

Heat Recovery Units (Apartments) - Technical Submittal (TSM)

Project: New Cross Residential, Bendix Street
Project No: MC1161
TSM No: D480-AME-XX-XX-TS-M-0018
Revision: PO2

Revision Notes:

1) Handings updated

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Heat Recovery Units (Apartment MVHRs) Technical Submittal

Project New Cross Residential, Bendix Street
Project No. MC1161
Tech Submittal No. D480-AME-XX-XX-TS-M-0018
Revision P02



Apt. Type	Qty.	Location	Manufacturer	Model	Fixing	Supply Air Vol (l/s)	Supply Pres. Drop (Pa)	Extract Air Vol (l/s)	Extract Pres. Drop (Pa)	Height (mm)	Width (mm)	Depth (mm)	Full Weight (kg)	Efficiency (%)	SFP (W/l/s)
1-bed 1-1	1	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	13.0	n/a	29.0	102.0	605	560	260	14	90	0.66
1-bed 1-2	1	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	14.0	n/a	29.0	83.0	605	560	260	14	90	0.66
1-bed 1-3	5	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	13.0	n/a	29.0	118.0	605	560	260	14	90	0.66
1-bed 1-4	1	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	14.2	n/a	29.0	91.0	605	560	260	14	90	0.66
1-bed 1.5	18	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	14.5	n/a	29.0	118.0	605	560	260	14	90	0.66
1-bed 1.6	1	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	16.7	n/a	29.0	126.0	605	560	260	14	89	0.66
1-bed 1-7	15	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	14.8	n/a	29.0	118.0	605	560	260	14	89	0.66
1-bed 1.8	12	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	13.2	n/a	29.0	116.0	605	560	260	14	89	0.66
1-bed 1-9	1	Utility	EnergiSava 250	ESAVA 250-RS-L	Ceiling Mounted	17.2	n/a	29.0	98.0	605	560	260	14	89	0.66
1-bed 1-10	1	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	14.3	n/a	29.0	116.0	605	560	260	14	85	0.66
2-bed 2-1	2	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	22.2	n/a	37.0	173.0	605	560	260	14	85	0.96
2-bed 2-2	11	Utility	EnergiSava 250	ESAVA 250-RS-L	Ceiling Mounted	20.8	n/a	37.0	159.0	605	560	260	14	85	0.96
2-bed 2-3	7	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	19.7	n/a	37.0	174.0	605	560	260	14	85	0.96
2-bed 2-4	9	Utility	EnergiSava 250	ESAVA 250-RS-L	Ceiling Mounted	19.6	n/a	37.0	123.0	605	560	260	14	85	0.81
2-bed 2-5	18	Utility	EnergiSava 250	ESAVA 250-RS-L	Ceiling Mounted	20.4	n/a	37.0	156.0	605	560	260	14	85	0.96
2-bed 2-6	4	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	20.7	n/a	37.0	152.0	605	560	260	14	89	0.96
2-bed 2-7	9	Utility	EnergiSava 250	ESAVA 250-RS-L	Ceiling Mounted	20.6	n/a	37.0	121.0	605	560	260	14	85	0.81
2-bed 2-10	9	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	22.2	n/a	37.0	152.0	605	560	260	14	85	0.96
2-bed 2-11	7	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	22.2	n/a	37.0	181.0	605	560	260	14	85	0.96
2-bed 2-12	7	Utility	EnergiSava 250	ESAVA 250-RS-L	Ceiling Mounted	22.2	n/a	37.0	181.0	605	560	260	14	85	0.96
2-bed 2-13	12	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	23.0	n/a	37.0	191.0	605	560	260	14	85	0.96
3-bed 3-1	9	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	26.0	n/a	37.0	167.0	605	560	260	14	85	0.96
3-bed 3-2	1	Utility	EnergiSava 250	ESAVA 250-RS	Ceiling Mounted	26.0	n/a	45.0	224.0	605	560	260	14	85	0.96

Notes:
1) Units to operate on trickle speed, with boost setting activated by separate boost switch within cupboard or separate boost switch within kitchen and integral humidity sensor



TECHNICAL DATA SHEET
EnergiSava 250 | Lightweight & Compact Whole House Heat Recovery System

A



Lifetime Range*

TECHNICAL SPECIFICATIONS

Maximum Flow Rate	75 l/s (270 m³/h)
Heat Exchanger	Counter Flow (Plastic)
Efficiency	90%
Fans	EC
Specific Fan Power	0.66 W/l/s
Electrical Supply	230V / 1PH / 50Hz
Max Power Consumption	140W
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	14Kg

PRODUCT

The energiSava® 250 shall be a compact and lightweight whole house heat recovery ventilation system.

APPLICATION SUITABILITY

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 capable of being either floor, wall or ceiling mounting. It shall be suitable for installation in an accessible loft or internal cupboard space. It shall be a single person installation with easy commissioning features. The unit shall incorporate Ø125 extract and supply spigots.

PRODUCT CHARACTERISTICS DATABASE (PCDB)

Exhaust Terminal Configuration	Specific Fan Power (W/l/s)	Heat Recovery Efficiency (%)
Kitchen + 1 wet room	0.66	90
Kitchen + 2 wet rooms	0.81	89
Kitchen + 3 wet rooms	1.01	87

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 thermal bypass to control entering the home on warmer days

SAP 2012



TECHNICAL DATA SHEET

EnergiSava 250 | Lightweight & Compact Whole House Heat Recovery System

INSTALLATION

Full installation guide shall be enclosed with all products; or sent separately in advance if required.

MOTOR

The unit shall incorporate Ultra Low Watt EC motor technology to provide the lowest possible SFP and unit running costs with sealed for life ball bearings and designed to operate continuously at a pre-set 'background' rate.

FAN IMPELLER

EC motors shall power the centrifugal forward curved fan impellers.

HEAT EXCHANGE CELL

The heat exchange cell shall be a high efficiency counter flow cell capable of up to 90% efficiency.

SERVICING / MAINTENANCE

Supply and extract filters shall be located within the unit and exchanged annually. The unit shall incorporate a heat exchange cell for life and shall not require any maintenance within five years.

FILTRATION

The unit shall be supplied with plug out / plug in ISO Coarse 45% [G3] filters on the supply and extract inlets.

WARRANTY

The unit shall be covered by a five year warranty subject to the specified maintenance and servicing.

CONTROLS

The unit shall be fitted with Intellitrac® humidity tracking system and a single switch live input with wireless boost. The wireless controller shall also indicate when the summer by-pass, frost and humidity tracking functions are activated.

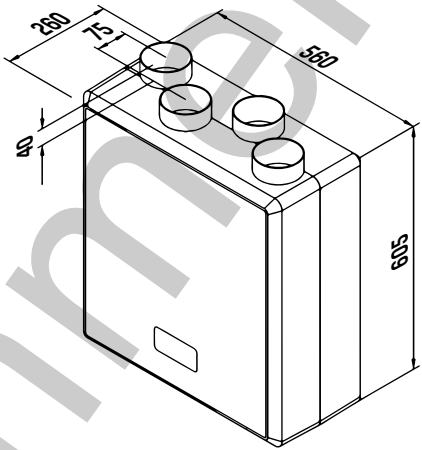
MANUFACTURER

Unit shall be the energiSava® 250 as manufactured by EnviroVent Ltd.

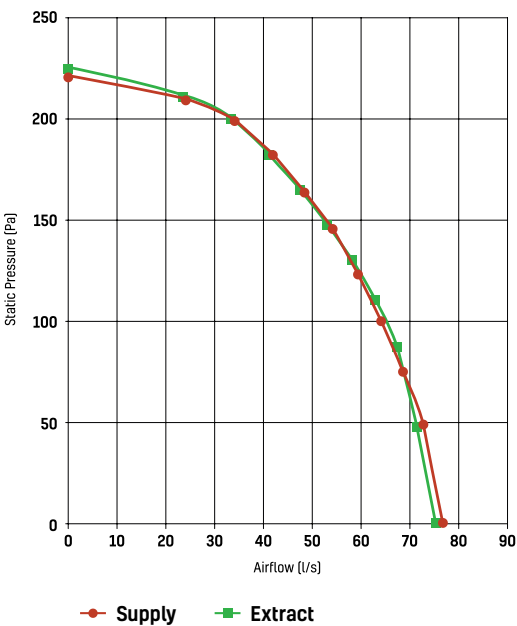
ACCREDITATION

- SAP PCDB Listed
- Conforms to the requirements of the UK Building Regulations and the Technical Standards for Ventilation
- Conforms to requirements of the EC council directives relating to Electromagnetic Compatibility and Electrical Safety (LDV and EMC).
- CE Marked

SIZE



PERFORMANCE CURVE

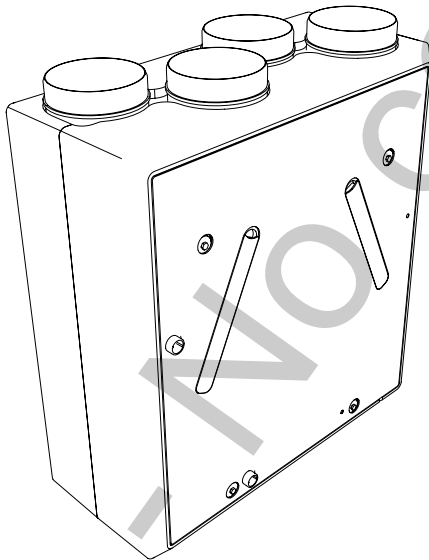


A full Consultant Specification can be sent on request.

AFTER INSTALLATION THE END USER SHOULD
KEEP THIS GUIDE FOR FUTURE REFERENCE
DO NOT THROW AWAY

envirovent®

**ENERGISAVA® 250
CEILING MOUNTED VERSION
INSTALLATION GUIDE**



Safety

Read and understand these instructions carefully before beginning installation. The unit should only be installed by a competent person.

Electrical Connection

The unit requires a continuous electrical power supply. Connection to the fixed wiring must be made outside the unit in a suitable location. The unit must be able to be disconnected from the mains supply after installation. The unit must be earthed and a double pole switch having a minimum contact separation of 3.0mm must be used to provide isolation for the unit.

The power cable running into the unit must remain the supplied flexible cable [not a solid core lighting cable]. If the power cable becomes damaged, it must be replaced by EnviroVent, an authorised service agent for your region/country, or a similarly qualified person in order to avoid a hazard. Do not remove or tamper with any electronic components inside the unit.

All wiring must comply with Building Regulations and the current IET Wiring Regulations [BS7671 in the UK] or equivalent standards for other countries. The final installation should be examined and tested by a qualified electrician.

The unit is considered to be suitable for use in countries having a warm, damp equable climate. It may also be used in other countries.

Electrical power is to be supplied to the unit through a residual current device [RCD] with a rated residual operating current not exceeding 30mA.

Location

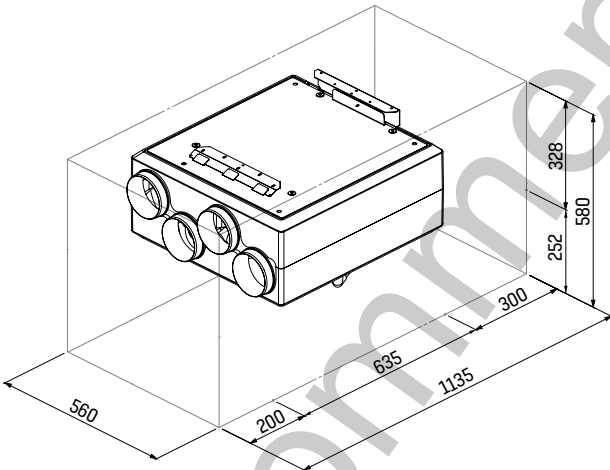
Check there is space for the unit in your chosen location including room for access and future servicing of the unit. The unit must not affect the operation of open-flue appliances. Consider the external vent locations in relation to open-flues from appliances e.g. boilers. You must ensure the external supply grilles are positioned away from open flues to avoid drawing harmful gases into the property. Consult your local regulations or a qualified gas engineer.

Users

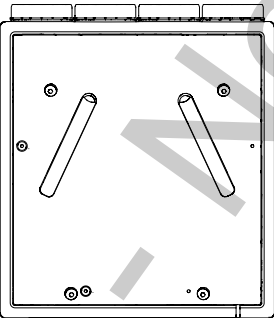
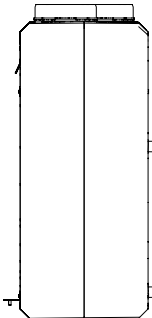
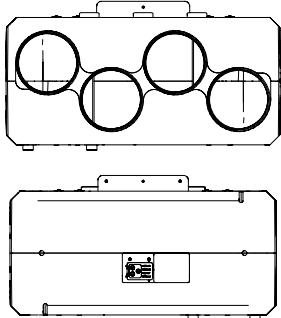
This unit is not intended for use by persons [including children] with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision and usage instruction by a person responsible for their safety. Children should be supervised to ensure they do not play with the unit. Cleaning and user maintenance must not be performed by children.

Diagrams

Overall unit dimensions and minimum area required for access & maintenance [mm].

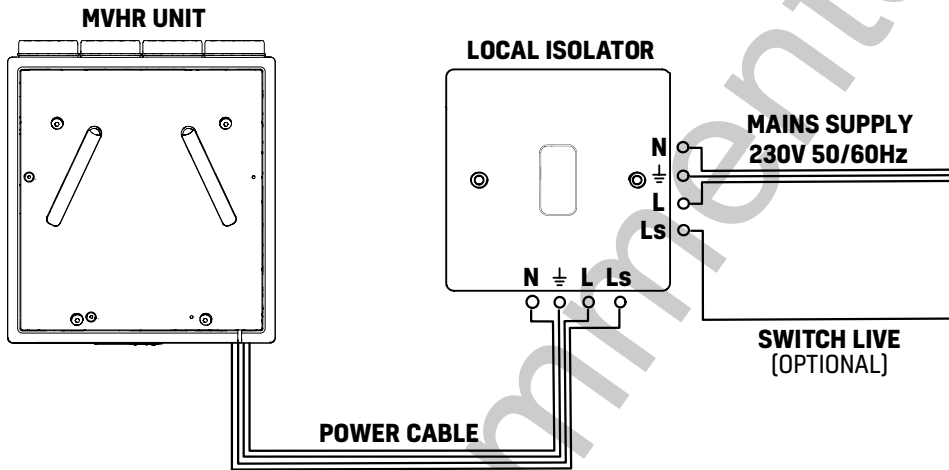


The energisava® 250 spigots are compatible with ø125mm duct.



Diagrams

WIRING



The local isolator must be connected to the mains as part of the fixed wiring. Connect the cores of the power cable to the matching terminals on the local isolator [3A fuse spur or similar].

The black switch live core of the mains cable can be wired to a switch input such as a light switch. When the switch is turned on, the boost function is engaged. When the switch is turned off, the unit will return to normal running mode. In this configuration a triple pole isolator must be used.

About the energiSava® 250

The energiSava® 250 is an MVHR unit [Mechanical Ventilation with Heat Recovery]. It is ideal for medium to large sized properties with a kitchen and up to 5 additional wet rooms. The unit is capable of delivering a maximum airflow of 280m³/h [78l/s] and a maximum system pressure in excess of 224Pa.

The unit will help to create a fresh and healthy living environment by supplying filtered air into a property through supply valves. Moist, stale air is removed out of the property through extract valves.

The heat exchanger inside the unit transfers waste heat energy from the extracted air to the supplied air in order to improve the thermal efficiency of the property and reduce heating costs.

The frost protection feature automatically uses the warm extracted air to ensure the heat exchanger inside the unit does not freeze when outdoor temperatures are below 5°C.

The Intellitrac® humidity tracking function monitors the humidity levels in the extracted air and will automatically increase the supply and extract air flow rates when the humidity levels rise. Once the humidity levels are lower the air flow rates will return to the normal rate.

The automatic, thermal bypass helps to control temperature entering the home on warmer days.

The energiSava® 250 includes a switch live function. When wired through the lighting switch of a room [such as a bathroom] the unit will enter boost mode whenever the light is turned on.

Box Contents

EnergiSava® 250

- 1x energiSava® 250 unit
- 1x Remote control
- 1x Instruction guide
- 1x User guide
- 2x Mounting brackets
- 10x Screws 8g x 2.0"
- 10x Plasterboard plugs
- 2x Wing nuts
- 1x Screw 10g x 0.5"
- 1 x Condensate drainage kit

EnergiSava® 250 App

- 1x energiSava® 250 app unit
- 1x Instruction guide
- 1x User guide
- 1x App guide
- 2x Mounting brackets
- 10x Screws 8g x 2.0"
- 10x Plasterboard plugs
- 2x Wing nuts
- 1x Screw 10g x 0.5"
- 1 x Condensate drainage kit

EnergiSava® 250 Basic/Remote Switch

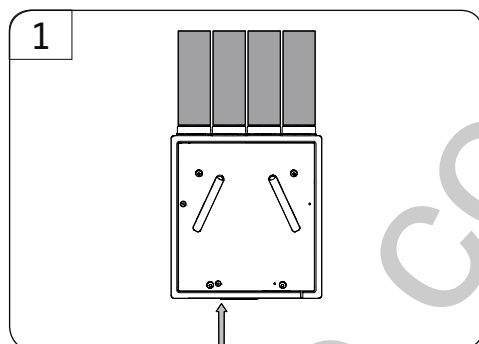
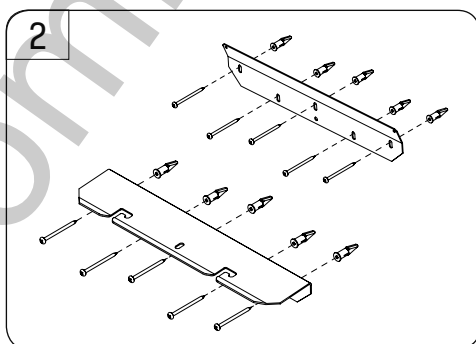
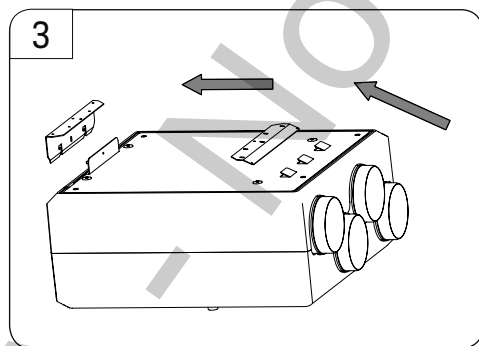
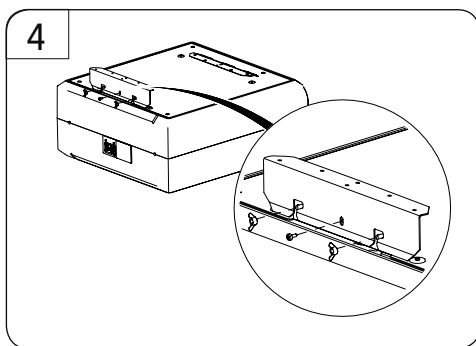
- 1x energiSava® 250 unit
- 1x Instruction guide
- 1x User guide
- 2x Mounting brackets
- 10x Screws 8g x 2.0"
- 10x Plasterboard plugs
- 2x Wing nuts
- 1x Screw 10g x 0.5"
- 1 x Condensate drainage kit

Pre - Installation Checklist

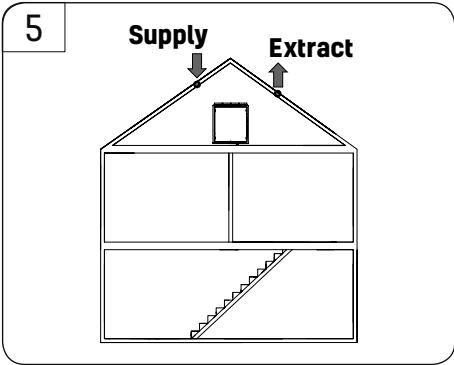
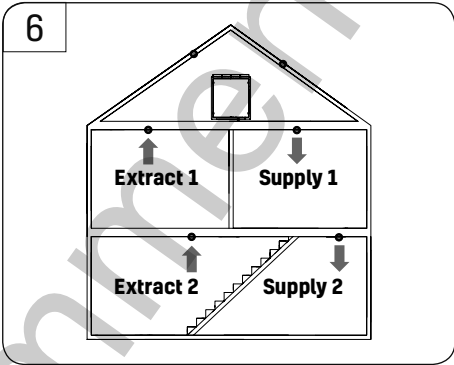
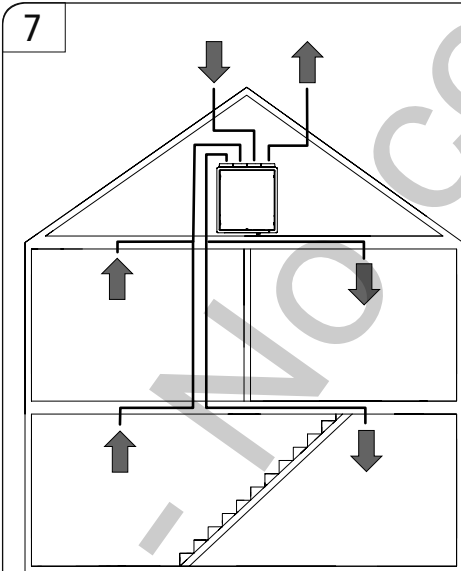
- Does the unit fit in the space where it will be installed?
- Is there room to connect ducts to the spigots without tight duct bends?
- Is there room to access and replace the filters after installation?
- Are there any obstructions above or below the locations where the input and extract valves are to be fitted?
- Is the mounted surface strong enough to support the unit?
- Is the mounting surface level?
- Are there adequate facilities to connect the unit condensate drain to the internal waste system of the property?

Installation

1. Hold the unit up to the chosen location and check there is space for ducts, condensate drainage, filter and keypad access.
2. Once you are satisfied with the position, line up the two brackets using the printed template then secure them to the mounting surface..
Use 10 8gx2.0" screws and 10 plasterboard plugs.
3. Mount the unit onto the brackets ensuring that it is fully supported.
4. Apply the two wing nuts onto the threaded studs then insert the self-tapping screw into the hole and tighten it. This will ensure the unit cannot be accidentally knocked off the brackets.



- 5. Fit the external supply and extract terminations.
- 6. Fit the supply and extract valves inside the property.
- 7. Fit the ductwork between the external terminations, the MVHR unit and the supply and extract valves.

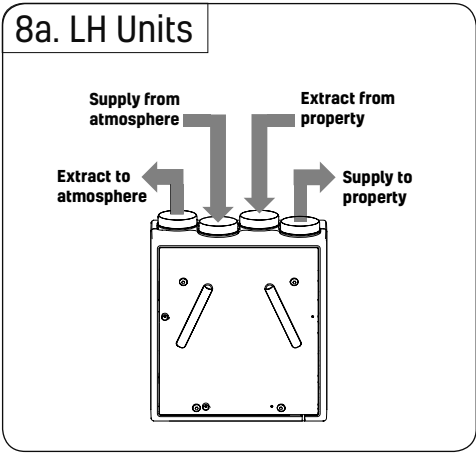
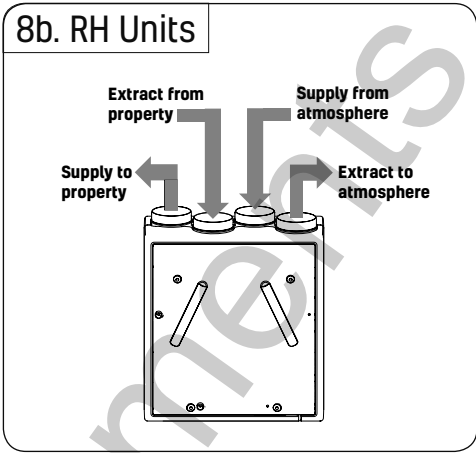


Ductwork should be fitted in accordance with the Domestic Ventilation Compliance Guide. [Example RH unit configuration shown].

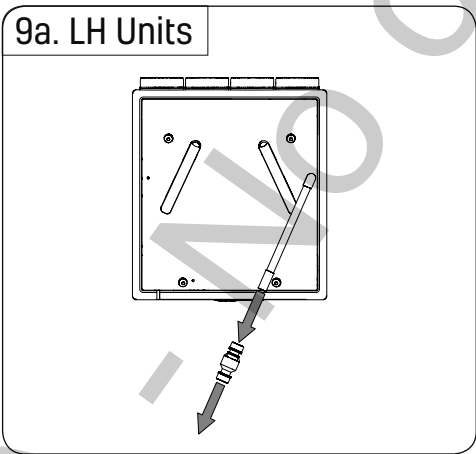
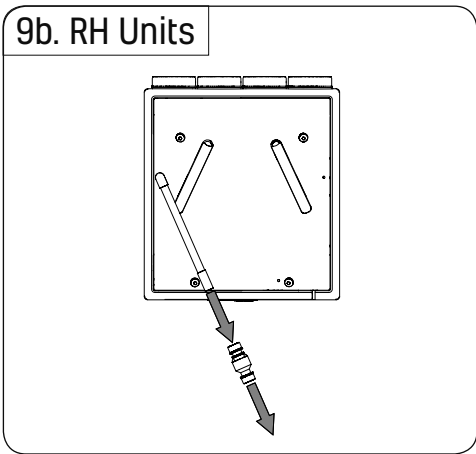
Ducts to and from atmosphere and through unheated spaces need to be insulated.

For efficiency, all ductwork should be as large a diameter as possible (min. 125mm) and use rigid or semi rigid duct wherever possible.

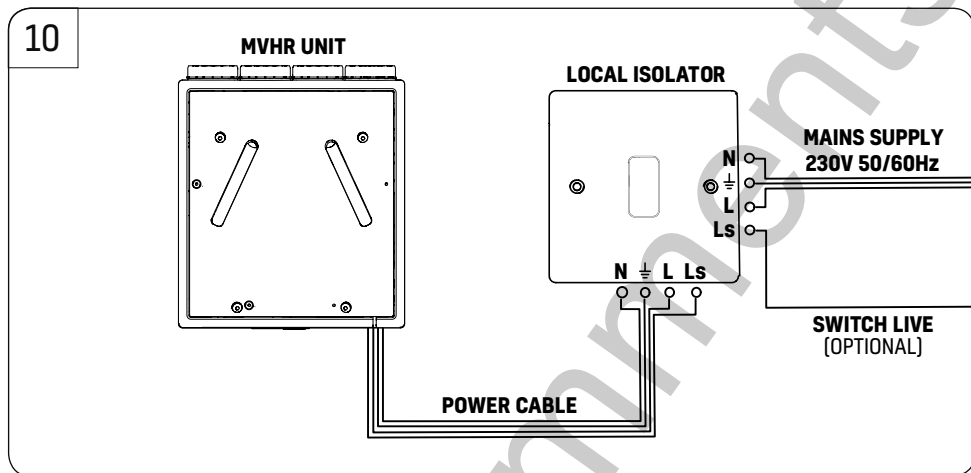
8. Connect each duct path to the spigot.



9. Make a water-tight connection between the two drainage connectors on the unit and the waste water system in the property. A suitable non-return device must be fitted to ensure air and waste water from the drain system do not flow back up into the unit. The drainage must be fitted with a minimum 5 degree fall away from the unit.

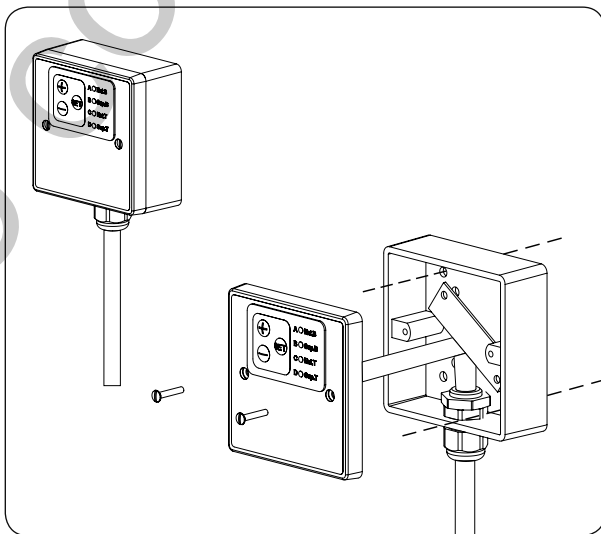


10. With the mains supply isolated, wire the unit to the local isolator as per the wiring diagram on page 3 and in accordance with the local wiring regulations. When the power is turned on, air will begin flowing into the property after a few seconds.



11. If you are installing a remote switch [-RS] unit:

- Open the switch ensuring the ribbon cable remains connected to the PCB.
- Screw the switch to the wall in an accessible location.
- Replace the lid and tighten the two screws.



Commissioning

All maintenance and building works should be complete before commissioning this MVHR unit. This will avoid any other major disturbance to the installation or high volumes of dust or debris being drawn into the system. Do not commission the MVHR unit until it is fully installed including power, ductwork, internal valves and external vents.

MVHR systems must be commissioned in accordance with Approved Document F of the Building Regulations for England and Wales. Further good practice advice for the installation of MVHR systems can be found in the latest edition of the Domestic Ventilation Compliance Guide for England and Wales. For MVHR commissioning guidance in other countries, please refer to the relevant local Building Regulations for that country.

- Determine the required ventilation rates. For guidance see Approved Document F of the building regulations for England and Wales.
- During normal running mode, press the SET button for 4 seconds to enter commissioning mode. (Humidity and temperature sensor input is disabled temporarily while the unit is in commissioning mode).
- LEDs B C D will light and LED A will flash indicating that the extract boost flow rate is being modified.
- Fully open all supply/extract valves then measure the air flow rate at all system extract points using a calibrated air flow meter capable of measuring in l/s or m³/hr.
- Add the extract rates from all rooms together then compare this value to the calculated whole building boost extract ventilation rate.
- Use the + and - buttons to increase or decrease the flow rate in order to meet the calculated whole building extract ventilation rate.

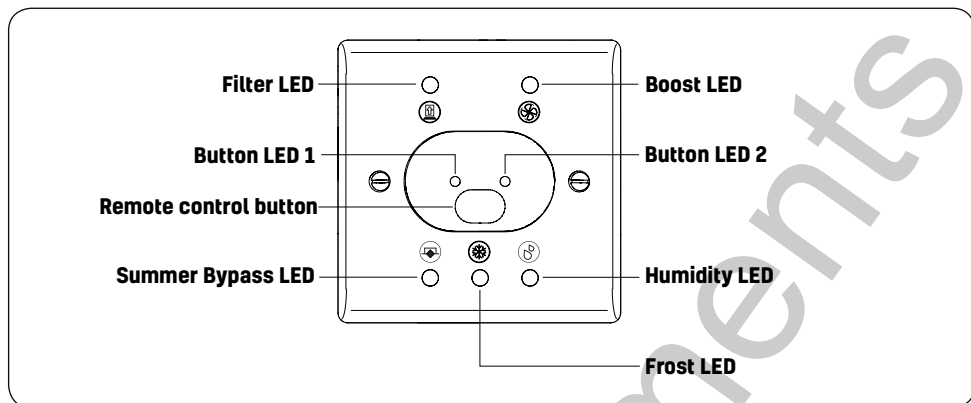
- Now adjust the individual valves to extract at the appropriate rate for each wet room.
- Press the SET button once to move on to the next flow rate. The flashing LED indicates which flow rate is being modified.
 - A: Extract Boost
 - B: Supply Boost
 - C: Extract Trickle
 - D: Supply Trickle
- Commission the unit in the order shown below, using the previous steps for adjusting air flow rates and valves.

[When maximum speed setting is reached, the LED will flash faster.
When the minimum speed setting is reached the LED will flash slowly].

Step	Flow Rate	Actions
1	Extract Boost	Lock the valves. Record the air flow rates.
2	Supply Normal [Trickle]	Lock the valves. Record the air flow rates.
3	Supply Boost	Do not adjust the valves. Record the air flow rates.
4	Extract Normal [Trickle]	Do not adjust the valves. Record the air flow rates.

- When commissioning is complete for all four flow rates, press SET for 4 seconds to return to normal running mode. If this is not done, the unit will automatically return to normal running mode after 60 minutes of inactivity and the current settings will be saved.

Wireless Remote Control



To view the current status of the unit:

- Press any button to wake the remote control and the relevant LEDs will light up according to the current status of the unit.

To manually activate or deactivate the boost function:

- Press any button to wake the remote control.
- Press the button again, the boost LED will flash [red]. After 2 seconds the unit will enter boost mode for 20 minutes then automatically return to trickle mode.
- If the switch live connection is turned on then boost cannot be cancelled until the switch live connection is turned off.
- To deactivate the boost mode, repeat the above steps.

To manually activate or deactivate the summer bypass function:

- Press any button to wake the remote control.
- Press the button again twice. The bypass LED will flash [red]. After 2 seconds the unit will enter bypass mode for 24 hours then automatically return to the normal running mode.
- To deactivate the summer bypass mode, repeat the above steps.

To switch between auto and manual summer bypass modes:

- Wake the remote control.
- Press and hold the button for 5 seconds, the filter LED will flash green.
- Press the button once to switch to edit the summer bypass mode.
- Press and hold the button for 5 seconds to switch between summer bypass modes.
- Auto = Bypass LED constant, Manual = bypass LED flashing.

Filter indicator and reset:

- If on waking the remote control the filter LED flashes (green), the filters need to be replaced. Contact EnviroVent to order new filters.
- After replacement filters have been installed, wake the remote control.
- Press and hold the button for 5 seconds, the filter LED will flash green.
- Press and hold the button for 5 seconds again to reset the filter, the filter LED will flash rapidly for 2 seconds to confirm the filter reset.

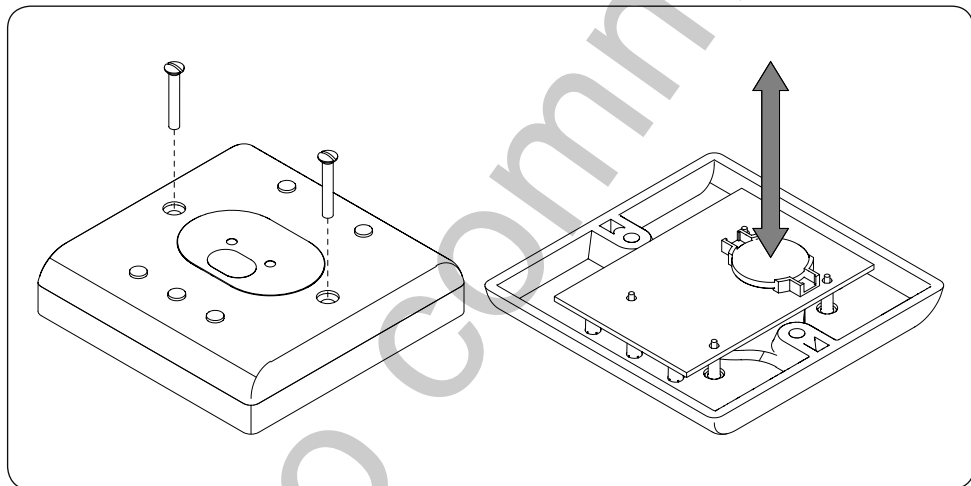
Pairing an extra remote control:

- Turn the unit off at the isolation point.
- Restore the power to the unit. For 20 seconds from restarting, the unit will be in pairing mode.
- Press the button on the new remote control once within the 20 seconds and the remote control will pair to the unit.
- If LED 2 lights green, the pairing has succeeded.

Fault indication:

- If on waking the remote control all LEDs are flashing (red), a fault has occurred with the MVHR unit. If it persists, call EnviroVent on 01423 810 810 for further help.

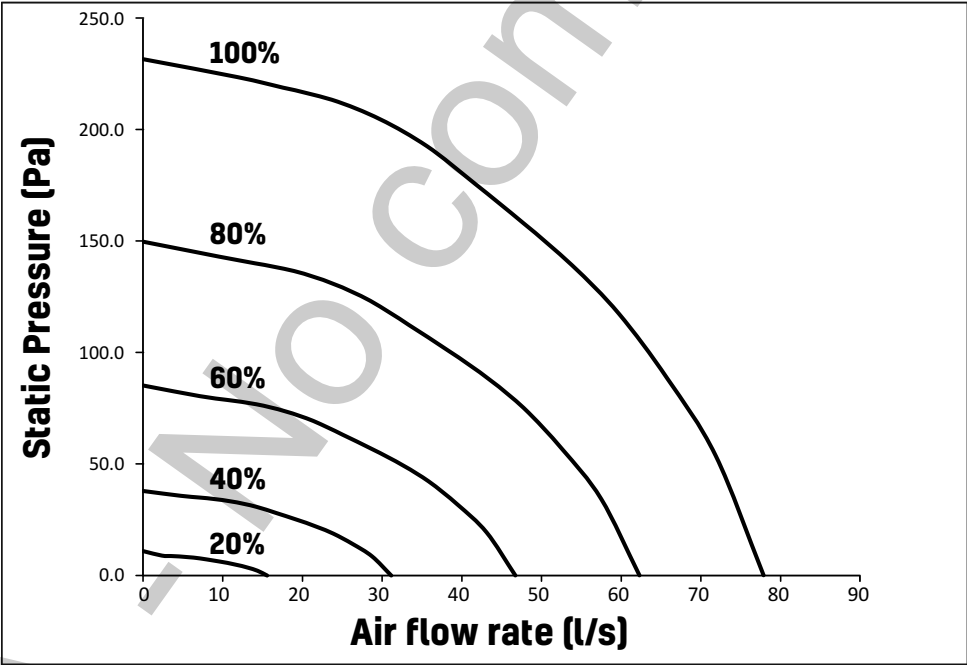
When the remote control battery need to be replaced, remove the two screws then open the remote control. The battery is located on the back of the front cover. Replace the battery then clip the rear cover back on. The switch will remain paired with the unit after battery replacement. The remote control uses 1x CR2032 battery. Dispose of the discarded battery in a safe manner.



Technical Specification

Spigot diameters	125mm
Maximum air flow rate	78l/s [280m³/h]
Maximum power consumption	150W
Electrical Supply	230V Single Phase 50Hz
Ingress protection rating	IPX2
Filter grade	ISO Coarse 45% [G3]
Boxed unit weight	16kg
Unboxed unit weight	14kg

Airflow Performance



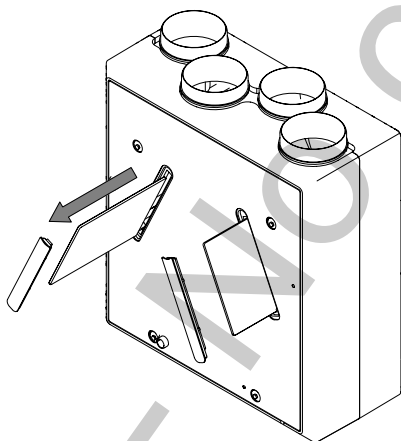
Post-Installation Checklist

- ☐ Installation instructions have been understood. Contact EnviroVent on 01423 810 810 if you require further technical help.
- ☐ Ductwork diameter is 125mm or larger throughout the property.
- ☐ Minimal amounts of flexible duct have been used in the installation.
- ☐ All ducts, valves, vents and drainage points are connected, mechanically fixed and sealed.
- ☐ Both filters are inserted into the filter slots on the unit.
- ☐ The unit is securely fixed with adequate space left for servicing.
- ☐ Condensate drain is securely connected to the waste water system, a non return device is correctly fitted and pipework has been water tested before connection to the MVHR unit.
- ☐ All major building works have been completed prior to commissioning.
- ☐ Supply and extract air flow rates have been commissioned with a calibrated anemometer to meet Approved Document F of the Building Regulations for England and Wales.
- ☐ Commissioning air flow rate data has been recorded.
- ☐ The occupants of the property are familiarised with the operation and maintenance of the system.

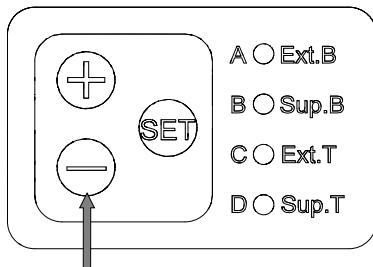
Filter Maintenance

- It is recommended to replace the filters inside the MVHR unit every 6-12 months [depending on occupancy levels and air conditions].
- Isolate the unit from the mains supply then slide off the front cover.
- Remove the filter caps, replace both filters then reinsert filter caps.
- Engage the mains supply then reset the filter indication by pressing the minus button for 10 seconds.
- Not maintaining the filters during the life of the product can invalidate the warranty. Filter indication duration is factory set to 12 months.

Filter Replacement



Filter Indication



**Press for
10 seconds**

Spares/Accessories

Item Description	Order Code
Replacement Filter	FILTER-ES250
125mm white supply valve	1DIFSUPPLY125WH
125mm white extract valve	1DIFEXTRACT125WH
150mm white supply valve	1DIFSUPPLY150WH
150mm white extract valve	1DIFEXTRACT150WH
Spare remote control	SWH-W-MVHR

Warranty

We appreciate you choosing this quality EnviroVent product, which is designed and manufactured in Harrogate, North Yorkshire. We are confident that you will be delighted with the performance of the system and the resulting improvement in air quality in your home after it has been installed.

This unit is covered by a full 5-year warranty. There is no requirement for extra maintenance other than replacement of the filter every 6-12 months. You should not dismantle or remove any parts of the product other than those instructed in this guide. Tampering with the unit will void the warranty. The valves should be checked periodically to ensure there is air flowing through the system.

For further assistance call 01423 810 810.

The warranty covers any defect or break down that arises due to faulty materials or construction. Please note that a receipt will be required as proof of purchase. Any units bought from an unapproved source, including but not limited to auction websites, are not covered by this warranty.

Your unit serial number

For warranty conditions and exclusions, visit
www.envirovent.com/warranty



TECHNICAL DATA SHEET
EnergiSava 200 | High Efficiency Whole House Heat Recovery System

A



Lifeline Range

PRODUCT

The energiSava® 200 shall be a compact and lightweight whole house heat recovery ventilation system.

APPLICATION SUITABILITY

The system shall be suitable for use in mid-sized houses with kitchen plus up to five wet rooms and designed primarily for new build and major renovations. The unit shall be capable of being either floor, wall or ceiling mounting. It shall be suitable for installation in an accessible loft or internal cupboard space. It shall be a single person installation with easy commissioning features. The unit shall incorporate Ø125 extract and supply spigots.

MOTOR

The unit shall incorporate an Ultra Low Watt EC backward curved motor to provide the lowest possible SFP and unit running costs with sealed for life ball bearings and designed to operate continuously at a pre-set 'background' rate.

PRODUCT CHARACTERISTICS DATABASE (PCDB)

Exhaust Terminal Configuration	Specific Fan Power (W/l/s)	Heat Recovery Efficiency (%)
Kitchen + 1 wet room	0.75	89
Kitchen + 2 wet rooms	0.82	87
Kitchen + 3 wet rooms	0.96	85
Kitchen + 4 wet rooms	1.17	84
Kitchen + 5 wet rooms	1.41	82

SAP 2012

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 90% 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

TECHNICAL SPECIFICATIONS

Maximum Flow Rate	67 l/s [241 m³/h]
Heat Exchanger	Counter Flow (Plastic)
Fans	EC (Electronically Commutated DC)
Electrical Supply	230V/1PH/50Hz
Max Power Consumption	140W
Protection Class	IPX2
Supply Filter Extract Filter	ISO Coarse 45% [G3] ISO Coarse 45% [G3]
Spigot (mm)	125
Dimensions (mm)	571 x 646 x 335
Weight	14kg



TECHNICAL DATA SHEET
EnergiSava 250 | High Efficiency Whole House Heat Recovery System

FAN

EC motors shall power the centrifugal backward curved fan impellers.

MECHANICAL SUMMER BYPASS

The automatic, integral mechanical summer by-pass shall ensure that cooler air enters the property on warmer days, creating an ideal indoor climate.

HEAT EXCHANGE CELL

The heat exchange cell shall be a high efficiency counter flow cell capable of up to 89% efficiency.

FILTRATION

The unit shall be supplied with 2 x ISO Coarse 45% [G3] filters that can easily be accessed for cleaning or replacing.

SERVICING / MAINTENANCE

Supply and extract filters shall be located within the unit and exchanged annually. The unit shall incorporate a heat exchange cell for life and shall not require any maintenance within five years.

WARRANTY

The unit shall be covered by a five year warranty subject to the specified maintenance and servicing.

CONTROLS

The unit shall be fitted with automatic Intellitrac® humidity controls, with a switch live option. It shall also come supplied with a remote control to adjust the unit's airflow between trickle and boost rates, including a summer by-pass, filter change and fault indicator.

MANUFACTURER

Unit shall be the energiSava® 200 as manufactured by EnviroVent Ltd.

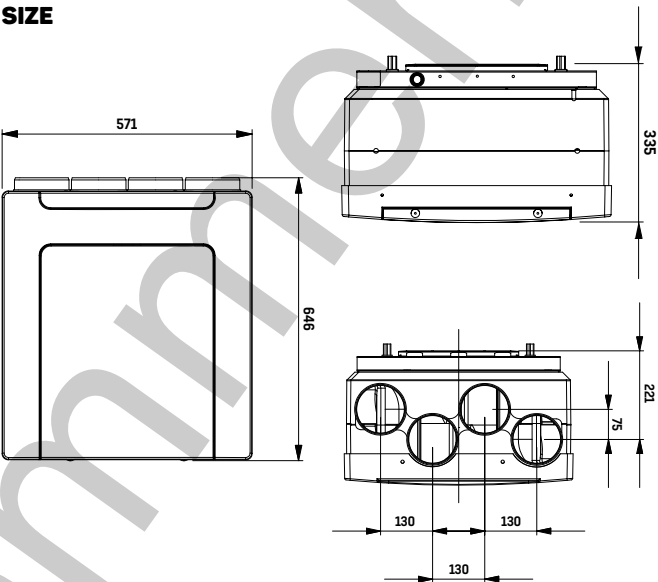
ACCREDITATION

- SAP PCDB Listed
- Conforms to the requirements of the UK Building Regulations and the Technical Standards for Ventilation
- Conforms to requirements of the EC council directives relating to Electromagnetic Compatibility and Electrical Safety (LDV and EMC)
- CE Marked

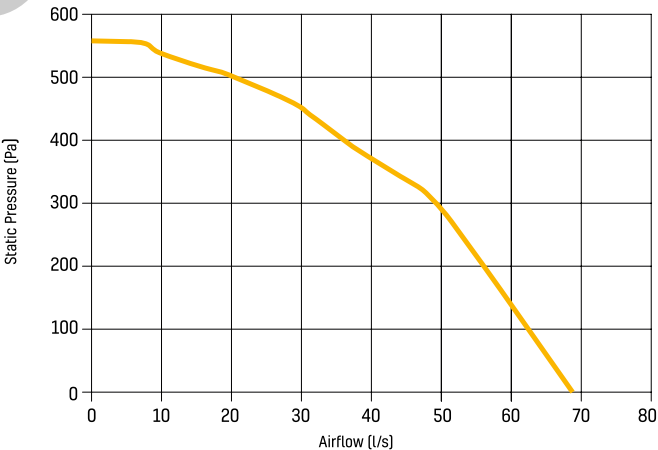
INSTALLATION

Full installation guide shall be enclosed with all products; or sent separately in advance if required.

SIZE



PERFORMANCE CURVE

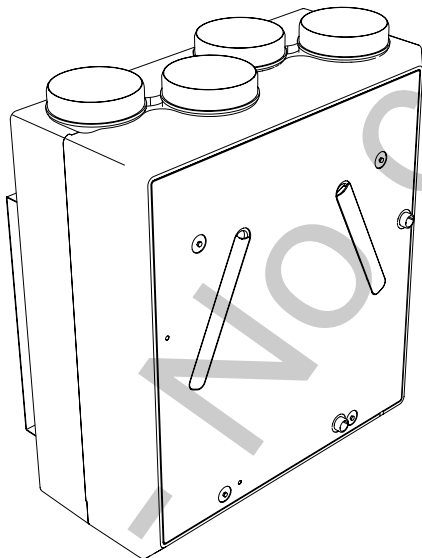


A full Consultant Specification can be sent on request.

AFTER INSTALLATION THE END USER SHOULD
KEEP THIS GUIDE FOR FUTURE REFERENCE
DO NOT THROW AWAY

envirovent®

ENERGISAVA® 200
CEILING MOUNTED VERSION
INSTALLATION GUIDE



Safety

Read and understand these instructions carefully before beginning installation. The unit should only be installed by a competent person.

Electrical Connection

The unit requires a continuous electrical power supply. Connection to the fixed wiring must be made outside the unit in a suitable location. The unit must be able to be disconnected from the mains supply after installation. The unit must be earthed and a double pole switch having a minimum contact separation of 3.0mm must be used to provide isolation for the unit.

The power cable running into the unit must remain the supplied flexible cable [not a solid core lighting cable]. If the power cable becomes damaged, it must be replaced by EnviroVent, an authorised service agent for your region/country, or a similarly qualified person in order to avoid a hazard. Do not remove or tamper with any electronic components inside the unit.

All wiring must comply with Building Regulations and the current IET Wiring Regulations [BS7671 in the UK] or equivalent standards for other countries. The final installation should be examined and tested by a qualified electrician.

The unit is considered to be suitable for use in countries having a warm, damp equable climate. It may also be used in other countries.

Electrical power is to be supplied to the unit through a residual current device [RCD] with a rated residual operating current not exceeding 30mA.

Location

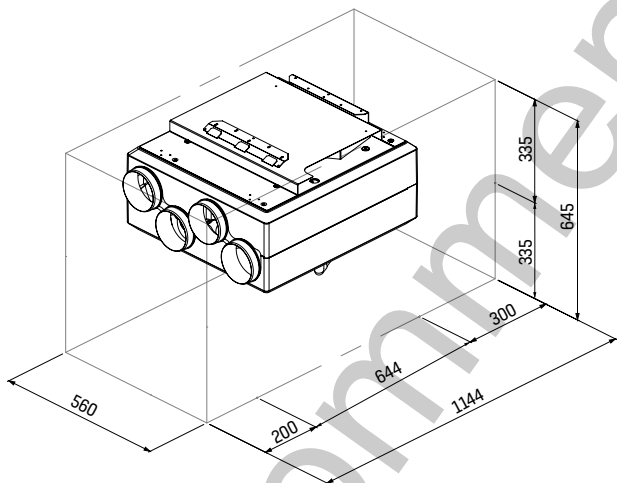
Check there is space for the unit in your chosen location including room for access and future servicing of the unit. The unit must not affect the operation of open-flue appliances. Consider the external vent locations in relation to open-flues from appliances e.g. boilers. You must ensure the external supply grilles are positioned away from open flues to avoid drawing harmful gases into the property. Consult your local regulations or a qualified gas engineer.

Users

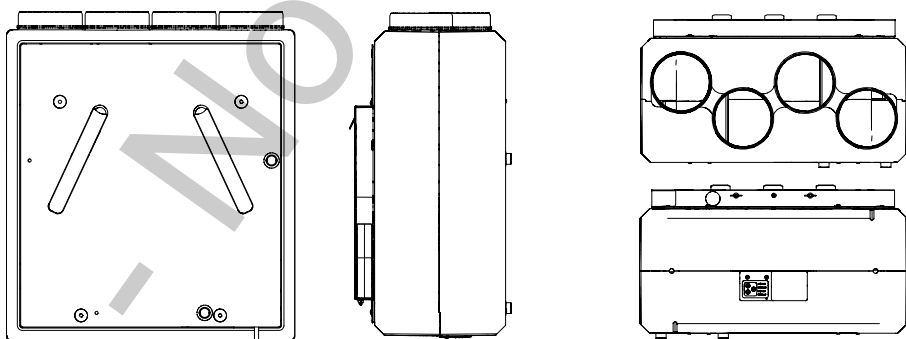
This unit is not intended for use by persons [including children] with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision and usage instruction by a person responsible for their safety. Children should be supervised to ensure they do not play with the unit. Cleaning and user maintenance must not be performed by children.

Diagrams

Overall unit dimensions and minimum area required for access & maintenance [mm].

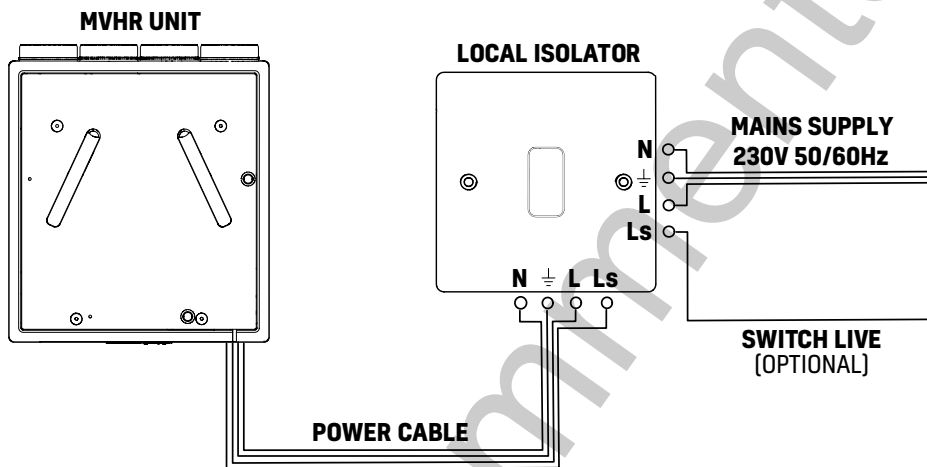


The energisava® 200 spigots are compatible with $\varnothing 125\text{mm}$ duct.



Diagrams

WIRING



The local isolator must be connected to the mains as part of the fixed wiring. Connect the cores of the power cable to the matching terminals on the local isolator [3A fuse spur or similar].

The black switch live core of the mains cable can be wired to a switch input such as a light switch. When the switch is turned on, the boost function is engaged. When the switch is turned off, the unit will return to normal running mode. In this configuration a triple pole isolator must be used.

About the energiSava® 200

The energiSava® 200 is an MVHR unit [Mechanical Ventilation with Heat Recovery]. It is ideal for small to medium sized properties with a kitchen and up to 5 additional wet rooms. The unit is capable of delivering a maximum airflow of 241m³/h [67l/s] and a maximum system pressure in excess of 500Pa.

The unit will help to create a fresh and healthy living environment by supplying filtered air into a property through supply valves. Moist, stale air is removed out of the property through extract valves.

The heat exchanger inside the unit transfers waste heat energy from the extracted air to the supplied air in order to improve the thermal efficiency of the property and reduce heating costs.

The frost protection feature automatically uses the warm extracted air to ensure the heat exchanger inside the unit does not freeze when outdoor temperatures are below 5°C.

The Intellitrac® humidity tracking function monitors the humidity levels in the extracted air and will automatically increase the supply and extract air flow rates when the humidity levels rise. Once the humidity levels are lower the air flow rates will return to the normal rate.

The mechanical summer bypass feature automatically diverts some of the supplied air around the heat exchanger at temperatures above 25°C to avoid the property overheating when the outdoor air temperature is high.

The energiSava® 200 includes a switch live function. When wired through the lighting switch of a room [such as a bathroom] the unit will enter boost mode whenever the light is turned on.

Box Contents

EnergiSava® 200

- 1x energiSava® 200 unit
- 1x Remote control
- 1x Instruction guide
- 1x User guide
- 2x Mounting brackets
- 10x Screws 8g x 2.0"
- 10x Plasterboard plugs
- 2x Wing nuts
- 1x Screw 10g x 0.5"
- 1 x Condensate drainage kit

EnergiSava® 200 App

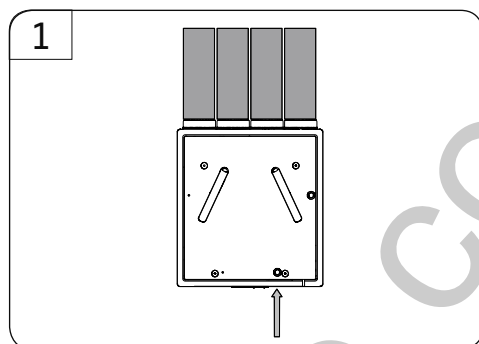
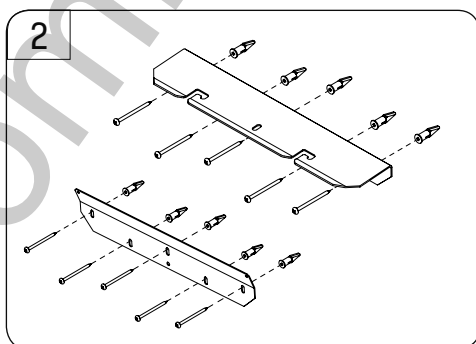
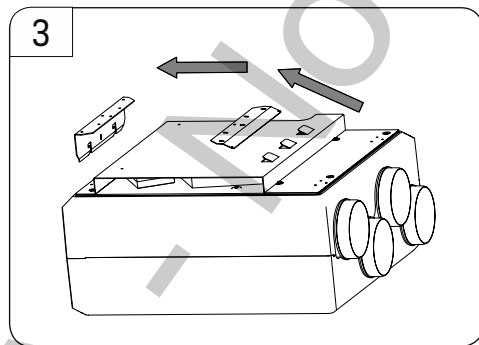
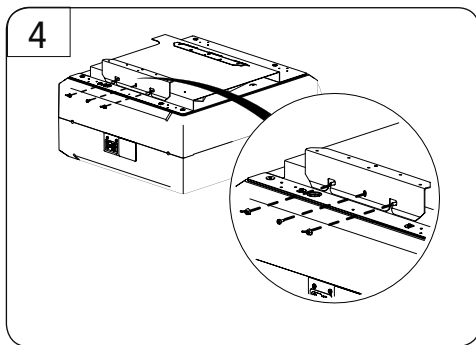
- 1x energiSava® 200 app unit
- 1x Instruction guide
- 1x User guide
- 1x App guide
- 2x Mounting brackets
- 10x Screws 8g x 2.0"
- 10x Plasterboard plugs
- 2x Wing nuts
- 1x Screw 10g x 0.5"
- 1 x Condensate drainage kit

Pre - Installation Checklist

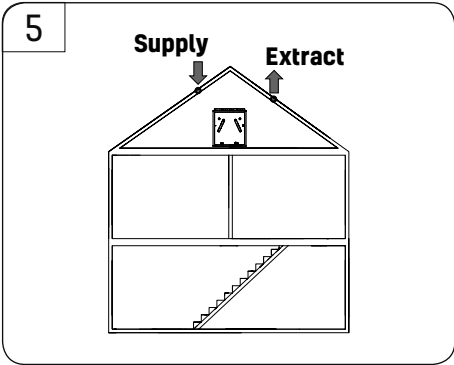
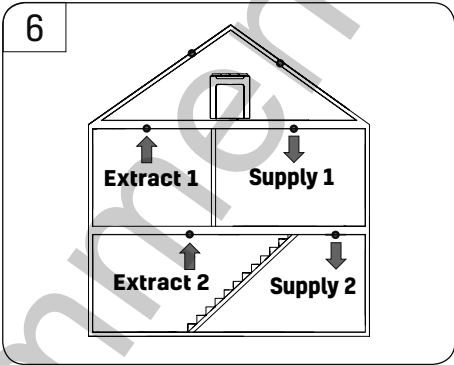
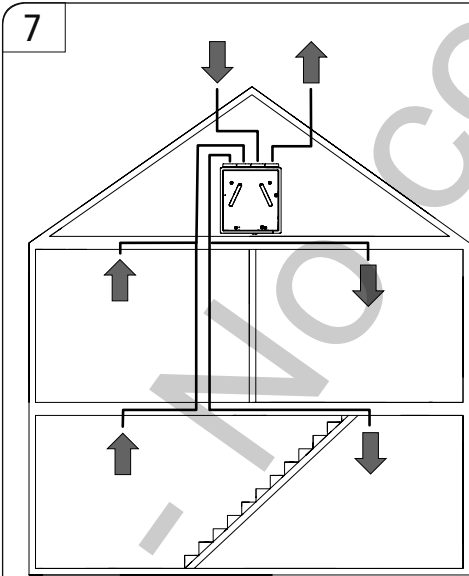
- Does the unit fit in the space where it will be installed?
- Is there room to connect ducts to the spigots without tight duct bends?
- Is there room to access and replace the filters after installation?
- Are there any obstructions above or below the locations where the input and extract valves are to be fitted?
- Is the mounted surface strong enough to support the unit?
- Is the mounting surface level?
- Are there adequate facilities to connect the unit condensate drain to the internal waste system of the property?

Installation

1. Hold the unit up to the chosen location and check there is space for ducts, condensate drainage, filter and keypad access.
2. Once you are satisfied with the position, line up the two brackets using the printed template then secure them to the mounting surface. **Use 5 8gx2.0" screws and 10 plasterboard plugs.**
3. Mount the unit onto the brackets ensuring that it is fully supported.
4. Apply the two wing nuts onto the threaded studs then insert the self-tapping screw into the hole and tighten it. This will ensure the unit cannot be accidentally knocked off the brackets.



- 5. Fit the external supply and extract terminations.
- 6. Fit the supply and extract valves inside the property.
- 7. Fit the ductwork between the external terminations, the MVHR unit and the supply and extract valves.

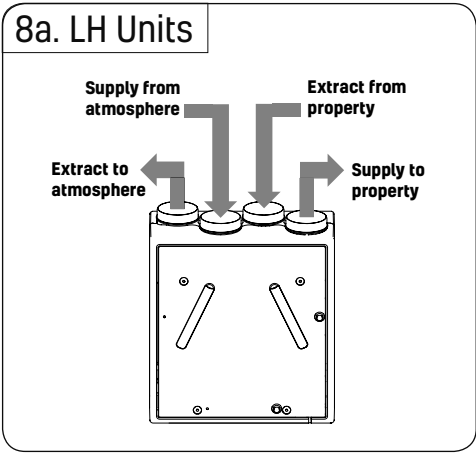
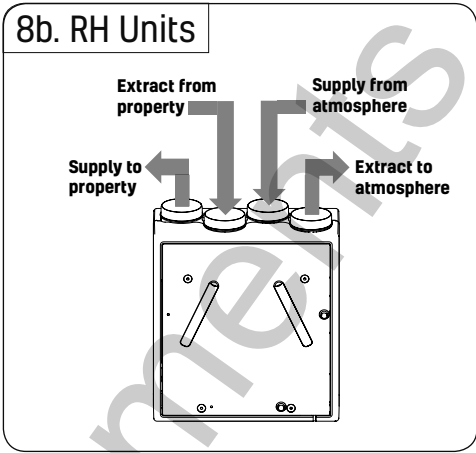


Ductwork should be fitted in accordance with the Domestic Ventilation Compliance Guide. [Example RH unit configuration shown].

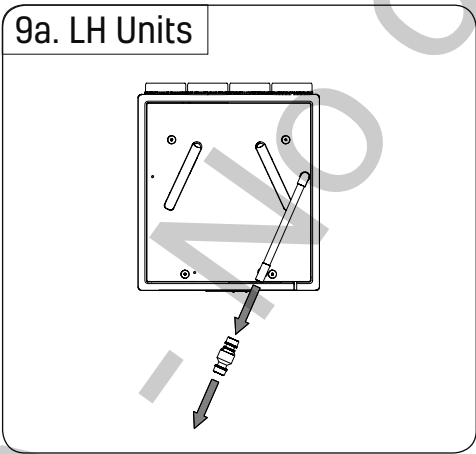
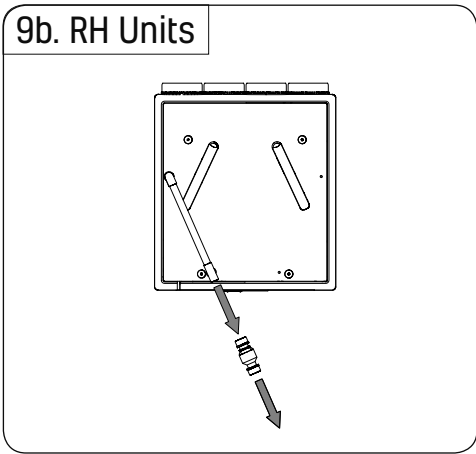
Ducts to and from atmosphere and through unheated spaces need to be insulated.

For efficiency, all ductwork should be as large a diameter as possible [min. 125mm] and use rigid or semi rigid duct.

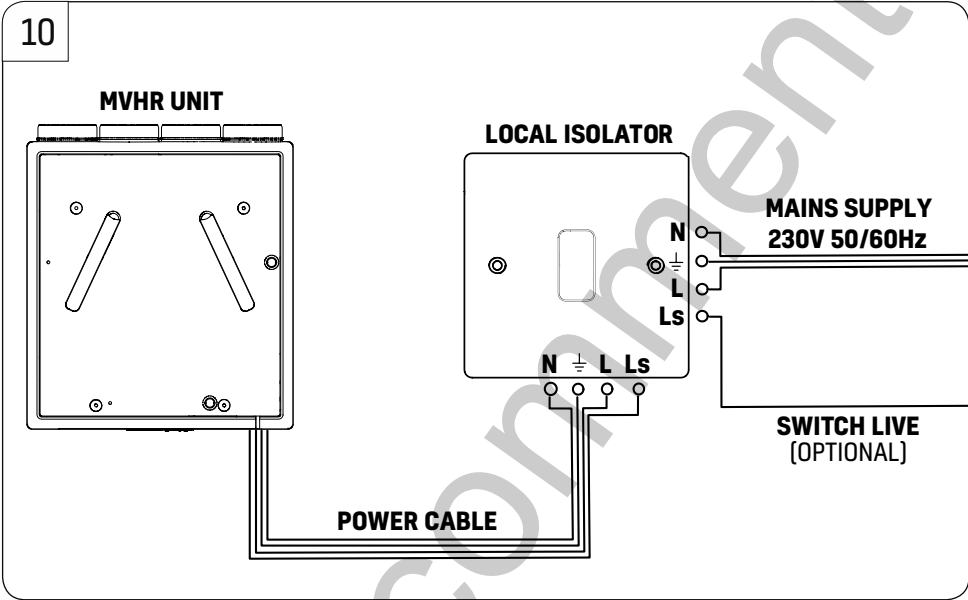
8. Connect each duct path to the spigot.



9. Make a water-tight connection between the two drainage connectors on the unit and the waste water system in the property. A suitable non-return device must be fitted to ensure air and waste water from the drain system do not flow back up into the unit. The drainage must be fitted with a minimum 5 degree fall away from the unit.



10. With the mains supply isolated, wire the unit to the local isolator as per the wiring diagram on page 3 and in accordance with the local wiring regulations. When the power is turned on, air will begin flowing into the property after a few seconds.



Commissioning

All maintenance and building works should be complete before commissioning this MVHR unit. This will avoid any other major disturbance to the installation or high volumes of dust or debris being drawn into the system. Do not commission the MVHR unit until it is fully installed including power, ductwork, internal valves and external vents.

MVHR systems must be commissioned in accordance with Approved Document F of the Building Regulations for England and Wales. Further good practice advice for the installation of MVHR systems can be found in the latest edition of the Domestic Ventilation Compliance Guide for England and Wales. For MVHR commissioning guidance in other countries, please refer to the relevant local Building Regulations for that country.

- Determine the required ventilation rates. For guidance see Approved Document F of the building regulations for England and Wales.
- During normal running mode, press the SET button for 4 seconds to enter commissioning mode. (Humidity and temperature sensor input is disabled temporarily while the unit is in commissioning mode).
- LEDs B C D will light and LED A will flash indicating that the extract boost flow rate is being modified.
- Fully open all supply/extract valves then measure the air flow rate at all system extract points using a calibrated air flow meter capable of measuring in l/s or m³/hr.
- Add the extract rates from all rooms together then compare this value to the calculated whole building boost extract ventilation rate.
- Use the + and - buttons to increase or decrease the flow rate in order to meet the calculated whole building extract ventilation rate.

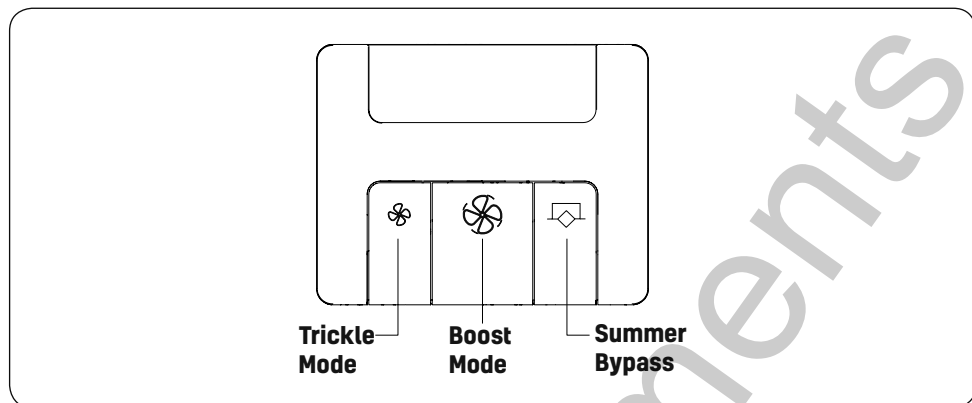
- Now adjust the individual valves to extract at the appropriate rate for each wet room.
- Press the SET button once to move on to the next flow rate. The flashing LED indicates which flow rate is being modified.
 - A: Extract Boost
 - B: Supply Boost
 - C: Extract Trickle
 - D: Supply Trickle
- Commission the unit in the order shown below, using the previous steps for adjusting air flow rates and valves.

[When maximum speed setting is reached, the LED will flash faster.
When the minimum speed setting is reached the LED will flash slowly].

Step	Flow Rate	Actions
1	Extract Boost	Lock the valves. Record the air flow rates.
2	Supply Normal [Trickle]	Lock the valves. Record the air flow rates.
3	Supply Boost	Do not adjust the valves. Record the air flow rates.
4	Extract Normal [Trickle]	Do not adjust the valves. Record the air flow rates.

- When commissioning is complete for all four flow rates, press SET for 4 seconds to return to normal running mode. If this is not done, the unit will automatically return to normal running mode after 60 minutes of inactivity and the current settings will be saved.

Wireless Remote Control



To view the current status of the unit:

- Press any button to wake the remote control and the relevant buttons will light up according to the current status of the unit.

To manually activate or deactivate the boost function:

- Press any button to wake the remote control.
- If the unit is currently in trickle mode, press the boost button once. The boost button will light up [green]. The unit will enter boost mode for 20 minutes then automatically return to trickle mode.
- If the unit is currently in boost mode, press the trickle button once to return to trickle mode. The trickle button will light up [green].
- If the switch live connection is turned on then boost cannot be cancelled until the switch live connection is turned off.

To manually activate or deactivate the summer bypass function:

- Press any button to wake the remote control.
- Press the summer bypass button to enable summer bypass for 24 hours.
- If the unit is currently in summer bypass mode, press the summer bypass button once to deactivate summer bypass mode.

Filter indicator and reset:

- If on waking the remote control the summer bypass light flashes [red], the filters need to be replaced. Contact EnviroVent to order new filters.
- After replacement filters have been installed press and hold the summer bypass button for 12 seconds to reset the filter indicator.

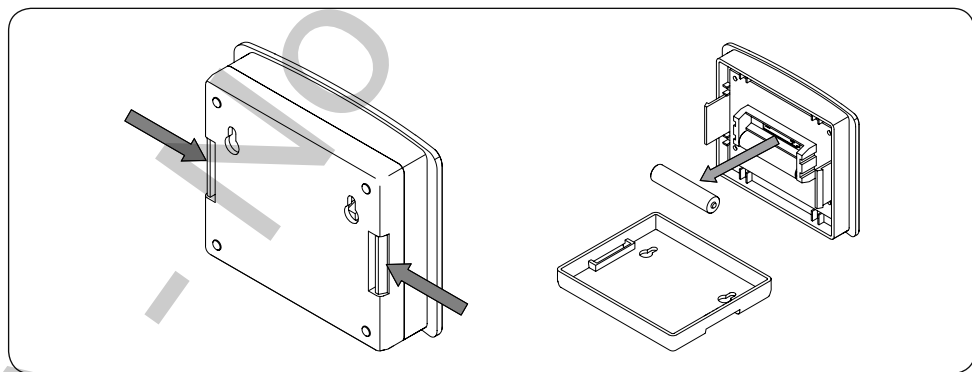
Pairing an extra remote control:

- Turn the unit off at the isolation point.
- Restore the power to the unit. For 20 seconds from restarting, the unit will be in pairing mode.
- Press any button on the extra remote control once within the 20 seconds and the remote control will pair to the unit.
- Successful pairing is indicated by all three lights flashing [green].

Fault indication:

- If a fault occurs with the MVHR unit, all lights on the remote control will flash [red]. If it persists, call EnviroVent on 01423 810 810 for further help.

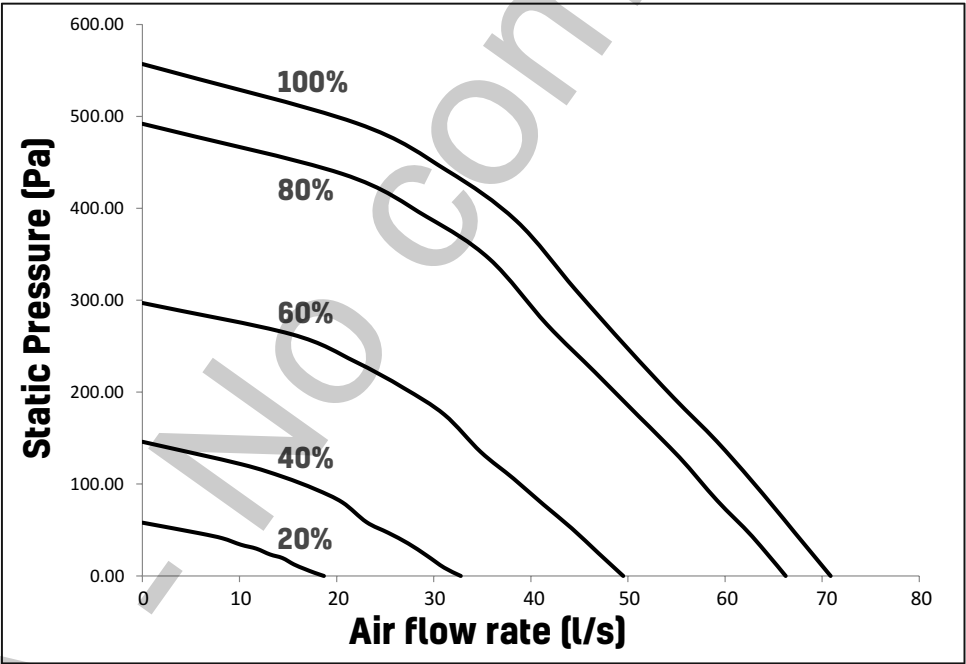
When the remote control batteries need to be replaced, unclip the switch rear cover. The battery is located on the back of the cover. Replace the batteries then clip the rear cover back on. The switch will remain paired with the unit after battery replacement. The remote control uses 2x AAA batteries. Dispose of the discarded batteries in a safe manner.



Technical Specification

Spigot diameters	125mm
Maximum air flow rate	71l/s [255.6m³/h]
Maximum power consumption	140W
Electrical Supply	230V Single Phase 50Hz
Ingress protection rating	IPX2
Filter grade	ISO Coarse 45% [G3]
Boxed unit weight	16kg
Unboxed unit weight	14kg

Airflow Performance



AFTER INSTALLATION THE END USER SHOULD
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DO NOT
THROW AWAY

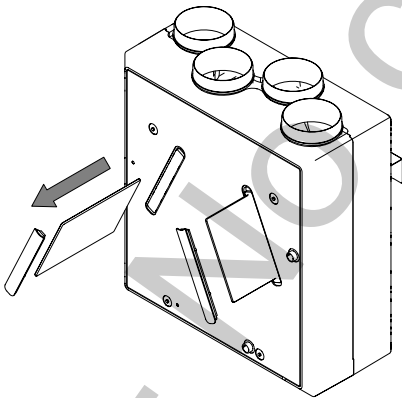
Post-Installation Checklist

- ☐ Installation instructions have been understood. Contact EnviroVent on 01423 810 810 if you require further technical help.
- ☐ Ductwork diameter is 125mm or larger throughout the property.
- ☐ Minimal amounts of flexible duct have been used in the installation.
- ☐ All ducts, valves, vents and drainage points are connected, mechanically fixed and sealed.
- ☐ Both filters are inserted into the filter slots on the unit.
- ☐ The unit is securely fixed with adequate space left for servicing.
- ☐ Condensate drain is securely connected to the waste water system, a non return device is correctly fitted and pipework has been water tested before connection to the MVHR unit.
- ☐ All major building works have been completed prior to commissioning.
- ☐ Supply and extract air flow rates have been commissioned with a calibrated anemometer to meet Approved Document F of the Building Regulations for England and Wales.
- ☐ Commissioning air flow rate data has been recorded.
- ☐ The occupants of the property are familiarised with the operation and maintenance of the system.

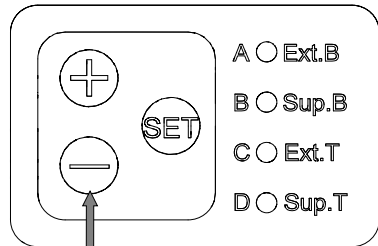
Filter Maintenance

- It is recommended to replace the filters inside the MVHR unit every 6-12 months [depending on occupancy levels and air conditions].
- Isolate the unit from the mains supply then slide off the front cover.
- Remove the filter caps, replace both filters then reinsert filter caps.
- Engage the mains supply then reset the filter indication by pressing the minus button for 10 seconds.
- Not maintaining the filters during the life of the product can invalidate the warranty. Filter indication duration is factory set to 12 months.

Filter Replacement



Filter Indication



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**DO NOT
THROW AWAY**

envirovent

Spares/Accessories

Item Description	Order Code
Replacement Filter	FILTER-ES200
125mm white supply valve	1DIFSUPPLY125WH
125mm white extract valve	1DIFEXTRACT125WH
150mm white supply valve	1DIFSUPPLY150WH
150mm white extract valve	1DIFEXTRACT150WH
Spare remote control	SWH-W-ES200

Warranty

We appreciate you choosing this quality EnviroVent product, which is designed and manufactured in Harrogate, North Yorkshire. We are confident that you will be delighted with the performance of the system and the resulting improvement in air quality in your home after it has been installed.

This unit is covered by a full 5-year warranty. There is no requirement for extra maintenance other than replacement of the filter every 6-12 months. You should not dismantle or remove any parts of the product other than those instructed in this guide. Tampering with the unit will void the warranty. The valves should be checked periodically to ensure there is air flowing through the system.

For further assistance call 01423 810 810.

The warranty covers any defect or break down that arises due to faulty materials or construction. Please note that a receipt will be required as proof of purchase. Any units bought from an unapproved source, including but not limited to auction websites, are not covered by this warranty.

Your unit serial number

For warranty conditions and exclusions, visit
www.envirovent.com/warranty