

MECHANICAL VENTILATION WITH HEAT RECOVERY

INSTALLATION GUIDE FOR ENGINEER / INSTALLER

WALL AND FLOOR MOUNTED VERSION



PLEASE RETAIN THESE INSTRUCTIONS WITH THE PRODUCT.

**UK
CA** **CE**

03 Wiring Diagram

IMPORTANT SAFETY INFORMATION



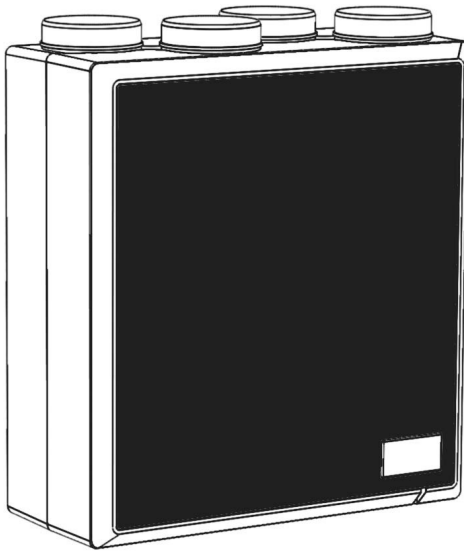
PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE COMMENCING INSTALLATION.

1. Do not install this product in areas where the following may be present or occur:
 - Excessive oil or a grease laden atmosphere.
 - Corrosive or flammable gases, liquids or vapours.
 - Subject to direct water spray from hoses.
 - Ambient temperatures higher than 40°C and lower than -20°C.
 - Possible obstructions that may hinder access to or removal of the unit.
2. All wiring must be in accordance with the current IEE wiring regulations BS7671, or appropriate standards of your country. Installation should be inspected and tested by a suitably qualified person after completion.
3. Ensure the mains supply (voltage, frequency and phase) complies with the rating label.
4. The unit should be provided with a local double pole fused spur fitted with a 3A fuse having a contact separation of at least 3mm.
5. These units must be earthed.
6. Precautions must be taken to avoid the back-flow of gases into the building from the open flue of gas or other fuel-burning appliances.
7. This appliance 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 or instruction concerning use of the appliance by a person responsible for their safety.
8. Young children should be supervised to ensure that they do not play with the appliance.

INSTALLATION GUIDANCE

1. The installer is responsible for the installation and electrical connection of the sentinel system on site. It is the responsibility of the installer to ensure that the equipment is safely and securely installed and left only when mechanically and electrically safe.
2. All regulations and requirements must be strictly followed to prevent hazards to life and property, both during and after installation, and during any subsequent servicing and maintenance.
3. The unit's condensate drain must be connected to the building's wastewater drainage system.
4. Certain applications may require the installation of sound attenuation to achieve the sound levels required.
5. The unit must not be connected directly to a tumble drier.
6. The supply and exhaust valves must be fully opened prior to commissioning.
7. The supply air must be drawn from the exterior of the property.
8. The unit should be allowed to stabilise during commissioning for a minimum period of 5 minutes when changing between boost and normal speeds.
9. Ensure that the unit's external grilles are a minimum of 1500mm apart. The exhaust grille should be located at least 600mm away from any flue outlet. The inlet grille should be located 2000mm away from any flue outlet.
10. This product and associated duct installation should be carried out in accordance with the domestic ventilation compliance guide.

03 About the unit

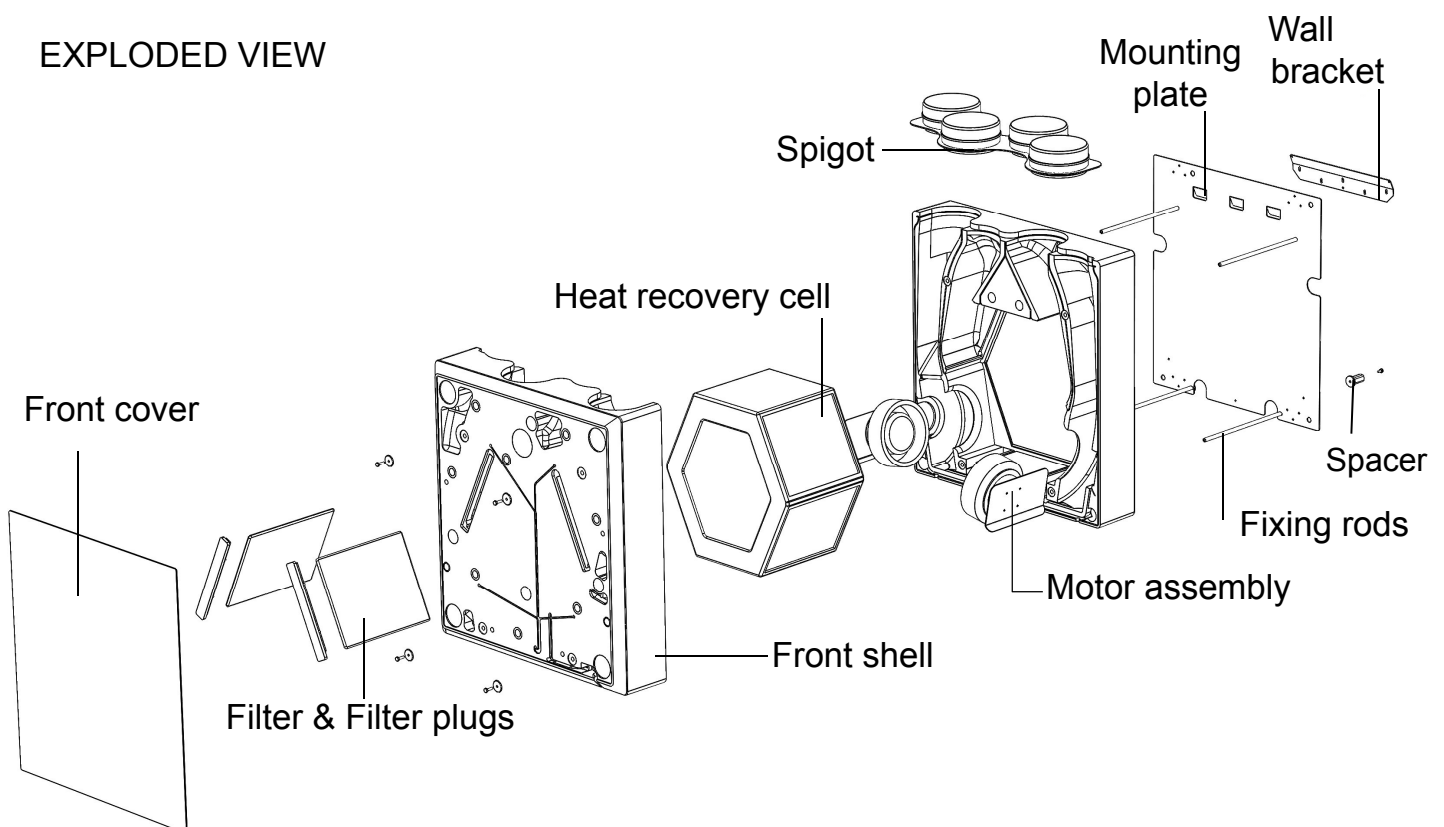


This Mechanical Ventilation with Heat Recovery unit (MVHR) is designed for the energy efficient ventilation of houses and similar dwellings, conforming to the latest requirements of the Building Regulations document F 2010.

The unit is designed for continuous 24 hour exhaust ventilation of stale moist air from bathrooms, toilets and kitchens. As the stale air is extracted, a heat exchanger within the unit transfers up to 90% of the heat into the supply air entering the bedrooms and lounge.

The unit can be mounted vertically or horizontally, with an additional horizontal fitting kit (475724 not supplied).

EXPLODED VIEW

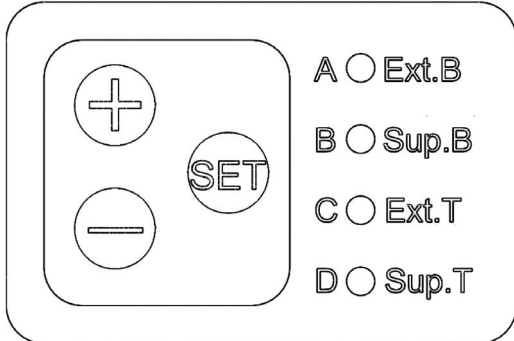
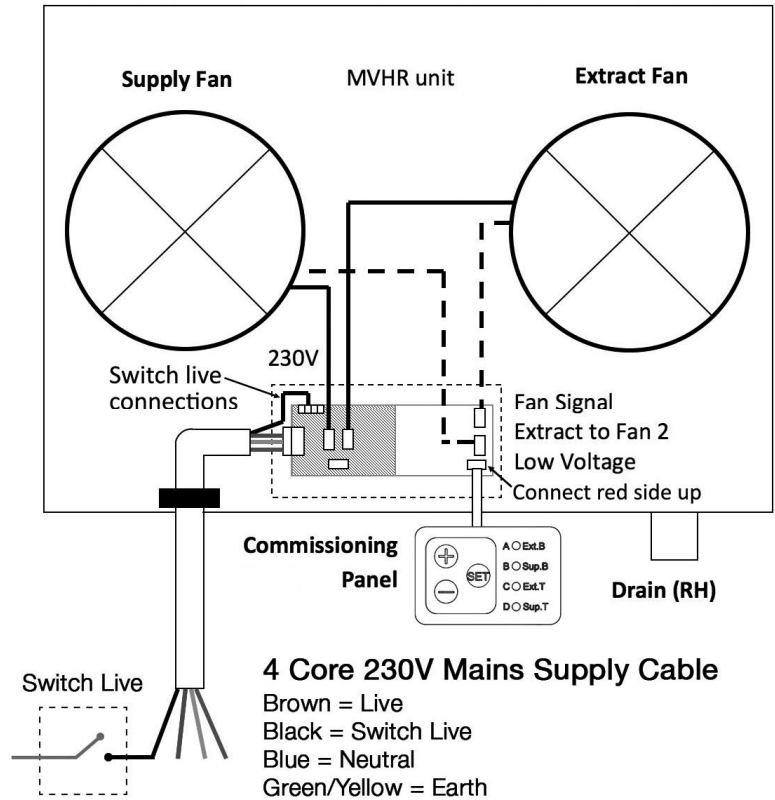


03 Wiring Diagram

Commissioning - Electrical Connections

The appliance 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. All wiring must be completed by a qualified electrician. This appliance is suitable for 230V ~ 50Hz single phase supply fused at 3 amps. The appliance is supplied with a 4 core mains flexible cable.

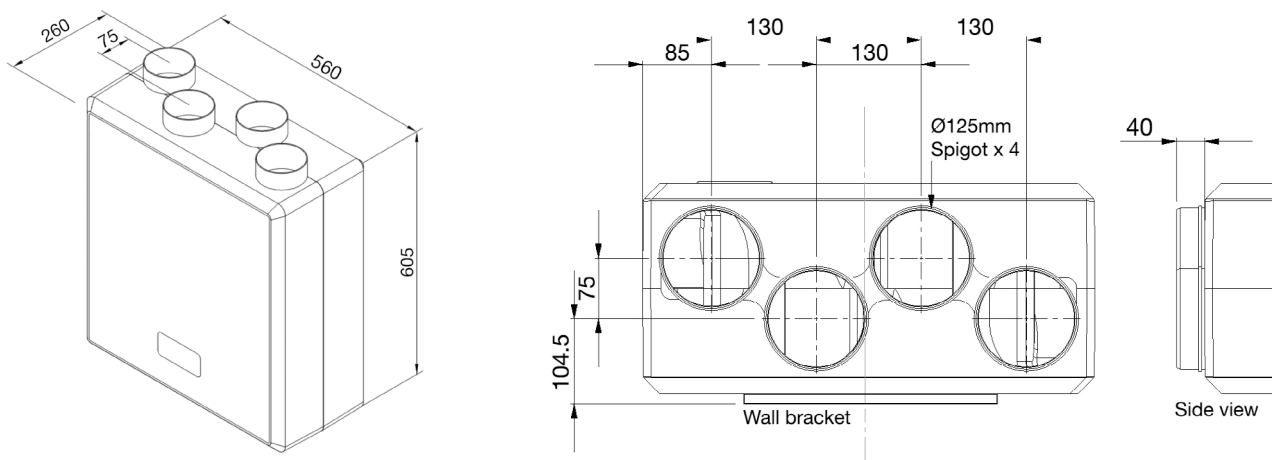
If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.



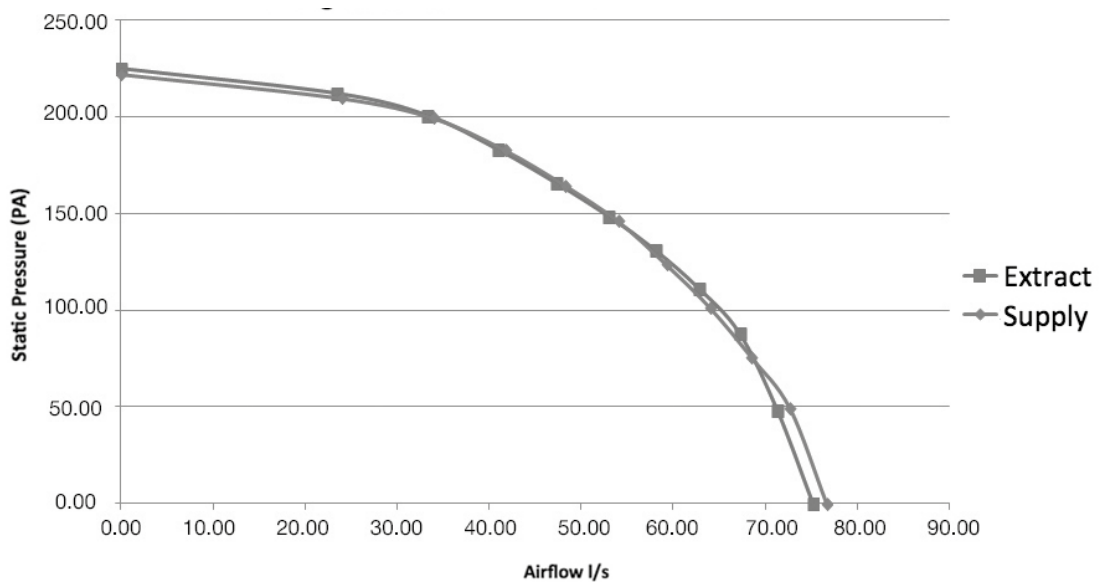
⚠ Emergency shutdown details - Unit to be isolated from the mains by turning it off at the isolating switch.

04 Technical Specifications

Maximum Flow Rate	75 l/s (270m ³ /h) MAX	Protection class	IPX2
Heat Exchanger	Counter Flow (Plastic)	Filters	ISO coarse 45%
Fans	EC DC	Spigot \varnothing	125mm
Electrical Supply	230V/1PH/50Hz	Dimensions	560 x 635 x 260mm
Max Power consumption	140W	Weight	14kg



Heat Recovery Unit Static Pressure - Airflow



05 Installation Instructions

IMPORTANT

Be sure to have read and understood these instructions before beginning the installation process.

PRE-INSTALLATION CHECK LIST

Make sure that the unit can physically fit in to the desired location.

The unit should be situated so that access for maintenance or replacement of parts is possible. Make the ductwork runs as short as possible. Having the most direct route and using as few bends as possible will reduce air resistance and improve the efficiency of the unit.

05 Installation Instructions

Control Options

Frost Protection

When the cell temperature in the unit falls below 6°C the unit automatically warms the cell with extracted air to prevent the formation of frost.

Boost - Switch Live

The unit comes with Switch Live as standard. It is an automatic function, sending the unit to boost when the bathroom or kitchen light is on.

Summer Bypass

The summer bypass helps reduce the air temperature coming into the dwelling during the summer months. It is an automatic function and operates when the supply air temperature to the property is above 25°C.

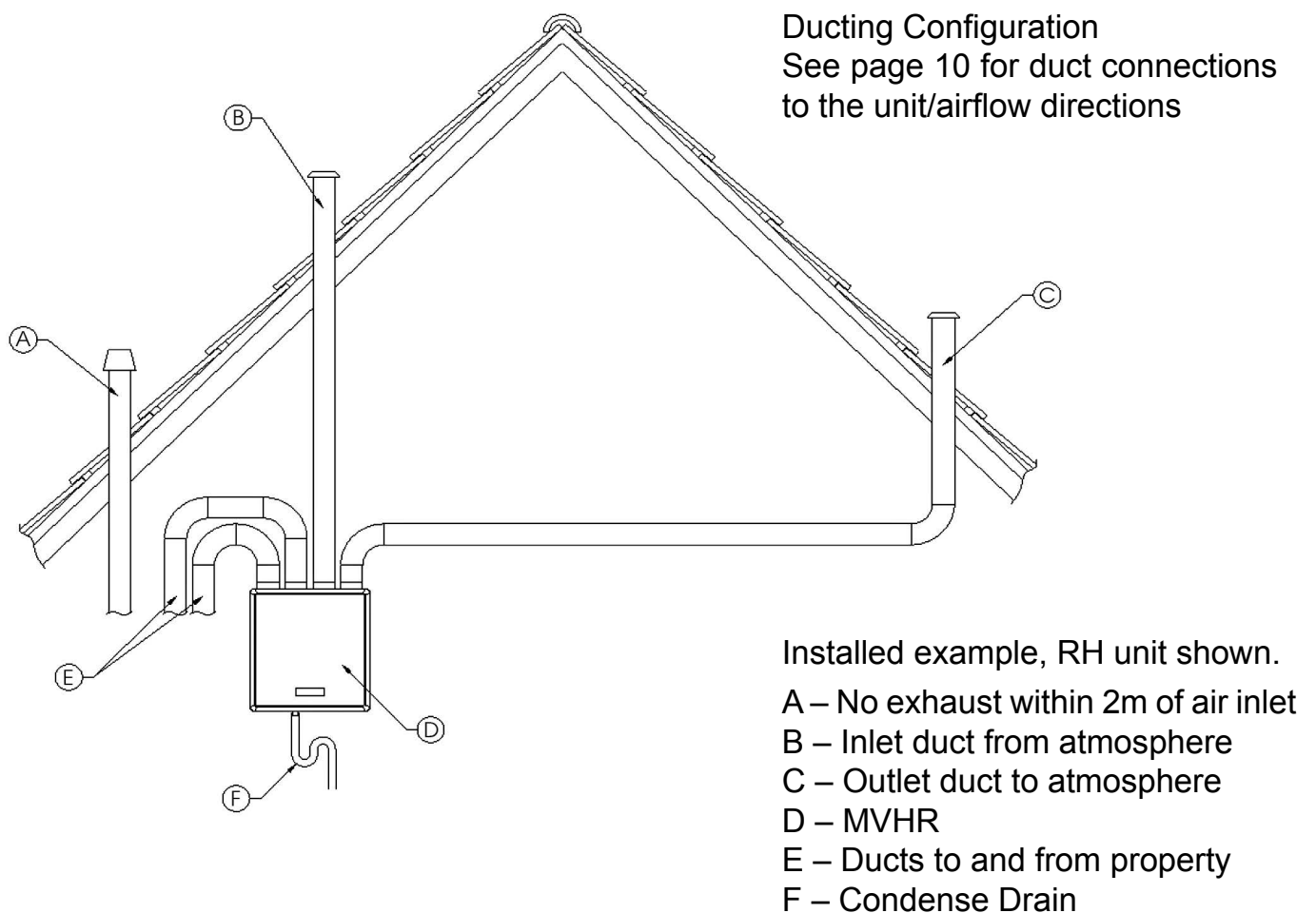
Control Options	
Frost Protection	✓
Boost Switch Live	✓
Summer Bypass	✓

05 Installation Instructions

FIRST FIX - Installing ductwork and electrical supply

Important note: This unit is for wall or floor mount only.

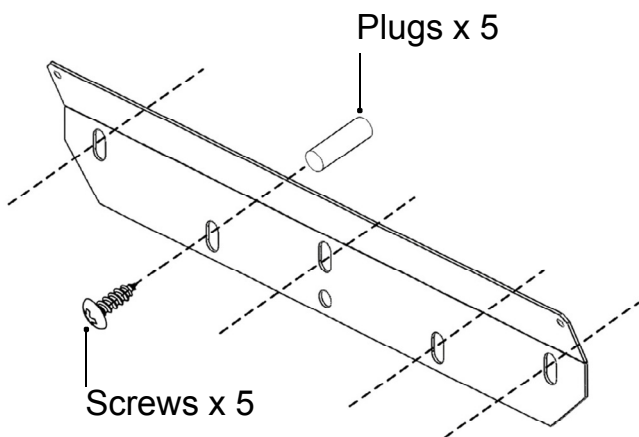
1. Locate external terminations (supply and extract) in accordance with the latest addition of the Domestic Ventilation Compliance Guide.
2. Ductwork within house $\text{\O}125\text{mm}$ - maximise duct size where possible. Make sure that the ductwork is insulated in unheated spaces. Minimise flexible duct.
3. Locate the mains supply within 1m of the location of unit. The position of the electrical power supply or unit (a fused switched isolator) must not be mounted above or closer than 1m to a cooker where it could be affected by excessive heat or moisture.
4. Make sure that there is room for the MVHR unit. The unit is designed to be vertically mounted in a kitchen or utility cupboard (on the wall). It can also be floor mounted in a loft space with an additional drainage kit.
5. Also make sure that there is a free space at the front of the appliance for cleaning the filter and carrying out maintenance on the appliance.



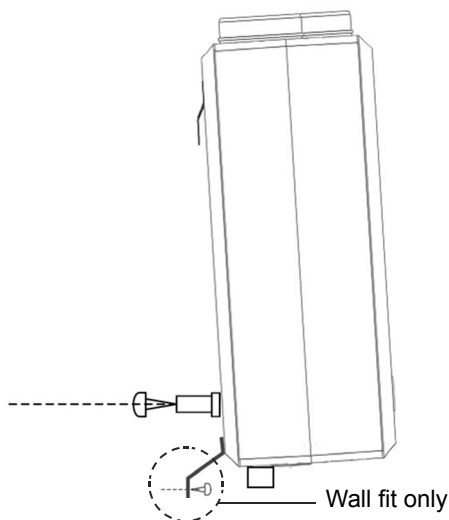
05 Installation Instructions

SECOND FIX - Installing the unit

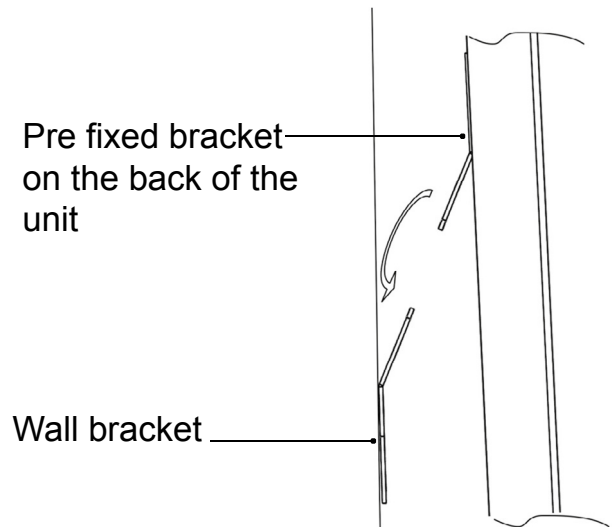
1. Attach the wall bracket to a flat stable surface that is capable of bearing the unit's weight, 14Kg. Ensure that bracket is positioned so that there is enough space for the condensate drain and ducts to be connected. Fixing kit provided.



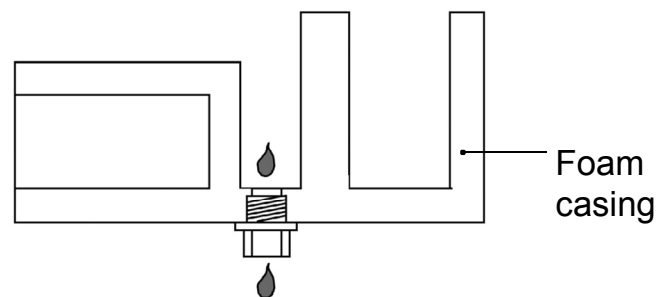
2. Attach spacers x 2 with screws provided. The spacers ensure that the unit tilts forward to improve drainage. Use the tie down cable if required to secure the bottom of the unit.



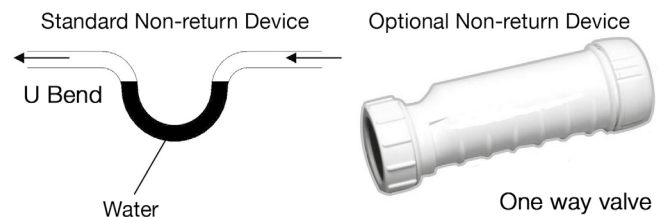
3. Slide the unit onto the wall bracket and attach ducting and drain.



Connect 22mm PVC drain fitting



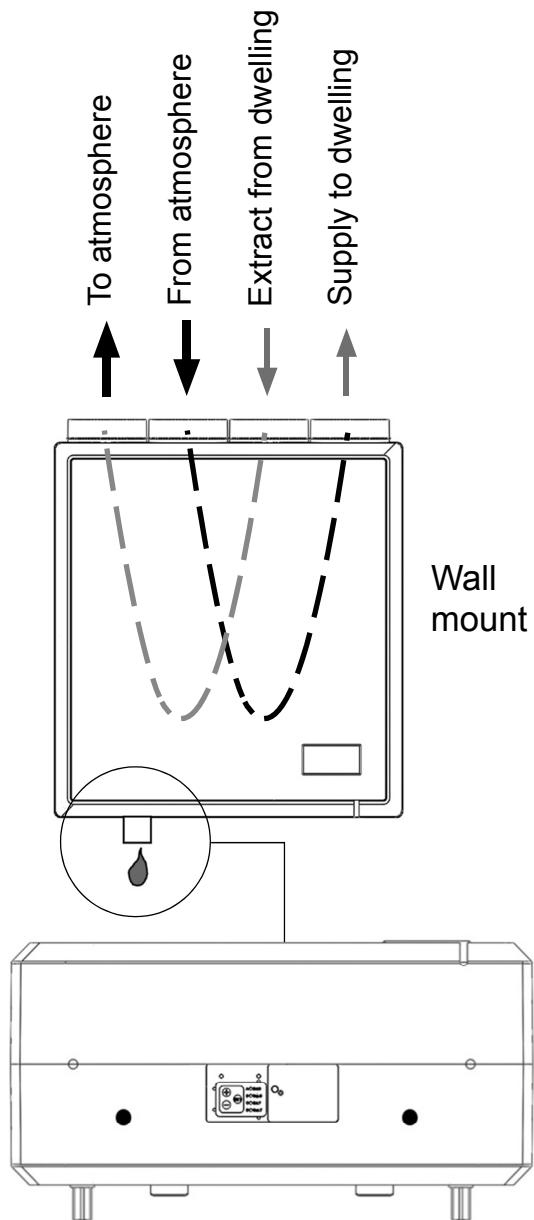
4. The drainage from the unit may be connected to an internal waste water system or soil pipe with an appropriate non-return device. One way valve device is recommended. Insulate pipes in an unheated loft space.



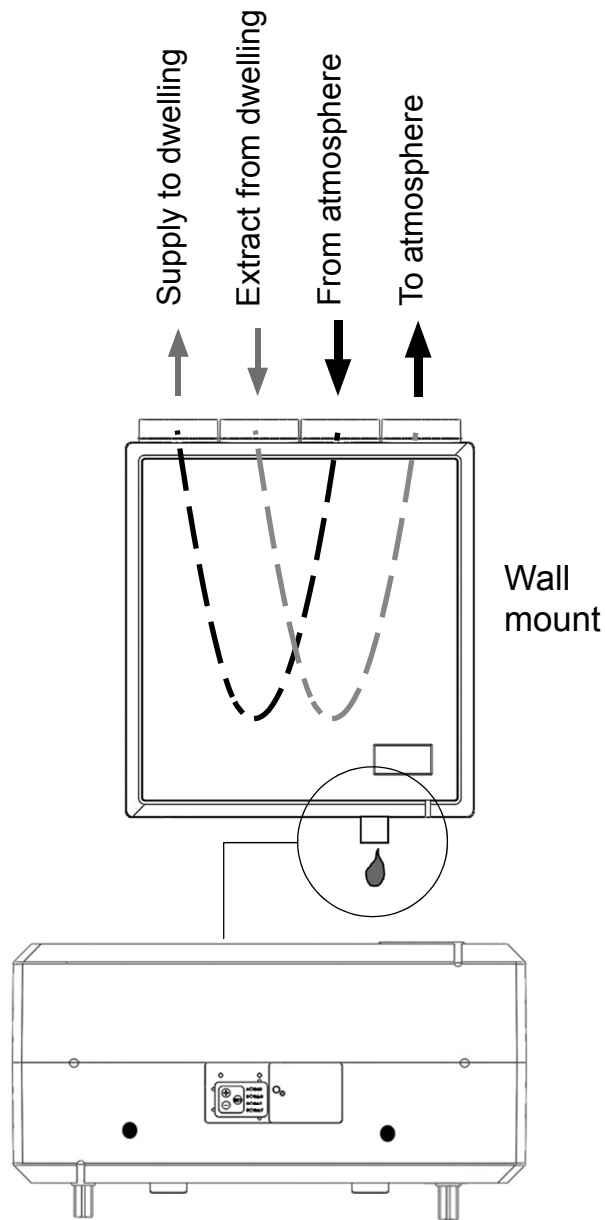
05 Installation Instructions

SECOND FIX

Airflow and drain fitting - LH



Airflow and drain fitting - RH



Drains are factory fitted. The units have either a LH or RH drain.

05 Installation Instructions

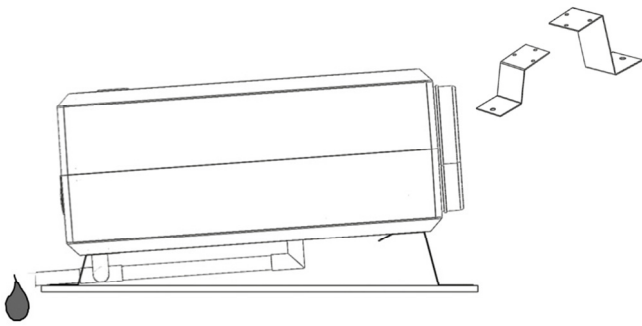
SECOND FIX –

For horizontal floor mounting, optional horizontal fitting kit must be used. (Stock Ref.: 475724 Not Supplied).

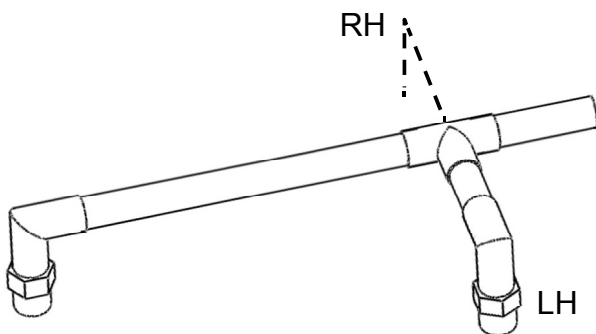
Connect 22mm PVC drain fitting

Floor mounting

5. The unit can be floor mounted in a loft space. Use the long and short S brackets provided along with short fitting screws to ensure correct drainage. The unit must be higher at the duct end.



Drain connections should be solvent welded as here. The centre Tee section is reversed to make either LH or RH drain. Push in the drain fitting and seal as appropriate to create a watertight assembly.

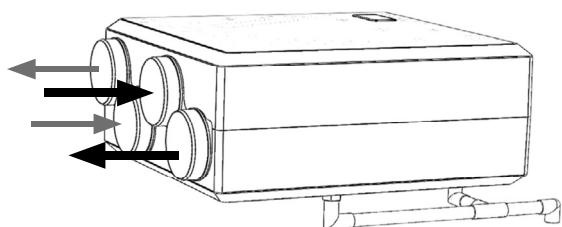


Important note: The floor mounted drain must be fitted on the same side as the factory fitted drain. This unit is for wall or floor mount only.

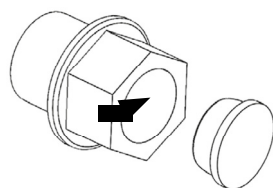
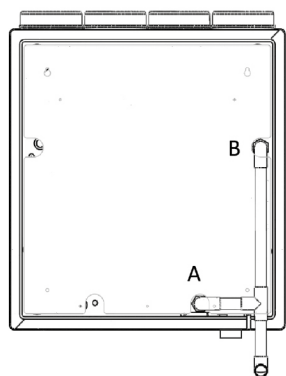
05 Installation Instructions

SECOND FIX - Drainage for floor mounted units

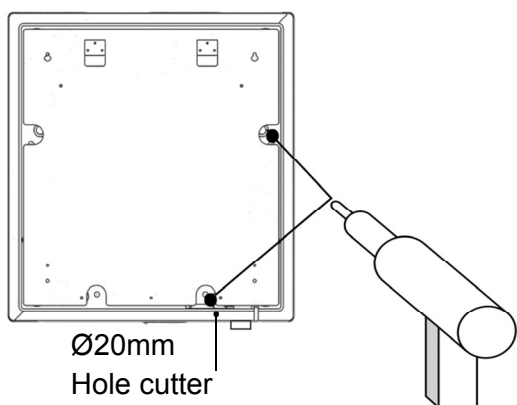
Floor mount - LH drain



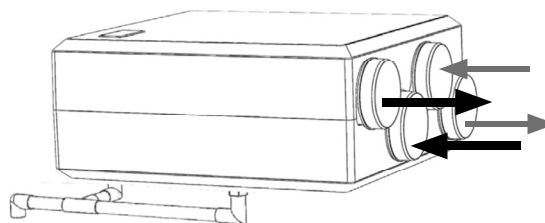
- ← To atmosphere
- Extract from dwelling
- From atmosphere
- ← Supply to dwelling



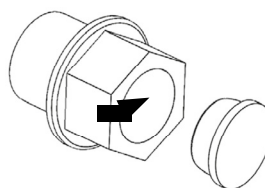
Place stopper provided into the fitted drain



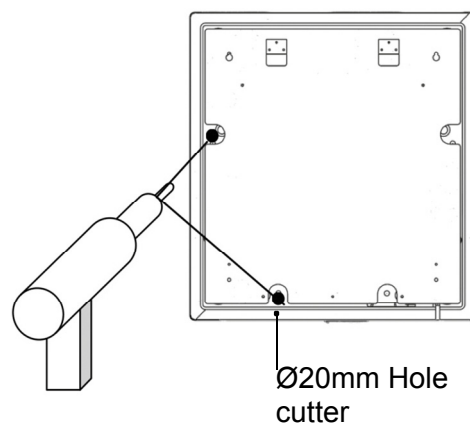
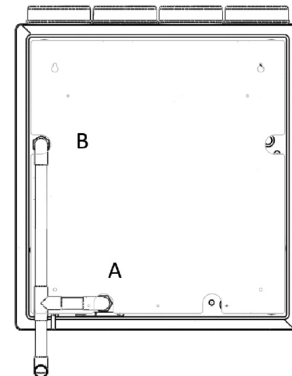
Floor mount - RH drain



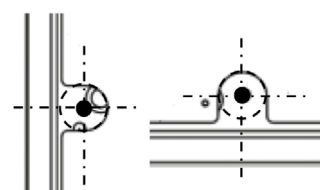
- To atmosphere
- ← Extract from dwelling
- ← From atmosphere
- Supply to dwelling



Place stopper provided into the fitted drain



Drill into the bottom of the case as shown, using the metal plate as a guide. Ensure that the foam core is fully removed.



06 Commissioning Part 1

Commissioning of the system is necessary to provide adequate ventilation to the dwelling, as stipulated in Approved Document F (ADF) of the Building Regulations (England and Wales).

Conditions - all installation works should be completed prior to the commissioning of the unit to avoid dust being drawn into the system. The unit should only be commissioned when fully installed, with power, ductwork, valves and vents in place.

Refer to **Domestic Ventilation Compliance Guide**.

Complete the **Inspection checklist and air flow measurement** test sheets using calibrated equipment as detailed in the Domestic Ventilation Compliance Guide.

Boost and Normal rates should be set as outlined in the commissioning guide (page 14).

Extract and Supply - flow rates should be balanced on Boost and Normal, and carried out in the following order: Boost Extract, Normal Supply, Normal Extract, Boost Supply.

Refer to system design drawings for flow rates.

Boost Rate

Open the **Extract** ceiling/wall valves. Measure all extract points summing the individual room rates.

Adjust using and buttons, press up or down until the total extract rate is met. See the individual product's instruction guide for method (page 14). When the desired overall extract rate is achieved, the individual valves should then be adjusted to draw the appropriate volume of air from each room, typically starting at the end of the Index Run – the valve furthest from the MVHR unit.

It may be necessary to adjust the fan unit slightly to account for increased pressure.

When adjustments are completed the valves should be locked into position to maintain settings.

Normal rate

Open the **Supply** ceiling/wall valves. Measure all supply points summing the individual room rates. Adjust the flow rate as described on page 14.

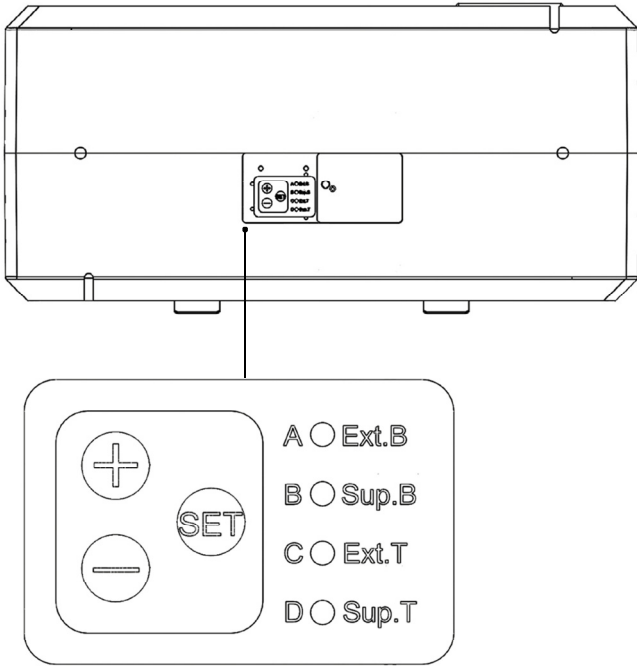
Adjust the valves to balance the flows and lock into position.

Normal Extract and Boost Supply: The valves cannot now be adjusted. Adjust the fan speeds up or down to achieve the desired flows.

07 Commissioning Part 2

Setup guide

The control switch is found behind the rear cover panel.

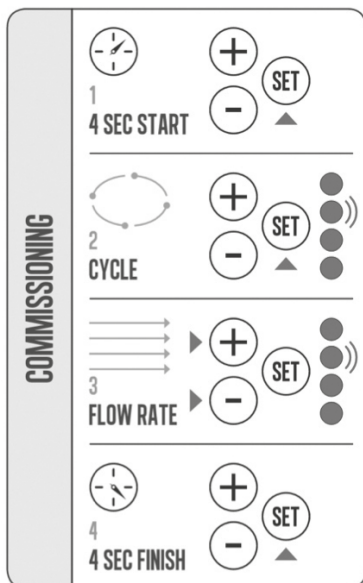


A) EXT.B -
Extract Boost

B) SUP.B -
Supply Boost

C) EXT.T -
Extract Trickle

D) SUP.T -
Supply Trickle



Commissioning mode is chosen by pressing the SET button for 4 seconds, all sensor inputs will be disabled in this mode so that they do not interfere with flow rates. All LEDs will light with the Extract Boost flashing (Ext B), this indicates that the flow rate may now be increased/decreased as required.

The next press of the SET button will move commissioning to the next setting, Sup.B and so on. When the unit has been fully commissioned, press the SET button for 4 seconds and this will put the unit back into status mode. If the unit is not put back into status mode after commissioning, it will automatically revert back to status mode after an hour.

Note: Settings will be retained if the power supply is interrupted.

LED Indications	
Constant LED	Flashing LED
(A) Frost protection ON	(A) Service required
(B) N/A	(B) Service required
(C) Boost state - Switched input ON	(C) N/A
(D) Summer by-pass ON	(D) Check filter*
Supply and extract LED indications Commissioning mode only	



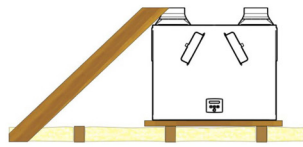
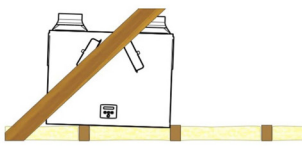
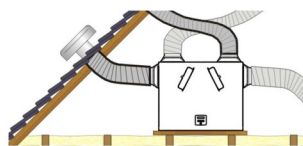
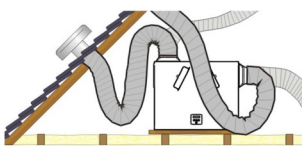
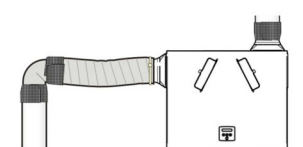
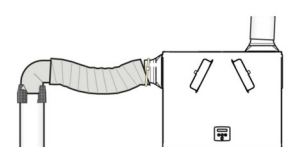
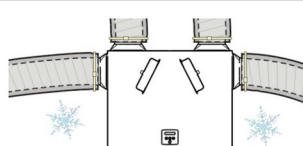
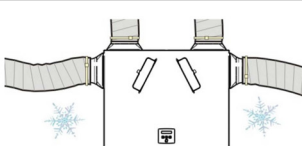
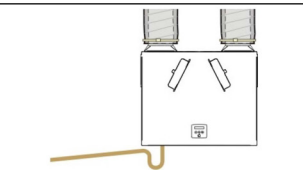
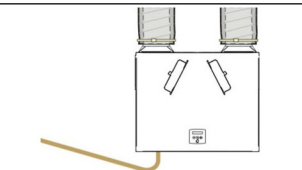
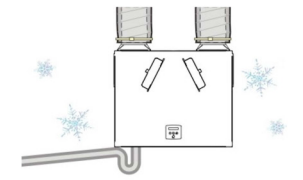
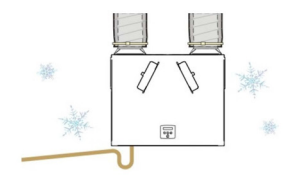
*To reset filter indication, see maintenance section on page 16.

MVHR Installation Checklist

REQUIRED TO BE COMPLETE TO COMPLY WITH CONDITIONS OF WARRANTY,
but does not affect statutory rights.

This is a short check list of good practice do's and don'ts that may affect the safety or functionality of the installation. It is not a complete list of what is required. They must be complied with in order to ensure that the installation performs as expected.

Unit Serial number: _____ Installer's name: _____

Check			Date and initials
1. Is the unit stable and horizontal with room around it to allow maintenance?			
2. Is any flexible ducting pulled taut to prevent moisture collection and avoids airflow issues?			
3. Are all joints in the ductwork sealed to prevent air leakage?			
4. Is the ducting insulated to prevent condensation and cooling or heating of the air?			
5. Does the condensate drain a) have the correct slope to ensure water runs away and b) is fitted with a trap to prevent smells coming back into unit?			
6. If the condensate drain passes through a cold space is it insulated to prevent freezing?			

- Installation instructions have been understood
- Duct is Ø125mm or larger has been used
- The unit is securely fixed into position with enough space left for servicing
- Condensate drain is tight, drains to a suitable location and has been water tested

General advice

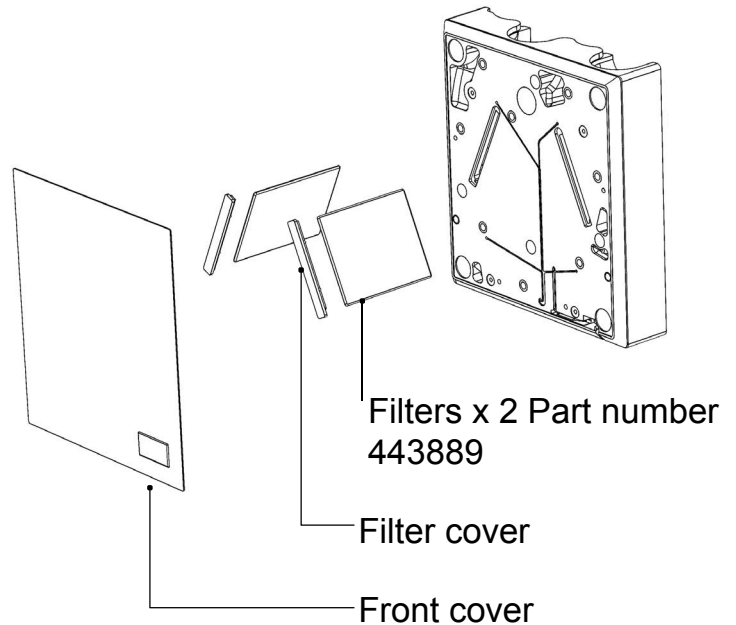
It is recommended that airflows at the diffusers are periodically checked by the resident or home owner.

Filter Maintenance - to be checked as required. 6 to 12 months recommended

1. Switch off the power supply
2. Remove front panel
3. Remove filter covers
4. Remove the filters
5. Vacuum the outside of the filter or replace if required
6. After cleaning replace filters at same side
7. Replace filter covers and front panel

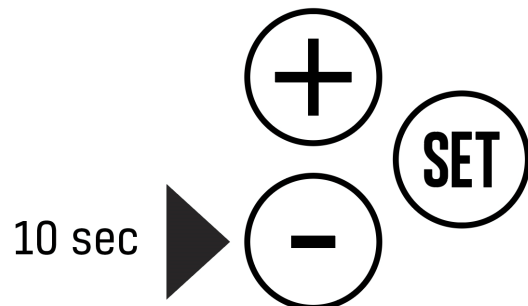
Major service

This is to be carried out at five years by an approved maintenance company.



Clearing filter indication using control switch

- To clear the filter indication light press minus (-) on the switch panel for 10 seconds.

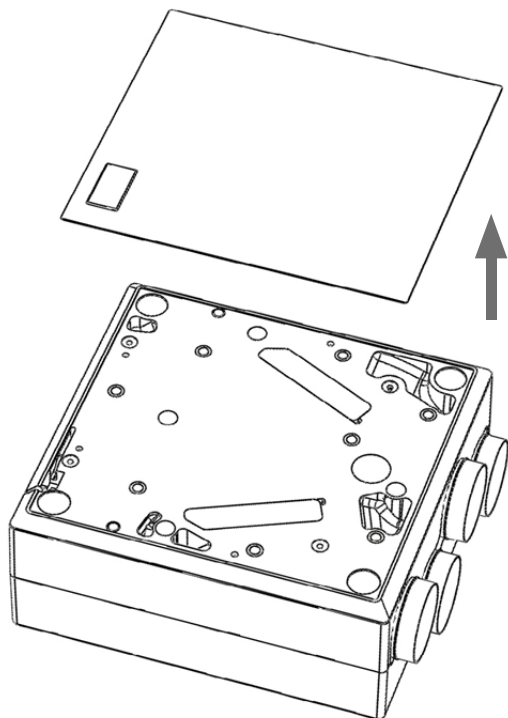


This will reset the filter counter and no more action is required. Filter indicator is set to 12 months as standard.

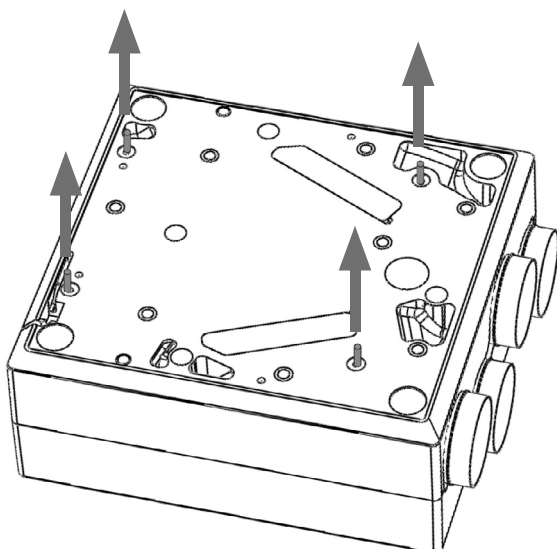
⚠ Filter maintenance is required for the proper function of the unit, not doing so may invalidate the warranty.

Disassembly of unit for engineering access and maintenance

1. Remove the front cover held on with velcro pads.

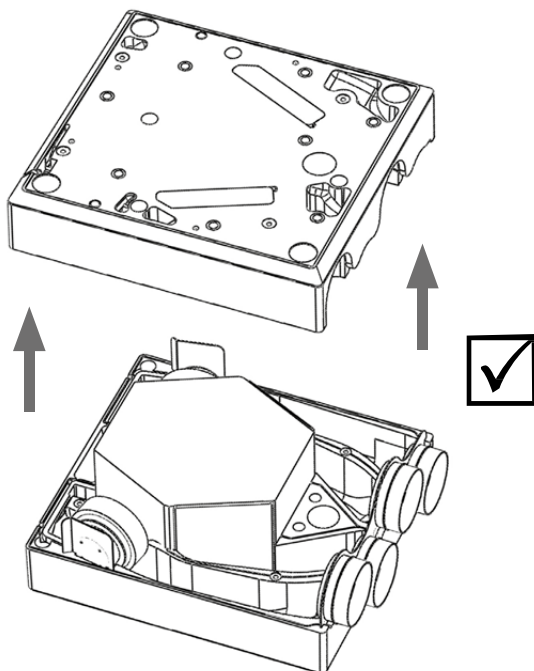


2. Remove retaining screws and washers x 4, store safely.

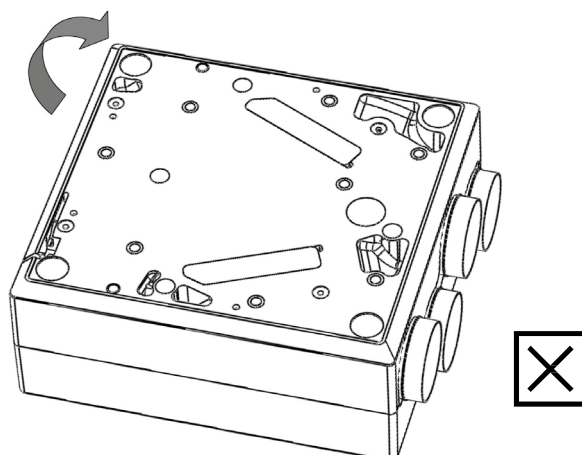


3. Carefully remove the top foam moulding by pulling it straight forward. Foam mouldings must remain parallel.

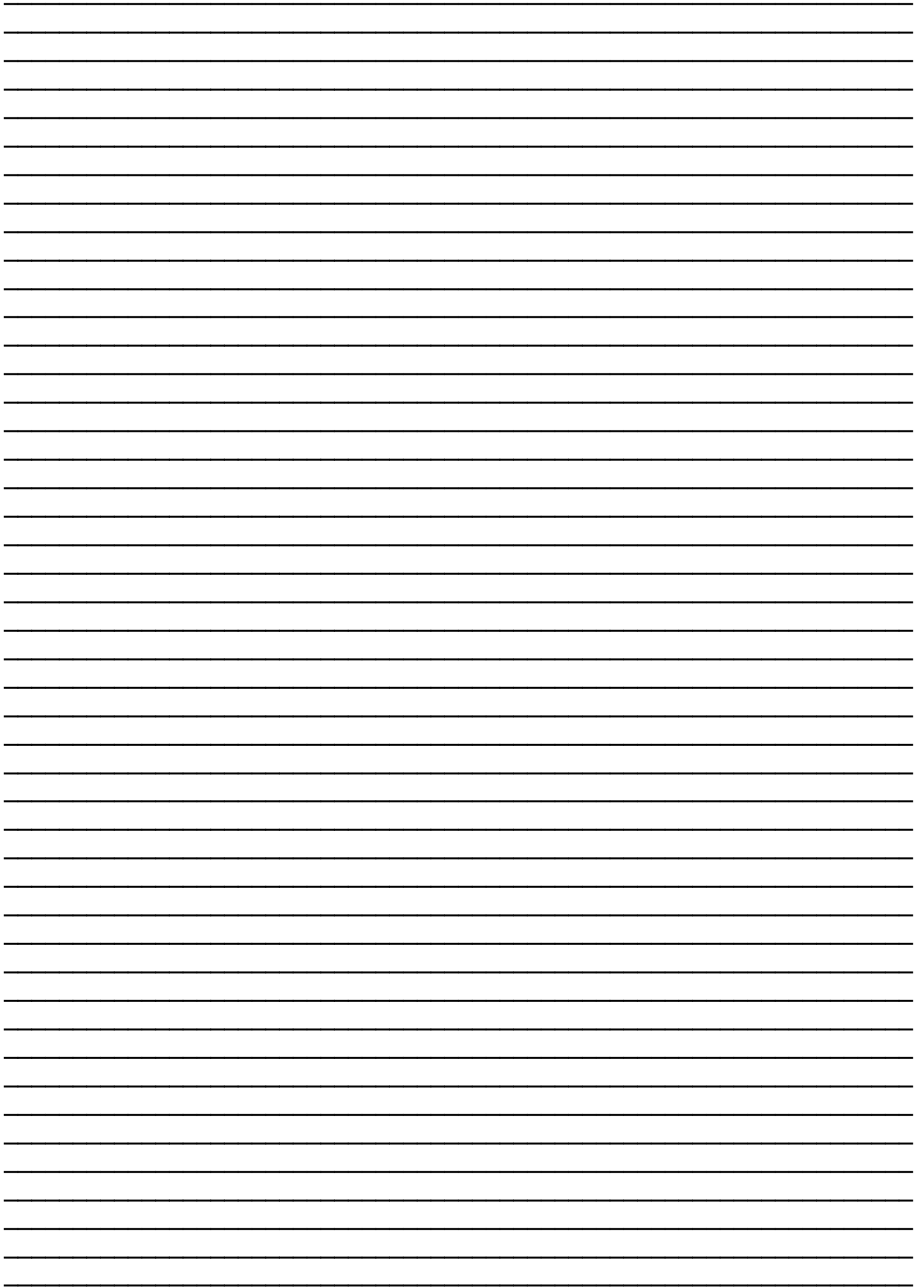
Take care not to damage the sealing gaskets.



Do not pull from one edge as this may damage the internal fixing rods.



When reassembling the unit after maintenance, ensure there are no trapped wires and that the seals are intact



**Disposal**

This product should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority for recycling advice.

PO BOX 1285, CRAWLEY RH10 0LY

EU Authorised Representative: Anda Products Bedrijvenweg 17 7442 CX Nijverdal Nederland authorisedrep@andaproducts.nl