unit specification, this feature can be controlled automatically or via a manual switch.

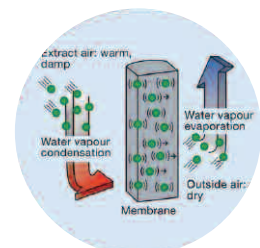
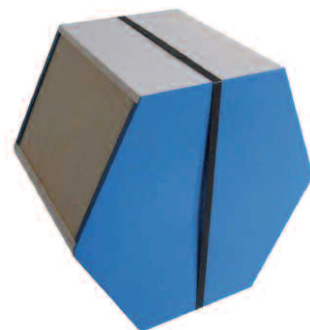
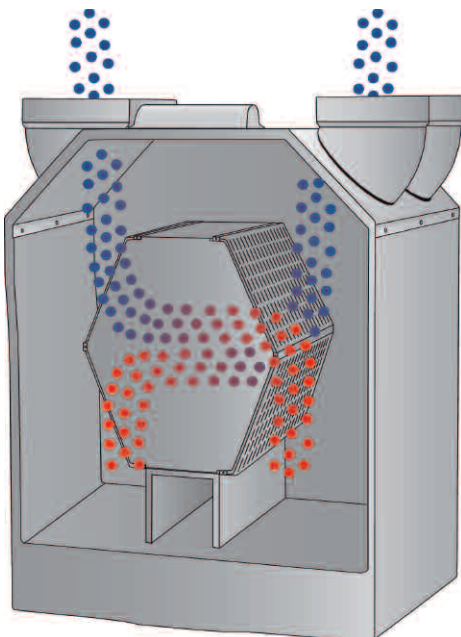


Heat Exchanger Options

The heat exchanger itself is the heart of the machine. The extract and supply airstreams are pulled through the heat exchanger which allows the outgoing air to pass most of its heat to the incoming air without the two airstreams actually mixing together.



The Enthalpy Heat Exchanger



The Enthalpy Heat Exchanger is an optional energy recovery ventilation (ERV) heat exchanger. This super efficient ultimate heat exchanger is designed to recover the heat and also water vapour for low humidity indoor spaces. (Only available with a range of Passive House certified units).

Integrated Air Tempering

The ComfoCool air tempering unit used in conjunction with the ComfoAir Q helps to reduce humidity along with the intake air temperature which in turn impacts on the internal environment and comfort levels. It can be easily integrated into your ventilation system to provide filtered fresh supply air whilst consuming a low amount of energy and at low noise levels.

Cooling is automatically activated by a user defined comfort temperature in combination with monitoring both intake air and internal air temperatures. It is also equipped with a compression cooling system, as is used in refrigerators to reduce the temperature, in this case of the incoming supply of filtered air. The unit differs from traditional air-conditioning by using the air performance of its sister MVHR system to deliver the available cooling power.

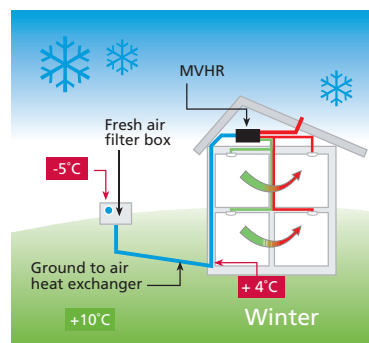
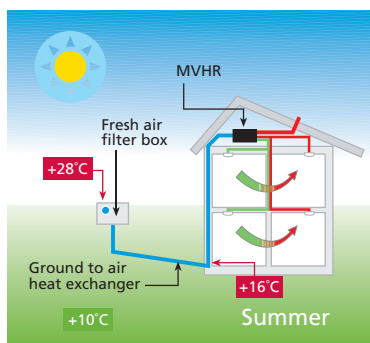
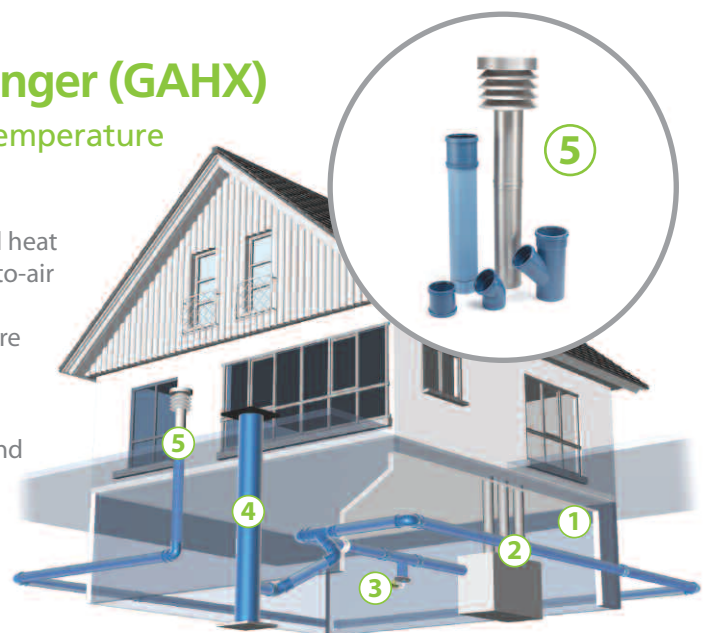


Ground-to-Air Heat Exchanger (GAHX)

Utilises the natural constant 8-12°C temperature 1.5m - 2m beneath ground level

When used in combination with your mechanical heat recovery ventilation system (MVHR), the ground-to-air heat exchanger (also known as earth tube) takes advantage of the natural geo-thermal temperature of the earth 1.5-2m below the ground generally a constant 8-12°C all year round.

It works by drawing in fresh air via an underground pipe which can cool the air in the summer and works in reverse in the winter months to ensure that the temperature is never below 5°C even with outdoor temperatures as low as -15°C.



- 1 250mm diameter pipe with anti-microbial inner layer (sits 1.5-2m below the surface of the ground)
- 2 MVHR unit located in the basement
- 3 Condensation Discharge (for buildings with cellars)
- 4 Condensation Chamber (for buildings without cellars)
- 5 Air inlet tower (Other terminals are available)

System available with 42m or 60m pipe lengths



Pre & Post Heat Options

In some instances there may be an opportunity to increase the air temperature coming into your property during cold spells to ensure that balanced ventilation can be achieved, and you can also add further heat to achieve a preferred "comfort" temperature. Pre- and post-heaters are usually fitted in-line in the ducting.

We strongly recommend that you speak with your appointed heating engineers in order to determine what system is best for your property, as this arrangement normally will not replace a traditional heating system.

Benefits of MVHR

Mechanical ventilation with heat recovery (MHRV) is a simple technology that has a multitude of benefits. Not only does it provide you with a constant supply of fresh filtered air for a healthier indoor environment but it will also have a direct impact on the Dwelling Emission Rate required in SAP which will ultimately reduce your carbon footprint.

There are so many decisions to be made. Nothing is more important than getting your ventilation system right first time and choosing the right ventilation partner to help you do that is also essential.

Energy efficient



Looking to make energy savings?

MVHR recovers and reuses up to 90% of the waste heat within your property and has a direct impact on the Dwelling Emission Rate required for the Standard Assessment Procedure (SAP) energy assessment. All of our units are either SAP Appendix Q accredited or Passive House approved.

Alleviates allergies & asthma symptoms



Suffer from allergies or asthma?

As the incoming fresh air is filtered, allergy and asthma symptoms are reduced. This will not only help asthma sufferers but also those with bronchitis, rhinitis, hay fever and chronic obstructive pulmonary disease (COPD).

Controls condensation



Don't let the rot set in!

Concerned condensation might take over your home? An MVHR system will control moisture and condensation in your property and not only put a stop to condensation on windows but also the development of damp and mould growth to ultimately improve indoor air quality

Tackles unpleasant odours



Can smells linger in your home for days?

The fresh air from the MVHR system will tackle everyday strong odours in your property typically emanating from cooking and pets that would ordinarily linger for days!

Filters out harmful pollutants



Everyday household products and furnishings can be detrimental to your health!

Volatile organic compounds (VOCs) are 2.5 times more likely to be present in your home than outside. They can be found in everyday household products such as paints, cleaning fluids, aerosol sprays as well as building materials and furnishings.

Reduces outside noise pollution



Ventilating your home through noisy open windows?


Fresh air will still circulate within your property so don't worry about keeping your windows closed! Not only will you keep the noises out you will also increase security in the home.

Choice of Units

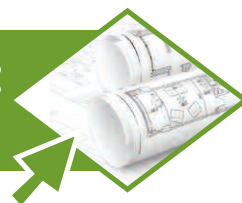
ADM offer an extensive range of SAP Appendix Q and Passive House certified heat recovery ventilation units suitable for most residential applications from a single room to a multi-storey property.

Quiet by design, they can be installed either vertically or horizontally, wall or ceiling mounted within a loft void or in a designated plant room.





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