Single Room Heat Recovery

MECHANICAL VENTILATION SOLUTIONS FOR RENOVATION OR NEW BUILD
MORE THAN 60 YEARS OF EXPERIENCE

Founded in 1955, Airflow has grown from one man’s expertise in fan design and air flow measurement into a thriving international group. Renowned for its innovative approach to new product development and air movement techniques, Airflow can offer you a variety of ventilation solutions to suit your needs.

With our headquarters in High Wycombe, Airflow has subsidiaries in Germany and the Czech Republic and has global distributors from Norway to New Zealand.

Listening to the requirements of our customer enables Airflow’s knowledgeable and committed staff to continually develop new and innovative products that raise standards and provide long term, reliable ventilation solutions.

UNITED KINGDOM
High Wycombe (Head Office)
Our founder started the business in 1955, just one mile from the current site, which has been Airflow’s headquarters since 1960, co-ordinating our global activities.

GERMANY
Airflow has been serving ventilation products and air measurement devices to the German and European markets for over 50 years. Operating near Cologne, Airflow Germany has their own customer service, sales and technical sales teams.

CZECH REPUBLIC
Founded in Prague over 20 years ago, the Airflow Czech Republic team offer sales and servicing of ventilation products for the Eastern European market.

BETTER VENTILATED HOMES MAKE BETTER LIVES

The requirement for many more affordable homes continues as does the need to improve the quality of the existing housing stock. The Decent Homes Programme has taken great strides in upgrading older dwellings but there is still much to be done.

As we build new and regenerate older dwellings to a higher standard of insulation, so we increase the conditions for dampness and mould growth and an environment with poor indoor air quality to thrive.

Where the UK Government support any retrofit works, it requires these to be done to Publicly Available Specification (PAS) standard. Such standards that exist are PAS 2030:2017, and the new PAS 2035 due out in mid-2019. These are available from BSI. The aim is that by ensuring these standards are followed and adhered to the quality of work improves.

A key element of PAS2035 is the requirement to install effective ventilation in all properties, especially those where insulation, or any other energy efficient measures are introduced.

Furthermore there is a requirement to check the ventilation in all properties and to upgrade the system when it fails to meet the specified criteria.

Therefore producing effective, efficient and compliant ventilation will be an obligation for social housing providers to combat the potentially harmful effects of dampness and mould and reduce the airborne pollutants which can result in a ‘Toxic Home’.

UNDERSTANDING THE ISSUES

A highly respected report concluded that 40,000 deaths a year can be linked to air pollution.

Toxic Home Syndrome can develop Allergies, Alzheimer’s and strokes.

The health problems resulting from exposure to air pollution leads to premature death, a high cost to people who suffer from illness and to our health services and to business.

Source: The Royal College of Physicians: Every Breath We Take: the lifelong impact of air pollution April 2016

WHAT IS ‘TOXIC HOME’?

If you live in an air tight home with poor air quality, you and your family can experience headaches, long lasting colds and bronchitis as well as chronic asthma and allergies.

15.3 million homes in the UK are at risk of Toxic Home Syndrome from the build-up of moisture and airborne pollutants, Volatile Organic Compounds (VOCs) within the air in your home.

Poor indoor air quality can lead to dampness and mould developing and damaging the fabric of the home and the air we breathe.
Non ducted systems

This type of ventilation is where the existing air in the property is extracted, as it is extracted the heat is removed (recovered). Then the unit uses this heat to warm up the fresh air entering the property. So giving you consistent fresh air that is warmed up using the recovered heat.

There are various solutions available:
- Single room MVHR units, these can be either a central supply & extract unit or a single unit with heat recovery. These are available as wall mounted or ceiling mounted units that are installed in each room.
- Central room MVHR units, these are available as central supply & extract units and they can be either single or multiple units installed depending on the air requirement of the dwelling.
- Central room MVHR units can be used in habitable rooms (bedrooms, living rooms, dining rooms, home office). Factors that need to be considered when using these units are the amount of background ventilation available and that they need to go on an external wall.
- You can also use single units as a total house solution, this is done by pairing units up and is very useful for where retrofit does not easily allow for a central MVHR unit to be installed.

Central room MVHR units, these are for the whole house solution where they supply and extract air for the whole dwelling using one central unit. With these units you would need to use ducting to reach each of the rooms.

Airflow have central solutions where units can utilise space that is not always optimised, above a hob in the kitchen is such an area, we have combined a MVHR unit and an extractor hood together. This unit is ideal for apartments where storage space is of a premium. Another such space is above the front door, we have units that can be placed above the front door and the filters accessed from outside, so no need to disturb the occupants for any filter changes and maintenance.

Multi room extraction with Heat Recovery

Habitable room solution can also be combined to provide a total dwelling solution

- Lots of flexibility and low noise levels
- EC Motors and built-in filter
- Can be connected to other units to provide total house solution
- Systems can be designed to meet Part F
- Used in retro fit or new build
- Used in multiple occupancy properties
- Accessories that enable for the extract to be incorporated into properties with external wall insulation
- Suitable for various wall depths

Wet room solution that meets regulations

- Ceramic heat recovery core
- Up to 88% heat recovery
- Ideal for use in wet rooms
- Meets building regulations for extraction System 1 with heat recovery
- Works in recovery mode or extraction only
- Built-in filter
- Manual boost

Airflow has developed different solutions depending on the application. The Unohab can be installed in any of the habitable rooms (bedrooms, living rooms, dining rooms, home office) and the Unoowet can be installed in wet rooms (toilets, en-suites, bathrooms, utility, kitchen).

Where multiple units of the Unohab are installed they are linked with each other to ensure the supply and extract function are synchronised.

The Unohab FROM AIRFLOW

With regard to decentralised ventilation, the focus is on two main points: On one hand, high efficiency is a prerequisite for the economical operation of the units whilst on the other hand, the individual ventilation units must form a complete system in perfect co-ordination with each other.

The Airflow Unohab unit is among the best in its class in both categories. Thanks to the preconfigured design and the quick and simple installation, the Unohab provides an economical solution for the ventilation of single rooms. The perfect combination of ceramic heat accumulator, flow straighteners and an EC fan make the Unohab exceptionally efficient and quiet.

A minimum of two alternating units form a functioning ventilation system, whereby multiple Unohab units are installed depending on the air requirement of the dwelling. The intelligent control unit enables the optimal adjustment of individual volume flows – even with an odd number of devices. Furthermore, it is possible for the first time to implement combi-ventilation in combination with extract air solutions, such as the Airflow QuietAir.

Commissioning is made simple: Thanks to the clever software, the settings can be configured directly via a PC or laptop – quick and user friendly. Thus, there is only one thing for the residents to do: Relax, sit back and take a deep breath!
ENERGY EFFICIENT VENTILATION SYSTEM UP TO 88% RECOVERY

The Uno hab opens up completely new possibilities for the economical ventilation of single rooms. The Uno hab is particularly useful if there is limited space available due to its compact dimensions, whether it is used in new construction or a renovation, for single-family houses or apartment buildings.

The heat recovery is regenerative with the help of a ceramic heat accumulator. During extract air operation, this absorbs and stores the heat from the indoor air in a ceramic accumulator, so that the recovered heat can be transferred to the incoming fresh air during the subsequent supply air phase.

Your benefits:

- Compact dimensions for external wall installation with minimum space requirements.
- Economical EC fans for maximum energy efficiency.
- Heat recovery efficiency of up to 88%.
- Convenient control, can be connected to extractor fans for combined ventilation.
- Simple commissioning by connecting the controller to the PC or laptop.
- Multiple award-winning design, perfectly suitable for the Airflow extract fans from the QuietAir range.

Features and benefits:

- Economical to operate with silent EC axial fan technology
- Elegant and unobtrusive design to blend with interior décor
- Flow rate up to 45 m³/h
- Up to 88% heat recovery efficiency
- Internal vent with efficient German design
- Easily installed with basic tools
- Very efficient core with flow straightening characteristics, culminating in high heat recovery and quiet operation
- Optional sound insulation elements to reduce the sound operation by maximum of 8 dB from the total sound pressure level
- ISO Coarse 50% (G4) air filter as standard, easily accessible which can be exchanged without tools
- Simple to adjust settings through its intuitive software
- LED display of current operating mode and fan speed
- Up to eight units may be controlled simultaneously
- Three operating modes (heat recovery, cross ventilation and supply air only)

Dual units alternating in one minute intervals

Unohab: AWARD-WINNING DESIGN

Unohab

Features and benefits:

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- Three operating modes (heat recovery, cross ventilation and supply air only)
INTELLIGENT CONTROL

Controller Uno hab

Clear display of the ventilation speeds and operating mode via the LED display. The functions can be selected using the buttons.

Ventilation Speed Button: Three speeds + OFF

Operating Mode Button:

→ Supply air mode

→ Cross-ventilation mode (non-reversing mode)

→ Reversing mode with heat recovery

Filter change display. The reminder of the filter change interval is indicated by flashing LEDs depending upon the chosen interval time (3, 6, 9 or 12 months).

UNO SOFTWARE - CONFIGURED, IN A FLASH.

The Uno hab is controlled intuitively via the LED controller, which can be used to control up to eight units at the same time. The buttons are used to select the three ventilation speeds and three operating modes (heat recovery, cross-ventilation and supply air mode). The ventilation speed and operating mode settings can be seen immediately at any time with the dimmable LEDs. They also show the current status of the system and a pending filter change.

Thanks to the software, the controller can be connected to a PC or laptop via the USB port. As an alternative to configuring the unit using the two buttons on the controller, the control unit can be accessed easily and conveniently in this way. Commissioning and the entry of necessary values (e.g. filter change intervals or minimum ventilation stage) can be completed in a short space of time. All possible setting options can be changed quickly using the user interface and user-friendly support is provided with the corresponding help texts. The set configuration can be saved directly on the PC or laptop and re-programmed into the controller if required. The installation cost in a larger property is thereby reduced to a minimum. If lots of the same ventilation systems are used, the configuration is just set once for a residential unit and can then be transferred to several controllers or apartments as required.

Mode 1– Reversing mode with heat recovery

The "reversing mode" function enables maximum heat recovery. In reversing mode, the Uno hab units change between supply air and extract air mode. The ceramic heat accumulator integrated in the Uno hab unit absorbs the heat from the passing air in extract air mode and transfers this heat into the incoming fresh air in supply air mode. Thus, up to 88% of the extract air heat is emitted into the incoming fresh air. The reversing mode (change of fan direction) activates every 60 seconds which permits the Uno hab system to be at its highest efficiency and best performance.

Mode 2– Cross ventilation mode (non-reversing mode)

The "cross ventilation" function enables ventilation without heat recovery. For this purpose, the first Uno hab unit, which is connected to the controller, is switched to supply air mode. The second Uno hab unit, which is connected to the subsequent controller terminal, is switched to extract air mode. Cross ventilation function can also be defined as air movement from one point of the property to another, resulting in cooling the inside air through a mechanical force that draws cool air in and pushes stagnant hot air outside.

Mode 3– Supply air mode

The "supply air mode" function enables the combination with an extract air fan (e.g. QuietAir). For this purpose, the Uno hab unit, which is connected to terminal 10, is switched to supply air mode. As regards to the units connected to the subsequent controller terminal, they can also change to supply air mode or standby mode via the program mode.

All in all, the Uno hab system has every option that a house needs for ventilation: heat recovery mode (warm up the indoor air), cross ventilation mode (cooling the air inside the house) and supply air mode in combination with extract fans (for a balanced ventilation in each room of the house). In addition, the Uno hab system is small in size with an intuitive controller which makes it ideal for an apartment or a small house.

Uno hab EXAMPLES

Two examples of where Uno hab has been used to provide an MVHR solution to a total dwelling.

They have been combined with QuietAir extract fans to provide a complete ventilation system solution, so that the correct extraction rates are achieved to meet building regulations.

By using a control unit the Uno hab units communicate with the QuietAir extractor fans. When the QuietAir is activated in the wetrooms, the Uno hab switches to supply air only, ensuring there is enough replacement air entering the dwelling so the moist humid air can be removed.

1 bed maisonette

This is a representation of a 1-bedroom maisonette design. The number of units required is subject to the size of the dwelling.

<table>
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<tr>
<th>Part No.</th>
<th>Description</th>
<th>Location</th>
<th>Design</th>
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<tr>
<td>90001177</td>
<td>Uno hab Cavity Wall Installation Kit</td>
<td>Kitchen / Dining-room Bedroom</td>
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<td>90001179</td>
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<td>Kitchen / Dining-room</td>
<td>1 pc. in Kitchen / Dining-room</td>
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<td>QuietAir QT100HT</td>
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<td>1 pc. in Bathroom</td>
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<tr>
<td>9041499</td>
<td>QuietAir QT120HT</td>
<td>Kitchen / Dining-room</td>
<td>1 pc. in Kitchen / Dining-room</td>
</tr>
</tbody>
</table>

1 BED MAISONETTE

The first example of installing the Uno hab system is represented in a 1 bed maisonette as a whole house ventilation solution by being combined with QuietAir extract fans.

The following products have been used:

KEY

UNO

QuietAir
**Unohab EXAMPLES**

Example shown: 2 bed 48 m² Maisonette / Bungalow / Flat. Required trickle vent area 40000 mm² System 1

Extract rates; Bathroom 15 l/s, Kitchen 30 l/s.

Unohab units are set to speed 1 in bedrooms and set to speed 2 in living room.

All doors should maintain a minimum of 7600 mm² transfer air provision gap at the base.

This is a representation of a 2-bedroom maisonette design. The number of units required is subject to the size of the dwelling.

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**2 BED MAISONETTE**

The second example of installing the Unohab system is represented by a 2 bed maisonette as a whole house ventilation solution by being combined with QuietAir extract fans.

The following products have been used:

<table>
<thead>
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<th>Part No.</th>
<th>Description</th>
<th>Location</th>
<th>Design</th>
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</thead>
<tbody>
<tr>
<td>90001177</td>
<td>Unohab Cavity Wall Installation Kit</td>
<td>Living / Dining-room Bedroom 1, Bedroom 2</td>
<td>2 pcs. in Living / Dining-room 2 pcs. in Bedroom 1 2 pcs. in Bedroom 2</td>
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<td>90001180</td>
<td>Controller DIN Rail Mounted Kit</td>
<td>Hallway</td>
<td>1 pc. in Hallway / Controller 1</td>
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<tr>
<td>90001179</td>
<td>Controller Flush Mounted Kit</td>
<td>Living / Dining-room</td>
<td>1 pc. in Living / Dining-room / Controller 2</td>
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<tr>
<td>9041261</td>
<td>QuietAir QT100HT</td>
<td>Bathroom</td>
<td>1 pc. in Bathroom</td>
</tr>
<tr>
<td>9041499</td>
<td>QuietAir QT120HT</td>
<td>Kitchen / Dining-room</td>
<td>1 pc. in Kitchen / Dining-room</td>
</tr>
</tbody>
</table>

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**MEETING THE STANDARD**

The Unohab is perfect for new build and renovation projects, with three operating modes and three ventilation speeds. The system can be paired with suitable extract fans to provide quiet, effective ventilation in any application.

The most common flow rate is 14 m³/h per unit for 5000 mm² Equivalent Area at 1 Pa as tested according to BS 13141-1, Clause 4.

Taking this and Part F 2013 requirements into consideration for background ventilation, the Unohab system will provide sufficient supply in tandem with the intermittent fans operating in compliance with Approved Document Part F.

Designed as a ‘whole house’ decentralised mechanical ventilation with heat recovery, the Unohab system enables balanced ventilation through a continuous alternating mode.

**PRIMARY MECHANICAL SYSTEMS IN APPROVED DOCUMENT F1**

The 2013 building Regulations, Approved Document Part F, means of ventilation prescribes minimum rates of ventilation within a dwelling. Compulsory for any project requiring planning consent and sign off by building control. It is of course good practice to follow regulations for any repair, maintenance and improvement work which impacts on the indoor environment.

The Unohab controller allows the resident to activate and deactivate heat recovery mode.

To ensure balanced ventilation, a minimum of two units are required for a small dwelling. Dependent upon the total air demand of the dwelling, more than two units can be installed in other rooms to provide complete ‘whole house’ ventilation.

The Unohab as a ‘whole house’ system is a hybrid of System 4. Backdraft flaps must be removed from the extract fans and free area of the fans needs to be checked.

The innovative aspect of the Unohab system is that it provides System 1 and 3 compliant background ventilation, more thermally efficient (with heat recovery).

- Can be controlled either;
- Manually boosted via multiple switches.
- Automatically boosted, typically via humidity, CO₂, motion or other sensors.
- These should be clearly marked and located in an accessible location in or near the wet rooms.
- Replacement air is dealt with by balanced supply and extract.

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For the first time, the operation of an extract air system (Airflow QuietAir range) can be intelligently combined with the Unohab units thanks to combined ventilation. The extension module Unohab EXM allows the combination of the two systems.

The Unohab operates in the habitable rooms and work in combination with the QuietAir extractor fans located in wet rooms i.e. bathroom, en-suite, utility and kitchen.

QuietAir fans are known for the highest pressure output, lowest sound levels and maximum energy efficiency. Two performance levels, jet water protection IP45 and high-quality long-life ball bearings are standard equipment features with clear added value. Quietair operates almost silently and consumes around a third less energy than conventional extract fans.

The QuietAir range is available with overrun and interval operation or barrier-free automatic functions, such as presence detectors or humidity control. This reacts to humidity increases over time with intelligent electronics and effectively prevents mould formation.

According to Building Regulation Part F, a balanced ventilation Unohab system can be used with QuietAir QT100 which is perfect for the toilet, bathroom and en-suite and QuietAir QT120 which is suitable for the bathroom and utility room and the QuietAir QT150 is recommended for the kitchen.

The QuietAir fans can be operated by a range of control options including basic switching, timer, humidity and motion sensor control.

- Very low SFP from 0.09 W/rls
- Long life ball-bearing motor 40,000 hours
- Integral flow straightener / backdraught shutter
- Powerful extraction for longer ducts
- Suitable for installation in Zone 1 of bathrooms when installed with an A2G
- IP45 rating
- Complies with Building Regulations
- 5 years warranty

The Unohab ventilation system can be intelligently combined with a range of extract fans such as QuietAir by means of the Extractor fan module which electrically connects the two systems.

The QuietAir range offers very useful features including the innovative Room Refresh/ Interval Timer which can be used for programmable ventilation every 8, 12 or 24 hours. Another useful feature of the QuietAir is the optional Delay Start operation which avoids unnecessary use — ideal for those short visits during the night.

- Axial fan
- Two speed ventilation* up to 90m³/h (QT100), 170 m³/hr (QT120), 260 m³/hr (QT150)
- Awarded Quiet Mark by Noise Abatement Society (QT100 / QT120 / QT150)
- Extremely quiet, noise levels as low as 25 dBA
- Power consumption from only 5 W
- Interval timer for routine auto extraction

Intelligent Humidity

Airflow's intelligent humidity sensor offers the additional feature of being able to recognize a rapid increase in humidity and activates the boost speed before the pre-set value is reached so that preventive ventilation commences. Should this occur, the fan switches off when the humidity level is within 10% of the pre-set value.

The benefits of this are that energy consumption is kept to a minimum and noise levels are reduced whilst ensuring optimum ventilation is achieved.

## Specifications

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<th>QT100T</th>
<th>QT100HT</th>
<th>QT100MST</th>
<th>QT120B</th>
<th>QT120T</th>
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<th>QT150T</th>
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### Performance

![Performance Graph](image)

**QuietAir QT100**

- Very low SFP from 0.09 W/rls
- Long life ball-bearing motor 40,000 hours
- Integral flow straightener / backdraught shutter
- Powerful extraction for longer ducts
- Suitable for installation in Zone 1 of bathrooms when installed with an A2G
- IP45 rating
- Complies with Building Regulations
- 5 years warranty

**QuietAir QT120**

- Very low SFP from 0.09 W/rls
- Long life ball-bearing motor 40,000 hours
- Integral flow straightener / backdraught shutter
- Powerful extraction for longer ducts
- Suitable for installation in Zone 1 of bathrooms when installed with an A2G
- IP45 rating
- Complies with Building Regulations
- 5 years warranty

**QuietAir QT150**

- Very low SFP from 0.09 W/rls
- Long life ball-bearing motor 40,000 hours
- Integral flow straightener / backdraught shutter
- Powerful extraction for longer ducts
- Suitable for installation in Zone 1 of bathrooms when installed with an A2G
- IP45 rating
- Complies with Building Regulations
- 5 years warranty

### Dimensions (mm)

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<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
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<td>QuietAir QT150</td>
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</table>
TECHNICAL DATA

The Unohab unit functions are based on three fan speeds (low rate, average speed and boost). The fan performance graph shows maximum air flow against pressure combined with low noise level to deliver optimal ventilation.

The fan speeds can be controlled from the LED controller speed button being set on ‘Away’, ‘Home’ or ‘Boost’ mode.

1. Design-inner panel with filter
   - White plastic design-inner panel with integrated air flow and ISO Coarse 50% (G4) air filter.
2. Fan unit
   - EC axial fan with 2-part connector
   - EPP shell (base body)
   - Ceramic heat accumulator
   - Flow straightener
   - Fan protection guard
   - Pull-out cord
   - Protection guard

INSTALLATION METHODS

Installation in the facade

Unohab unit
- Minimum space required for installation within the cavity wall
- For retrofit and new dwellings
- Elegant German design for both internal and external panels
- For wall thickness up to 800 mm
- Economical EC fans for maximum energy efficiency
- Heat recovery efficiency up to 88%
- Convenient control, can be connected to extract air fans for a hybrid whole system ventilation
- Easy to commission by connecting the controller to the PC or laptop
- Multiple award-winning design
- White or stainless-steel external vent

Installation in the window channel

External wall insulation vent kit
- No visible parts on the facade except for the wall grille
- Easy to incorporate in the thermal insulation layer
- For left or right side of the window installation with no modifications needed
- The wall sleeve length can be shortened as required
- Optional sound insulation elements can be integrated
- No special tools are required for installation
- Only four steps to follow for one Unohab unit to be installed in the window channel
- No components or external vents are visible on the external wall
- White or stainless-steel external vent

Unohab software
Power supplies
PSF—Power supply flush mounted
Or
PSD—Power supply DIN-rail mounted
Humidity sensor
Extractor fan module
Max. 8 units
**INSTALLATION IN THE FACADE**

Depending on the fan unit option, wall cavities should be cut in advance, e.g. by means of core drilling, and the electrical wiring must be prepared for the installation of the Unohab system. The fan unit can then be installed quick and easy in three steps:

**Step 1**
Install wall sleeve and external panel.
Once the wall installation sleeve has been fixed in the core hole, the external panel can be mounted to the finished facade.

**Step 2**
Insert unit and connect it electrically.
Once the construction or renovation measures are complete, the unit can be inserted in the wall sleeve and connected electrically. The fan unit is integrated in EPP shell, which ensures the thermal insulation of the external wall.

**Step 3**
Attach internal panel.
Once the fan unit has been installed, the internal panel with integrated filter can be attached. This can be performed effortlessly without any tools.

**INSTALLATION IN THE WINDOW CHANNEL**

The air inside a thermal insulation system is directed 90° in the window soffit with the newly developed soffit element made from highly insulating EPP. Apart from the grille in the window bar, no parts are visible on the external wall.

**Step 1**
Install wall sleeve and external wall insulation channel.
Once the wall installation sleeve has been fixed in the core hole, the external wall insulation channel can be installed on the outside.

**Step 2**
Attach external wall insulation channel.
The external wall insulation channel can be installed flexibly on the right or left, without conversion or additional costs. Furthermore, the EPP element can be shortened as required using a saw or hot wire. The external wall insulation channel is attached to the wall sleeve and mounted to the facade with the provided stainless steel screws.

**Step 3**
Integrate external wall insulation channel in the facade insulation.
The integrated condensate drain allows horizontal mounting. This saves time and simplifies the adjustment of the surrounding insulation boards. Thermal bridges are avoided.

**Step 4**
Plaster facade and mount wall grille.
Once the wall has been plastered, the protruding plaster frame can be removed and the wall grille can be screwed on. Once the construction or renovation measures are complete, the unit can be inserted and connected electrically. The internal panel can then be attached.
Uno

Cavity Wall Installation Kit

Controller

Flush Mounted Kit

Uno

External Wall Insulation Vent Kit

Controller

DIN Rail Mounted Kit

Uno

COMPLETE KITS

Part Number: 90001177
Kit for installation through the wall for one unit.
Consists of one Uno unit and one cavity wall installation kit.

Part Number: 90001178
Kit for installation in the window channel through the external wall insulation vent kit.
Consists of one Uno unit and one external wall insulation vent kit.

Part Number: 90001179
Controller kit consists of one controller, one back box, one switching power supply for flush mounting and one extractor fan module to connect to the bathroom fan.

Part Number: 90001180
Controller kit consists of one controller, one back box, one switching power supply for DIN rail mounting and one extractor fan module to connect to the bathroom fan.

Uno hab heat recovery system is specially designed to improve indoor air quality and reduce the risk of condensation and mould. When running at the average speed, single room heat recovery units are more efficient than standard extract ventilation units. In addition, they can be much easier to install as the customer will have two options to choose from: through the wall installation or by using the external insulation vent kit through the window wall. By having a choice, the customer can customise the entire heat recovery system according to their requirements. Recovering up to 88% of heat, the Uno hab unit is an innovative way of saving energy. Not only Uno hab does have a high efficiency grade but can also reduce the carbon emissions and other pollutants coming from the outdoor air.

The Uno hab unit functions in three fan speed: low, average and boost. The fan performance can vary depending upon the running speed.

The performance graph shows maximum air flow against pressure at a dry air density of 1.2041 kg/m³. The maximum pressure induced by an Uno hab unit is 40 Pa when running at the highest speed (boost). As the lowest pressure is 5 Pa when running at the lowest speed. Depending upon the controller setting, commissioning and customers' requirements, the fan can run at an average level in between the highest and lowest speed giving the best performance.

The Uno hab unit performance is directly associated with its axial EC motor. Thanks to the EC fans, the demand of energy is lowered, and the motor has got a longer lifetime. The EC fans are economically used for maximum energy efficiency.

The ceramic heat recovery core is highly efficient, recovering up to 88% heat from the extracted air and transferring it to the supply air. The German design heat exchanger allows a large quantity of heat to be transferred due to its conductive and accumulative properties. Also, the ceramic heat exchanger is insulated with a heat insulating material (EPP=Expanded Polypropylene) layer so the heat recovered and stored into the core will not outflow.

The Uno hab system can form a whole-house system within each individual Uno hab unit, which will be perfectly coordinated and synchronized with each other.
## COMPONENTS

### Cavity Wall Installation Kit
- **Part number:** 90000990
- Consists of plastic wall sleeve (160 mm diameter) and white coated external vent (dim. 272 x 230 x 50 mm (H x W x D) with bonded seal. EPP wedge included for attaching the wall sleeve with gradient for safe condensate drainage. (Core hole ≥162 with outward gradient) (Core hole ≥172 horizontal)

### Wall Sleeve
- **Part number:** 90001005
- Diameter 160 mm made of plastic
- **Part number:** 90001006
- Diameter 160 mm made of plastic (length 800 mm). EPP wedge for attaching the wall sleeve with gradient for safe condensate drainage.

### External Wall Insulation Channel
- **Part Number:** 90001008
- Consists of 500 mm insulation wall sleeve and EPP soffit channel (Fire Protection According to EN 13501-1, Class B).

### External Wall Insulation Vent Kit
- **Part number:** 90001000
- Stainless Steel Grille
- **Part number:** 90001002
- EPP soffit channel (fire protection class B1), stainless steel wall grille with integrated condensate drain and a seal.

### External Wall Grille
- **Part number:** 90001004
- White coated outdoor deep panel for use in the external wall with a thickness of 250-300 mm.

### Controller Kit Flush
- **Part Number:** 90000994
- Consists of Unohab controller and switching power supply (PSF) for installation in flush-mounted box. Enables the connection of up to 6 units. In case of more than 6 units, an additional PSF is required. Maximum of 8 units per controller is possible.

### Controller Kit DIN Rail
- **Part Number:** 90000995
- Consists of controller and switching power supply PSD for DIN rails (2 TE). Enables the connection of up to 4 units. In case of more than 4 units, an additional PSF is required. Maximum of 8 units per controller is possible.

### Controller Case For Surface Mounting
- **Part Number:** 90000993
- Consists of internal panel with filter, ceramic heat exchanger, flow straighteners, EC axial fan with protection grille, removal cord and EPP half shell base frame.

### External Wall Insulation Vent Kit
- **Stainless Steel Grille**
- **Part number:** 90001010
- White external wall grille with integrated condensate drain. Includes bonded seal.

### External Wall Grille
- **Part number:** 90001009
- Stainless steel wall grille with integrated condensate drain. Includes bonded seal.

### External Wall Insulation Channel
- **Part Number:** 90001007
- White coated outdoor panel for use in the external wall.

### External Vent
- **Part Number:** 90001000
- White coated outdoor deep panel for use in the external wall with a thickness of 250-300 mm.

### External Wall Grille
- **Part number:** 90001010
- White external wall grille with integrated condensate drain. Includes bonded seal.

### PSF (Power Supply Flush Mounted)
- **Part Number:** 90000996
- Switching power supply flush mounted used to extend the Unohab controller kit PSF from 6 to 8 units.
- Input: 230V AC, 50 / 60 Hz,
- Output: 12V DC / 1.5 A
- Output voltage to SELV protection class III.

### Controller Case For Surface Mounting
- **Part Number:** 90000999
- White controller case for surface mounting.
ACCESSORIES

**Brickwork Template Block**
- Part Number: 90001000
New building template made of EPS, first protection class B1. Removes necessary core drilling.
- Part Number: 90001001
New building template made of EPS*, fire protection class B1. Removes necessary core drilling.

**Humidity Sensor**
- Part Number: 9041570
Humidity sensor to connect to the controller’s external contact.
Parallel connection with the UNOhab Extractor fan module is not possible.
Dimensions:
76 x 76 x 34 mm (H × W × D)

**Sound Insulation Element For Wall Sleeve Installation**
- Part Number: 90001011
For use in wall sleeve (max. 4 pcs. at 500 mm).
Manufactured from thermoset melamine foam. Fire protection class: B1. Improves sound insulation against external noise by 2 dB.
Dimensions:
Ø 156 mm; Depth: 50 mm.

**UNOhab G3 (ISO Coarse 50%) Filter Pack**
- Part Number: 90001014
Replacement air filter pack which consists of two G3 filters, ISO Coarse 50% according to ISO 16890.

**Insect Grille**
- Part Number: 90001003
For installation with the external wall insulation vent kit. Stainless steel material.
Dimensions:
48 x 203 x 4 mm (W x H x D).

FIELD SUPPORT

**Field support**
Airflow do not view our customers just as a short term arrangement. We believe that by working together in partnership we can achieve better results in realising our shared objectives to deliver efficient, effective and reliable ventilation solutions so that you and your tenants are living in a healthy environment.
Our knowledgeable, trained technicians can provide support to ensure your ventilation projects run smoothly and where issues arise they can advise on the most suitable course of action to provide a successful outcome.
Airflow offers full field support across the UK, our after sales team can deal with any post sale needs and requirements. For any pre sale needs and requirements then our technical sales team can assist.

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