Fresh Air for a Healthy Home

A consumer guide to ventilation

Fresh Air for a Healthy Home!

Good ventilation throughout a property helps to create a happy, healthy home for you and your family to live in.

Ventilating our homes has never been more important.

In the past, housing stock in the UK often featured badly-fitting, single-glazed windows and doors, open fireplaces, or badly fitted loft-hatches with very little loft insulation, so there were plenty of opportunities for fresh air to enter the home.

As we have improved the efficiency of homes, through double glazing, loft insulation or even adding brush seals to our letterboxes, our homes have become more airtight, making it much harder for fresh air to enter and ventilate our homes.

We need fresh air to prevent overheating in summer months, to remove smelly cooking odours, and make sure that excess moisture from showering, washing-up and hanging out laundry can escape. Good air quality means healthier breathing at home.

Benefits of well-ventilated homes:

- ✓ Helps to prevent overheating
- ✓ Removes odours and pollutants from the air
- ✓ Can help combat indoor condensation
- ✓ Helps to control moisture and humidity in the air
- ✓ Prevents the air in your home becoming stale

Purge and background ventilation

There are two ways to get fresh air into our homes, purge ventilation (by opening doors and windows) and background ventilation which is a method allowing fresh air into the property at a low level continuously.

Background ventilation can be achieved by using trickle ventilators in windows, passive wall vents (no power supply required) or PIV (Positive Input ventilation) which is a powered system or MHRV (Mechanical Heat Recovery Ventilation) which are whole house systems.

The more expensive the system, generally the better it is at reducing heat loss and sound pollution and the more controllable it is.

Building regulations

The Government has created new Building Regulation requirements from 15 June 2022 that say whenever over 30% of a property's windows are replaced, then background ventilation should be provided to habitable rooms as the new windows may be more airtight than those being replaced.

Habitable rooms are those classed as living rooms, dining rooms bedrooms etc. It excludes kitchens and bathrooms which generally have mechanical extraction as well as hallways and utility rooms.

Background ventilation methods

Window Trickle Ventilators

Window trickle vents are generally the cheapest method of complying with background ventilation requirements. They can ventilate your home without compromising on security by leaving doors and windows open. Although there are several perceived issues consumers have with window-based trickle vents, including noise, draughts, lack of control and them providing a home for spiders.

To install trickle vents, holes are drilled through the frame, then an external and internal cover is mounted over the holes. The internal side has a plastic flap to open or close the trickle vent, as required.

Passive Wall Ventilation

Passive wall ventilation is a method of allowing fresh air into a room via a small hole in the wall. The vents are generally unobtrusive and there are products which are far more controllable and thermally efficient with better sound proofing than window-based vents. They are quick and easy to install into existing properties, it usually involves core drilling a hole in the wall around the same size as a modern gas boiler flue hole. They do not need a power supply, so can be located anywhere in the room, generally at high level.

Passive wall vents are generally far superior to using window trickle vents. Two examples of wall vent products are shown here. There are many other options available.

Triton Home Dry Vents

This system is a through wall system requiring a core drilled hole. The system includes a cleanable filter that reduces noise, thermal loss, and pollution ingress.

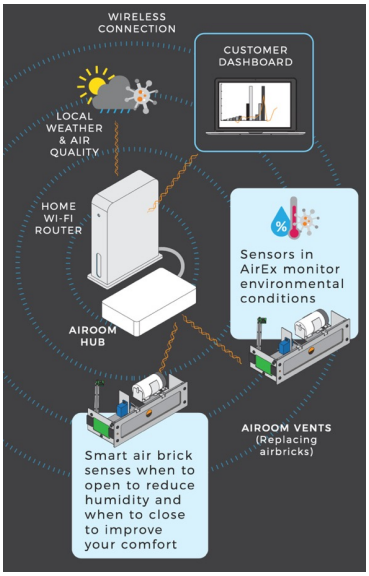
Airex Airoom

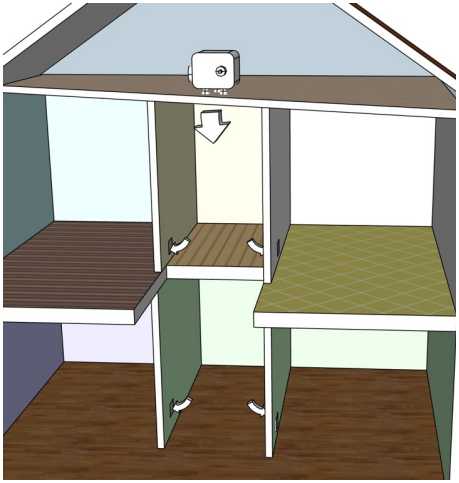
Airoom is the size of a standard airbrick and contains smart tech which detects internal air quality and opens and closes as required.

The internal grill can be specified to meet internal decorative requirements.

Each vent has replaceable batteries that last up to 3 years before needing replacement. It has a hub which connects to the internet.

The system is independently validated to reduce whole house heat loss by up to 12% and improve airtightness by 9% over standard air vents. Saving up to £88 per year (at 2021 energy) prices with a typical payback period of around 3 years.





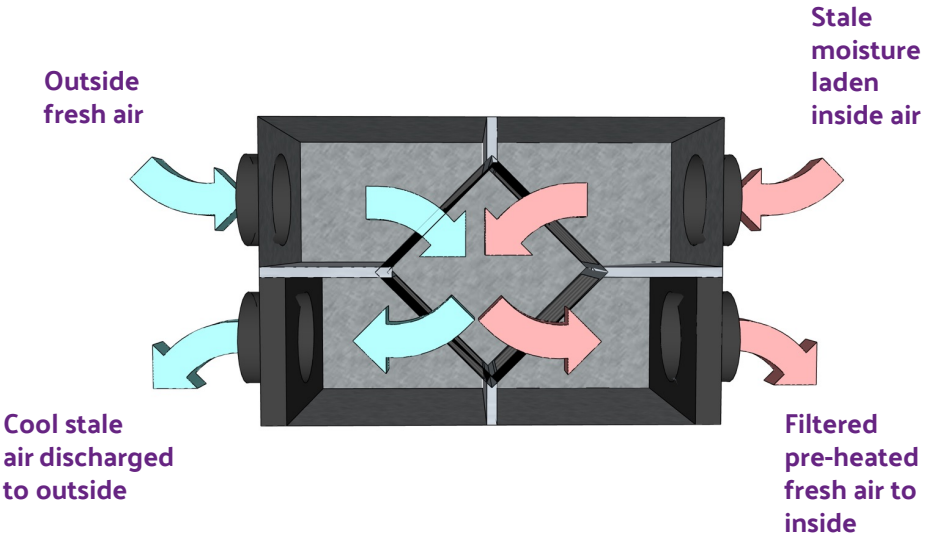
Positive Input Ventilation

Positive input ventilation works basically in the same way as an extractor fan you would find in kitchens and bathrooms, but in reverse. The fan would generally be very low speed to minimise noise and would push fresh air into the room.

They can be wall mounted or mounted in a loft and provides filtered air input. They can also be wall mounted.

Mechanical Heat Recovery Ventilation

A whole house system moves warm stale air and fresh air through a heat exchanger. The fresh air is warmed prior to entry into the property. Each room has ducts to extract stale air and input the fresh air. The units contain fans to direct the flow of air and filters to help clean the air also.



This is the best system to use but installation costs will be several thousand pounds.

Your choice of background ventilation

Building regulations are legally enforceable and there are potential fines for not complying with them. A window installer makes the legal declaration that an installation meets building regulations through a Competent Person Scheme on your behalf, but you as the homeowner, are ultimately responsible.

You may have issues selling your home if the work carried out is not compliant with the Building Regulations, notwithstanding the potential negative health impacts on you and your family from poor air quality.

At the time of ordering new windows, you must choose the type of background ventilation you require and declare it to your window installer to record within the installation contract.

If you are using window trickle vents, these will be specified and installed as part of your window installation contract. If you are choosing passive wall vents, the installer may be able to carry out this work for you as part of the window replacement work to minimise disruption to you. Alternatively, you can choose an alternate contractor to carry out this work.

Some installers may carry out PIV or MHRV but generally this would be carried out by a separate contractor.

Where you choose passive wall vents, PIV or MHRV installation as a method for background ventilation then you must declare this to the installer in the window installation contract documentation and also endeavour to have the work carried out in a timely manner from when the window installation work takes place.

Supplier references used in this document

- www.tritonsystems.co.uk
- www.airex.tech/airex-room

This guide has been written and designed by **Certass Trade Association**

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