

Why Vaillant?

Because we provide energy efficient ventilation.



Vaillant

■ recoVAIR VAR 275

■ recoVAIR VAR 350

Because  **Vaillant** thinks ahead.

Leaders in innovation

Introduction

Europe's No.1

When it comes to creating the perfect living environment, at home, in the office or even at your favourite restaurant, Vaillant has it all under control. For more than 135 years, we have been setting the standards in the heating market and developing products that have revolutionised the industry. Today we are proud to be one of the world's largest heating and technology manufacturers with an enviable reputation for performance, efficiency, quality and reliability. Staying on top requires constant innovation, so we continually invest in developing new technologies for even better solutions - all designed to create the perfect climate for all situations.

New technologies

As you would expect from one of the world's largest heating and hot water manufacturers, our range of products boast class leading features and controls, the highest efficiency ratings and unrivalled after sales service. Improving traditional products is just one of our aims, with global temperatures continuing to rise and traditional energy fuel stocks diminishing, the challenge now is to find new ways of providing the comfort we have all come to expect.

Energy efficiency and renewable energy

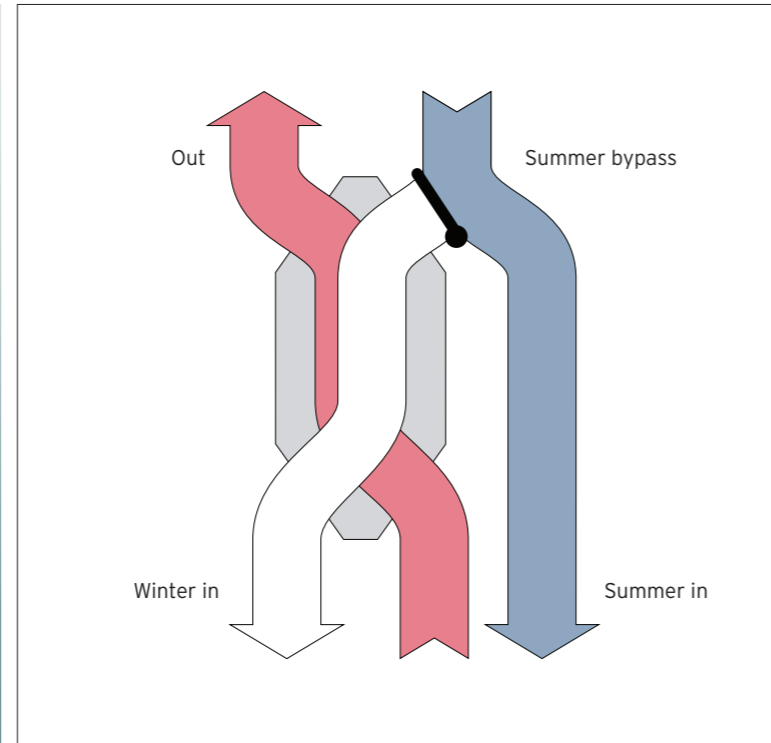
Both governments and consumers are demanding more efficient and more environmentally friendly heating and ventilation solutions to help conserve our planet for future generations. By conducting extensive research and development Vaillant have not only produced a range of energy efficient innovative products such as ground source heat pumps and solar thermal water heating but are also at the forefront of the development of the energy saving products of the future, such as mechanical ventilation and heat recovery.





Mechanical heat recovery ventilation

Clean efficient fresh air



recoVAIR mechanical ventilation and heat recovery system

Air flow and heat exchange



recoVAIR remote control



recoVAIR and by-pass unit

recoVAIR mechanical ventilation and heat recovery system

Mechanical ventilation and heat recovery means everyone in the home can have all the fresh air they require without wasting energy from the exhaust air. The recoVAIR whole house heat recovery ventilation system also reduces the carbon footprint of the home, reducing the reliance on fossil fuels needed to heat up the property.

The recoVAIR is designed to provide energy efficient ventilation to new-build properties with high insulation and fabric tightness specifications.

How does recoVAIR work?

The recoVAIR system extracts used air from the home and at the same time uses the heat from the extracted air to heat up fresh air from outside.

The recoVAIR unit has two internal speed controlled fans, one for the supply air, and one for extracted air. The respective air flows are managed so that they pass over each other within separate

compartments of the heat exchanger, providing maximum heat transfer up to 85% (as measured by BRE) from the extracted air to the fresh air supply. This brings fresh air back into the room, close to the current room temperature, reducing the amount of additional heat needed to match the temperature to the occupants requirements.

Automatic summer by-pass

Each recoVAIR appliance is supplied with a summer by-pass unit as standard. This allows the cooler summer night-time fresh air to by-pass the heat exchanger providing an immediate cooling effect as well as pre-cooling the building fabric prior to the next warm day. The standard controller even provides an energy gain display to show you how much energy is saved in using this feature.

Ease of installation

To assist in the installation of the recoVAIR system each appliance comes with a multi-sized connection flange allowing up to three different size ducts to be simply attached to the unit without the need for additional reducers. Each unit is also supplied with

a summer by-pass unit and Grade 3 dust filters as standard. Fine grade filters (F6) are also available as an optional extra to provide additional protection to homeowners with particular sensitivity to airborne particles.

Controls

Each recoVAIR appliance comes complete with a Vaillant, easy to use, multi-function controller. This control is used to set up the required air volume for the building and is used to control the fan speed at the set times for normal, low and boost operation. It also automatically sets the by-pass control, provides energy saving information as well as multiple diagnostic and servicing indications. In this way, the control can be programmed to carefully manage the ventilation system to match the homeowner requirements.

recoVAIR mechanical ventilation and heat recovery is available in two capacities

recoVAIR VAR 275

For airflows of 50m³/h up to a maximum of 275m³/h @ 175pa

recoVAIR VAR 350

For airflows of 70m³/h up to a maximum of 350m³/h @ 265pa

SAP Appendix Q

Vaillant recoVAIR Heat Recovery units VAR 275 and VAR 350 are SAP Appendix Q eligible and have been tested by the BRE for the extraction of air from a kitchen plus up to 7 wet rooms in a domestic property. In addition, the recoVAIR VAR 275 complies with the Energy Saving Trust Best Practice guidance.

The quoted efficiency figures of up to 86% (VAR 275) and up to 84% (VAR 350), have been calculated using the BRE's strict test procedures.

For more information please visit: www.sapappendixq.org.uk



Ventilation

The air that we breathe

**The need for ventilation**

Everyone requires fresh air and each person exhales between 10 and 75 litres of carbon dioxide and 175 grams of water vapour per hour. A family of four produces between 10 and 15 litres of water vapour each day through cooking, washing and breathing. Dust mites have proven links with over 80% of asthma cases and thrive when humidities are high. What's more, within a typical home there are traces of ammonia, acetic acid, methane, nitrogen monoxide and formaldehyde from cleaning products and building materials.

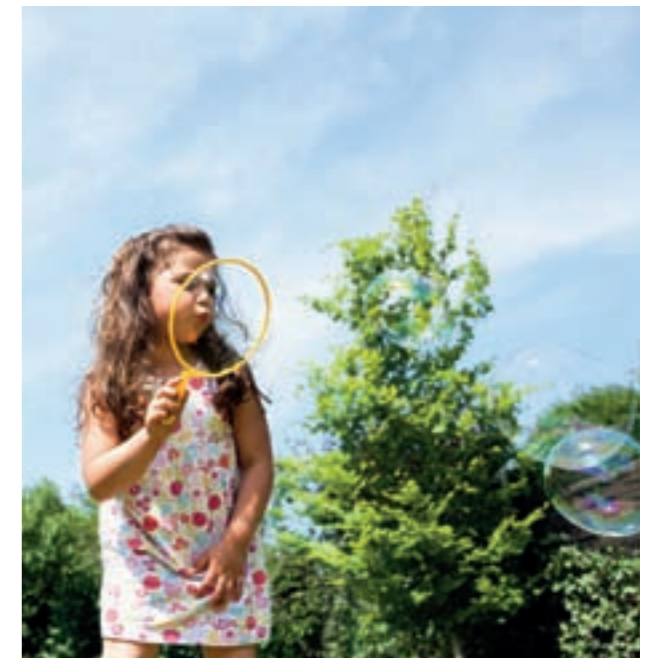
A properly designed and installed ventilation system is important to help manage stale air and contaminants which may otherwise linger within the home. A well designed fresh air ventilation system will replace stale air with clean fresh air, and will help to remove airborne contaminants.

Building Regulations and Code for Sustainable Homes

The new homes of today have greatly reduced levels of natural ventilation to minimise heat loss and to positively contribute to the energy efficiency of the property. However, a lack of proper ventilation can lead to a build up of contaminants that can affect the health of a building's occupants.

The need for ventilation in new homes is so important that a section of the Building Regulations (Part F) is devoted solely to this issue. Part F recognises the role to be played by heat recovery ventilation to not only meet the ventilation requirement but also to comply with the energy efficiency requirements of the building regulations.

Vaillant recoVAIR appliances form an important part of a housebuilder's toolkit when designing a home to meet the tough energy requirements in the Code for Sustainable Homes.



recoVAIR VAR 275 is
Energy Saving Trust
Best Practice Compliant

The Vaillant recoVAIR appliances are Appendix Q eligible, which means that the energy saving contribution can be used in the SAP energy assessment of a home.



recoVAIR

Frequently asked questions

Why is a ventilation system needed?

Current Buildings Regulations require all new dwellings to have almost no air loss to reduce the amount of energy needed to heat the building. However everyone needs a supply of fresh air for their continued health and well being.

The Regulations recognise this and provide guidelines for introducing a controlled amount of fresh air into new homes.

Why choose a heat recovery ventilation system?

Without a heat recovery system, even though the amount of fresh air introduced is controlled, this air will be at outside temperature and will still need to be heated to match the room temperature. Heat recovery units take the heat from the extracted air and return this heat to the fresh air as it is introduced back into the dwelling, without transferring any of the pollutants that the extracted air may contain. The amount of additional heat required, is therefore significantly reduced.

Can this system be fitted to any home?

To be most effective the house needs to be carefully constructed to ensure that the structure is properly sealed enabling control of the air flows. This means the system is most effective in new properties built to the latest standards. However, provided it can be correctly sealed and insulated any property can benefit from installing a recoVAIR unit.

In addition, both appliances have been independently tested by the BRE and are SAP-Q eligible. The recoVAIR VAR 275 also complies with the Energy Saving Trust Best Practice guidance.

Why choose a Vaillant recoVAIR system?

Vaillant, as the leader in domestic heating solutions is justifiably proud of their recoVAIR system. It has the class leading features and quality that you would expect from a Vaillant product.

Yes, but what is so good about the recoVAIR units?

- **Maximum energy efficiency.** The unit is capable of recovering up to 85% of the heat from the exhaust air (as measured by BRE).

- **Low running costs.** The recoVAIR unit uses DC speed controlled fans which can be exactly matched to the ventilation requirements, reducing the need for wasteful and noisy duct dampers.
- **System controls.** Vaillant's unique control system allows the installer to set up and commission the unit from the controller. The LCD display, as well as giving an instant read out of temperature and air flows, also provides instant access to all settings and allows the owner to set their own parameters as required.

Can the recoVAIR system benefit asthma sufferers?

Up to 80% of asthma sufferers are affected by dust mites, that thrive in damp conditions (typically over 60% Relative Humidity). Heat recovery ventilation efficiently reduces humidity created by cooking, cleaning and washing thereby removing the conditions dust mites love. Additionally, your recoVAIR unit can be fitted with optional high grade filters to remove airborne contaminants, including pollen, which could aggravate the condition.

Does the recoVAIR system need to be switched on and off?

This system is designed to operate all year round, their low wattage fan motors ensure running costs are minimised.

The recoVAIR control offers automatic timed day (high) and night operation (low) as well as holiday (minimum) and party (boost) available at a push of a button.

All recoVAIR systems also come with a summer by-pass as standard. This device automatically allows cooler night time air to be drawn directly into the house cooling the occupants and building fabric during summer months.

Who can install this system?

Installation of the recoVAIR mechanical ventilation and heat recovery system and ductwork should be undertaken by a suitable qualified professional.

Where does the unit go in the house?

Generally the unit is installed in the attic space or in a utility room or cupboard.

When do the filters need to be changed or cleaned?

To maintain the optimum efficiency of the unit and to ensure continued air quality, we recommend the filters are cleaned at least every six months and replaced annually. Units in particularly dirty atmospheres may require more frequent attention.

The recoVAIR system is fitted with a filter service indicator which automatically reminds you when filter attention is required.

Can the homeowner change the filters themselves?

Yes, the filters are easily accessed behind the front panel of the unit. The power supply should be isolated prior to attempting this.

What other servicing is required?

We recommend that the unit is checked annually for correct operation and cleaned by a qualified person. The service would include a check and clean (if necessary) of the heat exchangers and the filters would also be replaced.

How is the unit sized and selected?

The unit is selected based on the requirements of Building Regulations Part F which lays down the minimum ventilation requirements for new homes.

What about the ductwork?

The ductwork is designed to suit the requirements to provide the correct ventilation as well as ensure that undue strain is not put on the recoVAIR unit by excessive bends and restrictions.

What are the main benefits of fitting a recoVAIR unit?

The main benefits people have found from fitting one of our units are:

- No noticeable fungal (mould) growth in bathrooms or bedrooms
- Little condensation on windows
- Generally, people wake feeling refreshed as fresh air is circulated all through the night
- Fresher smelling bathrooms (air is constantly being changed so no need for air fresheners)

- Less dust (windows kept closed and all air entering the house is filtered)
- Feeling more secure (windows are kept closed even on warm summer nights due to the by-pass vent feature)
- Quieter house less outside noise as windows are kept closed, no noisy bathroom extraction fans.

Does the home need a heating system as well as the recoVAIR system?

Yes. The recoVAIR system reduces energy costs by recovering what would normally be waste heat but the home still needs to be heated using a conventional system. For the latest information about Vaillant heating systems please visit www.vaillant.co.uk

The recoVAIR system will improve the air in the home but is it expensive to operate?

Actually, compared to other forms of ventilation such as trickle vents with extract fans and passive stack ventilation systems, the recoVAIR system will reduce your heating costs. Individual extract fans are normally selected on a 'one size fits all' principle and typically move excessive amounts of air (and therefore heat) for the period they operate.

Although heat recovery ventilation is designed to operate 24/7 the energy saved by recovering the heat from the exhaust air more than compensates for this.

What are the consequences of poor ventilation?

The possible effects of a lack of sufficient ventilation to a home include:

- Strong multiplying of micro organisms and house dust mites
- Possible health problems
- Increase in allergies
- Headache and nausea
- Damage to the building structure and furnishings
- Build up of carbon dioxide and household odours.

Customer service support

Contact details

Working in partnership

The after sales service and support behind every Vaillant product is part of the quality package that has helped us build a unique reputation within the industry. It's this approach that's reflected in the support for our Vaillant ventilation and heat recovery products. For example, there's the benefit of a comprehensive parts and labour guarantee which is backed up by our renowned parts supply chain and service facilities.

High quality training

Please contact our training team to register your interest in attending a Vaillant mechanical ventilation and heat recovery training course.

Contact details

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Setting the standard for

Customer training



State of the art Vaillant Training Centre in Bristol

As the industry's leading training provider, Vaillant offer comprehensive training courses which can add value to your business.

Every year we train thousands of professionals. We are continually developing and improving our training programmes and facilities to provide a service that matches your requirements.

Every one of Vaillant's training courses is based on practical and detailed hands-on experience, backed up by expert tuition.

The aim of each Vaillant Training Course is to help improve your skills, which in turn can help you to improve your profit. That's why so many choose Vaillant as their training provider.

Who are Vaillant training courses designed for?

- Gas Safe Registered Installers (UK & Isle of Man)
- CORGI Registered Installers (Northern Ireland)
- IPHE Registered Installers
- SNIPEF Registered Installers
- Local Authorities and Housing Associations
- Service Organisations
- Architects and Specifiers
- Merchants and Spare Part Stockists
- Solar DHW installers
- Commercial boiler heating installers

Current training courses

ecoTEC High efficiency domestic boiler range

A one day course covering our latest range of condensing boilers, including installation, operation, servicing and repair.

Commercial boiler range

A one day course covering commercial installation, operation, servicing and repair.

BPEC Unvented domestic hot water

Three courses are available to suit all candidates wanting to take this assessment.

Unvented domestic hot water initial assessment

A one day BPEC certificated course comprising of a theory training session in the morning followed by assessment in the afternoon.

Unvented domestic hot water re-assessment

A half day course comprising of a brief update tutorial followed by the BPEC re-assessment examination paper. Please note to be eligible for this assessment all candidates must already hold a certificate of competence for unvented domestic hot water (expired or current), and will be required to present it prior to the assessment.

Unvented domestic hot water defined scope assessment

A one day defined scope BPEC certificated course for those wanting a better understanding of unvented domestic hot water systems, but not intending to install them. Please note this course does not qualify you to install unvented domestic hot water systems in accordance with part G3 of the Building Regulations.

Solar product course

A one day course for heating professionals wanting to get a basic understanding of solar domestic heating systems.

BPEC Solar DHW course

A two day course for heating professionals looking to gain solar heating BPEC certification.

BPEC Solar DHW course

A two day defined scope BPEC certificated course for those wanting a better understanding of solar domestic hot water systems, but not intending to install them.

Air to air appreciation course

A one day course designed for installers who wish to expand their knowledge of air to air heat pumps.

Ground Source Heat Pump (GSHP) course

A one day product course looking at the geoTHERM range of ground source heat pumps. The day will cover installation, operation, service and repair.

BPEC Ground Source Heat Pump (GSHP) course

A two day BPEC certificated course for professionals seeking a GSHP qualification.

Mechanical Ventilation Heat Recovery (MVHR)

A one day product course looking at the recoVAIR range of mechanical ventilation heat recovery units. The day will cover installation, operation, service and repair.

FGas Regulations course

Three day training course leading to the Construction Skills assessment on the FGas Regulations.

Domestic controls training

A one day course designed to give you the best knowledge and expertise with our range of controls and accessories.

Certificate in Energy Efficiency for Domestic Heating

A one day course to help you promote the benefits of high efficiency boilers to your customers.

BPEC CPA 1 Combustion Analyser Assessment

From 1st February 2010, CPA1 will be a pre-requisite for anyone wishing to take ACS elements CEN1 and HTR1. We offer a one day BPEC certificated course for those proficient in the use of a combustion analyser. The day comprises of an update tutorial in the morning followed by assessment in the afternoon. If you would like to receive additional training on flue gas analysis or would just like the opportunity to practice with your own analyser, please contact us for further details.

Tailor-made courses

The Vaillant training department creates custom made programmes to suit your company's individual training needs.

For more information on any Vaillant training course

please contact our Training Department on:

Telephone: 01634 292370 Fax: 01634 292354

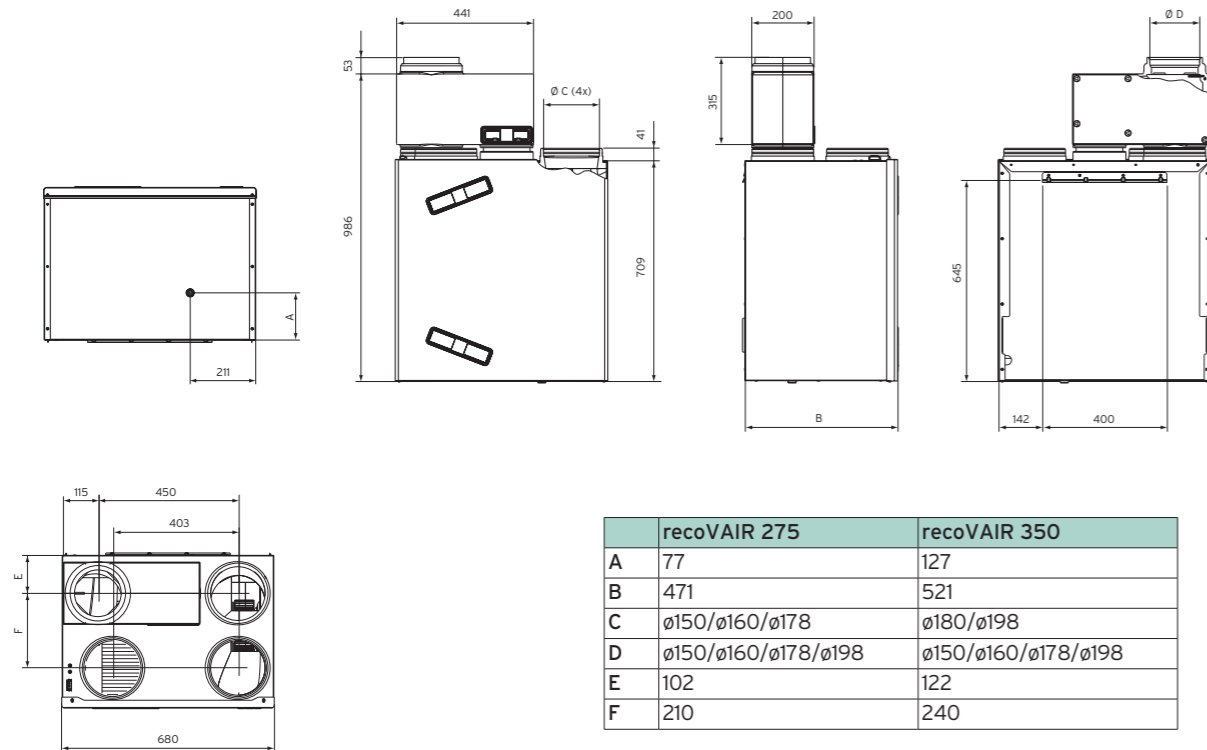
Email: training@vaillant.co.uk

www.vaillant.co.uk/installers/training



recoVAIR system

Unit dimensions



Features and benefits

Energy efficient

- Heat exchange efficiency of up to 85%.

Summer by-pass fitted as standard

- Automatic operation
- Display for energy saved
- Plug and play fitting
- Controls can be positioned up to 30m away from the main unit for maximum adaptability.

Standard multi-function e-bus remote control

- Timer functions
- Extra-low and boost setting at a touch of a button
- Diagnostic display
- Temperature and unit performance read out.

Feature packed construction

- Multi-size duct connections
- Long life aluminium heat exchanger
- Polypropylene internal construction for lightness and soundproofing qualities
- Powder coated steel outer casing for durability
- Robust and quiet DC fan motors, giving infinite speed control for maximum efficiency
- Optional high efficiency filters
- Vaillant quality
- Lightweight aluminium heat exchanger for maximum durability and performance.

Dimensions

In addition to the dimensions of the appliance shown above, sufficient clearance around the appliance must be ensured to allow access for maintenance. These clearances are detailed in the installation manual which is available separately on request.

recoVAIR

Technical specification

| System reference | recoVAIR heat recovery ventilation | |
|---|--|------------------------------|
| | VAR 275 | VAR 350 |
| Nominal air flow | m ³ /h 275 | 350 |
| Nominal external static pressure | Pa 170 | 265 |
| Maximum air flow | m ³ /h 275 | 350 |
| Minimum air flow | m ³ /h 50 | 70 |
| Maximum efficiency | % 95.3 | 95.1 |
| Unit dimensions | mm h ^x w ^x d 708x680x471 | 708x680x521 |
| Nett weight | kgs 42 | 44 |
| Gross weight | kgs 46 | 48 |
| Filter class | EU G3 as Standard (F6 optional) | G3 as Standard (F6 optional) |
| Sound pressure level @ 1m | dbA 48 | 52 |
| By-pass unit dimension | mm l ^x h ^x d 441x280x200 | 441x280x200 |
| Power | | |
| Voltage/Frequency | V/Hz 230/50 | 230/50 |
| Power @ 30% | 25 | 30 |
| Power @ 60% | 55 | 85 |
| Power @ 100% | 175 | 295 |
| Air connection sizes | | |
| Supply air in | mm 150/160/180 | 180/200 |
| Supply air out | mm 150/160/180 | 180/200 |
| Extract air in | mm 150/160/180 | 180/200 |
| Extract air out | mm 150/160/180 | 180/200 |
| Operating temperatures | | |
| Maximum ambient temperature | °C 40 | 40 |
| Frost protection mode | °C -7 | -7 |
| SAP Appendix Q Data (as measured by BRE) | | |
| Heat exchange efficiency level | (%) Up to 85% | Up to 85% |
| Specific fan power | (W/l/s) Down to 0.9 | Down to 0.9 |
| Energy Saving Trust Best Practice Compliant | Yes | No |



recoVAIR VAR 275 is Energy Saving Trust Best Practice Compliant



recoVAIR VAR 275 is Energy Saving Trust Best Practice Compliant

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