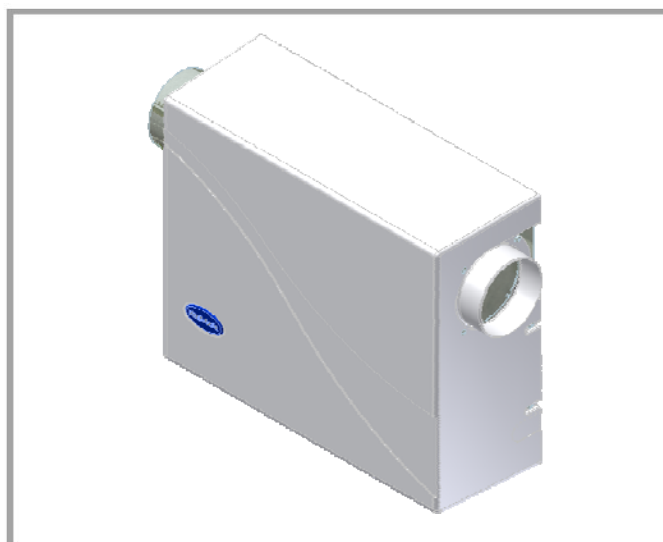


Lo-Carbon PoziDry Compact

Positive Pressure
Ventilation Unit

Installation and Wiring Instructions



Stock Ref. N°

Pozidry Compact
444767 – With integral heater
444076 – Without heater

220-240V~50Hz

Vent-Axia®

PLEASE READ INSTRUCTIONS IN CONJUNCTION WITH THE ILLUSTRATIONS.
PLEASE SAVE THESE INSTRUCTIONS

IP22
CE

Installation and Wiring Instructions for the Lo-Carbon PoziDry Compact Positive Ventilation Unit.



**IMPORTANT:
READ THESE INSTRUCTIONS BEFORE COMMENCING THE INSTALLATION**

SAFETY AND GUIDANCE NOTES

1. DO NOT install this product in areas where the following may be present or occur:
 - 1.1. Excessive oil or a grease laden atmosphere.
 - 1.2. Corrosive or flammable gases, liquids or vapours.
 - 1.3. Ambient temperatures higher than 40°C or less than -5°C.
 - 1.4. Possible obstructions which would hinder access or removal of the Fan.
 - 1.5. Relative humidity above 90%
 - 1.6. Sudden ductwork bends or transformations close to the Unit.
2. All wiring to be in accordance with the current I.E.E. Regulations, or the appropriate standards of your country and MUST be installed by a suitably qualified person.
3. The fan should be provided with a 3A fused, isolator switch capable of disconnecting all poles, having a contact separation of at least 3mm.
4. Ensure that the mains supply (voltage, frequency, and phase) complies with the fan's rating label.
5. The fan should not be used where it is liable to be subjected to direct water spray.
6. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
7. Children should be supervised to ensure that they do not play with the appliance.

A. INTRODUCTORY NOTES

The Vent-Axia Lo-CARBON POZIDRY COMPACT is a positive input ventilation unit, designed to be installed in apartments taking fresh air from outside and supplying the air, filtered, into the building.

The unit has two fully adjustable speed settings; 'Normal' and 'Boost'.

The unit uses a sensor to monitor the incoming air temperature, automatically adjusting the air volume when necessary.

'Normal' speed is automatically selected when the ambient loft temperature is up to 18°C.

'Boost' is automatically selected when the ambient loft temperature is between 18°C and 27°C.

If the ambient incoming air temperature exceeds 27°C, the unit will automatically switch to standby (no airflow, LED displaying one segment). The standby power consumption is 2W.

In the case of the integral heater version, the heater element is automatically activated when necessary and tempers the supply air to between 10°C and 20°. This temperature can be set using the adjuster located between the Normal and Boost speed adjusters.

The units have the capability to run on Purge setting (maximum speed); this is particularly useful for installations where condensation is a severe problem.

To enable 'Purge' speed, connect a switched live connection to the LS core on the integral mains flying lead. See WIRING in section C.

The unit also incorporates a non-resettable elapsed hour counter.

B. INSTALLATION

Lo-CARBON POZIDRY COMPACT

The Lo-CARBON POZIDRY COMPACT can be wall-mounted using the bracket and fixings supplied. A paper template is also supplied.

The wall should have sufficient strength to support the unit.

Take into consideration the routing of the cable and the ducting that must be fitted to both the inlet and discharge spigots.
The unit must always be mounted on a vertical wall with the spigots nearest the top of the unit, with a horizontal airflow.

PLEASE LOCATE THE SEPARATELY BAGGED FILTER!

Wall-mounting

Take off the white plastic cover by removing the 4 x screws at the sides.
Take off the metal front cover by removing the 4 x screws.
Carefully remove the round to rectangular duct adaptor, packed loosely in the filter plenum (internal, near to the white plastic spigot). The filter is bagged separately to the unit.

Handing

The Lo-CARBON POZIDRY COMPACT is supplied with the airflow direction horizontally from right to left. If the opposing airflow is required (left to right), the following should be carried out:

Re-position the cable gland by first loosening off the gland to allow the cable to be pulled through back into the unit.
Swap the cable gland and the blanking plug over to each others' positions.
Re-secure the cable through the cable gland.
Take off the rear metal cover by removing the 4 x screws, and re-fix to the other side of the unit in place of the metal front cover.
Carefully cut out the skinned area on the white plastic cover where the cable gland will now lie.

Rear-entry inlet

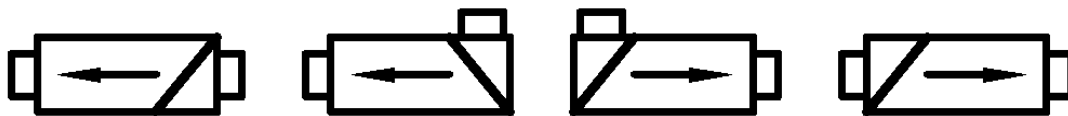
If rear-entry inlet duct connection is required, the appropriate blanking plate (closest to the white plastic inlet spigot), should be changed over with the white plastic inlet spigot/seal.
The paper template supplied indicates rear entry spigot centres in relation to the fixing hole centres.

Either handing:-

Use the paper template to mark the required fixing-hole positions for the bracket and unit on the wall.
Drill the wall and fit suitable wall plugs to all four positions.
Using 2 x suitable size screws fit the mounting bracket to the wall.
Offer the unit up to the wall and allow the mating part on the unit to sit inside the mounting bracket, and then secure the unit to the wall with suitable size screws through the 2 x key-way holes on the back-plate of the unit.

Fit the separately bagged filter using the diagram below to ensure that it is fitted to suit the relevant handing/inlet spigot position. There are guides in the filter plenum to allow fitting of the filter in two directions. The diagram below shows the four possible airflow/inlet spigot arrangement options. The arrow shows the airflow direction. The diagonal line behind the tail of the arrow shows which direction to slide the filter in.

VIEW FROM THE TOP OF THE UNIT



Re-fix the metal front cover.
Following commissioning, re-fix the white plastic cover.

C. WIRING



WARNING: THE POSITIVE VENTILATION UNIT AND ANY ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING THE INSTALLATION OR MAINTENANCE.

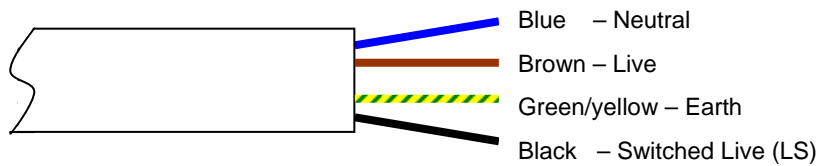
THE Lo-Carbon PoziDry Compact (POSITIVE VENTILATION UNIT) MUST BE EARTHED.

Mains supply voltages (220-240V ac) are present in this equipment which may cause death or serious injury by electric shock. Only a qualified electrician or installer should connect the power supply to this unit.
The Lo-Carbon PoziDry is designed for operation from a single-phase alternating current source (220-240V AC).

An integral mains flying lead is connected to the unit for connection to a 3A switched fused spur. It should be capable of disconnecting all poles, having a contact separation of at least 3mm.

TO CONNECT A POWER SUPPLY:

- Ensure the local AC power supply is isolated.
- The product has a pre-wired flying lead. Connect the brown core to Live, blue core to Neutral, green/yellow to Earth, and black to LS (for 100% PURGE if required).



- Use cable clamps and clips to secure the cable, as appropriate.

D. START UP SEQUENCE

The Lo-Carbon Pozidry Compact will perform a start up test procedure on **every** power up.

During this sequence, the following will occur:

- 1) Motor goes to full speed.
- 2) LED segments light up one at a time until all 7 are lit.
- 3) Potentiometers and Thermistor are measured and the motor pulses counted. If any of these sources shows an error, then it is displayed. A list of error codes is shown below.
- 4) Motor goes to lowest (Normal) speed; if the motor stalls then an 'error' is displayed. Otherwise the display shows 'n' indicating Normal speed.
- 5) After 10 seconds the heater is turned on, the display now shows 'h.' for heat.
- 6) After 20 seconds (to allow the element to warm up) the heater is turned off, the motor goes to maximum Boost speed to cool the heater and the display shows 'b' indicating Boost speed.
- 7) After 10 seconds the display shows the elapsed hours. Six digits are displayed sequentially immediately after the 'b'. For example, 000048 would indicate 2 complete days has elapsed.**
- 8) The unit exits the test mode and runs at the appropriate rate whilst displaying a rotating segment display. The rate will depend upon ambient temperature.

CAUTION:

As the heater element is activated during this sequence, the ducting **must** be attached. Please take extreme caution after the self test as the unit may become hot.

E. COMMISSIONING

The Lo-Carbon Pozidry Compact has two speed settings, '**Normal**' and '**Boost**'.

'**Normal**' speed is automatically selected when the ambient loft temperature is **below 18°C**.

'**Boost**' is automatically selected when the ambient loft temperature is **between 18°C and 27°C**.

If the ambient incoming air temperature exceeds 27°C, the Lo-Carbon Pozidry Compact automatically switches to standby (no airflow).

The speed settings on the Lo-Carbon Pozidry Compact are fully adjustable via the potentiometers located on the front of the unit.

As marked on the unit, the **left hand** potentiometer controls the '**Normal**' speed setting.

The **right hand** potentiometer controls the '**Boost**' speed setting.

The **central** potentiometer (if available) controls the heat setting for integral heater version (444767).



WARNING: THE BLUE POTENTIOMETER DRIVER SUPPLIED WITH THE UNIT MUST BE USED TO ADJUST THE POTENTIOMETERS.

Turning the potentiometers **clockwise** will increase the speed/temperature value.

Once speed/temperature is set, apply the clear label over the marked area containing the potentiometers to ensure the potentiometers are inaccessible and so that the unit returns to an IP X2 rated status.

The fan speeds must be selected to suit the condensation level of the house.

The condensation level of a house is affected by a combination of factors and not just house size, but research by the Building Research Establishment and other bodies has shown that a ventilation rate equal to half the volume of

the house per hour will provide adequate background ventilation, therefore for ease of installation the Lo-Carbon Pozidry Compact can be commissioned based on house size.

Based on this air change rate; the following speeds are recommended:

- 'Normal' Setting 1 = 10 l/s (36 m³/h), power consumption 5.7W, - floor area up to 72m².
- 'Normal' Setting 2 = 18 l/s (65 m³/h), power consumption 12.2W, - floor area up to 130m².
- 'Normal' Setting 3 = 26 l/s (94 m³/h), power consumption 24.6W, - floor area up to 187m².
- 'Normal' Setting 4 = 34 l/s (122 m³/h), power consumption 49.8W, - floor area up to 245m².

Maximum motor power 50W

As a guideline the 'Boost' speed setting should be the 'Normal' speed setting plus three, however as every house is unique, this is not always the case, in some houses the 'Boost' speed may need to be less than the guideline speed.

Note: Figures based on a 2.4m ceiling height.

The factory setting is "Normal" Setting 1 and "Boost" setting 2.

In many installations where condensation is a severe problem; it is recommended to run the fan at high speed for a couple of weeks to ventilate the house thoroughly.

This can be achieved by utilizing the LS input option, whereby the unit will run on Purge setting until the LS signal is terminated. To achieve this, connect the LS core of the integral mains flying lead to an LS input.

It is the responsibility of the installer to ensure that appropriate speeds are selected.

F. SERVICING AND MAINTENANCE

The fan motor uses sealed ball bearings, and does not require further lubrication.

Apart from filter change the Lo-Carbon Pozidry contains no user serviceable parts.

Under normal conditions; i.e. away from main roads and industrial areas; it is recommended that the filter is checked annually and cleaned or replaced as necessary. Otherwise change as required.

The filter may be gently cleaned with a vacuum cleaner or washed in a soapy water solution and allowed to air dry before re-fitting. Do not dry in a tumble dryer.

Spare filters are available from Vent-Axia Sales Centres.

Spares	Stock Reference
Filter	447381
Front cover	447383
Control PCB (to suit 444076 - without heater)	447385
Control PCB (to suit 444767 - with integral heater)	447386
PSU PCB	426127
Motor/impeller	447384
Heating element (integral heater version 444767 only)	447391
Accessories	
Elbow - 90 degree bend, (100 dia.)	400752
Duct - 2.0 m length, (100 dia.)	5108250
Wall fitting kit - white	254102
Wall fitting kit - brown	254100
Quick Fit 100mm wall grille - white	563521
Quick Fit 100mm wall grille - brown	563541
Quick Fit 100mm termination	563535A
Air replacement set (door grille) - ivory	561401
Air replacement set (door grille) - brown	561400

Installation Packs			
Stock Reference: -	453546	453547	453548
Quick-fit grill, white	1	1	1
Wall fitting kit, brown	1	1	1
HR 70WH Rnd-Rect Ad	1	3	3
HR 060WH Vert 90° bend	2	2	2
Ind 040WH Elbow/Spgt	1	1	1
HR 010WH 1m Flat Chnl	1	2	2
HR 015WH 1.5m Flat Chnl	1	2	2
HR 020WH Connector	1	4	4
HR 050WH Horiz 90° bend	-	-	2
HR 122-H Chnl Clip	4	6	2

G. FAULT FINDING.

The Lo-Carbon PoziDry has built in fault detection software to ensure continual safe functioning.

If one of the following faults appears on the LCD display, please contact Technical Support on: 0844 8560594.

F1 = Open circuit thermistor i.e. not connected.

F2 = Short circuit thermistor i.e. wires, PCB or thermistor shorted.

The above codes are mutually exclusive so cannot occur at the same time.

F3 = Motor Tachometer signal failure or fan not rotating.

F4 = Motor AND open circuit thermistor failures.

F5 = Motor AND short circuit thermistor failures.

Vent-Axia®

Head Office: Fleming Way, Crawley, West Sussex, RH10 9YX. Tel: 01293 526062 Fax: 01293 551188

UK NATIONAL CALL CENTRE, *Newton Road, Crawley, West Sussex, RH10 9JA*

SALES ENQUIRIES: Tel: 0844 8560590 Fax: 01293 565169

TECHNICAL SUPPORT: Tel: 0844 8560594 Fax: 01293 539209

For details of the warranty and returns procedure please refer to www.vent-axia.com or write to Vent-Axia Ltd, Fleming Way, Crawley, RH10 9YX