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1st Edition



Lo-Carbon Response/SELV dMEV Unit

A new generation of Lo-Carbon continuous running fans

Vent-Axia[®]



A new generation of Lo-Carbon continuous running fans

Looking towards the future

Vent-Axia has been at the forefront of technical innovation in the ventilation industry for over 75 years. Manufactured in the UK, the Lo-Carbon product range continues to develop and improve towards more energy efficient solutions.

Things have moved on since the Building Regulations were first introduced over 20 years ago. The Lo-Carbon Response from Vent-Axia aims to satisfy and lead the ventilation market in overcoming the three key challenges, which the Government has centred their legislation around.

Guaranteed installed performance

Part F of the Building Regulations state that once a ventilation product has been fitted, the product must be commissioned and the installed performance of the unit measured and recorded. This has previously been a time consuming task, producing at times inaccurate results. The integrated digital display, showing the calibrated airflow and system pressure of the installed Lo-Carbon Response will guarantee optimum fan performance and accurate commissioning, removing the need to test the installation with an expensive airflow measuring device.

Improved comfort to home owners

The number of brown field sites used for residential development projects is increasing. The impact of noise ingress from traffic, industry and airports has therefore become an important aspect for any building designer to consider.

With increasing air tightness the acoustic properties also improve leading to a reduction of external noise entering dwellings. However, this makes any noise generated inside the property even more noticeable.

The attractive and discreet styling of the new Lo-Carbon Response will complement the décor of any home while virtually silent operation, through the new high pressure silent axial impellor ensures optimum ventilation is achieved without intrusive noise.

Increased energy efficiency

The Government's commitment to reduced energy consumption and carbon emissions requires buildings to be more airtight and more energy efficient.

The Lo-Carbon Response includes a low energy DC motor and consumes as little as 1 Watt on trickle speed, which amounts to a yearly running cost of under £1.50! Low carbon technology combined with intelligent automatic control ensures the Lo-Carbon Response is one of the most energy efficient continuous running fans available.

The new Lo-Carbon Response can provide excellent pressure whilst still maintaining the energy efficiency



Lo-Carbon Response costs under £1.50 per to year to run!



The Specifiers Choice

- The 100mm spigot is common with traditional intermittent extract fans, simplifying the specification process.
- The unique day-logger feature will enable landlords to monitor exactly how many days the fan has been running.
- Safety first - the Lo-Carbon Response has an IPX4 rating for installation in bathrooms, Zone 1 and 2.
- Switched Live input allows the Lo-Carbon Response to be boosted by a range of Vent-Axia switches and sensors, or a single light switch.



The Installers Choice

- No need to test for airflow due to built in airflow display
- Installation and commissioning time is significantly reduced with the innovative digital display showing the calibrated airflow (l/s) and system pressure (Pa) of the installed product.
- The Lo-Carbon Response can be wall or panel/ceiling mounted.
- The innovative multi-orientation grille can be rotated by 90/180° to suit varied ceiling configuration requirements.
- With our extensive Distribution network and a highly experienced nationwide Sales Team, we are able to provide industry leading product support, offering guidance at all stages of your project.



The Home Occupiers Choice

- With discrete aesthetics and low noise levels due to an accurately balanced axial impeller, the Lo-Carbon Response is one of the most unobtrusive axial kitchen or bathroom fans available. The high quality material means that there is no area for dirt to build up so the fan will look better for longer.
- The constant volume technology of the Lo-Carbon Response automatically adjusts the speed of the fan to ensure that the desired airflow is delivered. This means that energy is not unnecessarily wasted. Combined with the low energy DC motor, the Lo-Carbon Response can cost less than £1.50 a year to run.
- During periods of increased humidity levels, for example when the occupier may be taking a bath, the Lo-Carbon Response can automatically delay its boost function to avoid nuisance noise.



Continuous Decentralised Ventilation - Providing comfort in our homes

High pressure, efficient airflow

Standard centrifugal fans, which develop greater pressure are often not very efficient and can generate more noise. Axial fans are generally more energy efficient, but usually run slowly and do not deliver a suitable pressure.

The Lo-Carbon Response solves this problem. The fan's constant volume technology automatically adjusts the speed of the fan to ensure that the desired airflow is delivered. Using a silent high pressure axial fan, the Lo-Carbon Response can meet the ventilation requirements of most domestic installations without the need to use a centrifugal fan.

This enables the Lo-Carbon Response to provide a 64% energy saving when compared to centrifugal alternatives (See SAP Product Characteristics Database).

Configuration	Location	Alternative Centrifugal Fan SFP	Vent-Axia Response SFP	Saving
In room	Kitchen	0.38	0.17	55%
	Wet Room	0.29	0.18	38%
Through Wall	Kitchen	0.36	0.13	64%
	Wet Room	0.28	0.15	46%

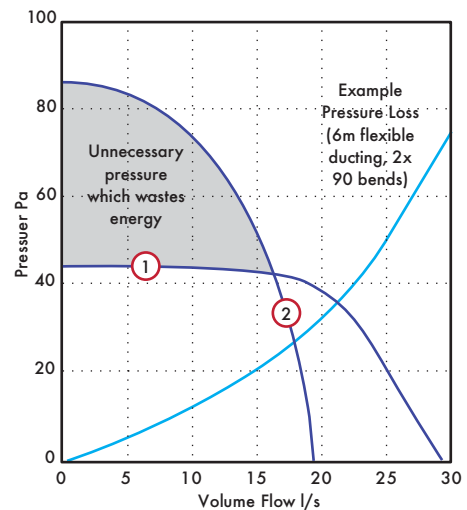
In normal running mode the fan can extract at either 6 l/s (22m³/h) or 8 l/s (29m³/h) flow rate. The fan will boost to 13 l/s (46.8m³/h) when the LS connection is switched on or humidity rises above the set point.

Dynamic humidity sensor

The Lo-Carbon Response HTP and SELV HTP models include a dynamic ambient response humidity sensor and work intelligently to ensure the correct level of ventilation is provided without wasting energy.

The fan senses the speed of the rise in humidity and controls the fan accordingly. A slow rise in humidity and the fan speed slowly increases, getting rid of nuisance running (by turning the potentiometer to maximum you can even switch the humidity sensor off if you want)

The airflow detection system will detect the installation duct resistance and also react to external wind conditions to ensure the fan maintains a constant extraction rate.



- ① Vent-Axia Lo-Carbon Response Fan
- ② Competitor Product



Innovative digital display

Following the introduction of the Domestic Ventilation Compliance Guide within Part F 2010, and the requirement to test the installed airflow of extract fans, the new Lo-Carbon Response fan from Vent-Axia provides the easiest install available.

Be confident that the Lo-Carbon Response is delivering the right performance with our unique digital display. Every 20 seconds the display will switch between showing the calibrated airflow (l/s) and the system pressure (Pa) of the installation. The airflow figure will be fixed and the pressure figure will flash On and Off.

This feature will be active for a short period once the fan has been switched on and will help to identify if the installation is compliant with Part F of the Building Regulations, removing the need to test the installation with an airflow measuring device.

Side view of airflow display

As an example, Airflow will display a nonflashing figure 13.0 (13.0l/s airflow rate)

As an example, Pressure will display a flashing figure 17.0 (17.0Pa system pressure)



The digital display also features a Day-logger which shows the number of days the unit has been running.

Opportunity to prevent nuisance running at bath time

The intelligent Lo-Carbon Response includes a silent running boost mode to ensure that even during periods of increased humidity, for example when the occupier may be having a bath, they will not be disturbed by the fan automatically switching to boost mode. This feature delays the boost operation for a maximum of 20 minutes to reduce noise and cold drafts while bathing. The fan then overruns the equivalent time after the light switch is switched Off, or 20 minutes, whichever is shorter. This mode is optional on installation.



Lo-Carbon Response/SELV

dMEV Unit

Features & Benefits

- Continuous running dMEV fan with unique constant volume technology
- Complies with Part F of the Building Regulations
- Innovative display showing calibrated airflow and system pressure (patent pending)
- Switched live connection for external switches/sensors
- 220-240V input
- Fits 100mm diameter hole
- Integrated day-logger feature
- 6l/s or 8l/s trickle speed selection
- 13l/s boost speed
- Safety Extra Low Voltage models available
- High quality ABS plastic
- IPX4 rated
- Multi-orientation grille – grille can be rotated 90/180 degrees to suit ceiling configuration requirements

Lo-Carbon Response

Continuous running, constant volume dMEV unit with switched live (LS) and innovative digital display. Quiet running and with high pressure development, the Lo-Carbon Response is best in class.

SAP Appendix Q Performance

Unit		
Configuration	Location	SFP (W/l/s)
In room (rigid duct)	Kitchen	0.17
In room (rigid duct)	Wet Room	0.18
In room (flex duct)	Kitchen	0.17
In room (flex duct)	Wet Room	0.16
Through wall	Kitchen	0.13
Through wall	Wet Room	0.15

Model

Lo-Carbon Response dMEV

Recognised in SAP Appendix Q. Auto speed selection at installation. The integrated ambient response sensor senses the speed of the rise in humidity and controls the fan accordingly.

Stock Ref
404535

Lo-Carbon Response/SELV TP (Timer/Pullcord)

For kitchen, utility and bathroom/toilet applications, the continuous running TP model incorporates an adjustable overrun timer. This adjusts the time the fan will continue to run on boost after the LS connection has been deactivated. The timer, which also sets the pullcord run-on period is adjustable between 1 and 30 minutes (default 15 mins).

Model	Stock Ref
TP	404876
SELV TP	404878

Lo-Carbon Response/SELV HTP (Humidistat/Pullcord)

For kitchen, utility and bathroom/toilet applications, the continuous running HTP model incorporates an adjustable ambient response humidistat. The fan will increase the extract rate if the humidity rises above the point set at installation.

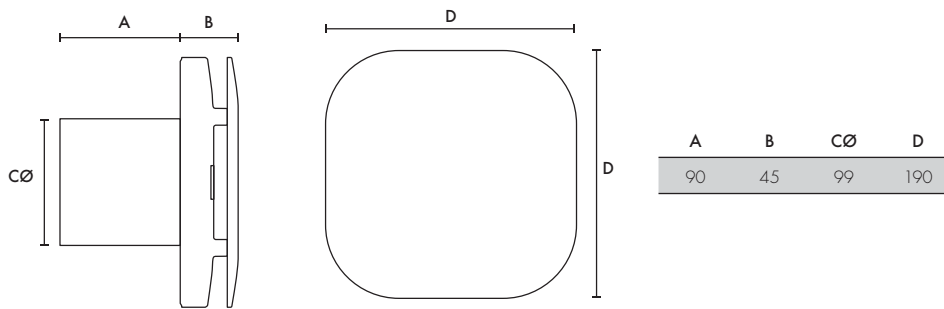
Model	Stock Ref
HTP	404877
Response SELV HTP	404879

Wall Kit

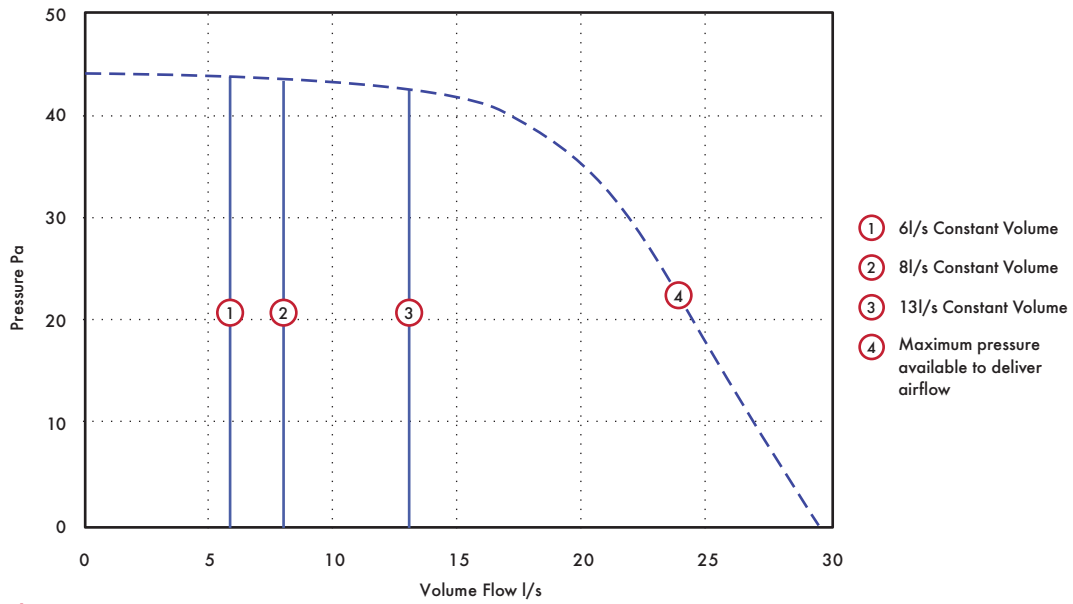
Model	Stock Ref
White	254102
Brown	254100



Dimensions (mm)



Performance Curve



Performance Guide

Model	Extract Performance l/s (m³/h) - FID			Watts			dB(A) @ 3m		
	Trickle Low	Trickle High	Boost	Trickle Low	Trickle High	Boost	Trickle Low	Trickle High	Boost
Lo-Carbon Response	6 (21)	8 (29)	13 (43)	1.0	1.2	1.7	12	17	32.5



By Appointment to H.M. The Queen
Suppliers of Unit Ventilation Equipment
Vent-Axia, Crawley, West Sussex

Vent-Axia®

VENT-AXIA CONTACT NUMBERS

Free technical, installation and sales advice is available

Sales Centre:

Domestic & Commercial

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Sales Fax: 01293 565169
Tech Support Tel: 0844 856 0594
Tech Support Fax: 01293 532814

Heating Support

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Supply & Service

All sales made by Vent-Axia Limited are made only upon the terms of the Company's Conditions of Sale, a copy of which may be obtained on request. As part of the policy of continuous product improvement Vent-Axia reserves the right to alter specifications without notice.



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