

# Lo-Carbon SELV Tempra

THROUGH THE WALL  
HEAT RECOVERY FAN

Installation and Wiring Instructions



## Stock Ref. N°

444368	Pullcord. (P)
403833	Pullcord Long Cell (LP)
444369	Timer. (T)
403835	Timer Long Cell (LT)
444370	Humidistat -Timer Pullcord. (HTP)
403837	Humidistat -Timer Pullcord Long Cell (LHTP)

220-240V~50Hz SELV

# Vent-Axia®

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

IPX4  
CE  
UK  
CA

## Installation and Wiring Instructions for the Tempra SELV Range of Heat Recovery Fans.



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

DO NOT install this product in areas where the following may be present or occur:

- Excessive oil or a grease laden atmosphere.
- Corrosive or flammable gases, liquids or vapours.
- Ambient temperatures higher than 40°C or less than – 5°C.
- Possible obstructions which would hinder the access or removal of the Fan.

### SAFETY AND GUIDANCE NOTES

- A. 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.
- B. The Fan should be provided with a local isolator switch capable of disconnecting all poles, having a contact separation of at least 3mm.
- C. Ensure that the mains supply (Voltage, Frequency, and Phase) complies with the rating label.
- D. The electrical supply to this fan is 24V DC SELV from the transformer/controller. This means the fan may be installed within reach of a person using a fixed bath or shower, i.e. in a nearby wall. However, the fan must not be placed where it could be submerged in water or regularly exposed to direct water spray, e.g. from a shower head whether permanently fixed or movable.
- E. Only connect the products from the Lo-Carbon Tempra SELV range since the fans are specially designed to work on 24V DC and are not compatible with other Vent-Axia controllers. Do not connect more than one fan to the controller.
- F. The controller must not be installed in a shower cubicle or enclosure. It must be away from direct sources of water spray and out of reach of a person using a fixed bath or shower. Site away from direct sources of heat.
- G. The controller needs free air circulation and must not be covered with any insulating material such as might be in a ceiling or roof void.
- H. The Fan should only be used in conjunction with the appropriate Vent-Axia products.
- I. The fan should only be used in conjunction with fixed wiring.
- J. Exhaust fans may adversely affect the safe operation of appliances burning gas or other fuels (including those in other rooms) due to back flow of combustion gases. These gases can potentially result in carbon monoxide poisoning. After installation of an exhaust fan such as a partition fan or a duct fan the operation of flued gas appliances should be tested by a competent person to ensure that back flow of combustion gases does not occur.
- K. The Fan should not be used where it is liable to be subject to direct water spray for prolonged periods of time.
- L. The horizontal duct should be arranged to slope slightly downwards away from the Fan.
- M. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory and mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved.
- N. Children shall not play with the appliance.
- O. Cleaning and user maintenance shall not be made by children without supervision.

### Disposal

This product should not be disposed of with household waste.  
Please recycle where facilities exist.  
Check with your local authority for recycling advice.



## **DESCRIPTION**

### **Through the wall Mounted Heat Recovery Fan**

The Vent-Axia Lo-Carbon Tempra SELV is suitable for refurbishment or new build, kitchen, bathroom, toilet or utility applications. The unit meets the performance requirements for intermittent extract fans under the Building Regulations Part F 2010 (table 5.1a) and also for continuous running products

Tempra SELV is available in 6 models.

#### **444368 – Tempra SELV P**

Constant trickle speed with pull cord or switch live to boost airflow.

#### **403833 - Tempra SELV LP**

#### **444369 – Tempra SELV T**

Constant trickle speed with switch live to boost airflow with adjustable 5-50 min overrun timer and optional 3-minute delay on timer

#### **403835 - Tempra SELV LT**

#### **444370 – Tempra SELV HTP**

Constant trickle speed with pull cord or switch live to boost airflow with adjustable 5-50 min overrun timer and optional 3-minute delay on timer or internal humidistat adjustable 60- 90% RH.

#### **403837 - Tempra SELV LHTP**

### **SELV Controller**

The controller can be installed surface or recess mounted using a Vent Axia back box 410020 (not supplied) or any standard single gang mounting box with a minimum depth of 25mm.

## **A. INSTALLATION**

### **WALL MOUNTING**

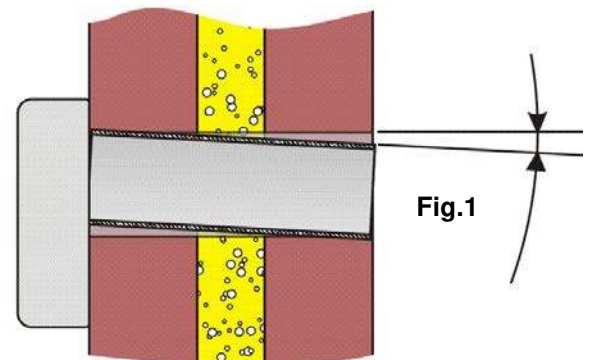
Models **P,T & HTP** are designed for use in a wall with a maximum thickness of 318mm fitted with a 110mm Soil pipe or Wall Sleeve (Stock Ref No 445529).

Models **LP,LT & LHTP** are designed for use in a wall with a maximum thickness of 460mm fitted with a 110mm Soil pipe.

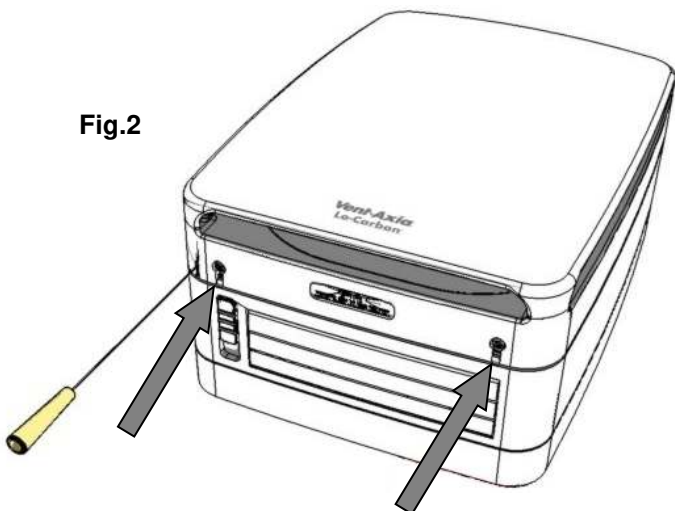
- 1) Using the template provided mark the 4 wall fixing positions, the hole for the wall pipe and mains cable entry point.
- 2) Cut a hole through the wall and insert the soil pipe or wall sleeve.

Slope the sleeve slightly downwards away from the fan and cement both ends into position flush with the wall Fig 1

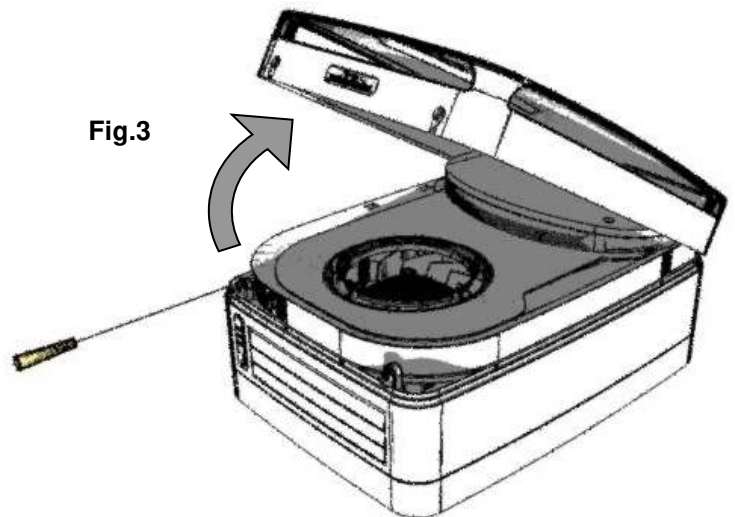
- 3) Undo 2 fixing screws and lift off Cover Plate Fig 2 & 3.



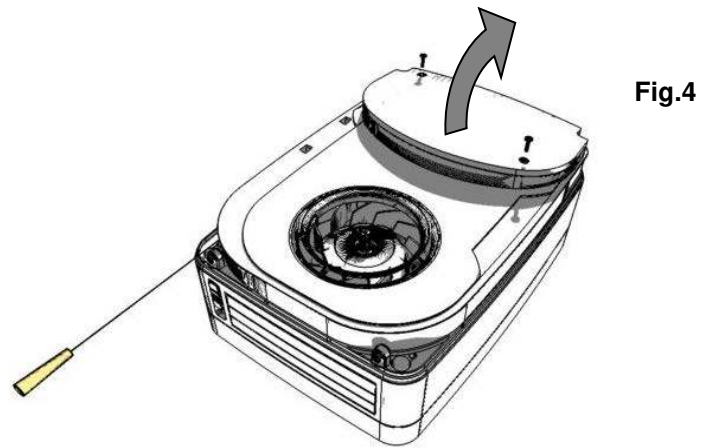
**Fig.2**



**Fig.3**



4) Remove 2 screws and detach Electrical Cover fig 4.



5) Lift where indicated to engage hinges Fig 5 and open Door Fig 6.

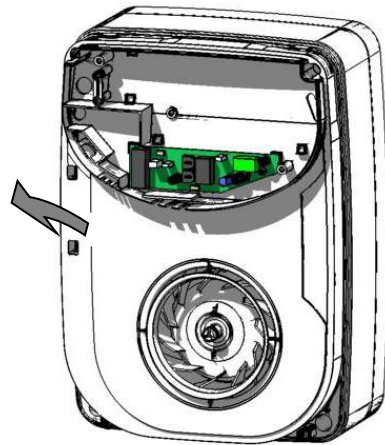


Fig.5

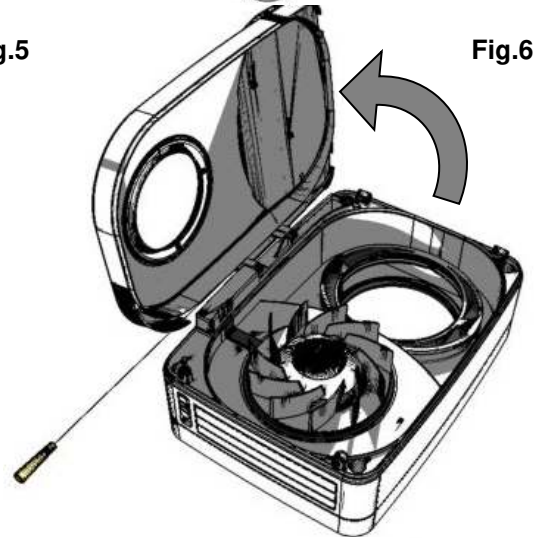


Fig.6

6) Feed flexible LV cable from PSU through one of the rear entry points or the side entry point as required. And then the door Fig 7 & 8.

Fig.7

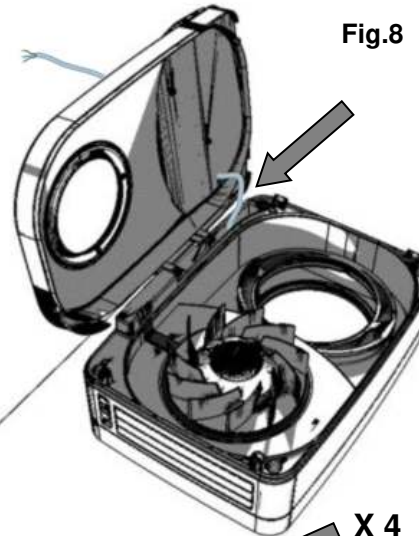
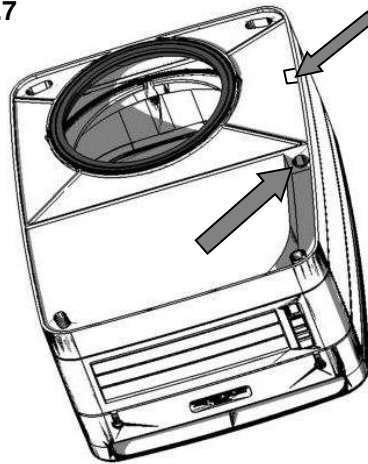


Fig.8

7) Fit Chassis to wall with 4 fixing screws carefully aligning the hole in the back of the Tempra with the Wall Pipe Fig 9.

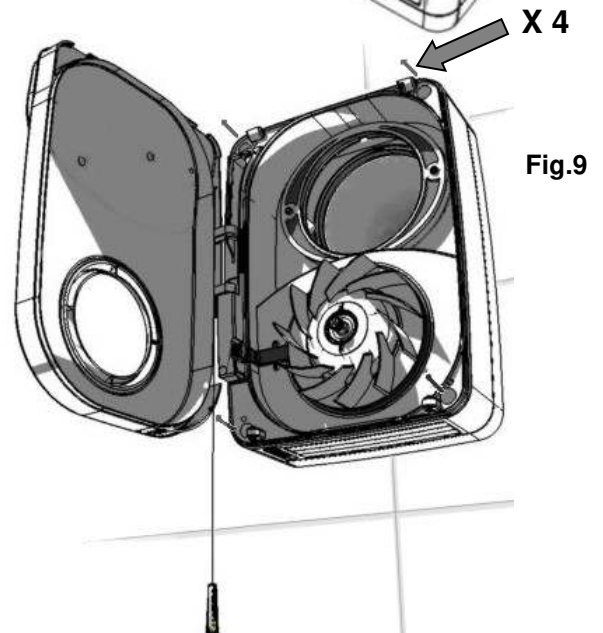


Fig.9

8) Remove screws and Heat Exchanger Retaining Clamp kit Fig 10. (Discard polybag)

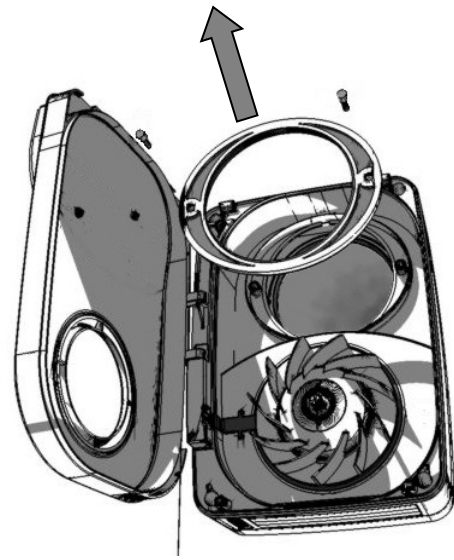


Fig.10

9) Insert Heat Exchanger through Chassis and into Wall pipe Fig 11.

Note: Line up key on top of Heat Exchanger with slot in Chassis

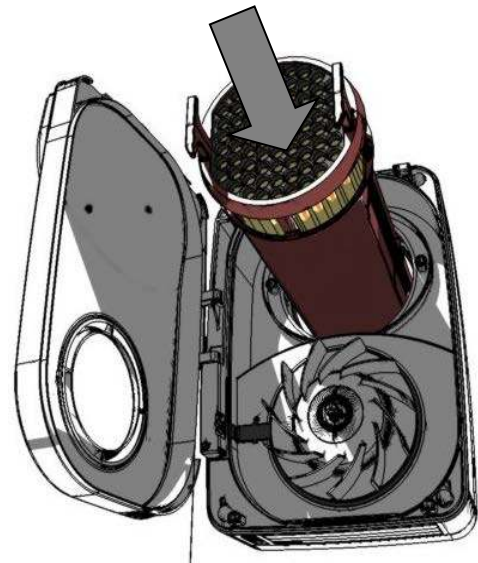


Fig.11

10) Fit Heat Exchanger Retaining Clamp with the screws provided Fig 12.

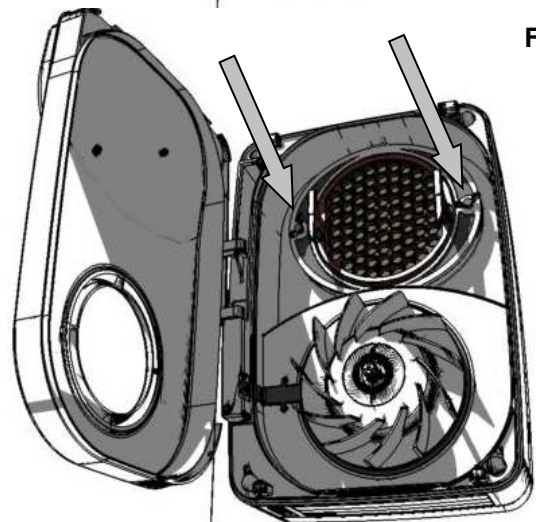


Fig.12

11) Close Door and connect 24V Supply as described in section B – Wiring, Adjust any settings as required see section C – Setup. Fig 13

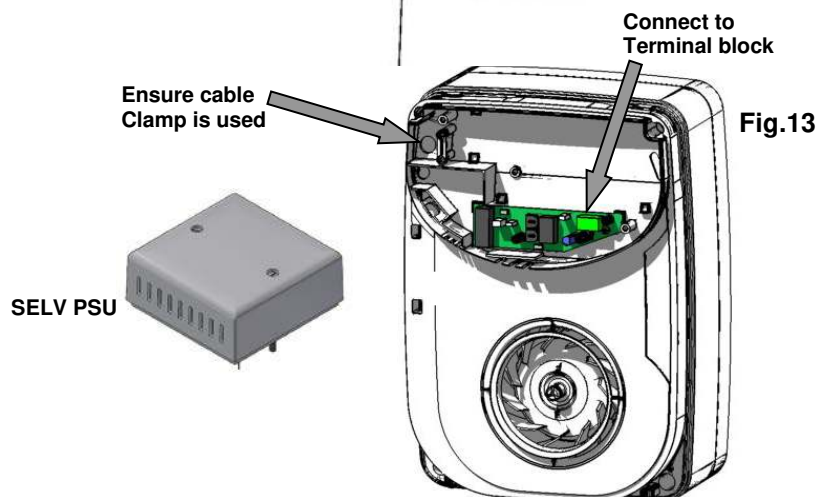


Fig.13

12) Re fit Electrical Cover with 2 screws indicated In Fig 14.

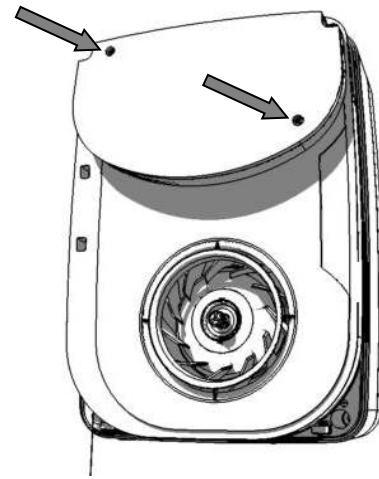


Fig.14

13) Re fit Cover Plate and tighten 2 screws Fig 15 &16. Ensure Pull cord is engaged in Lower Slot

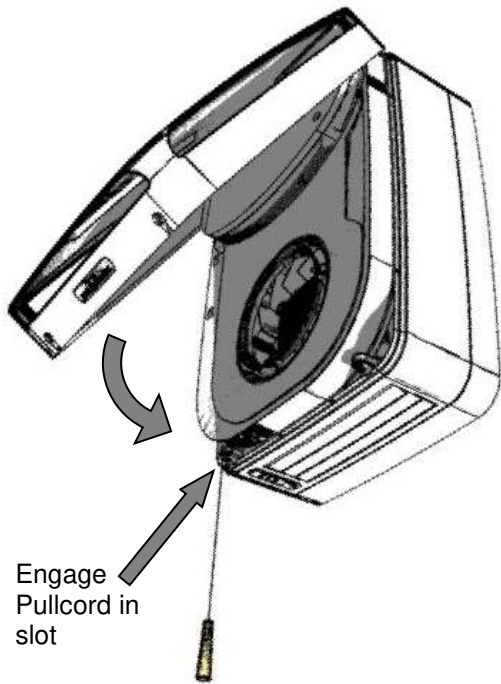


Fig.15



Fig.16

Ensure this vent is **open** when installed to activate the heat recovery function

14) The Tempra unit is also fitted with a “manual summer setting” which allows the unit to be set to extract only, helping to prevent a dwelling becoming too warm in hot summer conditions. When first installed this shutter/vent should be **open**. Fig.16 To activate the summer setting it should be shut.

15) Make good on outside wall with the wall Cover bezel provided, ensure the arrow on the bezel is at the top. Fix/seal to the wall with a suitable sealant.

Apply sealant in outer groove on rear of bezel.

**Important:-** Please ensure that you apply sufficient sealant to hold the bezel to the wall. (If the wall surface is not suitable for using sealant 2 screws can be located through the 2 bosses provided).

**Note:-** Do not seal the bezel to the heat exchanger, this needs to be removed for cleaning at regular intervals.

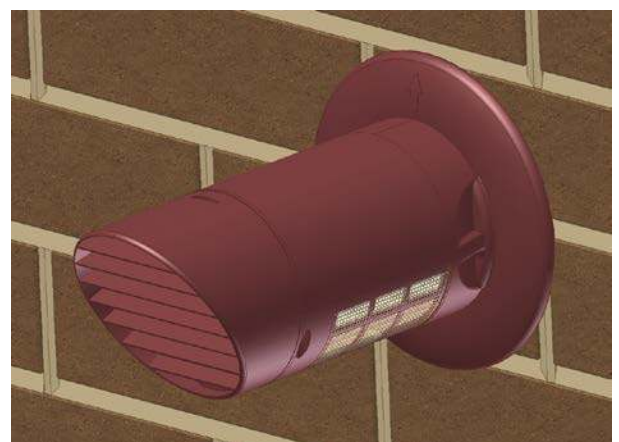


Fig.17

## B. WIRING.



**WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING THE INSTALLATION / OR MAINTENANCE.**

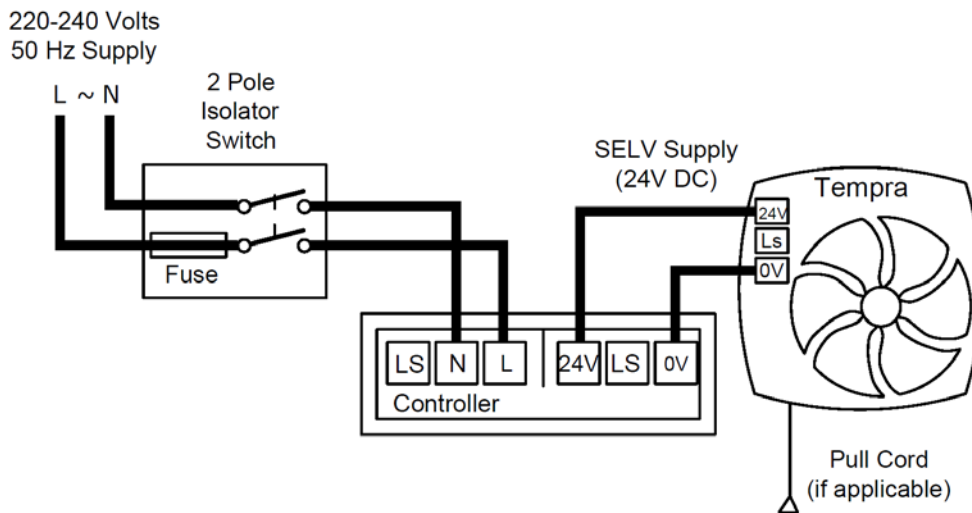
### IMPORTANT

- The fan should only be used in conjunction with fixed wiring.
- The cross - sectional area of supply cord used should range from 1 -1.5mm<sup>2</sup>.
- Cable entry can only be made from the rear of the fan.
- Allow sufficient 24V flexible cable when connecting fan, to ensure hinged door opens freely.
- The Controller is suitable for connection to 220-240V 50Hz supply and 24V SELV to the fan.
- The fan is a class II double insulated product and **MUST NOT** be earthed.

1. Select and follow the appropriate wiring diagram. (Fig. 18 or 19)
2. Check all connections have been made correctly and ensure all terminal connections and cable clamps are securely fastened.

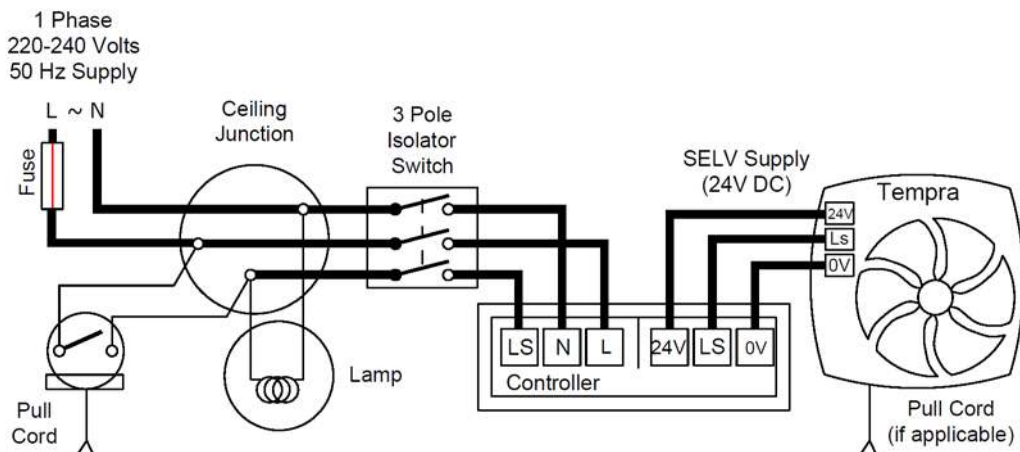
**Fig 18**

**Continuous trickle (6l/s or 9l/s) with pullcord boost facility SELV P,LP and SELV HTP, LHTP**



**Fig 19**

**Continuous trickle (6l/s or 9l/s) with switch live boost facility**

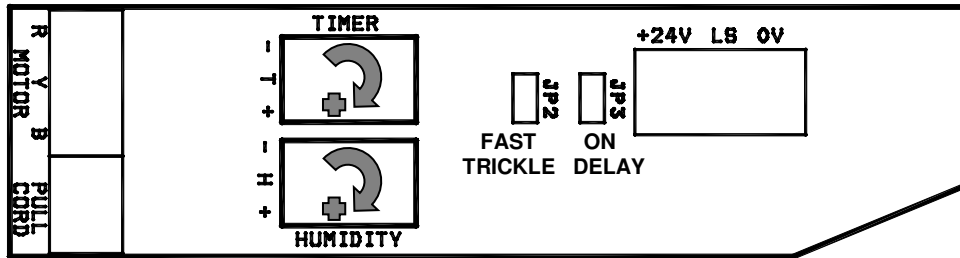


## C. SETUP



**WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING THE INSTALLATION / OR MAINTENANCE.**

Fig. 20



### TRICKLE SPEED SELECTION (6l/s or 9l/s) – (Fig. 20)

In Trickle running mode the fan can extract at either 6l/s (22m<sup>3</sup>/h) or 9l/s (32m<sup>3</sup>/h) flow rate. The fan will boost to 15l/s (54m<sup>3</sup>/h) when the LS / Humidity / Pull cord connection is switched.

- Factory set at **6l/s** (22m<sup>3</sup>/h).
- Remove jumper connector (**JP2**) if **9l/s** (32m<sup>3</sup>/h) extract flow rate is required.

### PULLCORD OPERATION (P,LP AND HTP,LHTP MODELS)

THE PULLCORD ACTIVATES THE BOOST TO ON OR OFF.

### TIMER ADJUSTMENT (T,LT AND HTP,LHTP MODELS) (FIG. 20)

THE TIMER IS ONLY ACTIVATED VIA THE LS CONNECTION.

1. The controller is factory set at 15 minutes approx. The overrun time period can be adjusted from 5-50 minutes by altering the adjuster on the control PCB.
2. To **INCREASE** the operating time, use a small screwdriver to turn the **TIMER** adjuster **CLOCKWISE**.
3. To **REDUCE** the operating time, use a small screwdriver to turn the **TIMER** adjuster **ANTI CLOCKWISE**.
4. In addition a 3 minute delay on timer is included this can be de-activated by removing (**JP3**).

### HUMIDITY SET-POINT ADJUSTMENT SVHTP MODEL (FIG. 20)

**NOTE:- ON INSTALLATION IT IS POSSIBLE THAT THE HUMIDITY CONTROLLER WILL RUN CONTINUOUSLY UNTIL IT HAS ACCLIMATIZED TO THE ENVIRONMENT.**

1. The controller is factory set to switch on at about 70% RH. The humidity set point can be adjusted from 60-90%RH by altering the adjuster on the control PCB.
2. To **LOWER** the set-point use a small screwdriver to turn the **HUMIDITY** adjuster **ANTI-CLOCKWISE**. This makes the controller **MORE** sensitive.
3. To **RAISE** the set-point use a small screwdriver to turn the **HUMIDITY** adjuster **CLOCKWISE**. This makes the controller **LESS** sensitive.

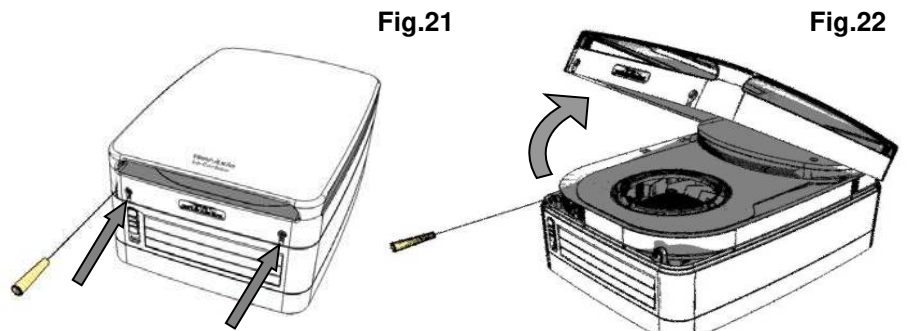
## D. MAINTENANCE.



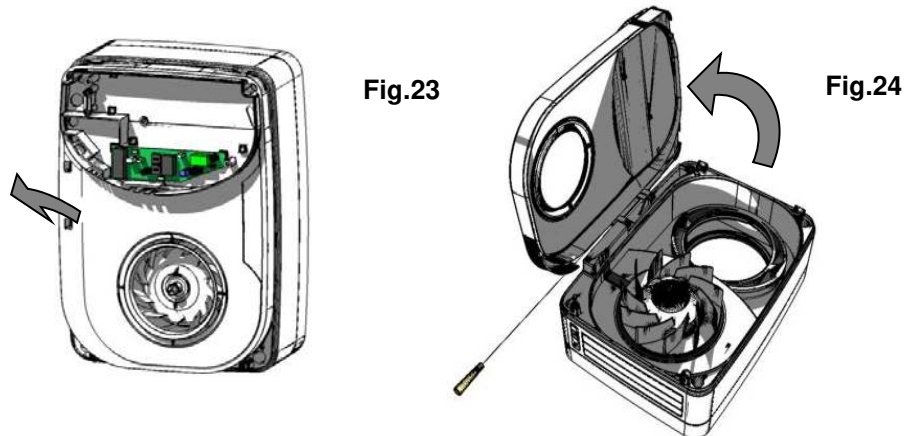
**WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING MAINTENANCE.**

The fan should be cleaned to ensure there is no build up of dirt or other deposits.

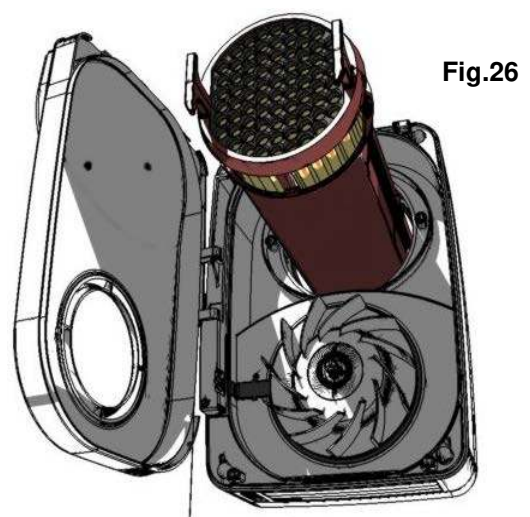
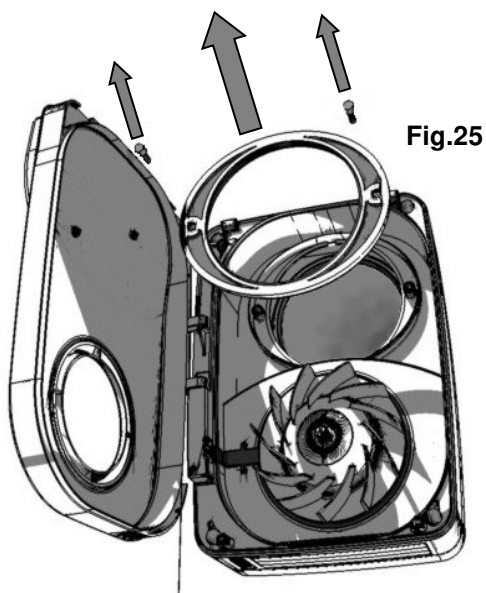
1. Remove 2 screws and lift off Cover Plate assembly Fig 21 & 22.



2. Lift where indicated to engage hinges Fig 23 and open Door Fig 24.



3. Remove Retaining Plate, Carefully slide out the Heat Exchanger Fig 25 & 26 and wash in warm water using a mild detergent, dry thoroughly and re assemble in reverse order to above.

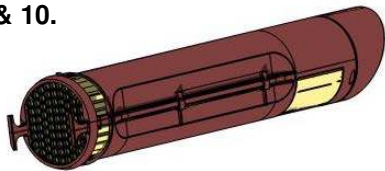


## E. Spares

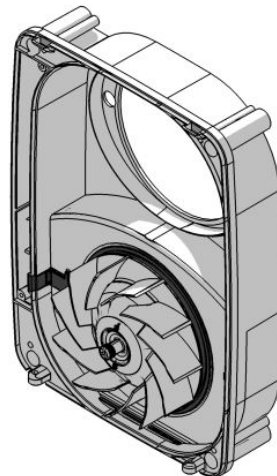
The following spares may be ordered from Vent-Axia

Item	Part No	Description	Models used
1.	445885	Heat exchanger (Short)	P, T & HTP
2.	445886	Motor chassis assembly	P, LP, T, LT, HTP & LHTP
3.	445892	SELV Cover assembly	P, LP, T, LT, HTP & LHTP
4.	495742	SELV power supply unit	P, LP, T, LT, HTP & LHTP
5.	445889	Pullcord PCB	P & LP (only)
6.	445890	Timer PCB	T & LT (only)
7.	445891	HTP PCB	HTP & LHTP (only)
8.	455630	Pullcord Assembly	P, LP, HTP & LHTP
9.	447838	Wall cover bezel	P, LP, T, LT, HTP & LHTP
10.	403878	Heat exchanger (Long)	LP, LT & LHTP

1. & 10.



2.



4.



9.



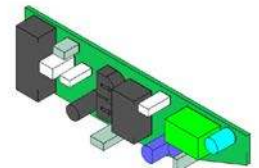
3.



5. (P, LP)

6. (T, LT)

7. (HTP, LHTP)



8.



## PRODUCT FICHE

For Residential Ventilation Units (Complying Commission Delegated Regulation (EU)

No 1254/2014)

Name:	Vent-Axia	Vent-Axia	Vent-Axia	Vent-Axia	Vent-Axia	Vent-Axia
Model ID (Stock Ref.) :	Lo-Carbon Tempra SELV P - 444368	Lo-Carbon Tempra SELV LP - 403833	Lo-Carbon Tempra SELV T - 444369	Lo-Carbon Tempra SELV LT - 403835	Lo-Carbon Tempra SELV HTP - 444370	Lo-Carbon Tempra SELV LHTP - 403837
SEC Class	E	E	E	E	B	B
SEC Value ('Average')	41.30	41.30	41.68	41.68	43.99	43.99
SEC Value ('Warm')	18.67	18.67	18.85	18.85	19.89	19.89
SEC Value ('Cold')	80.79	80.79	81.54	81.54	86.06	86.06
Label Required? (Yes/No=Out of scope)	No	No	No	No	No	No
Declared as: RVU or NRUV/UVU or BVU	RVU-BVU	RVU-BVU	RVU-BVU	RVU-BVU	RVU-BVU	RVU-BVU
Speed Drive	Multi-Speed	Multi-Speed	Multi-Speed	Multi-Speed	Multi-Speed	Multi-Speed
Type HRS (Recuperative, Regenerative, None)	Recuperative	Recuperative	Recuperative	Recuperative	Recuperative	Recuperative
Thermal Eff: [ (%), NA(if none)]	78	78	78	78	78	78
Max. Flow Rate (m3/h)	54.00	54.00	54.00	54.00	54.00	54.00
Max. Power Input (W): (@Max.Flow Rate)	26.60	26.60	26.60	26.60	26.60	26.60
LWA: Sound Power Level (dB)	53.52	53.52	53.52	53.52	53.52	53.52
Ref. Flow Rate (m3/s)	0.01	0.01	0.01	0.01	0.01	0.01
Ref. Pressure Diff. (Pa)	N/A	N/A	N/A	N/A	N/A	N/A
SPI [W/(m3/h)]	0.70	0.70	0.70	0.70	0.70	0.70
Control Factor & Control Typology: (CTRL/ Typology)						
Control Factor; CTRL	1.00	1.00	0.95	0.95	0.65	0.65
Control Typology	Manual Control	Manual Control	Clock Control	Clock Control	Local Demand Control	Local Demand Control
Declared: -Max Internal & External Leakage Rates(%) for BVUs or carry over (for regenerative heat exchangers only), -&Ext. Leakage Rates (%) for Ducted UVUs;	N/A	N/A	N/A	N/A	N/A	N/A
Mixing Rate of Non-Ducted BVUs not intended to be equipped with one duct connection on either supply or extract air side;	N/A	N/A	N/A	N/A	N/A	N/A
Position and description of visual filter warning for RVUs intended for use with filters, including text pointing out the importance of regular filter changes for performance and energy efficiency of the unit	N/A	N/A	N/A	N/A	N/A	N/A
For UVUs (Instructions Install Regulated Supply/Extract Grilles Façade)	In F&W	In F&W	In F&W	In F&W	In F&W	In F&W
Internet Address (for Disassembly Instructions)	www.vent-axia.com	www.vent-axia.com	www.vent-axia.com	www.vent-axia.com	www.vent-axia.com	www.vent-axia.com
Sensitivity p. Variation@+20/-20 Pa: (for Non-Ducted Vus)	N/A	N/A	N/A	N/A	N/A	N/A
Air Tightness-ID/OD-(m3/h) (for Non-Ducted Vus)	N/A	N/A	N/A	N/A	N/A	N/A
Annual Electricity Consumption: AEC (kWh/a)	10.15	10.15	9.43	9.43	5.53	5.53
Annual Heating Saved: AHS (kWh/a)						
AHS: Average	41.30	41.30	41.68	41.68	43.99	43.99
AHS: Warm	18.67	18.67	18.85	18.85	19.89	19.89
AHS: Cold	80.79	80.79	81.54	81.54	86.06	86.06

## The **Vent-Axia** Guarantee

Applicable only to products installed and used in the United Kingdom. For details of guarantee outside the United Kingdom contact your local supplier.

Vent-Axia guarantees its products for two years from date of purchase against faulty material or workmanship. In the event of any part being found to be defective, the product will be repaired, or at the Company's option replaced, without charge, provided that the product:-

- Has been installed and used in accordance with the instructions given with each unit.
- Has not been connected to an unsuitable electricity supply. (The correct electricity supply voltage is shown on the product rating label attached to the unit).
- Has not been subjected to misuse, neglect or damage.
- Has not been modified or repaired by any person not authorised by the company.

### **IF CLAIMING UNDER TERMS OF GUARANTEE**

Please return the complete product, carriage paid to your original supplier or nearest Vent-Axia Centre, by post or personal visit. Please ensure that it is adequately packed and accompanied by a letter clearly marked "Guarantee Claim" stating the nature of the fault and providing evidence of date and source of purchase.

The guarantee is offered to you as an extra benefit, and does not affect your legal rights

## **Vent-Axia**

Head Office: Fleming Way, Crawley, West Sussex, RH10 9YX.

EU Authorised Representative: Vent-Axia, Sigarenmaker 5 - 5521DJ, Eersel, Nederland, [authorisedrep@vent-axia.nl](mailto:authorisedrep@vent-axia.nl)

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

SALES ENQUIRIES: Tel: 0344 8560590 Fax: 01293 565169

TECHNICAL SUPPORT: Tel: 0344 8560594 Fax: 01293 539209

Web:-[www.vent-axia.com](http://www.vent-axia.com) Email:- [info@vent-axia.com](mailto:info@vent-axia.com)

As part of the policy of continuous product improvement Vent-Axia reserves the right to alter specifications without notice.

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