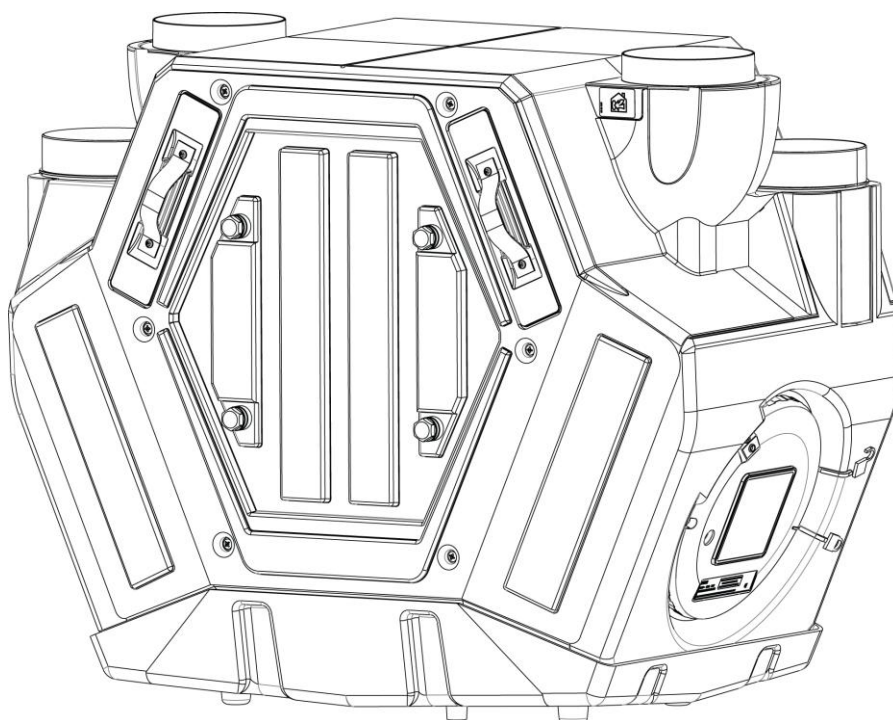


Fusion HRV2HT

Mechanical Ventilation with Heat Recovery Installation Instructions



Commissioning Data:

*To be completed by the Commissioning Engineer.
Refer to User/Homeowner Guide also supplied.*



Contents

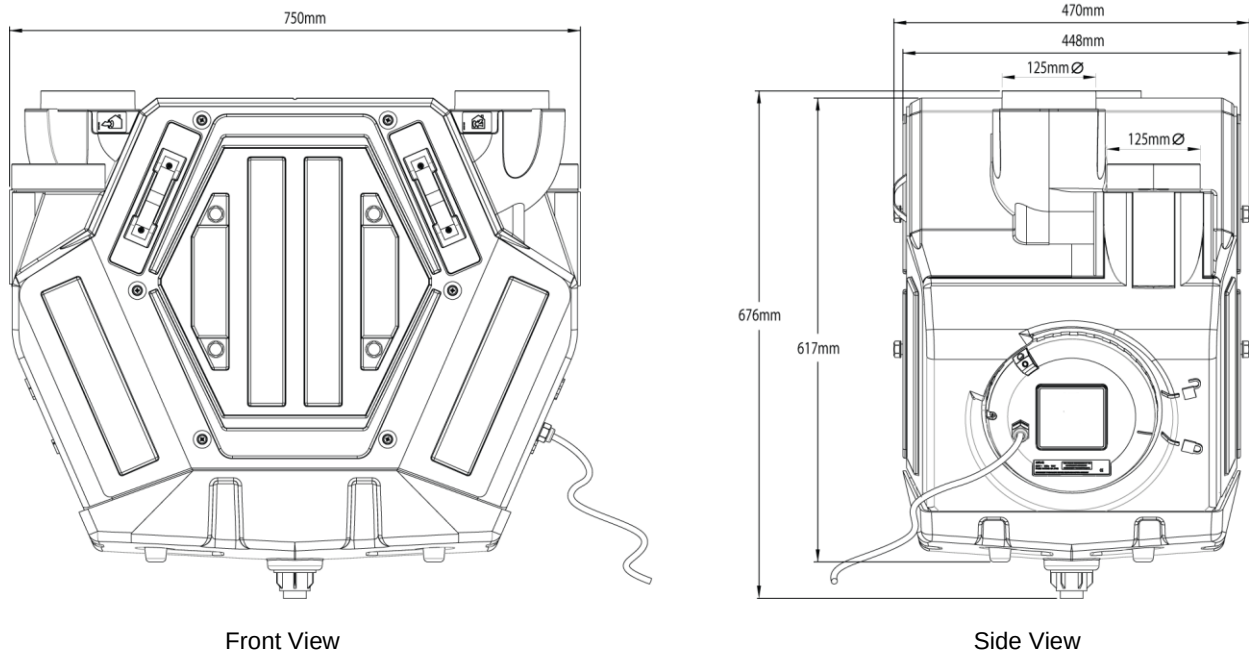
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1.0 General Description / Physical Specification

1.1 Overview

- 1.1.1 The HRV2HT is a ventilation system designed to provide improved indoor air quality in dwellings. As a whole house system, the unit continuously extracts air from the non-habitable rooms and supplies fresh, filtered air to habitable rooms. Heat that is recovered from the air drawn from the bathrooms and kitchen is passed through a heat exchanger and the heat that is recovered is transferred, to temper the supply air in habitable rooms to provide a comfortable indoor environment.
- 1.1.2 A boost speed facility is provided to increase the ventilation rate, e.g. when cooking or showering, providing a comfortable indoor environment. A wireless boost switch (not supplied) such as GRF1 or GRF2 can be used to provide this operation. Alternatively a GS2 Switch Live boost switch can be used to provide this operation ([See Section 2.6 Electrical](#)).
- 1.1.3 This product features on SAP Appendix Q as a high efficiency version and part of the process requires the Installation Checklist for MVHR products to be completed and submitted to building control, available at www.sap-appendixq.org.uk, along with all other relevant paperwork.
- 1.1.4 Record sheets for commissioning information are provided, please refer to section 6 of the User/Homeowner Guide also supplied with HRV2HT.
- 1.1.5 **Ancillary Items Required**
- 125mm Ducting (rectangular ducting can be used, where appropriate)
 - GRF1 Digital radio frequency device for commissioning and switching between trickle, medium and boost
 - GRF2 Radio frequency switch providing switching between trickle, medium and boost (option)
 - GS2 Hardwired switch providing switching between trickle and boost (option)
- 1.1.6 **Packaging Includes –**
1 x HRV2HT Unit
1 x Wall Fixing Bracket
1 x Installation Instructions
1 x User/Homeowner Guide
- 1.1.7 The appliance is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely. Young children should be supervised to ensure that they do not play with the appliance.
- 1.1.8 **Siting Notes:** Where an open-flued oil or gas-fuelled appliance is installed in the kitchen, extract ventilation can cause the spillage of flue gases. Care must be taken to ensure ventilation is reduced appropriately, as set out in the Building Regulations. Kitchens with solid-fuel appliances should not have extract fans fitted.

1.2 Physical Specification



2.0 Installation Instructions

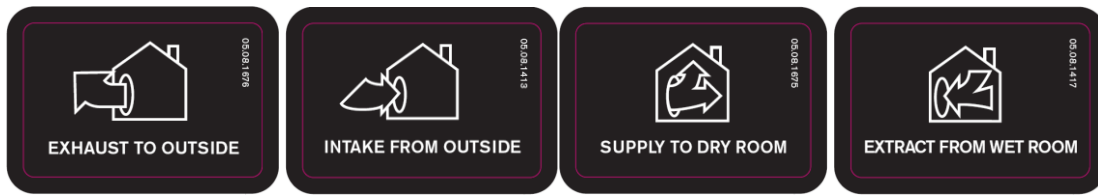
2.1 General Preparation

- 2.1.1 The HRV2HT unit is supplied with 4 x 125mmØ spigots.
- 2.1.2 **125mm** ducting with connectors can be used (see ancillary section page 2) to provide performance levels required for compliance with Building Regulations.
- 2.1.3 Installation of the HRV2HT should be in accordance with the current editions of Building Regulations and BS7671: IEE Wiring Regulations.
- 2.1.4 The design, material specification and installation must only be carried out by 'competent persons'. Electrical installation must be carried out by a qualified Electrician.
- 2.1.5 **IMPORTANT NOTE** Gases from fuel-burning equipment must not be drawn into any living areas. If any room, where air is extracted, contains a fuel burning appliance such as a central heating boiler, then either of the following should be undertaken:
 - The flue must be of the room sealed or balanced flue type or;
 - Allowance must be made for an adequate supply of air into the room.

2.2 Positioning

- 2.2.1 The unit must be installed vertically and wall mounted to enable effective condensate drainage in either a service cupboard or secured to a vertical structure in the loft space. Duct spigots must be upright at top of unit.
- 2.2.2 It is not advisable to install the unit directly above a bedroom or living room ceiling, or in an area that is part of a living area or bedroom.
- 2.2.3 Consideration must be given to allow for adequate access for servicing, maintenance and any fault diagnostics (*See Figure 9 on Page 7*).
- 2.2.4 The unit can be configured for **right and left hand** installation (*See Figures 1 to 3 overleaf*).

2.2.5 Configuration Symbols



Exhaust Air

Intake Air

Supply Air

Extract Air

- Exhaust Air – Port to exhaust stale air to outside
- Intake Air – Port to intake fresh air from outside
- Supply Air – Port to supply fresh air to dry rooms
- Extract Air – Port to extract stale air from kitchen and wet rooms

2.2.6 Right Hand Configuration (factory setting) *(See Figure 1)*

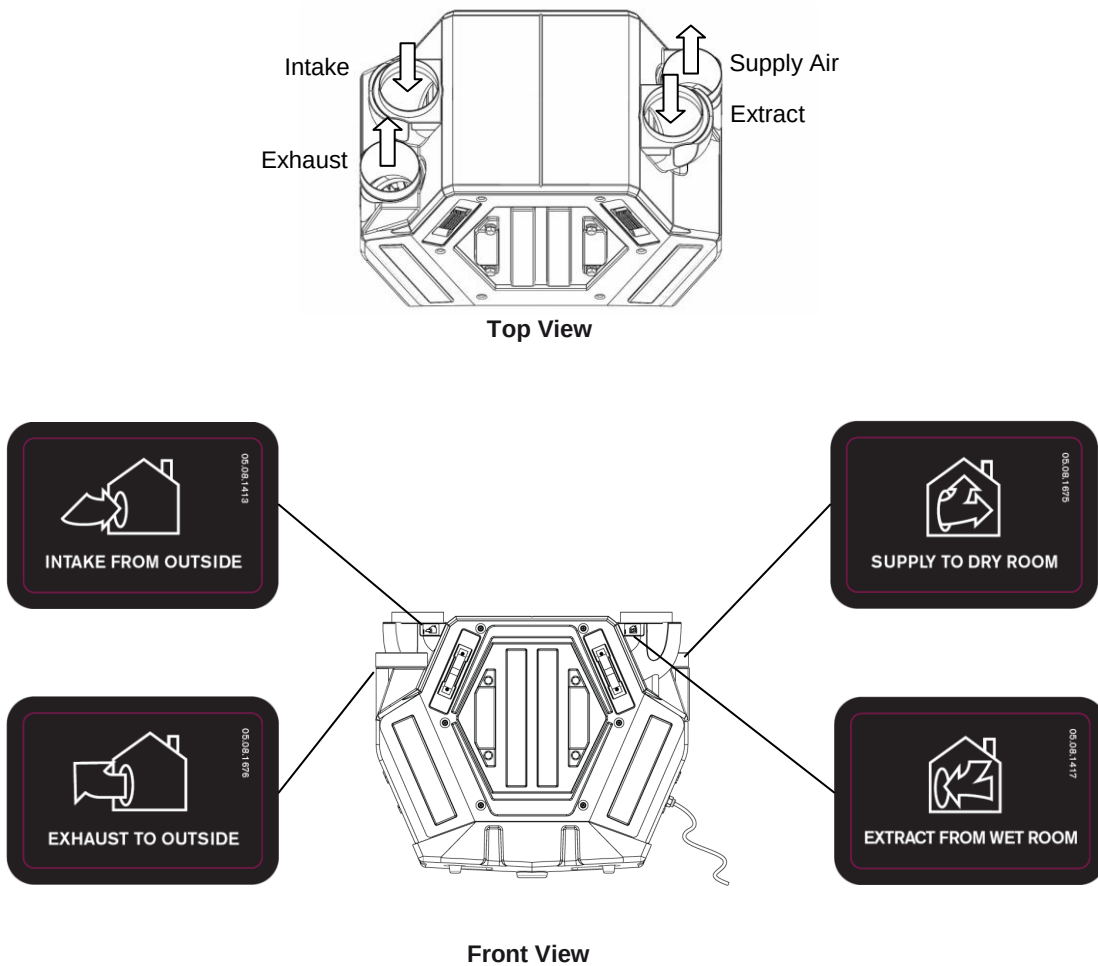


Figure 1

2.2.7

Left Hand Configuration

The handing of the unit can be changed by following the 3 steps as shown below (See Figure 2), and **does not require any internal changes**.

- 1) Remove both filters from the unit.
- 2) Rotate unit through 180 degrees.
- 3) Reinsert both filters into the unit.

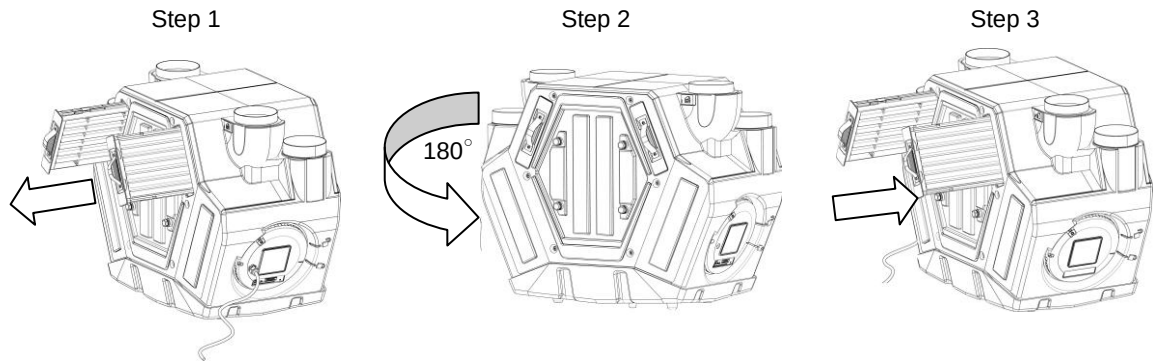


Figure 2

The unit is now in left hand configuration mode with altered duct connections (See Figure 3).

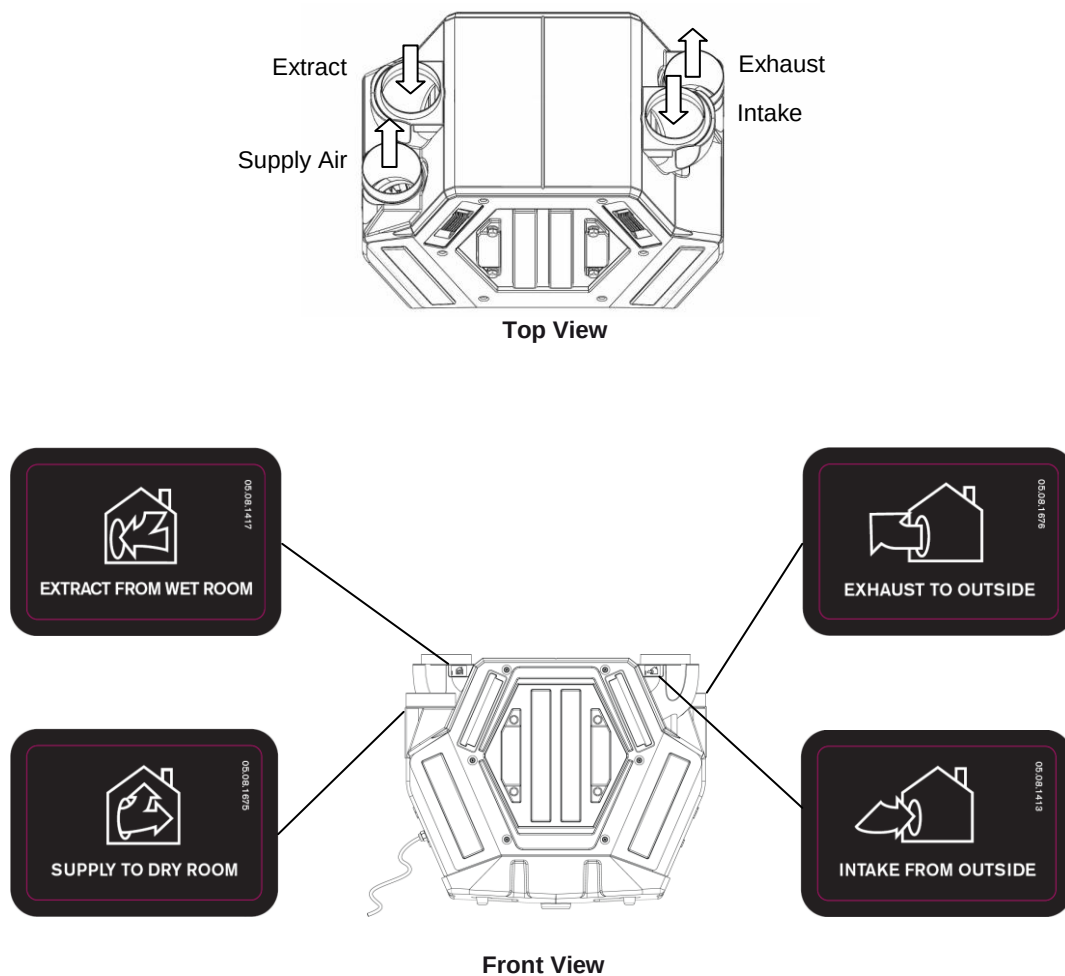


Figure 3

2.3 Mounting (Vertical Installation Only)

- 2.3.1 The HRV2HT unit is supplied with one wall fixing bracket. The bracket has six fixing points available; four of these are slotted, and located in each corner. Minimum acceptable number of fixing points for mounting is four. Screws and fixings not supplied.
- 2.3.2 Proceed to align the wall bracket taking into account the available wall space to mount the unit, ensuring that the wall can support 20kg.
- 2.3.3 Use a spirit level to assist mounting and levelling the bracket (See Figures 4 & 5). Use 'V' slots located top and bottom of bracket to mark a vertical pencil line (See Figure 6), and securely fix bracket to wall using suitable fixings. Total product weight when running 20kg.
- 2.3.4 The HRV2HT unit fixes to the bracket by aligning the four mounting studs on the rear panel (See Figure 7), with the large holes and slots on the fixing bracket (See Figure 4 or 5). You can also use the pencil line drawn earlier as a guide (See Figure 6), using the V cut out on the front of the product to align. Once the mounting studs are located correctly, slide the product downwards so that it is securely mounted to the wall (See Figure 8).

Note;

There should be no movement once correctly located and the filters should be accessible from the front of the unit.

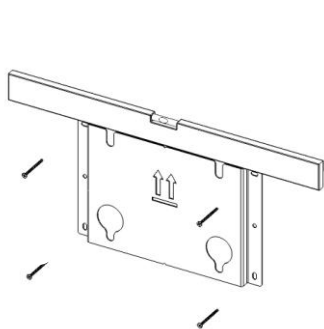


Figure 4

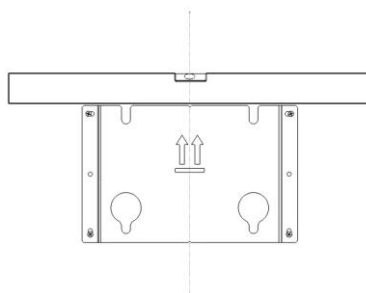


Figure 5

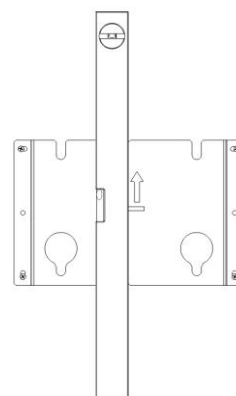


Figure 6

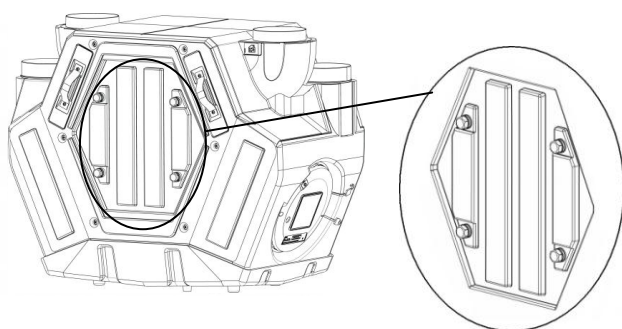


Figure 7

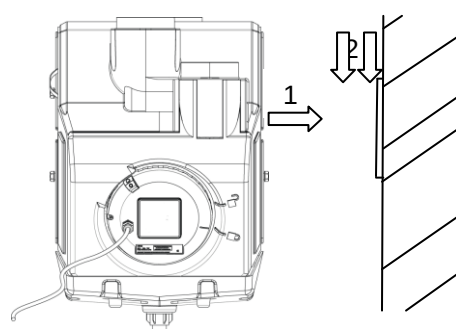


Figure 8

2.3.5 Access for Maintenance

Footprint of HRV2HT (top view)

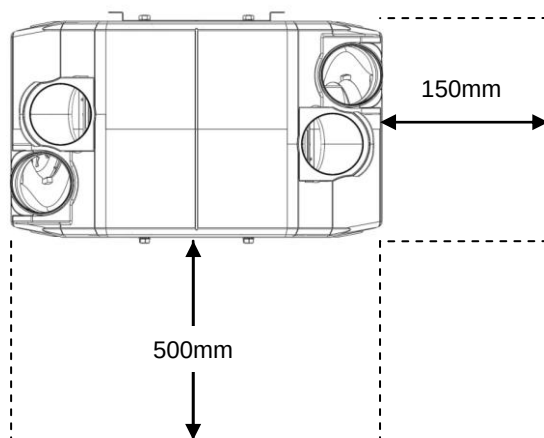


Figure 9

2.3.6 Controller Mounting

The GRF1 and GRF2 controllers can be mounted to the wall, however only the GRF1 controller can be mounted to the HRV2HT unit. The controller is supplied with one back box, one fixing plate and one screw and raw plug set.

2.3.7 Wall Mounting (See Figure 10)

- Using the four countersunk screws and four raw plugs supplied, mount the back box (A) to a flush surface.
- Using the remaining two pan head screws, mount the fixing plate (B) to the back box.
- Place the control panel (C) onto the fixing plate until the top and bottom clips are fully engaged.
- The controller **must not** be mounted in a bathroom or above / closer than 1mtr to a cooker where the screen could be affected by excessive heat or moisture.
- Surface mounted depth 36mm
- Recess mounted depth 20.5mm

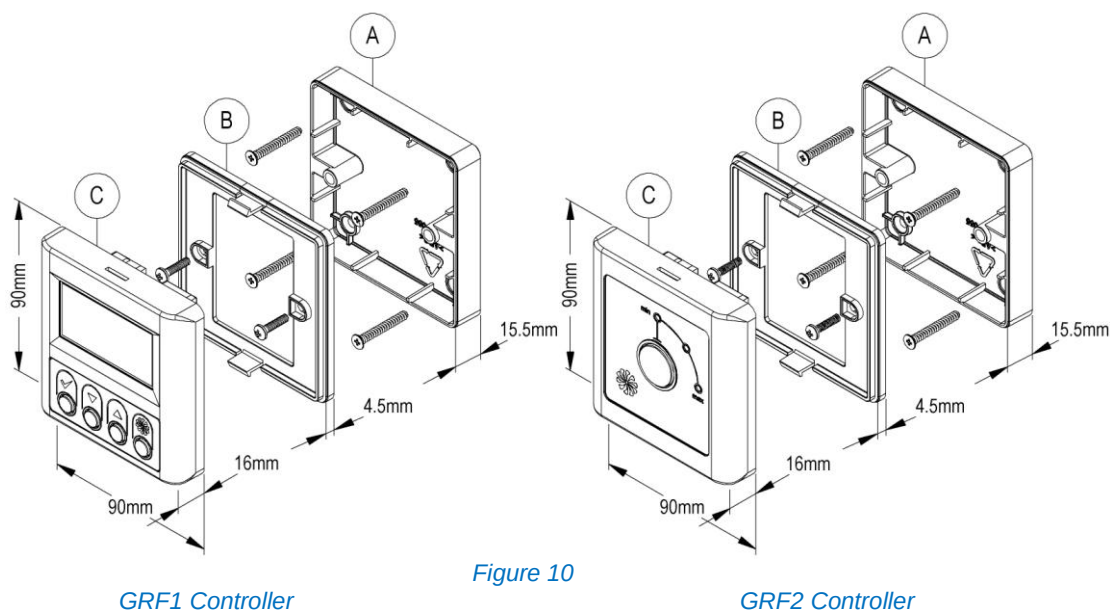


Figure 10

GRF1 Controller

GRF2 Controller

2.3.8 Unit Mounting for GRF1 only (See Figure 11 & 12)

- Remove the 'access for controls pairing' panel (See Figure 11) located on the flying lead side of the HRV2HT revealing the docking connector.
- Using the original two screws, mount the fixing plate (See Figure 12) to the unit.
- Remove any batteries from the controller
- Place the GRF1 controller onto the fixing plate until the catch clicks into position.

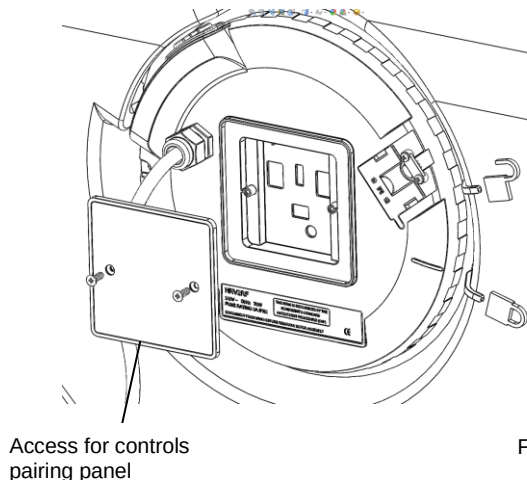


Figure 11

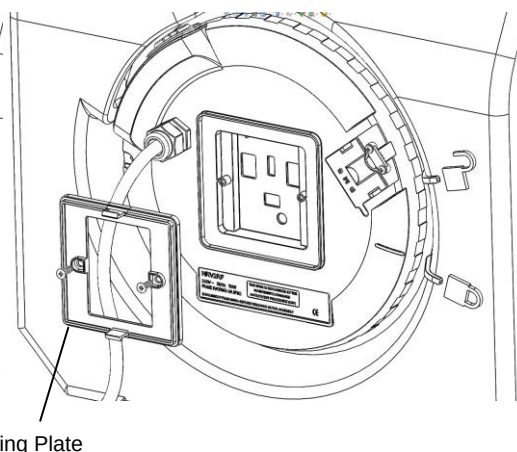


Figure 12

2.3.9 Removal of the GRF1 and GRF2 Front Cover (for battery insertion / replacement)

The fixing clips (located at the top and bottom) hold the controller securely in place. Never attempt to pull the controller away from the fixing plate without releasing the clips first, otherwise you could cause damage to the fixing plate or controller.

Using the tip of a flat blade screwdriver, gently push in to free clips before easing off the controller to remove (See Figure 13). Insert 2 x AA (non-rechargeable) batteries (See Figure 14). To refit the controller ensure the correct orientation, before clicking the controller back onto the fixing plate, please ensure both clips at the top and bottom are fully engaged.

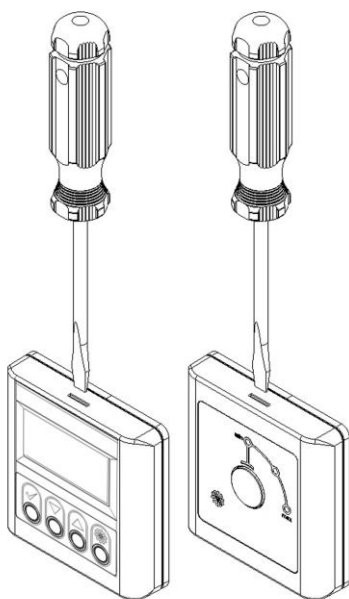


Figure 13 – Recessed Image Illustration

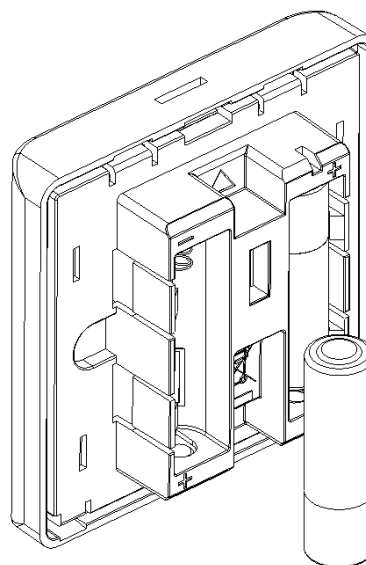


Figure 14

2.4 Condensate Drain

- 2.4.1 It is important that any condensate **MUST** be drained away. The unit is provided with a condensate drain located centrally at the base of the unit underneath (See Figures 15 & 16). The drain plug allows a condensate drain hose (22mm diameter) to be push connected and secured to the wall.
- 2.4.2 The drain must have a continuous minimum fall of 6mm per 1m run and can either be chased into the wall or run downwards from the unit into the nearest waste water network. Ensure that steps are taken to minimise the risk of mechanical damage to the drainage pipe work.

IMPORTANT NOTE: The condensate drain must incorporate a U bend to create an air block and avoid leakage of smells back into the unit. If the unit is installed within a loft space, please ensure that the condensate drain is insulated to prevent against freezing.

- 2.4.3 In some instances, a condensate connecting point will already be provided as part of the building design. The position of this point, relative to where the HRV2HT unit is to be installed should be checked for any connection misalignment and any necessary adjustment made before proceeding any further.

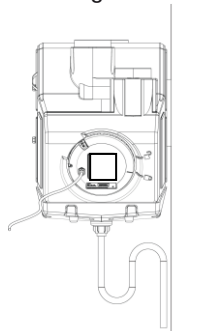
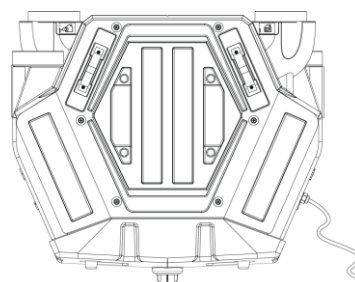


Figure 15 – Side View



Condensate Drain
Connection Point

Figure 16 – Front View

2.5 Ducting Guidelines

- 2.5.1 Please refer to design drawings for proposed ducting layout.
- 2.5.2 Four 125mm nominal diameter spigots are provided for connection of the ducting. Ductwork should be securely connected to spigots. Failure to do this will cause unnecessary air leakage and impair performance. Ducting must be connected to all four spigots according to right or left hand configuration (See [handing Sections 2.2.4 to 2.2.7 for configuration](#)).
- 2.5.3 Where ducts are exposed in unheated areas, such as roof spaces, they must be insulated with at least 25mm of insulation.
- 2.5.4 If applicable, Fire Dampers **MUST BE FITTED** in accordance with **Part B** of the Building Regulations.
- 2.5.5 **Rigid Ducting** - Install using the least number of fittings to minimise resistance to air flow. Where possible, final connection to grilles and unit should be made with a flexible connection. Mechanically fix ducts using metal jubilee clips or heavy duty plastic cable ties and appropriate non-hardening sealant for air tightness.
WARNING: Do not use screws for connection and ensure jubilee clips are not over tightened.
- 2.5.6 **Flexible Ducting** - Ensure ducting lengths are kept to a minimum and ducting is pulled taut so that it is smooth and straight. Where bends are necessary and where ducting is run in restricted areas, **ensure the ducting is not crushed**. Mechanically fix ducts using metal jubilee clips or heavy duty plastic cable ties and tape seal for air tightness.
WARNING: Should be in accordance with Building Regulations.
- 2.5.7 The intake fresh air should be directly from the outside. If drawn through a wall, an external grille should be fitted. If drawn through a roof, a recognised roof terminal should be fitted. Roof terminal to have a minimum equivalent free area of 10,000mm².
- 2.5.8 The exhaust air must exit to the outside through a wall or roof and must be protected by a wall grille or recognised roof terminal. Roof terminal to have a minimum equivalent free area of 10,000mm².
- 2.5.9 Intake and exhaust pipes should be installed at least 1m apart to avoid the cross contamination of airflows.

2.6 Electrical

2.6.1 **WARNING:** The appliance **MUST** be earthed. All wiring must conform to BS7671: IEE Wiring Regulations.

2.6.2 The installation must be carried out by a qualified Electrician.

2.6.3 All units are suitable for a 230V~50Hz single phase supply fused at 3A.

2.6.4 The HRV2HT unit is supplied with a pre-wired mains flexible cord – PVC sheathed, 4-core green/yellow, blue, brown & black. Size 0.75mm².

2.6.5 **'If the supply cord is damaged, it must be replaced by a special cord/assembly available from the manufacturer or its service agent. The replacement must be carried out by a qualified Electrician in accordance with IEE or local regulations'.**

2.6.6 A double-pole switch having a minimum contact separation of 3.0mm must be used to provide isolation for the unit.

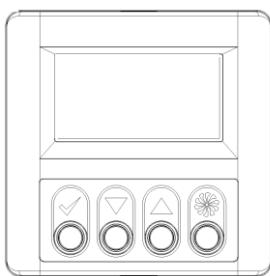
2.6.7 The recommended switches for use with this product are the Greenwood Airvac;

- GRF1 – LCD Radio Frequency controller (for commissioning & advanced user controls)
- GRF2 – Optional 3-position Radio Frequency controller
- GS2 – Optional 2-position hardwired switch

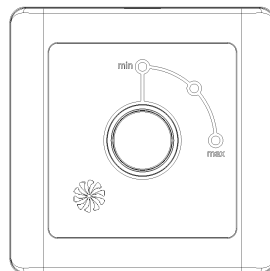
(See [Wiring Diagrams on page 11](#)).

2.6.8

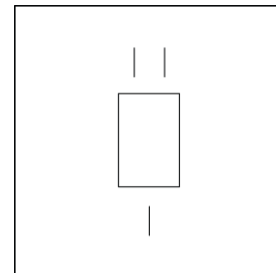
Controller	Switch Type	Speeds
GRF1	LCD RF	Trickle (☼), Medium (☼☼), Boost (☼☼☼), Timed Boost (☼☼☼⌚)
GRF2	3-position RF	Trickle (min), Medium, Boost (max), Timed Boost
GS2	2-position rocker	Trickle (I), Boost (II)



GRF1



GRF2



GS2

Note:

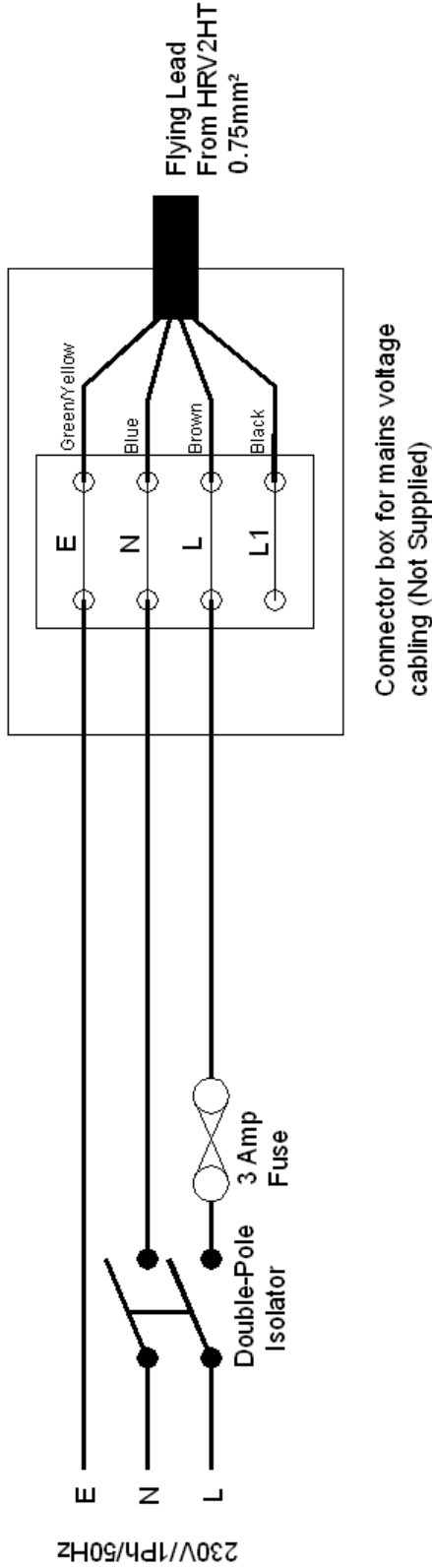
The unit may also be wired to a Building Management System (BMS) ([See Section 2.8 for wiring details](#))

2.6.9 The controllers **must not** be mounted in a bathroom or above / closer than 1 meter to a cooker where it could be affected by excessive heat or moisture.

2.7.1

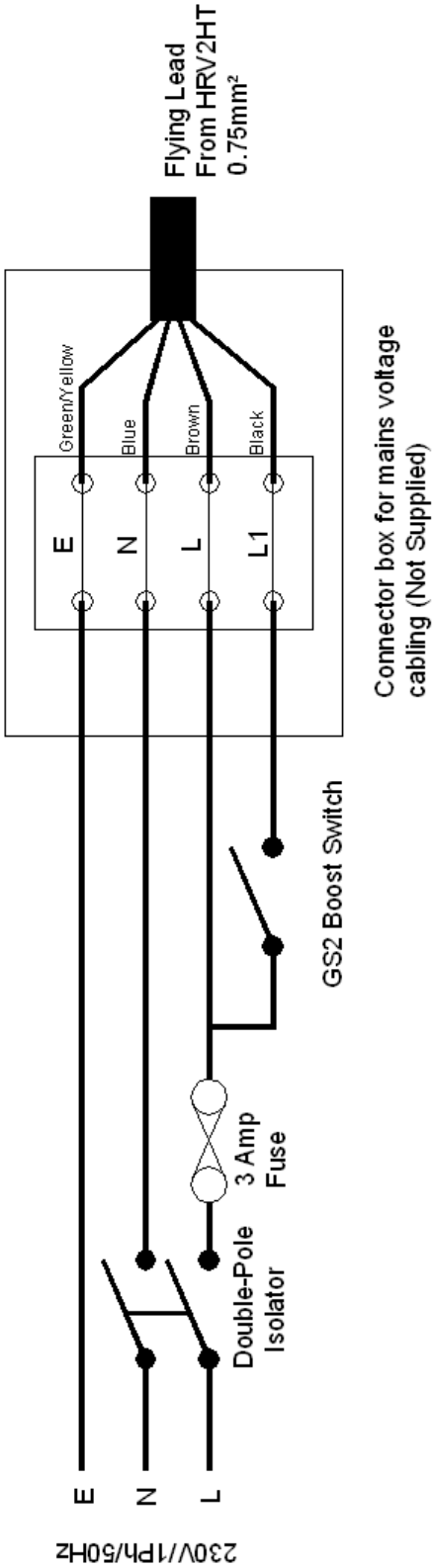
External wiring for HRV2HT for continuous operation on trickle speed with medium and boost operation via Greenwood GRF1 or GRF2 (Wireless Options)

Wiring Diagrams



2.7.2

External wiring for HRV2HT for continuous operation on trickle speed with medium and boost operation via Greenwood GRF1 or GRF2 (Wireless Options) and boost speed with GS2 (Hardwired Option)



2.8 Connecting to the Building Management System (BMS)

- 2.8.1 The HRV2HT can be connected and controlled by a Building Management System that can provide a 0 – 10V output. Control and operation of the commissioned speeds can be applied as follows;

Voltage	Speed Control
0V – 3.2V	Trickle
3.3V – 6.4V	Medium
6.5V – 10V	Boost

- 2.8.2 To connect your BMS system to the HRV2HT, first locate the connector underneath the BMS gland on the supply side of the Unit (*See Figure 17*).

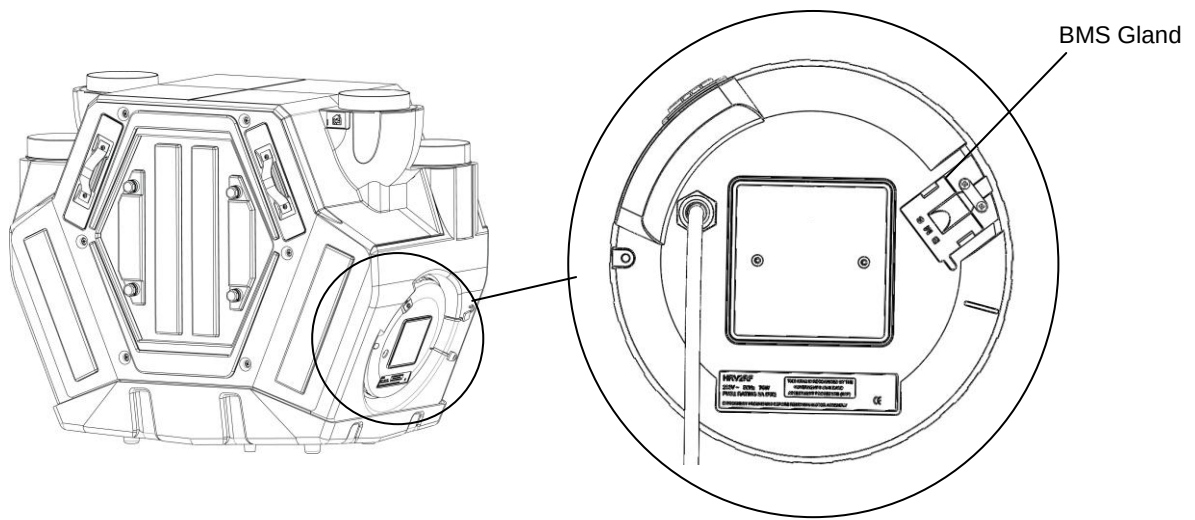


Figure 17 – HRV2HT BMS Location

- 2.8.3 Unscrew the cable clamp and retain screw fixings (*See Figure 18*).

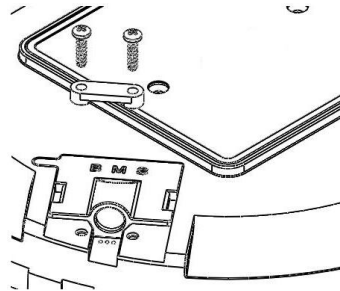


Figure 18 – Removal of BMS Gland Dust Cover

- 2.8.4 Using a screwdriver remove the BMS gland (*See Figure 19*).

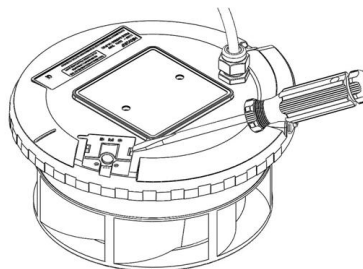


Figure 19 – Removal of BMS Gland

- 2.8.5 Using suitably sized cabling, route the cable towards the BMS connector. With a sharp object pierce through the thinned layer of membrane around the front of the BMS Gland dust cover and feed cable through leaving adequate length to wire into connector pins.
- 2.8.6 Now wire into the connector pins. 1 – 3 are for speed control, 4 – 6 are for fault indication (*See Figure 20*).

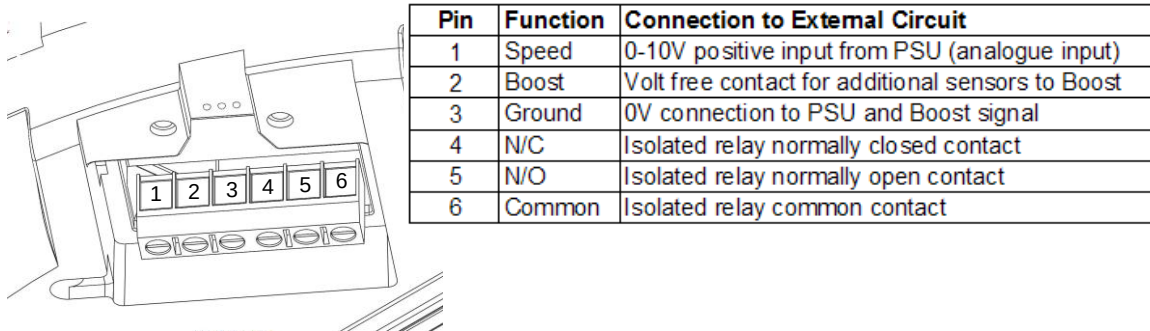


Figure 20 – BMS Wiring Configuration

- 2.8.7 When wiring has been completed re-apply cable clamp and retain the cable sheath securely in place by tightening the cable clamp down with original screw fixings (*See Figure 21*).

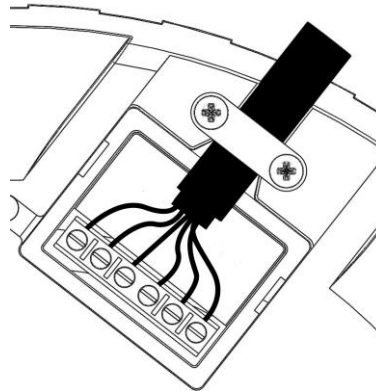


Figure 21 – Securing BMS Wiring(Cable Not Supplied)

- 2.8.8 Re-apply BMS dust cover gland (*See Figure 22*).

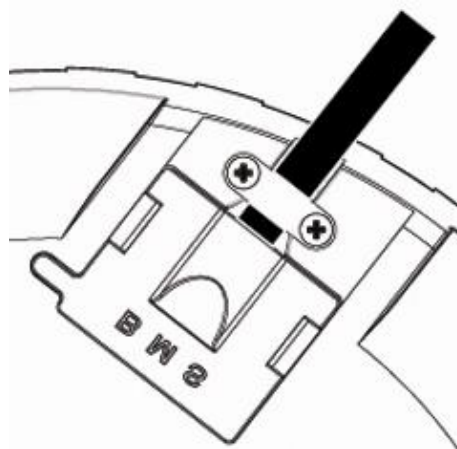


Figure 22 – Dust Cover Gland Attached(Cable Not Supplied)

2.9 On Site Commissioning (using the GRF1)

- 2.9.1 This section covers set up, configuration of the unit for installation and altering pre-set factory settings. For instructions on how to operate the GRF1 LCD display user menu, maintenance options and indicator warning information, please refer to the User / Homeowner Guide.

Once the wiring connections have been checked, switch the mains supply on and check that the system is operating correctly.

WARNING – Failure to pair the GRF1 or GRF2 (Option) with the HRV2HT will result in loss of controller functionality.

2.9.2 Pairing the HRV2HT unit with either the GRF1 or GRF2 Controllers

Commissioning the HRV2HT is done through the GRF1 controller. Upon completing the commissioning stage, the GRF1 controller can be installed for User / Homeowner to give advanced controllability of the HRV2HT system, with a further option to use the GRF2 3-position radio frequency boost controller. Before the HRV2HT can be operated remotely, the GRF1/GRF2 and HRV2HT must be synchronised to each other.

2.9.3 GRF1

- At the start of pairing please ensure the GRF1 controller **does not** have batteries inserted.
- Remove the 'access for controls pairing' panel (See Figure 23) located on the flying lead side to reveal the registration button and LED (See Figure 24).
- Press the red registration button (located in the centre), once pressed the registration LED next to it should illuminate.
- The registration LED indicates that the HRV2HT unit is now ready to be paired. With the LED illuminated simply insert the 2 x AA batteries (supplied) into the GRF1 controller. You will have approximately 1 minute to insert the batteries to complete the pairing process (please ensure that you remain close to the HRV2HT unit during this 1 minute period).
- Upon successful registration and pairing, the GRF1 will display a confirmation message. This should be shown for approximately 1 minute (See Figure 25). The GRF1 will begin communication with the HRV2HT after the registration period of 1 minute has timed out or until the red registration button is re-pressed and the LED is turned off.
- Reattach the 'access for controls pairing' panel (See Figure 23).

In the event of the GRF1 not successfully pairing with the unit an error display should be displayed on the screen (See Figure 26). If this should occur please ensure the registration LED is not illuminated, remove the batteries and repeat (Section 2.9.3).

To de-register the GRF1 (See Section 2.9.14).

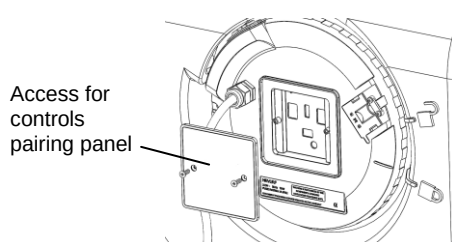


Figure 23 – Removal of Panel

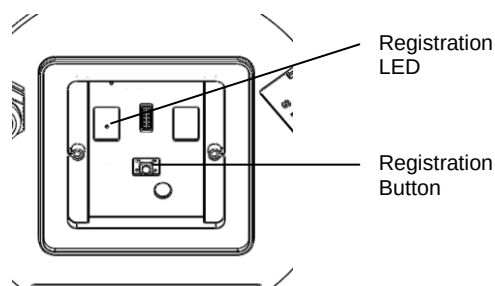


Figure 24 – Behind Access for Controls Pairing Panel



Figure 25 – GRF1 Successful Registration

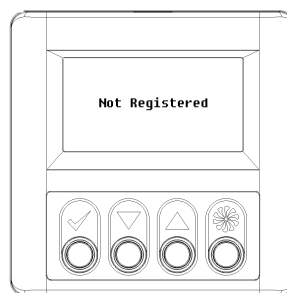


Figure 26 – GRF1 Unsuccessful Registration

2.9.4 GRF2 (Option)

- At the start of pairing please ensure the GRF2 controller **does not** have batteries inserted.
- Remove the 'access for controls pairing' panel ([See Figure 23](#)), located on the flying lead side, to reveal the registration button and LED ([See Figure 24](#)).
- Press the red registration button (located in the centre), once pressed the registration LED next to it should illuminate.
- The registration LED indicates that the HRV2HT unit is now ready to be paired. With the LED illuminated simply insert the 2 x AA batteries (supplied) into the GRF2 controller. You will have approximately 1 minute to insert the batteries to complete the pairing process (please ensure that you remain close to the HRV2HT unit during this 1 minute period).
- Upon successful registration of the GRF2, the controller will flash 3 times before remaining unresponsive for approximately 1 minute until the registration LED on the HRV2HT unit goes off ([See Figure 25](#)).
- Reattach the 'access for controls pairing' panel ([See Figure 23](#)).

To validate that the GRF2 controller has been successfully paired with the HRV2HT unit, please press the boost button, which should show the HRV2HT unit's current speed setting. If all 3 LED lights flash rapidly for 3 seconds the pairing has been unsuccessful, to resolve, please repeat ([Section 2.9.4](#)). To de-register the GRF2 ([See Section 2.9.15](#)).

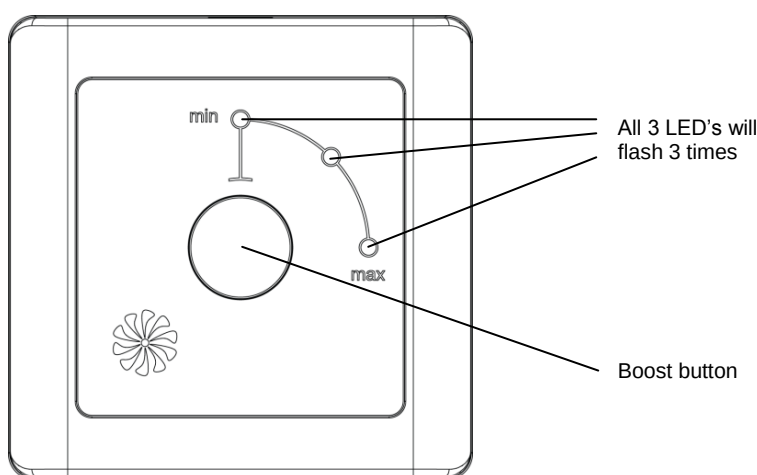


Figure 27 – GRF2 successful registration

2.9.5 HRV2HT Model

- Once the unit is paired with the RF controller check that the system is operating correctly. The unit should switch between trickle, medium & boost speeds using the GRF1. If the optional GRF2 is also being used the unit should switch between trickle, medium & boost and if the hardwired GS2 is being used the unit should switch between trickle & boost.
- Performance levels can be verified at both extract and supply air valves using an appropriate method such as a rotating vane anemometer and air cone kit.
- **Record airflow rates for room extract and supply air valves for trickle and boost speeds within the separate User/Homeowner guide that should be incorporated into the Home Information Pack for the homeowner to keep.**
- Refer to performance graph for HRV2HT airflow characteristics ([See section 2.9.16](#)).

2.9.6 Valve Set-up

- Switch the unit to the highest operating position.
- Close external windows and doors.
- With the system operating in boost mode, proceed to open the extract valves to their maximum.
- Measure the total air volume at the extract valves.
- Regulate the extract valves to the required flow per room.
- Switch the unit to trickle speed to confirm desired extract rate is achieved. It should normally not be necessary to adjust the extract valves further.
- Repeat tests for supply air valves.

2.9.7 HRV2HT Fine Tuning

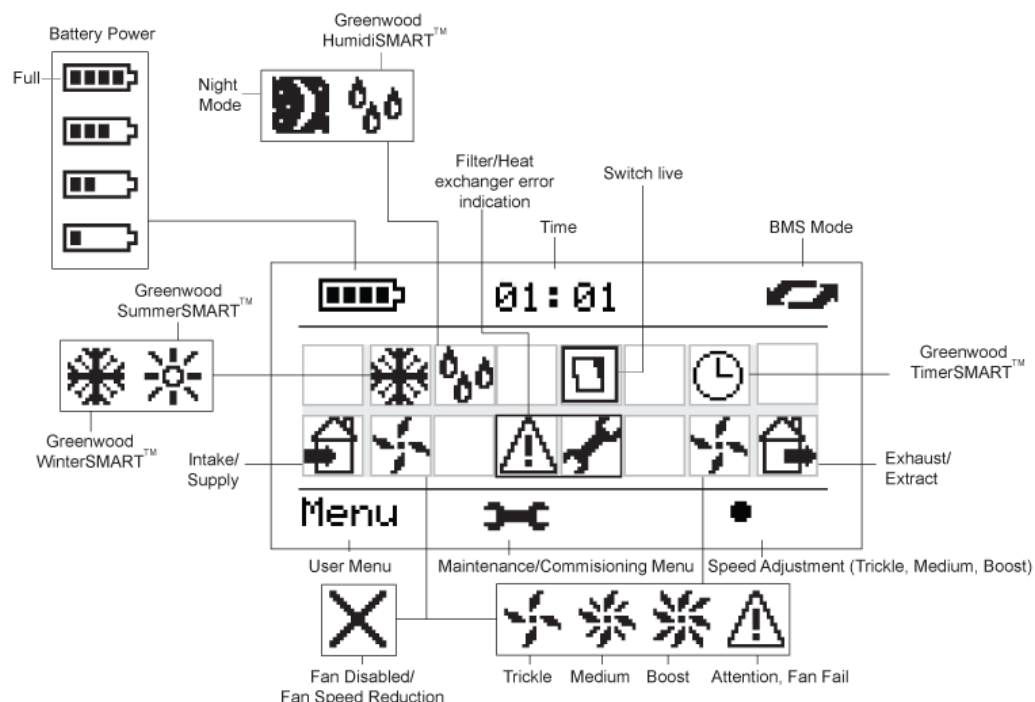
Factory settings ([Section 2.9.12](#)) suitable for two bedroom dwellings up to 100m² floor area, with a Kitchen plus two Wet Rooms (such as Bathroom, Utility Room, Shower Room, En-suite, WC).

Minor adjustments may be required depending on overall ductwork length. Fine tuning of the motor speeds and altering factory settings can be achieved by using the GRF1 LCD commissioning menu ([Section 2.9.10](#)).

Record airflow rates for room extract and supply air valves for trickle and boost speeds within the separate User/Homeowner guide that should be incorporated into the Home Information Pack for the homeowner to keep.

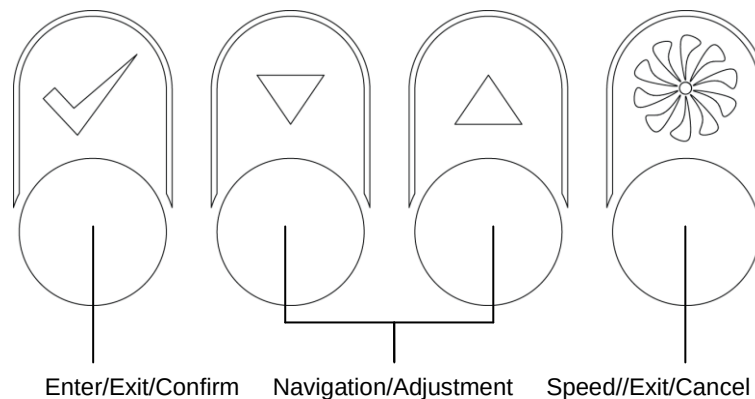
When in the commissioning menu screen press [>] to move to the next item or [] to move back to the previous item. Pressing [] enables alterations and also confirms alterations once amended with a further press to accept the alteration changes. Pressing [] while making alterations will cancel any adjustments made. To exit the commissioning menu simply press and hold [] for 2 seconds.

2.9.8 LCD Display



2.9.9 General Controls

The four buttons on the controller have different functions dependent on which screen or menu you are in.



Button Functionality is Menu/Screen Dependent

Details of the respective functions of these are shown within-

- 1) Normal Operation Display ([See User / Homeowner Guide Section 3.1.3](#))
- 2) User Menu ([See User / Homeowner Guide Section 3.1.7](#))
- 3) Maintenance Menu ([See User / Homeowner Guide Section 4.1.3](#))
- 4) Commissioning Menu ([See Section 2.9.10](#))

2.9.10 Commissioning Menu

To enter the commissioning menu;

- i. Press and hold the [▽] button for 2 seconds on the GRF1 controller.
- ii. Enter the three button code. Press the following buttons in this sequence [Fan], [△] and [▽].
- iii. Press [✓] to confirm

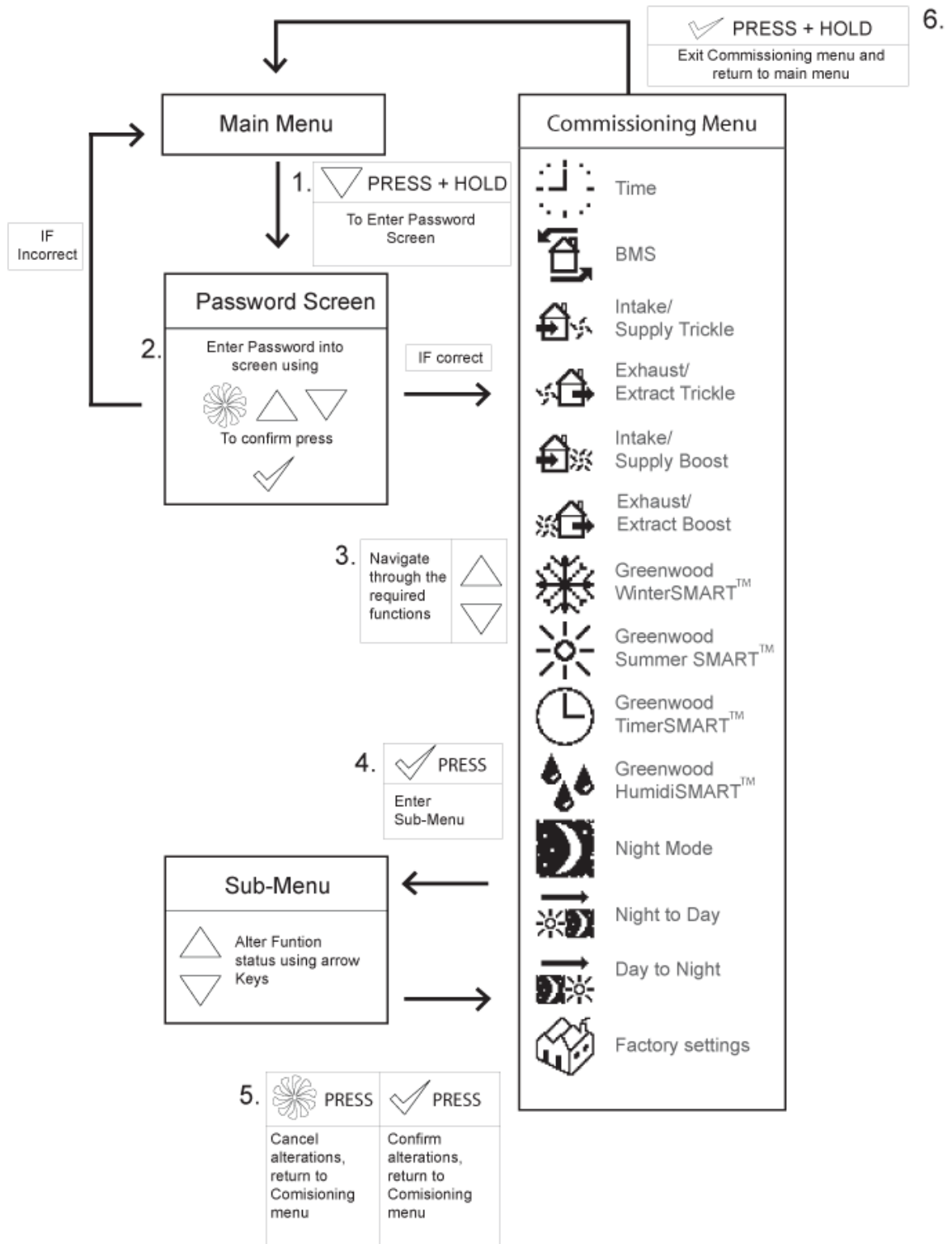
The first symbol shown upon entering the commissioning menu is the Clock setting ([Section 2.9.12](#)). When in the commissioning menu screen a spanner will be shown in the top right hand corner to indicate you are in commissioning mode. When in the commissioning menu press [△ or ▽] to navigate between menu options, please refer to Altering Factory Settings ([Section 2.9.12](#)). Navigate to the required symbol and use [✓] to enable alteration then use [△ or ▽] to modify setting followed by [✓] to confirm alterations. To exit the Commissioning Menu at any time press and hold [✓] until normal running screen appears.

See ([Section 2.9.11](#)) for an example of how to navigate through the commissioning menu for trickle speed adjustment.

Note: (While in Commissioning)

If no buttons are pressed for 5 minutes, the GRF1 controller will enter idle mode to conserve battery power. During idle mode the LCD will turn off, upon reactivation the screen will show the user menu.

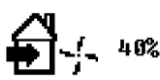
Below is the schematic of how to navigate around the Commissioning Menu.



Note:

For specific adjustment details, please refer to respective function shown on Page 20

Example:
Setting Intake/Supply Trickle Speed to 40%

Sequence	Instruction	Display Image	Description
1	Hold []		Enter commissioning menu password screen
2	Press []	 *	Enter first password character
3	Press []	 **	Enter second password character
4	Press []	 ***	Enter third password character
5	Press []		Confirm password and enter commissioning menu, Clock icon shown
6	Press [] 2 times to navigate to function 2		Navigate to Intake/Supply Trickle speed screen
7	Press []	 33%	Enable alterations
8	Press [] until 40% is reached	 40%	Adjust the speed setting
9	Press []		Accept the alteration
10	Press [] to navigate to next commissioning function		Navigate to alternative commissioning function
11	Press and hold [] for 2 seconds to exit		Exit commissioning menu

Note:

All settings are stored within the HRV2HT's memory and should NOT be lost in the event of a power failure. When power is restored, the HRV2HT unit should revert to normal running with all settings unchanged. Likewise, reminder indicators are NOT reset.

2.9.12 Altering Factory Settings

Function number	Function	Symbol	Description	Factory Setting	Altering Factory Setting Options
0	Clock		24hr clock	00:00	00:00 – 23:59
1	BMS		Unit controlled by BMS system	OFF	ON – OFF
2	Intake/Supply Trickle Speed		Intake/Supply trickle speed setting	33%	25 – 64%
3	Exhaust/Extract Trickle Speed		Exhaust/Extract trickle speed setting	33%	25 – 64%
4	Intake/Supply Boost Speed		Intake/Supply boost speed setting	66%	40 – 99%
5	Exhaust/Extract Boost Speed		Exhaust/Extract boost speed setting	66%	40 – 99%
6	Greenwood WinterSMART™		Temperature at which frost protection is activated (See Section 5 of the User/Homeowner Guide)	-1°C	-2 – 0°C
7	Greenwood SummerSMART™		Temperature at which summer slowdown is activated (See Section 5 of the User/Homeowner Guide)	25°C	18 – 35°C
8	Greenwood TimerSMART™		Smart overrun timer for switch-live boost (See Section 5 of the User/Homeowner Guide)	OFF	ON - OFF
9	Greenwood HumidiSMART™		Smart humidity controlled boost (See Section 5 of the User/Homeowner Guide)	OFF	ON - OFF
10	Night Mode		Switch-live or humidity boost disabled during set night hours	OFF	ON – OFF
Function's 10a and 10b are only available when Night Mode is turned ON					
10a	Night to Day Time		Night end time	05:00	00:00 – 23:59
10b	Day to Night Time		Night start time	23:00	00:00 – 23:59
11	Factory		Restore unit to factory default	X	OK - X

Note:

For details on adjusting the factory settings, please refer to the worked example ([Section 2.9.11](#)).

2.9.13 De-registering the GRF1 or GRF2 controllers

In the event that either the GRF1 or GRF2 controllers need to be de-registered from the HRV2HT, the following steps need to be performed:

2.9.14 GRF1

- Whilst the HRV2HT unit is still running remove one of the batteries from the GRF1.
- Press and hold [] on the GRF1 controller whilst reinserting the removed battery ([See Section 2.3.9](#)).
- Upon successful de-registration of the GRF1, a confirmation display should be shown for approximately 1 minute ([See Figure 28](#)).

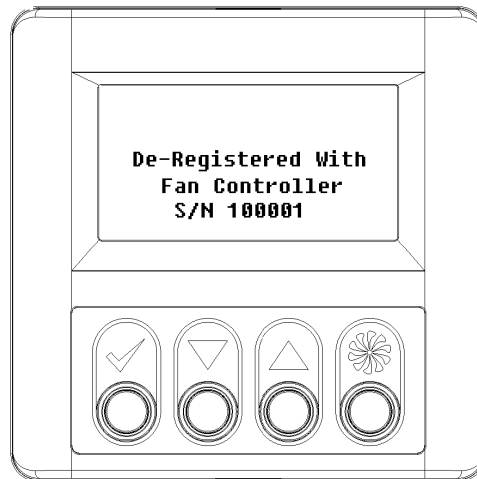


Figure 28 – GRF1 Successful De-Registration

2.9.15 GRF2 (Option)

- Whilst the HRV2HT unit is still running remove one of the batteries from the GRF2.
- Press and hold the [Boost] button whilst reinserting the removed battery ([See Section 2.3.9](#)).
- Upon successful de-registration of the GRF2, the controller will flash rapidly for approximately 3 seconds ([See Figure 29](#)).

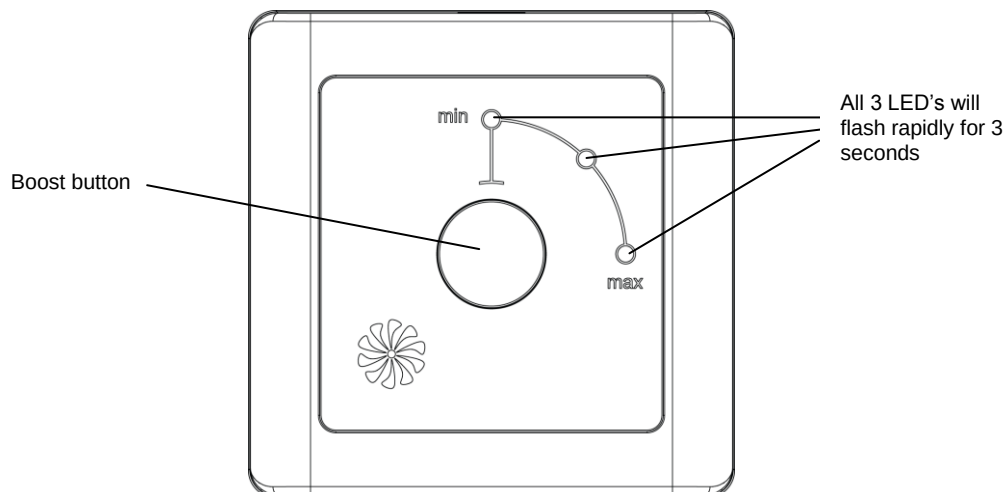


Figure 29 – GRF2 Successful De-Registration

2.9.16 Performance Graph - Airflow Characteristics for HRV2HT

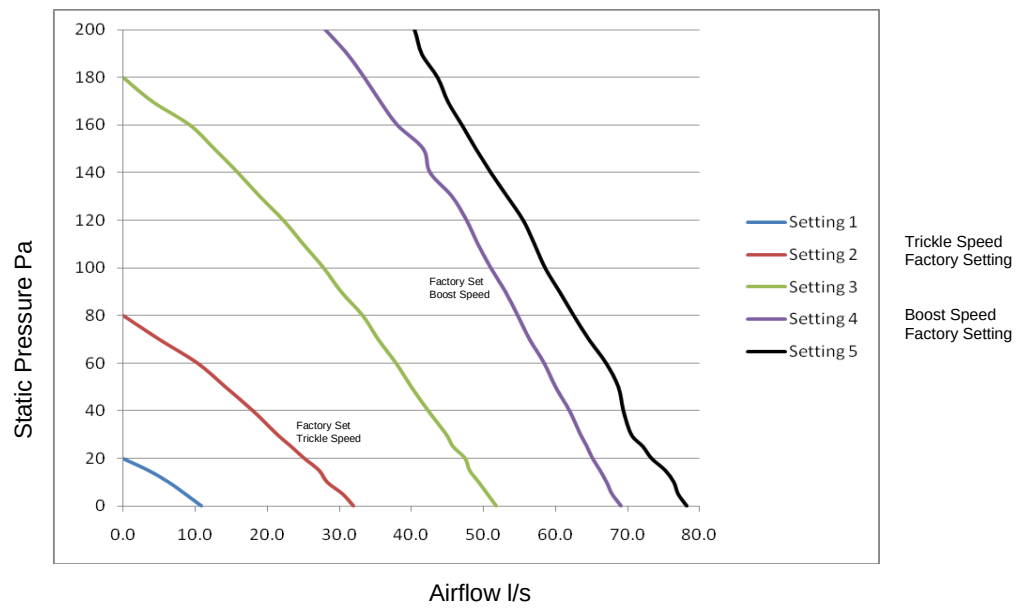


Figure 30

3.0 The Guarantee Period

- 3.1.1 This Greenwood product (**HRV2HT**) has a 2 Year Guarantee.
- 3.1.2 This does not affect your statutory rights.
- 3.1.3 Full details available on request from +44 (0) 870 900 1880 or www.greenwood.co.uk / info@greenwood.co.uk

All information is believed correct at time of going to press. E&OE.

All goods are sold according to Greenwood Air Management Ltd's Standard Conditions of Sale which are available on request. All dimensions referred to are in millimetres unless otherwise stated.

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