

# Unity CV3

Low Energy Continuous Extract Fan



A FAN DESIGNED TO DELIVER **GUARANTEED INSTALLED PERFORMANCE**





## #PerformanceIsEverything

Adequate ventilation is critical for our health and wellbeing as well as for keeping our homes free from mould and condensation, however intrusive noise, concerns about running costs or under performing installed products can mean that ventilation rates are not achieved.

Unity CV3 is the next generation of extractor fan, and has been designed to take on board the continued importance of reducing energy usage, easy compliance as well as contribution to well-being by eliminating nuisance noise.

#IndoorAirQuality

#HealthyHomes

#GuaranteedInstalledPerformance

#LessThan£1aYeartoRun

#DoNotDisturb

**DID YOU KNOW?**  
GREENWOOD INVENTED dMEV FANS



# Unity CV3 the next generation of dMEV

Low energy continuous ventilation suitable for new and existing homes.



## Installed performance

For confidence of performance and easy compliance, Unity CV3 has integrated airflow sensing that ensures performance from the point of installation and throughout its life.

## Less nuisance noise

Nuisance noise is eliminated with running levels as low as 14.5dB (min) and SMART sensors that ensure the fan only boosts when required.

Also now including **Do Not Disturb** feature.

## Less energy

Unity CV3 costs less than £1 to run for the entire year – up to 50%\* less than other comparable products in the market. It also offers an outstanding SFP Performance and reward in SAP.

## Contactless

NEW

Set-up, Control and Customise Unity CV3 during and post installation with a simple tap of your smartphone.

**For social landlords** - understand how the fan is performing and conditions of the installed environment e.g. data logging including time on boost, time on trickle and current/average humidity and temperature levels.

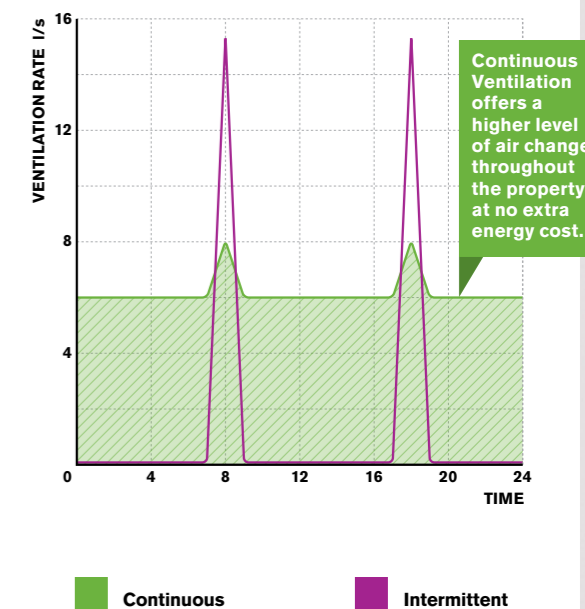


## INDOOR AIR QUALITY AND VENTILATION GO HAND IN HAND

### DID YOU KNOW?

Continuous ventilation provides **5 times more ventilation** than intermittent - and even with low running costs.

With increasing focus on IAQ and improving insulation in homes, continuous ventilation offers the best option for healthy homes and elimination of mould and condensation.



### Greenwood SMART Technology



**A Greenwood GIP Product** designed to ensure that installed performance can be achieved easily.

\* based on comparisons of current products available on the market

# For an air of confidence.



Air Sensing Technology automatically senses, reacts and extracts to achieve the correct installed airflow in each installation.

## Guaranteed Installed Performance.



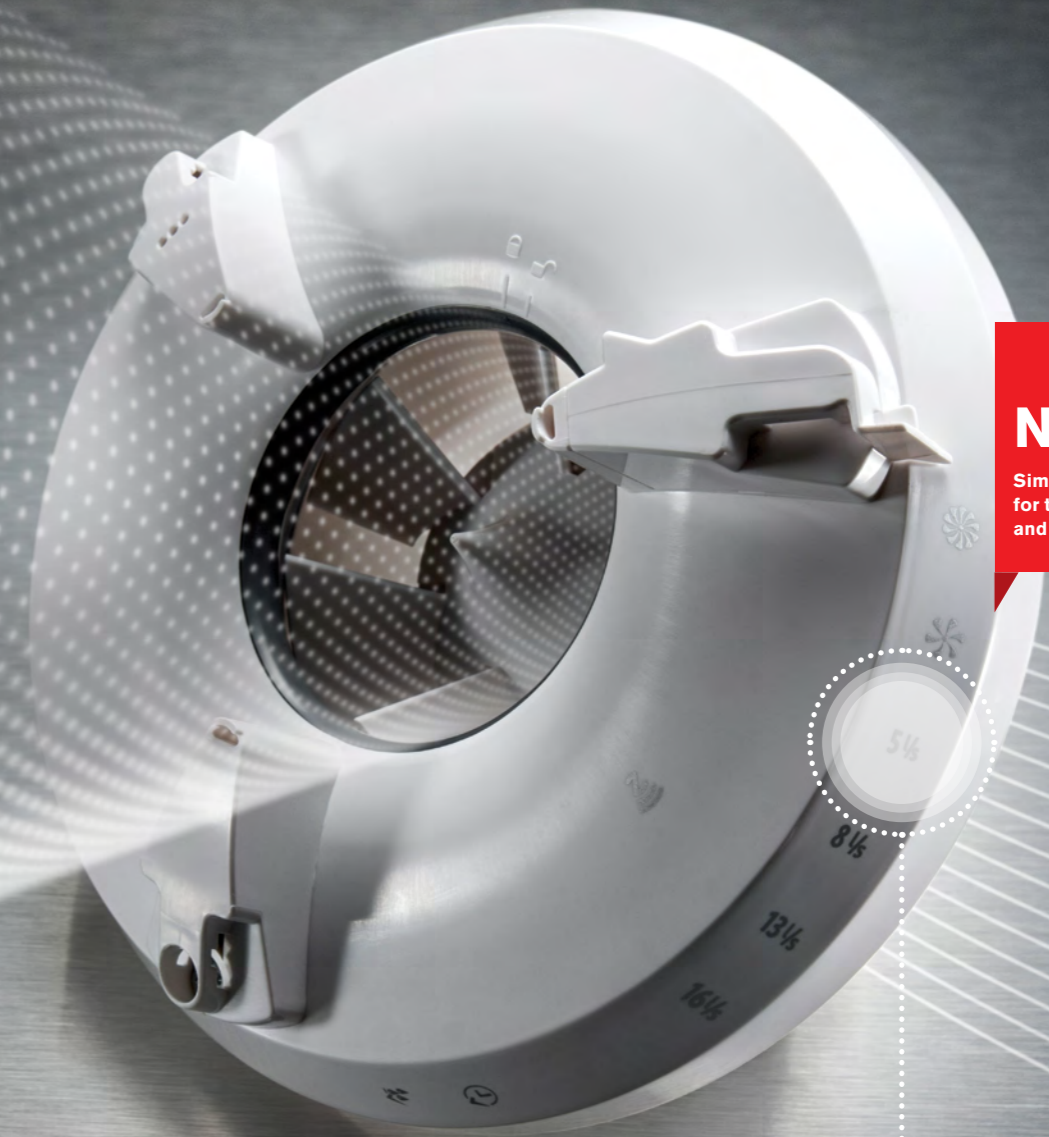
Once installed, CV3 uses air sensing technology to measure and self-regulate the airflow to achieve the correct extraction rate for the room.

This contributes to delivering good Indoor Air Quality and helps eliminate issues such as mould and condensation because the fan is doing what it is designed to do.

#GuaranteedInstalledPerformance

## Reduced time, more savings, total confidence.

With Greenwood CommissionSMART™ technology, commissioning and installed performance is achieved quickly and efficiently without the need for the installer to undertake additional testing on-site with an airflow meter.



## New

Simple touch buttons for the easiest set-up and no mistakes.



## TOUCH TO SET

Unity CV3 uses capacitive touch technology for quick and easy set-up on-site – simply touch to set the speed required.

Four airflow performance points are available to meet regulation room rates requirements easily for trickle and boost speeds.

5 1/2

8 1/2

13 1/2

16 1/2



**AIR SENSING TECHNOLOGY**  
USED IN CV3 IS TESTED AT THE POINT OF MANUFACTURE USING UKAS ACCREDITED TESTING EQUIPMENT.

# Never 'bean' cheaper

CV3 is an ultra low energy ventilation solution designed to do the job it is supposed to do without costing the earth.

This is especially important for tenants and homeowners as well as having positive impact in SAP for new building dwellings.



**97p** for the entire year

Unity CV3 has one of the lowest running costs for continuous ventilation – less than the cost of two cans of branded baked beans for the entire year!

## Specific Fan Power Performance – PCDB

### Rigid Ducting

Configuration	Location	SFP (w/l/s)
In-room	Kitchen	0.16
	Bathroom	0.12
Through-wall	Kitchen	0.13
	Bathroom	0.11

### Flexible Ducting

Configuration	Location	SFP (w/l/s)
In-room	Kitchen	0.16
	Bathroom	0.12
Through-wall	Kitchen	0.13
	Bathroom	0.11

### Pre-set Speeds

Airflow	Power (W)
5 l/s	0.72
8 l/s	0.9
13 l/s	1.5
16 l/s	2.1

Low Watt – so what?

We can demonstrate low running costs for CV3, but how does this translate?

How does CV3 compare to everyday items in the home?

**Cost to run per year**

**Equivalent to running:**

**1** 1Kw microwave

**£12.73\***  
based on 15 minutes usage per day.

=

**13**  
**CV3**  
fans per annum

**1** Leading games console

**£38.75\***  
based on 2 hours usage per day.

=

**39**  
**CV3**  
fans per annum

**1** 9Kw electric shower

**£80.73\***  
based on 10 minutes usage per day.

=

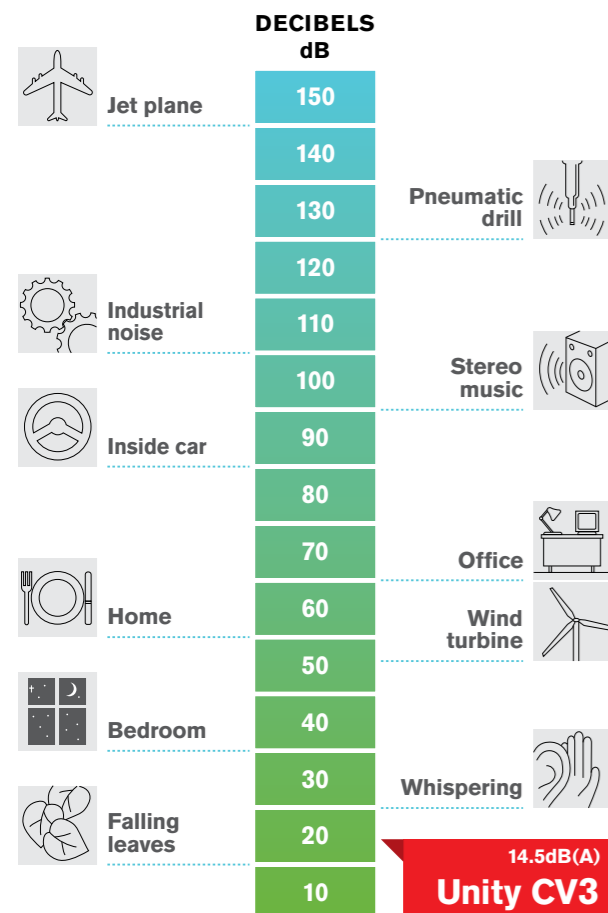
**83**  
**CV3**  
fans per annum

\* based on 12p/Kwh

# Do.Not.Disturb.

One of the main reasons that a fan in the bathroom or kitchen is turned off is because it's causing a nuisance to occupants – mainly because of noise.

Switching off fans has consequences on both the building and the health and well-being of occupants. The need for quiet and effective continuous ventilation is fundamental to eliminating issues with mould and condensation and associated indoor air quality issues.



## 14.5dB(A)\*

**That's how quiet Unity CV3 is.**

**That's 10% quieter than one of the best performing fans on the market.**

The quiet running speed has been achieved through a combination of innovative motor, electronics and aerodynamic impellor design.

**It's all about the pitch**

With continuously running fans, the pitch or frequency of the noise is often the root of nuisance noise. CV3 has been designed to overcome these issues.



\* noise at pre-set speed 5l/s



## ELIMINATING NUISANCE NOISE WITH SMART TECHNOLOGY



**Greenwood TimerSMART™**  
Smart Timing is unlike other fans that have a pre-set timer that activates even if you take a quick trip to the bathroom. Instead it looks at duration of time e.g. in for 10 minutes, overrun for 10 minutes... (and no overrun if you are less than 5 minutes).



**Greenwood HumidiSMART™**  
Smart Humidity Sensing is unlike other fans that use a pre-set point to activate boost. Instead it is looking for man-made spikes in humidity – like taking a shower – to activate boost.

Eliminate unnecessary running (when it's a hot humid day) and energy wastage.

**NEW**

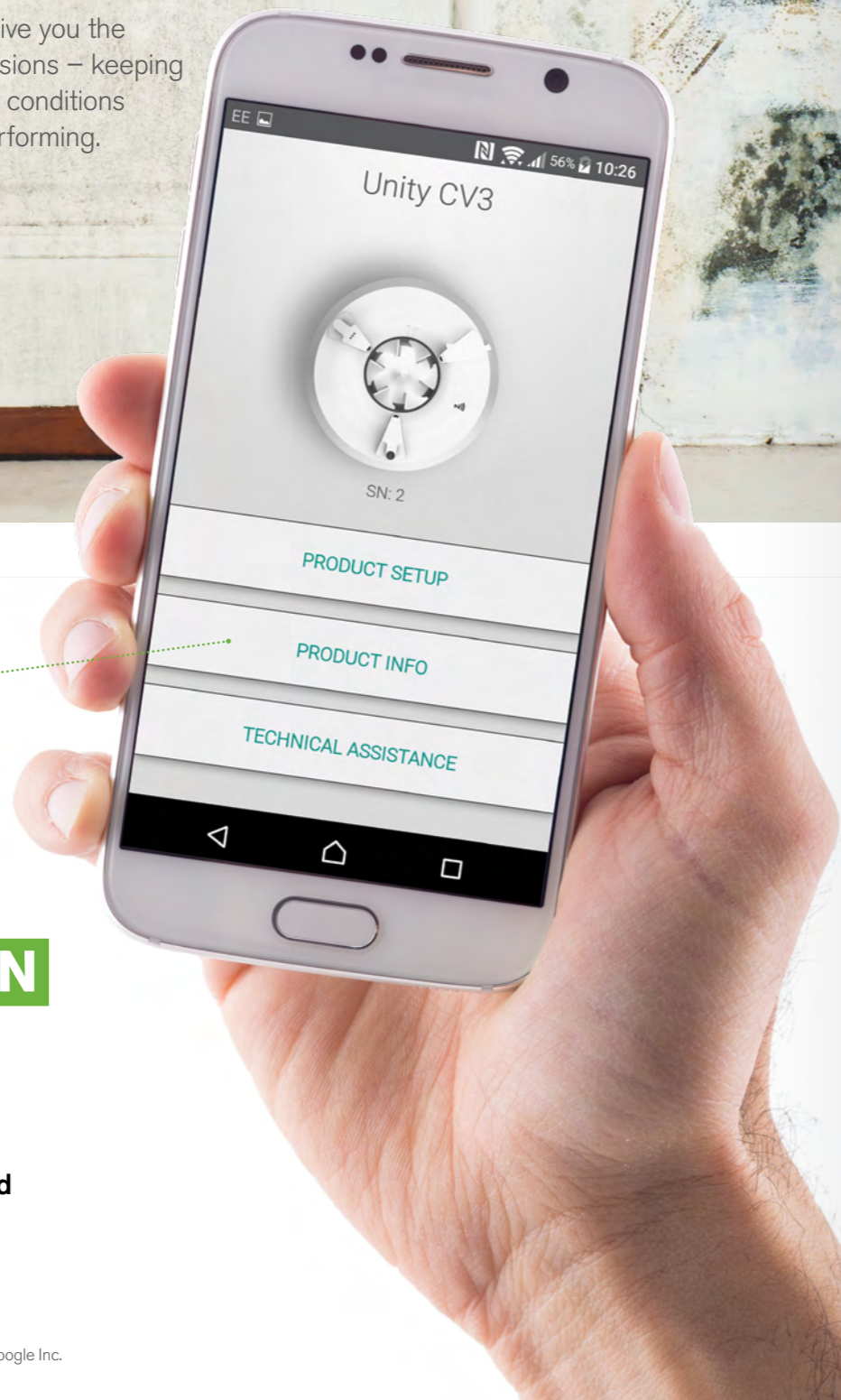
**'Do Not Disturb'** feature to tackle nuisance running at night. You can simply set a time frame e.g. 10pm-6am to turn off the boost function, so if you get up in the night the fan won't boost.

# Landlords, how much is mould and condensation costing you?



Fans being turned off or not working correctly (poor airflow performance) play a huge part in the issue of mould and condensation in homes. These issues are costly to manage and rectify in terms of building fabric and tenant health.

Unity CV3 has been designed to give you the information you need to make decisions – keeping you informed about property/room conditions and how ventilation is **(or isn't)** performing.



Simply choose **Product Info** on the CV3 App to transfer data

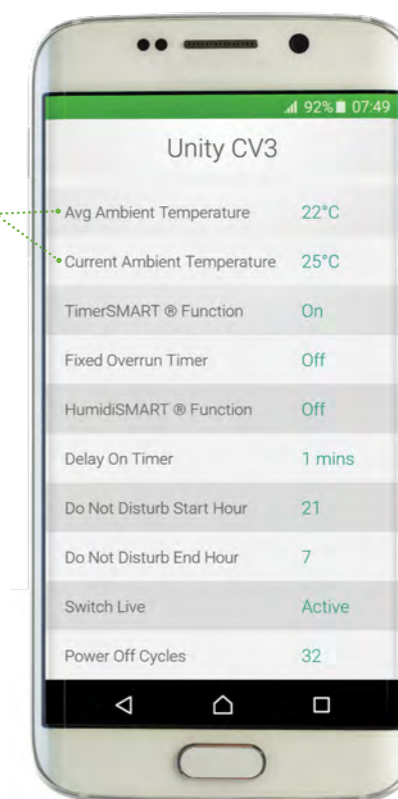
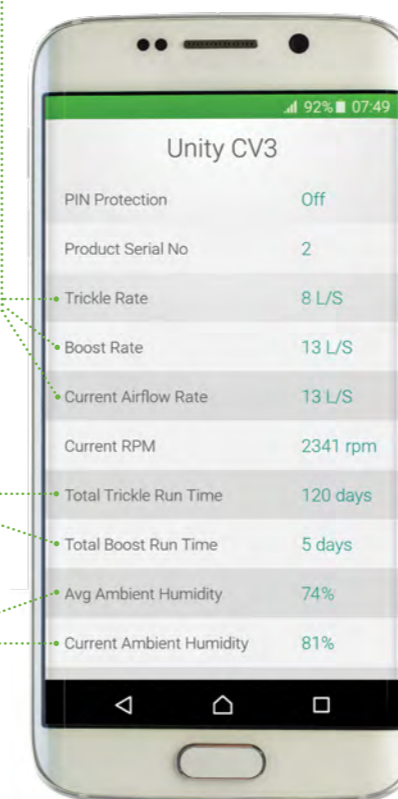
## Tap in to **REAL TIME INFORMATION**

With contactless technology, for the first time ever – you can simply transfer data (more than just time logs) from the installed fan to the phone easily.

How long has the fan been running?

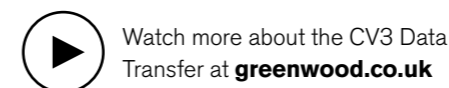
See exactly what airflow the fan is set to

View current and average temperature levels from the past three months. Is Fuel Poverty an issue and contributing to condensation and damp issues?



View current and average humidity levels from the past three months. Is humidity excessively high? Do ventilation rates need to be addressed to overcome this issue?

**Tenant tampering: Power off cycles**  
See exactly how many times the fan has been switched off. If ventilation isn't being used this could be the cause of constant mould and condensation issues.

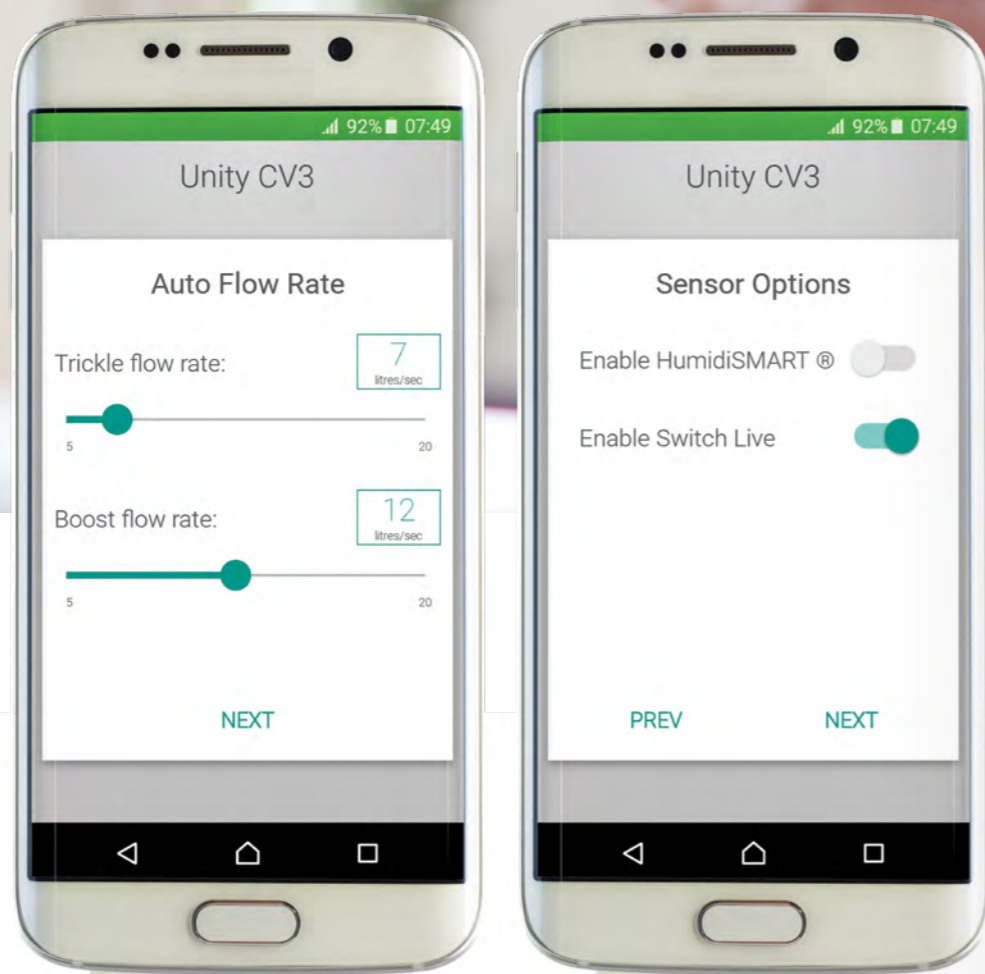


**Download the CV3 App**  
Also on greenwood.co.uk  
(From Dec 2017)

# Just tap. It's as simple as that.



Unity CV3 allows you to set-up, adjust and monitor ventilation directly from your smartphone offering a quick and simple set-up and customisation for your homes where required.



Set trickle and boost speeds.

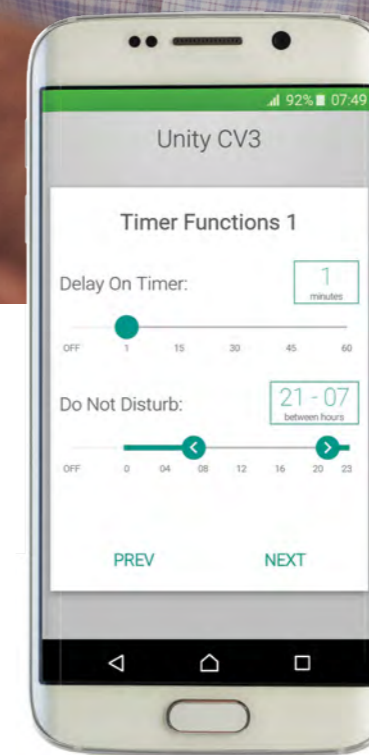
Enable controls such as SMART Humidity Sensing to eliminate nuisance running and energy wastage.

## Tap to **SET**

At the point of installation use the CV3 App to choose your settings and then simply tap to the fan to transfer the information.

## Tap to **CUSTOMISE**

Enjoy more features to eliminate nuisance running and ensure good levels of indoor air quality throughout the day – once complete simply tap to the fan to transfer the information.



Tailored settings ensure specific problems can be resolved quickly and with no fuss.

**Brand new** 'Do Not Disturb' feature to tackle nuisance running at night. You can simply set a time frame e.g. 10pm-6am to turn off the boost function.

### The advantages of **customisation**

Customising ventilation settings can help overcome issues and problems in homes that have costly consequences;

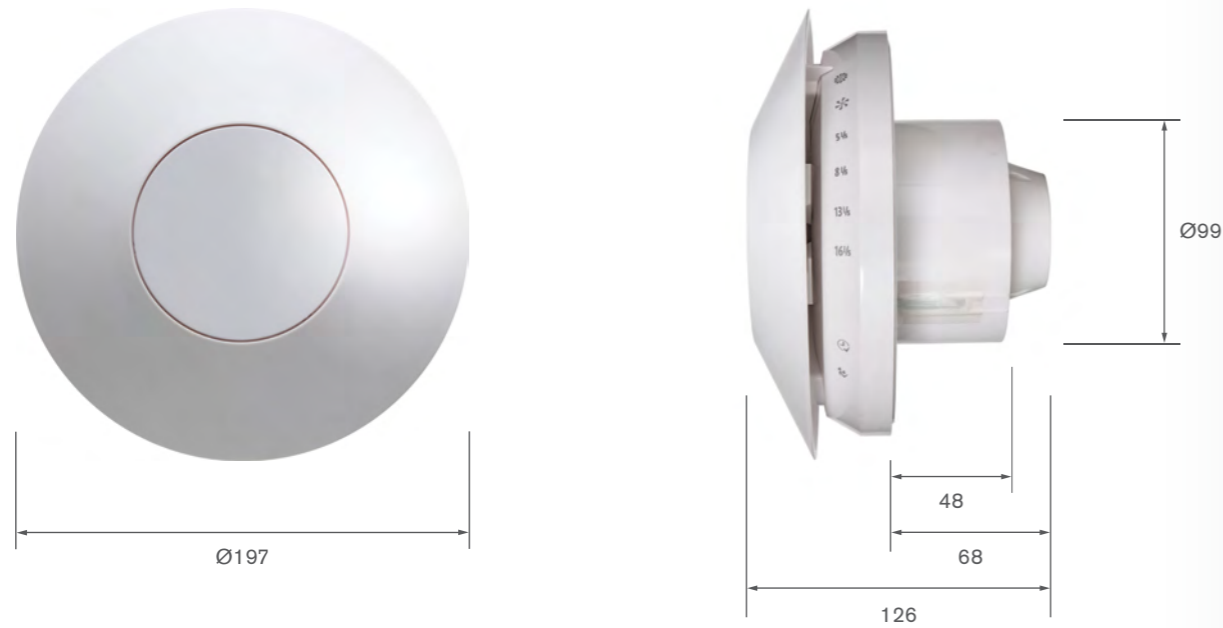
- ▶ Increase boost rates in problem properties where mould and condensation is constant.
- ▶ Activate Do Not Disturb where nuisance noise complaints are prevalent.

Watch more about the CV3 Data Transfer at [greenwood.co.uk](http://greenwood.co.uk)



Download the CV3 App  
Also on [greenwood.co.uk](http://greenwood.co.uk)  
(From Dec 2017)

# Technical specifications



PRE-SET SPEEDS	
Airflow (l/s)	Energy consumption* (W)
5 l/s	0.72
8 l/s	0.9
13 l/s	1.5
16 l/s	2.1

## Models and control options

Model	Control operation	IP	Voltage
CV3	Ultra Low Energy dMEV/Continuously running fan with Greenwood CommissionSMART™ technology and optional SMART Humidity and Timer options set-up at installation	IPX4 Ceiling IPX5 Wall	220–240
CV3SV	<b>Low Voltage</b> Ultra Low Energy dMEV/Continuously running fan with Greenwood CommissionSMART™ technology and optional SMART Humidity and Timer options set-up at installation	IPX4 Ceiling IPX5 Wall	24DC

## Physical specification

**Weight:** 0.53kg  
**Materials:** White satin / gloss finish  
 ABS / PCABS / PC plastic

All measurements in millimetres

## Specific Fan Power Performance – PCDB

### SAP Performance \*\*

#### Rigid Ducting

Configuration	Location	SFP (w/l/s)
In-room	Kitchen	0.16
	Bathroom	0.12
Through-wall	Kitchen	0.13
	Bathroom	0.11

#### Flexible Ducting

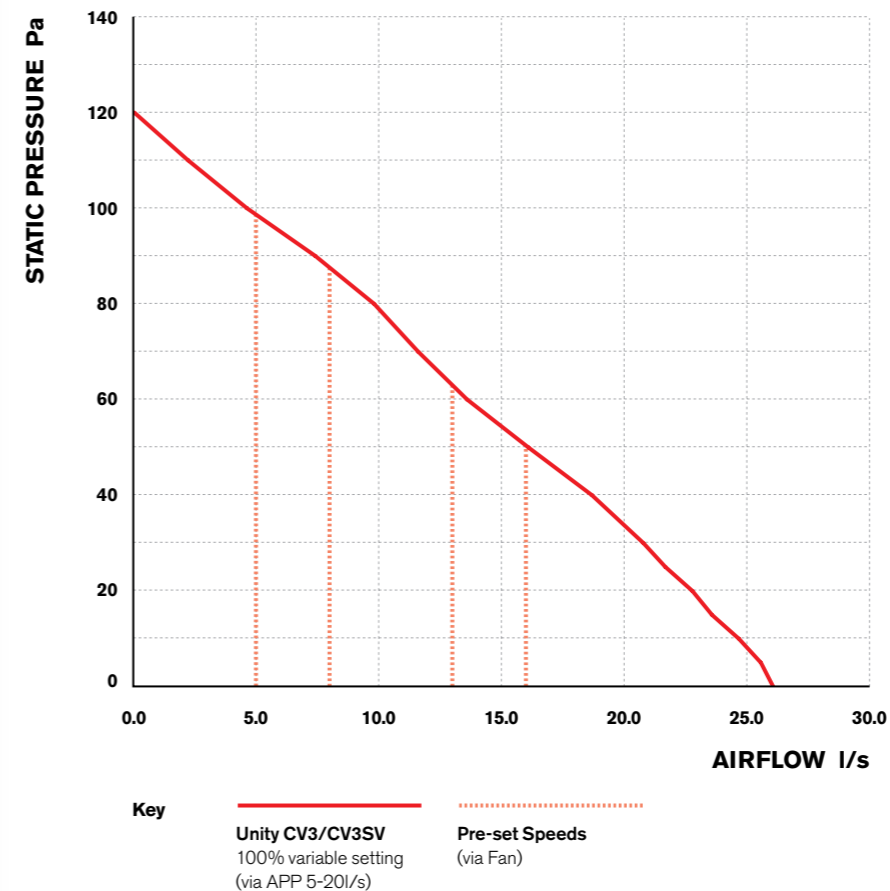
Configuration	Location	SFP (w/l/s)
In-room	Kitchen	0.16
	Bathroom	0.12
Through-wall	Kitchen	0.13
	Bathroom	0.11

**Please Note:** Flexible ducting is not recommended. If used, it must be pulled to min 90% of its entire length. Flexible ducting can also be more difficult to support and retain internal shape/size which can impact performance.

## Performance – Free Air

Speed setting	Airflow performance (l/s)		Energy consumption (W)		Sound pressure level @ 3m dB(A)
	Bathroom (Pre-set speeds)	Kitchen (Pre-set speeds)	Minimum	Maximum	
Trickle speed	5	8			As low as 14.5dB (A)
Boost speed	8	13	0.72	2.1	
Maximum speed	16	16			

Full third party accredited data is available on request



\* Measured in free air

\*\* Information extracted from the full PCDB report (previously known as SAP Appendix Q) on www.ncm-pcdb.org.uk

## Installation

**Wiring:** Must comply with IEE Regulations

**Cable:** Ø 2 core 1mm<sup>2</sup> max  
 Ø 3 core 1.5mm<sup>2</sup> max

**Fuse:** 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)

**Electrical specification:** 220–240V~50Hz Class II SELV Class III

**Consumption:** Min 0.72W Max 2.1W (Pre-set Speeds)

Up to 6.4W (max variable airflow performance)

## Ancillaries

**SP13** PVC round pipe 100mm Ø x 350mm

**EG1** Complementary fixed blade louvred grille in semi-matt ABS plastic, UV stabilised. Choice of white or brown grille

**GD4 / GD8** Modular lightweight PVC ducting system

**PFACV2** Picture frame adaptor / decorative cover for Unity

**GG42** External louvred wall vent available in white or brown

**Flexiduct** Flexible 100mm aluminium ducting

**FF100** Fast fix wall duct system. Comprises 100mm PVC duct, external wall duct seal and external grille, choice of white or brown grille

# Health and Indoor Air Quality

What factors are driving the need for effective ventilation in homes?

## Home improvement

Sealing up homes helps save energy and reduce bills, however it prevents moisture and VOCs from escaping as easily as before. If you insulate, you must ventilate!



## Lifestyle

How a home is lived in impacts its indoor environment. Fuel poor homes and those hanging washing inside throughout the winter all contribute to continual problems with condensation damp and poor indoor air quality. Ventilation that works effectively is crucial to help reduce these issues from reoccurring.

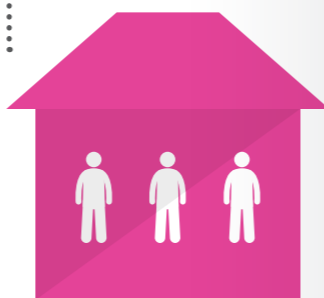


## Occupancy

Did you know that a family of 4 creates up to 16 pints of moisture per day in their home – cooking, washing, hanging clothes to dry and even breathing?

**More people = more moisture**

Moisture levels can differ dramatically – are your ventilation levels suitable and are you sure the fan is effectively extracting once it is installed?



## Installation application

There are common ways to install fans – in walls, in windows and through ceilings – depending on house type and layout.

Resistance caused by ducting, grilles and dirt, impacts on installed performance, leading to two issues – noise and poor airflow performance.

Do you have confidence that the fans installed are doing their job?



## Tenant tampering

A noisy extractor fan is a nuisance. Fact. Many issues with condensation and mould are a result of fans being switched off or the settings tampered with, resulting in poor or ineffective ventilation.

## Indoor Air Quality

Health and Indoor Air Quality is at the top of the agenda. The need to ensure VOCs and other harmful airborne particles are removed is crucial to well-being and health. Ventilation is fundamental in this requirement and needs to be effectively working throughout the year.

**75%** increase in loft insulation measures in the UK since 2007 means better insulation, however it hasn't equated to improvements in domestic ventilation.

“The costs to the NHS of substandard housing suggests that the quality of people’s housing has a similar impact on health as does smoking or alcohol”

**Graham Juke OBE CFCIEH**

Chartered Institute of Environmental Health  
commenting on the BRE Briefing Paper on  
The Costs of Poor Housing to the NHS 2011



Choosing a tamper-proof solution, and one that can provide data directly from the source, could give you the information you need to make decisions e.g. has the fan been turned off?





**UNITY CV3**  
THE NEXT GENERATION OF DMEV

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