

# Ventilation and Heat Recovery Systems

Cooling

Villevent

Ventilation

Heat Recovery



# A Fresh Approach to Clean Air

the of a healthy home

LEADING THE WAY IN DOMESTIC, WHOLE HOUSE ENVIRONMENTAL SOLUTIONS.

## INTRODUCTION

Villavent Ltd are the brand leaders in whole house environmental solutions. With over 40 years experience in Scandinavia we have both the product quality and expertise to provide an array of services to provide a 'one stop' shop, bespoke service to the marketplace.

With 20 years experience here in the UK,Villavent strive to provide what we all expect – 'value for money'. Villavent is the quality product in the marketplace today, with a complete installation service, expert advice, good levels of guarantee, extended warranty packages and a clear informative website. As we move forward we can already boast a National Installation Service – a first, direct from a manufacturer and a DIY installation booklet for those individuals keen to do it themselves.

Villavent are part of a large European network within the ventilation industry ensuring we remain strong and competitive within this field in a growing international market, and can call upon manufacture from Germany, Norway, Sweden and Canada.

Our product quality is second to none with manufacture to ISO 9002 and the environmental standard 140001.

As the systems are generally a whole house installation, complete with piping and ducts, the design is of paramount importance with any installation.

Villavent operate a CAD system, which is drawn in 4, colours and is very clear in its imaging. Generally we provide 3 issues of drawings: For Comment, For Approval and For Construction once all comments and notes have been discussed and agreed. An accurate materials list can then be called off to ensure a smooth installation.

So how can we be of assistance to you?

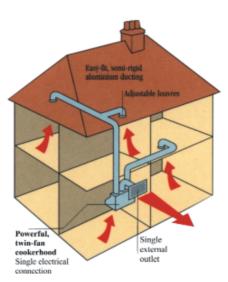
As detailed on the following pages we specialise in:-

- Central Mechanical Extract Ventilation.
- Heat Recovery Ventilation.
- 'Villacool™' Comfort Cooling.
- Villavent<sup>®</sup> Comfort Conditioning<sup>™</sup>.
- Central Vacuum System.

# CENTRAL MECHANICAL EXTRACT VENTILATION

### **Benefits**

- Very quiet in operation.
- One fan unit.
- One breakout point through the building structure.
- One electrical connection.
- No over-run timers.
- Easy to install (no specialist skills or tools required).
- Healthier living environment by constant replacement of air.
- Condensation control.



Building Regulations call for extractor fans in all wet areas of the property and trickle vents in all the windows to allow air back into the property.

The Villavent Central Extract fan unit is sited either integrally within a Villavent cooker-hood; mounted in the roof void or at high level in a cupboard.

Ducting connects the fan to ceiling/wall mounted extract louvers in the rooms being ventilated.

The fresh air is drawn into the rooms through small trickle vents fitted in the window frames. The pressure difference makes the fresh air flow towards the wet rooms thus providing effective ventilation throughout the entire house.

Stale air is continually extracted from the rooms being ventilated and is discharged by the central fan to the outside.

Control of the system is either by means of a cooker-hood or by a remotely located control panel. Either of these gives a three speed setting, normal plus boost for rapid ventilation and with the option of a low speed setting if preferred.

### **Building Regulations**

Current Building Regulations call for extractor fans in the 'wet' areas of the property and trickle vents in the windows.

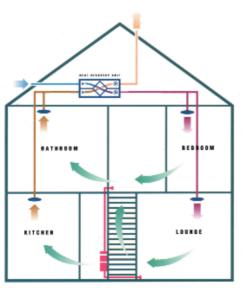
By installing a Villavent Central Extract fan this will meet the Building Regulations 1995 Part F amended 2000, Part F Section 1.9(d) and BRE Digest 398 (trickle ventilators are still required in windows).



### HEAT RECOVERY VENTILATION

### **Benefits**

- Filtered fresh air British Allergy Foundation approval.
- Very quiet in operation.
- Excellent Heat Recovery and enhancement of energy efficiency.
- One electrical connection and low voltage control panel.
- Constant change of air without draughts removing indoor pollution.
- No unsightly trickle ventilators in windows.
- No noisy extractor fans.
- No overrun timers.
- Fewer breakout points through the building structure.
- Condensation control.
- Ventilation system is operational as soon as power is available reducing drying our times and speeding decoration.
- Easy to install.



The Villavent Heat Recovery system is designed to completely change all the air in the property at least once every two hours, continually replacing the stale damp air with fresh, warmed clean filtered air.

The Villavent Heat Recovery Ventilation systems recover between 65 and 90% of the heat normally lost through trickle vents and other breakout points in the building structure (dependant upon model type).

The Villavent Heat Recovery units are of Scandinavian construction. The casing is constructed from double skinned galvanised steel sheet with thermal insulation and is very quiet in operation. The large cross flow heat exchanger is manufactured from aluminium giving both higher energy efficiency and longevity. The pollen EU7 bag filter and electric heater battery are fitted as standard, to most units.

By installing a Villavent Heat Recovery system you are providing filtered fresh air thus creating a healthier indoor environment alleviating asthma and hayfever sufferers. Our EU7 Pollen Filter has the seal of approval from the British Allergy Foundation.

The Villavent Heat Recovery system complies with the current Building Regulations 1995 Part F amended 2000 and BRE Digest 398 and therefore no noisy extractor fans or draughty trickle ventilators in windows are required.

By negating the need for trickle ventilators in the windows noise pollution and heat loss is greatly reduced.





supplied with EU7 filter

### How it works

Villavent offer a wide range of Heat Recovery Ventilation units that can be sited either in the roof space; above a Villavent cooker-hood in the kitchen; at high level in a cupboard or alternatively the unit can be wall mounted.



Ducting connects the stale air exhaust grille to the Heat Recovery unit and extracts via ducting to all the wet areas of the property. The stale air passes through the cross-flow heat exchanger and typically 65-70% of the heat normally lost via trickle vents is recovered.

Fresh air is brought into the property via a separate external grille, passes though the heat exchanger and picks up the heat recovered from the stale air.

There is no mixing of air flows only the transfer of heat.

The warmed fresh air is then ducted to all the habitable rooms within the property.

Control of the system is by low voltage control panel that can be remotely located to suit customer requirements. The control panel gives a multi speed setting, low; low/medium; high/medium; high for rapid ventilation.

The control panel indicates when the unit is in operation; when the filter needs replacement and also when the heater battery is in operation.

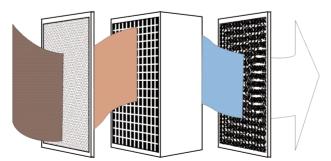
### Summer by Pass Block

In most Heat Recovery Ventilation units the heat exchanger block can be replaced by a summer by pass block when heat recovery is not required (in some units this is automatic.). This will increase the air flow and may give a cooling effect on hot summer days.

### The Villavent ELFI electrostatic filter



With ever increasing concern given to the quality of the air we breathe, an additional filter can be supplied. The ELFI electrostatic filter takes out 97% of airborne particles as small as 0.1 micron i.e. pollen, bacteria, smoke, viruses, country odours, traffic fumes, etc. thus making it a sound investment for those who suffer from allergies and who have young children.







### **Benefits**

- Low cost cooling.
- Can be added to the Heat Recovery Ventilation system.
- Whole house cooling.
- Easy to install.
- First fix pipework to plumb in initially 2nd fix at later date.

With increasingly warmer summer months and increases in external pollution air conditioning is now becoming a more recognised requirement in today's living environment, however this is usually limited to commercial buildings and cars due to the high capital cost of the equipment.

Villavent offers a Comfort Cooling system that is both flexible in design and adaptable to different buildings as well as being unobtrusive and affordable.

Rather than being a expensive thermostatically controlled air conditioning system the Villavent Comfort Cooling unit will cool and dehumidify the supply air temperature off the coil by 8-12°C on outside air temperature. This reduction in temperature will vary dependent on the amount of heat gain within the building and the amount of air provided by the ventilation system.

This option allows the customer to add a 'Villacool™' system to the Heat Recovery Ventilation system and will therefore provide cool air to the whole house. Therefore the property becomes energy efficient in the winter and cooler in the summer months.

'Villacool<sup>™</sup>' may be added to the Heat Recovery system at a later date (providing all supply air ducting is pre-insulated) allowing for budgeting to be more flexible.

### **External Condensing Unit (remotely sited)**







# VILLAVENT COMFORT CONDITIONING

Villavent<sup>®</sup> Comfort Conditioning<sup>™</sup> is the ability to 'choose' the level of comfort we require in our homes.

Villavent offer a choice from a 'Five Star' treatment list as detailed below – I star (top up heating) is normally supplied as standard.



# TOP UP HEATING

Not for total heating of a dwelling, but to provide 'top up', to room temperature, when the outside air drops below freezing.

# 🛧 FILTRATION

All important with any ventilation system. Our level is usually provided to a very high (EU7) standard where it is already approved by the British Allergy Foundation and as such has been awarded its 'Seal of Approval'.

Changing this filter once a year (minimum) is paramount.

Additionally an electrostatic filter is available for those requiring even better levels of filtration, whilst retaining the airflow as the airflow is not restricted.

Replacement EU7 filter or electrostatic filter.

# ★ NOISE LEVEL

The standard level is to achieve Building Regulations and typically a NR of 30 in a bedroom, 35 in a living area.

By adding attenuation we can reduce this to virtually inaudible within the room itself i.e. below NR 30 (on normal operation).

### ★ HEAT RECOVERY EFFICIENCY

The standard range is 65-70% efficient. By increasing the efficiency, and therefore improving the heat recovered we can offer.

80% VR range of HRV Units 90% VM range of HRV Units

# 🛨 COOLING

By adding the 'Villacool<sup>™</sup>' system to provide 8-12°C temperature drop off of the unit itself, from ambient.

### CENTRAL VACUUM SYSTEM

### **Benefits**

- Cleaner and healthier environment.
- Simple to use ergonomically designed.
- Low maintenance.
- Quieter in operation, at point of use.
- Lightweight hose.
- Large collection canister.
- Unobtrusive.
- Powerful.
- Many ancillary items available.



The Villavent Central Vacuum system can be easily installed into a new or existing property and combines all the benefits of simplicity to use; low maintenance and environmental friendliness in one system.

With the power unit sited away from the habitable areas the Villavent Central Vacuum system eliminates the re-distribution of dust and dirt. The system is quieter at the point of operation and is more powerful than a portable vacuum cleaner and therefore picks up substantially more dirt, pollen and dust, giving a much cleaner and healthier environment. The dust canister (bag) requires emptying only a few times each year and the whole system is virtually maintenance free.

The lightweight hose eliminates the requirement to carry around a heavy dust canister or have electrical cables creating a hazard.

### How it Works

The power unit is sited away from the habitable areas (garage; basement; utility) resulting in a quieter system, than traditional portable vacuum cleaners.

A 50mm dia vacuum pipe is connected from the main unit to a pre-determined number of strategically placed wall mounted inlets.

The Villavent Central Vacuum switches on and off automatically when the lightweight hose is inserted into and removed from each inlet. Alternatively the on/off control can be located at the hand portion of the hose if required.

The ergonomic design of the handle helps you to work easier.

A wide range of tools and accessories are available to cater for all vacuuming requirements, including pet care combs; hard floor/deep pile tools and car valet kits.



# AFTER SALES & SERVICE

### **Guarantee**

Villavent offer a 2 year guarantee from date of invoice and covers all parts.

### **Extended Warranty**

Villavent offer a further 3 year extended warranty, which can be taken out within 12 months of the original invoice. This can be paid monthly, annually by cheque or up front for 3 years with 5% discount (ask for full details).

### National network

Villavent has its own service and maintenance engineers and access to a national network of service engineers. All service queries should be directed to 01993 772270.





### Frequently asked questions

### **Central Extract**

- Q: How do you boost the system?
- A: Because we are all used to a fan going off and coming on we expect an increase in airflow and in noise. As the system runs on a continual basis it is not necessary to increase the airflow. Continued, quiet, efficient ventilation is all that is needed. If automatic boost airflow is desired however we have a variety of methods to suit all applications.
- Q: Can the cookerhood be linked into the system?
- A: You cannot link in a motorised cookerhood, made by others, however you can with a telescopic or stainless steel canopy hood without a motor, supplied by ourselves, on selected models.

### Heat Recovery Ventilation (HRV)

- Q: Why will I be pleased I invested in HRV, in the future?
- A: Modern buildings are built to be energy efficient and to achieve this they are made to be as air tight as possible. This is not healthy as contaminants produced within the home are not expelled to outside.

Heat Recovery ventilation combines energy efficiency with a healthy indoor environment.

- Q: Why Buy Villavent and not 'A N Other'
- A: Quite simply we give you excellent 'value' for your money.

With over 40 years experience we ask your questions you wish you'd thought of – so you can make a fully informed choice as to what you really need! Villavent are the informed choice on the market today.

- Q: Can we fit the system ourselves, with confidence?
- A: With the unique Villavent DIY guide and 4 colour CAD design layout no problem! A Villavent engineer can come and commission the system, if necessary.

### **Comfort Cooling**

- Q: What is the difference between Comfort Cooling and Air Conditioning?
- A: Air conditioning is generally a term given to the cooling of a room down to a set temperature. Calculations would normally have been made to provide enough cooling to a given room or space so that a desired temperature may be maintained. This is also generally re-circulated air with a little (10%) fresh air mixed in. Comfort Cooling is a 'general' term given to a simplified on/off system which will provide a nominal cooling effect and 100% fresh air with 'Villacool'.

Calculations may not have been carried out and just a 'kW of cooling' figure given.

The cooling effect on a room or space will be dependent upon the heat gain and volume of air from the system provided.



- Q: Is the system noisy?
- A: Air Conditioning units generally incorporate compressors and these do vibrate when in operation.

The 'Villacool'  $^{\text{TM}}$  is sited external to the building and this, therefore, will not affect the noise levels within the dwelling.

- Q: What levels of cooling can we expect within the room itself?
- A: As we provide Comfort Cooling and not Air Conditioning we do not provide heat gain/cooling calculations. We therefore cannot say with confidence the expected temperature drop within a room.

We can say however that the temperature off of the cooling unit will be about 8-12°c lower than ambient temperature (typical cooling load in kW is 4000 watts).

### **Central Vacuum**

- Q: Is the unit powerful enough compared with leading portable vacuum cleaners?
- A: Providing the unit is sized correctly by the manufacturer or supplier the suction is 'at least' similar.
- Q: What are the guarantees on life of the unit and service requirements.
- A: 2 years as standard with a 3 year additional warranty available at extra cost.

Differing units have different maintenance requirements. Some require a bag to be emptied or a filter cleaned/replaced on a regular basis. Others have a self cleaning filter.

- Q: What are the main benefits of this system and is there a chance the pipe will get blocked?
  - Healthier indoor environment no re-circulated air.
    - Ease of use no unit to lug around.
      - Noise of unit in separate room or garage.
      - Many attachments.
      - Longer Life.

As far as the pipe being blocked, providing the system is installed to the manufacturers requirements any possible blockages will be at the outlet and not within the system itself (i.e. easy to remove obstruction).

### **TESTIMONIALS**

A:

"Villavent recommended an excellent quality product that is well suited to Barratt and has integrated well with our development at Pierhead Lock. This was supported by a complete sales and support service of a very high standard." **Barratts, East London.** 

"Octagon Developments recognised the need for a quiet, efficient whole house ventilation system to enhance their prestigious build quality and approached Villavent 5 years ago. To date we have been very pleased with both the end product and bespoke design, supply, installation and commissioning package provided by Villavent."

"Villavent's total service, including supply of all components, installation and commissioning, combined with what we believe is the best quality available on the market, fit nicely with Mullion's overall concept of a secure, healthyliving environment together with flexibility of internal design." **Mullion - (Retirement Housing)** 

"We have used Villavent Central Extract systems over the past 10 years. The solution to noisy individual fans and several external grills is a quiet efficient centralised system as manufactured by Villavent. This system is easily installed requiring only 1 electrical point and discharge grille and is competitively priced." John Dickie Homes Ltd. (Scotland).

**Michael Holmes**, editor of Home Building & Renovating Magazine installed both Villavent Heat Recovery Ventilation, and Central Vacuum systems due to his demand for a quality product and proven track record. Michael comments "whilst I was convinced on the technical attributes of the Villavent products, my wife was sceptical. The ease of use and the power of the Vacuum System has meant we have no hesitation in specifying Villavent for both systems. We now feel these are essential in any modern house."



Housebuilder/Developer



#### Timber Frame/Individual



#### Health and Medical Centres



### Student Accommodation



### Retirement Apartments



### Nursing Homes



#### Commercial and Leisure



### Distributed by:

# Service and Support

### Design

- Supply of all materials
- Installation recommendations
- Commissioning/Maintenance options

National network of local agents and distributors can provide on site and technical assistance

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