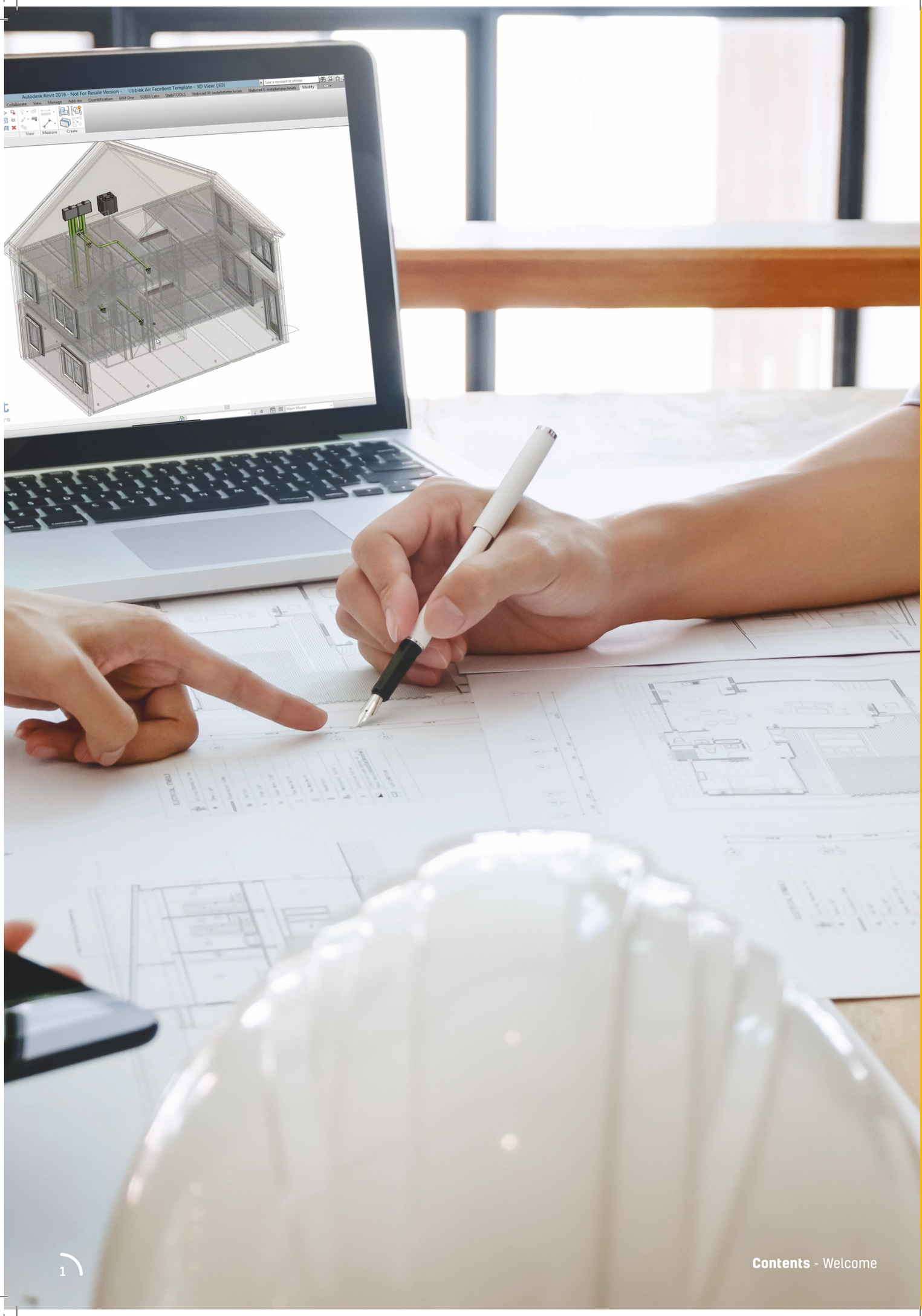
MEV & MVHR
Specification Guide

System 3 & System 4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Ubbink Air Excellent Template - 3D View: {3D}

CONTENTS

INTRODUCTION

Experts in Ventilation

From project concept through to completion, EnviroVent can guide you through the whole process

The Trusted Manufacturer

EnviroVent is one of Britain's leading manufacturers of low energy, sustainable domestic ventilation equipment. Formed over twenty five years ago, EnviroVent is proud to offer an unparalleled integrated service for our clients.

Catering for all projects, from self-build properties through to apartments and larger communal residences, EnviroVent's projects team takes the hassle and complication out of ventilation system design by providing a dedicated and bespoke design service enabling us to easily convert your requirements into a quote quickly and hassle free.

With increasing pressure to deliver the required ventilation rates in properties with greater levels of air tightness, our experienced team of system designers will ensure that the most suitable and effective ventilation solution is correctly specified to comply with all relevant regulations.

SAP Product Characteristics Database

With SAP ratings being such a major factor in any newbuild project, the Projects Team can provide expert advice and recommendations as to which energy efficient ventilation product can help to improve on your overall SAP rating. EnviroVent's MEV and MVHR systems available for project design have been independently tested by BRE and are PCDB listed.

Integrated Service

From enquiry right through to hand over, EnviroVent's knowledgeable team will take responsibility for your project. Technical advice and support will be provided at every stage. Customers can choose to utilise the entire integrated service from start to finish or from a certain point along the process - you can use EnviroVent for as much or as little as you need.

Full Service Solution

- BIM Compliant Design Drawings
- Technical Support
- Quotations
- Installations
- Specifications
- Training
- Commissioning
- Long Term Warranties

We Specialise In...

- Private housing developments
- Social housing code 3, 4, 5 & 6
- Student accommodation
- Apartment multi-storey
- Nursing home / sheltered housing
- Medical centres
- Other

"We chose EnviroVent as our ventilation partner as the company offers a progressive ventilation solution for the ever more stringent building regulation requirements. After extensive trials in actual homes, the company proved it has the ability to supply us with a wide range of ventilation solutions to meet all Part F requirements."

Jon Moss, Group Technical Manager at Redrow

SYSTEM DESIGN SERVICE

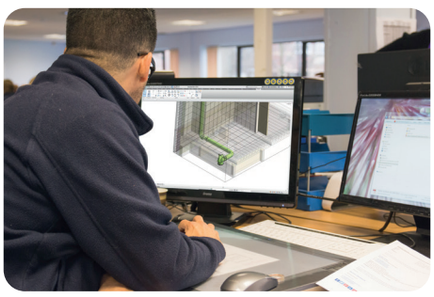
We Offer A Complete Service Solution

Enquiry

Once an enquiry has been received, either direct from the customer or following a site visit from one of EnviroVent's experienced field representatives, the projects team will allocate a project number and time slot in the design schedule in order that all schemes receive the appropriate attention and are completed within the timescales set. The project will then be allocated to the appropriate designer, dependent on the complexity, size and number of dwellings. They will then recommend the most appropriate cost effective and energy efficient mechanical ventilation system solution from the extensive EnviroVent product portfolio.

Design & Quote

Using bespoke BIM Compliant Revit design software, our Design Team will provide detailed and technical drawings to fully comply with Government Regulations. These show system locations, duct runs, ancillaries and quantities required. Plans can be sent and received electronically enabling us to convert your requirements into a quote quickly and hassle free. Supporting information consisting of technical data, a detailed proposal summary, details of assumptions and exclusions and a sample of the mechanical ventilation system design is included.



Placing the Order

On confirmation of order, site specific Health & Safety documentation, method statements and risk assessments are provided to you by EnviroVent's approved installation engineers. A complete set of installation drawings are also produced.

A site visit is arranged to confirm the designs and make any re-designs if necessary until you are completely satisfied that all design criteria has been met. This will then be followed up with the final drawings and a revised quotation.

PARTNERSHIP INSTALLERS

Expert Supply & Fit Service

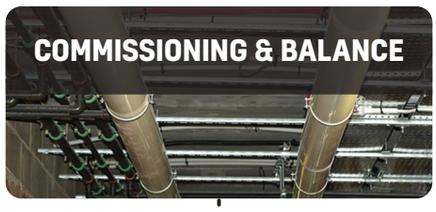
Expert Supply & Fit Service

EnviroVent have a National Network of Partnership Installers, consisting of specialist ventilation partners covering the whole of the UK. Highly trained and experienced in installing the EnviroVent products, the Partnership Installers ensure that the ventilation solution is installed to meet the unique requirements of your projects, compliant with all the required regulations - taking the time, hassle and complication away from you.

We work for a number of main M&E Contractors providing a full design, supply & install service from basic domestic installations through to light commercial systems on projects such as student accommodation, retirement villages, schools, care homes (BUPA and Extra Care) etc.

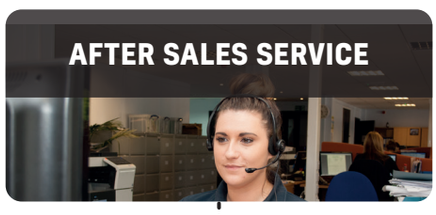
The process is simple and straightforward. EnviroVent provides a single point of contact for the whole process. The EnviroVent Partnership Installers takes full responsibility for your ventilation installation and ensure that the following requirements are met:

- Approved installer status
- NICEIC Approved
- Commissioning of systems
- Certification



Site supervisors and or installation engineers would be responsible for undertaking the commissioning and balancing of the ventilation systems. Any adjustments are then made to ensure that the system meets the exact design plan.

Following the completion of a project, a full hand over pack for each property is provided, which includes the completed air flow calculation sheets and technical manuals.



We pride ourselves on the high standards of service and after sales support we provide. We work closely to ensure that each client is delighted with the systems designed, supplied and installed. If there are any issues, you can talk to us easily and instantly.

"Trained in providing the highest level of customer service and with an intimate knowledge of our products, the EnviroVent installers ensure the ventilation solution is installed to meet the unique requirements of your project."

NICEIC TRAINING & CPDS

Ventilation Training Developed by Leading Industry Experts

The Importance of Correct Ventilation

As part of the 2010 revision to the Building Regulations Approved Document F, Domestic Ventilation became 'notifiable work'. This means that just like installing heating and plumbing systems, ventilation provision must be installed by a competent and qualified person. Essentially, a new vocation has been created - the Domestic Ventilation Installer. To ensure that installers are correctly installing, inspecting, testing and commissioning ventilation products, EnviroVent offers a comprehensive course recognised by the BESA and NICEIC for fixed domestic systems for both existing and new build properties.

NICEIC APPROVED ASSESSMENT CENTRE

Learning outcomes

The domestic ventilation training and assessment has been designed to provide the necessary skills in design, installation, testing, commissioning, handover, servicing and fault-finding of ventilation systems in accordance with the latest National Occupational Standards (NOS) and Minimum Technical Competency documents (MTC).

What's covered?

Taking place over two days, the course covers both theoretical and practical training. It focuses on the 5 main types of Domestic Ventilation Systems.

Location

The training course is carried out at the EnviroVent Headquarters based in Harrogate, North Yorkshire. Course dates are available throughout the year.

To reserve your place, please contact EnviroVent on 01423 810 810 (ext. 316) or email NICEIC@envirovent.com

COURSE AIMS

- Install the most common types of domestic ventilation
- Commission and provide information on the systems
- Inspect and test systems

DURATION | 2 Days

"The course combines both theoretical and practical know-how in understanding the installation, inspection, balancing and commissioning of ventilation systems for today's ventilation installer."

"EnviroVent hosts a series of CPD seminars for Newbuild Construction, which aim to broaden your knowledge of ventilation solutions."

Continual Professional Development (CPD)

Our range of CPD seminars delivers informative and relevant information on designing, installing and commissioning the most effective and energy-efficient ventilation solutions to comply with Building Regulations and the Code for Sustainable Homes. As a fully accredited CPD organisation, all attendees will receive a CPD certificate. The seminars are completely free and can be delivered to your premises at a time convenient to you, by your local ventilation specialist. Hundreds of professionals, including surveyors, building consultants and architects, have benefited from this free service to broaden their knowledge of this ever more important subject.

Our current CPD's include:

- **Ventilation Strategies & Best Practice Compliance.**
- **Ventilation Strategies to Meet Parts 3 & 6 and Best Practice Compliance.**
- **Condensation and mould in the UK housing stock**

BUILDING REGULATIONS

Approved Documents F & L

When it comes to ventilation there are two documents that are key to Building Regulation Compliance

FOCUSES ON 1 DESIGN

Approved Document F (ADF): Ventilation 2010

This outlines the ventilation requirements for both new build and existing dwellings.

FOCUSES ON 2 INSTALLATION

FOCUSES ON 3 OPERATION

Domestic Ventilation Compliance Guide 2010:

This provides detailed guidance on installing, inspecting, testing and commissioning of ventilation systems in new and existing dwellings. It also provides recommendations on what should be provided to the building owner to operate and maintain the ventilation system.

Along with ADF, the documents for Approved Document L (ADL): Conservation of Fuel and Power also play an important part.

Approved Document L 2013: Conservation of Fuel and Power

This deals with energy efficiency requirements in new dwellings.

Domestic Building Services Compliance Guide:

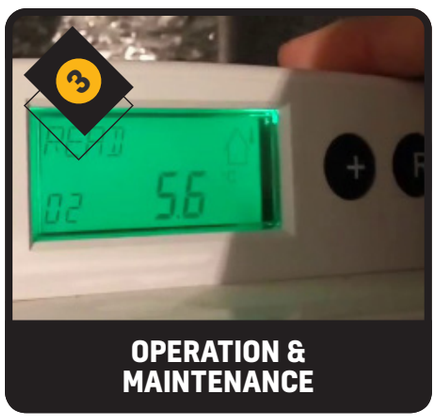
Provides detailed guidance on the installation of mechanical ventilation for both new and replacement systems.

Approved Document F (ADF): Ventilation 2010

ADF 2010 and ADL 2013 of the Building Regulations have had a significant impact on the ventilation industry in terms of design, installation and maintenance. Please refer to Technical Handbook for Scottish Building Regulations.

Amendments to ADF

Since October 2010, the amendments to Approved Documents F (ADF) - Means of Ventilation) and L (ADL) - Conservation of Fuel & Power have resulted in the following three-fold effect on ventilation, which is an important step in classifying ventilation as a controlled service:



DESIGN
Infiltration Rates

To reflect the fact that properties are being built tighter, there are different air permeability designs for infiltration rates within ADF 2010: one for a leakier home at >5m³/(h.m²) @50Pa and one for a more airtight home at <5m³/(h.m²) @50Pa.

The default in SAP 2009 is assumed to be <5m³/(h.m²) @50Pa with zero air permeability. This means that the house does not allow any air to enter or leave the dwelling naturally through leakage paths within the structure of the building. It is therefore completely reliant on purpose-provided ventilation via controllable air exchange through natural or mechanical means.

LEAKY HOUSE

AIRTIGHT HOUSE

Ventilation Methodologies for New Dwellings

SYSTEM 01

INTERMITTENT EXTRACT FANS WITH BACKGROUND VENTILATORS

SYSTEM 03

MECHANICAL EXTRACT VENTILATION (MEV)

SYSTEM 04

MECHANICAL VENTILATION WITH HEAT RECOVERY (MVHR)

BBA

SYSTEMS WITH BBA ACCREDITATION (PIV)

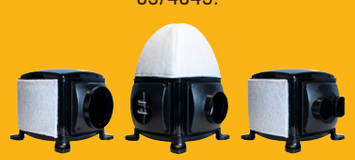
NICEIC APPROVED ASSESSMENT CENTRE

Get NICEIC Certified and become a trained ventilation systems specialist. **Turn to page 8 to find out more.**

ALTERNATE APPROACH

'Other ventilation systems and devices, perhaps following a different strategy (e.g. Positive Input Ventilation) may provide acceptable solutions, provided it can be demonstrated to the Building Control Body that they meet Requirement F1 (e.g. by a BBA Certificate)'.

The EnviroVent Loft and Wall Mounted Positive Input Ventilation Units are accredited with BBA certification: 03/4043.



BUILDING REGULATIONS

Approved Documents F & L - How to Comply?

Ventilation Airflow Rates

TABLE 5.1A - EXTRACT VENTILATION RATES

Room	Minimum Intermittent Extract Rate	Continuous Extract	
		Minimum High Rate	Minimum Low Rate
Kitchen	30l/s (adjacent to hob) or 60l/s (elsewhere)	13l/s	Total extract rate must be at least the whole building ventilation rate in table 5.1b
Utility Room	30l/s	8l/s	
Bathroom	15l/s	8l/s	
Sanitary Accommodation	6l/s		

TABLE 5.1B - WHOLE BUILDING VENTILATION RATES

No. of bedrooms in dwelling	1	2	3	4	5
Whole building ventilation rate	13l/s	17l/s	21l/s	25l/s	29l/s

Notes

In addition, the minimum ventilation rate should not be less than 0.3l/s per m² internal floor area (this includes each floor, e.g. for a two-storey building, add the ground and first floor areas).

This is based on two occupants in the main bedroom and a single occupant in all other bedrooms. This should be used as the default value. If a greater level of occupancy is expected, then add 4l/s per occupant.

Background Ventilation: Table 5.2a

Total floor area (m²)	NUMBER OF BEDROOMS (A)				
	1	2	3	4	5
<50	35000	40000	50000	60000	65000
51-60	35000	40000	50000	60000	65000
61-70	45000	45000	50000	60000	65000
71-80	50000	50000	50000	60000	65000
81-90	55000	60000	60000	60000	65000
91-100	65000	65000	65000	60000	65000
<100	Add **7000mm²** for every additional **10m²** floor area				

Total floor area (m²)	NUMBER OF BEDROOMS (B)				
	1	2	3	4	5
<50	25000	35000	45000	45000	55000
51-60	25000	30000	40000	45000	55000
61-70	30000	30000	30000	45000	55000
71-80	35000	35000	35000	45000	55000
81-90	40000	40000	40000	45000	55000
91-100	45000	45000	45000	45000	55000
<100	Add **5000mm²** for every additional **10m²** floor area				

(A) Total equivalent ventilator area(mm²) for a dwelling with any design air permeability.

(B) Alternative guidance on total equivalent area (mm²) for a dwelling with a designed air permeability leakier than (>) 5m³/(h.m²) @50Pa.

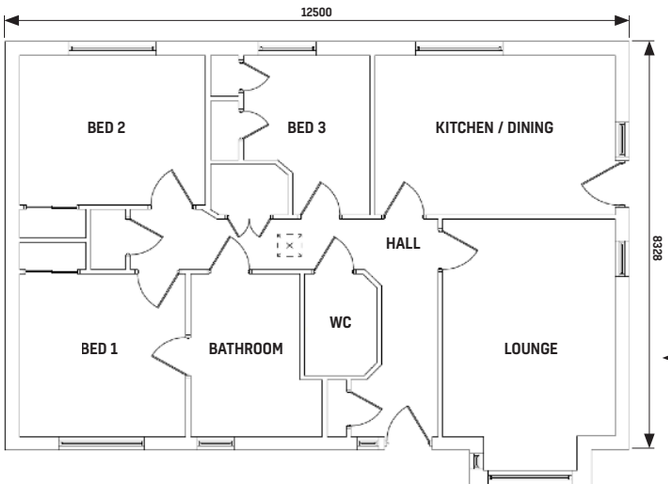
Notes

1. The equivalent area of a background ventilator should be determined at 1 Pa pressure difference.
2. This is based on two occupants in the main bedroom and a single occupant in all other bedrooms. For a greater level of occupancy, assume a greater number of bedrooms (i.e. assume an extra bedroom per additional person). For more than five bedrooms, add an additional 10000mm² per bedroom.

Trickle Ventilation Requirements

System 1 Intermittent Fans	2500mm² per wet room in addition to 10,000mm² or above split between habitable rooms (refer to tables above)
System 3 Continuous Running Mechanical Extract Ventilation	None required where design air permeability >5m³/(h.m²) @50Pa Where design air permeability <5m³/(h.m²) @50Pa, 2500mm² per habitable room
System 4 Mechanical Ventilation with Heat Recovery	None
Alternative Approach Systems with BBA Accreditation (PIV)	None required where design air permeability > 3 m³/(h.m²) at 50 Pa Where design air permeability < 3m³/(h.m²) @ 50 Pa (refer to BBA certificate)

SYSTEM 3 | WORKING EXAMPLE



No. Beds: 3 bed property

Floor Area: Floor area 104m²

Rooms: Kitchen + 2 Wet rooms (Bathroom & WC)

Step 1: Whole dwelling ventilation rate (Trickle).

We first look at table **5.1b (Figure1)** from Approved Document F 2010 to calculate the whole dwelling ventilation rate (trickle rate).

- A Look at the airflow required, this is dependent upon the number of bedrooms.
- B Multiply the floor area (m²) of the property by 0.3 (see notes in Table 5.1b).
- C We use the higher from A or B as the trickle rate.

Calculate the trickle rate:

Whole Dwelling ventilation rate (Trickle) =

- **21l/s** from Table 5.1b ADF
- **31.2l/s** from Table 5.1b ADF Note 1 **(0.3 x floor area)**

Therefore, the trickle rate to be used will be 31.2l/s

Step 2: Calculate the boost rate:

- Whole dwelling extract ventilation rate (Boost) = **27l/s (13l/s kitchen, 8l/s bathroom, 6l/s WC)** from Table 5.1a of ADF.
- In this scenario, the Boost rate needs to be increased to at least the trickle.
- Therefore, boost will increase from **27l/s** to a minimum of **31.2l/s.**

Note: When calculating airflows and the whole dwelling ventilation rate (Trickle) works out to be greater than the whole dwelling extract ventilation rate (Boost). Approved Document F (ADF) requires that the Boost rate be increased to at least the trickle rate (see example 1 below).

However, when designing systems and this scenario occurs, we would suggest EnviroVent set the boost to be 20-25% higher than the trickle. This is something most manufacturers in the ventilation industry do as standard.

This is not mandated in ADF but is good practice. Otherwise, the user will see no benefit from having a boost mode, it can lead to the perception that the unit is not working and can also mean that the RH tracking will not work as this often tracks from trickle to boost.

For ease of understanding we will use Trickle and Boost, however ADF uses the words 'Whole dwelling ventilation rate' for trickle and 'Whole dwelling extract ventilation rate' for boost.

Step 3: Background Ventilation

- If the air permeability is >5m³/(h.m²) at 50Pa there are no background ventilation requirements in wet rooms or habitable rooms.
- If the air permeability is <5m³/(h.m²) at 50Pa then 2500mm² background ventilation is required in each habitable room.

Domestic Building Services Guide

Minimum standards for mechanical ventilation systems

According to the Domestic Building Services Guide in conjunction with ADL, there are minimum recommended standards for both new and replacement systems, this includes existing domestic dwellings:

1.0 Fan Power

A Mechanical ventilation systems should be designed to minimise electric fan power. Specific fan power (SFP) should not be worse than:

- I 0.5 W/(l/s) for intermittent extract ventilation systems;
- II 0.7 W/(l/s) for continuous extract ventilation systems;
- III 0.5 W/(l/s) for continuous supply ventilation systems;
- IV 1.5 W/(l/s) for continuous supply and extract with heat recovery ventilation systems

2.0 Efficiency

A The heat recovery efficiency of balanced mechanical ventilation systems incorporating heat recovery should not be worse than 70%.

3.0 Controls

A Controls may be manual (i.e. operated by the occupant) or automatic.

2 INSTALLATION
Inspection & Commisioning

A major change to the Building Regulations 2010 was the requirement for installation and commissioning by a competent person. This has been outlined in the Domestic Ventilation Compliance Guide.

Best practice installation guidance is provided within the document. EnviroVent has a team of competent and fully qualified installation engineers. We also offer an NICEIC approved training programme for installers and electrical personnel who would like to become qualified.

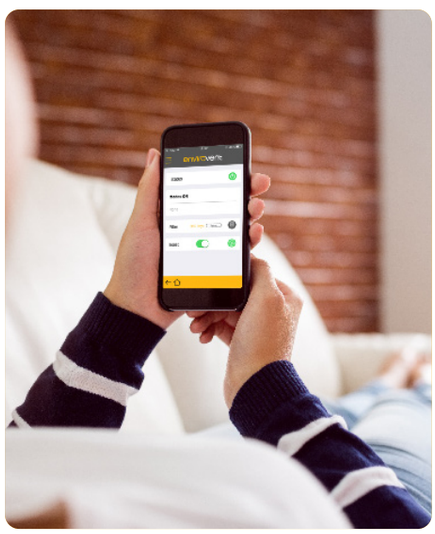
3 OPERATION
& Maintenance

Following the completion of an installation into both an existing and a new home, notice of confirmation and commissioning must be submitted to building control within 5 days of completion. Airflow testing should also be carried out in newbuild properties.

In order to guarantee optimum effectiveness of the system, emphasis has now been placed on the importance of ensuring that the end user correctly uses the ventilation system and is aware of the servicing and maintenance requirements.

Additional guidance on a number of practices is also recommended to achieve best practice performance:

- If the boost is controlled manually, the controllers or switches must be within easy reach of the rooms where it will need to be used, rather than a centralised switch.
- Only sensors that are recommended by the manufacturer should be used.
- The user should not be able to switch off a continuous running system unless using the main isolator for maintenance purposes.



SYSTEM 03

Mechanical Extract Ventilation (MEV)

About

The MEV systems can be either a whole house centralised unit, or decentralised fan. The centralised MEV systems are typically located in a loft space or hallway cupboard. Multiple ducts run from the unit to the kitchen, bathroom, en-suites and other wet rooms of a property to simultaneously draw moisture laden air from these wet rooms to control humidity levels.

Decentralised MEV (dMEV) are individual room fans which operate continuously to draw moisture from either the bathroom, kitchen, utility room or other wet room.

All EnviroVent's MEV Products Feature...

- Continuously extracts air from 'wet' rooms
- Consists of a central ventilation unit located in a cupboard or loft space ducted throughout the dwelling to the 'wet' rooms. Can also be continuous running fans located in the 'wet' rooms
- Typical dual speed: continuous trickle and high speed 'boost' flow
- Ultra Low Watt motor technology
- Energy Savings Trust Best Practice Performance Compliant

Notes...

- The ECO dMEV and ECO dMEV LC are decentralised fans.
- The MEV Spider and OZEO are centralised units.

ECO dMEV

ECO dMEV LC

MEV SPIDER

OZEO

ADVANTAGES

- **Easy to install (dMEV only)**
- **Provides continuous 'low level' background ventilation**
- **Operation is easy to understand**
- **Fewer openings in external leaf**

DISADVANTAGES

- **Centralised MEV requires ducting from 'wet' rooms**
- **Requires commissioning**

ECO DMEV

Decentralised Mechanical Extract Ventilation Unit

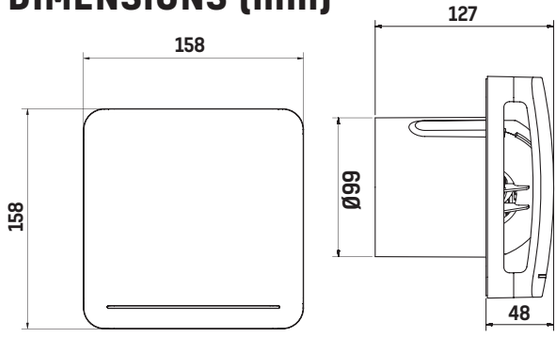
ABOUT

The ECO dMEV has been designed and developed to offer the market a constant volume, continuously running decentralised extract fan to achieve the lowest power consumption, the lowest noise and the lowest life-cycle costs.

KEY FEATURES

- SAP PCDB Listed achieving a low Specific Fan Power of 0.28 W/l/s
- Constant volume, continuously running extract ventilation with variable trickle speed settings
- Timer, humidity sensor and pullcord models
- Ø100mm spigot
- Low voltage version available
- Fitted with low watt DC motors for minimum energy consumption down to 1.5 Watts
- Includes 4 interchangeable front panel trims
- 2 year warranty

DIMENSIONS (mm)



Link to Specification visit: **envirovent.com/specs**

...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim**

...Or Scan Me

APPLICATION

Wall | Ceiling

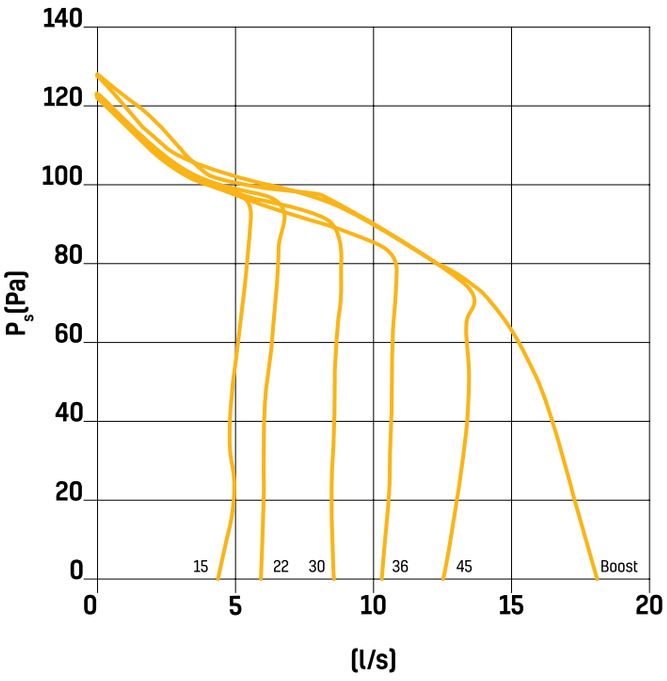
ORDER CODES

CODE(S)	DESCRIPTION
ECO DMEV S	eco dMEV Standard model
ECO DMEV T	eco dMEV Adjustable timer
ECO DMEV HT	eco dMEV Adjustable timer, adjustable humidity sensor
ECO DMEV HTP	eco dMEV Adjustable timer, adjustable humidity sensor, pullcord
ECO DMEV S17V	eco dMEV SELV standard model
ECO DMEV T17V	eco dMEV SELV adjustable timer
ECO DMEV HT17V	eco dMEV SELV adjustable timer, adjustable humidity sensor
ECO DMEV HTP17V	eco dMEV SELV adjustable timer, adjustable humidity sensor, pullcord

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
1RD EFWAK**	Standard wall kit
1RD GRILL 100**	Fixed louvre grille
WH TC BR CO	**Available in White, Terracotta, Brown, and Cotswold Stone.** When ordering, please state which colour grille you require and replace the ** at the end of the code with one of the four colour codes

PERFORMANCE



TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m³/h)	18 (65)
FANS	DC
SPECIFIC FAN POWER (w/l/s)	0.28
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	6
PROTECTION CLASS	IPX4 (SELV Version - IP57)
SPIGOT (mm)	100
DIMENSIONS (mm)	158 x 158 x 48 (When Fitted)
WEIGHT (kg)	0.57

CONSULTANT SPECIFICATION

ECO dMEV

The dMEV shall be suitable for wall, ceiling or panel mounting in kitchens, WCs, bathrooms and shower rooms to meet Approved Document F: Ventilation in England and Wales, Technical Handbook for Scotland, Northern Ireland Technical Booklet, Part K. The one fan shall ventilate any domestic kitchen, utility room, bathroom or shower room in accordance with System 3 and PCDB listed for inclusion within SAP for decentralised Mechanical Ventilation Equipment (dMEV).

The unit shall be the ECO dMEV as manufactured by EnviroVent.

The unit should be powered by a low energy, DC motor for minimum energy consumption down to 0.8 Watts, supplied in a 230V format or SELV version with Trickle Speed ranging between 4-13 l/s with a maximum high speed (Boost) of 17 l/s.

The unit shall be available with timer, humidity sensor or pull cord options.

The unit shall be capable of operating continuously on constant volume to work in direct correlation with any resistance in the ductwork, ensuring that the commissioned airflow is always delivered and maintained. The unit will operate on trickle at the pre-set rate and with the facility to boost to maximum air volume via a switch, pullcord or humidity sensor.

The unit shall enable ease of commissioning through the intelligent constant volume microprocessor technology.

The unit shall come supplied with three interchangeable front panel trims to match the internal décor of any bathroom.

The unit shall be constructed out of high-quality injection moulded plastic providing a permanent IPX4 seal and IP57 for the SELV version. The unit shall be suitable for installing in bathroom Zone 1. The electronic components shall be protected in an IPX4 enclosure offering a highly robust fan for domestic applications.

The unit shall incorporate an innovative centrifugal motor with a dual inlet to allow air to enter from four sides. The motor shall be mounted on anti-vibration mounts and unit noise levels shall not exceed 32 dB(A) @3m on maximum speed and shall achieve <20 dB(A) @3m on low speed.

The unit shall incorporate a filter gauze for ease of maintenance.

The unit shall be supplied with a 2 year warranty.

PRODUCT CHARACTERISTICS DATABASE (SAP 2012)

Systems with rigid ductwork (installation only)						
Unit configuration	**LOCATION**	**FAN SPEED SETTING (m³/h)**	**FLOW RATE (l/s)**	**FLOW RATE WIND CONDITION (l/s)**	**SPECIFIC FAN POWER (W/l/s)**	**% REDUCTION OF TOTAL FLOW RATE**
In room (Ducted)	Kitchen	45	14.3	14.2	0.38	1
In room (Ducted)	Wet Room	20	8.5	8.2	0.29	4
Through wall	Kitchen	45	14.9	14.3	0.36	4
Through wall	Wet Room	20	8.7	8.2	0.28	6

Systems with flexible or mixed ductwork (installation only)						
Unit configuration	**LOCATION**	**FAN SPEED SETTING (m³/h)**	**FLOW RATE (l/s)**	**FLOW RATE WIND CONDITION (l/s)**	**SPECIFIC FAN POWER (W/l/s)**	**% REDUCTION OF TOTAL FLOW RATE**
In room (Ducted)	Kitchen	45	14.6	14.4	0.38	1
In room (Ducted)	Wet Room	20	8.5	8.2	0.29	4
Through wall	Kitchen	45	14.9	14.3	0.36	4
Through wall	Wet Room	20	8.7	8.2	0.28	6

ECO DMEV LC

Intermittent Or Continuous Running dMEV

ABOUT

The ECO dMEV LC has been designed and developed to offer the market a centrifugal extract fan with optimum versatility to operate continuously or intermittently.

Ideal for all domestic applications, WCs, bathrooms, utility rooms and kitchens. It is a 100mm continuously running or intermittent extract fan, which can be fitted in wall, ceiling or panel installations.

APPLICATION

Wall | Ceiling

KEY FEATURES

- SAP PCDB Listed achieving a low Specific Fan Power of 0.25 W/l/s
- Continuously running or intermittent extract ventilation with up to 5 adjustable trickle speed settings
- Timer, humidity sensor, PIR and pullcord models
- Low voltage version available
- Ø100mm spigot
- Fitted with low watt DC motors for minimum energy consumption down to 1.5 Watts
- Includes 4 interchangeable front panel trims
- 2 year warranty

ORDER CODES

CODE(S)	DESCRIPTION
ECO DMEV S LC	eco dMEV LC Standard model
ECO DMEV T LC	eco dMEV LC Adjustable timer
ECO DMEV HT LC	eco dMEV LC Adjustable timer, adjustable humidity sensor
ECO DMEV HTP LC	eco dMEV LC Adjustable timer, adjustable humidity sensor, pullcord
ECO DMEV DT LC	eco dMEV LC PIR sensor, adjustable timer,
ECO DMEV S LC 17V	eco dMEV LC SELV standard model
ECO DMEV T LC 17V	eco dMEV LC SELV adjustable timer
ECO DMEV HT LC 17V	eco dMEV LC SELV adjustable timer, adjustable humidity sensor
ECO DMEV HTP LC 17V	eco dMEV LC SELV adjustable timer, adjustable humidity sensor, pullcord
ECO DMEV DT LC 17V	eco dMEV LC SELV PIR sensor, adjustable timer

DIMENSIONS (mm)

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
1RD EFWAK**	Standard wall kit
1RD GRILL 100**	Fixed louvre grille
WH TC BR CO	**Available in White, Terracotta, Brown, and Cotswold Stone.** When ordering, please state which colour grille you require and replace the ** at the end of the code with one of the four colour codes

Link to Specification visit: **envirovent.com/specs**

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Link to BIM /Revit Files visit: **envirovent.com/bim**

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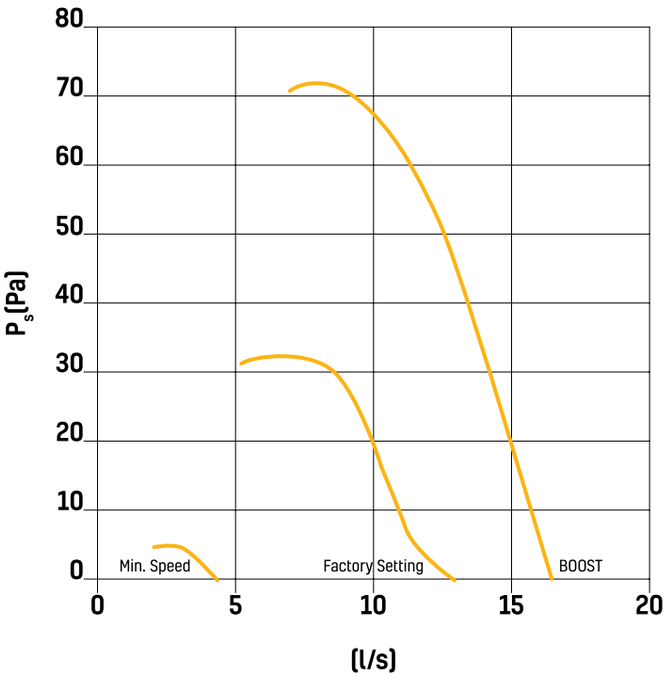
PERFORMANCE



TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m^3/h)	17 (60)
FANS	DC
SPECIFIC FAN POWER (w/l/s)	0.24
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	5.6
PROTECTION CLASS	IPX4 (SELV Version - IP57)
SPIGOT (mm)	100
DIMENSIONS (mm)	158 x 158 x 48 (When Fitted)
WEIGHT (kg)	0.57

CONSULTANT SPECIFICATION

ECO dMEV LC

The dMEV shall be suitable for wall, ceiling or panel mounting in kitchens, WCs, bathrooms and shower rooms to meet Approved Document F: Ventilation in England and Wales, Technical Handbook for Scotland, Northern Ireland Technical Booklet, Part K. The one fan shall ventilate any domestic kitchen(continuous only), utility room(continuous only), bathroom, WC or shower room in accordance with System 3 and PCDB listed for inclusion within SAP for decentralised Mechanical Ventilation Equipment (dMEV).

The unit shall also be capable of being set to ventilate any domestic, bathroom, shower room or WC in accordance with System 1 of Approved Document F: Ventilation in England and Wales, Technical Handbook for Scotland, Northern Ireland Technical Booklet, Part K.

The unit shall be the ECO dMEV LC as manufactured by EnviroVent.

The unit shall be capable of operating in either continuous running mode or intermittent mode.

The unit should be powered by a low energy, DC motor for minimum energy consumption down to 0.8 Watts, supplied in a 230V format or SELV version with adjustable low speed (Trickle) settings ranging between 4-13 l/s with a maximum high speed (Boost) of 17 l/s.

The unit shall be available with timer, humidity sensor, pull cord or PIR options.

In constant running mode the unit shall run continuously on trickle at the pre-set rate with the facility to boost to maximum air volume via a switch, pullcord, humidity sensor or PIR detector. In intermittent mode, the unit will turn on and deliver the maximum airflow when required via a switch, pullcord, humidity sensor or PIR detector.

The unit shall come supplied with three interchangeable front panel trims to match the internal décor of any bathroom.

The unit shall be constructed out of high-quality injection moulded plastic providing a permanent IPX4 seal and IP57 for the SELV version. The unit shall be suitable for installing in bathroom Zone 1. The electronic components shall be protected in an IPX4 enclosure offering a highly robust fan for domestic applications.

The unit shall incorporate an innovative centrifugal motor with a dual inlet to allow air to enter from both sides. The motor shall be mounted on anti-vibration mounts and unit noise levels shall not exceed 32 dB(A) @3m on maximum speed and shall achieve <20 dB(A) @3m on low speed.

The unit shall incorporate a filter gauze for ease of maintenance.

The unit shall be supplied with a 2 year warranty.

PRODUCT CHARACTERISTICS DATABASE (SAP 2012)

Unit configuration	LOCATION	FAN SPEED SETTING (m^3/h)	FLOW RATE (l/s)	FLOW RATE WIND CONDITION (l/s)	SPECIFIC FAN POWER (W/l/s)	% REDUCTION OF TOTAL FLOW RATE
In room (Ducted)	Kitchen	45	14.3	14.2	0.38	1
In room (Ducted)	Wet Room	20	8.5	8.2	0.26	4
Through wall	Kitchen	45	14.9	14.3	0.30	4
Through wall	Wet Room	20	8.7	8.2	0.25	6

MEV SPIDER

Low Energy Whole House Mechanical Extract Ventilation Unit

ABOUT

The MEV Spider from EnviroVent is a low energy, continuous mechanical extract ventilation system designed with multiple extract points to simultaneously draw moisture-laden air out of the wet rooms, whilst minimising the migration of humidity to other rooms.

APPLICATION

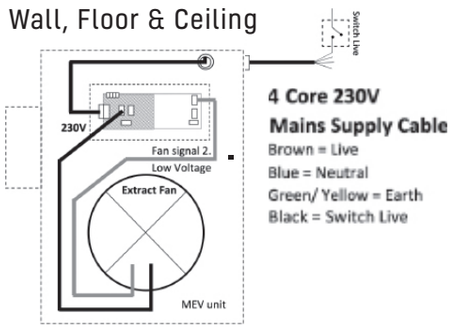
Wall | Ceiling | Floor

KEY FEATURES

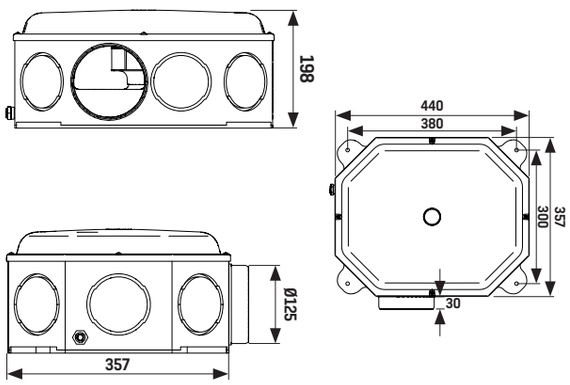
- Low Specific Fan Power (SFP) of 0.32 W/l/s
- Low profile of just 198mm high
- Versatile - Can be installed on a wall, ceiling or floor
- Intellitrac® humidity tracking
- 9 spigot points (3x Ø100mm spigots supplied)
- Low watt DC motors
- SAP PCDB Listed
- 5 year warranty

WIRING DIAGRAM

Wall, Floor & Ceiling



DIMENSIONS (mm)



SOUND DATA

		SOUND POWER LEVELS (Lw dB(A))										SPL/ Casing Breakout
		Frequency (Hz)										
Unit Setting	Mode	RPM	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOTAL dB(A)	dB(A) @ 3m
100%	Extract	2976	22.5	26.7	34.0	29.7	28.2	30.9	30.4	21.0	38.6	18.06
	Breakout	2976	26.3	41.2	59.8	61.7	62.4	64.5	57.1	43.1	68.8	48.26
80%	Extract	2379	14.8	20.0	27.3	20.2	22.5	29.2	31.6	20.1	35.2	14.66
	Breakout	2385	21.5	35.8	53.9	54.8	56.7	58.8	50.9	34.7	62.8	42.26
60%	Extract	1775	11.0	17.2	26.6	19.3	20.9	23.7	22.6	18.1	30.8	10.26
	Breakout	1740	20.1	29.2	43.5	48.4	50.8	51.1	37.7	23.2	55.4	34.86
40%	Extract	1213	12.9	16.8	16.0	16.7	20.1	20.6	19.4	17.9	27.2	6.66
	Breakout	1218	15.3	32.5	34.7	43.2	42.4	39.2	25.3	19.3	47.1	26.56

All sound measurements are hemispherical. For spherical figures, subtract 3dB from the value.

Link to Specification visit: **envirovent.com/specs**

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Link to BIM /Revit Files visit: **envirovent.com/bim**

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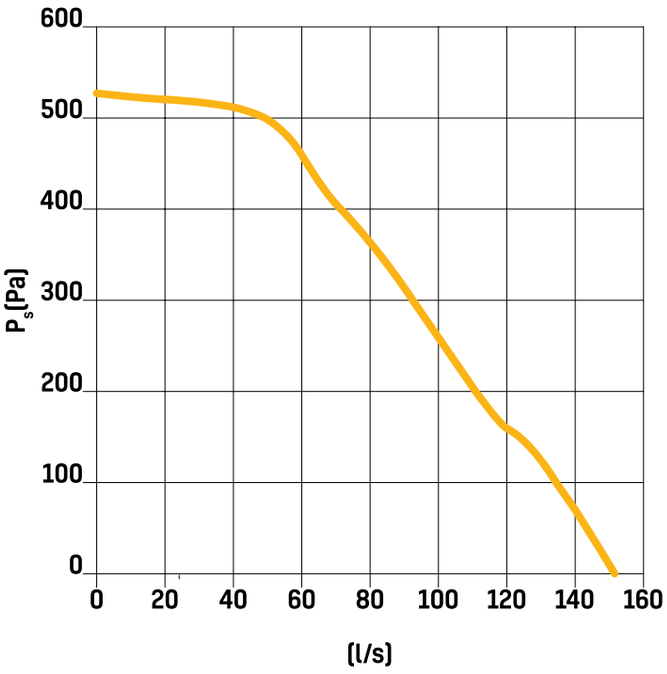
PERFORMANCE



TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m^3/h)	151 (545)
FANS	DC
SPECIFIC FAN POWER (w/l/s)	0.32
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	70
PROTECTION CLASS	IP30
SPIGOT (mm)	100
DIMENSIONS (mm)	440 x 357 x 198
WEIGHT (kg)	4.3
ErP RATING	B

PRODUCT CHARACTERISTICS DATABASE (SAP 2012)

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)
+ 1 additional wet room	0.36
+ 2 additional wet rooms	0.32
+ 3 additional wet rooms	0.33
+ 4 additional wet rooms	0.32
+ 5 additional wet rooms	0.35
+ 6 additional wet rooms	0.36

ORDER CODES

CODE(S)	DESCRIPTION
MEVS-W	MEV Spider Remote control with humidity tracking
MEVS-H	Hard wired unit with humidity tracker

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
SWH-W	Additional remote control
SPIGOT	Additional bayonet spigot
1RD 100 X 3M	Ø100mm rigid ducting (3m length)
1RD INSFLEX 125	Flexible insulated hose ducting
1DIF EXTRACT 100	White powder coated metal ceiling valve

CONSULTANT SPECIFICATION

MEV SPIDER

The unit shall be suitable for houses, apartments and communal residences designed specifically for incorporation within a system for a kitchen plus up to 6 additional wet rooms. The unit shall ventilate the property in full compliance of Building Regulations Approved Document F: Ventilation for System 3, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010 and shall be SAP PCDB listed capable of a low Specific Fan Power as low as 0.32 W/l/s.

The unit shall be the MEV Spider as manufactured by EnviroVent Ltd.

The unit shall be capable of being installed horizontally or vertically on floors, ceilings or walls. The unit shall be designed with up to 9 quick fit spigot connection. The unit shall be low-profile in design with a height no greater than 198mm. A rapid installation kit and mounting template shall be supplied as standard. The unit's casing shall be constructed out of durable white plastic.

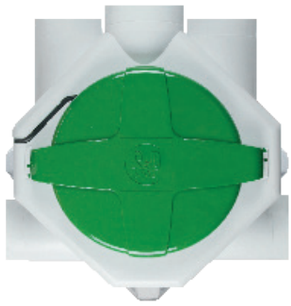
The unit shall incorporate a Low Watt DC motor with sealed for life ball bearings and a backward curved centrifugal fan, fully commissionable to high and low rates. The unit is designed to operate continuously at a low level to ensure that the home is correctly ventilated. The unit shall incorporate the unique Intellitrac® humidity tracking controls which constantly monitor the relative humidity level, increasing the motor speed in direct correlation to ensure quiet and efficient running. The unit shall also be supplied with a remote control boost switch as standard or with optional hard wired manual override switching.

There shall be no specific requirements for maintenance within a five year period.

The unit shall be covered by a five year guarantee.

OZEO

Low Energy Whole House Mechanical Extract Ventilation Unit



ABOUT

The OZEO is a low energy, continuously running whole house mechanical extract ventilation unit (MEV) fitted with multiple extract points to simultaneously draw moisture laden air out of the wet rooms of a property, whilst minimising the migration of humidity to other rooms.

APPLICATION

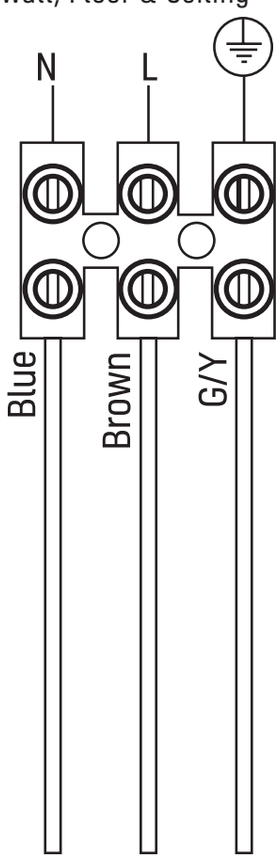
Wall | Ceiling | Floor

KEY FEATURES

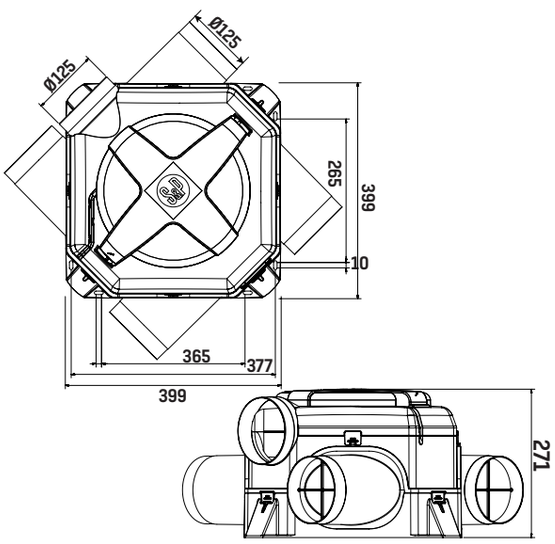
- Low Specific Fan Power (SFP) of 0.24 W/l/s
- 4x Ø125mm inlets with double injection duct connections which pivot 90°
- Three speed motor with two adjustments (wireless version only)
- 1x Ø125mm exhaust outlet
- Supplied with a wireless control and timer function(wireless version only)
- Low watt DC motors
- SAP PCDB Listed
- 2 year warranty

WIRING DIAGRAM (WIRELESS)

Wall, Floor & Ceiling



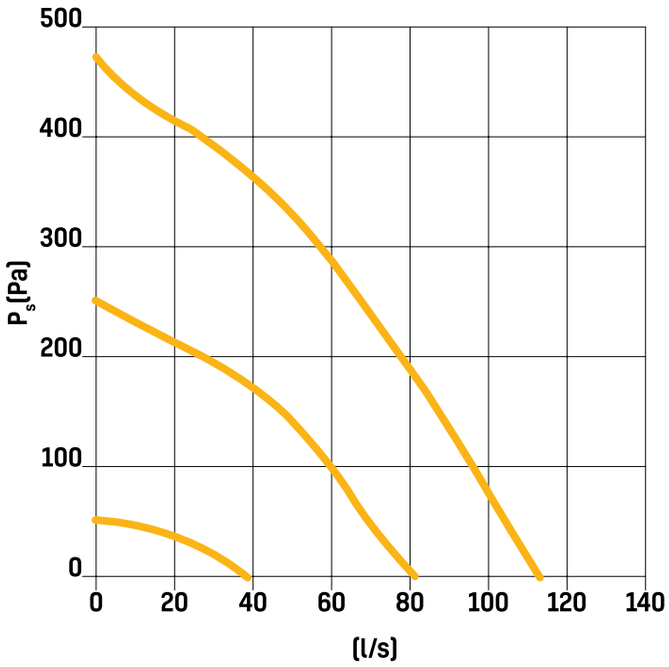
DIMENSIONS (mm)



Link to Specification visit: **envirovent.com/specs** ...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim** ...Or Scan Me

PERFORMANCE



TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m³/h)	85 (305)
FANS	DC
SPECIFIC FAN POWER (w/l/s)	0.24
SOUND dB(A)	45.2 dB(A) for 225 m³/h@50Pa
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	70
PROTECTION CLASS	IP30
SPIGOT (mm)	100
DIMENSIONS (mm)	399 x 399 x 271
WEIGHT (kg)	5.45 (Packaged)
ErP RATING	E

PRODUCT CHARACTERISTICS DATABASE (SAP 2012)

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)
+ 1 additional wet room	0.30
+ 2 additional wet rooms	0.28
+ 3 additional wet rooms	0.25
+ 4 additional wet rooms	0.24
+ 5 additional wet rooms	0.25
+ 6 additional wet rooms	0.27

ORDER CODES

CODE(S)	DESCRIPTION
OZEO	DC version (wireless)
OZEO-HW	DC version (hard wired)

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
BOOST OZEO RF	Additional wireless boost switch
OZEO E SWITCH	Hard wired boost switch

CONSULTANT SPECIFICATION

OZEO

The unit shall be suitable for houses, apartments and communal residences designed specifically for incorporation within a system for a kitchen plus up to 6 additional wet rooms. The unit shall ventilate the property in full compliance of Building Regulations Approved Document F: Ventilation for System 3, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010 and shall be SAP PCDB listed capable of delivering a Specific Fan Power (SFP) as low as 0.24 W/l/s.

The unit shall be the OZEO as manufactured by EnviroVent Ltd.

The unit shall be capable of being installed horizontally or vertically on floors, ceilings or walls. The four inlets shall pivot 90° and double injection duct connections shall enable a fast and safe connection. The exhaust outlet shall be capable of rotating 360°. A rapid installation kit and mounting template shall be supplied as standard. The unit's casing shall be constructed out of moulded polypropylene and the lid out of ABS.

The unit shall incorporate a three speed Low Watt DC motor designed to operate continuously. The OZEO shall be supplied with a wireless control and timer function as standard with the ability to increase to a pre-set boost rate. A hard-wired version shall be available.

The OZEO shall be fitted with a backward curved impeller. For the front, the cover shall simply unclip for quick access to clean the front impeller.

The unit shall be covered by a two year guarantee.

System 4 - Mechanical Ventilation with Heat Recovery (MVHR)

SYSTEM 04

Mechanical Ventilation with Heat Recovery (MVHR)

About

Our range of MVHR systems are sophisticated whole home ventilation and condensation control units. The systems work by extracting stale, moisture-laden air from the wet rooms such as bathrooms, WC's, kitchen and shower rooms, which passes over a high efficiency heat exchange cell before reaching atmosphere.

Simultaneously, fresh air is drawn into the unit from outside, and is warmed by the heat exchange cell before being delivered through supply vents into the living, dining and bedroom areas.

All EnviroVent's MVHR Products Feature...

- All year round good indoor air quality
- Effective at reducing risk of condensation and draughts (airtight structures).
- Can be effective at meeting part of the heating load in energy efficient dwellings and aid heat distribution
- Generally dual speed: low-speed continuous 'trickle' ventilation and high-speed 'boost' extract ventilation
- Energy saving benefits only realised for airtight properties [<5m³/(h.m²)@50Pa]
- SAP Appendix Q eligible
- Energy Savings Trust Best Practice Performance Compliant
- Innovative remote control options

ADVANTAGES

- **Controlled, preheated fresh air is provided throughout the house**
- **Heat exchanger reduces heating demand**
- **Filters the incoming air from outside**
- **No trickle vents**
- **An acoustic solution**
- **Most beneficial for airtight properties**

DISADVANTAGES

- **Systems require maintenance**
- **Design compliance and good practice installation is essential**
- **Commissioning required**

ENERGISAVA® 200

ENERGISAVA® 325

ENERGISAVA® 400

SLIMLINE 300

ENERGISAVA® 200

Kitchen +5 Wet Rooms

Small - Medium S M Dwelling

High Efficiency Whole House Heat Recovery Unit

ABOUT

Incorporating a powerful backward curved EC motor, the energiSava® 200 delivers exceptional performance within a compact unit. Ideal for medium sized houses with kitchen plus 5 additional wet rooms the stylish little energiSava® 200 achieves a maximum airflow of 241m³/h (67l/s) and a high maximum system pressure in excess of 500Pa.

APPLICATION

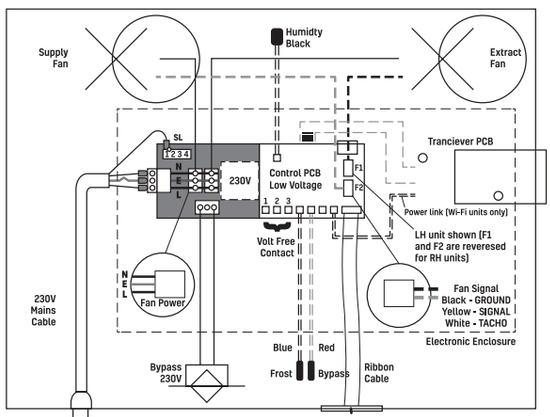
Wall | Ceiling | Floor

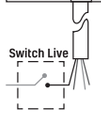
KEY FEATURES

- Compact and lightweight with single person installation, weighs 14Kg with the depth measurement protruding from a wall no more than 360mm
- Easy commissioning via a push button commissioning pad or via the myenvirovent App if specified
- High efficiency counter flow cell capable of up to 89% thermal efficiency and Specific Fan Power (SFP) down to 0.75 W/l/s
- 5 year warranty
- Integral Intellitrac® humidity tracking controls to control RH levels quietly and efficiently
- Wireless remote control to adjust airflow speeds, display mode of operation and filter change/fault indicator
- Automatic and integral mechanical bypass with no reduction in airflow
- Right or left-hand configurations

WIRING DIAGRAM

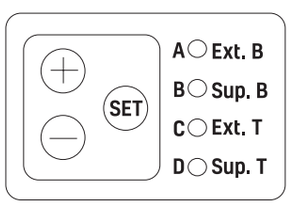
Wall, floor & ceiling



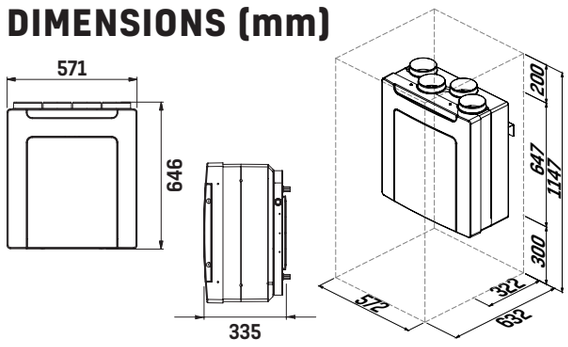


Black - Switch Live
Blue - Neutral
Green/Yellow - Earth
Brown - Live

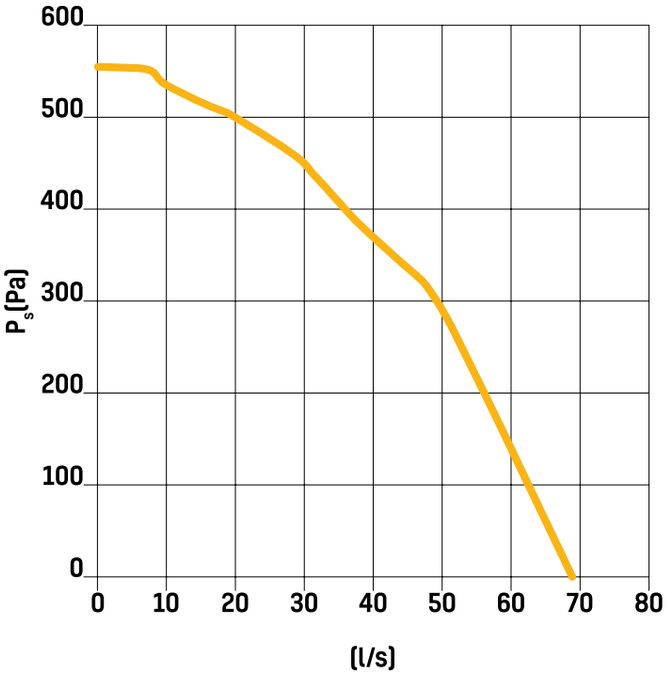
Low Voltage Commisioning Panel



DIMENSIONS (mm)



PERFORMANCE



Brings together style, performance and usability in a neat and compact MVHR system.

TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m^3/h)	67 (241)
HEAT EXCHANGER	Counter Flow (Plastic)
EFFICIENCY (%)	89
FANS	EC
SPECIFIC FAN POWER (w/l/s)	0.75
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	140
PROTECTION CLASS	IPX2
SUPPLY FILTER	ISO Coarse 45% (G3)
EXTRACT FILTER	ISO Coarse 45% (G3)
SPIGOT (mm)	125
DIMENSIONS (mm)	571 x 646 x 335
WEIGHT (kg)	14
ErP RATING	A

ENERGISAVA 200 PRODUCT CHARACTERISTICS DATABASE (SAP 2012)

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)	HEAT RECOVERY EFFICIENCY (%)
+ 1 additional wet room	0.75	89
+ 2 additional wet rooms	0.82	87
+ 3 additional wet rooms	0.96	85
+ 4 additional wet rooms	1.17	84
+ 5 additional wet rooms	1.41	82

SOUND DATA

						SOUND POWER LEVELS (Lw dB(A))									SPL/Casing Breakout
						Frequency (Hz)									
Unit Setting	Flow (m^3/h)	Flow (l/s)	Static pressure	Mode	RPM	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOTAL dB(A)	dB(A) @ 3m
100%	260.00	72.22	40.00	Extract	3940	44.6	38.8	48.3	58.1	55.3	54.1	46.7	33.0	62.0	**41.46**
				Supply		45.8	49.4	53.3	70.6	68.0	65.3	60.6	49.1	74.0	**53.46**
				Breakout		46.6	43.5	58.5	69.6	60.7	57.6	54.3	43.9	71.0	**50.46**
			200.00	Extract		44.1	38.5	48.0	56.1	54.8	53.6	46.4	32.4	60.0	**39.46**
				Supply		45.7	48.3	51.9	68.1	66.6	63.8	58.7	47.0	72.0	**51.46**
				Breakout		46.4	43.7	58.0	67.4	59.8	56.7	53.0	42.9	69.0	**48.46**
			420.00	Extract		44.0	37.7	49.6	54.6	54.6	53.5	46.4	32.7	60.0	**39.46**
				Supply		46.1	50.1	54.5	67.1	66.1	63.2	57.4	47.2	71.0	**50.46**
				Breakout		46.2	45.0	59.2	66.2	58.9	56.0	51.8	43.2	68.0	**47.46**
69%	180.00	50.00	20.00	Extract	2800	22.1	32.2	52.0	46.1	45.7	44.7	34.6	23.9	54.0	**33.46**
				Supply		34.9	43.0	57.4	58.5	59.1	56.9	50.9	36.6	64.0	**43.46**
				Breakout		37.6	38.3	53.8	52.3	51.7	50.2	44.6	32.4	58.0	**37.46**
			105.00	Extract		22.6	32.7	48.3	45.2	45.1	44.2	33.5	23.8	52.0	**31.46**
				Supply		35.1	42.3	54.6	57.0	58.2	55.7	48.6	35.6	63.0	**42.46**
				Breakout		37.7	37.9	54.2	52.0	51.7	49.6	43.2	32.4	58.0	**37.46**
			205.00	Extract		24.4	33.7	46.2	45.3	44.8	43.7	33.2	23.6	51.0	**30.46**
				Supply		35.4	45.6	54.0	58.1	57.5	54.7	47.5	36.4	63.0	**42.46**
				Breakout		37.7	40.0	54.5	52.6	51.0	48.7	42.0	33.5	58.0	**37.46**
48%	125.00	34.72	10.00	Extract	2000	19.0	27.6	42.2	37.9	37.8	36.9	25.0	22.8	45.0	**24.46**
				Supply		23.0	36.1	39.6	47.6	51.4	49.1	37.8	25.9	55.0	**34.46**
				Breakout		20.6	33.5	53.5	47.6	45.1	43.7	33.9	25.3	55.0	**34.46**
			50.00	Extract		21.6	28.0	41.7	37.2	37.3	36.1	24.8	22.8	45.0	**24.46**
				Supply		26.1	36.7	39.4	46.8	50.4	47.2	35.9	25.6	54.0	**33.46**
				Breakout		23.6	32.9	51.4	47.6	44.8	42.8	33.0	25.6	54.0	**33.46**
			110.00	Extract		20.3	29.2	40.5	37.5	36.7	35.4	24.9	22.7	44.0	**23.46**
				Supply		27.5	40.1	40.2	46.6	49.1	45.8	36.8	27.0	53.0	**32.46**
				Breakout		23.5	34.8	50.2	47.8	44.1	42.0	33.7	26.9	53.0	**32.46**

All sound measurements are hemispherical. For spherical figures, subtract 3dB from the value.

ORDER CODES

CODE(S)	DESCRIPTION
ESAVA200	energiSava® 200 wall & floor mounted
ESAVA200C	energiSava® 200 Ceiling mounted
ESAVA200A	energiSava® 200 Wall & floor mounted (app-enabled)
ESAVA200CA	energiSava® 200 Ceiling mounted (app-enabled)
ESAVA200-L	energiSava® 200 Wall & floor mounted - left hand
ESAVA200C-L	energiSava® 200 Ceiling mounted - left hand
ESAVA200A-L	energiSava® 200 Wall & floor mounted (app-enabled) - left hand
ESAVA200CA-L	energiSava® 200 Ceiling mounted (app-enabled) - left hand

Link to Specification visit: **envirovent.com/specs**

...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim**

...Or Scan Me

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
1RV VENT 5 IN 1	5 In 1 roof vent kit
1RD INS FLEX 125	Ø125mm flexible insulated hose ducting
1RD ACO FLEX 125	Ø125mm acoustically insulated aluminium hose ducting
1RD 125 X 350MM **1RD 125 X 2M**	Ø125mm rigid ducting
KIT-CONDENSATE-ES200	*Drainage kit (floor mounted only)
1AC HOR LOUV	Slimline airbrick (available in white, terracotta, brown and cotswold stone)
FILTER-ES250	Additional ISO Coarse 45% (G3) filter
SWH-W-ES200	Additional wireless boost control
1DIF EXTRACT 125 **1DIF SUPPLY 125**	White powder-coated metal ceiling valves (extract and supply)
1FD 204 X 60 1.5M **1FD 204 X 60 2M**	Flat channel ducting

CONSULTANTS SPECIFICATION

SPECIFICATION

A Mechanical Ventilation System with Heat Recovery (MVHR) shall be supplied and installed suitable for installation in a utility room, kitchen, loft or void space. The system shall be suitable for use in small to mid-sized houses with kitchen plus up to five wet rooms and designed primarily for new build and major renovations.

- The unit shall be the energiSava® 200 as manufactured by EnviroVent and shall be capable of being either floor, wall (ESAVA200) or ceiling mounted (ESAVA200C). Floor mounting brackets shall be available separately (KIT-CONDENSATE-ES200).
- It shall be a lightweight design capable of a single person installation weighing no greater than 14Kg with easy commissioning via a push button commissioning pad or App if specified.
- The design of the unit shall be compact and small with the depth measurement protruding from a wall no more than 360mm.
- The unit shall incorporate Ø125 extract and supply spigots to connect easily to Ø125mm round ducting.
- The unit shall be fully insulated to provide excellent thermal and acoustic performance.
- The MVHR shall incorporate low watt EC motor technology with sealed for life ball bearings designed to operate continuously at a pre-set background rate and deliver the lowest possible SFP. The EC motors shall power the centrifugal forward curved fan impellers and shall be suitable for temperatures of -20°C to +60°C.
- The MVHR shall incorporate a high efficiency counter flow cell capable of up to 89% thermal efficiency. The heat exchanger shall be protected by high grade plug out/plug in ISO Coarse 45% (G3) filters on the supply and extract inlets, which shall be designed for quick and easy maintenance via the front access panel.
- The unit shall be supplied complete with a 21.5mm drain connection.
- The MVHR shall be available in left or right hand configurations.
- The MVHR shall be supplied with a 5 year warranty which starts from the day of delivery.
- The MVHR shall be the ESAVA200 or ESAVA200C as manufactured by EnviroVent and shall be SAP PCDB listed. ESAVA200-L shall be the left hand assembly compliant as per the right handed versions listed in SAP PCDB.
- The MVHR shall be ErP grade A, CE Certified and manufactured in accordance with BS EN ISO 9001 and BS EN ISO 14001.

OPERATION

The MVHR shall be installed in accordance with the specified drawings with reference to the schedule of works in the specifications. The airflow shall meet the Building Regulations Approved Document F: Ventilation for System 4, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010.

The MVHR shall extract stale, moisture-laden air from the wet rooms of the property (the kitchen, bathroom, ensuite and utility room). This moist air shall pass over the heat exchanger before being ducted to atmosphere. Simultaneously, filtered fresh air shall be drawn into the unit from outside and the energy from the extracted air shall be transferred to the new fresh air through the high efficiency heat exchange cell before being delivered through supply vents into the property to the habitable rooms (living room, bedrooms). The extracted air shall also be filtered by the ISO Coarse 45% (G3) high grade filter before it enters the heat exchange cell.

The unit shall be capable of varying its speed and airflow rate by receiving signals from one of the following:

- Wireless remote control boost
- Integral Intellitrac® humidity tracking controls
- Switched live signal
- Myenvirovent App (ESAVA200A and ESAVA200CA only)

When these signals are received, the fan shall change the airflow rate to either boost (manually via wireless remote control, S/L or App) or variably in direct proportion to the increase in humidity (automatic Intellitrac® controls).

The unit shall allow the commissioning of the extract and supply airflows to have fully variable speed control to set the minimum and maximum rates.

CONTROL OPTIONS

All versions shall have the facility to change the speed and airflow rate according to one of the following control functions:

Integral Automatic Intellitrac® Humidity Tracking Controls

These shall be integral within the unit as standard, this function constantly monitors the humidity level, meaning no user intervention is required. As humidity rises and falls, the motor speed rises and falls automatically in direct correlation. This controls condensation quietly and efficiently, reducing the period of time when the unit operates on boost mode, saving energy.

Automatic And Integral Mechanical Bypass With No Reduction In Airflow

An automatic and integral mechanical bypass with no reduction in airflow shall be incorporated as standard. The bypass damper shall operate automatically through a wax actuator allowing the air to route around the heat exchange cell to minimise overheating.

Remote control wireless boost switch shall be supplied as standard with all units (except the App-enabled ESAVA200A and ESAVA200CA) and shall clearly indicate the switch designation and mode of operation via the LED buttons such as summer bypass, frost, humidity and filter indicator.

Pre-wired and factory-fitted by the manufacturer are the additional integrally mounted functions within the fan unit on the purpose made PCB which include:

- Switch live for remote switch boost
- Frost protection: the facility shall monitor the temperature of the heat exchange cell. When the temperature falls below 5°C the system will automatically warm the cell to prevent the formation of frost

OPTIONAL APP-ENABLED VERSIONS ESAVA200A AND ESAVA200CA

These models shall be compatible with the EnviroVent myenvirovent App through a mobile device via a home wifi network or directly with the unit from a smart device. For the end user this shall allow them to boost the airflow and provide status and filter indicators. For the installer this shall allow access for quick and easy commissioning for airflow and default settings.

The App shall display the following end user functions:

- Current status on/off
- Indicate when the filters require changing
- Indicate the following modes of operation when activated: frost, humidity, summer bypass, boost
- Activate the boost
- Alter the length of boost time
- Enable/disable the summer bypass
- Access to instruction guides, FAQs and technical support.
- In addition to the above, the following functions shall be available to the installer:
- Fully variable commissioning of the extract and supply airflow to meet regulations
- Alter the temperature at which the summer bypass activates

ENERGISAVA® 210

Kitchen +5 Wet Rooms

Small - Medium S M Dwelling

Low Energy Whole House Heat Recovery Unit

ABOUT

Incorporating a powerful backward curved EC motor, the energiSava® 210 is a low energy whole house heat recovery unit with a high-efficiency counter-flow heat exchanger. The unit supplies fresh air into the home with up to 89% thermal efficiency. Ideal for medium sized houses with kitchen plus 5 additional wet rooms the stylish energiSava® 210 achieves a maximum airflow of 270m³/h (75l/s).

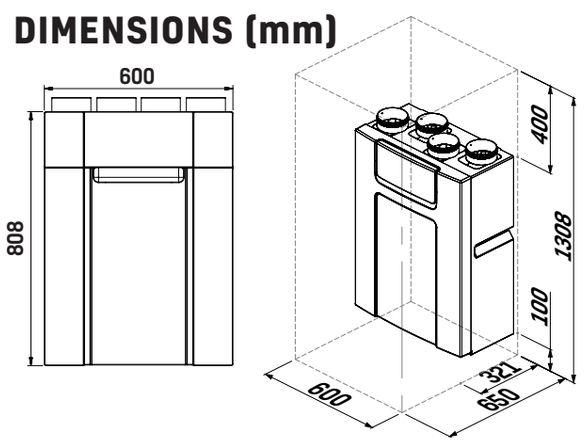
APPLICATION

Wall

KEY FEATURES

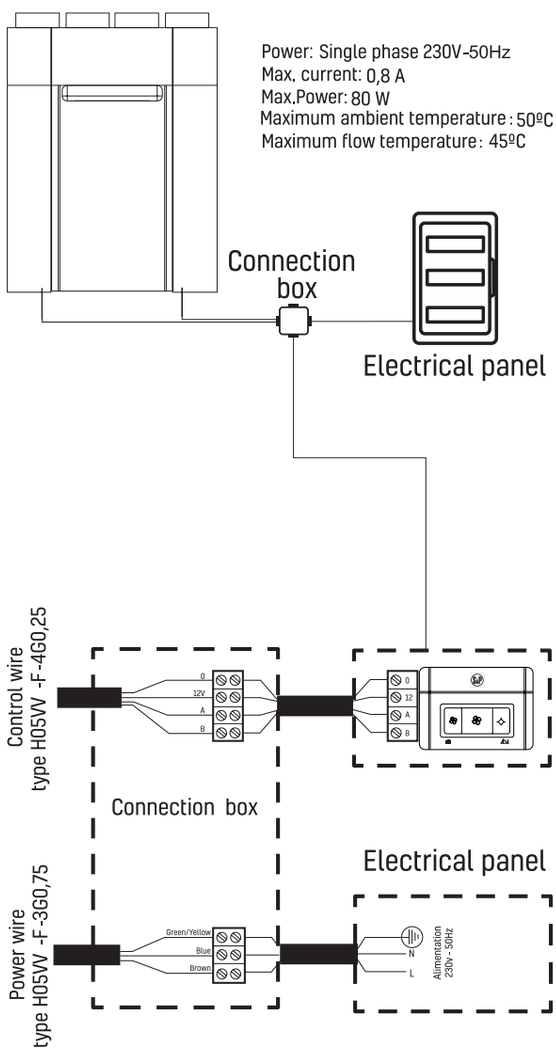
- **Compact and lightweight with single person installation, weighs 15Kg**
- **Easy commissioning via stepped speed control on the control pad**
- **Integral Intellitrac® humidity tracking controls to control RH levels quietly and efficiently**
- **Hard-wired control switch to activate kitchen boost, display mode of operation, set holiday mode and filter indicator**
- **100% Automatic and integral mechanical bypass with no reduction in airflow**
- **High efficiency counter flow cell capable of up to 89% thermal efficiency and Specific Fan Power (SFP) down to 0.81 W/l/s**
- **3 year warranty**

DIMENSIONS (mm)

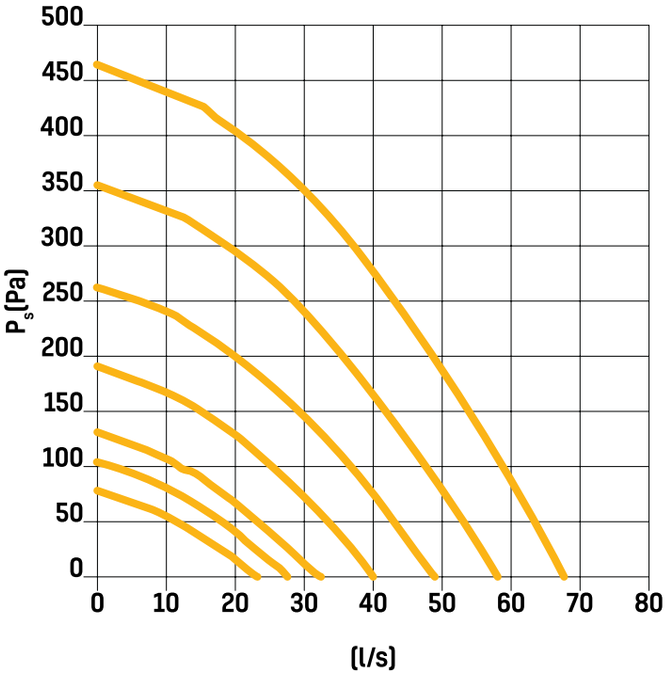


WIRING DIAGRAM

Wall



PERFORMANCE



Low on energy and **big on performance**

TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m^3/h)	75 (270)
HEAT EXCHANGER	Counter-Flow (Plastic)
EFFICIENCY (%)	89
FANS	EC
SPECIFIC FAN POWER (w/l/s)	0.81
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	140
PROTECTION CLASS	IPX2
SUPPLY FILTER	EPM1 65% (F7)
EXTRACT FILTER	ISO Coarse 65% (G4)
SPIGOT (mm)	125
DIMENSIONS (mm)	600 x 808 x 321
WEIGHT (kg)	15
ErP RATING	A

ENERGISAVA 210 PRODUCT CHARACTERISTICS DATABASE (SAP 2012)

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)	HEAT RECOVERY EFFICIENCY (%)
+ 1 additional wet room	0.81	89
+ 2 additional wet rooms	0.82	87
+ 3 additional wet rooms	0.89	87
+ 4 additional wet rooms	1.03	85
+ 5 additional wet rooms	1.22	85

SOUND DATA

						SOUND POWER LEVELS (Lw dB(A))									SPL/Casing Breakout
						Frequency (Hz)									
Point	**Flow (m³/h)**	**Flow (l/s)**	**Pressure (Pa)**	**Mode**	**RPM**	**63 Hz**	**125 Hz**	**250 Hz**	**500 Hz**	**1000 Hz**	**2000 Hz**	**4000 Hz**	**8000 Hz**	**TOTAL dB(A)**	**dB(A) @ 3m**
1	210.00	58.33	100.00	Extract	3301	25.2	29.4	33.1	40.2	41.3	36.6	27.3	24.0	45.1	**24.58**
				Supply	3301	28.9	41.0	52.9	62.2	65.8	60.7	55.2	39.4	68.6	**48.02**
				Breakout	3301	35.9	39.6	51.1	57.3	56.3	52.4	43.8	30.0	61.2	**40.61**
2	195.00	54,17	90.00	Extract	3090	23.8	28.0	31.7	38.8	39.9	35.2	25.9	22.6	43.7	**23.18**
				Supply	3090	27.1	39.2	51.1	60.4	64.0	58.9	53.4	37.6	66.8	**46.22**
				Breakout	3090	34.9	38.6	50.1	56.3	55.3	51.4	42.8	29.0	60.1	**39.56**
3	180.00	50.00	80.00	Extract	2890	22.3	26.5	30.2	37.3	38.4	33.7	24.4	21.1	42.3	**21.76**
				Supply	2890	25.3	37.4	49.3	58.6	62.2	57.1	51.6	35.8	64.9	**44.36**
				Breakout	2890	33.8	37.5	49.0	55.2	54.2	50.3	41.7	27.9	59.0	**38.46**
4	165.00	45.83	70.00	Extract	2665	22.3	25.0	28.7	36.3	35.5	31.7	25.9	24.5	40.5	**19.95**
				Supply	2665	29.1	36.1	53.2	57.1	59.1	54.4	47.1	30.7	62.7	**42.17**
				Breakout	2665	23.8	34.1	51.5	54.0	50.1	49.7	36.3	24.6	57.8	**37.26**
5	150.00	41.67	60.00	Extract	2470	20.6	23.3	27.0	34.6	33.8	30.0	24.2	22.8	38.8	**18.25**
				Supply	2470	27.0	34.0	51.1	55.0	57.0	52.3	45.0	28.6	60.6	**40.07**
				Breakout	2470	22.6	32.9	50.3	52.8	48.9	48.5	35.1	23.4	56.6	**36.06**
6	135.00	37.50	55.00	Extract	2300	19.1	21.8	25.5	33.1	32.3	28.5	22.7	21.3	37.3	**16.75**
				Supply	2300	25.1	32.1	49.2	53.1	55.1	50.4	43.1	26.7	58.7	**38.17**
				Breakout	2300	21.5	31.8	49.2	51.7	47.8	47.4	34.0	22.3	55.4	**34.91**
7	120.00	33.33	50.00	Extract	2100	19.4	21.1	24.7	31.0	28.4	26.2	24.6	23.5	35.3	**14.76**
				Supply	2100	21.5	33.0	45.5	51.5	52.3	47.2	36.8	24.1	56.1	**35.55**
				Breakout	2100	18.8	30.9	46.6	49.9	46.3	47.9	28.4	23.3	54.0	**33.44**
8	105.00	29.17	45.00	Extract	1925	17.5	19.2	22.8	29.1	26.5	24.3	22.7	21.6	33.4	**12.86**
				Supply	1925	19.1	30.6	43.1	49.1	49.9	44.8	34.4	21.7	53.7	**33.15**
				Breakout	1925	17.5	29.6	45.3	48.6	45.0	46.6	27.1	22.0	52.6	**32.06**
9	90.00	25.00	40.00	Extract	1740	15.4	17.1	20.7	27.0	24.4	22.2	20.6	19.5	31.3	**10.76**
				Supply	1740	16.3	27.8	40.3	46.3	47.1	42.0	31.6	18.9	50.9	**30.35**
				Breakout	1740	15.9	28.0	43.7	47.0	43.4	45.0	25.5	20.4	51.0	**30.46**
10	76.00	21.11	35.00	Extract	1560	13.0	14.7	18.3	24.6	22.0	19.8	18.2	17.1	28.9	**8.36**
				Supply	1560	13.3	24.8	37.3	43.3	44.1	39.0	28.6	15.9	47.9	**27.35**
				Breakout	1560	14.1	26.2	41.9	45.2	41.6	43.2	23.7	18.6	49.3	**28.74**
11	60.00	16.67	30.00	Extract	1360	10.0	11.7	15.3	21.6	19.0	16.8	15.2	14.1	25.9	**5.36**
				Supply	1360	9.5	21.0	33.5	39.5	40.3	35.2	24.8	12.1	44.1	**23.55**
				Breakout	1360	11.9	24.0	39.7	43.0	39.4	41.0	21.5	16.4	47.1	**26.54**

All sound measurements are hemispherical. For spherical figures, subtract 3dB from the value.

ORDER CODES

CODE(S)	DESCRIPTION
ESAVA210	energiSava® 210 Standard

Link to Specification visit: **envirovent.com/specs**

...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim**

...Or Scan Me

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
1RV VENT 5 IN 1	5 In 1 roof vent kit
1RD INS FLEX 125	Ø125mm flexible insulated hose ducting
1RD ACO FLEX 125	Ø125mm acoustically insulated aluminium hose ducting
1RD 125 X 350MM **1RD 125 X 2M**	Ø125mm rigid ducting
1AC HOR LOUV	Slimline airbrick (available in white, terracotta, brown and cotswold stone)
FILTER-ES210	Additional filter
1DIF EXTRACT 125 **1DIF SUPPLY 125**	White powder-coated metal ceiling valves (extract and supply)
1FD 204 X 60 1.5M **1FD 204 X 60 2M**	Flat channel ducting

CONSULTANTS SPECIFICATION

SPECIFICATION

A Mechanical Ventilation System with Heat Recovery (MVHR) shall be supplied and installed suitable for installation in a utility room or kitchen. The system shall be suitable for use in small to mid-sized houses with kitchen plus up to five wet rooms and designed primarily for new build and major renovations.

- The unit shall be the energiSava® 210 as manufactured by EnviroVent and shall be capable of being installed vertically on walls.
- It shall be a lightweight design capable of a single person installation weighing no greater than 15Kg with easy commissioning via stepped speed controls on the control pad.
- The unit shall incorporate Ø125 extract and supply spigots to connect easily to Ø125mm round ducting.
- The unit shall be fully insulated to provide excellent thermal and acoustic performance.
- The MVHR shall incorporate low watt EC motor technology with sealed for life ball bearings designed to operate continuously at a pre-set background rate and deliver the lowest possible SFP.
- The MVHR shall incorporate a high efficiency counter flow cell capable of up to 89% thermal efficiency. The heat exchanger shall be protected by plug out/plug in ISO Coarse 65% (G4) filters on the extract and EPM10 50% (F5) or EPM1 65% (F7) filters on the supply inlet, as per the specification, which shall be designed for quick and easy maintenance via the front access panel.
- The unit shall be supplied complete with drain connection.
- The MVHR shall be supplied with a 3 year warranty which starts from the day of delivery.
- The MVHR shall be the ESAVA210 by EnviroVent and shall be SAP PCDB listed.
- The MVHR shall be ErP grade A, CE Certified and manufactured in accordance with BS EN ISO 9001 and BS EN ISO 14001.

OPERATION

The MVHR shall be installed in accordance with the specified drawings with reference to the schedule of works in the specifications. The airflow shall meet the Building Regulations Approved Document F: Ventilation for System 4, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010.

The MVHR shall extract stale, moisture-laden air from the wet rooms of the property (the kitchen, bathroom, ensuite and utility room). This moist air shall pass over the heat exchanger before being ducted to atmosphere. Simultaneously, filtered fresh air shall be drawn into the unit from outside and the energy from the extracted air shall be transferred to the new fresh air through the high efficiency heat exchange cell before being delivered through supply vents into the property to the habitable rooms (living room, bedrooms). The extracted air shall also be filtered by the ISO Coarse 65% (G4) filter before it enters the heat exchange cell.

The unit shall be capable of varying its speed and airflow rate by receiving signals from one of the following:

- Hard-wired control switch
- Integral Intellitrac® humidity tracking controls

When these signals are received, the fan shall change the airflow rate to either boost (manually via hard-wired control) or variably in direct proportion to the increase in humidity (automatic Intellitrac® controls).

The unit shall allow the commissioning of the extract and supply airflows by stepped speed control to set the minimum and maximum rates.

CONTROL OPTIONS

All versions shall have the facility to change the speed and airflow rate according to one of the following control functions:

Integral Automatic Intellitrac® Humidity Tracking Controls

These shall be integral within the unit as standard, this function constantly monitors the humidity level, meaning no user intervention is required. As humidity rises and falls, the motor speed rises and falls automatically in direct correlation. This controls condensation quietly and efficiently, reducing the period of time when the unit operates on boost mode, saving energy.

100% Automatic or Manual Integral Mechanical Bypass With No Reduction In Airflow

A 100% automatic and integral mechanical bypass with no reduction in airflow shall be incorporated as standard. The bypass shall also be activated manually via the hard-wired switch if required. The bypass damper shall operate automatically through an actuator allowing the air to route around the heat exchange cell to minimise overheating.

A hard-wired control switch incorporating the capability to activate a holiday mode shall be supplied as standard and shall clearly indicate the mode of operation allowing the user to:

- Activate the kitchen boost for ½ hour.
- Return manually to the minimum airflow
- Activate holiday mode
- Manually switch to by-pass mode
- Display filter alarm
- Reset filter alarm

Pre-wired and factory-fitted by the manufacturer are the additional integrally mounted functions within the fan unit on the purpose made PCB which include:

Frost protection: the facility shall monitor the temperature of the heat exchange cell. When the temperature falls below 5°C the system will automatically warm the cell to prevent the formation of frost.

ENERGISAVA® 250

Kitchen +3 Wet Rooms

Small - Medium S M Dwelling

Lightweight & Compact Whole House Heat Recovery Unit

ABOUT

Incorporating a powerful backward curved EC motor, the energiSava® 250 delivers exceptional performance within a compact unit. Ideal for smaller houses and apartments with kitchen plus 3 additional wet rooms, the stylish little energiSava® 250 achieves a maximum airflow of 270m³/h (75l/s). The energiSava® 250 delivers not only the utmost practicality in installation flexibility, it also performs with exceptional efficiency, achieving a low Specific Fan Power of 0.66 W/l/s.

APPLICATION

Wall | Ceiling | Floor

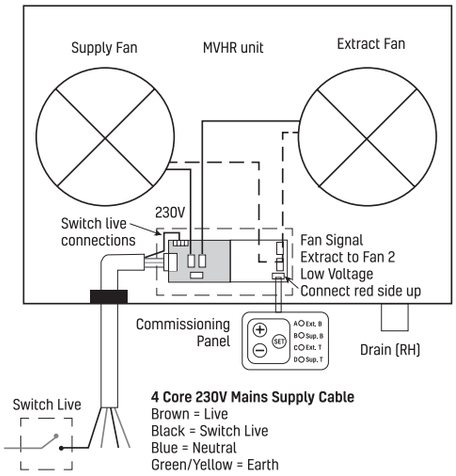
KEY FEATURES

- Compact and lightweight with single person installation, weighs 14Kg with the depth measurement protruding from a wall no more than 305mm
- Easy commissioning via a push button commissioning pad or via the myenvirovent App if specified
- High efficiency counter flow cell capable of up to 90% thermal efficiency and extremely low Specific Fan Power (SFP) down to 0.66 W/l/s. ErP Grade A+
- 5 year warranty
- Integral Intellitrac® humidity tracking controls
- Wireless remote boost switch as standard which also indicates the mode of operation and filter indicator
- Automatic and integral mechanical bypass with no reduction in airflow

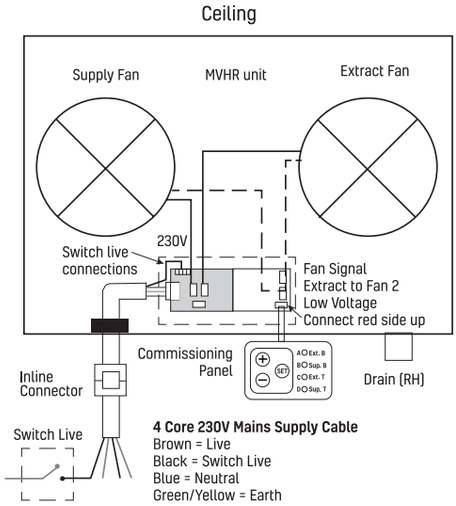
WIRING DIAGRAM

Wall, Floor & Ceiling

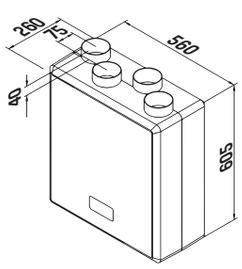
Wall & floor

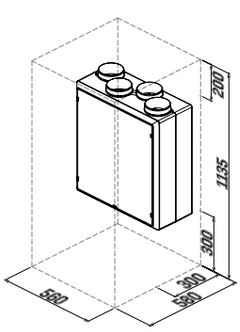


Ceiling

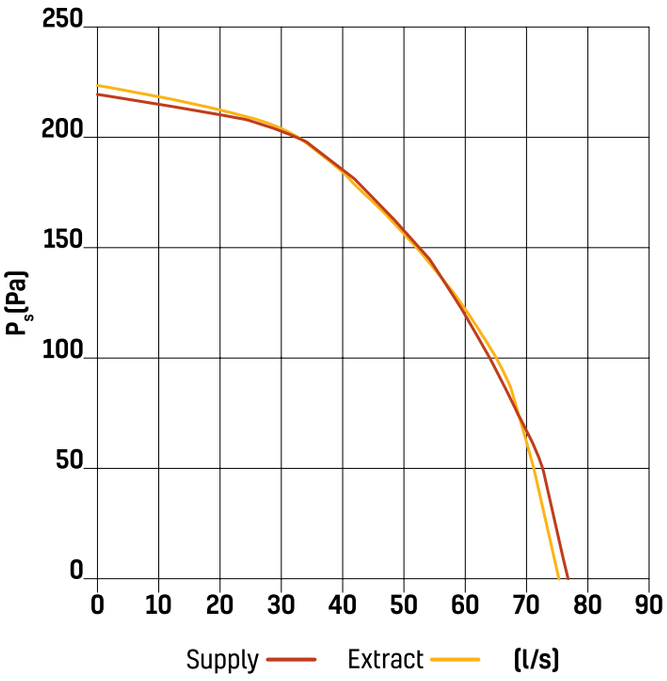


DIMENSIONS (mm)





PERFORMANCE



One of the most compact and lightweight on the market, achieving a high thermal efficiency of 90%

TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m^3/h)	75 (270)
HEAT EXCHANGER	Counter Flow (Plastic)
EFFICIENCY (%)	90
FANS	EC
SPECIFIC FAN POWER (w/l/s)	0.66 W/l/s
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	140
PROTECTION CLASS	IPX2
SUPPLY FILTER	ISO Coarse 45% (G3)
EXTRACT FILTER	ISO Coarse 45% (G3)
SPIGOT (mm)	125
DIMENSIONS (mm)	560 x 635 x 260
WEIGHT (kg)	14
ErP RATING	A

ENERGISAVA 250 PRODUCT CHARACTERISTICS DATABASE (SAP 2012)

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)	HEAT RECOVERY EFFICIENCY (%)
+ 1 additional wet room	0.66	90
+ 2 additional wet rooms	0.81	89
+ 3 additional wet rooms	1.01	87

SOUND DATA

					SOUND POWER LEVELS (Lw dB(A))									SPL/Casing Breakout
					Frequency (Hz)									
Unit Setting	Flow (m³/h)	Flow (l/s)	Mode	RPM	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOTAL dB(A)	dB(A) @ 3m
100%	280.46	77.91	Extract	2375	29.3	42.3	53.5	48.5	41.6	45.3	37.4	28.8	55.7	35.16
			Supply		38.1	53.4	54.5	56.6	49.4	52.5	48.9	40.7	61.2	40.66
			Breakout		34.5	48.5	61.3	60.3	57.2	57.3	51.4	47.8	65.7	45.16
80%	215.43	59.84	Extract	1900	27.4	37.8	48.7	42.6	36.4	39.3	29.3	23.4	50.5	29.96
			Supply		35.4	48.0	49.3	49.5	41.9	45.2	40.9	31.4	54.8	34.26
			Breakout		31.3	44.2	55.8	54.0	52.6	50.9	45.3	40.4	60.0	39.46
60%	145.53	40.43	Extract	1425	23.9	32.4	41.7	34.8	29.5	28.1	23.7	22.3	43.4	22.86
			Supply		31.9	42.1	42.7	40.8	33.0	35.1	31.3	23.5	47.4	26.86
			Breakout		27.2	41.0	48.3	46.4	46.6	40.9	36.5	29.1	52.7	32.16
40%	74.13	20.59	Extract	950	20.0	29.3	31.0	25.6	22.8	22.2	22.5	22.2	35.2	14.66
			Supply		23.6	34.2	32.0	30.2	23.8	24.7	23.3	22.2	38.1	17.56
			Breakout		23.8	40.2	37.4	36.0	35.7	28.1	24.1	22.3	44.0	23.46

All sound measurements are hemispherical. For spherical figures, subtract 3dB from the value.

ORDER CODES

CODE(S)	DESCRIPTION
ESAVA250	energiSava® 250 Wall & floor mounted
ESAVA250C	energiSava® 250 Ceiling mounted
ESAVA250A	energiSava® 250 Wall & floor mounted (app-enabled)
ESAVA250CA	energiSava® 250 Ceiling mounted (app-enabled)
ESAVA250-L	energiSava® 250 Wall & floor mounted - left hand
ESAVA250C-L	energiSava® 250 Ceiling mounted - left hand
ESAVA250A-L	energiSava® 250 Wall & floor mounted (app-enabled) - left hand
ESAVA250CA-L	energiSava® 250 Ceiling mounted (app-enabled) - left hand

Link to Specification visit: **envirovent.com/specs**

...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim**

...Or Scan Me

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
1RV VENT 5 IN 1	5 In 1 roof vent kit
1RD INS FLEX 125	Ø125mm flexible insulated hose ducting
1RD ACO FLEX 125	Ø125mm acoustically insulated aluminium hose ducting
1RD 125 X 350MM **1RD 125 X 2M**	Ø125mm rigid ducting
KIT-CONDENSATE-ES250-2	*Drainage kit (floor mounted only)
1AC HOR LOUV	Slimline airbrick (available in white, terracotta, brown and cotswold stone)
1DIF EXTRACT 125 **1DIF SUPPLY 125**	White powder-coated metal ceiling valves (extract and supply)
FILTER-ES250	Additional filter
SWH-W-MVHR	Additional wireless boost control
1FD 204 X 60 1.5M **1FD 204 X 60 2M**	Flat channel ducting

CONSULTANTS SPECIFICATION

SPECIFICATION

A Mechanical Ventilation System with Heat Recovery (MVHR) shall be supplied and installed suitable for installation in a utility room, kitchen, loft or void space. The system shall be suitable for use in small to mid-sized houses with kitchen plus up to three wet rooms and designed primarily for new build and major renovations.

- The unit shall be the energiSava® 250 as manufactured by EnviroVent and shall be capable of being either floor, wall (ESAVA250) or ceiling mounted (ESAVA250C). Floor mounting brackets shall be available separately (KIT-CONDENSATE-ES250-2).
- It shall be a lightweight design capable of a single person installation weighing no greater than 14Kg with easy commissioning via a push button commissioning pad or App if specified.
- The design of the unit shall be compact and small with the depth measurement protruding from a wall no more than 305mm.
- The unit shall incorporate Ø125 extract and supply spigots to connect easily to Ø125mm round ducting.
- The unit shall be fully insulated to provide excellent thermal and acoustic performance.
- The MVHR shall incorporate low watt EC motor technology with sealed for life ball bearings designed to operate continuously at a pre-set background rate and deliver the lowest possible SFP. The EC motors shall power the centrifugal forward curved fan impellers and shall be suitable for temperatures of -20°C to +60°C.
- The MVHR shall incorporate a high efficiency counter flow cell capable of up to 90% thermal efficiency. The heat exchanger shall be protected by high grade plug out/plug in ISO Coarse 45% (G3) filters on the supply and extract inlets, which shall be designed for quick and easy maintenance via the front access panel.
- The unit shall be supplied complete with a 21.5mm drain connection.
- The specific fan power (SFP) shall meet the Building Regulations Approved Document L1A requirement of less than 1.5W/l/s and heat recovery efficiency no worse than 70%.
- The MVHR shall be available in left or right hand configurations.
- The MVHR shall be supplied with a 5 year warranty which starts from the day of delivery.
- The MVHR shall be the ESAVA250 or ESAVA250C as manufactured by EnviroVent and shall be SAP PCDB listed. ESAVA250-L shall be the left hand assembly compliant as per the right handed versions listed in SAP PCDB.
- The MVHR shall be ErP grade A, CE Certified and manufactured in accordance with BS EN ISO 9001 and BS EN ISO 14001.

OPERATION

The MVHR shall be installed in accordance with the specified drawings with reference to the schedule of works in the specifications. The airflow shall meet the Building Regulations Approved Document F: Ventilation for System 4, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010.

The MVHR shall extract stale, moisture-laden air from the wet rooms of the property (the kitchen, bathroom, ensuite and utility room). This moist air shall pass over the heat exchanger before being ducted to atmosphere. Simultaneously, filtered fresh air shall be drawn into the unit from outside and the energy from the extracted air shall be transferred to the new fresh air through the high efficiency heat exchange cell before being delivered through supply vents into the property to the habitable rooms (living room, bedrooms). The extracted air shall also be filtered by the ISO Coarse 45% (G3) high grade filter before it enters the heat exchange cell.

The unit shall be capable of varying its speed and airflow rate by receiving signals from one of the following:

- Wireless remote control boost
- Integral Intellitrac® humidity tracking controls
- Switched live for manual boost
- Myenvirovent App (ESAVA250A and ESAVA250CA only)

When these signals are received, the fan shall change the airflow rate to either boost (manually via wireless remote control, S/L or App) or variably in direct proportion to the increase in humidity (automatic Intellitrac® controls).

The unit shall allow the commissioning of the extract and supply airflows to have fully variable speed control to set the minimum and maximum rates.

CONTROL OPTIONS

All versions shall have the facility to change the speed and airflow rate according to one of the following control functions:

Intellitrac® Humidity Tracking Controls

These shall be integral within the unit as standard, this function constantly monitors the humidity level, meaning no user intervention is required. As humidity rises and falls, the motor speed rises and falls in direct correlation. This controls condensation quietly and efficiently, reducing the period of time when the unit operates on boost mode, saving energy.

Remote control wireless boost switch shall be supplied as standard with all units (except the App-enabled ESAVA250A and ESAVA250CA) and shall clearly indicate the mode of operation via the LED buttons such as summer bypass, frost, humidity and filter indicator.

The additional functions are integral to the unit and are wired into the purpose built PCB within the fan unit:

- Switch live for remote switch lighting boost
- Thermal summer by-pass shall automatically operate on warmer days to minimise overheating.
- Frost protection: the facility shall monitor the temperature of the heat exchange cell. When the temperature falls below 5ºC the system will automatically warm the cell to prevent the formation of frost

OPTIONAL VERSIONS ESAVA250A AND ESAVA250CA

These models shall be compatible with the EnviroVent myenvirovent App through a mobile device via a home wifi network or directly with the unit from a smart device. For the end user this shall allow them to boost the airflow and view the status and filter indicators. For the installer this shall allow access for quick and easy commissioning for airflow and default settings.

The App shall allow the following end user functions:

- Current status on/off
- Indicate when the filters require changing
- Indicate the following modes of operation when activated: frost, humidity, summer bypass, boost
- Activate the boost
- Alter the length of boost time
- Enable/disable the summer bypass
- Access to instruction guides, FAQs and technical support.
- In addition to the above, the following functions shall be available to the installer:
- Fully variable minimum and maximum commissioning of the extract and supply airflow to meet regulations
- Alter the temperature at which the summer bypass activates

ENERGISAVA® 300

Kitchen +7 Wet Rooms

Medium - Large M L Dwelling

High Efficiency Whole House Heat Recovery Systems

ABOUT

The energiSava® 300 series is ideal for residential properties to provide a constant supply of clean, tempered air and maintain stable humidity levels. With maximum airflow capacities of 300m³/h respectively, they are available in left-handed and right-handed versions with a range of options for connecting the ducts. In addition to the comprehensive standard version, a 'Plus version' is also available which offers additional connection options, such as a CO_2 sensor.

APPLICATION

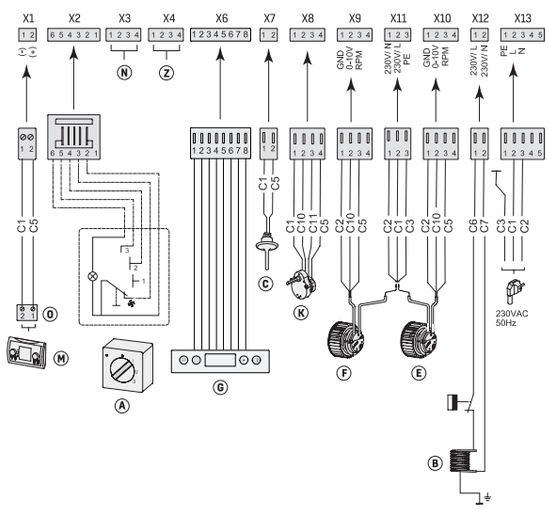
 Wall  Floor

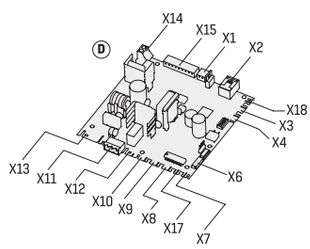
KEY FEATURES

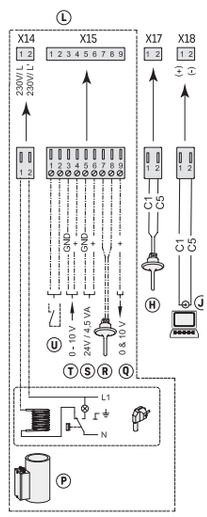
- Low Specific Fan Power (SFP) of 0.62 W/l/s and high thermal efficiency of 89%
- Constant flow technology to deliver the required airflow at all times
- 100% automatic integral mechanical bypass with no reduction in airflow
- 4-way hard-wired switch to indicate the mode of operation and filter change indicator
- Pre-heater to warm the incoming air when the temperature falls below 5°C
- 'Plus' version available for additional 0-10V or volt-free connection options, such as a CO_2 sensor
- Left or right-hand configurations
- Passive Haus Certified

WIRING DIAGRAM

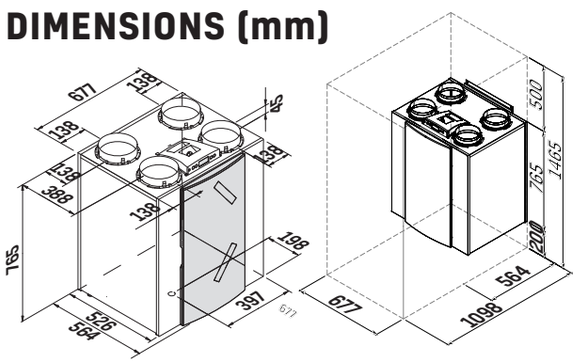
Wall & Floor



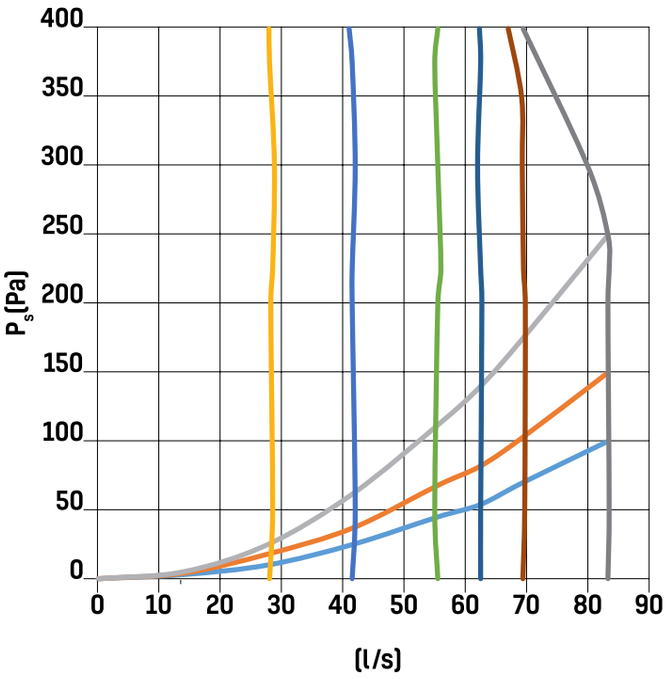




DIMENSIONS (mm)



PERFORMANCE



Designed not only with the optimum performance for today's requirements but with forward-thinking innovation for future demands in ventilation.

TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m^3/h)	83 (300)
HEAT EXCHANGER	Counter Flow (Plastic)
EFFICIENCY (%)	89
FANS	EC
SPECIFIC FAN POWER (w/l/s)	0.62
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	98
PROTECTION CLASS	IP30
SUPPLY FILTER	ISO Coarse 45% (G3) / Optional EPM1 50% (F7)
EXTRACT FILTER	ISO Coarse 45% (G3) / Optional EPM1 50% (F7)
SPIGOT (mm)	150 / 160
DIMENSIONS (mm)	754 x 677 x 564
WEIGHT (kg)	38
ErP RATING	A+

ENERGISAVA 300 PRODUCT CHARACTERISTICS DATABASE (SAP 2012)

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)	HEAT RECOVERY EFFICIENCY (%)
+ 1 additional wet room	0.66	89
+ 2 additional wet rooms	0.62	87
+ 3 additional wet rooms	0.66	86
+ 4 additional wet rooms	0.74	85
+ 5 additional wet rooms	0.86	84
+ 6 additional wet rooms	1.04	83
+ 7 additional wet rooms	1.21	83

SOUND DATA

					SOUND POWER LEVELS (Lw dB(A))									SPL/Casing Breakout
					Frequency (Hz)									
Unit Setting	Flow (m³/h)	Flow (l/s)	Pressure (Pa)	Mode	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOTAL dB(A)	dB(A) @ 3m
1	300.00	83.33	50.00	Extract	43.2	45.6	58.5	46.6	39.6	38.3	29.8	21.7	54.0	33.46
				Supply	52.2	58.0	66.8	67.3	59.8	56.4	48.6	41.2	67.0	46.46
				Breakout	42.7	48.8	56.0	48.0	39.1	37.0	30.6	26.5	50.0	29.46
			100.00	Extract	45.8	46.1	57.8	54.0	40.2	39.0	31.8	22.1	54.0	33.46
				Supply	51.3	56.8	64.5	67.1	59.9	56.5	48.7	42.0	67.0	46.46
				Breakout	44.9	49.5	57.6	48.9	40.3	38.0	31.9	28.4	52.0	31.46
2	210.00	58.33	50.00	Extract	41.6	41.4	50.8	45.9	31.7	30.6	21.9	20.8	45.0	24.46
				Supply	45.8	51.9	59.2	61.3	52.2	48.0	38.1	28.0	60.0	39.46
				Breakout	40.6	41.3	52.6	42.4	31.9	26.5	19.0	21.9	44.0	23.46
			100.00	Extract	45.9	41.5	51.8	46.6	32.4	31.3	21.6	21.0	46.0	25.46
				Supply	45.9	51.9	60.2	60.2	52.9	48.8	39.1	29.5	60.0	39.46
				Breakout	41.7	42.3	54.7	43.8	33.2	27.8	20.3	21.2	46.0	25.46
3	150.00	41.67	50.00	Extract	40.2	40.9	43.3	39.4	25.2	23.0	16.8	20.9	39.0	18.46
				Supply	43.1	53.2	52.9	52.5	44.8	39.8	27.6	21.7	52.0	31.46
				Breakout	39.6	47.5	41.6	33.8	25.2	20.8	16.5	20.8	38.0	17.46
			100.00	Extract	42.9	48.8	47.6	41.9	27.2	24.9	17.1	20.8	42.0	21.46
				Supply	43.6	49.1	55.4	56.8	47.2	42.5	31.1	23.3	55.0	34.46
				Breakout	42.1	43.6	43.8	35.9	26.7	22.2	16.9	20.6	38.0	17.46
4	90.00	25.00	50.00	Extract	43.2	41.5	36.6	31.9	17.8	14.1	15.8	20.9	33.0	12.46
				Supply	42.5	44.5	45.6	44.8	36.9	29.0	18.1	20.9	44.0	23.46
				Breakout	41.5	34.8	35.8	27.2	20.0	14.6	15.9	20.8	30.0	9.46
			100.00	Extract	41.7	35.1	38.2	33.8	20.7	17.5	15.9	20.9	34.0	13.46
				Supply	41.6	50.1	47.7	47.6	40.7	34.5	22.4	21.4	47.0	26.46
				Breakout	41.6	40.4	37.3	30.2	23.9	16.8	15.9	20.6	33.0	12.46

All sound measurements are hemispherical. For spherical figures, subtract 3dB from the value.

ORDER CODES

CODE(S)	DESCRIPTION
ESAVA300-R	energiSava® 300 Standard
ESAVA300P-R	energiSava® 300 Plus
ESAVA300-L	energiSava® 300 Standard - left hand
ESAVA300P-L	energiSava® 300 Plus - left hand

Link to Specification visit: **envirovent.com/specs**

...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim**

...Or Scan Me

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
SWHBKRFSET-4	4 way remote control switch and receiver
SWHBKRFSET-2	2 way remote control switch and receiver
SWHBKRF-4	4 way remote control switch
SWHBKRF-2	2 way remote control switch
SWHBK-4W	4 way wired switch with filter indication
SENSORBK-H	Humidity sensor, duct mounted
SENSORBK-CO2	CO_2 sensor (PLUS versions only)
FILTER-ES300/400-G3	2 x ISO Coarse 45% (G3)
FILTER-ES300/400-G4/F7	ISO Coarse 65% (G4) / EPM1 50% (F7)

CONSULTANTS SPECIFICATION

SPECIFICATION

A Mechanical Ventilation System with Heat Recovery (MVHR) shall be supplied and installed suitable for installation in a utility room or loft space. The system shall be suitable for use in mid to large-sized houses with kitchen plus up to seven wet rooms and designed primarily for new build and major renovations.

- The unit shall be the energiSava® 300 by EnviroVent and shall be capable of being installed vertically on walls.
- The unit shall incorporate Ø150 extract and supply spigots to connect easily to Ø150mm round ducting.
- The unit shall operate through constant flow technology to ensure maximum efficiency and that the commissioned airflow rate is always delivered despite any resistance encountered in the ductwork or filters. The constant flow control system shall also ensure that commissioning is carried out quickly and easily.
- The unit shall be fully insulated to provide excellent thermal and acoustic performance.
- The MVHR shall incorporate low watt EC motor technology with sealed for life ball bearings designed to operate continuously at a pre-set background rate and deliver the lowest possible SFP.
- The MVHR shall incorporate a high efficiency counter flow cell capable of up to 89% thermal efficiency. The heat exchanger shall be protected by plug out/plug in ISO Coarse 45% (G3) filters on the extract and ISO Coarse 65% (G4) or EPM1 50% (F7) filters on the supply inlet, as per the specification, which shall be designed for quick and easy maintenance via the front access panel.
- The MVHR shall incorporate a pre-heater to warm the incoming air on cooler days when the temperature falls below 5°C.
- The unit shall be supplied complete with a 32mm drain connection.
- The MVHR shall be available in left or right hand configurations.
- The MVHR shall be supplied with a 2 year warranty on parts and 5 year warranty on the heat exchanger which starts from the day of delivery.
- The MVHR shall be the ESAVA300 by EnviroVent and shall be SAP PCDB listed.
- The MVHR shall be ErP grade A, (A+ when more than 2 sensors are included) CE Certified and manufactured in accordance with BS EN ISO 9001 and BS EN ISO 14001.
- The MVHR shall be Passive House Certified

OPERATION

The MVHR shall be installed in accordance with the specified drawings with reference to the schedule of works in the specifications. The airflow shall meet the Building Regulations Approved Document F: Ventilation for System 4, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010.

The MVHR shall extract stale, moisture-laden air from the wet rooms of the property (the kitchen, bathroom, ensuite and utility room). This moist air shall pass over the heat exchanger before being ducted to atmosphere. Simultaneously, filtered fresh air shall be drawn into the unit from outside and the energy from the extracted air shall be transferred to the new fresh air through the high efficiency heat exchange cell before being delivered through supply vents into the property to the habitable rooms (living room, bedrooms). The extracted air shall also be filtered by the ISO Coarse 45% (G3) filter before it enters the heat exchange cell.

The unit shall be capable of varying its speed and airflow rate by receiving signals from one of the following:

- 4 way remote control switch and receiver
- 2 way remote control switch and receiver
- 4 way wired switch with filter indicator
- Through a duct mounted humidity sensor

When these signals are received, the fan shall change the airflow rate to boost mode (manually via hard-wired control)

Using the intelligent digital display panel, the unit shall allow the commissioning of the extract and supply airflows to have fully variable speed control to set the minimum and maximum rates.

CONTROL OPTIONS

All versions shall have the facility to change the speed and airflow rate according to one of the following control functions:

100% Automatic Integral Mechanical Bypass With No Reduction In Airflow

A 100% automatic and integral mechanical bypass with no reduction in airflow shall be incorporated as standard. The bypass damper shall operate automatically through an actuator allowing the air to route around the heat exchange cell to minimise overheating.

4-way hard wired switch with filter indicator

A hard-wired control switch incorporating a filter change indicator shall be supplied as standard and shall clearly indicate the mode of operation.

OPTIONAL ENERGISAVA 300 PLUS VERSION

The ESAVA300P shall also be available in a left or right handed version with all of the above features including the addition of two further 0-10V or volt free connection options (programmed on the unit), such as a CO_2 sensor. It shall also have the option of a post heater.

ENERGISAVA® 325

Kitchen +6 Wet Rooms

Medium - Large M L Dwelling

Ultra Efficient Whole House Heat Recovery System

ABOUT

Ideal for medium to large sized dwellings, the energiSava® 325 brings together exceptional performance and efficiency within a compact and patented design. Highly effective at reducing indoor pollutants and improving indoor air quality, the unit runs continuously to provide optimum ventilation all year round.

APPLICATION

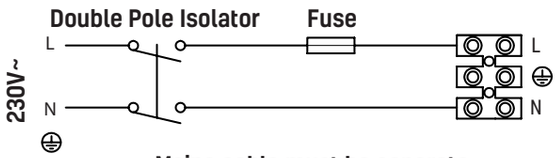
Wall | Floor

KEY FEATURES

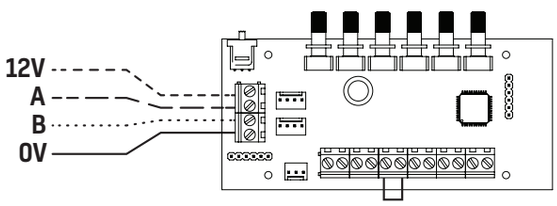
- Extremely low Specific Fan Power (SFP) of 0.60 W/l/s and high thermal efficiency of 91%
- 100% automatic integral mechanical bypass with no reduction in airflow
- Integral humidity sensor
- Stepped reduction intelligent frost protection
- Hard-wired LED status indicator
- Summer kick-up mode for increased airflow
- Left- or right-hand configurations
- 3 year warranty

WIRING DIAGRAM

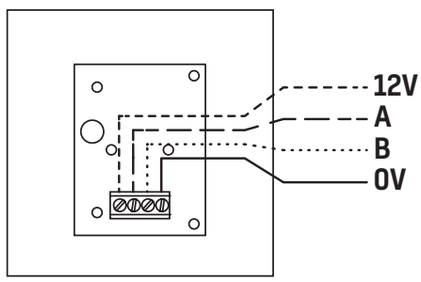
Wall & Floor



Mains cable must be separate from the communication cables. See Important Information.

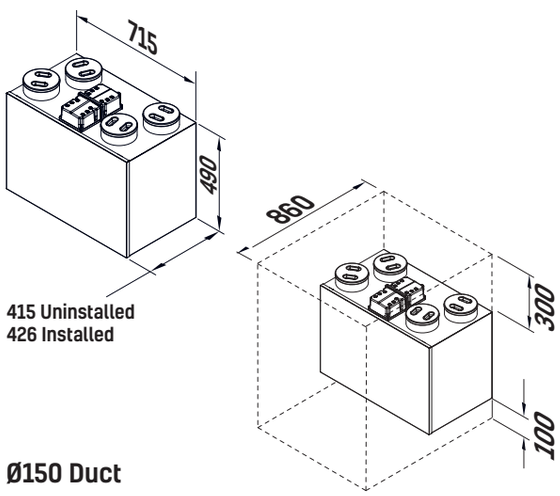


Connection at Unit

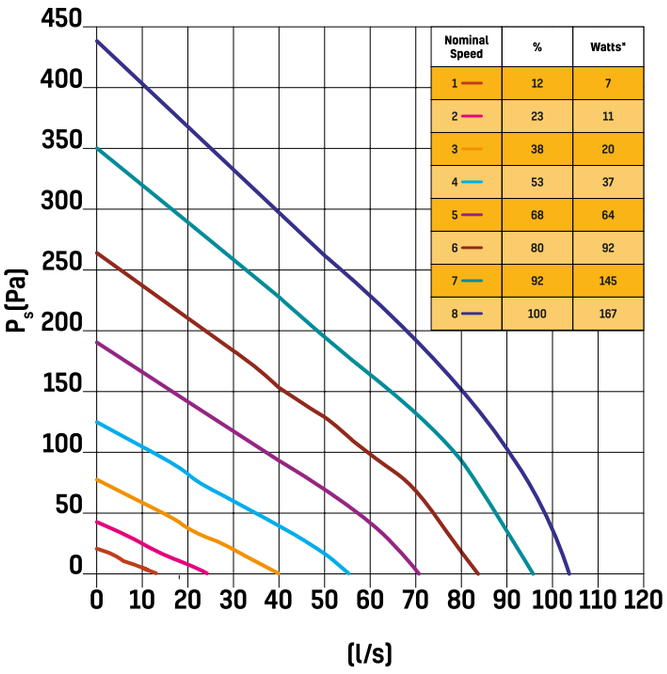


Connection at Indicator

DIMENSIONS (mm)



PERFORMANCE



Combining extremely low power consumption & a highly efficient heat exchanger

TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m^3/h)	103 (370)
HEAT EXCHANGER	Counter Flow (Plastic)
EFFICIENCY (%)	91
FANS	EC
SPECIFIC FAN POWER (w/l/s)	0.60
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	167
PROTECTION CLASS	IPX2
SUPPLY FILTER	ISO Coarse 45% (G3) / Optional ISO Coarse 65% (G4)
EXTRACT FILTER	ISO Coarse 45% (G3) / Optional ISO Coarse 65% (G4)
SPIGOT (mm)	150
DIMENSIONS (mm)	715 x 490 x 415
WEIGHT (kg)	24
ErP RATING	A

ENERGISAVA 325 PRODUCT CHARACTERISTICS DATABASE (SAP 2012)

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)	HEAT RECOVERY EFFICIENCY (%)
+ 1 additional wet room	0.60	91
+ 2 additional wet rooms	0.62	90
+ 3 additional wet rooms	0.72	89
+ 4 additional wet rooms	0.88	88
+ 5 additional wet rooms	1.06	87
+ 6 additional wet rooms	1.30	87

SOUND DATA

					SOUND POWER LEVELS (Lw dB(A))									SPL/Casing Breakout
					Frequency (Hz)									
Unit Setting	Flow (m^3/h)	Flow (l/s)	Mode	RPM	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOTAL dB(A)	dB(A) @ 3m
1	Max	Max	Extract	2917	36.8	41.1	51.7	50.4	51.6	50.0	37.8	24.4	57.0	36.46
			Supply	2949	39.1	52.5	65.2	68.4	64.7	63.6	53.5	38.3	72.0	51.46
			Breakout	2961	44.9	52.3	64.5	68.0	63.3	62.5	54.6	37.8	71.0	50.46
2	75.60	21.00	Extract	1586	27.2	31.3	41.0	33.7	36.8	36.5	30.6	22.7	44.0	23.46
			Supply	1590	30.1	38.3	49.0	46.7	47.0	44.6	31.8	23.2	53.0	32.46
			Breakout	1580	26.8	40.1	45.9	46.6	45.6	43.8	32.8	22.9	52.0	31.46

All sound measurements are hemispherical. For spherical figures, subtract 3dB from the value.

ORDER CODES

CODE(S)	DESCRIPTION
ESAVA325	energiSava® 325 Standard
ESAVA325-L	energiSava® 325 Standard - left hand

Link to Specification visit: **envirovent.com/specs**

...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim**

...Or Scan Me

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
SWH-ES325/500	Hard-wired LED status indicator
AVMT-ES325	Anti-Vibration Mount for use with the ESAVA325
FILTER-G3-ES325	1 Pair of ISO Coarse 45% (G3) filters
FILTER-G4-ES325	1 Pair of ISO Coarse 65% (G4) filters

CONSULTANTS SPECIFICATION

SPECIFICATION

A Mechanical Ventilation System with Heat Recovery (MVHR) shall be supplied and installed suitable for installation in a utility room or loft space. The system shall be suitable for use in mid to large-sized houses with kitchen plus up to six wet rooms and designed primarily for new build and major renovations.

- The unit shall be the energiSava 325 by EnviroVent and shall be capable of being installed vertically on walls with the use of the quick fit mounting bracket.
- The unit shall incorporate Ø150 extract and supply spigots to connect easily to Ø150mm round ducting.
- The unit shall be fully insulated to provide excellent thermal and acoustic performance.
- The MVHR shall incorporate low watt EC motor technology with sealed for life ball bearings designed to operate continuously at a pre-set background rate and deliver the lowest possible SFP.
- The MVHR shall incorporate a high efficiency counter flow cell capable of up to 91% thermal efficiency. The heat exchanger shall be protected by plug out/plug in ISO Coarse 45% (G3) filters on the extract and supply inlets, with optional ISO Coarse 65% (G4) filters as per the specification, which shall be designed for quick and easy maintenance via the front filter panels.
- The MVHR shall incorporate a Summer Kickup mode to allow both the supply and extract fans to operate at full speed whenever the Summer Bypass is activated.
- The MVHR shall be available with anti-vibration mounts to further reduce any low levels of vibration (AVMT-ES325).
- The unit shall be supplied complete with drain connection.
- The MVHR shall be supplied with a 3 year warranty which starts from the day of delivery.
- The MVHR shall be the ESAVA325 by EnviroVent and shall be SAP PCDB listed.
- The MVHR shall be ErP grade A, CE Certified and manufactured in accordance with BS EN ISO 9001 and BS EN ISO 14001.

OPERATION

The MVHR shall be installed in accordance with the specified drawings with reference to the schedule of works in the specifications. The airflow shall meet the Building Regulations Approved Document F: Ventilation for System 4, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010.

The MVHR shall extract stale, moisture-laden air from the wet rooms of the property (the kitchen, bathroom, ensuite and utility room). This moist air shall pass over the heat exchanger before being ducted to atmosphere. Simultaneously, filtered fresh air shall be drawn into the unit from outside and the energy from the extracted air shall be transferred to the new fresh air through the high efficiency heat exchange cell before being delivered through supply vents into the property to the habitable rooms (living room, bedrooms). The extracted air shall also be filtered by the ISO Coarse 45% (G3) filter before it enters the heat exchange cell.

- The MVHR shall be supplied with a hard-wired LED status indicator to display the mode of operation, including a filter and fault indicator.

100% Automatic Integral Mechanical Bypass

- A 100% automatic and integral mechanical bypass shall be incorporated as standard. The summer bypass shall divert stale air being extracted around the heat cell so that the heat is not transferred to the fresh filtered air being supplied to the property.

Stepped Reduction Intelligent Frost Protection

- Shall be incorporated as standard to reduce the supply ventilation rate to prevent to formation of ice build-up within the heat cell.

Summer Kickup Mode

- Shall allow both the supply and extract fans to operate at full speed whenever the Summer Bypass is activated.

CONTROL OPTIONS

All versions shall have the facility to change the speed and airflow rate according to one of the following control functions:

Integral humidity sensor

Shall be incorporated as standard to monitor the relative humidity of the extracted air. When the relative humidity rises above the set trigger point, variable from 55 RH to 85 RH, it increases the airflow proportionately to ensure minimum noise levels.

Volt-free one-way switch

Shall be incorporated such as an external sensor (PIR, thermostat, standard one-way switch) and will activate boost.

ENERGISAVA® 400

Kitchen +6 Wet Rooms

Medium - Large M L Dwelling

High Efficiency Whole House Heat Recovery Systems

ABOUT

The energiSava® 400 series is ideal for residential properties to provide a constant supply of clean, tempered air and maintain stable humidity levels. With a maximum airflow capacity of 400m³/h respectively, they are available in left-handed and right-handed versions with a range of options for connecting the ducts. In addition to the comprehensive standard version, a 'Plus version' is also available which offers additional connection options, such as a CO_2 sensor.

APPLICATION

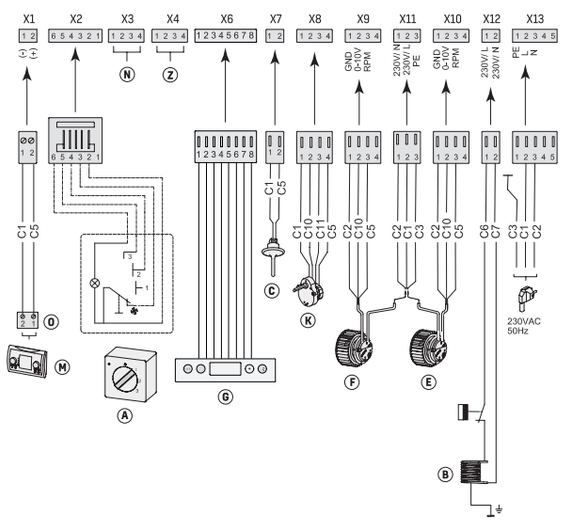
Wall | Floor

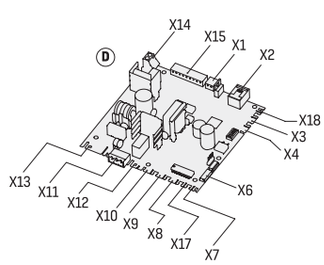
KEY FEATURES

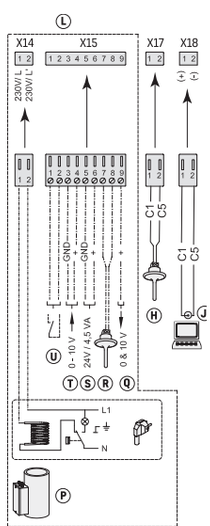
- Low Specific Fan Power (SFP) of 0.61 W/l/s and high thermal efficiency of 89%
- Constant flow technology to deliver the required airflow at all times
- 100% automatic integral mechanical bypass with no reduction in airflow
- 4-way hard-wired switch to indicate the mode of operation and filter change indicator
- Pre-heater to warm the incoming air when the temperature falls below 5°C
- 'Plus' version available for additional 0-10V or volt-free connection options, such as a CO_2 sensor
- Left or right-hand configurations
- Passive Haus Certified

WIRING DIAGRAM

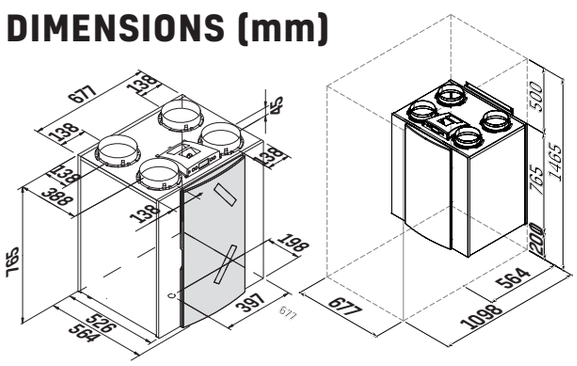
Wall & Floor



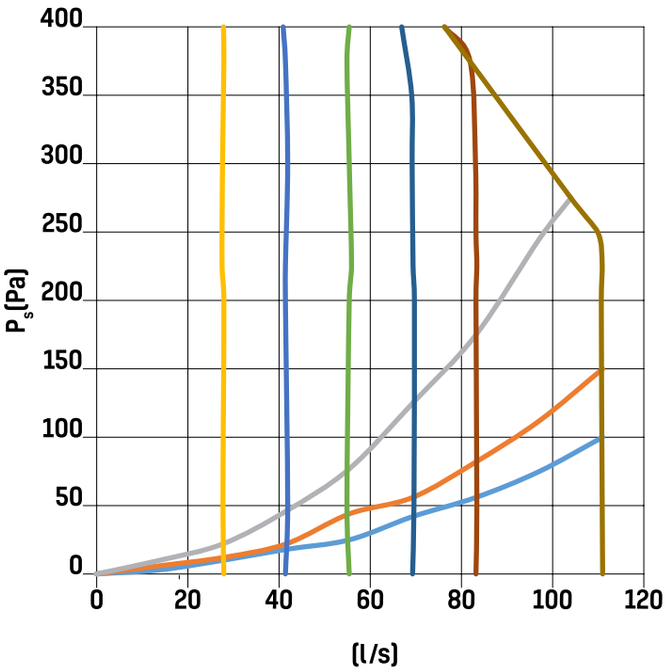




DIMENSIONS (mm)



PERFORMANCE



'CONSTANT FLOW' technology ensures maximum efficiency and that the **commissioned airflow rate is always delivered despite any resistance encountered**

TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m³/h)	111 (400)
HEAT EXCHANGER	Counter Flow (Plastic)
EFFICIENCY (%)	89
FANS	EC
SPECIFIC FAN POWER (w/l/s)	0.61
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	98
PROTECTION CLASS	IP30
SUPPLY FILTER	ISO Coarse 45% (G3) / Optional EPM1 50% (F7)
EXTRACT FILTER	ISO Coarse 45% (G3) / Optional EPM1 50% (F7)
SPIGOT (mm)	180
DIMENSIONS (mm)	754 x 677 x 564
WEIGHT (kg)	38
ErP RATING	A+

ENERGISAVA 400 PRODUCT CHARACTERISTICS DATABASE (SAP 2012)

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)	HEAT RECOVERY EFFICIENCY (%)
+ 1 additional wet room	0.63	89
+ 2 additional wet rooms	0.61	89
+ 3 additional wet rooms	0.66	87
+ 4 additional wet rooms	0.74	86
+ 5 additional wet rooms	0.84	85
+ 6 additional wet rooms	0.95	84

SOUND DATA

					SOUND POWER LEVELS (Lw dB(A))									SPL/Casing Breakout
					Frequency (Hz)									
Unit Setting	Flow (m^3/h)	Flow (l/s)	Pressure (Pa)	Mode	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOTAL dB(A)	dB(A) @ 3m
1	400.00	111.11	150.00	Extract	48.7	50.3	55.9	54.0	54.4	44.3	40.2	36.7	54.5	33.96
				Supply	57.7	63.4	68.1	70.1	63.9	62.9	55.6	47.0	70.5	49.96
				Breakout	47.6	52.7	62.4	59.2	45.9	45.0	38.4	23.9	59.0	38.46
			225.00	Extract	52.6	50.9	57.2	58.9	47.4	46.3	41.7	38.2	57.0	36.46
				Supply	57.7	63.6	67.0	71.6	65.2	64.0	56.6	48.5	71.5	50.96
				Breakout	46.6	52.8	61.0	60.6	46.7	45.5	38.8	24.7	59.0	38.46
2	300.00	83.33	84.00	Extract	45.2	43.3	56.1	49.1	40.2	39.0	34.2	28.3	51.0	30.46
				Supply	54.6	59.3	65.5	65.3	59.2	57.6	50.1	39.6	66.0	45.46
				Breakout	42.6	47.4	63.3	53.5	40.8	39.2	32.8	32.8	17.4	-3.14
			175.00	Extract	45.9	46.6	54.1	53.3	43.0	41.5	36.2	30.7	53.0	32.46
				Supply	54.9	60.2	69.4	67.0	61.0	59.3	51.7	42.2	68.5	47.96
				Breakout	46.1	48.7	60.5	55.4	42.1	40.6	34.1	34.1	19.2	-1.34
			240.00	Extract	49.9	47.8	56.0	51.9	45.5	44.4	39.0	33.7	54.0	33.46
				Supply	55.3	61.3	65.6	68.1	62.0	60.7	53.0	44.3	68.5	47.96
				Breakout	46.2	51.3	60.9	56.4	43.7	42.1	35.3	35.3	21.1	0.56
3	225.00	62.50	47.00	Extract	42.2	41.4	49.8	41.9	33.2	31.3	25.5	17.5	43.5	22.96
				Supply	50.5	55.6	61.0	60.2	53.2	51.2	43.3	30.7	60.5	39.96
				Breakout	42.2	42.9	56.4	47.3	33.8	31.9	25.2	12.7	48.5	27.96
			100.00	Extract	42.9	43.3	54.7	43.5	36.6	34.4	28.4	20.6	47.5	26.96
				Supply	51.5	55.9	61.1	62.2	55.7	53.1	45.0	33.7	62.5	41.96
				Breakout	42.3	42.6	55.8	48.8	35.7	33.4	26.6	11.5	50.0	29.46
4	200.00	55.56	38.00	Extract	41.9	40.5	48.0	38.5	29.8	27.7	20.3	12.5	40.5	19.96
				Supply	48.8	53.4	58.2	56.8	49.4	47.3	38.0	25.0	57.0	36.46
				Breakout	35.4	43.9	55.1	44.0	30.3	28.7	20.6	12.2	46.5	25.96
			80.00	Extract	42.4	40.2	47.2	40.1	32.7	30.3	23.6	15.8	41.5	20.96
				Supply	49.3	53.7	59.1	59.0	51.7	49.3	40.7	28.6	59.0	38.46
				Breakout	40.2	41.2	56.4	45.8	32.1	30.0	22.5	8.6	48.0	27.46
5	100.00	27.78	9.00	Extract	37.3	30.7	30.4	31.1	20.0	10.4	4.8	7.1	29.5	8.96
				Supply	42.5	45.8	43.4	42.7	34.5	29.2	16.9	9.5	42.5	21.96
				Breakout	38.8	39.6	34.9	31.3	17.9	15.3	8.9	11.6	31.5	10.96
			40.00	Extract	35.6	37.4	34.2	32.9	23.1	17.5	8.2	7.1	32.5	11.96
				Supply	44.1	49.6	48.5	47.4	39.6	35.6	24.6	12.0	47.5	26.96
				Breakout	38.3	35.9	39.0	34.8	20.2	16.5	9.4	8.4	34.5	13.96

All sound measurements are hemispherical. For spherical figures, subtract 3dB from the value.

ORDER CODES

CODE(S)	DESCRIPTION
ESAVA400-R	energiSava® 400 Standard
ESAVA400P-R	energiSava® 400 Plus - left hand
ESAVA400-L	energiSava® 400 Standard - left hand
ESAVA400P-L	energiSava® 400 Plus - left hand

Link to Specification visit: **envirovent.com/specs**

...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim**

...Or Scan Me

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
SWHBKRFSET-4	4 way remote control switch and receiver
SWHBKRFSET-2	2 way remote control switch and receiver
SWHBKRF-4	4 way remote control switch
SWHBKRF-2	2 way remote control switch
SWHBK-4W	4 way wired switch with filter indication
SENSORBK-H	Humidity sensor, duct mounted
SENSORBK-CO2	CO_2 sensor (PLUS versions only)
FILTER-ES3/400-G3	2 x ISO Coarse 45% (G3) filters
FILTER-ES3/400-G4/F7	ISO Coarse 65% (G4) / EPM1 50% (F7)

CONSULTANTS SPECIFICATION

SPECIFICATION

A Mechanical Ventilation System with Heat Recovery (MVHR) shall be supplied and installed suitable for installation in a utility room or kitchen. The system shall be suitable for use in mid to large-sized houses with kitchen plus up to six wet rooms and designed primarily for new build and major renovations.

- The unit shall be the energiSava® 400 by EnviroVent and shall be capable of being installed vertically on walls.
- The unit shall incorporate Ø180 extract and supply spigots.
- The unit shall operate through constant flow technology to ensure maximum efficiency and that the commissioned airflow rate is always delivered despite any resistance encountered in the ductwork or filters. The constant flow control system shall also ensure that commissioning is carried out quickly and easily.
- The unit shall be fully insulated to provide excellent thermal and acoustic performance.
- The MVHR shall incorporate low watt EC motor technology with sealed for life ball bearings designed to operate continuously at a pre-set background rate and deliver the lowest possible SFP.
- The MVHR shall incorporate a high efficiency counter flow cell capable of up to 89% thermal efficiency. The heat exchanger shall be protected by plug out/plug in ISO Coarse 45% (G3) filters on the extract and ISO Coarse 65% (G4) or EPM1 50% (F7) filters on the supply inlet, as per the specification, which shall be designed for quick and easy maintenance via the front access panel.
- The MVHR shall incorporate a pre-heater to warm the incoming air on cooler days when the temperature falls below 5°C.
- The unit shall be supplied complete with a 32mm drain connection.
- The MVHR shall be available in left or right hand configurations.
- The MVHR shall be supplied with a 2 year warranty on parts and 5 year warranty on the heat exchanger which starts from the day of delivery.
- The MVHR shall be the ESAVA400 by EnviroVent and shall be SAP PCDB listed.
- The MVHR shall be ErP grade A, (A+ when more than 2 sensors are included) CE Certified and manufactured in accordance with BS EN ISO 9001 and BS EN ISO 14001.
- The MVHR shall be Passive House Certified

OPERATION

The MVHR shall be installed in accordance with the specified drawings with reference to the schedule of works in the specifications. The airflow shall meet the Building Regulations Approved Document F: Ventilation for System 4, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010.

The MVHR shall extract stale, moisture-laden air from the wet rooms of the property (the kitchen, bathroom, ensuite and utility room). This moist air shall pass over the heat exchanger before being ducted to atmosphere. Simultaneously, filtered fresh air shall be drawn into the unit from outside and the energy from the extracted air shall be transferred to the new fresh air through the high efficiency heat exchange cell before being delivered through supply vents into the property to the habitable rooms (living room, bedrooms). The extracted air shall also be filtered by the ISO Coarse 45% (G3) filter before it enters the heat exchange cell.

The unit shall be capable of varying its speed and airflow rate by receiving signals from one of the following:

- 4 way remote control switch and receiver
- 2 way remote control switch and receiver
- 4 way wired switch with filter indicator
- Through a duct mounted humidity sensor

When these signals are received, the fan shall change the airflow rate to boost mode (manually via hard-wired control).

Using the intelligent digital display panel, the unit shall allow the commissioning of the extract and supply airflows to have fully variable speed control to set the minimum and maximum rates.

CONTROL OPTIONS

All versions shall have the facility to change the speed and airflow rate according to one of the following control functions:

100% Automatic Integral Mechanical Bypass With No Reduction In Airflow

A 100% automatic and integral mechanical bypass with no reduction in airflow shall be incorporated as standard. The bypass damper shall operate automatically through an actuator allowing the air to route around the heat exchange cell to minimise overheating.

4-way hard wired switch with filter indicator

A hard-wired control switch incorporating a filter change indicator shall be supplied as standard and shall clearly indicate the mode of operation.

OPTIONAL ENERGISAVA 400 PLUS VERSION

The ESAVA400P shall also be available in a left or right handed version with all of the above features including the addition of two further 0-10V or volt free connection options (programmed on the unit), such as a CO_2 sensor. It shall also have the option of a post heater.

ENERGISAVA® 500

Kitchen +7 Wet Rooms

Medium - Large M L Dwelling

Ultra Efficient Whole House Heat Recovery System

ABOUT

Ideal for large sized dwellings, the energiSava® 500 combines exceptional performance and the lowest energy consumption. Highly effective at reducing indoor pollutants and improving indoor air quality, the unit runs continuously to provide optimum ventilation all year round.

APPLICATION

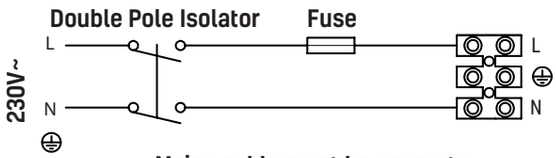
Wall | Floor

KEY FEATURES

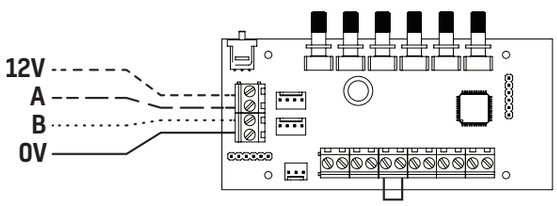
- Exceptionally low Specific Fan Power (SFP) of 0.43 W/l/s and high thermal efficiency of 90%
- 100% automatic integral mechanical bypass with no reduction in airflow
- Integral humidity sensor
- Stepped reduction intelligent frost protection
- Hard-wired LED status indicator
- Summer kick-up mode for increased airflow
- 3 year warranty

WIRING DIAGRAM

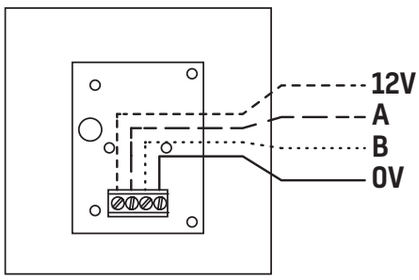
Wall & Floor



Mains cable must be separate from the communication cables. See Important Information.

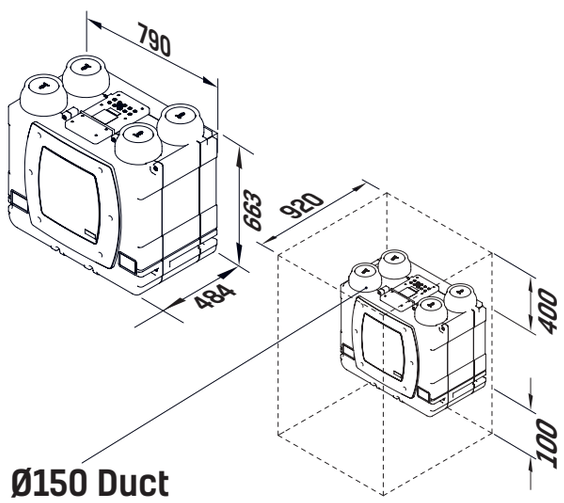


Connection at Unit

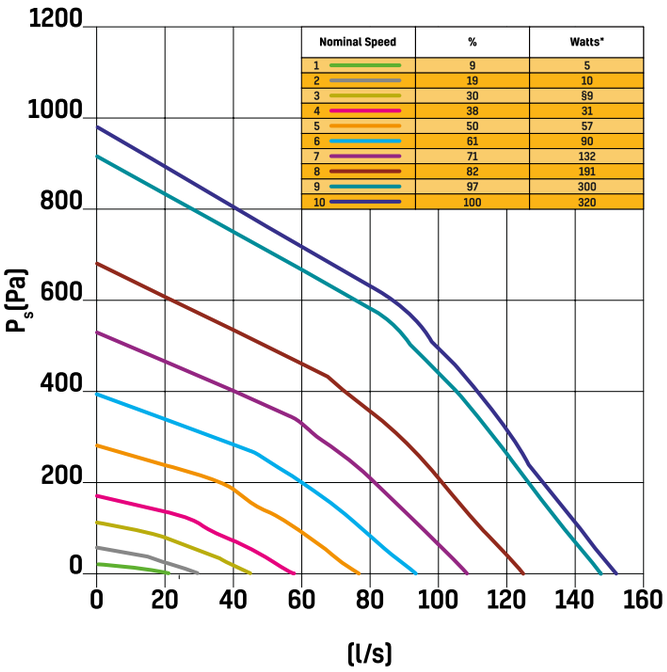


Connection at Indicator

DIMENSIONS (mm)



PERFORMANCE



Extremely low Specific Fan Power down to 0.43 W/l/s and high thermal efficiency of up to 90%

TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m³/h)	150 (540)
HEAT EXCHANGER	Counter Flow (Plastic)
EFFICIENCY (%)	90
FANS	EC
SPECIFIC FAN POWER (w/l/s)	0.43
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	320
PROTECTION CLASS	IPX2
SUPPLY FILTER	ISO Coarse 65% (G4) / Optional EPM1 50% (F7)
EXTRACT FILTER	ISO Coarse 65% (G4) / Optional EPM1 50% (F7)
SPIGOT (mm)	150
DIMENSIONS (mm)	790 x 663 x 484
WEIGHT (kg)	18
ErP RATING	A

SAP APPENDIX Q PERFORMANCE

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)	HEAT RECOVERY EFFICIENCY (%)
+ 1 additional wet room	0.43	90
+ 2 additional wet rooms	0.46	88
+ 3 additional wet rooms	0.54	87
+ 4 additional wet rooms	0.65	86
+ 5 additional wet rooms	0.79	85
+ 6 additional wet rooms	0.96	84
+ 7 additional wet rooms	1.16	83

SOUND DATA

					SOUND POWER LEVELS (Lw dB(A))									SPL/Casing Breakout
					Frequency (Hz)									
Unit Setting	Flow (m^3/h)	Flow (l/s)	Pressure (Pa)	Mode	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOTAL dB(A)	dB(A) @ 3m
1	43.20	12.00	2.00	Extract	25.0	26.0	28.0	18.0	17.0	14.0	19.0	23.0	33.0	18.00
				Supply	28.0	30.0	33.0	31.0	25.0	18.0	19.0	23.0	37.0	
				Breakout	0.0	19.0	31.0	30.0	29.0	21.0	18.0	21.0	35.0	
2	122.40	34.00	3.00	Extract	23.0	37.0	39.0	30.0	28.0	17.0	19.0	23.0	42.0	29.00
				Supply	29.0	52.0	47.0	45.0	40.0	30.0	20.0	23.0	54.0	
				Breakout	0.0	21.0	41.0	43.0	38.0	28.0	18.0	21.0	46.0	
3	201.60	56.00	12.00	Extract	24.0	40.0	48.0	39.0	39.0	28.0	20.0	23.0	49.0	35.00
				Supply	36.0	51.0	63.0	54.0	50.0	44.0	33.0	25.0	64.0	
				Breakout	11.0	34.0	48.0	46.0	48.0	39.0	26.0	21.0	51.0	
4	270.00	75.00	27.00	Extract	30.0	44.0	51.0	47.0	46.0	37.0	28.0	24.0	54.0	40.00
				Supply	43.0	55.0	67.0	65.0	57.0	53.0	44.0	36.0	70.0	
				Breakout	12.0	30.0	46.0	55.0	53.0	48.0	38.0	24.0	58.0	
5	342.00	95.00	44.00	Extract	35.0	49.0	58.0	52.0	50.0	44.0	36.0	29.0	60.0	45.00
				Supply	49.0	59.0	78.0	69.0	63.0	59.0	51.0	43.0	79.0	
				Breakout	22.0	33.0	56.0	59.0	57.0	54.0	43.0	30.0	63.0	
6	424.80	118.00	55.00	Extract	39.0	52.0	55.0	59.0	55.0	48.0	42.0	36.0	62.0	49.00
				Supply	52.0	63.0	69.0	78.0	68.0	64.0	56.0	49.0	79.0	
				Breakout	31.0	36.0	50.0	65.0	60.0	58.0	49.0	35.0	67.0	
7	500.40	139.00	80.00	Extract	47.0	56.0	58.0	63.0	58.0	52.0	47.0	41.0	66.0	55.00
				Supply	56.0	66.0	71.0	88.0	72.0	68.0	61.0	54.0	88.0	
				Breakout	27.0	41.0	52.0	72.0	63.0	61.0	54.0	40.0	73.0	
8	518.40	144.00	100.00	Extract	52.0	56.0	59.0	60.0	60.0	53.0	48.0	42.0	65.0	54.00
				Supply	59.0	67.0	72.0	86.0	75.0	69.0	63.0	55.0	87.0	
				Breakout	42.0	40.0	52.0	70.0	65.0	62.0	55.0	41.0	72.0	

All sound measurements are hemispherical. For spherical figures, subtract 3dB from the value.

ORDER CODES

CODE(S)	DESCRIPTION
ESAVA500	energiSava® 500 Standard

Link to Specification visit: **envirovent.com/specs**

...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim**

...Or Scan Me

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
SWH-ES325/500	Hard-wired LED status indicator
AVMT-ES500	Anti-Vibration Mount for use with the ESAVA500
SWHT-BOOST-M	Momentary boost switch
SWHT-BOOST-L	Latching boost switch
SWHT-BOXRELAY	Relay Box
FILTER-G4-ES500	1 Pair of ISO Coarse 65% (G4) filters
FILTER-G4/F7-ES500	ISO Coarse 65% (G4) / EPM1 50% (F7) filters

CONSULTANTS SPECIFICATION

SPECIFICATION

A Mechanical Ventilation System with Heat Recovery (MVHR) shall be supplied and installed suitable for installation in a utility room or loft space. The system shall be suitable for use in larger-sized houses with kitchen plus up to six wet rooms and designed primarily for new build and major renovations.

- The unit shall be the energiSava 500 by EnviroVent and shall be capable of being installed vertically on walls with the use of the quick fit mounting bracket.
- The unit shall incorporate Ø150 extract and supply spigots to connect easily to Ø150mm round ducting.
- The unit shall be fully insulated to provide excellent thermal and acoustic performance.
- The MVHR shall incorporate low watt EC motor technology with sealed for life ball bearings designed to operate continuously at a pre-set background rate and deliver the lowest possible SFP.
- The MVHR shall incorporate a high efficiency counter flow cell capable of up to 90% thermal efficiency. The heat exchanger shall be protected by plug out/plug in ISO Coarse 65% (G4) filters on the extract and supply inlets, with optional EPM1 50% (F7) filters as per the specification, which shall be designed for quick and easy maintenance via the front panel.
- The MVHR shall incorporate a Summer Kickup mode to allow both the supply and extract fans to operate at full speed whenever the Summer Bypass is activated.
- The MVHR shall be available with anti-vibration bracket to further reduce any low levels of vibration.
- The unit shall be supplied complete with a 21.5mm drain connection.
- The MVHR shall be supplied with a 3 year warranty which starts from the day of delivery.
- The MVHR shall be the ESAVA500 by EnviroVent and shall be SAP PCDB listed.
- The MVHR shall be ErP grade A, CE Certified and manufactured in accordance with BS EN ISO 9001 and BS EN ISO 14001.

OPERATION

The MVHR shall be installed in accordance with the specified drawings with reference to the schedule of works in the specifications. The airflow shall meet the Building Regulations Approved Document F: Ventilation for System 4, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010.

The MVHR shall extract stale, moisture-laden air from the wet rooms of the property (the kitchen, bathroom, ensuite and utility room). This moist air shall pass over the heat exchanger before being ducted to atmosphere. Simultaneously, filtered fresh air shall be drawn into the unit from outside and the energy from the extracted air shall be transferred to the new fresh air through the high efficiency heat exchange cell before being delivered through supply vents into the property to the habitable rooms (living room, bedrooms). The extracted air shall also be filtered by the ISO Coarse 65% (G4) filter before it enters the heat exchange cell.

The MVHR shall be supplied with a hard-wired LED status indicator to display the mode of operation, including a filter and fault indicator.

100% Automatic Integral Mechanical Bypass

A 100% automatic and integral mechanical bypass shall be incorporated as standard. The summer bypass shall divert stale air being extracted around the heat cell so that the heat is not transferred to the fresh filtered air being supplied to the property.

Stepped Reduction Intelligent Frost Protection

Shall be incorporated as standard to reduce the supply ventilation rate to prevent to formation of ice build-up within the heat cell.

Summer Kickup Mode

Shall allow both the supply and extract fans to operate at full speed whenever the Summer Bypass is activated.

CONTROL OPTIONS

All versions shall have the facility to change the speed and airflow rate according to one of the following control functions:

Integral humidity sensor

Shall be incorporated as standard to monitor the relative humidity of the extracted air. When the relative humidity rises above the set trigger point, variable from 55 RH to 85 RH, it increases the airflow proportionately to ensure minimum noise levels.

Volt-free one-way switch

Shall be incorporated such as an external sensor (PIR, thermostat, standard one-way switch) and will activate boost.

SLIMLINE 150

Kitchen +3 Wet Rooms

Small - Medium S M Dwelling

Ultra Efficient Whole House Heat Recovery System

ABOUT

The high-efficiency EnviroVent Slimline 150 is ideal for ceiling mounted applications such as care homes and student accommodation to provide optimum ventilation. It can also be wall mounted using the supplied brackets. With a height of just 200mm, the low profile and compact design is perfect for installations where space is restricted. For renovation projects, the Slimline 150 offers an excellent choice for smaller dwellings and can be installed in areas such as above suspended ceilings in the central hallway of an apartment.

APPLICATION

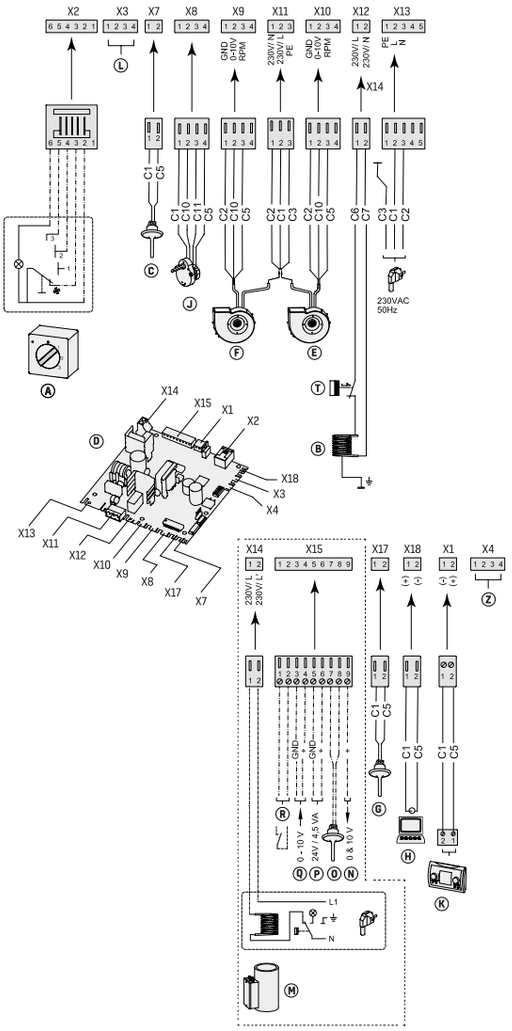
Wall | Ceiling

KEY FEATURES

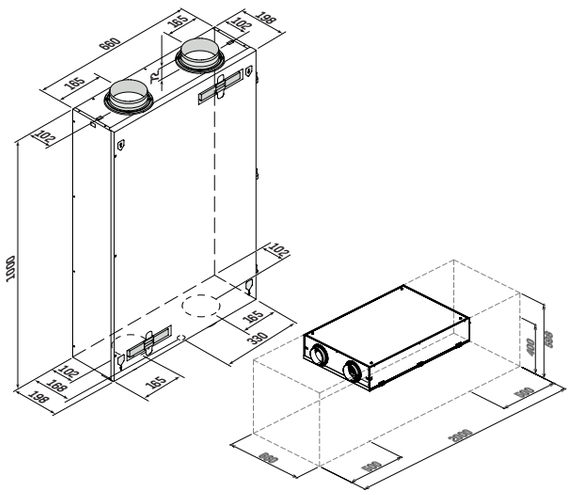
- Low Specific Fan Power (SFP) of 0.75 W/l/s and high thermal efficiency of up to 88%
- 100% automatic integral mechanical bypass with no reduction in airflow
- Intelligent frost protection
- Intelligent control module as standard
- Left or right-hand configurations
- 2 year warranty
- Passive Haus Certified

WIRING DIAGRAM

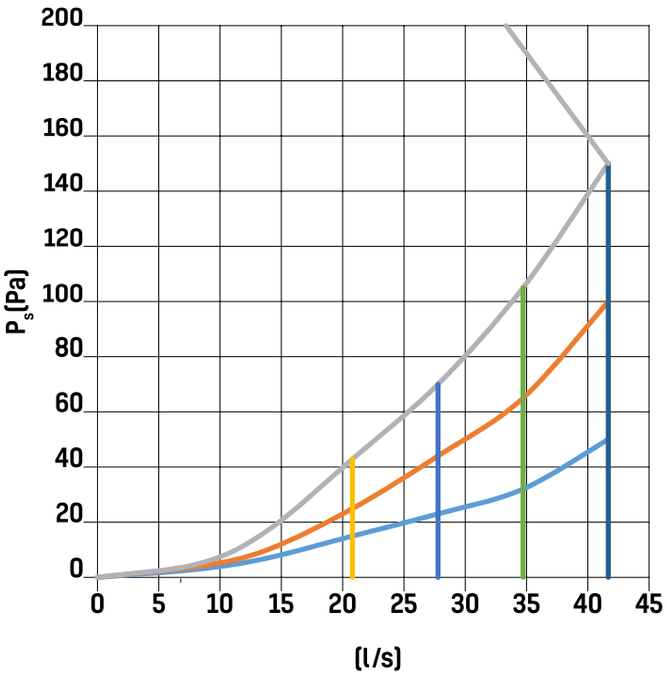
Wall & Ceiling



DIMENSIONS (mm)



PERFORMANCE



A 'Plus' version is also available featuring additional connection options such as a CO_2 sensor.

TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m^3/h)	42 (150)
HEAT EXCHANGER	Counter Flow (Plastic)
EFFICIENCY (%)	88
FANS	EC
SPECIFIC FAN POWER (w/l/s)	0.75
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	95
PROTECTION CLASS	IP30
SUPPLY FILTER	ISO Coarse 65% (G4) / Optional EPM1 50% (F7)
EXTRACT FILTER	ISO Coarse 65% (G4)
SPIGOT (mm)	125
DIMENSIONS (mm)	1000 x 660 x 198
WEIGHT (kg)	37
ErP RATING	A

SAP APPENDIX Q PERFORMANCE

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)	HEAT RECOVERY EFFICIENCY (%)
+ 1 additional wet room	0.75	88
+ 2 additional wet rooms	0.86	85
+ 3 additional wet rooms	1.04	84

SOUND DATA

				SOUND POWER LEVELS (Lw dB(A))	SPL/Casing Breakout
				Frequency (Hz)	
Flow (m^3/h)	Flow (l/s)	Pressure (Pa)	Mode	TOTAL dB(A)	dB(A) @ 3m
45.00	12.50	10.00	Extract	27.0	6.46
			Supply	41.0	20.46
			Breakout	24.0	3.46
		50.00	Extract	36.0	15.46
			Supply	49.0	28.46
			Breakout	33.0	12.46
		100.00	Extract	42.0	21.46
			Supply	58.0	37.46
			Breakout	39.0	18.46
75.00	20.83	25.00	Extract	34.0	13.46
			Supply	50.0	29.46
			Breakout	33.0	12.46
		50.00	Extract	37.0	16.46
			Supply	53.0	32.46
			Breakout	35.0	14.46
		150.00	Extract	42.0	21.46
			Supply	57.0	36.46
			Breakout	40.0	19.46
105.00	29.17	50.00	Extract	40.0	19.46
			Supply	57.0	36.46
			Breakout	38.0	17.46
		100.00	Extract	43.0	22.46
			Supply	60.0	39.46
			Breakout	41.0	20.46
150.00	41.67	50.00	Extract	46.0	25.46
			Supply	62.0	41.46
			Breakout	44.0	23.46
		100.00	Extract	47.0	26.46
			Supply	64.0	43.46
			Breakout	45.0	24.46

All sound measurements are hemispherical. For spherical figures, subtract 3dB from the value.

ORDER CODES

CODE(S)	DESCRIPTION
SL150	Slimline 150 Standard
SL150P	Slimline 150 Plus

Link to Specification visit: **envirovent.com/specs**

...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim**

...Or Scan Me

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
SWHBKRFSET-4	4 way remote control switch and receiver
SWHBKRFSET-2	2 way remote control switch and receiver
SWHBKRF-4	4 way remote control switch
SWHBKRF-2	2 way remote control switch
SWHBK-4W	4 way wired switch with filter indication
SENSORBK-H	Humidity sensor, duct mounted
SENSORBK-CO2	CO_2 sensor (PLUS version only)
FILTER-SL-G4	2 x ISO Coarse 65% (G4) filters
FILTER-SL-G4/F7	ISO Coarse 65% (G4) / EPM1 50% (F7) filters
SL150-DBOX	Low profile distribution box

CONSULTANTS SPECIFICATION

SPECIFICATION

A Mechanical Ventilation System with Heat Recovery (MVHR) shall be supplied and installed suitable for installation in ceiling mounted or wall mounted applications. The system shall be suitable for use in small to mid-sized applications with kitchen plus up to three wet rooms and designed primarily for new build and major renovations.

- The unit shall be the Slimline 150 by EnviroVent and shall be capable of being installed vertically on walls or horizontally on ceilings.
- The unit shall incorporate Ø125 extract and supply spigots to connect easily to Ø125mm round ducting.
- The unit shall operate through constant flow technology to ensure maximum efficiency and that the commissioned airflow rate is always delivered despite any resistance encountered in the ductwork or filters. The constant flow control system shall also ensure that commissioning is carried out quickly and easily.
- The unit shall be fully insulated to provide excellent thermal and acoustic performance.
- The MVHR shall incorporate low watt EC motor technology with sealed for life ball bearings designed to operate continuously at a pre-set background rate and deliver the lowest possible SFP.
- The MVHR shall incorporate a high efficiency counter flow cell capable of up to 88% thermal efficiency. The heat exchanger shall be protected by plug out/plug in in ISO Coarse 65% (G4) filters on the extract and supply inlets, with the option of an EPM1 50% (F7) filter as per the specification, which shall be designed for quick and easy maintenance.
- The MVHR shall be designed to be low profile and compact in its design to enable ease of installation in restricted spaces.
- The MVHR shall incorporate a pre-heater to warm the incoming air on cooler days when the temperature falls below 5°C.
- The unit shall be supplied complete with drain connection.
- The MVHR shall be supplied with a 2 year warranty on parts and 5 year warranty on the heat exchanger which starts from the day of delivery.
- The MVHR shall be the SL150 by EnviroVent and shall be SAP PCDB listed.
- The MVHR shall be ErP grade A, CE Certified and manufactured in accordance with BS EN ISO 9001 and BS EN ISO 14001.
- The MVHR shall be Passive House Certified

OPERATION

The MVHR shall be installed in accordance with the specified drawings with reference to the schedule of works in the specifications. The airflow shall meet the Building Regulations Approved Document F: Ventilation for System 4, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010.

The MVHR shall extract stale, moisture-laden air from the wet rooms of the property (the kitchen, bathroom, ensuite and utility room). This moist air shall pass over the heat exchanger before being ducted to atmosphere. Simultaneously, filtered fresh air shall be drawn into the unit from outside and the energy from the extracted air shall be transferred to the new fresh air through the high efficiency heat exchange cell before being delivered through supply vents into the property to the habitable rooms (living room, bedrooms). The extracted air shall also be filtered by the in ISO Coarse 65% (G4) filter before it enters the heat exchange cell.

The unit shall be capable of varying its speed and airflow rate by receiving signals from one of the following:

- Intelligent control module
- 4 way remote control switch and receiver
- 2 way remote control switch and receiver
- 4 way wired switch with filter indicator
- Through a duct mounted humidity sensor

When these signals are received, the fan shall change the airflow rate to boost mode (manually via hard-wired control)

Using the intelligent control module, the unit shall allow the commissioning of the extract and supply airflows to have fully variable speed control to set the minimum and maximum rates.

100% Automatic Integral Mechanical Bypass With No Reduction In Airflow

A 100% automatic and integral mechanical bypass with no reduction in airflow shall be incorporated as standard. The bypass damper shall operate automatically through an actuator allowing the air to route around the heat exchange cell to minimise overheating.

CONTROL OPTIONS

All versions shall have the facility to change the speed and airflow rate according to one of the following control functions:

Intelligent Remote Control Module

An intelligent hard-wired control module incorporating a filter change indicator shall be supplied as standard and shall clearly indicate the time, date, airflow rate and mode of operation.

OPTIONAL SLIMLINE 150 PLUS VERSION

The SL150P shall also be available with all the above features including the addition of two further 0-10V or volt free connection options (programmed on the unit), such as a CO_2 sensor.

SLIMLINE 300

Kitchen +6 Wet Rooms

Medium - Large M L Dwelling

Ultra Efficient Whole House Heat Recovery System

ABOUT

The high-efficiency EnviroVent Slimline 300 is ideal for ceiling mounted applications such as care homes and student accommodation to provide optimum ventilation. It can also be wall mounted using the supplied brackets. With a height of just 310mm, the low profile and compact design is perfect for installations where space is restricted. The Slimline 300 unit has a maximum airflow rate of 300 m^3/h and a high thermal efficiency heat exchanger up to 90% to improve indoor air quality and deliver optimum comfort.

APPLICATION

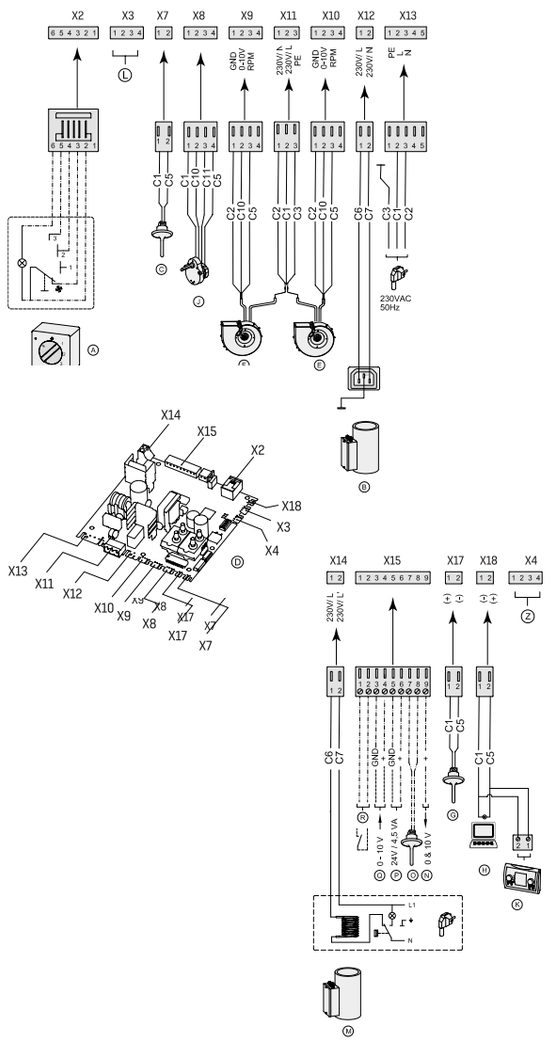
Wall | Ceiling

KEY FEATURES

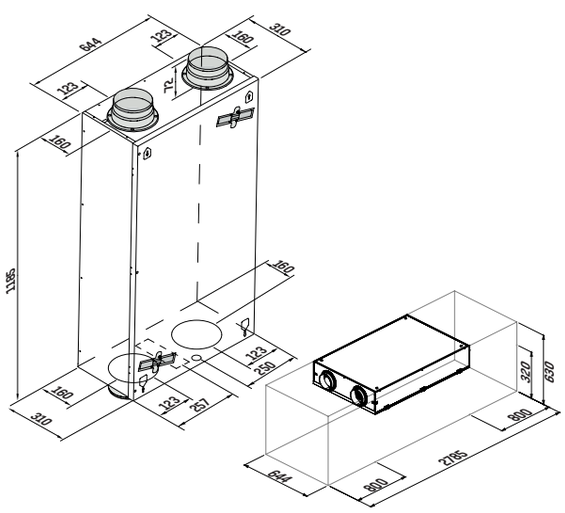
- Low Specific Fan Power (SFP) of 0.60 W/l/s and high thermal efficiency of up to 90%
- 100% automatic integral mechanical bypass with no reduction in airflow
- Intelligent frost protection
- Intelligent control module as standard
- Left or right-hand configurations
- 2 year warranty
- Passive Haus Certified

WIRING DIAGRAM

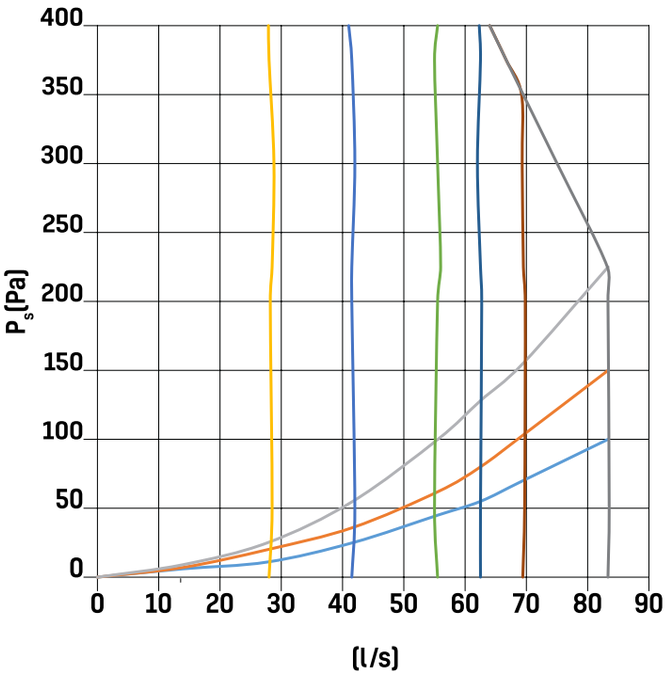
Wall & Ceiling



DIMENSIONS (mm)



PERFORMANCE



High maximum airflow rate of 300m³/h and a high thermal efficiency heat exchanger up to 90%

TECHNICAL DATA

MAXIMUM FLOW RATE L/S (m³/h)	83 (300)
HEAT EXCHANGER	Counter Flow (Plastic)
EFFICIENCY (%)	90
FANS	EC
SPECIFIC FAN POWER (w/l/s)	0.60
ELECTRICAL SUPPLY	230V / 1PH / 50Hz
MAX POWER CONSUMPTION (W)	205
PROTECTION CLASS	IP30
SUPPLY FILTER	ISO Coarse 65% (G4) / Optional EPM1 50% (F7)
EXTRACT FILTER	ISO Coarse 65% (G4)
SPIGOT (mm)	150/160
DIMENSIONS (mm)	1185 x 644 x 310
WEIGHT (kg)	37
ErP RATING	A+

SAP APPENDIX Q PERFORMANCE

EXHAUST TERMINAL CONFIGURATION - KITCHEN + ADDITIONAL WET ROOMS	SPECIFIC FAN POWER (w/l/s)	HEAT RECOVERY EFFICIENCY (%)
+ 1 additional wet room	0.60	90
+ 2 additional wet rooms	0.62	90
+ 3 additional wet rooms	0.71	87
+ 4 additional wet rooms	0.83	86
+ 5 additional wet rooms	0.97	85
+ 6 additional wet rooms	1.12	84

SOUND DATA

				SOUND POWER LEVELS (Lw dB(A)) Frequency (Hz)	SPL/Casing Breakout
Flow (m³/h)	Flow (l/s)	Pressure (Pa)	Mode	TOTAL dB(A)	dB(A) @ 3m
100.00	27.78	17.00	Extract	32.0	11.46
			Supply	43.0	22.46
			Breakout	29.0	8.46
		40.00	Extract	32.0	11.46
			Supply	44.0	23.46
			Breakout	30.0	9.46
150.00	41.67	38.00	Extract	41.0	20.46
			Supply	51.0	30.46
			Breakout	37.0	16.46
		80.00	Extract	43.0	22.46
			Supply	53.0	32.46
			Breakout	40.0	19.46
225.00	62.50	84.00	Extract	49.0	28.46
			Supply	60.0	39.46
			Breakout	46.0	25.46
		100.00	Extract	49.0	28.46
			Supply	61.0	40.46
			Breakout	46.0	25.46
		160.00	Extract	50.0	29.46
			Supply	62.0	41.46
			Breakout	47.0	26.46
300.00	83.33	150.00	Extract	55.0	34.46
			Supply	69.0	48.46
			Breakout	53.0	32.46
		178.00	Extract	55.0	34.46
			Supply	68.0	47.46
			Breakout	53.0	32.46

All sound measurements are hemispherical. For spherical figures, subtract 3dB from the value.

ORDER CODES

CODE(S)	DESCRIPTION
SL300	Slimline 300 Standard
SL300P	Slimline 300 Plus

Link to Specification visit: **envirovent.com/specs**

...Or Scan Me

Link to BIM /Revit Files visit: **envirovent.com/bim**

...Or Scan Me

OPTIONS & ANCILLARIES

CODE(S)	DESCRIPTION
SWHBKRFSET-4	4 way remote control switch and receiver
SWHBKRFSET-2	2 way remote control switch and receiver
SWHBKRF-4	4 way remote control switch
SWHBKRF-2	2 way remote control switch
SWHBK-4W	4 way wired switch with filter indication
SENSORBK-H	Humidity sensor, duct mounted
SENSORBK-CO2	CO_2 sensor (PLUS version only)
FILTER-SL-G4	2 x ISO Coarse 65% (G4) filters
FILTER-SL-G4/F7	ISO Coarse 65% (G4) / EPM1 50% (F7) filters
SL300-DBOX	Low profile distribution box

CONSULTANTS SPECIFICATION

SPECIFICATION

A Mechanical Ventilation System with Heat Recovery (MVHR) shall be supplied and installed suitable for installation in ceiling mounted or wall mounted applications. The system shall be suitable for use in mid to larger-sized applications with kitchen plus up to six wet rooms and designed primarily for new build and major renovations.

- The unit shall be the Slimline 300 by EnviroVent and shall be capable of being installed vertically on walls or horizontally on ceilings.
- The unit shall incorporate Ø150 extract and supply spigots to connect easily to Ø150mm round ducting.
- The unit shall operate through constant flow technology to ensure maximum efficiency and that the commissioned airflow rate is always delivered despite any resistance encountered in the ductwork or filters. The constant flow control system shall also ensure that commissioning is carried out quickly and easily.
- The unit shall be fully insulated to provide excellent thermal and acoustic performance.
- The MVHR shall incorporate low watt EC motor technology with sealed for life ball bearings designed to operate continuously at a pre-set background rate and deliver the lowest possible SFP.
- The MVHR shall incorporate a high efficiency counter flow cell capable of up to 90% thermal efficiency. The heat exchanger shall be protected by plug out/plug in ISO Coarse 65% (G4) filters on the extract and supply inlets, with the option of an EPM1 50% (F7) filter as per the specification, which shall be designed for quick and easy maintenance.
- The MVHR shall be designed to be low profile and compact in its design to enable ease of installation in restricted spaces.
- The unit shall be supplied complete with drain connection.
- The MVHR shall be supplied with a 2-year warranty on parts and 5 year warranty on the heat exchanger which starts from the day of delivery.
- The MVHR shall be the SL300 by EnviroVent and shall be SAP PCDB listed.
- The MVHR shall be ErP grade A, (A+ when more than 2 sensors are included), CE Certified and manufactured in accordance with BS EN ISO 9001 and BS EN ISO 14001.
- The MVHR shall be Passive House Certified

OPERATION

The MVHR shall be installed in accordance with the specified drawings with reference to the schedule of works in the specifications. The airflow shall meet the Building Regulations Approved Document F: Ventilation for System 4, BRE Digest 398 for Scotland and Technical Booklet K for Ireland. The installation shall comply with the requirements of the Domestic Ventilation Compliance Guide 2010.

The MVHR shall extract stale, moisture-laden air from the wet rooms of the property (the kitchen, bathroom, ensuite and utility room). This moist air shall pass over the heat exchanger before being ducted to atmosphere. Simultaneously, filtered fresh air shall be drawn into the unit from outside and the energy from the extracted air shall be transferred to the new fresh air through the high efficiency heat exchange cell before being delivered through supply vents into the property to the habitable rooms (living room, bedrooms). The extracted air shall also be filtered by the ISO Coarse 65% (G4) filter before it enters the heat exchange cell.

The unit shall be capable of varying its speed and airflow rate by receiving signals from one of the following:

- Intelligent control module
- 4 way remote control switch and receiver
- 2 way remote control switch and receiver
- 4 way wired switch with filter indicator
- Through a duct mounted humidity sensor

When these signals are received, the fan shall change the airflow rate to boost mode (manually via hard-wired control)

Using the intelligent control module, the unit shall allow the commissioning of the extract and supply airflows to have fully variable speed control to set the minimum and maximum rates.

100% Automatic Integral Mechanical Bypass With No Reduction In Airflow

A 100% automatic and integral mechanical bypass with no reduction in airflow shall be incorporated as standard. The bypass damper shall operate automatically through an actuator allowing the air to route around the heat exchange cell to minimise overheating.

CONTROL OPTIONS

All versions shall have the facility to change the speed and airflow rate according to one of the following control functions:

Intelligent Remote Control Module

An intelligent hard-wired control incorporating a filter change indicator shall be supplied as standard and shall clearly indicate the time, date, airflow rate and mode of operation.

OPTIONAL SLIMLINE 300 PLUS VERSION

The SL300P shall also be available with all the above features including the addition of two further 0-10V or volt free connection options (programmed on the unit), such as a CO_2 sensor.

DUCTING RANGES

EnviroVent Radial Semi-Rigid and Thermal Fast Track Range

About

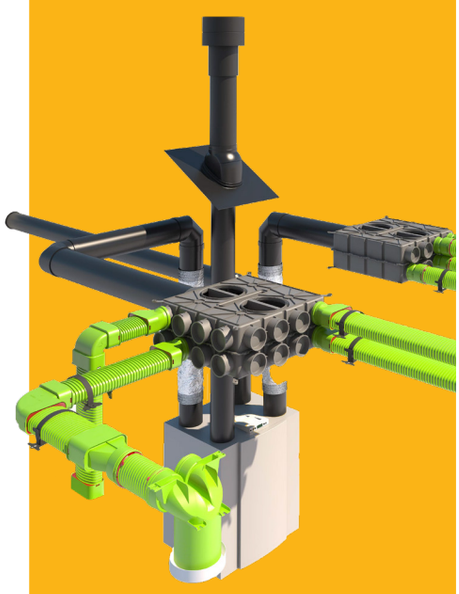
Don't blame the installers, just make it easier for them!

EnviroVent believes that quality ductwork should not be dependent upon highly qualified installers and regulatory measures.

Therefore, we introduced ventilation ductwork, which can be installed very easily and quickly, even by less qualified and experienced installers and is air tight by definition.

Ductwork is the Achilles heel of mechanical ventilation units:

- **Poorly designed ductwork results in high pressure drop.**
- **Unsealed connections result in high air leakage.**
- **Both result in higher energy consumption and noise hindrance, as the ventilation units have to work harder to ventilate 'right' (although some installers don't seal connections, they should).**



Fast Track

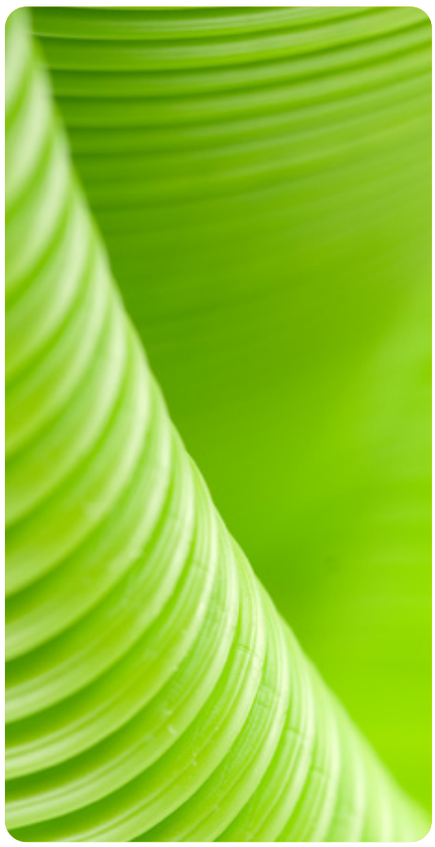
Kill several birds with one stone with EnviroVent's 'Fast Track'!

If installers seal connections, they generally use mastic and/or tape, but sealing connections using mastic and tape:

- Can be messy and wasteful
- Takes a lot of time to do it properly, i.e. costly
- Is not always possible = high air leakage
- Tape may lose its adhesion in time
- Makes it difficult to achieve a high and consistent quality air tight seal

Airtight mechanical connections are:

- Clean and there's no waste
- Extremely easy and quick to install - it only takes a couple of seconds
- Highest and most consistent quality air tight seal possible
- Sustainable air tight connection



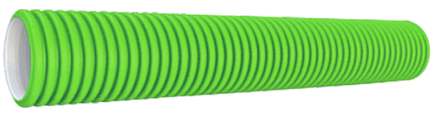
Domestic Ventilation Compliance Guide and NHBC Standards

TABLE 5 - SYSTEM 3 INSTALLATION GUIDELINES	
2.0 Ductwork Installation Clauses	**A** All duct connections require sealing. Where ducts are installed against a solid structure this can be difficult to achieve. In such locations pre-assembly of duct sections should be considered. This will require that connections are permanent to ensure the seal is maintained during installation. **B** Where access to ducts will not be possible after construction is complete, i.e. ductwork is within floor and wall voids, consideration should be given to permanent connection and sealing with an appropriate non-hardening sealant, and not using duct tape to achieve connection and sealing.

NHBC Standards 3.2/D3/G Joints in ductwork, and between ductwork and other system components, should be securely fixed and sealed with purpose-designed connections, in accordance with ductwork manufacturer's recommendations. Joints should be durable and air tight **(see Clause M4(b))**

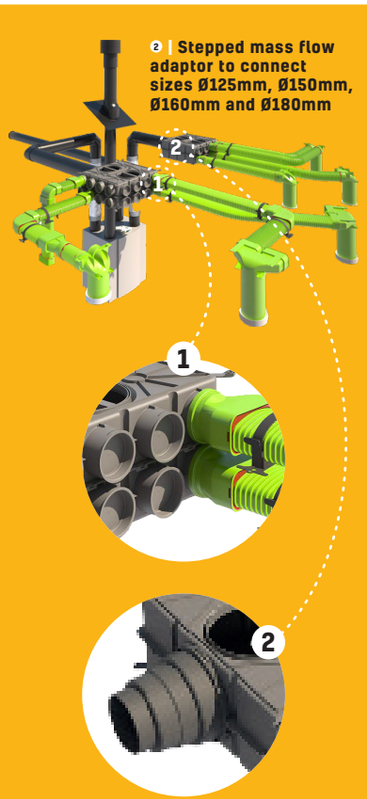
The Complete Semi-Rigid Solution

The Fast Track Range is a comprehensive portfolio of ductwork and parts to make complete, energy-efficient and easy to install ventilation systems. The ductwork is available in various circular and semi-circular dimensions. All ductwork types can connect to one universal distribution box by use of adapters. This eliminates the need to keep stock of numerous box types and limits costs. One box. One solution for all installations.

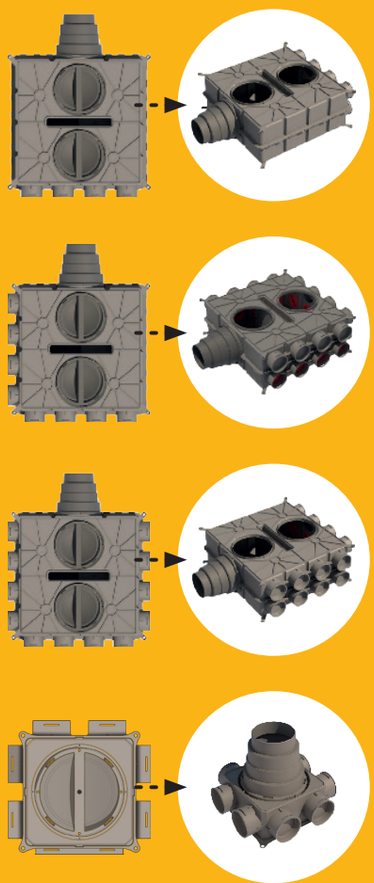


Air Distribution Boxes with Semi-Rigid Ducting

- Plastic = lightweight, risk-free installation
- Universal distribution box for ALL duct types: 75mm, 90mm, 102mm x 50mm and 132mm x 60mm
- Airtightness Class C (EN 12237)
- **Stepped mass flow duct adaptor:** Ø125mm, Ø150mm, Ø160mm and Ø180mm
- Easy post-installation access to restrictors and for maintenance



4 sizes to cover all domestic and small non-domestic systems



NOTES

Write any notes you may have here...


piekarnik w zabudowie
lodówka w zabudowie
blat roboczy
szafa 180x60
pralka w zabudowie meblowej
szafa 80x45
szafka wisząca z lustrami
h=252
szafa na artykuły fotograficzne 200x40
zabudowa meblowa pod telewizor

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