

INTEGRA PLUS

Installation and Wiring Instructions



Stock Ref. N°
INTEGRA PLUS
437666

230V~ 50Hz

Vent-Axia®

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

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VENT-AXIA INTEGRA PLUS – HEAT RECOVERY VENTILATION UNIT INSTALLATION AND MAINTENANCE INSTRUCTIONS

Read the following instructions in conjunction with the illustrations before commencing installation.

Product Description

The INTEGRA PLUS is a loft/ceiling mounted heat recovery ventilation unit for domestic and commercial applications. It is designed for connection to 150mm-diameter insulated flexible or rigid ventilation ducting. The unit's two fans and heat exchanger arrangement simultaneously supply and extract air while transferring heat from the stale exhaust airflow to the fresh intake airflow. This provides up to 70% heat recovery from the stale extracted air.

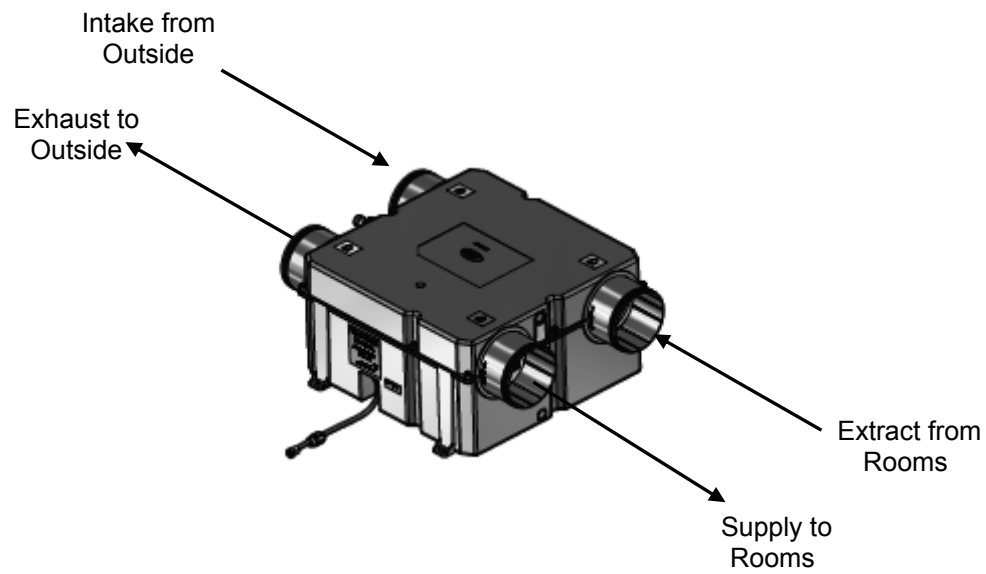
Separation of the exhaust airflow and intake airflow is maintained throughout the unit.

The fan motors have maintenance free self lubricating long life bearings and are fitted with thermal overload protection, which in the event of a fault causing a motor to overheat will cut off the electrical supply to that motor. The electrical power consumption of the unit is 425W when running at maximum speed from a 230V supply.

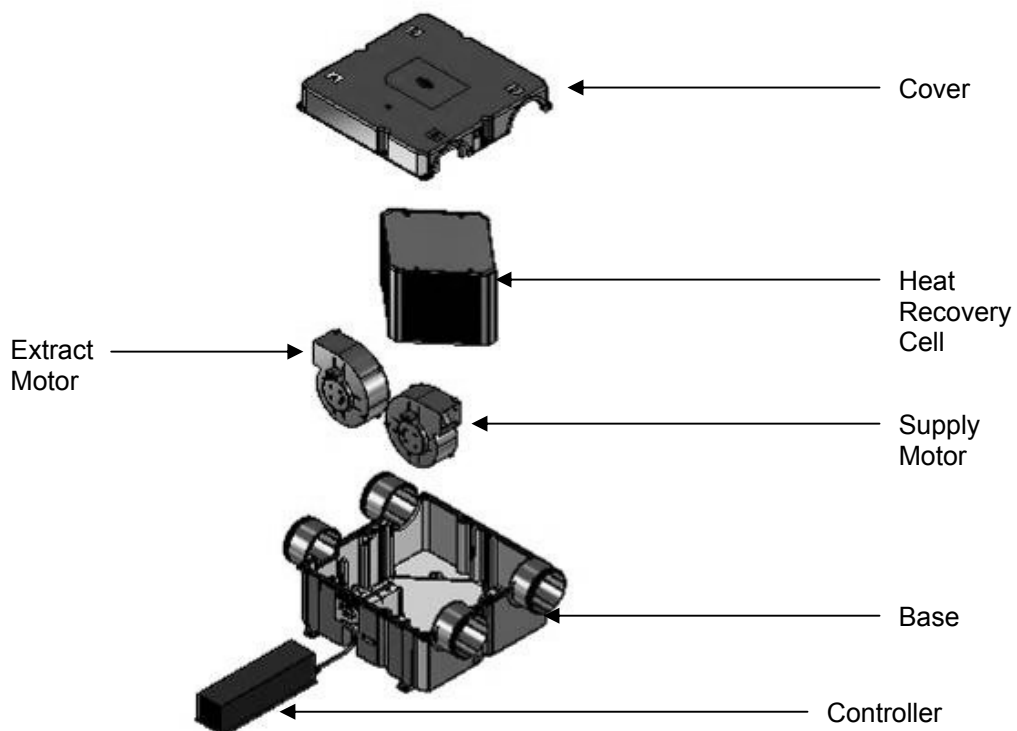
SAFETY - IMPORTANT POINTS TO NOTE

1. THIS APPLIANCE IS INTENDED FOR PERMANENT CONNECTION TO THE MAINS ELECTRICAL SUPPLY FIXED WIRING AND MUST BE INSTALLED BY A SUITABLY QUALIFIED PERSON.
2. THIS APPLIANCE MUST BE SITED AND CONNECTED IN ACCORDANCE WITH CURRENT UK BUILDING, FACTORY AND IEE WIRING REGULATIONS (BS7671) OR THE APPROPRIATE NATIONAL REGULATIONS IN YOUR COUNTRY.
3. WIRING TO THE APPLIANCE IN THE UK MUST BE VIA A FUSED AND SWITCHED CONNECTION UNIT INCORPORATING A DOUBLE POLE SWITCH WITH 3mm CONTACT SEPARATION AND CONFORMING TO BS5733 OR BS1363 PART 4. A 3 AMP BS1362 FUSE SHOULD BE FITTED TO THE CONNECTION UNIT, WHICH MUST BE LOCATED OUTSIDE OF A ROOM CONTAINING A FIXED BATH OR SHOWER.
4. WARNING: THIS APPLIANCE IS CLASS I AND IT MUST THEREFORE BE EARTHED.
5. CHECK THE RATING LABEL ON THE APPLIANCE TO ENSURE THAT THE ELECTRICAL SUPPLY IS COMPATIBLE WITH THE APPLIANCE WHICH IS RATED AT 230V AC 50 Hz.
6. THIS APPLIANCE MUST BE SITED OUT OF REACH OF ANY PERSON USING A FIXED BATH OR SHOWER.
7. IN SITUATIONS WHERE MOISTURE CAN BE PRESENT IN THE AIR, THE APPLIANCE SHOULD BE CONNECTED TO A CONDENSATE DRAINAGE SYSTEM.
8. IN ENVIRONMENTS WHERE PARTICLE LADEN AIR IS BEING EXTRACTED PROVISION MUST BE MADE FOR ADEQUATE FILTRATION BEARING IN MIND SYSTEM RESISTANCE AND REGULAR FILTER MAINTENANCE.
9. THIS APPLIANCE MUST BE SITED AWAY FROM DIRECT SOURCES OF HEAT IN EXCESS OF 40 DEGREES C.
10. SITE THE APPLIANCE AND ARRANGE THE ASSOCIATED DUCTING AND GRILLES TO PROVIDE A BALANCED CIRCULATION OF AIR.
11. THE EXTERNAL INTAKE TERMINALS ASSOCIATED WITH THIS APPLIANCE MUST BE SITED AT LEAST 1000mm AWAY FROM THE FLUE OF A FUEL BURNING APPLIANCE/ OTHER EXTERNAL GRILLE TO PREVENT THE BACKFLOW OF GASES.
12. THIS APPLIANCE IS NOT INTENDED FOR USE BY PERSONS (INCLUDING CHILDREN) WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES, OR LACK OF KNOWLEDGE, UNLESS THEY HAVE BEEN GIVEN SUPERVISION OR INSTRUCTION CONCERNING USE OF THE APPLIANCE BY A PERSON RESPONSIBLE FOR THEIR SAFETY.
13. CHILDREN SHOULD BE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE APPLIANCE.
14. ALL SAFETY REGULATIONS AND REQUIREMENTS MUST BE STRICTLY FOLLOWED TO PREVENT HAZARDS TO LIFE AND PROPERTY BOTH DURING AND AFTER INSTALLATION AND DURING ANY SUBSEQUENT MAINTENANCE AND SERVICING.
15. SWITCH OFF THE MAINS ELECTRICAL SUPPLY BEFORE COMMENCING INSTALLATION, MAINTENANCE OR SERVICING.

Air Direction



Exploded View of Fan unit



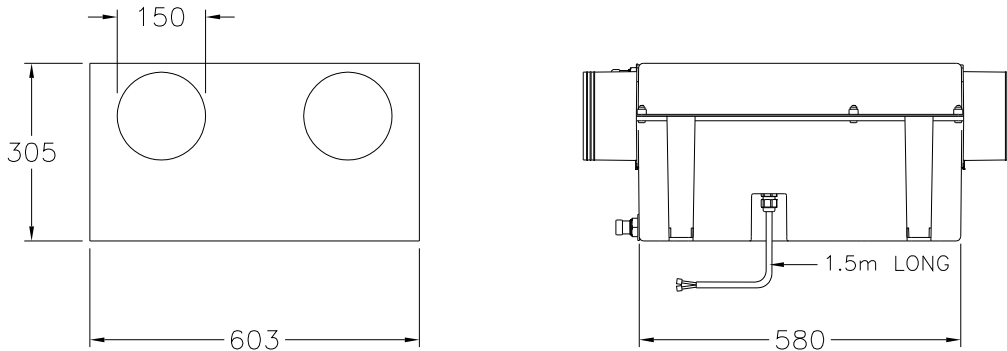
Installers Guide

This Appliance must be sited and connected in accordance with current UK Building, Factory and IEE wiring regulations (BS7671) or the appropriate national regulations in your country and carried out by a suitably qualified person.

The size of the fan unit and the controller and space for access to screws or other fixings must be considered when choosing a suitable location for installation.

A) Installing the Fan unit

Fig 1 – The size of the unit



All dimensions are in mm unless otherwise stated.

1. Remove the ventilation unit from the packaging.
2. After noting the positions of the duct spigots, cable and drainage connection on the ventilation unit, select a suitable installation site and type (see below). Note that the unit must be mounted with the drainage at the bottom (3 or 5-degree tilt towards the drain). The site selected must allow sufficient space around the unit for the removal of the ducts, cover and heat exchanger for maintenance and servicing purposes.
3. If appropriate, provide mains electrical supply and drainage system in the vicinity of the installation site.
4. Typically there are two forms of installation for the INTEGRA PLUS

To mount the unit on joists: Place the unit across two beams and attach the appropriate cabling, drainage and ductwork to the unit, with the Vent-Axia bubble badge facing up. For optimum performance, ensure the ductwork does not turn 90deg directly off the spigots. The unit should, for optimum drainage, be tilted by 3 degrees towards the drain side. See Fig. 3a.

Ceiling mounted: Invert the unit with the Vent-Axia logo facing down and attach the unit securely to the rafters. For optimum performance, ensure the ductwork does not turn 90deg directly off the spigots. The unit should, for optimum drainage, be tilted by 3 degrees towards the drain side. See Fig. 3b.

Please note - the situation and type of installation for the unit must be decided and assembled before any drainage knockouts are removed, as they cannot be refitted.

5. Having decided upon a location and position remove the knock out for the condensate drain, this must be at the lowest point. Connect the drain of the ventilation unit to the drainage system using suitable 'U'-bends (see fig 4).
6. Install suitable internal and external grilles/ terminals and connect them to the ventilation unit using suitable 150mm ducting. If flexible ducting is used, it should be stretched in order to obtain the best performance.

Mounting Options

Fig 3a. Mounted on joists

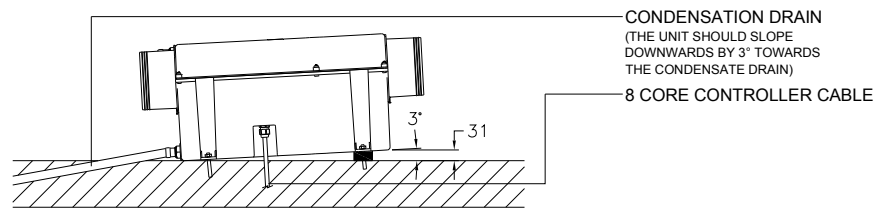


Fig 3b. Ceiling mounted

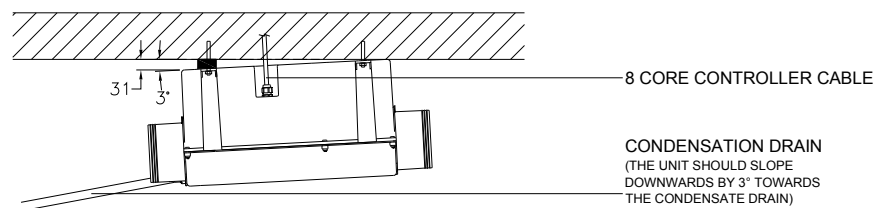
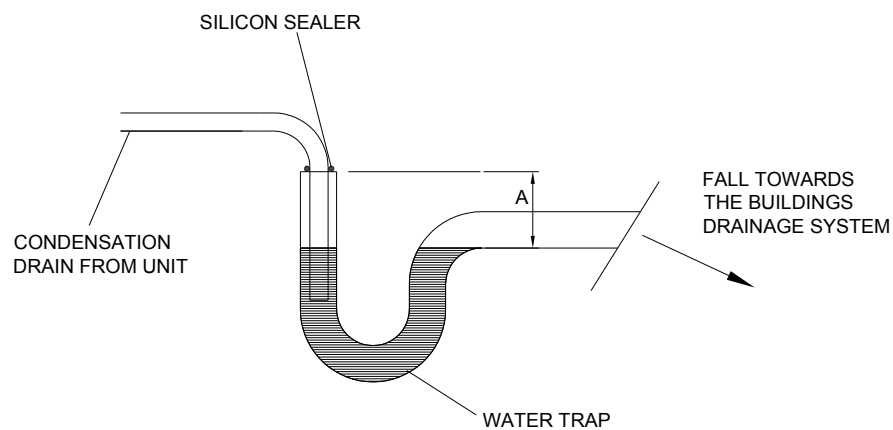


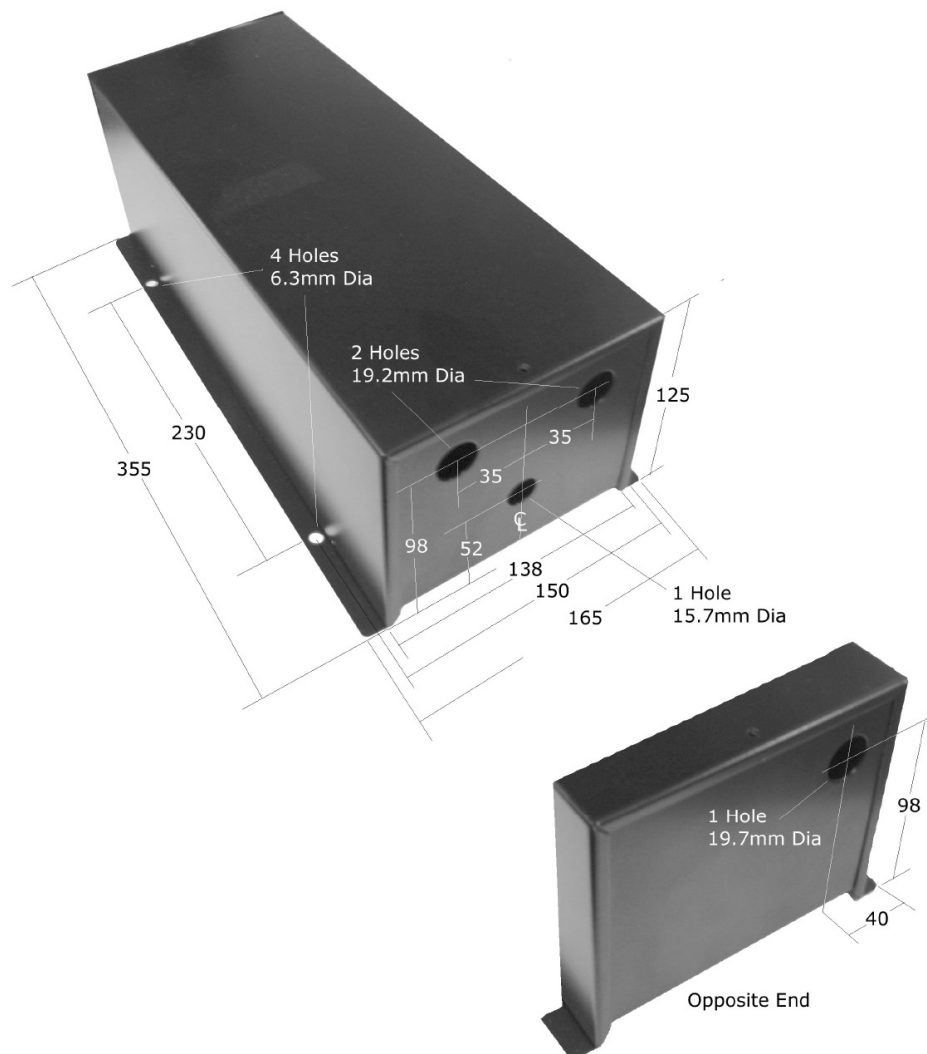
Fig 4. Water trap details



NOTE:
INSTALL THE CONDENSATE DRAINAGE TUBING IN
ACCORDANCE WITH THE DIAGRAM.
ENSURE THE WATER TRAP IS BELOW THE DRAIN
ELBOW OUT LET "A"

B) Installing the Controller

Controller Dimensions



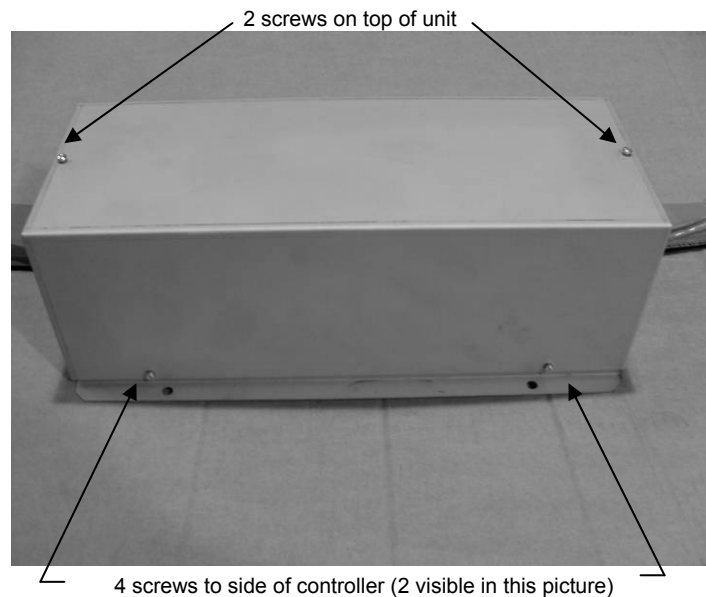
Dimensions of the Controller Box

Installing the Controller

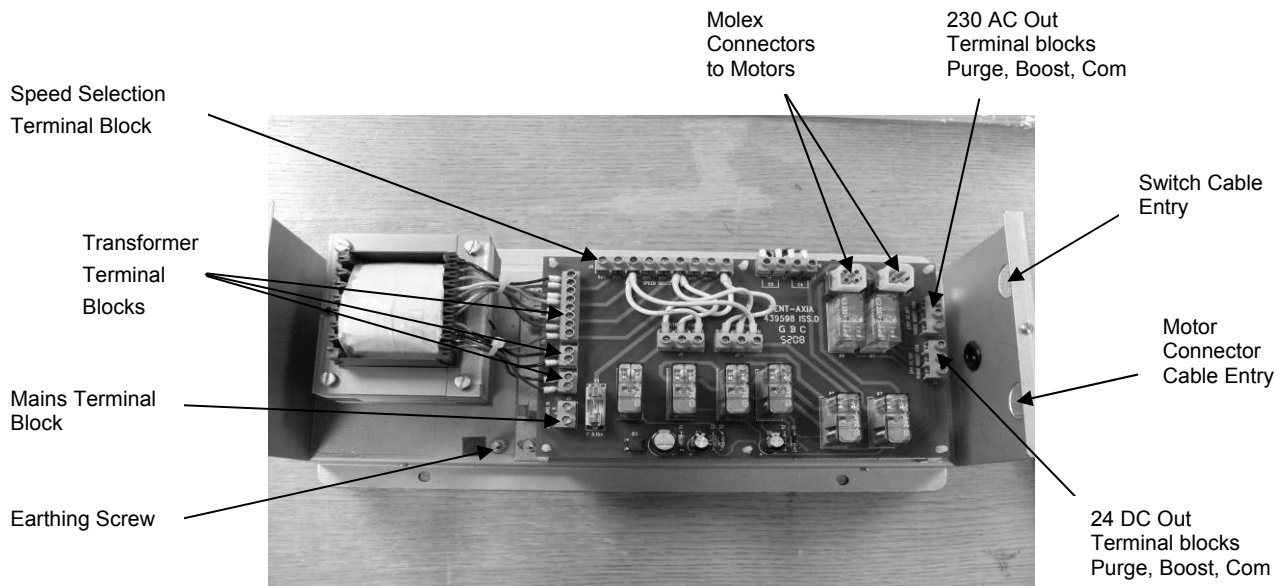
1. Remove the controller from the packaging.
2. After noting the positions of the cable connections on the unit, select a suitable installation site (allow for an extra 30mm clearance either end for cable glands. Note that the unit can be ceiling or floor mounted. The site selected must allow sufficient space around the unit for the removal of the cover after mounting and close enough to be able to be connected to the fan unit via the 8-core cable.
3. The controller can be mounted using the 4 holes on the flange of the controller housing and appropriate screws.

Setting and wiring the Controller

1. Any power supply to the controller must be switched off before any work is done on the controller or the cover is removed.
2. Remove the controller cover by unscrewing the 6 cover screws.

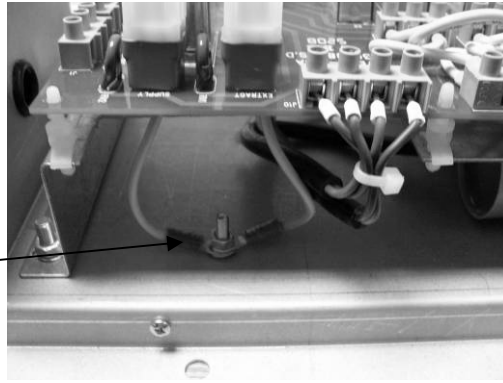


3. Determine which voltages are needed to give the appropriate volumes (there is a graph in the appendix for reference).
4. Once the voltages are determined, the supply and extract motors can have their individual Normal, Boost and Purge voltages (if needed) by repositioning the white and yellow wires in the voltage terminal block into the appropriate terminals.

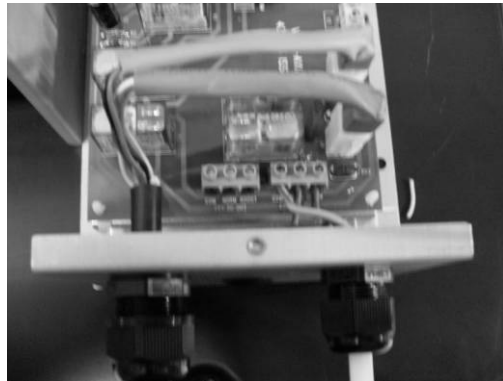


5. Ensure the wires are securely fixed into the terminal block after use.
6. A 10-12mm outside diameter 3-core mains lead should enter the controller housing via the cable gland nearest the '230V IN' terminal on the PCB. Ensure that the cable core csa is suitable for the current according to local electrical regulations.
7. The Mains Live and Neutral wires should be secured appropriately into the terminal block while the Earth wire should be stripped back and secured around the earth stud and between the 2 brass washers, secured by the shake proof washer and locking nut.

Earthing
Crimped
Eye



8. The Mains cable gland must be then tightened and secured.
9. The 2 Molex connectors from the Fan unit must then be pushed through the hole in the Controller housing and connected to the appropriate Molex connectors inside the PCB (fitting red to red and blue to blue). They are colour coded as well as polarised to aid connection.



The motor connections should be fitted through the cable entry on the left, while the cable entry on the right should be used for switches.

10. The cable gland around this cable must also be securely fitted.
11. The sensor or switch used with the product should be connected via the remaining cable gland using a 10-12mm diameter cable. The blind grommet should only be used if the other cable gland routes are already used
12. Once all wiring has been completed and the cable glands secured, replace the cover by replacing the 6 screws.

Wiring Diagrams

Fig.1

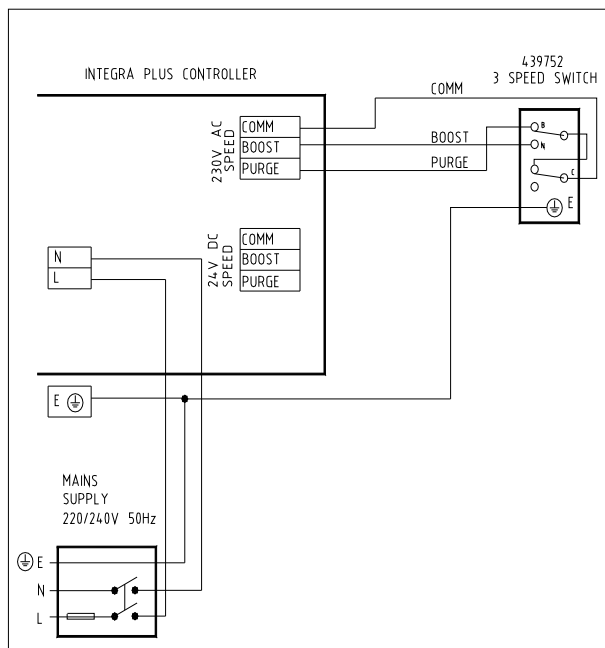


Fig.2

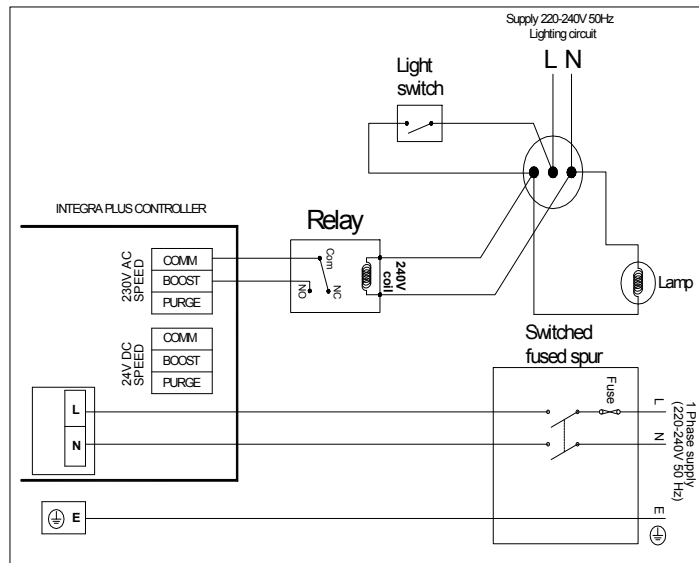


Fig.3

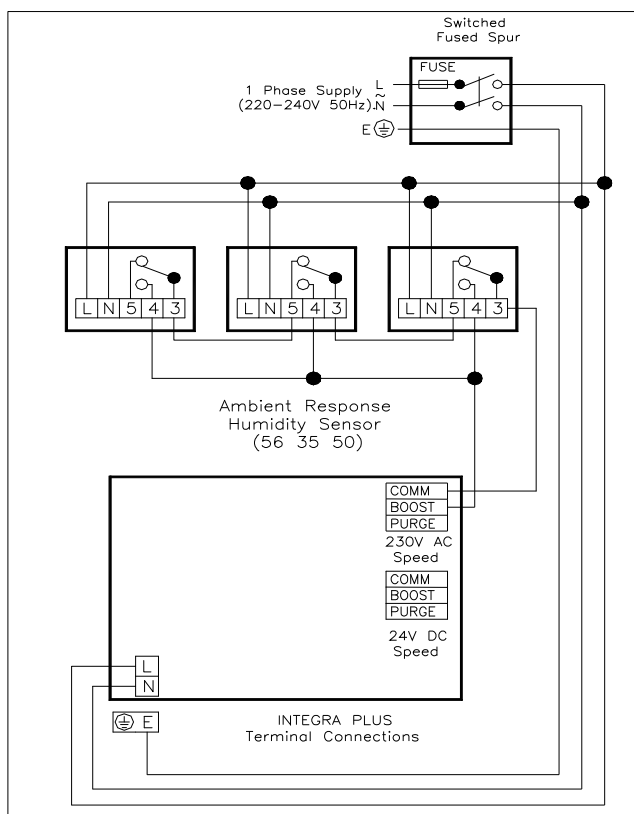


Fig.4

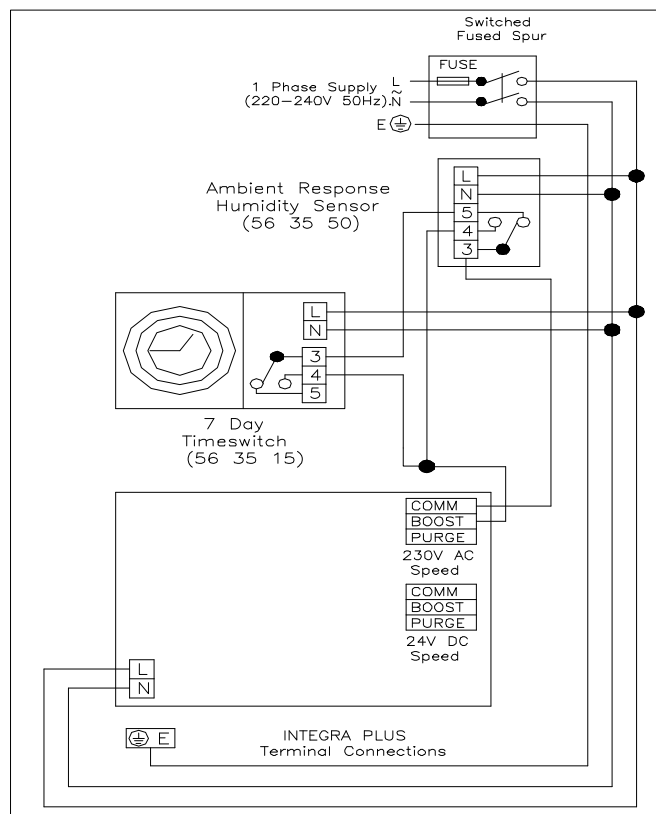


Fig.1 = Wiring via a 3 speed external switch

Fig.2 = Wiring via a light switch

Fig.3 = Wiring via 3 Ambient Response Humidity Sensors

Fig 4 = Wiring via an Ambient Response Humidity Sensor & Timeswitch

Symbols for 3 speed switch

Normal =



Purge =



Boost =



Maintenance and Cleaning

Cleaning Instructions

Isolate from the mains supply before cleaning the product.

The following cleaning and disinfection regime should be conducted every 6 months to maintain the efficiency and hygiene of the unit.

Cleaning should be carried out by a suitably qualified person.

Care should be taken when using sterilising solutions; the manufacturer's instructions should be followed. Gloves and eye protection are the minimum levels of personal protective equipment required.

Do not spill the cleaning solution on any other surfaces, especially fabric as bleaching damage could occur.

The sterilising solution used should be a 'Milton' type solution diluted 1 to 20, or 'Instachlor PR1000' tablets (or similar), these will then give a 1,000 ppm available Chlorine solution.

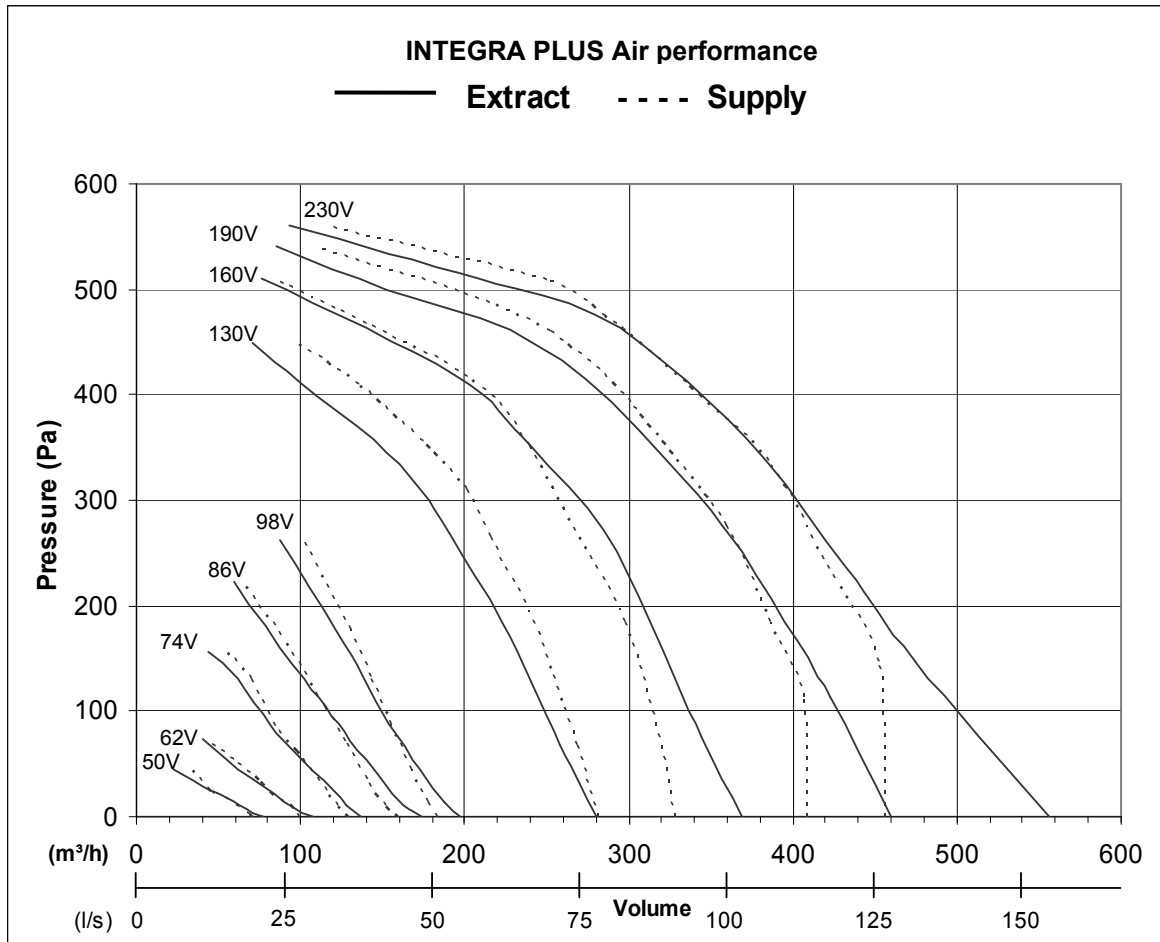
Cleaning Procedure

- | | |
|----------------------------|--|
| 1) Heat Recovery Cell: | Remove from appliance and wash ensuring that the sterilising solution penetrates between the Cell plates.
All parts should be well rinsed with clean water and dried after cleaning with the sterilising solution. |
| 2) Condensate Drain Pipes: | Drain and clean the pipe using a bottlebrush, or similar, soaked in the sterilising solution.
All parts should be well rinsed with clean water and dried after cleaning with the sterilising solution. |
| 3) Filters | The filters should be removed where possible and wiped clean using the sterilising solution, taking care not to damage the filter.
All parts should be well rinsed with clean water and dried after cleaning with the sterilising solution. |
| 4) General Cleaning | The sterilising solution should be used to wipe down all parts showing signs of fungal or mould growth.
All parts should be well rinsed with clean water and dried after cleaning with the sterilising solution. |

Please leave these instructions with the end user

Appendix 1

Air Performance Graph



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 effect your legal rights

Vent-Axia®

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

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 532814

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

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