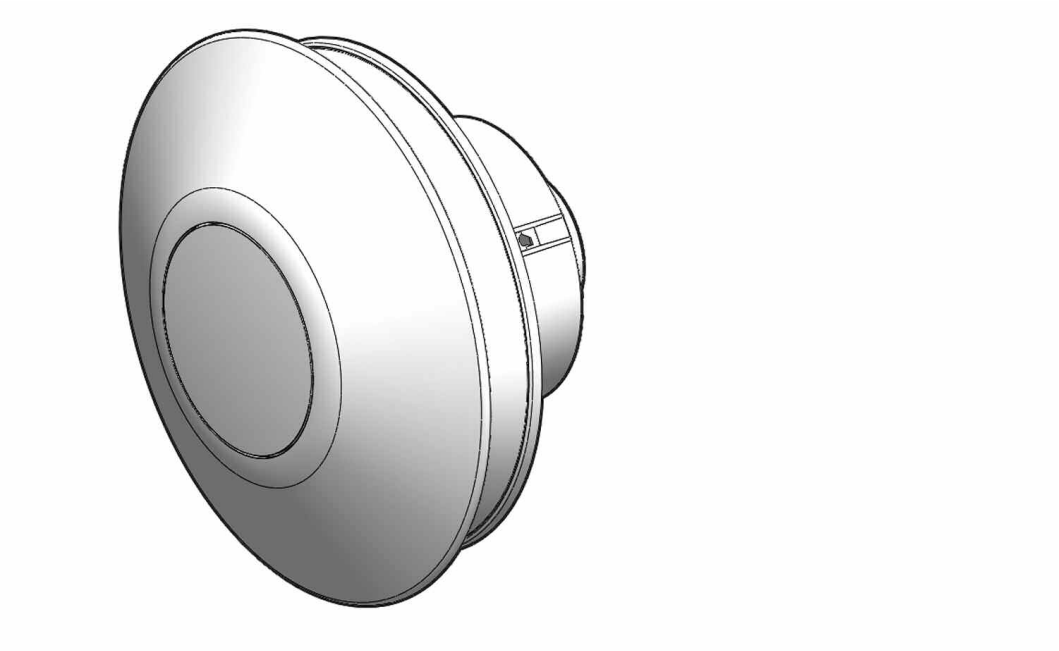
# Unity CV2GIP

## Decentralised Mechanical Extract Ventilation (dMEV)

## Installation Instructions

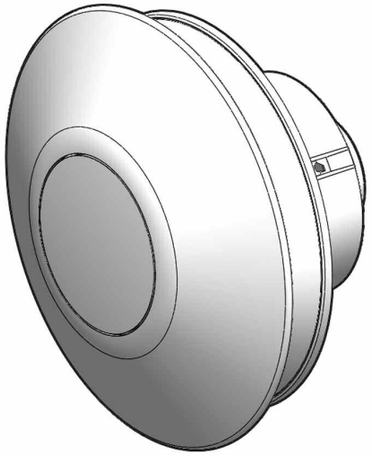


**Commissioning Data:**

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

# Contents







# 1.0 General Description / Physical Specification

## 1.1 Overview

1.1.1 Greenwoods Unity CV2GIP is a continuously running (dMEV) extract fan, designed to offer a simplistic approach to meet Building Regulations and provide an energy efficient domestic ventilation solution to improve indoor air quality in dwellings.

1.1.2 The concept revolves around ‘one product’, which has been designed to be flexible in application (ceiling and wall installations) and to meet the performance requirements of all ‘wet’ rooms within a dwelling. The Unity CV2GIP features new Greenwood TimerSMART™ and Greenwood HumidiSMART™ technology (fully automatic integral delay / over-run timer and humidity functions) which monitor the homeowners’ environment. For enabling / disabling features see section 2.8 On Site Commissioning.

1.1.3 A boost speed facility is provided to increase the ventilation rate during peak times, helping to provide a comfortable indoor environment. Either a ‘switch-live’ light switch or an alternative boost switch (not supplied) should be wired to provide this operation (see section - 2.6 Electrical).

1.1.4 This product features on SAP Appendix Q, part of the process will require the Installation Checklist for dMEV products to be completed and submitted to building control, available at www.sap-appendixq.org.uk, along with all other relevant paperwork.

1.1.5 Record sheets for commissioning information are provided; please refer to section 4 of the User / Homeowner Guide also supplied with the product.

1.1.6 Packaging Includes –

1 x Unity CV2GIP Unit
1 x Loose item set
1 x Installation Instructions
1 x User / Homeowner Guide

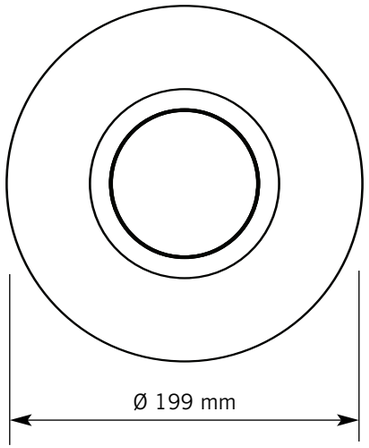
Ancillary Items Required: 100mm round ducting or
Flat duct (110 x 54mm) or (204 x 60mm).
100mm grille & appropriate boost switch (GS2).

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.

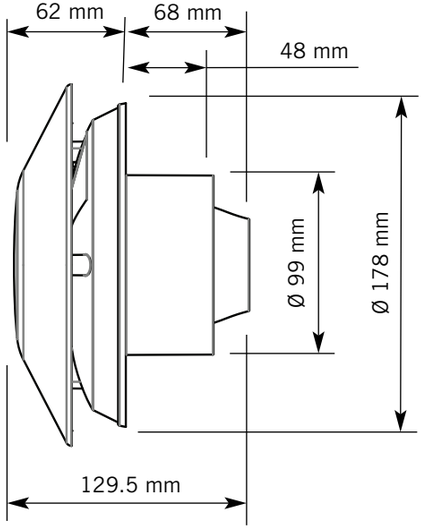
1.1.8 Siting Notes: Where an open-flued oil or gas-fuelled appliance is installed in the kitchen, extract ventilation can cause the spillage of flue gases. Care must be taken to ensure ventilation is reduced appropriately, as set out in the Building Regulations. Kitchens with solid-fuel appliances should not have extract fans fitted.

1.1.9 When installing wall mounted fans, ensure that there are no buried cables or pipes in the way. It is recommended that this fan is mounted 1.8m above floor level.

## 1.2 Physical Specification




Front




Side



# 2.0 Installation Instructions

## 2.1 General Preparation

2.1.1 The Unity CV2GIP fan is supplied with a 100mm nominal spigot for connection of ducts for installation.

2.1.2 100mm diameter rigid duct should be used to provide the best performance levels required for compliance with Building Regulations. Greenwood Airvac Technical Services can be contacted on +44 (0) 1903 777135 should you have any questions in respect of this.

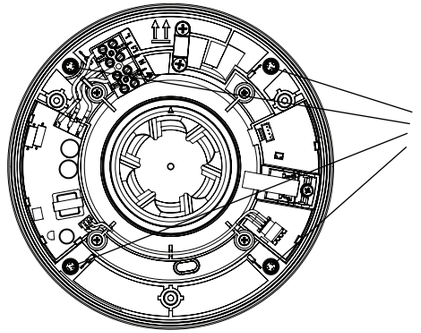
2.1.3 Installation of the unit should be in accordance with the current editions of Building Regulations and BS7671: IEE Wiring Regulations.

2.1.4 Electrical installation must only be carried out by a qualified Electrician.

## 2.2 Positioning / Application

2.2.1 The unit can be installed on a wall or ceiling mounted and ducted.

2.2.2 The unit must be securely mounted using all four fixing holes provided (see Figure 1).



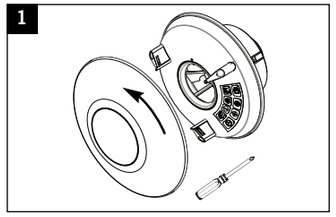
Using No.8 screws provided, ensure that all four fixing points on the back plate are securely fitted

Figure 1: Back Plate Screw Fixtures

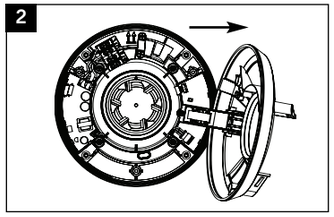
## 2.3 Wall Mounting

2.3.1 Determine the most ideal location for the unit for this installation, also taking account of the electrical services.

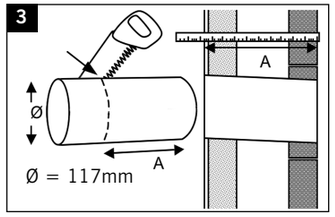
2.3.2 Ensure there is adequate access for installation and eventual replacement. **Note:** The electronics cover has been designed to retain and hold screws, for ease, when positioning/mounting the product to a surface.



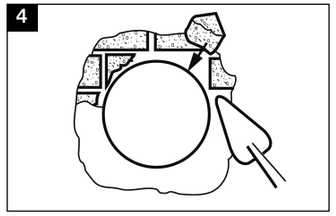
To remove outer front cover, rotate to the left until retaining clips are released. Then loosen the 3 fixing screws (see Note above).



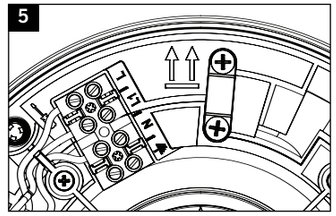
Carefully open the electronics cover until retention hinge is fully extended.



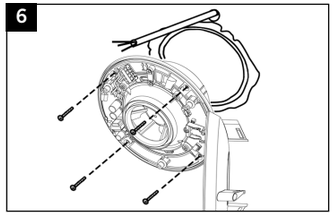
Cut the duct to width of the plasterboard or tiled wall with slight fall to exterior. (Make provisions for cable).



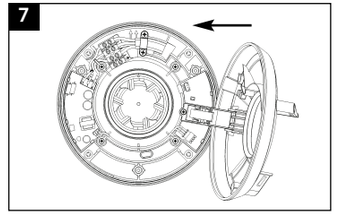
Fill in any gaps with mortar or foam and make good internal and external walls. Make sure that ducting remains circular.



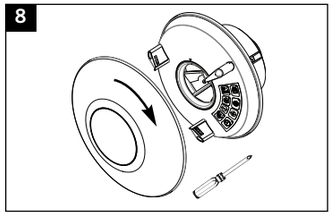
To ensure the control panel is in the correct configuration, please mount the fan with orientattion symbol arrows facing upwards.



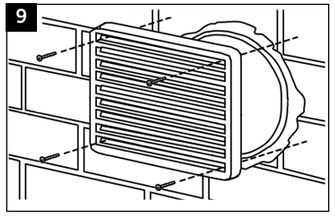
Using the four No 8 screws, secure fan body to the wall. The electrical cable passes through as appropriate. Wire fan (See wiring details).



Carefully close the electronics cover, ensuring that the outer rubber seal edges are positioned correctly back into the fan body.



Tighten the 3 fixing screws. To attach the outer front cover, rotate to the right, utilising the guidance rail, until firmly secured by the retaining clips.



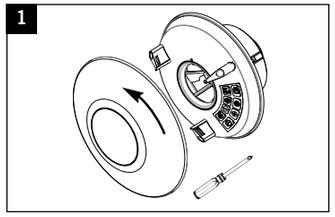
Screw the protective wall grille over the external duct opening.



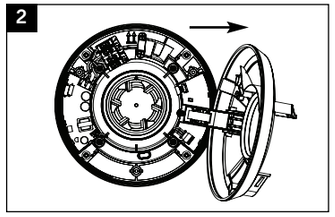
## 2.4 Ceiling Mounting

2.4.1 Determine the most ideal location for the unit for this installation, also taking account of the electrical services.

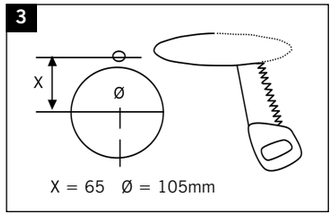
2.4.2 Ensure there is adequate access for installation and eventual replacement. **Note:** The electronics cover has been designed to retain and hold screws, for ease, when positioning/mounting the product to a surface.



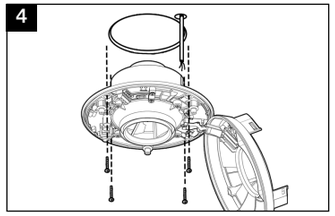
To remove outer front cover, rotate to the left until retaining clips are released. Then loosen the 3 fixing screws (see Note above).



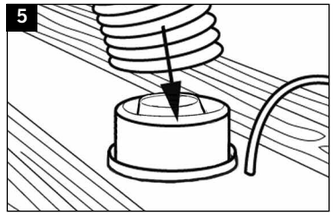
Carefully open the electronics cover until retention hinge is fully extended.



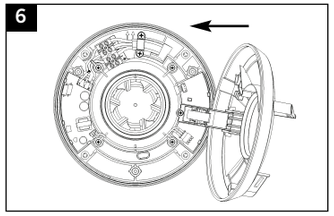
Cut an opening through the ceiling for the fan and electrical cable.



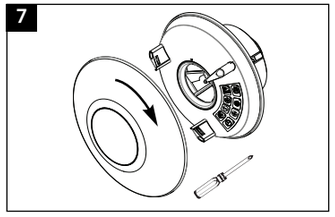
The unit must be securely mounted using all four fixing holes provided (see section 2.2). Wire fan (See wiring details).



Place flexible or rigid ducting over the spigot of the fan. Fit ducting to spigot using appropriate method. Refer to section 2.5.



Carefully close the electronics cover, ensuring that the outer rubber seal edges are positioned correctly back into the fan body.



Tighten the 3 fixing screws. To attach the outer front cover, rotate to the right, utilising the guidance rail, until firmly secured by the retaining clips.

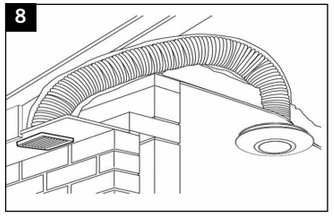


Diagram depicting typical installation ducted through roof soffit.

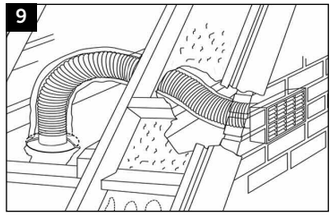


Diagram depicting typical installation ducted through roof to external wall.

## 2.5 Ducting Guidelines

2.5.1 A 100mm nominal diameter spigot is provided for connection to ducting. Ductwork should be securely connected to fan spigot. Failure to do this will cause unnecessary air leakage and may impair performance.

2.5.2 All duct connections require sealing. Where ducts are installed against a solid structure this can be difficult to achieve. In such locations preassembly of duct sections should be considered. This will require that connections are permanent to ensure the seal is maintained during installation.

2.5.3 If applicable, Fire dampers **MUST BE FITTED** in accordance with Part B of the Building Regulations.

2.5.4 **Rigid Ducting** - Install using the least number of fittings to minimise resistance to airflow. Where access to ducts will not be possible after construction is complete, i.e. within floor and wall voids, consideration should be given to permanent connection and sealing with an appropriate non-hardening sealant, and not using duct tape to achieve connection and sealing.

2.5.5 **Flexible Ducting** - Ensure ducting lengths are kept to 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. Connection of lengths of flexible duct must use a rigid connector and jubilee clips or similar to ensure a long term seal is achieved. Connection of lengths of flexible duct should not be taped-only.

2.5.6 The fan exhaust must terminate to external air and be protected by a suitable wall or roof terminal. Roof terminal to have a minimum equivalent free area of 7,500mm$^2$.



## 2.6 Electrical

2.6.1 **WARNING: All wiring must conform to BS7671: IEE Wiring Regulations.**

2.6.2 **WARNING: The appliance must be isolated from the mains supply before removing the electronics cover.**

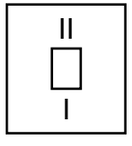
2.6.3 **The installation must be carried out by a qualified electrician.**

2.6.4 The Unity CV2GIP is suitable for a 220-240V ~ 50Hz single phase supply fused at 3A.

2.6.5 A double-pole switch having a minimum contact separation of 3mm must be used to provide isolation for the unit.

2.6.6 The recommended alternative 'switch-live' switch for use is the - **Greenwood Airvac; GS2 switch.**

| GS2 Remote Switch Positions | Function |
|---|---|
| Trickle (I) | Fan running at trickle speed |
| Boost (II) | Fan running at boost speed |




2.6.7 **The fan must not be mounted above or closer than 1m to the cooker where it could be affected by excessive heat or moisture.**

2.6.8 **Wiring Details**

- Strip cable to correct lengths as shown in Figure 2 - Diagram 2.a.
- Insert cable through cable entry point (A), and then clamp cable using the cable clamp (B).
- Push the wires into the terminal block (C) as per wiring diagram (see section 2.7).
- Tighten screws of the terminal connection.

**Note:** A facility to park the earth cable has been provided (D); as the fan is double insulated no connection to earth is required.

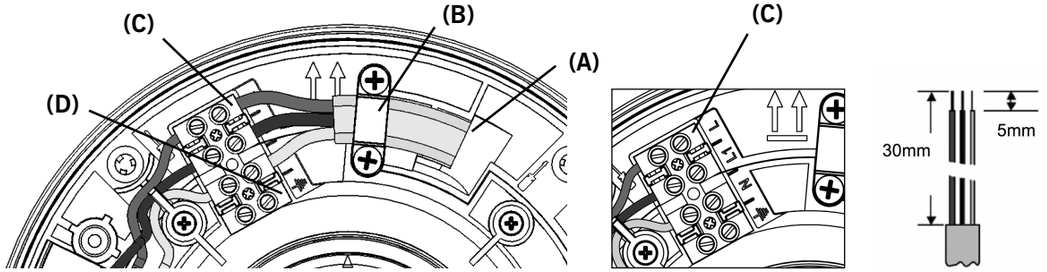


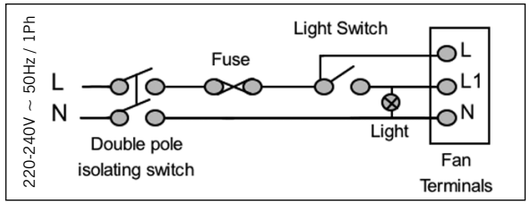

Figure 2 - Wiring Details Diagram 2.a.

2.6.9 **Fan Specifications**

220-240V ~ 50Hz / 1Ph IPX4 ⧈ 5 Watts max.

Cable sizes (max): Fixed flat wiring 2 core 1mm², 3 core 1/1.5mm²

## 2.7 Wiring Diagram

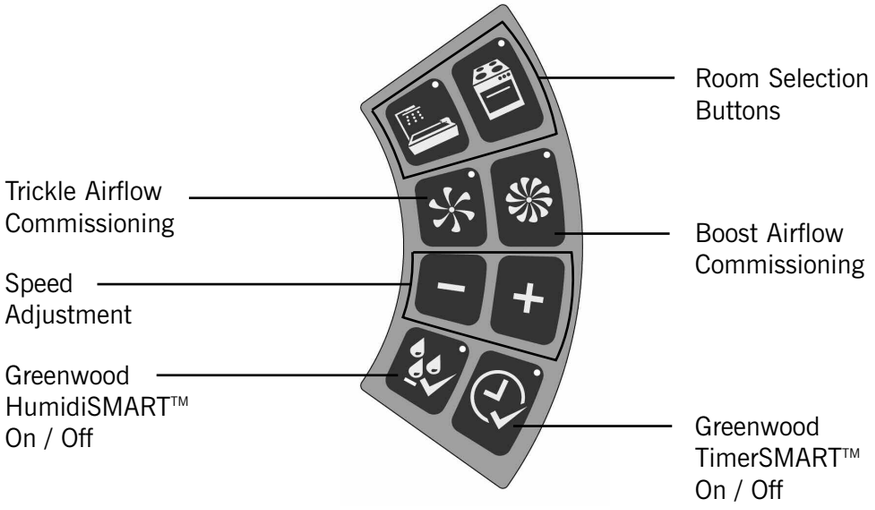





## 2.8 On Site Commissioning / Set Up

2.8.1 This section covers set up, configuration of the unit for installation and altering pre-set factory settings.

2.8.2 **Control Panel**



### 2.8.3 Room Installation Selection

Once the wiring connections have been checked, switch the mains supply on.

On first power up, both Bathroom and Kitchen Room selection button lights should flash to indicate that an appropriate installation setting needs to be selected.

**Note:** If no button is selected, lights should flash for 15 minutes and should then divert to Bathroom Default settings and lock out the commissioning section of the controls.

**Note:** To reactivate commissioning mode see Section 2.8.9.

### 2.8.4 To Commission Bathroom Fan Airflow Rates (Includes WC)

Whilst both room selection lights are flashing, press the Bathroom button. The Bathroom light should show as solid.

The Boost speed light should now start to flash.

- **Boost Factory Setting: 8 l/s (Through Wall)**

To adjust the airflow, press the [-/+] buttons to the required level and verify with an airflow measuring device, then press the Boost button [ ] to confirm and the 'boost' light should show as solid.

**Note:** For WC reduce Boost airflow to 6 l/s.

The Trickle speed light should now start to flash.

- **Trickle Factory Setting: 5 l/s (Through Wall)**

To adjust the airflow, press the [-/+] buttons to the required level and verify with an airflow measuring device, then press the Trickle button [ ] to confirm and the 'trickle' light should show as solid.

**Note:** Selection lights should remain on for approximately 10 seconds to enable the setup and status of the fan to be observed and checked, upon which time the commissioning section of the controls should lock.

**Note:** To reactivate commissioning mode, see Section 2.8.9.



### 2.8.5 To Commission Kitchen Fan Airflow Rates

Whilst both room selection lights are flashing, press the Kitchen button. The Kitchen light should show as solid.

The Boost speed light should now start to flash.

- **Boost Factory Setting: 13 l/s (Through wall)**

To adjust the airflow, press the [-/+] buttons to the required level and verify with an airflow measuring device, then press the Boost button [ ] to confirm and the 'boost' light should show as solid.

The Trickle speed light should now start to flash.

- **Trickle Factory Setting: 8 l/s (Through Wall)**

To adjust the airflow, press the [-/+] buttons to the required level and verify with an airflow measuring device, then press the Trickle button [ ] to confirm and the 'trickle' light should show as solid.

**Note:** Selection lights should remain on for approximately 10 seconds to enable the setup and status of the fan to be observed and checked, upon which time the commissioning section of the controls should lock.

**Note:** To reactivate commissioning mode, see Section 2.8.9.

2.8.6 **To Activate Greenwood HumidiSMART™**

Press [ ] to activate the Greenwood HumidiSMART™, the light should come on to indicate that the function is active.

- **Factory set to OFF**
- **Option's ON / OFF**

2.8.7 **To Activate Greenwood TimerSMART™**

Press [ ] to activate the Greenwood TimerSMART™, the light should come on to indicate that the function is active.

- **Factory set to OFF**
- **Option's ON / OFF**

2.8.8 **To Reactivate Commissioning Mode**

Press any button to activate the panel. The current fan set up / status should be shown via the panel lights.

To enter the commissioning mode press and hold [-/+] buttons simultaneously for approximately 3 seconds until the Bathroom & Kitchen lights flash - room and airflow settings from previous commissioning should be recalled.

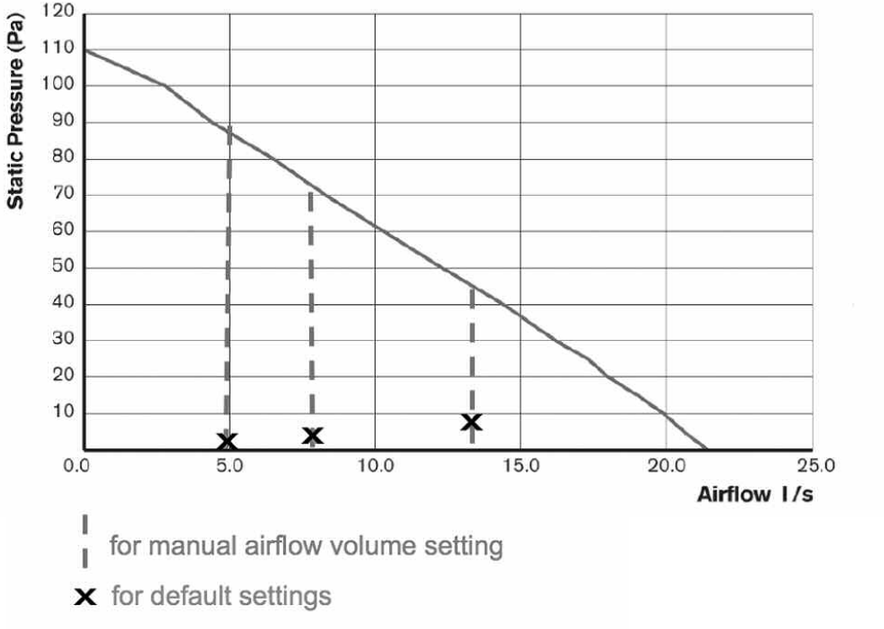
See section 2.8 for commissioning details.

**Note:** To 'master reset' press and hold [-/+] buttons simultaneously for approximately 10 seconds until all lights flash to indicate the fan has been reset to factory settings and then revert to both room selection lights at start of commissioning mode.



## 2.9 Performance Graph

2.9.1 Airflow Characteristics




| Airflow Settings l/s | Bathroom (Default) | Kitchen (Default) |
|---|---|---|
| Trickle | 5 | 8 |
| Boost | 8 | 13 |

**Note:** The Unity CV2GIP will automatically compensate for fluctuations in back pressure, to meet Building Regulation requirements

# 3.0 The Guarantee Period

3.1.1 This Greenwood product (**Unity CV2GIP**) 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

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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 shown.



**Greenwood Air Management Ltd**

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| Main Line Fax: | +44 (0) 1903 782398 |
| Web: | www.greenwood.co.uk |
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