

Vent-Axia[®]

WHOLE HOUSE HEAT RECOVERY UNIT

Installation, Connection and set up Instructions



AIR MINDER PLUS

**READ INSTRUCTIONS IN CONJUNCTION WITH ILLUSTRATIONS
PLEASE SAVE THESE INSTRUCTIONS**

CE



**IMPORTANT:
READ THESE INSTRUCTIONS BEFORE COMMENCING THE INSTALLATION**

DO NOT install this product in areas where the following may be present or occur:

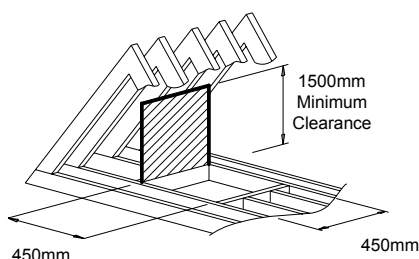
- Excessive oil or a grease laden atmosphere.
- Corrosive or flammable gases, liquids or vapours.
- Ambient temperatures higher than 50°C or less than -10°C.
- Relative humidity above 90%
- Possible obstructions which would hinder the access to or removal of the Unit.

SAFETY AND GUIDANCE NOTES

- All wiring must be in accordance with building Regulations and the current I.E.E. Wiring Regulations (BS7671), or the appropriate standards of your country. The installation should be, inspected and tested by a suitably qualified person after completion.
- The Unit should be provided with a local double pole isolator switch having a contact separation of at least 3mm.
- Ensure that the mains supply (Voltage, Frequency and Phase) complies with the rating label.
- It is recommended that the connection to the unit is made with flexible cable.
- This Unit should not be used where it is liable to be subject to direct water spray from hoses etc.
- This HRU's condensate drain must be connected to the building foul water drainage system.
- If an extract grille associated with the HRU is sited in a room containing a fuel burning appliance, the installer must ensure that air replacement is adequate for both appliances.
- Ensure that the HRU's external grilles are a minimum of 2m apart and located at least 600mm away from any flue outlet.
- If the ductwork passes through an unheated loft void or similar location, it should be insulated.
- Certain applications may require the installation of sound attenuation to achieve the sound levels required.
- The unit must not be connected directly to a Cooker Hood or Tumble Dryer.
- The Condensate Waste pipe must be insulated if it passes through an unheated loft void.
- The Supply and Exhaust Valves must be fully opened prior to commissioning.
- The Supply air must be drawn from the exterior of the property.
- The internal Drain Tray condensate outlet should be clear of debris prior to commissioning.
- The Supply and Exhaust Valves must be positioned a minimum of 300mm from a wall to enable the airflow measuring equipment to fit correctly over the Valve.
- The unit should be allowed to stabilise during commissioning for a minimum period of 5 minutes when changing between the Low, Medium and Boost speeds.
- When the unit is fitted in a new build property the Supply and Extract Filter should be checked at one month intervals for the first six months.
- When the unit is used in conjunction with open flue appliances (see Frost Protection, section I pg 11) an electrical duct heater must be placed in the Supply (cold fresh air duct, colour green).

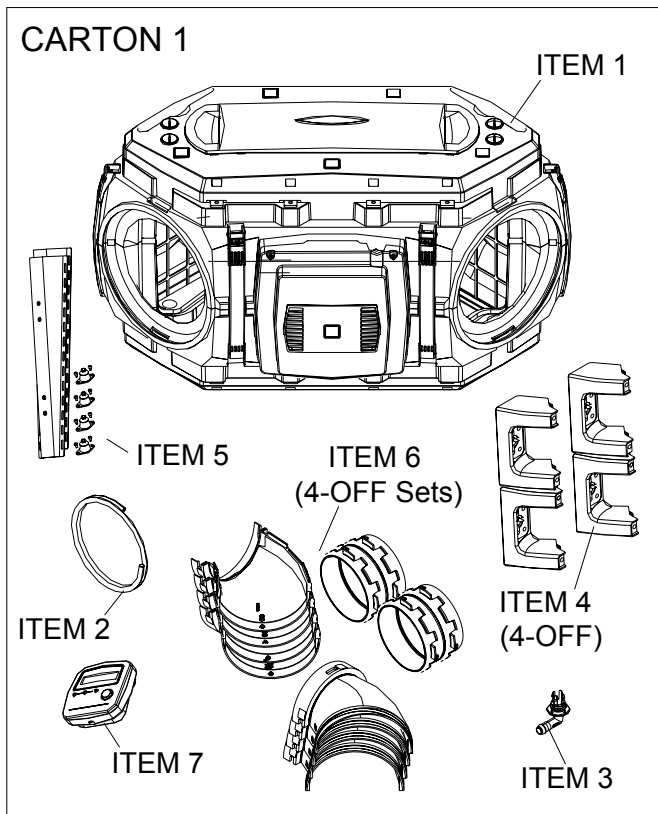
PRE-INSTALLATION.

1. Measure the access to ensure that the **HRU** will pass through the access into the loft space (*See below*). The Unit can be installed fully assembled or where the hatch space is limited it is designed so that it can pass through a 450mm square hole and be assembled in the loft void.



2. The following factors must be considered prior to the installation of the HRU:
 - The Unit's Condensate drain should be connected to the building foul water drainage system.
 - The Unit must be positioned to allow for the access and removal of the Unit's Filters and Heat Recovery Cube for maintenance purposes.
 - Avoid sudden ductwork bends or transformations close to the Unit.
 - Use flexible connections between the rigid ductwork and the unit spigots.

AIRMINDER PLUS has been designed and packaged to be easily installed by one person. For ease of handling and installation the Air Minder Plus HRU is delivered in two cartons:

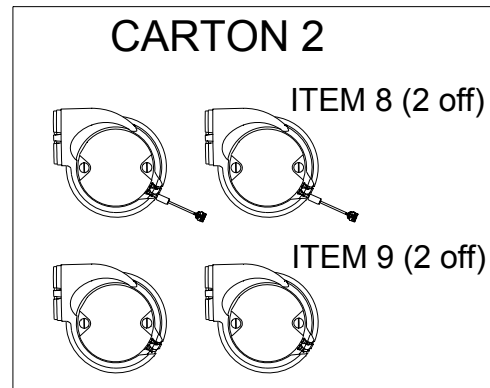


Carton 1

- 1 – MAIN BODY
- 2 – CONDENSATION TUBING
- 3 – DRAIN ELBOW
- 4 – FOUR FEET / FIXINGS
- 5 – ANGLED MOUNTING BRACKETS
- 6 – SET OF FOUR CONNECTION SPIGOTS
- 7 – L.C.D. CONTROLLER

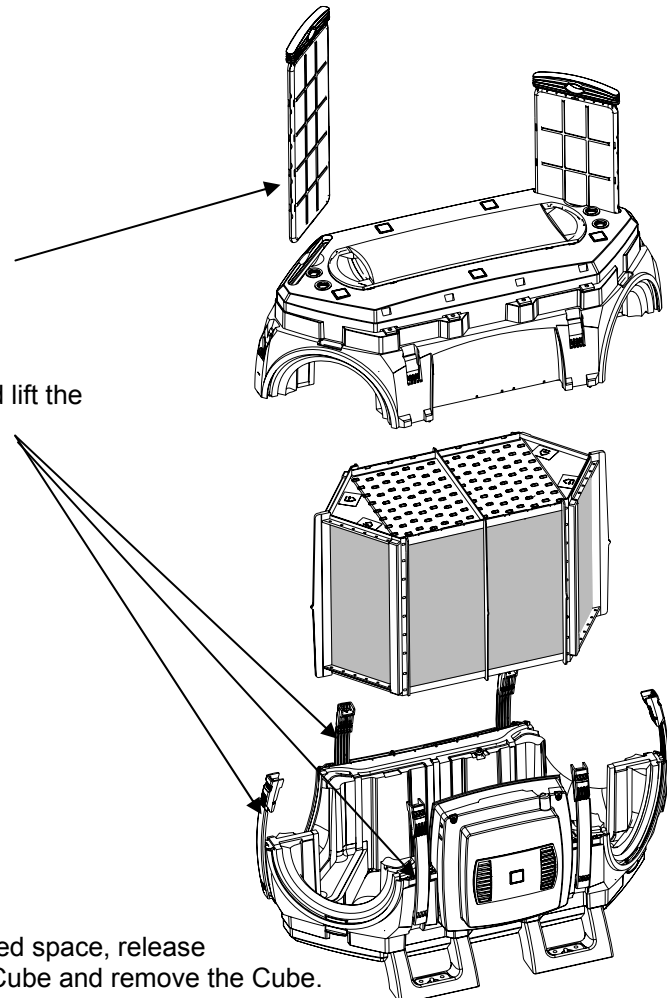
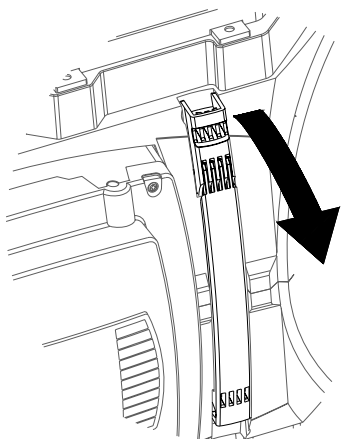
Carton 2

- 8 – TWO FAN BLOWER UNITS
- 9 – TWO INLETS



A. PREPARATION.

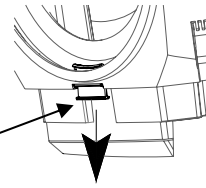
1. Remove the contents from Carton 1.
2. Remove the Air Filters from the main body.
3. Release the six yellow locking Straps (The two end Straps have locking screws) and lift the Top Housing away from the Base Housing.



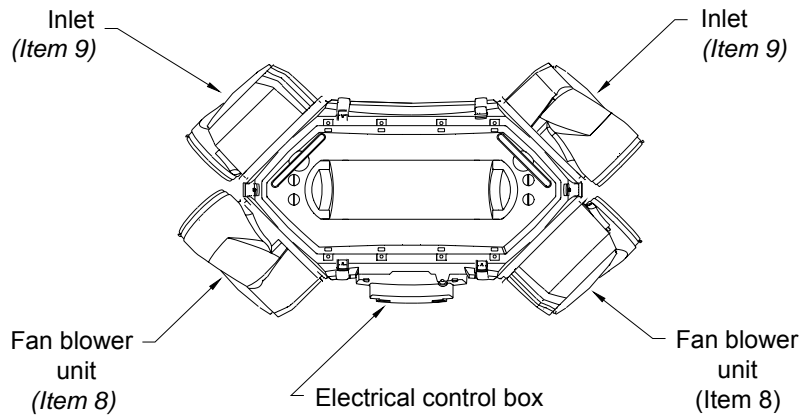
4. If the HRU is to be passed through a restricted space, release the screws on the side of the Heat Recovery Cube and remove the Cube.

B. ASSEMBLY.

1. Fit the four feet to the Base Housing for floor fixing.
2. Insert the Heat Recovery Cube into the Base Section and secure the Cube into position.

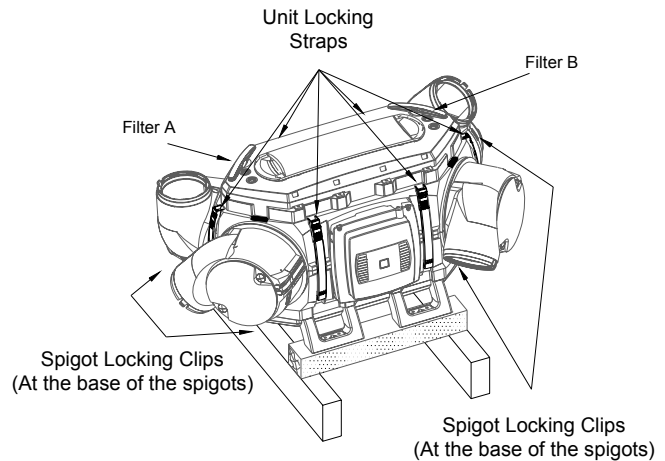


3. Pull out the four Spigot Locking Clips.
4. Locate the Fan Blower Units (*Item 8*) from carton 2 either side of the Electrical Control Box, and the Inlets (*Item 9*) into the retaining grooves on the other side of the Base Housing.

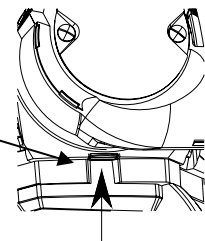


Ensure the Fan Units (*Item 8*) are on either side of the Electrical Control Box and the Inlets (*Item 9*) are on the opposite side.

5. Locate the Top Housing onto the Base Housing and secure into position using the yellow Locking Straps and tighten the locking screws.

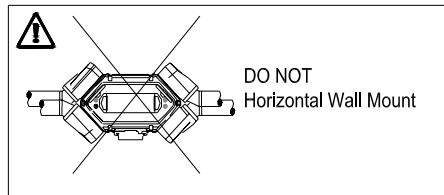


6. Rotate the Blower Units and the Inlets to the most convenient position to suit the direction of the ductwork.
7. Lock the spigots into position by Pushing the yellow Spigot Locking Clips into the Base Housing, until they are flush.



8. Insert the Air Filters (A and B) into the Top Section.

C MOUNTING

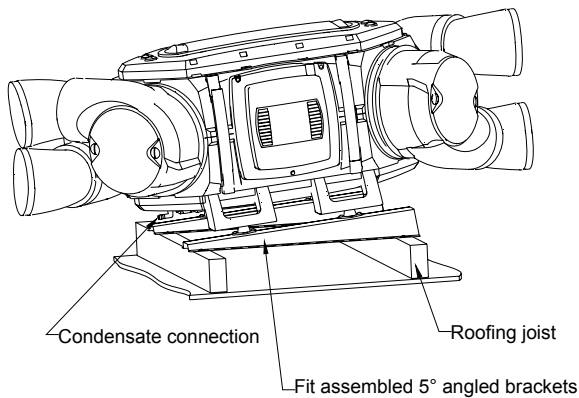


Note: Ensure that horizontal units are installed with a 5° fall towards the condensate drain point.

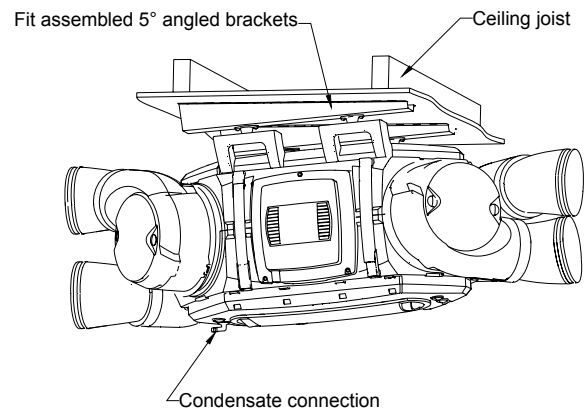
TYPICAL MOUNTING

1. The HRU should be secured to the support timbers by 4 Woodscrews (25mm long x N°10 Round Head)
2. The angled brackets assembled with the Anti Vibration Mountings supplied to be attached to the feet of the HRU orientate to the diagram below for loft or ceiling mounting.

Loft mounting



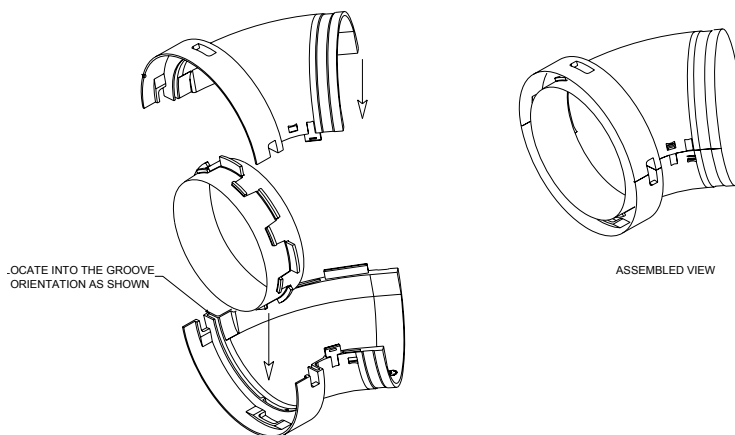
Ceiling mounting



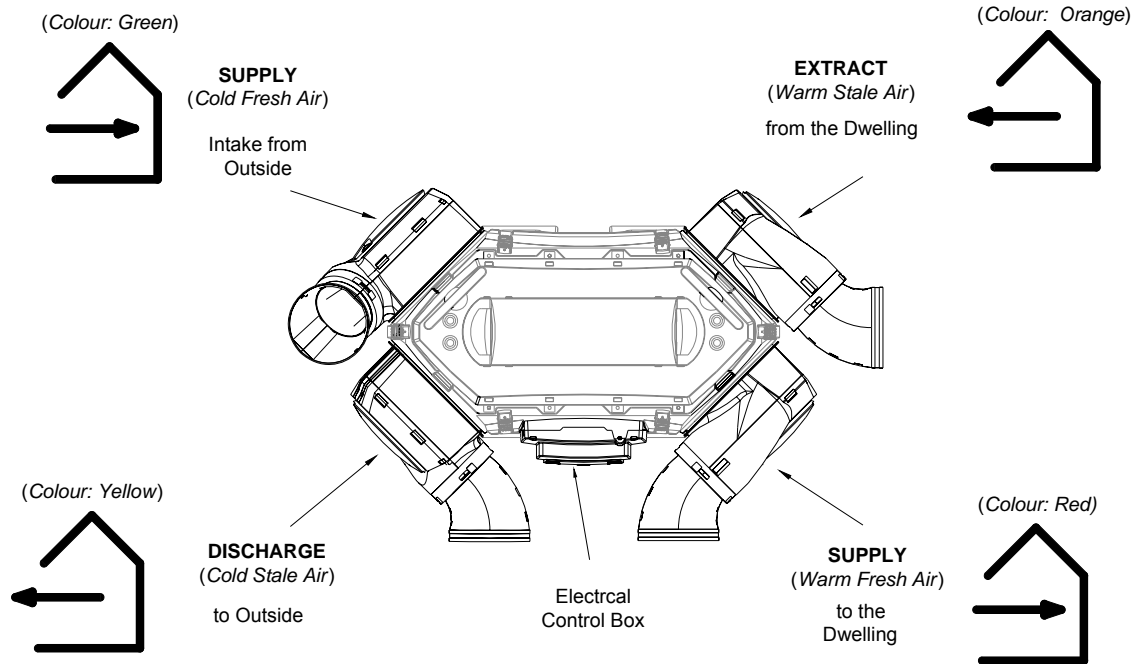
D. CONNECTION SPIGOTS

SPIGOT ASSEMBLY

Spigot Sizes: AM PLUS 290 – 150mm ø
AM PLUS 375 – 200mm ø



1. For convenience the connection spigots can be fixed in one of four positions, using the bayonet design.

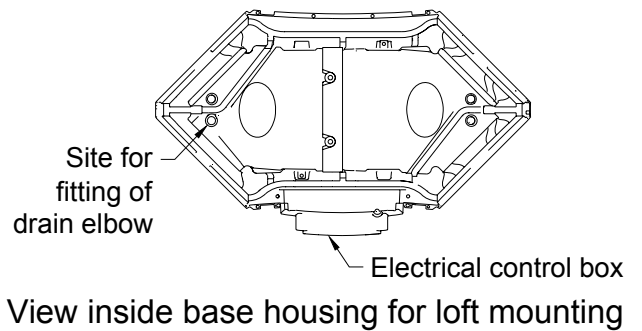


E. CONDENSATE DRAIN.



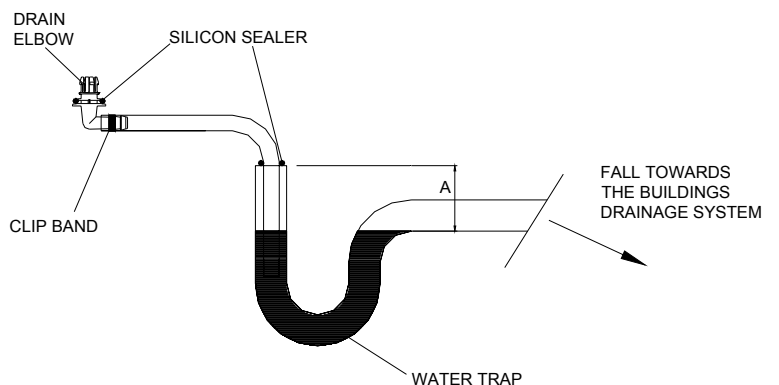
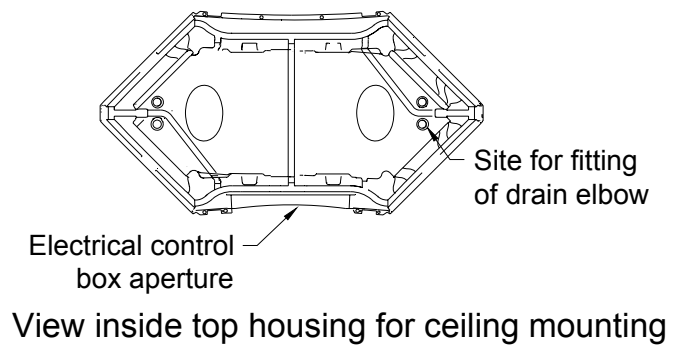
Installation.

1. Remove the quarter turn Drain Plug seal (item 1) shown and insert the quarter turn Drain Elbow (Item 3), connect the Tubing (Item 2) to the Drain Elbow and secure with a Clip Band. Align the Drain Elbow with the waste pipe to ensure there are no abrupt bends or restrictions in the Tubing.



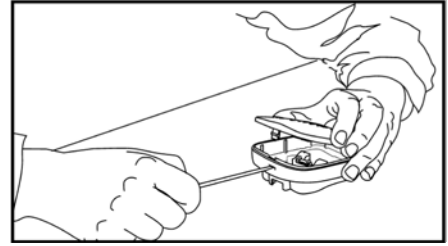
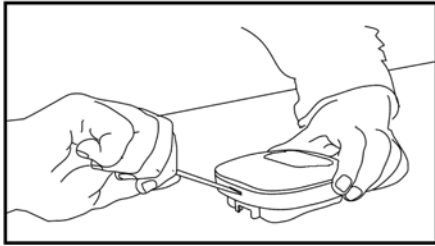
Note: Ensure that units are installed with a 5° fall towards the condensate drain point.

2. Connect the tubing (Item 2) to Drain Elbow and secure into position with a Clip Band. Align the elbow with the condensate waste pipe to ensure there are no abrupt bends or restrictions in the Tubing.
3. Install the condensate drainage Tubing in accordance with the diagram.
4. Ensure the water trap is below the Drain Elbow outlet 'A'.

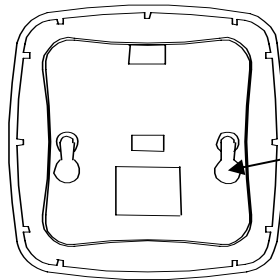


INSTALLING THE CONTROLLER

1. Insert a small flat bladed screwdriver into the small slot at the base of the controller, push the release catch in and gently lever upwards to remove the front cover of the controller by pulling the cover away from the back box.



2. Fix the back box in the position required using the 2 key hole slots the countersink at the top of the slots provides permanent fixing.

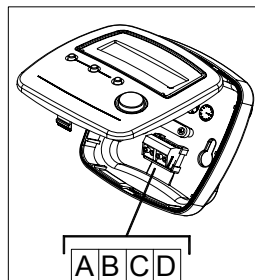


Fixing Slots.

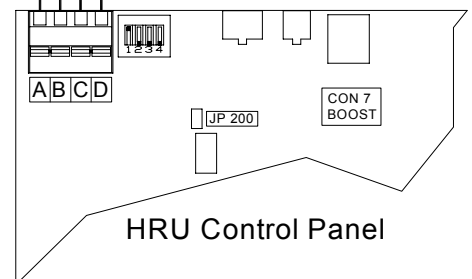
CONTROLLER

1. The 4 core SELV cable is wired to the controller terminals in the following order:
2. Replace the Controller's front cover.

L.C.D Controller



BLUE / WHITE
ORANGE / WHITE
WHITE / ORANGE
WHITE / BLUE

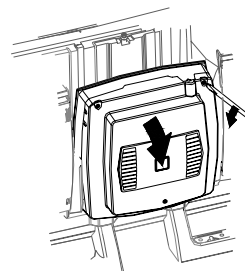


F. WIRING.

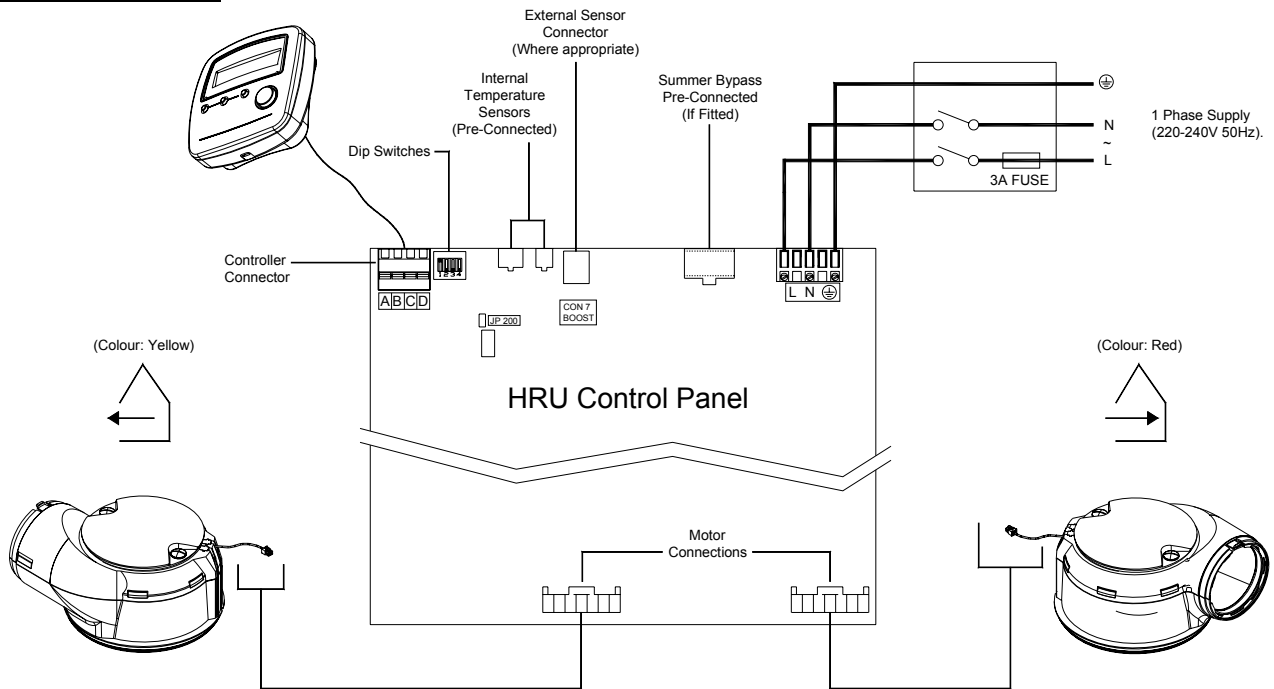


WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING THE INSTALLATION / OR MAINTENANCE.

Unscrew the three retaining screws and remove the Electrical Control Box Cover.



Connections.



FANS.

1. Route the blower unit cable in the Cable Retaining Groove on the Fan Blower and around the outside groove to the base of the Electrical Control Box.
2. Connect the Connector Plugs from each Blower Unit to the Terminal Connection Sockets on the Connection Board.
3. Feed any excess cable into the recesses on either side of the Electrical Control Box and clamp the Cable securely into position.

MAINS CONNECTION.

- Connect the mains power supply to the HRU.

HOUSE VOLUME SELECTION.

- Select the Total House Volume from the table below and set the Dip Switches to the speed required.

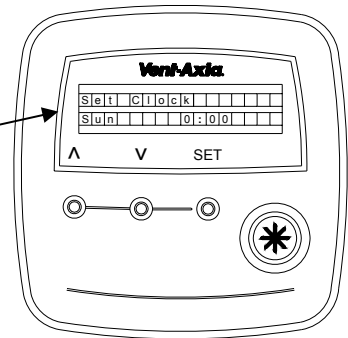
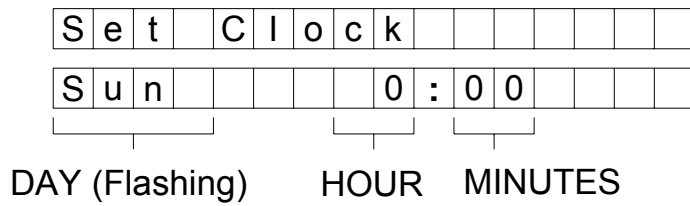
	Setting 1	Setting 2	Setting 3	Setting 4
AM PLUS 290				
House Volume	265m³	310m³	355m³	400m³
	Low 60 m ³ /h Med 120 m ³ /h High 200 m ³ /h	Low 70 m ³ /h Med 140 m ³ /h High 230 m ³ /h	Low 80 m ³ /h Med 160 m ³ /h High 270 m ³ /h	Low 90 m ³ /h Med 180 m ³ /h High 290 m ³ /h
AM PLUS 375				
House Volume	400m³	466m³	555m³	600m³
	Low 90 m ³ /h Med 180 m ³ /h High 290 m ³ /h	Low 100 m ³ /h Med 210 m ³ /h High 330 m ³ /h	Low 120 m ³ /h Med 250 m ³ /h High 360 m ³ /h	Low 135 m ³ /h Med 270 m ³ /h High 380 m ³ /h

- Replace the HRU's Control Box's Cover.
- Switch the Unit On at the Switch Fused Spur box and follow the controller set up sequence, described in the next Section G.
- Ensure the HRU is working correctly.
- Note: The System operating noise level will be significantly higher when operating on the High speed.

G INSTALLER SET UP INSTRUCTIONS FOR THE CONTROLLER

Switch on the power at the **Switch Spur Box** to provide the power to the **Heat Recovery Unit**.

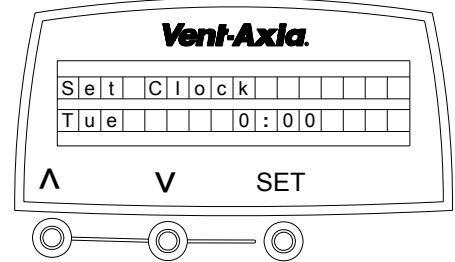
G:1 On start up the screen will display:



G:2 **Setting the Day**

Press the “Λ” or “V” Key to set the **Day**.

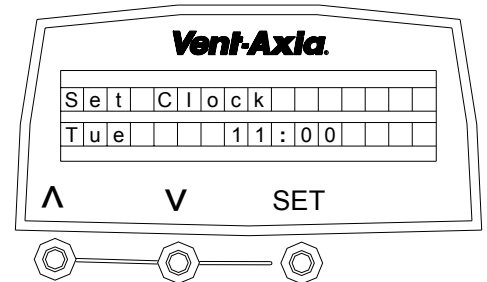
Press the “Set” Key, the **Day** will remain on and the **Hour** will start to flash.



G:3 **Setting the Hour**

Press the “Λ” or “V” Key to set the **Hour**.

Press the “Set” Key, the **Hour** will remain on and the **Minutes** will start to flash.



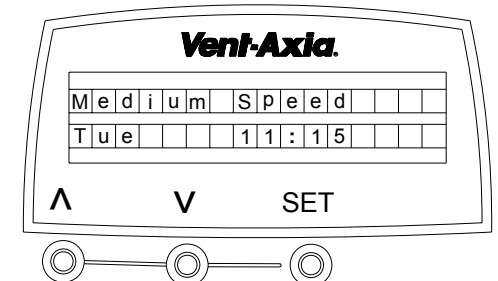
G:4 **Setting the Minutes**

Press the “Λ” or “V” Key to set the **Minutes**.

Press the “Set” Key, the **Minutes** will remain on and the display will scroll to the next setting screen.

The System Default Settings are:

Daytime Running **06:00 to 22:30 Medium Speed**
 Night-Time Running **22:30 to 06:00 Low Speed**



G:5 **Setting the Service Providers Telephone Number**

The Service provider can enter their telephone number.

Press the “Λ” or “V” Key to set the 1st **Number**.

Press the “Set” Key, the Number will remain on and move to the 2nd number to be set.

Repeat these steps until the Service Number has been entered.

Press the “Set” Key, until the display screen displays the Normal Running Screen (see **G:4** screen).

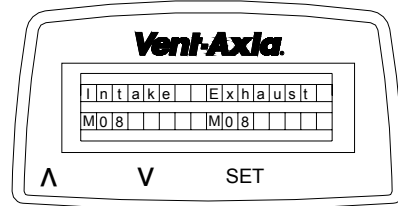
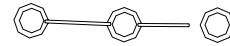
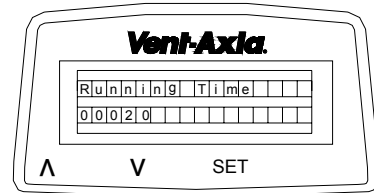
Press “V” Key for 5 seconds to reset the telephone service number.

G:6 Adjusting the Medium Airflow Rates

Press the “ V ” “ ^ ” and `set’ Keys for more than 5 seconds until the display changes to the screen opposite.

Press the “ ^ ” until the display changes to the screen opposite.

The present rate number for each is shown. Press `SET’ to adjust intake rate, `SET’ again for Exhaust rate and SET again to store the new values.



The external pressure head available is a minimum of 200Pa at all speeds. However, the higher the resistance of the system the higher will be the power that is consumed. Take care to design, install and commission the system with the least resistance in order to minimise power consumption. The figures quoted are nominal air flows which are subject to the design, installation and commissioning of the complete ventilation system. The medium and boost inlet and extract flows can be adjusted independently via the controller as described in the Fitting and Wiring information.

Air Minder Plus 290

rate numbers and corresponding Airflow rates, Nominal setting shown bold

House size 1													
Low	1	60											
Medium	2	70	3	80	4	90	5 120	6	140	7	160	8	180
Boost	9	200											

House size 2													
Low	2	70											
Medium	3	80	4	90	5	120	6 140	7	160	8	180	9	200
Boost	10	230											

House size 3													
Low	3	80											
Medium	4	90	5	120	6	140	7 160	8	180	9	200	10	230
Boost	11	270											

House size 4														
Low	4	90												
Medium	5	120	6	140	7	160	8 180	9	200	10	230	11	270	
Boost	12	290												

Air Minder Plus 375

rate numbers and corresponding Airflow rates, Nominal setting shown bold

House size 1													
Low	1	90											
Medium	2	100	3	120	4	135	5 180	6	210	7	240	8	270
Boost	9	290											

House size 2														
Low	2	100												
Medium	3	120	4	135	5	180	6 210	7	240	8	270	9	290	
Boost	10	330												

House size 3													
Low	3	120											
Medium	4	135	5	180	6	210	7 240	8	270	9	290	10	330
Boost	11	360											

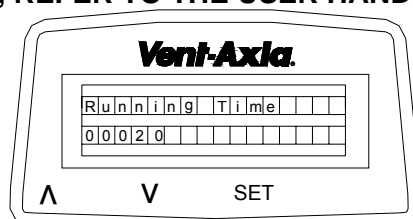
Press the Boost Button * for 12 seconds to reset to factory default setting.

House size 4														
Low	4	135												
Medium	5	180	6	210	7	240	8 270	9	290	10	330	11	360	
Boost	12	380												

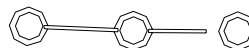
IF DIFFERENT RUNNING TIMES ARE REQUIRED, REFER TO THE USER HAND BOOK.

G:7 Adjusting the Boost Airflow Rates

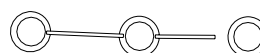
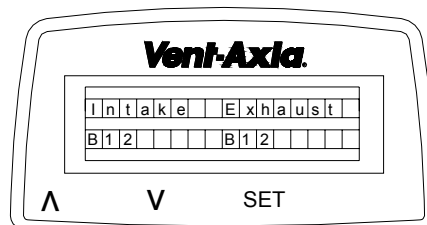
Press the “ V ” “ ^ ” and `set’ Keys for more than 5 seconds until the display changes to the screen opposite.



Press the “ ^ ” until the display changes to the screen opposite.



The present rate number for each is shown. Press `SET’ to adjust intake rate, `SET’ again for Exhaust rate and SET again to store the new values.



Air Minder Plus 290

rate numbers and corresponding Airflow rates, Nominal setting shown bold

House size 1										
Low	1	60								
Medium	5	120								
Boost	3	80	4	90	5	120	6	140	7	160
			8	180	9	200				

House size 2										
Low	2	70								
Medium	6	140								
Boost	4	90	5	120	6	140	7	160	8	180
			9	200	10	230				

House size 3										
Low	3	80								
Medium	7	160								
Boost	5	120	6	140	7	160	8	180	9	200
			10	230	11	270				

House size 4										
Low	4	90								
Medium	8	180								
Boost	6	140	7	160	8	180	9	200	10	230
			11	270	12	290				

Air Minder Plus 375

rate numbers and corresponding Airflow rates, Nominal setting shown bold

House size 1										
Low	1	90								
Medium	5	180								
Boost	3	120	4	135	5	180	6	210	7	240
			8	270	9	290				

House size 2										
Low	2	100								
Medium	6	210								
Boost	4	135	5	180	6	210	7	240	8	270
			9	290	10	330				

House size 3										
Low	3	120								
Medium	7	240								
Boost	5	180	6	210	7	240	8	270	9	290
			10	330	11	360				

House size 4										
Low	4	135								
Medium	8	270								
Boost	6	210	7	240	8	270	9	290	10	330
			11	360	12	380				

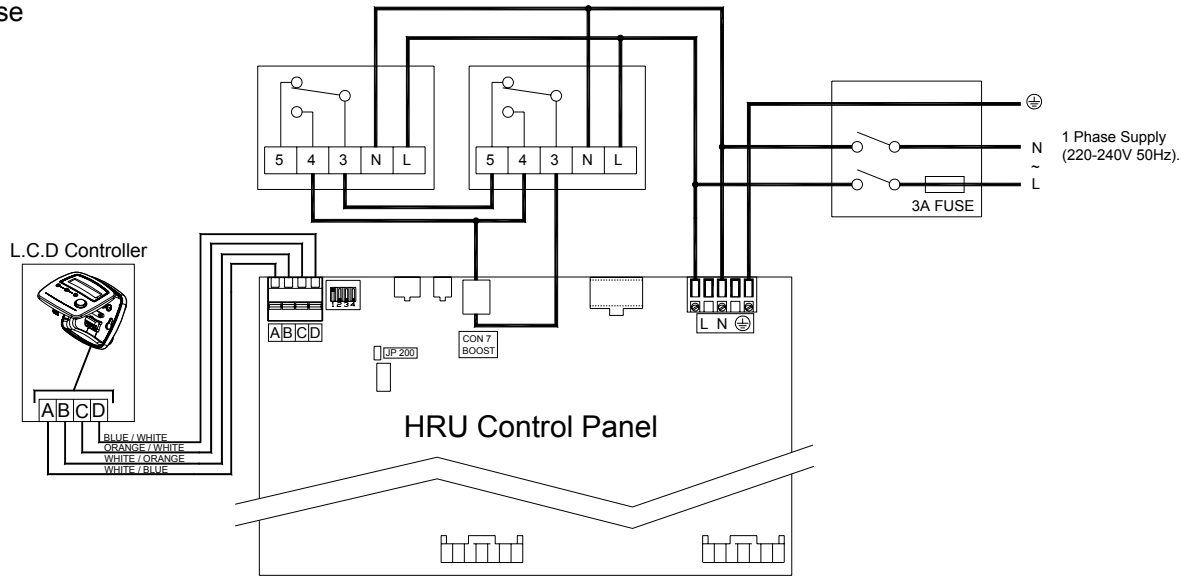
H EXTERNAL SENSOR CONNECTIONS

Select the required External Sensors.

Ambient Response
Humidity Sensor
(56 35 50)

Ecotronic
Humidity Sensor
(56 35 32)

Visionex PIR
(45 07 26)



I FROST PROTECTION.

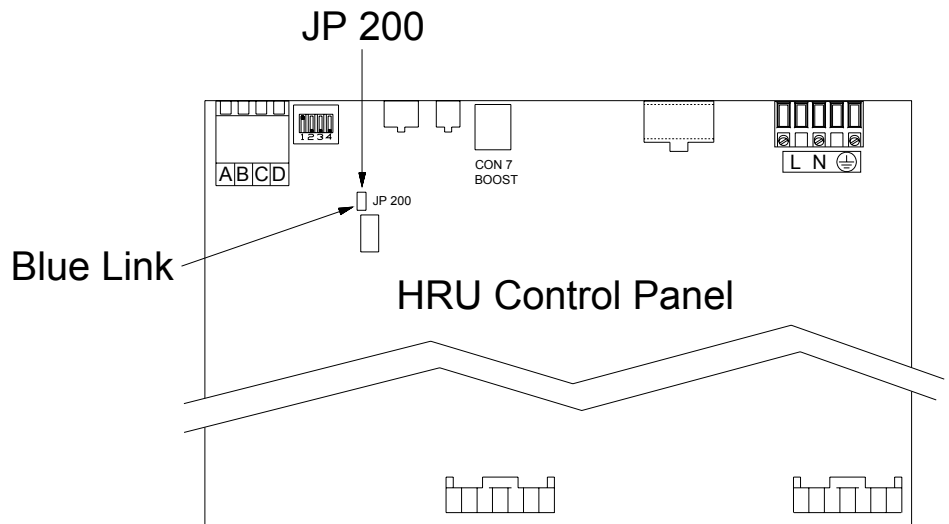
Standard Frost Protection.

When the external intake air temperature is between 0°C and -5°C the defrost mode will automatically activate. This mode will reduce the supply airflow rate and increase the extract airflow rate to prevent frost forming on the heat exchanger.

When the external intake air temperature is below -5°C the defrost mode will automatically activate. This mode will automatically switch off the supply fan, the extract fan will continue to run at a reduced rate to prevent frost forming on the heat exchanger.

Open flue appliances (F/FB Models Only).

In installations where a negative pressure within the dwelling is not permitted, a link must be fitted between the JP 200 terminals on the HRU Control Panel. When this link is in position and the external air temperature drops below -1°C the summer bypass will open and the supply fan will continue to run, allowing external air to bypass the heat exchanger and enter the dwelling.



J SUMMER BYPASS.

The Bypass damper activates when the outside air temperature is equal to or below the pre-set 'Comfort Temperature' (adjustable between 16° and 30°C). The unit's internal damper opens allowing the cooler fresh air from the outside to bypass the Heat Recovery Cube and reduce the internal temperature to the required pre-set 'Comfort Temperature'.

When the inside air temperature reaches the pre-set 'Comfort Temperature' the Bypass Damper closes.

VENT-AXIA SALES CENTRES

ENGLAND & WALES NATIONAL CALL CENTRE

Newton Road, Crawley
West Sussex
RH10 9JA

Telephone: 01293 530202
Fax: 01293 565169

REPUBLIC OF IRELAND

Vent-Axia Ventilation Ltd.
921 Western Road Industrial Estate
Naas Road, Dublin 12.

Telephone: (01) 450 4133
Fax: (01) 450 4570

Did you find these instructions easy to use?

We value your comments, contact us via:

Email: info@vent-axia.com

The Vent-Axia Guarantee

Applicable only to products installed and used in the United Kingdom. For details of the Guarantee outside of the United Kingdom contact your local supplier.

Vent-Axia guarantees this product for two years from the date of purchase against faulty material or workmanship. In the event of any part being found to be defective, the product will be repaired, or at the Company's discretion the product will be replaced without charge, provided that the product:

- 1). Has been installed and used in accordance with the instruction given with each unit.
- 2). The electricity supply complies with the rating label.
- 3). Has not been misused, neglected or damaged.
- 4). Has not been modified or repaired by any person not authorised to do so by Vent-Axia.

IF CLAIMING UNDER THE TERMS OF THE GUARANTEE

Please return the complete product, carriage paid to your original supplier by post or in person. Please ensure that it is adequately packed and accompanied by a letter clearly marked 'Guarantee Claim' stating the nature of the fault and providing proof of the date and source of purchase.

As part of the policy of continuous product improvement Vent-Axia reserve the right to alter specifications without notice

Vent-Axia[®]

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