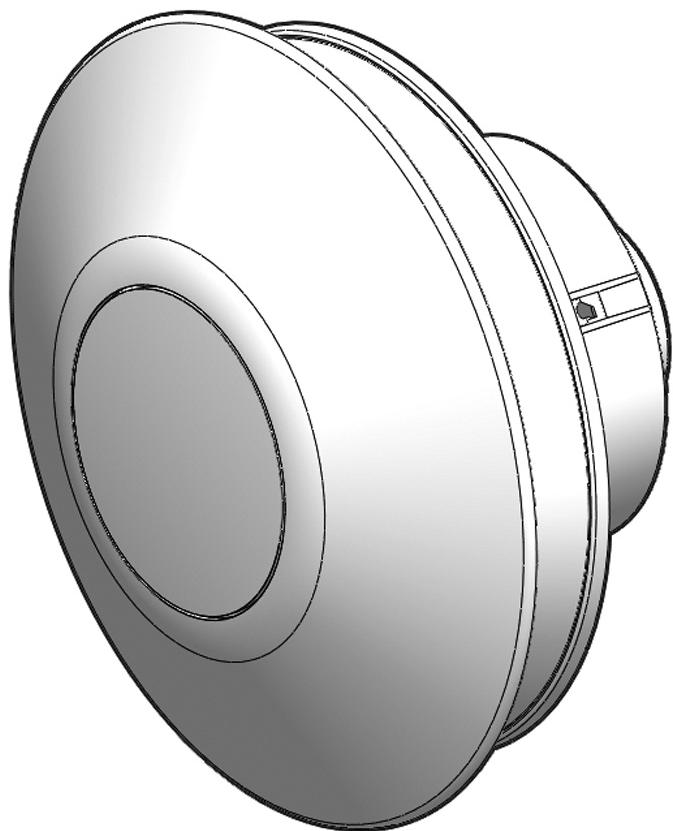


Unity CV2GIP / CV2SVGIP

Decentralised Mechanical Extract Ventilation (dMEV)

Installation Instructions



Commissioning Data:

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

Notice:

For Wall Mounting:
To ensure IPX5 install fan with orientation arrows facing upwards.
(See section 2.3, figure 5)

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To disassemble the unit, disconnect from mains supply and use a screwdriver to segregate the electronic components and motor from the plastic housing. Dispose items in accordance with WEEE.

WEEE Statement

This product may not be treated as household waste. Instead it should be handed to an appropriate collection point for the recycling of electrical and electronic equipment.

For more detailed information about the recycling of this product, please contact your local council office or your household waste disposal service.



1.0 General Description / Physical Specification

1.1 Overview

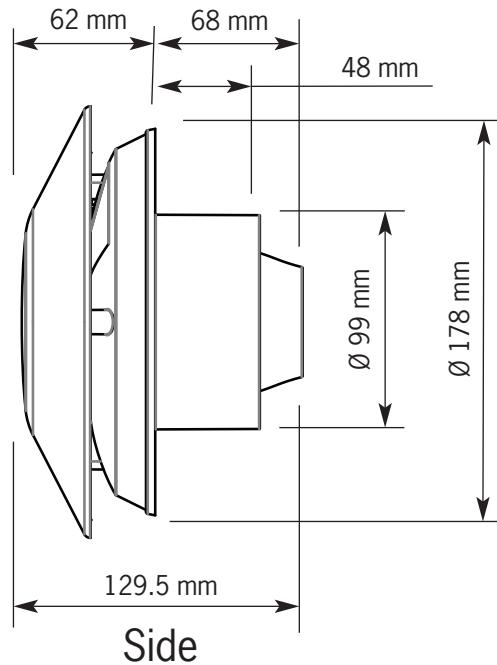
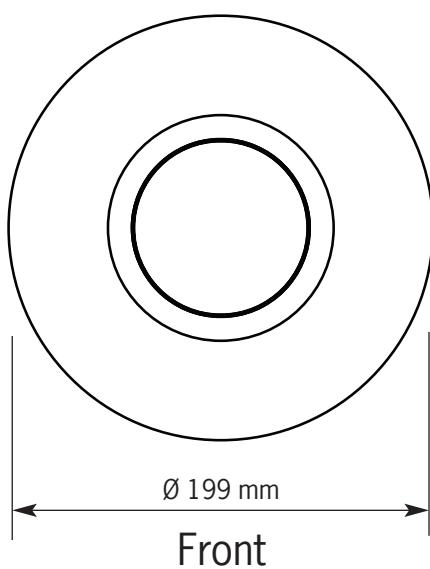
- 1.1.1 Unity CV2GIP / CV2SVGIP is a continuously running (dMEV) extract fan, designed to offer a simplistic approach to meet Building Regulations and provide an energy efficient domestic ventilation solution to improve indoor air quality in dwellings.
- 1.1.2 The concept revolves around ‘one product’, 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 / CV2SVGIP 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 PCDB, part of the process will require the Installation Checklist for dMEV products to be completed and submitted to building control, available at www.ncm-pcdb.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 –

CV2GIP	CV2SVGIP
1 x Unity dMEV Unit	1 x Unity dMEV Unit
1 x Loose item set	1 x SELV Box
1 x Installation Instructions	1 x Loose item set
1 x User / Homeowner Guide	1 x Installation Instructions
	1 x User / Homeowner Guide

Ancillary Items: 100mm round ducting or Flat duct (110 x 54mm) or (204 x 60mm). 100mm grille & appropriate boost switch (GS2). PFACV2 - Picture Frame Adaptor.

- 1.1.7 **Warning:** This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- 1.1.8 Where an open-flued oil or gas-fuelled appliance is installed, precautions must be taken to avoid a back-flow of gases into the room.
- 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.
- 1.1.10 The fan should not be sited where it would be subject to a direct heat source in excess of 40°C.
- 1.1.11 Observe appropriate safety precautions if working on steps or ladders. Wear eye protection when breaking out wall or window materials, etc.
- 1.1.12 The CV2SVGIP fan must only be installed by using the supplied Safety Extra Low Voltage (SELV) controller, corresponding to the markings on the appliance.

1.2 Physical Specification



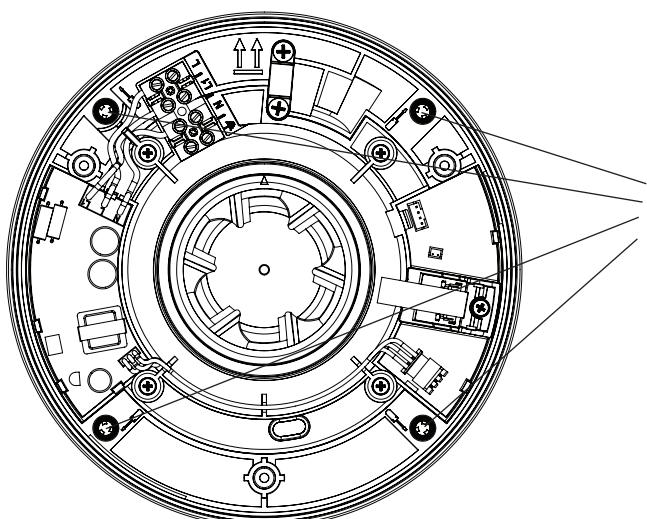
2.0 Installation Instructions

2.1 General Preparation

- 2.1.1 The Unity CV2GIP / CV2SVGIP 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. Technical Services can be contacted on +44 (0) 1276 408402 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).

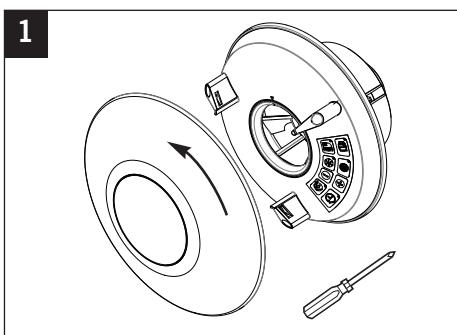


Using No.8 screws provided, ensure that all four fixing points on the back plate are securely fitted

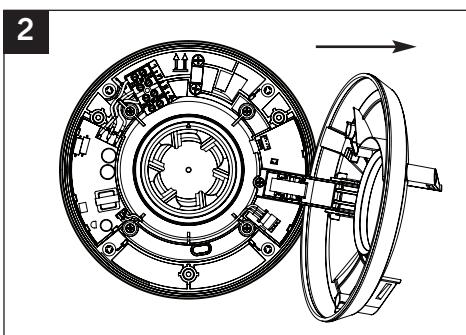
Figure 1: Back Plate Screw Fixtures

2.3 Wall Mounting

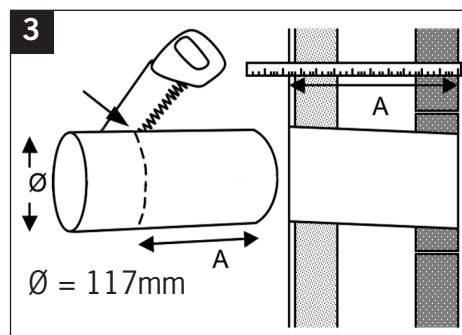
- 2.3.1 Determine the most ideal location for the unit for this installation, also taking account of the electrical services.
- 2.3.2 Ensure there is adequate access for installation and eventual replacement. **Note:** The electronics cover has been designed to retain and hold screws, for ease, when positioning/mounting the product to a surface.



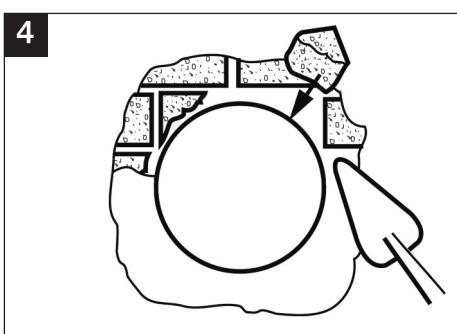
To remove outer front cover, rotate to the left until retaining clips are released. Then loosen the 3 fixing screws (see Note above).



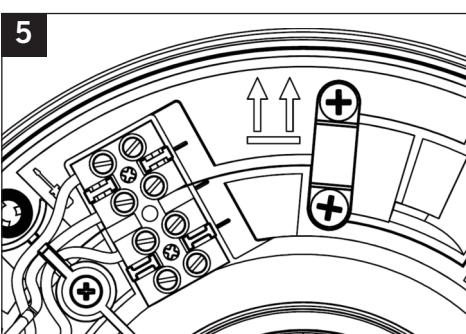
Carefully open the electronics cover until retention hinge is fully extended.



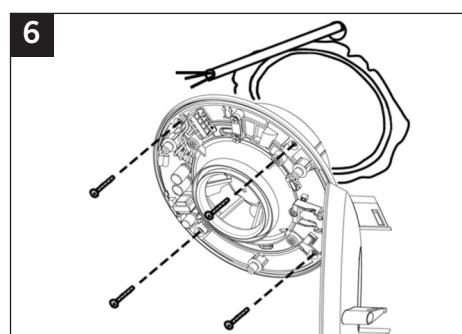
Cut the duct to width of the plasterboard or tiled wall with slight fall to exterior.
(Make provisions for cable).



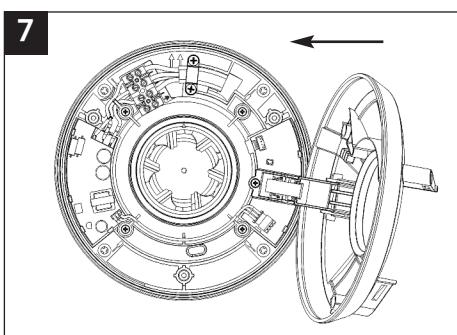
Fill in any gaps with mortar or foam and make good internal and external walls. Make sure that ducting remains circular.



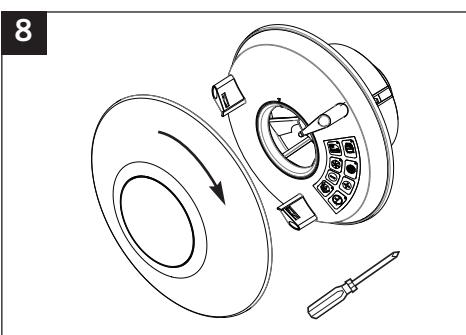
To maintain IPX5 and avoid possible hazard, please mount the fan with orientation symbol arrows facing upwards.



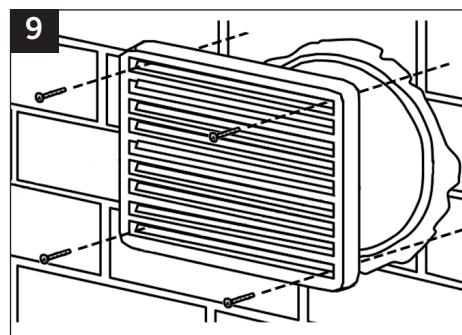
Using the four No 8 screws, secure fan body to the wall. The electrical cable passes through as appropriate. Wire fan (See wiring details).



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



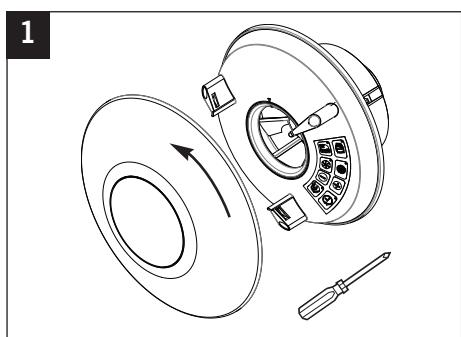
Fully tighten the 3 fixing screws until they lock to maintain IPX5 and avoid possible hazard. To attach the outer front cover, rotate to the right, utilising the guidance rail, until firmly secured by the retaining clips.



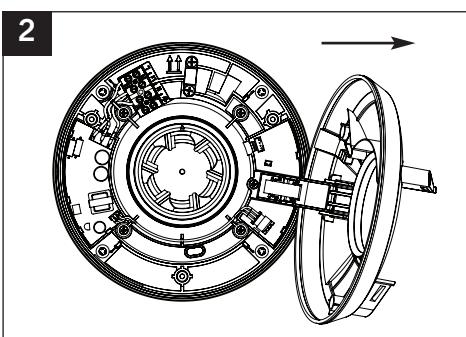
Screw the protective wall grille over the external duct opening.

2.4 Ceiling Mounting

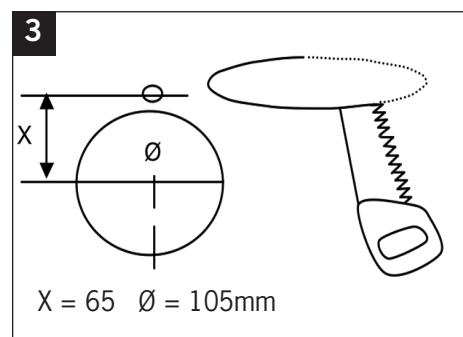
- 2.4.1 Determine the most ideal location for the unit for this installation, also taking account of the electrical services.
- 2.4.2 Ensure there is adequate access for installation and eventual replacement. **Note:** The electronics cover has been designed to retain and hold screws, for ease, when positioning/mounting the product to a surface.



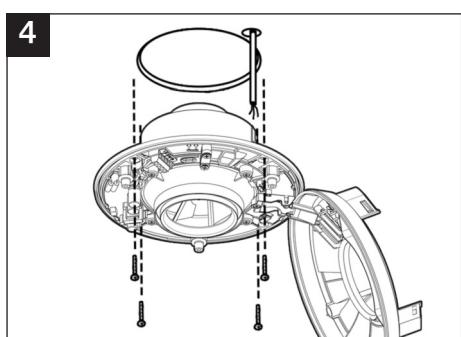
To remove outer front cover, rotate to the left until retaining clips are released. Then loosen the 3 fixing screws (see Note above).



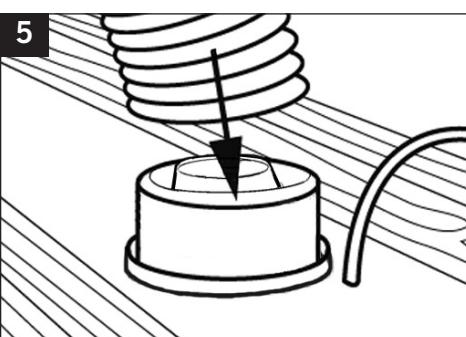
Carefully open the electronics cover until retention hinge is fully extended.



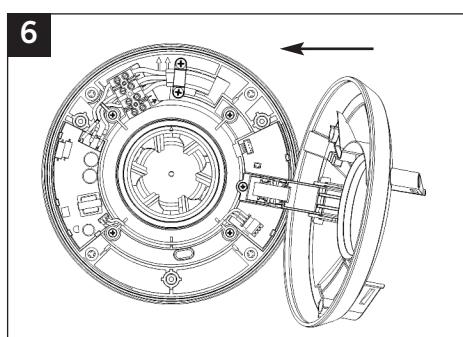
Cut an opening through the ceiling for the fan and electrical cable.



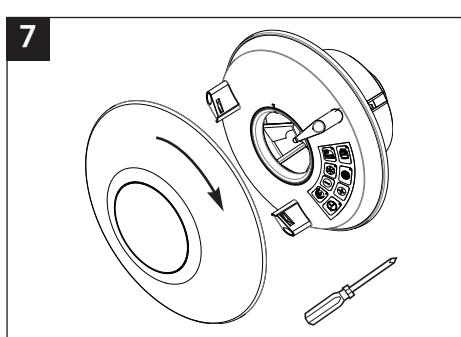
To maintain IPX4 the unit must be securely mounted using all four fixing holes provided (see section 2.2). Wire fan (See wiring details).



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.



Fully tighten the 3 fixing screws until they lock to maintain IPX4 and avoid possible hazard. To attach the outer front cover, rotate to the right, utilising the guidance rail, until firmly secured by the retaining clips.

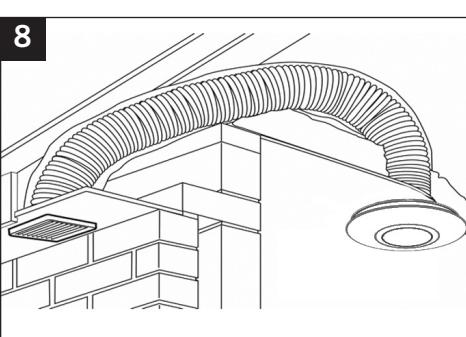


Diagram depicting typical installation ducted through roof soffit. If ducted via a roof vent follow guidelines set out with the Domestic Ventilation Compliance Guide.

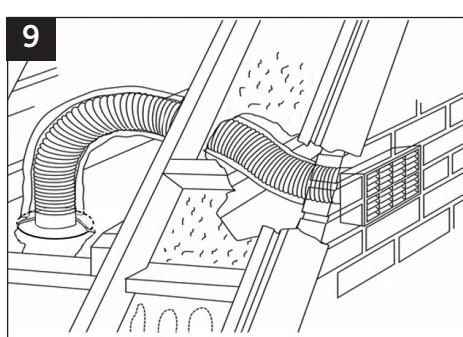


Diagram depicting typical installation ducted through roof to external wall.

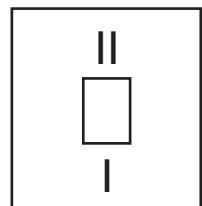
2.5 Ducting Guidelines

- 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 7,500mm².

2.6 Electrical

- 2.6.1 Installation or disconnection must be carried out by a qualified Electrician and all wiring must conform to IEE Wiring or local Regulations.
- 2.6.2 Isolate electricity supply before starting work.
- 2.6.3 The Unity CV2GIP fan is double insulated and does not require an earth.
- 2.6.4 The Unity CV2SVGIP SELV fan is a class III and does not require an earth.
- 2.6.5 A triple-pole switch having a minimum contact separation of 3mm must be used to provide isolation for the unit.
- 2.6.6 When supplied from a 6 amp lighting circuit no local fuse is required. If electricity is not supplied via the lighting circuit, a localised 3 amp fuse must be used.
- 2.6.7 The recommended alternative ‘switch-live’ switch for use is the - **GS2 switch.**

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



- 2.6.8 **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.

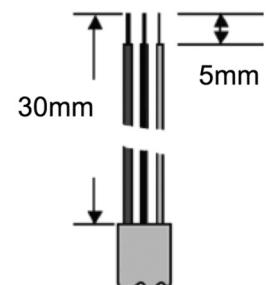
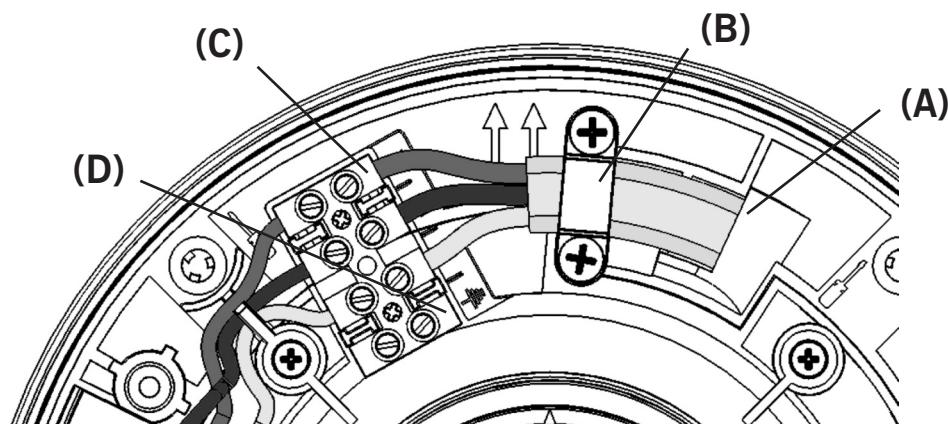
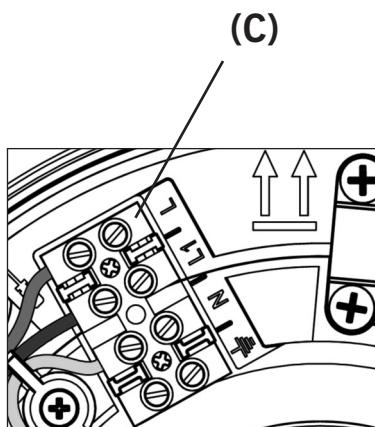
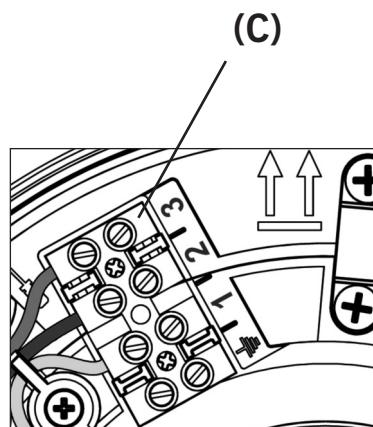


Figure 2 - Wiring Details

Diagram 2.a.



230V



SELV

2.6.9 Fan Specifications

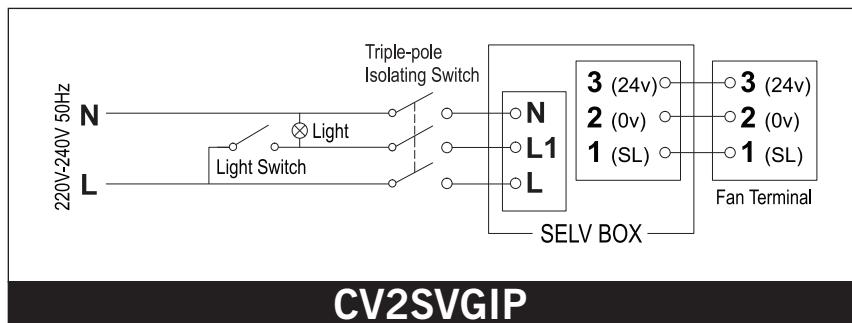
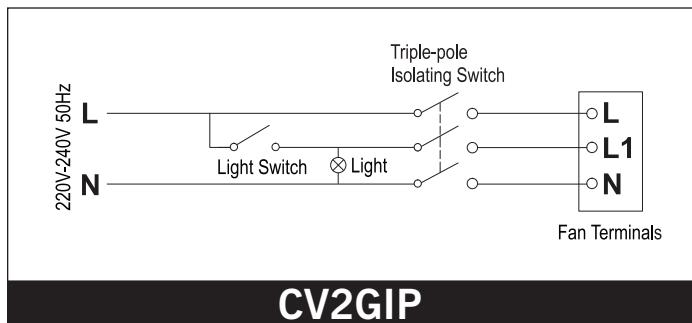
230V Model: IPX5 Wall, IPX4 Ceiling 220-240V ~ 50Hz / 1Ph 5 Watts max.

SELV Model: IPX5 Wall, IPX4 Ceiling 24DC: between controller and fan 220-240V ~ 50Hz / 1Ph 5 Watts max.

Cable Sizes: Mains: Fixed flat wiring 2 core 1mm², 3 core 1/1.5mm²

SELV Output: Circular wiring 3 core 0.75mm²

2.7 Wiring Diagrams

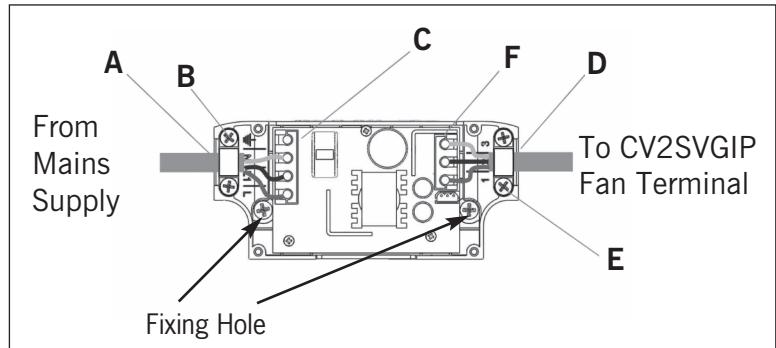


2.8 SELV Box Installation

- 2.8.1 Install SELV Back Plate and Power Supply (see images on page 12), using the two fixing holes, in a suitable location outside of the room where the Unity SELV fan (CV2SVGIP) is installed. The location should be as such that air can circulate around the Power Supply unit and it should never be covered.
- 2.8.2 The distance between the fan and the SELV Back Plate and Power Supply should be kept to a minimum and ideally not be greater than 3.0m.
- 2.8.3 Strip cable to correct length (as shown in section 2.6.8) for CV2SVGIP and SELV Back Plate.

2.8.4 Insert mains cable (A) and clamp using cable clamp provided (B).

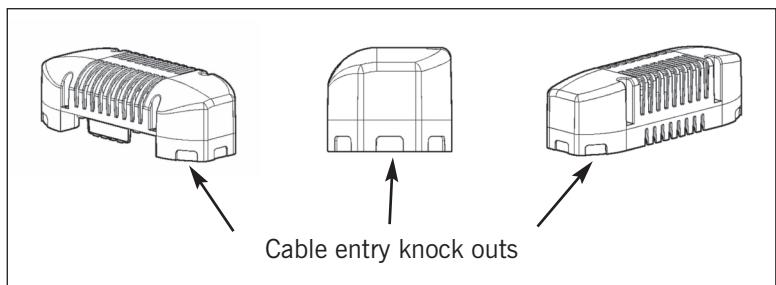
2.8.5 Push the wires into the terminal block (C) as per the wiring diagram (see section 2.7). Tighten the terminal block screws and ensure a good connection.



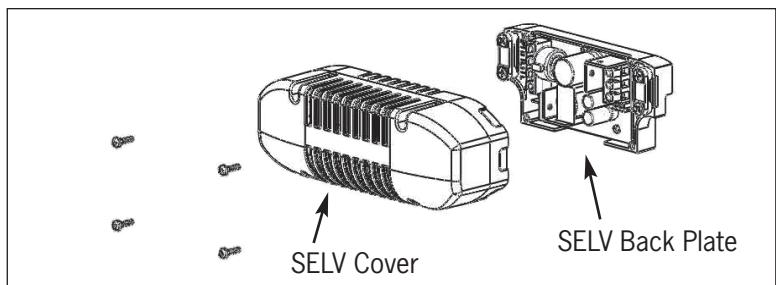
2.8.6 Push circular low voltage cable through cable entry point (D) and then secure cable using the cable clamp (E).

2.8.7 Push the wires into the terminal block (F) as per the wiring diagram (see section 2.7). Tighten the terminal block screws and ensure a good connection.

2.8.8 Before fitting the SELV Box Top remove suitable cable knock outs that best suit the entry position of both the mains and low voltage cables, ensure that they are dressed and that all sharp edges are removed to ensure cable insulation is not damaged.



2.8.9 Fit SELV Cover to SELV Back Plate and Power Supply and secure using the 4 screws provided.



2.8.10 Insert low voltage cable through the Unity fan's cable entry point and then secure cable using the cable clamp.

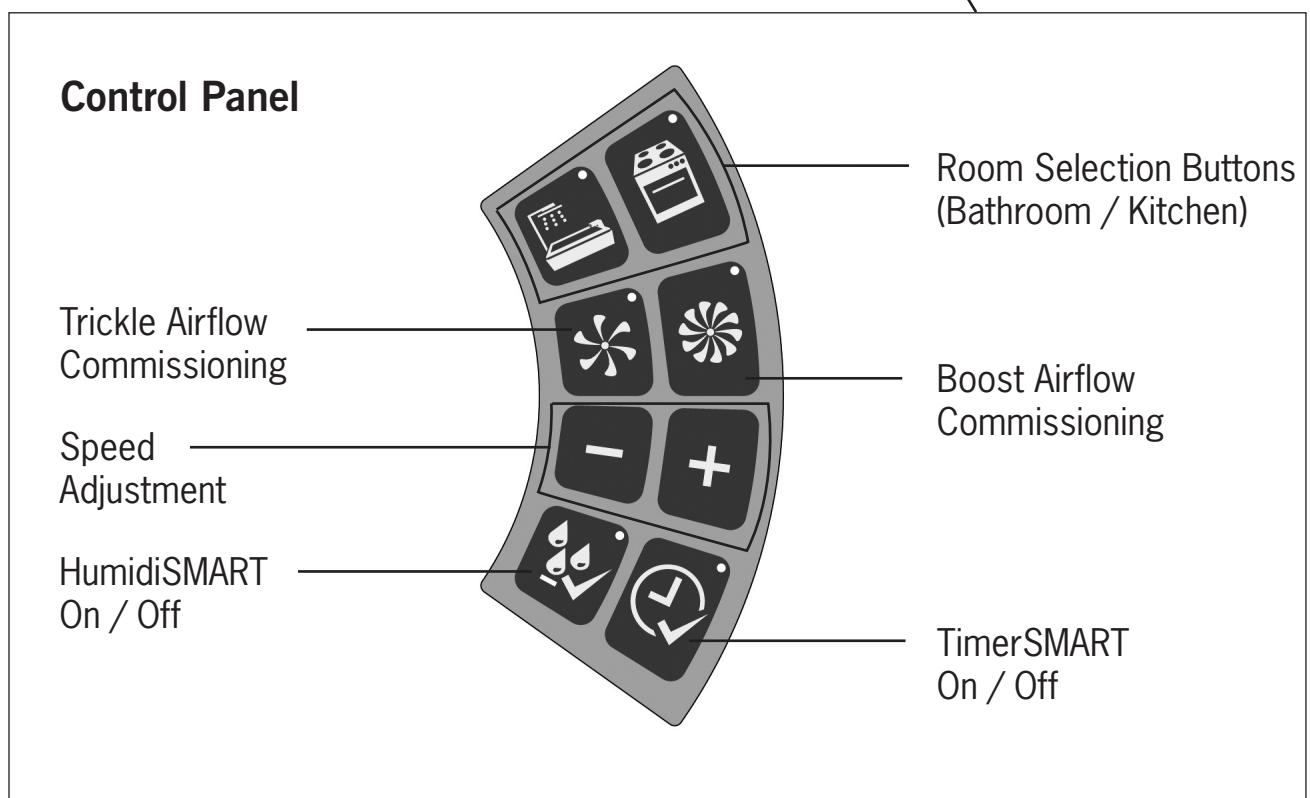
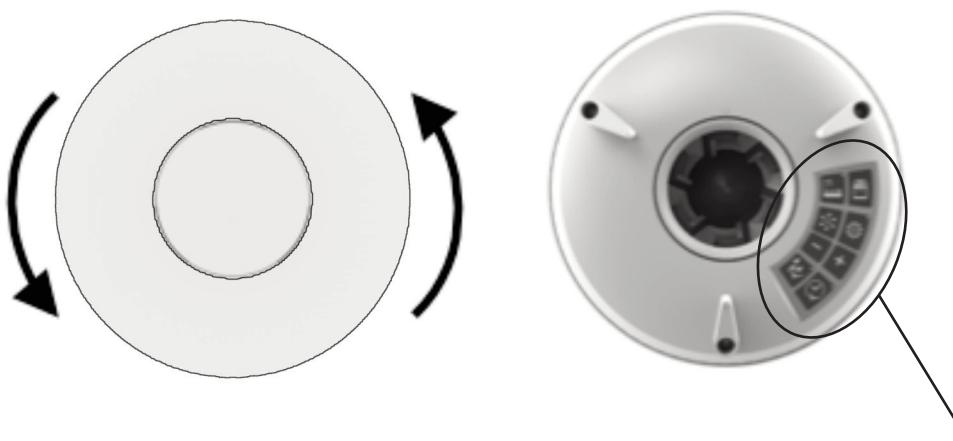
2.8.11 Push the wires into the fan's terminal block as per the wiring diagram (see section 2.7). Tighten the terminal block screws and ensure a good connection.

2.9 On Site Commissioning / Set Up

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

2.9.2 Removal of the Front Cover and Control Panel Functions

Twist outer front cover anti-clockwise to remove. You will then see the Control Panel.



2.9.3 Commissioning

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



Step 1

Press Bathroom or Kitchen button
- light will go solid

Step 2

Boost Airflow button will flash
– factory setting:

	Bathroom 8 l/s	Kitchen 13 l/s
--	----------------	----------------

Press speed adjustment buttons to required level and verify
- re-press Boost button to confirm

Step 3

Trickle Airflow button will flash
– factory setting:

	Bathroom 5 l/s	Kitchen 8 l/s
--	----------------	---------------

Press speed adjustment buttons to required level and verify
- re-press Trickle button to confirm

Step 4

For HumidiSMART press button to turn on
- light will go solid



Step 5

For TimerSMART press button to turn on
- light will go 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 selected commissioning settings should lock out.

2.9.4 To Reactivate Commissioning Mode

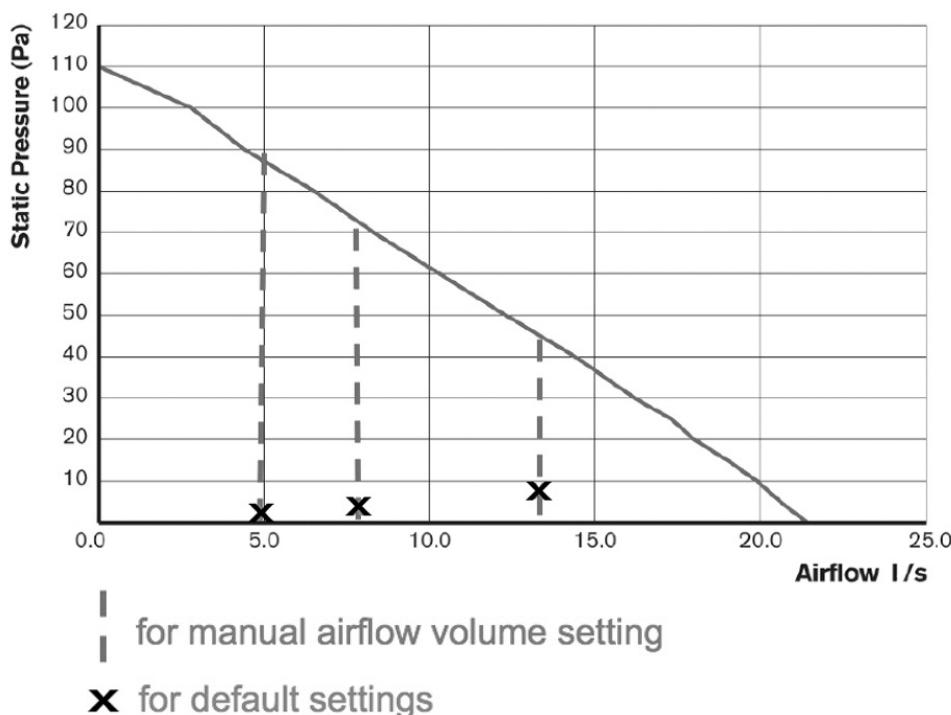
Press any button to activate the panel. The current fan setup / status should be shown via the panel lights.

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

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.

2.9.5

Performance Graph Airflow Characteristics.



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

Note: The Unity CV2GIP / CV2SVGIP will automatically compensate for fluctuations in back pressure, to meet Building Regulation requirements.

All information is believed correct at time of going to press. All dimensions referred to are in millimetres unless otherwise shown. E&OE.

All goods are sold according to Zehnder Group UK Ltd's Standard Conditions of Sale which are available on request. See website for warranty period details.

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