

Greenwood Unity CV2.1

**Decentralised continuous mechanical extract ventilation (dMEV)
with humidity sensor and timer**

Product data sheet

always the best climate





Greenwood Unity CV2.1

Unity CV2.1 is a decentralised Mechanical Extract Ventilation fan (dMEV) that revolves around ‘a one product concept’ which can be applied to any wet room in the home.

The Unity CV2.1 family has been tested and certified against the 2021 UK Building Regulations – giving specifiers the confidence to commission a fully functional and compliant solution into homes.



Key Benefits

- It's a 'one fan' solution for bathrooms, kitchens, utility rooms and WC's. This makes it easy for large scale planned new build and maintenance programmes;
- Easily installable on walls, windows (with adaptor kit), or ceilings with minimal disruption to existing infrastructure due to the compact 68mm spigot design which is ideal for shallow ceiling voids, maximizing space efficiency;
- Unity CV2.1 offers ultra-quiet ventilation as low as 7.9dB(A) in low speed mode once installed;
- The capacitive touch pad, located on the front panel, ensures easy access and simple commissioning;
- Once calibrated, the controls can be locked to avoid unnecessary changes being made to the fan's running mode. In the event of loss of power (power cut or maintenance), the fan remembers its calibrated settings;
- Meets the latest regulatory requirements, guidance and best practice methodology for dMEV installations and CE/UKCA marked;
- Designed to be utilised with flexible, rigid and semi-rigid ducting, ideal as a diverse solution for installations;
- IPX5 for wall and IPX4 for ceiling installations, ensuring resilience in wet environments;
- 3 year warranty

Article Numbers

Description	Product Code
Unit	
Unity Low Energy dMEV Fan, with SMART Humidistat/Timer	CV2.1
Unity Low Energy dMEV Fan, with SMART Humidistat/Timer, for CT110mm Ducting	CV2.1CTA110
Fire collar ø 100mm for CV2GIP, CV2.1 and CV3, ceiling mounting, 50mm depth	FIRO100.SPV
Secure Window Kit for Unity CV3 Low Energy dMEV Fan	EWCV3
Picture frame adaptor for Unity dMEV fan	PFACV2

Controls	
Controls, two position switch	ZGS2

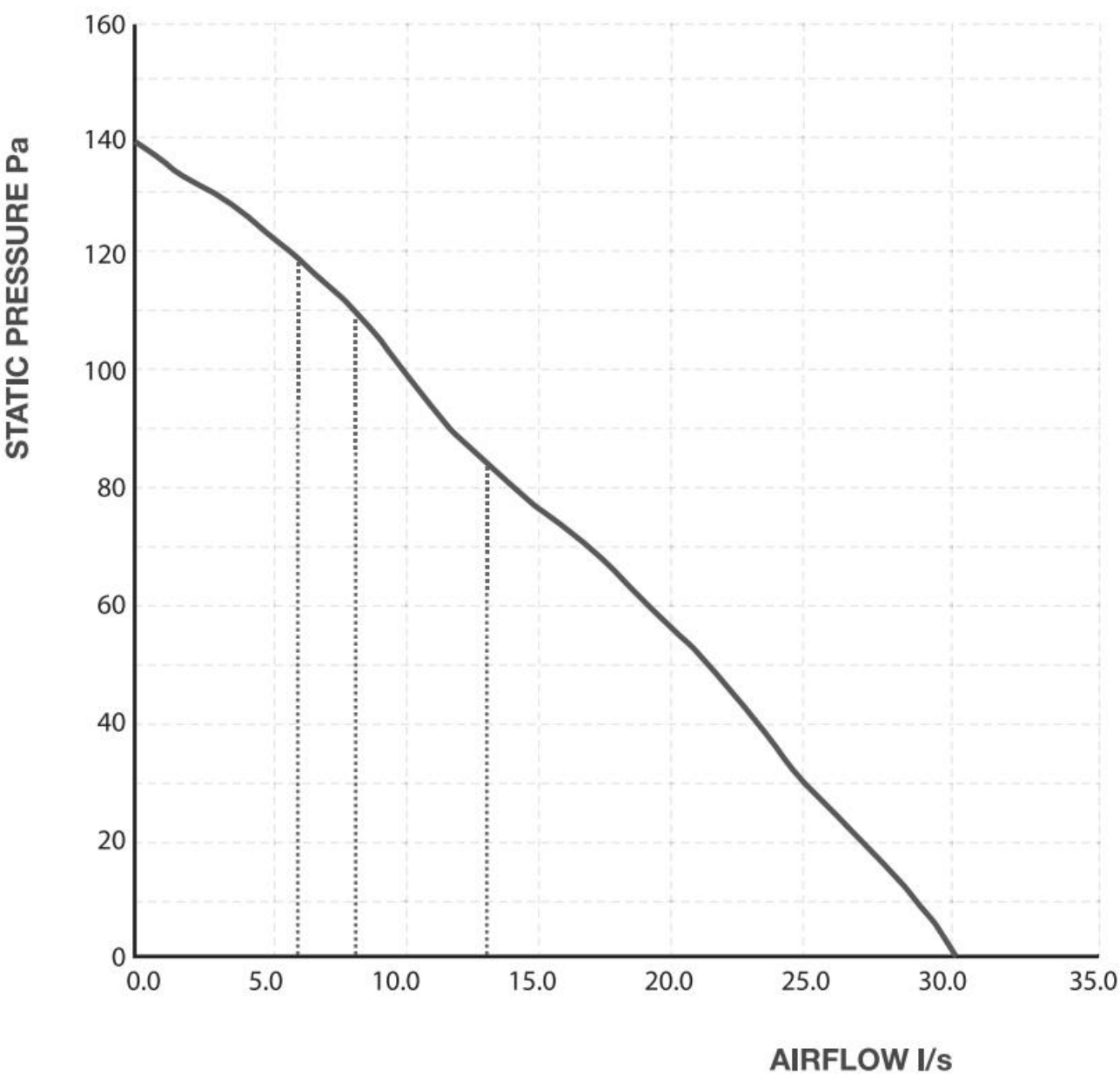
SAP PCDB

Rigid Ducting		SFP (w/l/s)
Configuration	Location	2021
In-room	Kitchen	0.13
	Bathroom	0.11
Through-wall	Kitchen	0.1
	Bathroom	0.1

Semi-rigid Ducting		SFP (w/l/s)
Configuration	Location	2021
In-room	Kitchen	0.13
	Bathroom	0.11
Through-wall	Kitchen	0.1
	Bathroom	0.1



Pressure Curve



Key

Unity CV2.1
100% variable setting

for manual airflow
volume setting

Sound Data

Setting	Test area	Octave Band (Hz) Sound Power Level, dB								dB(A) @ 3 m
		63	125	250	500	1000	2000	4000	8000	
MIN	Casing	29.2	23.1	22.6	17.5	13.0	14.5	18.4	23.1	7.9
4 l/s	Casing	29.1	24.2	22.5	19.0	14.2	14.9	18.4	23.1	8.2
6 l/s	Casing	30.1	25.2	27.6	22.9	15.1	15.1	18.1	22.8	9.5
8 l/s	Casing	31.6	27.9	35.0	25.5	20.5	19.6	18.7	23.0	13.3
10 l/s	Casing	33.7	28.5	39.7	32.0	24.8	23.5	19.2	23.0	17.7
12 l/s	Casing	34.5	33.8	44.4	36.9	30.1	28.9	20.8	23.2	22.2
13 l/s	Casing	35.2	38.3	46.5	38.4	32.2	31.9	21.5	23.2	24.3

Casing tested according to [ISO 3741:2010](#). Environment dB(A) @ 3m given as hemispherical.

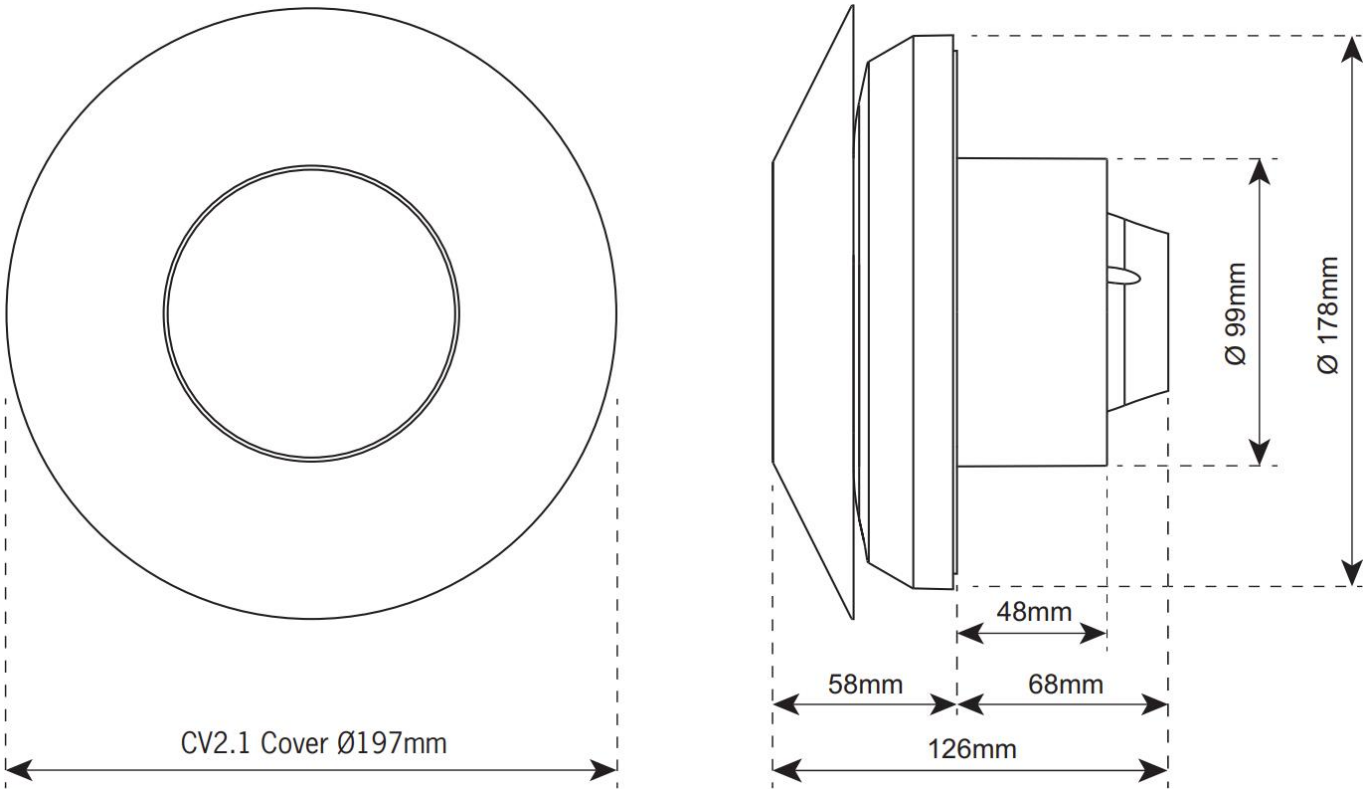


Technical Specification

Weight	0.53 Kg
Glazing	Suitable for 4-28 mm Glazing hole 118-130 mm
Materials	ABS / PC plastic
Supply voltage	230 V / single-phase / 50Hz SELV 24DC
Maximum power consumption	6 W
Current draw	0.055 A
Fuse rating	3 amp
IP Rating	IPX4 Ceiling IPX5 Wall
Specific Fan Power	0.10 W/l/s

Dimensions

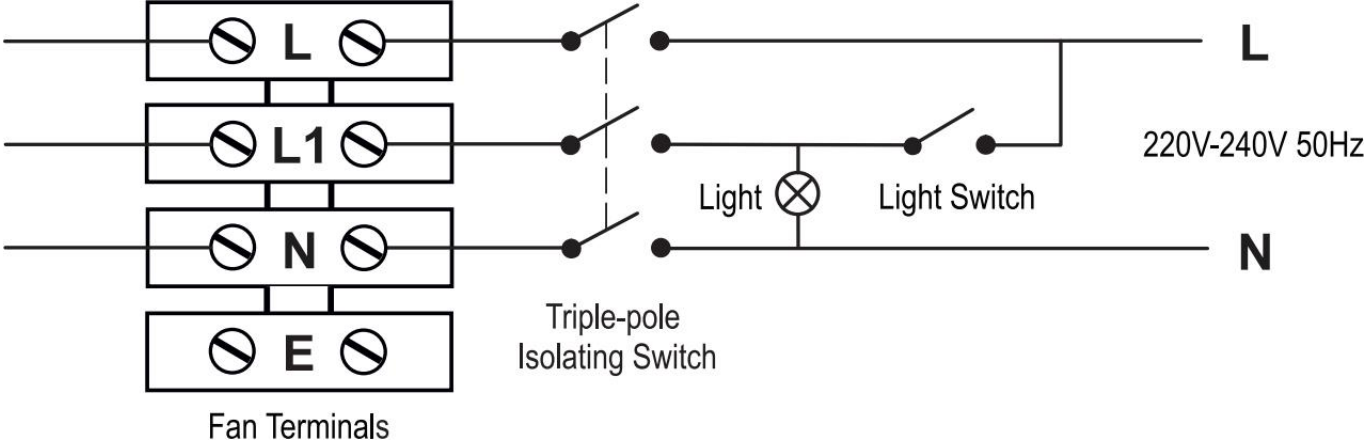
Height	197 mm
Width	197 mm
Depth	126 mm
Spigot diameter ø	100 mm



Wiring

Electrical connections should be carried out in accordance to [IEE regulations](#) by a qualified electrician. The unit is supplied with a flying lead for connection to the mains supply.

Boost via light switch



Touch to set

Unity CV2.1 uses capacitive touch technology for quick and easy set-up on-site to help reduce set up and commissioning. All of the set up features are located in one place which is easy to access once the fan is wired and installed.

This helps ensure that the correct installation is achieved and once completed, the commissioned speed settings are locked to avoid unnecessary changes being made to the fan's running mode.





SMART Technology

SMART Technology comes in sensors, controls and design features within our products, usually our GIP product range.

The very first SMART Technology launched was Greenwood CommissionSMART™ Technology on our iconic Unity CV2GIP product.

The first of its kind - the SMART touch-pad was designed to improve and simplify the process of set-up and commissioning onsite. With all of the relevant and required features located in one place, the SMART touch-pad is easily accessible on the front of the fan; making is easy once it has been wired and installed in the wall or ceiling.

The second introduction of SMART Technology was our Humidity boost which has taken humidity controlled ventilation by storm - now available in Unity, Omnique, ComfoAir 155/185 and Centair CMEV.4e.

Humidity controlled ventilation uses humidity levels sensed in a room to boost ventilation - either turning it on or moving from a trickle speed to a boost speed. Why?? Because humidity means moisture which in turn needs to be extracted. Failure to provide effective ventilation causes mould, condensation and damp.

HumidiSMART boost provides humidity controlled ventilation without nuisance running (in the middle of the night!), unnecessary heat loss and energy consumption from homes. It activates ventilation in response to man-made spikes in humidity only because it works with the 'real time' installed environment and knows exactly what the normal level of humidity is at any given point in time. It then uses this as its base line to look for spikes.

Traditional humidity sensors usually provide ventilation when it is needed, but it is often when it isn't needed that the fan still comes on... WHY???? Because it uses a generic base line to activate the fan e.g. 65%. If it happens to be a hot summer's evening and the windows are open in the bathroom, this will activate the fan therefore causing nuisance running and unnecessary energy consumption!

Finally TimerSMART monitors the length of time that there is an occupancy presence within a wet room and provides a fixed over-run time period to best match the length of time the switch-live was active. This helps to reduce nuisance running noise at night and reduce running costs.



Fire collar ø 100mm for CV2GIP, CV2.1 and CV3, ceiling mounting, 50mm depth

Article number: FIRO100.SPV

Description

Fire collar:

Recessed ceiling fans are commonplace in domestic buildings, primarily for aesthetic gains. Ceilings are subject to fire regulations and must be fire protected in accordance with Approved Document B. To support this, any holes that are made for ceiling fans must be fire stopped, in order to reinstate the original fire rating of the ceiling. To satisfy this requirement the fire collar for ceiling fan has been developed to provide protection for holes created by 100 mm ceiling fans. The Fire Damper for Ceiling Fan is both quick and easy to install and has been independently approved with Unity CV2, CV2.1 and CV3 extract fans.

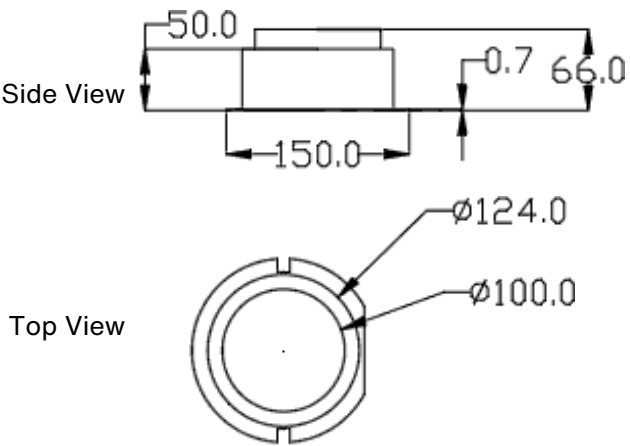
Technical Specification

Length	66 mm
Diameter ID	100 mm
Diameter OD	124 mm
Weight	0.5 kg
Material	Modified steel / fire wrap
Fire Tested to BS EN 1365-2 standard	30 minute fire rating Tested in Timber / Metal Web Joist system

■ For use with Unity Low Energy dMEV Fan



Dimensions





Secure Window Kit for Unity CV3/CV2/CV2.1 Low Energy dMEV Fan

Article number: EWCV3

Description

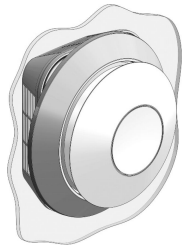
Window Kit:

The Unity Window Fixing Kit is made from robust material and features a specially designed external grille which makes gaining access to the inside of a property through the entry created by the fan more difficult. Extra thick webbed plastic at screw fixing points also give an increased level of strength and security to protect the unit from possible malicious damage.

Technical Specification

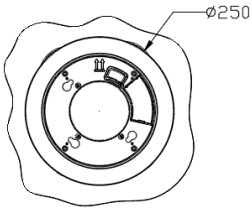
Height (external / internal element)	222 / 250 mm
Width (external / internal element)	191 / 250 mm
Depth (external / internal element)	67.5 / 29 mm
Weight (external / internal element)	0.26 / 0.15 kg
Glazing	Suitable for 4-28 mm Glazing hole 118-130 mm
Material (external / internal element)	ABS and polycarbonate / ASA and polycarbonate

■ For use with Unity Low Energy dMEV Fan

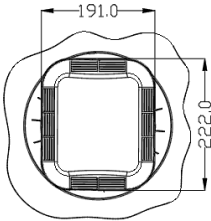


Dimensions

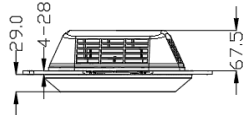
Front View



Rear View



Side View



Picture frame adaptor for Unity dMEV fan

Article number: PFACV2

Description

Picture Frame Adaptor:

Designed to provide a perfect aesthetic finish when Unity is used as a replacement product in existing 150 mm wall installations.

Technical Specification

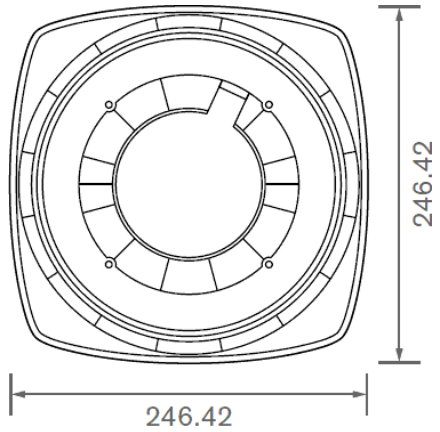
Height	246.42 mm
Width	246.42 mm
Depth	22.19 mm
Weight	0.18 kg
Material	White satin finish ABS Plastic

■ For use with Unity Low Energy dMEV Fan



Dimensions

Front View



Side View



Controls

ZGS2

Product code: ZGS2



The Zehnder ZGS2 is a two position switch designed to enable the user to manually select the desired ventilation systems flow rate

Key Benefits

- 2 separate ventilation flow rate options to select in 1 controller

Technical Specification

Mounting options	Recessed
Supply voltage	Mains power - 230 V / single-phase / 50Hz

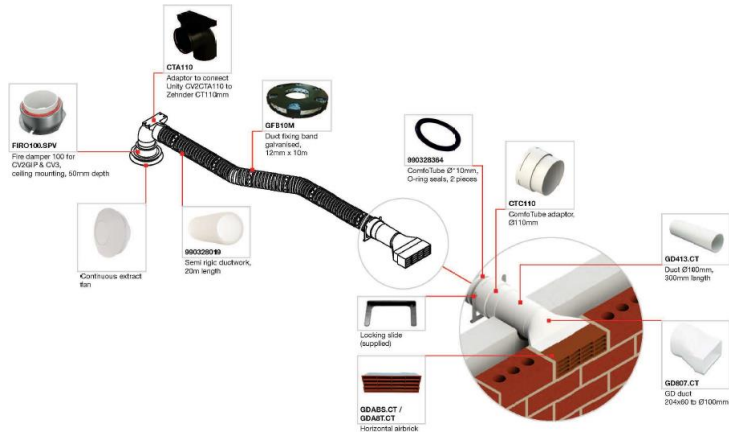
Dimensions (recessed)

Height	86 mm
Width	86 mm
Depth	15 mm



For use with

The CV2.1TA110 can be used with our zero leakage ComfoTube 110 mm semi-rigid ductwork to speed up installation and reduce running cost and noise levels.



TO VIEW OUR COMFOTUBE 110 INFORMATION

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Our Informational Videos



Watch our video on how to commission the Unity CV2.1 extract fan

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Consultant Specification

Specification

The fan shall consist of a body manufactured in recyclable ABS. It shall have an ultra-low energy DC motor with a backwards curved mixed flow impellor and shall be constructed to have a removable cover.

The fan shall have a single 100 mm diameter exhaust connection for direct connection to standard ductwork or a converter piece to enable use with 110mm semi-rigid ductwork.. The unit shall be tested and published on the PCDB for rigid ductwork. It shall be suitable for horizontal or vertical orientation to the wall, window or ceiling and provide a minimum of IPX5 protection in the wall / window installation (jetted water) and IPX4 protection in the ceiling installation (splashing water) as standard.

The fan shall conform to LVD and EMC standards, be UKCA Marked and be independently tested for noise characteristics. It shall be double insulated to meet the IEE wiring regulations. The fan shall be manufactured by Zehnder.

Operation

The fan shall be a Unity manufactured by Zehnder and shall be suitable to mount on a wall, window or ceiling in accordance with the specification.

The fan shall vary its speed of the ultra-low energy DC automatically when it receives a signal from external sensors in combination with external switches. The fan shall incorporate electrical connections to allow for the signal from a switched live 230V contact to vary its speed.

The fan shall have the ability to adjust and commission the extract motor along with activate or deactivate the timer or humidity control via the front mounted control panel on the main body, without the need to remove the cover. The fan shall offer 100% variable speed control on both the low and high speeds, and maintain commissioned settings even in the event of a power cut.

Controls

- All fans shall contain the following functions which are factory fitted by the manufacturer:
- 100% variable extract motor control
 - Variable low and high speed flow rate set point
 - Easy to use commissioning facility via the main body of the fan with 100% variability for both the low and high airflow rates
 - Switched live input
 - SMART humidity sensors to operate the unit in response to humidity spikes above natural background humidity levels as opposed to a single threshold humidity point to activate the high set point
 - SMART timer controls using variable length of boost operating time depending upon room occupancy duration