

Zehnder Unity ZCV3si

Installation and Operating Instructions

The Unity ZCV3si is a continuously running 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.



Please read instructions before commencing the installation.

Please make these instructions available for the user.



The Unity ZCV3si is a continuously running fan that revolves around 'one product', which has been designed to be flexible in application and to meet the performance requirements of all 'wet' rooms within a dwelling.

Your Unity ZCV3si may have the following features activated:

- * Intelligent sensing via the Smart Timer and Humidity technology (fully automatic integral delay / over-run timer and humidity functions) which monitor the homeowners' environment.
- * Delay-on-timer, set between 1-60 minute period.
- * A 'do not disturb' night mode where your fan will not boost for a period of time upon activation of the light switch.

Note: These functions only affect the higher extract boost mode, your fan will continue to ventilate at the lower trickle mode.

Key: Installer Information **pages 2 - 9** User Information **pages 10 - 11**

Important:

Please read these instructions before commencing the installation

- 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. Ensure the fan is switched off from the mains supply before cleaning commences.
- 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.
- 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 and within 400mm of the finished ceiling.
- The fan should not be sited where it would be subject to a direct heat source in excess of 40°C, e.g. at least 600mm distance from cooker hob.
- Observe appropriate safety precautions if working on steps or ladders.
- Wear eye protection when breaking out wall or ceiling materials, etc.
- 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

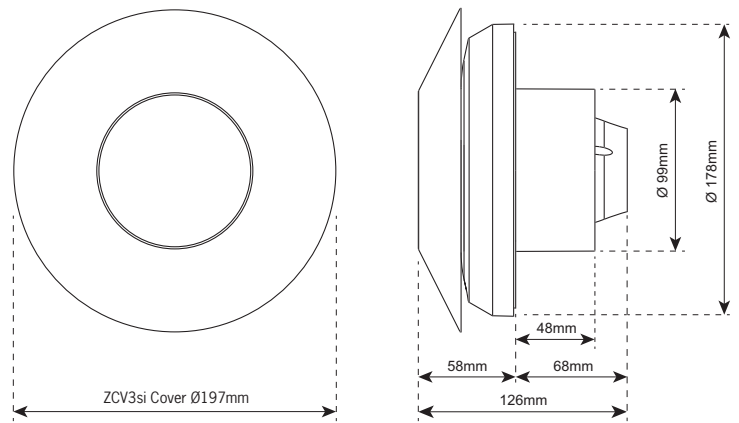
This product may not be treated as household waste. Instead it should be handed to an appropriate collection point for the recycling of electrical and electronic equipment. For more detailed information about the recycling of this product, please contact your local council office or your household waste disposal service.



Installation Preparation

Electrical installation must only be carried out by a qualified Electrician and in accordance with local regulations.

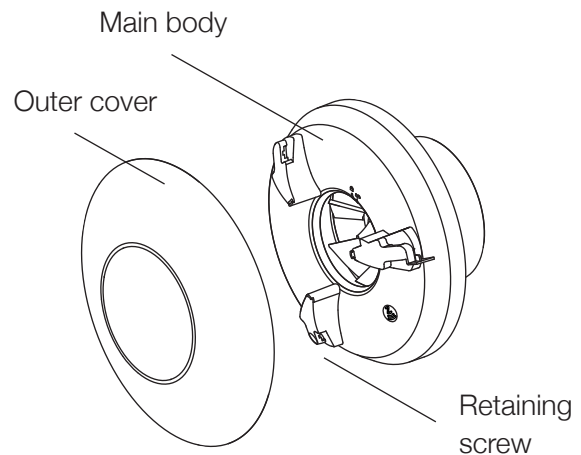
The Unity ZCV3si fan is supplied with a 100mm nominal spigot for connection of ducts for installation - 100mm diameter rigid duct should be used to provide the best performance levels required for compliance with Building Regulations.



Preparing your fan for installation

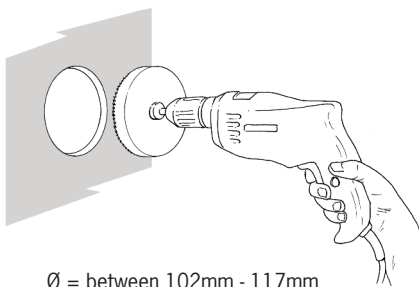
Upon removal from packaging, rotate 'outer cover' anticlockwise until retaining clips are released and place the cover to one side.

Loosen retaining screw in main body cover and rotate anticlockwise to remove.



The unit can be installed on a wall, window (with separate adaptor kit) or ceiling mounted and ducted.

Wall Preparation

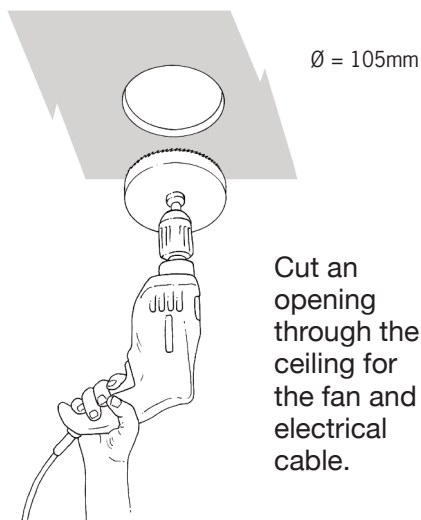


\varnothing = between 102mm - 117mm
(to suit ducting dimensions)
Allow a clearance of 50mm from wall/ceiling edges around the fan.

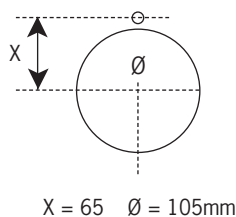
Cut the duct to depth of the plasterboard or tiled wall with slight fall to exterior (Make provisions for cable).

Fill in any gaps with mortar or foam and make good internal and external walls. Make sure that ducting retains its original shape.

Ceiling Preparation

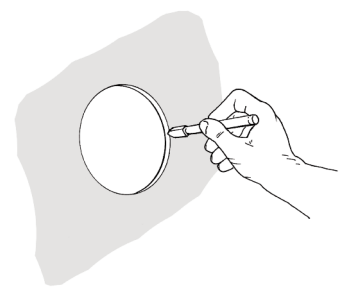


$\varnothing = 105\text{mm}$
Cut an opening through the ceiling for the fan and electrical cable.



X = 65 $\varnothing = 105\text{mm}$

Window Preparation



Cut circular hole within window pane.

- minimum $\varnothing = 118\text{mm}$
- maximum $\varnothing = 130\text{mm}$

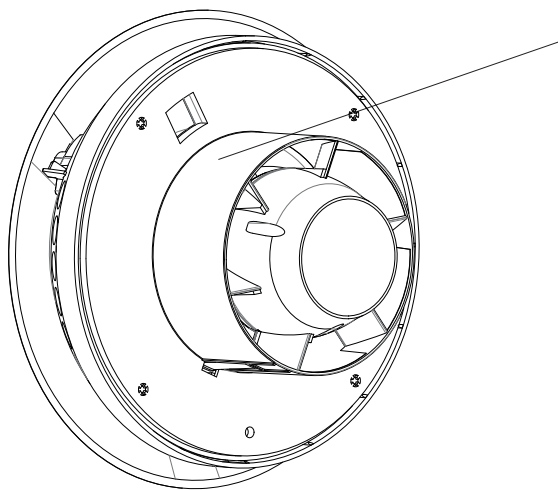
See instructions with window kit for installation details.

Installation

STEP 1

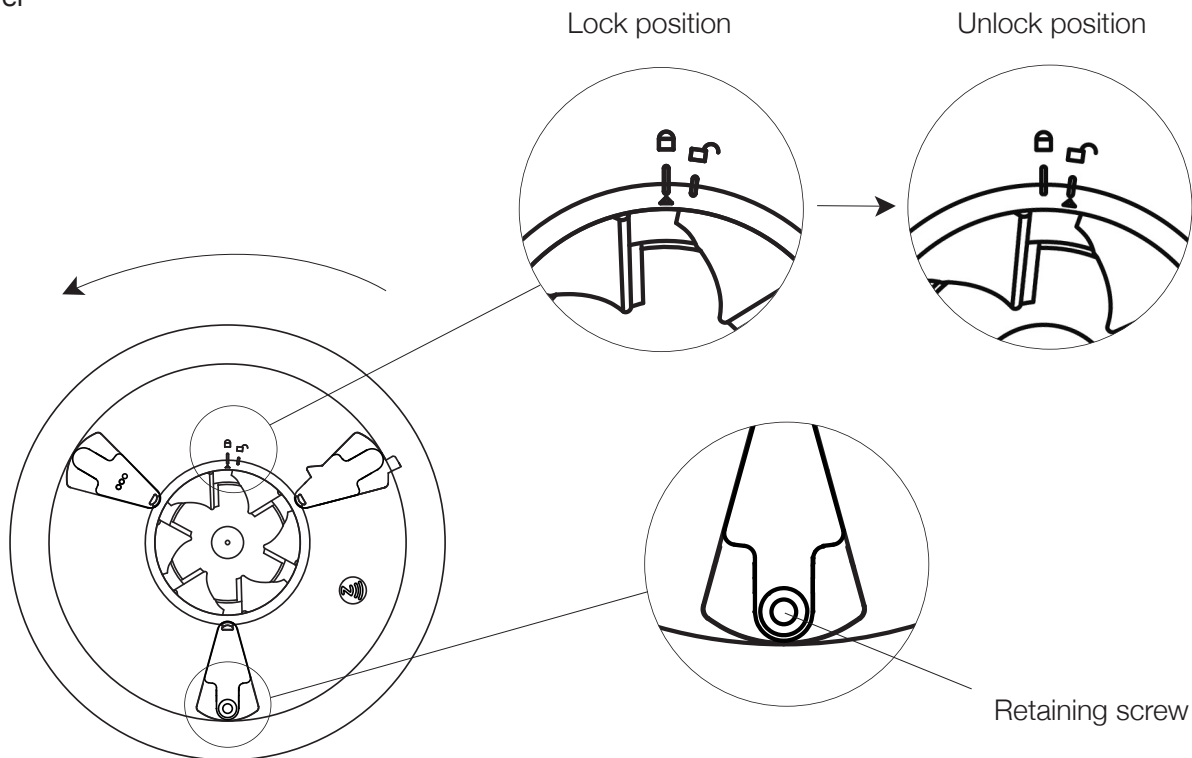
Connect ducting to the spigot on the back of the Unity ZCV3si

Note: If using flexible ducting, ensure this is pulled taut (to a min. 90% stretch capacity) between fan and termination



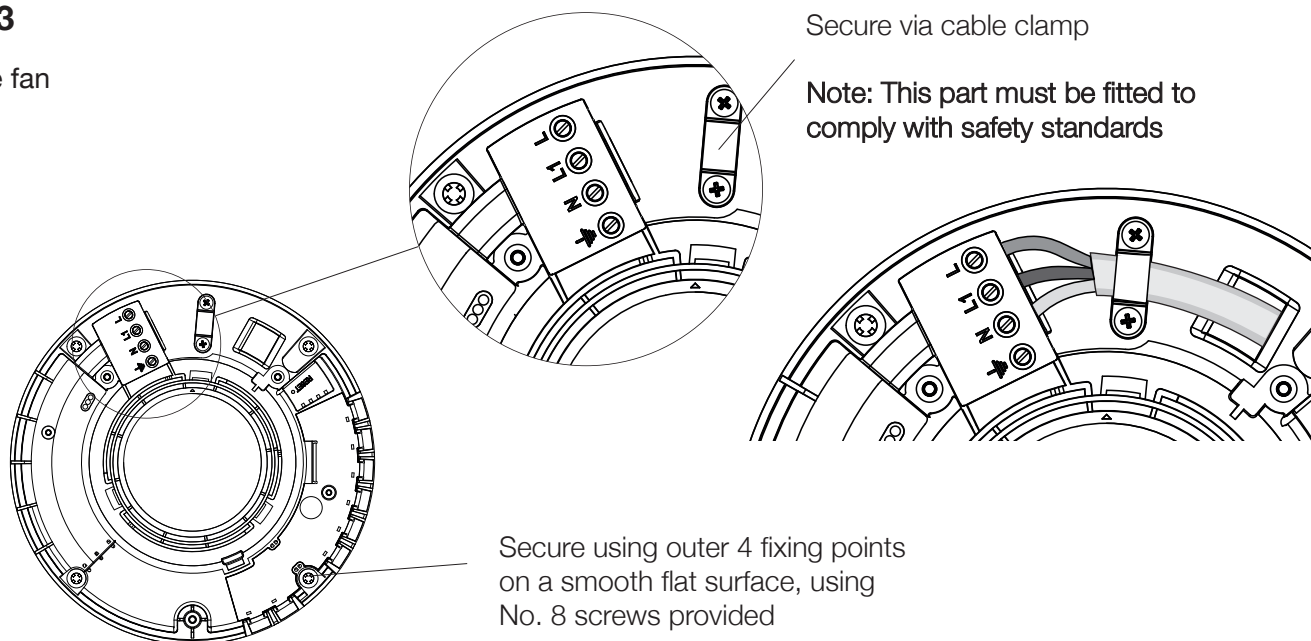
STEP 2

Loosen retaining screw until you can rotate main body cover of the fan anticlockwise to 'unlock position' and remove cover



STEP 3

Wire the fan



Electrical Installation Preparation

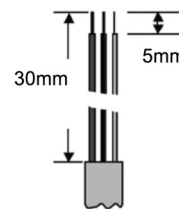
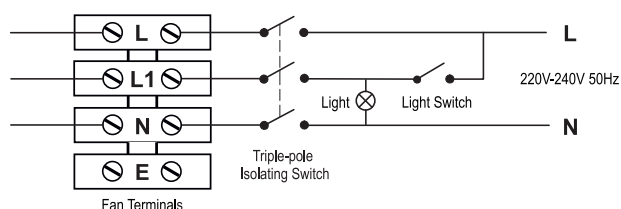
Installation or disconnection must be carried out by a qualified Electrician and all wiring must conform to local regulations. Isolate electricity supply before starting work.

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

Unity 230V Wiring Details

☐ IPX5 Wall, IPX4 Ceiling, 220-240V ~ 50Hz / 1Ph, 7 Watts max.

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



Strip cable to correct lengths and insert cable through cable entry point at the back of the fan.

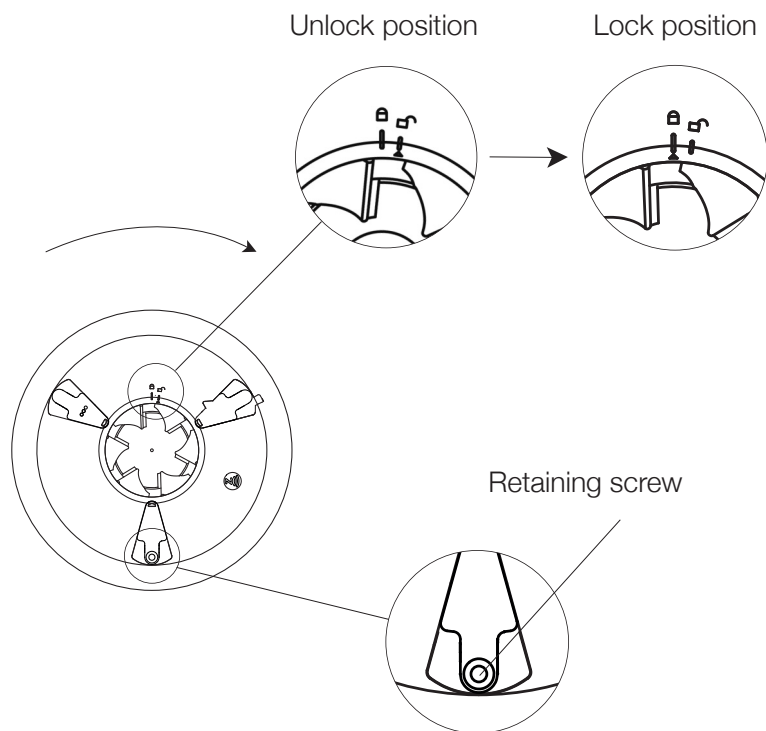
Tighten cable clamp and push wires into the terminal block as per wiring diagram, tighten screws of the terminal block.

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

STEP 4

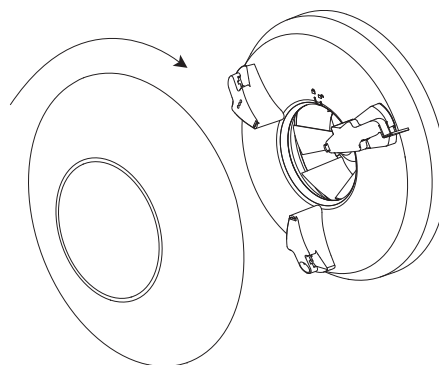
Turn power off and locate main body cover via the arrow & unlock position, rotate clockwise to 'lock position'

Tighten retaining screw until main body cover cannot be opened.
Turn power on and follow respective commissioning on pages 7 & 8



STEP 5

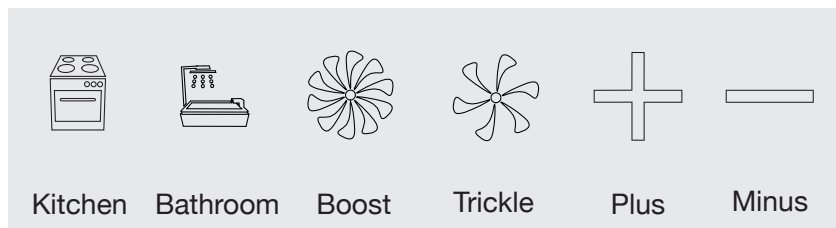
Reattach the front cover by rotating clockwise, utilising the guidance rail, until firmly secured by the retaining clips



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

Commissioning your Unity ZCV3si ... via the fan

Upon first power up, your Unity ZCV3si will commence a diagnostic check, whereby the capacitive touch buttons will flash. You should hear a range of beeps, 1 long beep followed by between 2-4 short beeps (depending on how the unit has been configured).



Following diagnostic completion, the 'Kitchen and Bathroom' buttons will start to flash. Select required flow rate, the light adjacent to your selection will go solid.

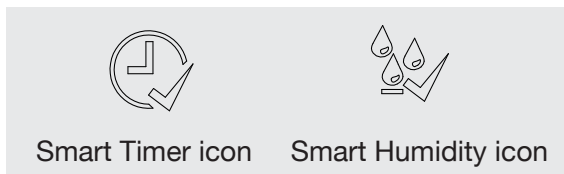
Boost Airflow button will flash, press the speed adjustment buttons '+/-' to required level, repress button to confirm.

Trickle Airflow button will flash, press the speed adjustment buttons '+/-' to required level, repress button to confirm.

Factory Settings

Room		Basic ventilation	Boost ventilation
Small bathroom		18 m ³ /h	29 m ³ /h
Kitchen / large bathroom		29 m ³ /h	47 m ³ /h

Select required settings for smart timer and humidity and refit the 'outer cover' onto fan (see Step 5 on page 6).



Default setting: Off

To activate, press required button → the light adjacent to your selection will go solid.

The Smart Humidity sensor automatically registers the speed at which the humidity in the room changes. If there is a rapid change it reacts to a rise in room humidity caused by the user and switches on the ventilator.

The Smart Timer monitors the length of time that there is an occupancy presence within a wet room (via the 'switch-live') and provides a fixed over-run time period to best match the length of time that the 'switch live' is active (as shown below):

Time 'Switch Live' is Active	Over-run Boost Period
0 – 5 minutes	No over-run
5 – 10 minutes	5 minutes
10 – 15 minutes	10 minutes
15+ minutes	15 minutes

Note: the first 5 minutes will not activate an over-run.

Commissioning your Unity ZCV3si ... via the APP

Download our 'Unity CV3 APP' onto your android device via the link available from Google Play.



Note: Your device must be NFC capable with NFC enabled (some devices may not work whilst in a case). Minimum Android operating requirements for functionality via the APP is OS 4.3.

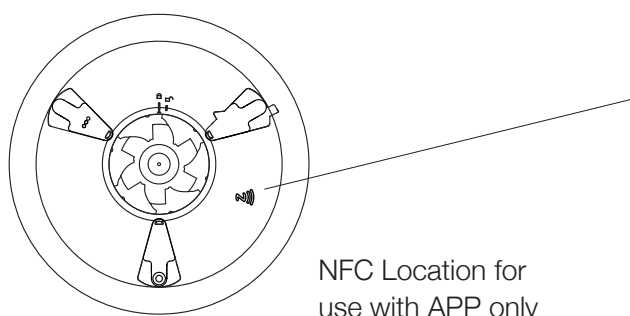
Upon first power up, your Unity ZCV3si will commence a diagnostic check, whereby the capacitive touch buttons will flash. You should hear a range of beeps, 1 long beep followed by between 2-4 short beeps (depending on how the unit has been configured).

Following diagnostic completion, the 'Boost' button and 3 higher speeds will start to flash.

Note: Do not press any buttons.

Open the 'Unity CV3 APP', remove 'outer cover' of your fan and when prompted match your Android device's NFC with the NFC symbol on the 'main body' of the fan (please refer to your Android device instructions for the NFC location).

Click on the 'Product Setup' section and follow the APP on screen instructions.



NFC Location for use with APP only

See matrix below for motor speed % setup:

Airflow	Without Grille	With Grille / Flymesh
18 m ³ /h	31%	32%
29 m ³ /h	41%	43%
36 m ³ /h	48%	52%
47 m ³ /h	61%	65%
58 m ³ /h	74%	78%

Results based on a 'through wall' installation

Upon completion, press 'save' and place the NFC symbol on your phone on the NFC symbol on the main body of the fan.

Upon confirmation of required set up via the APP, your Unity ZCV3si will start to go through its initialisation sequences for the respective flow rate commissioning. Refit the 'outer cover' onto your fan (see Step 5 on page 6).

To master reset and recommission your Unity ZCV3si

Resetting your Unity ZCV3si must be carried out by a qualified electrician or competent person.

Whilst the fan is running, remove both the outer cover and main body cover of the fan (see installation section page 4).

Locate the 'reset' button and depress using a small 'pin-sized' tool for 3 seconds. All lights will turn on to show the unit has been reset.

Turn the power OFF to the fan → refit the main body cover.

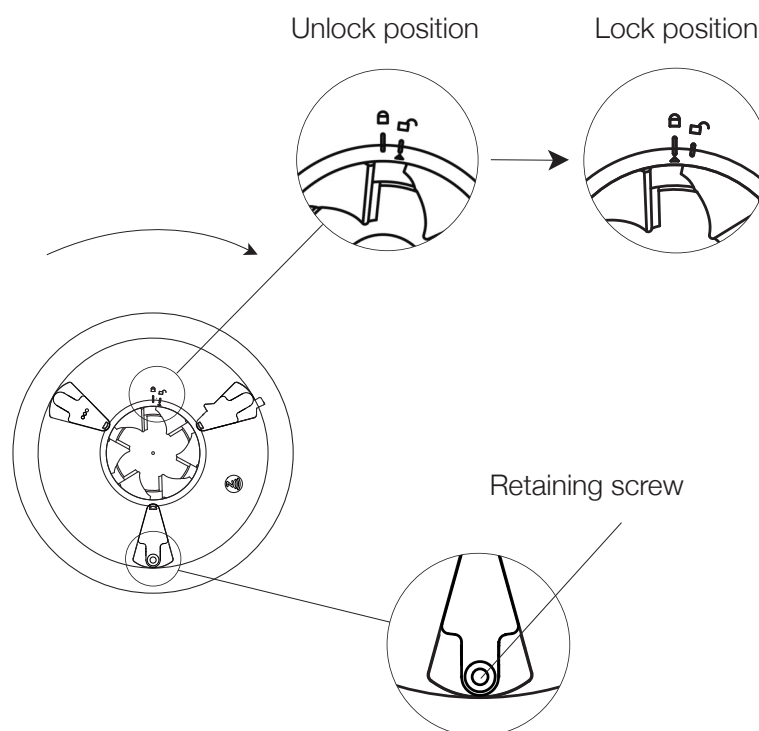
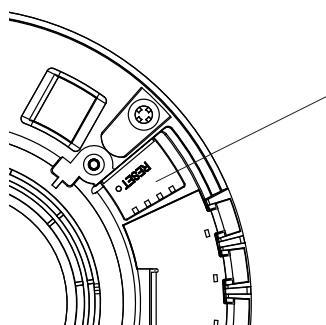
Locate main body cover via the arrow & unlock position, rotate clockwise to 'lock position'.

Tighten retaining screw until main body cover cannot be opened.

Turn the power to the fan ON → recommission either via your fan or the APP, refer to respective commissioning section (for via the fan see page 7 or for via the APP see page 8).

The Unity ZCV3si will start to go through its initialisation sequences for the flow rate commissioning. See page 7 for fan status.

Note: Your fan will remember its previous timer and humidity settings, if required, these can be changed during the recommissioning section.



Servicing / Maintenance

Service / Maintenance must be carried out by a trained / competent person.

The Unity ZCV3si fan contains a unique backward curved mixed flow impellor that has been designed to reduce build-up of dirt. The fan motor has sealed for life bearings, which do not require lubrication.

Periodic cleaning of the fans front cover and casing can be carried out using a soft damp cloth.

Do not use solvents to clean this fan.

Cleaning and user maintenance shall not be made by children without supervision.

Please note that your stored fan settings will not be lost during any interruptions to your fan's power supply.

Troubleshooting

Question	Answer
I don't think that my fan is working	<p>The fan is very quiet when the room's light is off, but it is still extracting and working to provide you with enhanced comfort</p> <p>If in doubt, remove the front cover to expose the fan. If the fan impellor is not rotating then contact your local installer.</p>
My fan is running all the time	<p>This is correct; it will run at a low speed whilst your room is unoccupied to provide continuous ventilation</p>
My fan is running faster and noisier	<p>Your fan will automatically go into "boost" mode when you turn the light on or if the Smart Humidity is activated, when you have a bath / shower / generate steam via cooking</p> <p>The fan will run at a faster speed which generates more noise as more air is being extracted</p>
My fan still runs faster and noisier when I turn the light off	<p>Has the bathroom light been left on for more than 5 minutes?</p> <p>If yes, your fan has the Smart Timer activated and the fan will run at the higher noisier "boost" rate between 5 - 15 minutes and it will then return to the lower quieter continuous speed setting</p>
Why can't I turn the fan off	<p>Your fan has been designed to ventilate the room continuously (i.e. 24/7) to improve the indoor air quality and enhance your comfort</p>
How do I change my fan's settings	<p>Press button on fan</p> <ul style="list-style-type: none"> • If the 'trickle or boost' symbols with a flow rate lights up, your fan has been commissioned locally. You can change the following settings: • Touch Smart Timer button for on or off • Touch Smart Humidity button for on or off <p>If only the 'trickle or boost' symbols & no airflow speeds light up, your fan has been commissioned via our APP. To review / change your settings, download our 'Unity CV3 APP' from Google Play. You can view your settings by removing the front cover and placing your android device over the NFC symbol. Follow APP to read settings on your device for:</p> <ul style="list-style-type: none"> • If fan setup has been locked you cannot change anything • If unlocked you will be able to adjust: <ul style="list-style-type: none"> • Smart Humidity on / off • Selected timer mode: <ul style="list-style-type: none"> o Smart Timer on / off o Silent mode delay-on-timer, 1-60 minute range • Night mode setting to deactivate the boost mode during your selected time period

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 Sales International Standard Conditions of Sale which are available on request. See website for warranty period details.

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