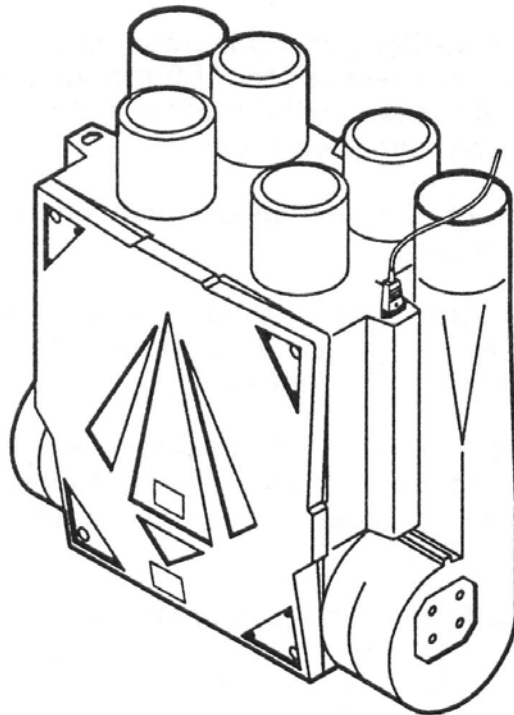


Vent-Axia®

HR250 HEAT RECOVERY VENTILATION UNIT

Installation and Maintenance Instructions

Cupboard or void mounting wholehouse heat recovery ventilation unit and transformer for continuous use in dwellings.



CE

Part No. 14125010

- * Wholehouse ventilation unit with heat recovery
- * Easy to install
- * Energy saving
- * Trickle and/or boost ventilation modes
- * Extremely quiet trickle ventilation mode
- * Meets Building Regulations requirements

220-240V/1/50Hz 190W

PLEASE LEAVE THESE INSTRUCTIONS WITH THE END USER

INSTALLATION AND MAINTENANCE INSTRUCTIONS

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

PRODUCT DESCRIPTION

The HR250 is a wholehouse ventilation appliance having twin centrifugal motor/impellers which provide balanced supply and extract ventilation with up to 70% heat recovery from the stale extracted air. Separation of the exhaust and intake airflows is maintained throughout the unit. In conjunction with a 150VA transformer (Part No. 563538) the unit has the facility to match the performance to the size of the dwelling.

The ventilation unit is suitable for vertical or horizontal mounting in cupboards or roof voids. It is designed for connection to 100mm diameter rigid or flexible ducting extracting from kitchens, utility rooms, bathrooms and toilets and supplying to halls, living rooms and bedrooms.

The electrical power consumption of the ventilation unit when operating at the highest/boost speed is 190 watts.

The ventilation units motors are fitted with thermal overload protection, which in the event of a fault causing either of the two motors to overheat will cut off the electrical supply to the faulty motor.

The optional transformer (Part No. 563538), incorporates electrical connections for operating the ventilation unit at any of six speeds, thereby providing the means for trickle and boost operation together with matching the performance of the unit to the size of the dwelling.

The ventilation unit when used with the 150VA transformer may be connected through a Vent-Axia Ecotronic Humidistat (Part No. 563532) or Ambient Response Humidistat (Part No. 563550) which will automatically switch the ventilation unit from trickle to boost ventilation when the relative humidity in the vicinity of the humidistat exceeds a preset adjustable level.

IMPORTANT POINTS TO NOTE

1. ENSURE THE MAINS ELECTRICAL SUPPLY IS SWITCHED OFF BEFORE COMMENCING INSTALLATION, MAINTENANCE OR SERVICING.
2. 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 OR SERVICING.
3. THIS APPLIANCE IS INTENDED FOR PERMANENT CONNECTION TO THE MAINS ELECTRICAL SUPPLY FIXED WIRING AND MUST BE INSTALLED BY A SUITABLY QUALIFIED PERSON.
4. THIS APPLIANCE MUST BE SITED AND CONNECTED IN ACCORDANCE WITH CURRENT UK BUILDING AND IEE WIRING REGULATIONS (BS 7671) OR THE APPROPRIATE NATIONAL REGULATIONS AND/OR STANDARDS IN YOUR COUNTRY.

5. 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 BS 5733 OR BS 1363 PART 4. A 3 AMP FUSE SHOULD BE FITTED TO THE UNIT, WHICH MUST BE LOCATED OUTSIDE OF A ROOM CONTAINING A FIXED BATH OR SHOWER.

6. WARNING: THIS APPLIANCE IS CLASS I AND IT MUST THEREFORE BE EARTHED.

7. CHECK THE RATING LABEL ON THE APPLIANCE TO ENSURE THAT THE MAINS ELECTRICAL SUPPLY IS COMPATIBLE WITH THE APPLIANCE, WHICH IS RATED AT 220-240V 50Hz AC.

8. THIS APPLIANCE MUST BE SITED AWAY FROM ANY SOURCE OF WATER AND OUT OF REACH OF ANY PERSON USING A FIXED BATH OR SHOWER.

9. IN SITUATIONS WHERE MOISTURE IS PRESENT IN THE AIR, THE APPLIANCE MUST BE CONNECTED TO A DRAINAGE SYSTEM.

10. IF THE APPLIANCE IS SITUATED IN AN UNHEATED ROOF VOID, OR SIMILAR LOCATION, IT SHOULD BE INSULATED TOGETHER WITH ITS ASSOCIATED DUCTING.

11. THE APPLIANCE MUST BE SITED AWAY FROM DIRECT SOURCES OF HEAT IN EXCESS OF 40°C

12. DO NOT SITE AN ASSOCIATED INTERNAL EXTRACT GRILLE IN THE VICINITY OF EXCESSIVE LEVELS OF AIRBORNE OIL OR GREASE.

13. SITE THE APPLIANCE AND ARRANGE ITS ASSOCIATED DUCTING TO PROVIDE A BALANCED CIRCULATION OF AIR.

14. IF AN EXTRACT GRILLE ASSOCIATED WITH THIS APPLIANCE IS SITED IN A ROOM CONTAINING A FUEL BURNING APPLIANCE THE INSTALLER MUST ENSURE THAT AIR REPLACEMENT IS ADEQUATE FOR BOTH APPLIANCES.

15. THE EXTERNAL GRILLES ASSOCIATED WITH THIS APPLIANCE MUST BE SITED AT LEAST 600mm AWAY FROM THE FLUE OF A FUEL BURNING APPLIANCE.

16. THE L TERMINAL ON THE OPTIONAL 150VA TRANSFORMER OUTPUT SIDE PROVIDES FOR FULL SPEED BOOST VENTILATION FROM THE FAN UNIT WHILE TERMINALS L1, L2, L3, L4 AND L5 PROVIDE FOR 5 LOWER SPEED CONTINUOUS TRICKLE VENTILATION OPTIONS. THE FAN CONNECTIONS TO THESE TERMINALS MUST BE VIA SUITABLE SWITCHING ARRANGEMENTS, SIMILAR TO THOSE SHOWN IN FIGS. 4.1, 4.2 AND 4.3.

FITTING THE VENTILATION UNIT (SEE FIG.3)

1. Remove the ventilation unit, mounting channel and fixing pack from the packaging.

2. After noting the positions of the electrical connector, duct spigots and drainage connector on the ventilation unit (See Fig. 1) select a suitable installation site. Note that the drainage connector must be to the bottom of the unit irrespective of horizontal or vertical mounting. The site selected must allow sufficient space around the unit for the removal of the access panel, heat exchanger and ducts for maintenance and servicing purposes.

3. If appropriate, provide a mains electrical supply and drainage system in the vicinity of the installation site.
4. Fix the mounting channel to the mounting surface using, if appropriate, the fixing screws and wall plugs supplied in the fixing pack.
5. Take the ventilation unit and cut off the closed ends of those duct spigots which are to be connected to the duct system (see Fig. 1). Ensure no cutting debris either falls into or remains in the unit as this could damage the balanced impellers and cause excessive noise and vibration.
6. Locate the mounting rib, which projects from the housing, in the mounting channel and fix the unit to the mounting surface using, the long screw and washer and, if appropriate, the wall plug supplied in the fixing pack. The screw passes through the slot in the lug projecting from the end of the housing in the vicinity of the duct spigots.
7. Connect the drain to the drainage system using appropriate pvc pipe work joined with pvc cement to form watertight joints.
8. Install suitable internal and external air grilles and connect them to the ventilation unit using suitable 100mm diameter flexible or rigid ducting and ducting components. If flexible ducting is used it should be fully stretched in order to obtain the best performance.

FITTING THE OPTIONAL 150VA TRANSFORMER AND CONTROL SWITCH (SEE FIG.3)

1. Remove the transformer from the packaging.
2. Unscrew the two cover retaining screws and remove the cover.
3. Offer the base assembly to the mounting surface and mark the fixing hole positions on the mounting surface.
4. Fix the base assembly to the mounting surface using suitable woodscrews and, if appropriate, wall plugs.
5. Install a suitable manual or automatic control switch in accordance with the instructions supplied with it. For wiring arrangements associated with this see Fig. 4.

WIRING THE VENTILATION UNIT, TRANSFORMER AND CONTROL SWITCH (SEE FIG.4)

1. Ensure the mains electrical supply is switched off.
2. Cut to length, strip and connect suitable cables between the ventilation unit, transformer and control switch in accordance with the wiring arrangements shown in Fig. 4. For circuits incorporating the 150VA Transformer (563538) note that 5 trickle and 5 boost speed options can be obtained by selecting different transformer output voltages. This is done by connecting the 'TRICKLE' wire to any one of the L1(80V), L2(100V), L3(120V), L4(140V) or L5(160V) terminals and the 'BOOST' wire to any one of the L2(100V), L3(120V), L4(140V), L5(160V) or L(240V) terminals with a higher voltage than the terminal selected for the 'TRICKLE' wire. Note that the circuit must include change over switching arrangements similar to those shown in Figs. 4.1, 4.2 and 4.3 in order to avoid simultaneously energising two transformer

windings. Failure to observe this instruction will result in damaging the transformer.

3. When using surface wiring which is not contained in conduit anchor the cables to the mounting surface along their length and particularly adjacent to the connection unit, transformer and control switch.

4. The detachable flexible lead from the ventilation unit must be clamped at the transformer or control switch, whichever is appropriate. For this purpose an M20 plastic bushing incorporating a cable clamp is supplied loose with the transformer.

5. Replace the transformer cover and tighten the retaining screws while ensuring no wiring is trapped between the base and cover.

6. Locate the control switch on its mounting box and tighten its retaining screws.

7. Switch on the mains electrical supply and check for satisfactory operation of the ventilation unit and duct system.

CLEANING INSTRUCTIONS

Apart from removing odours, providing fresh air and recovering heat, this appliance extracts airborne impurities such as dust, dirt and grease. These gradually build up and detract from the efficiency of the unit. Therefore, to ensure peak performance, the appliance should be cleaned regularly at intervals determined by the level of contamination experienced and according to the procedure listed below:

1. Switch off the mains electrical supply to the appliance.

2. Remove the access panel after unscrewing the four captive retaining screws.

3. Withdraw the heat exchanger.

4. Wash the heat exchanger in warm water using a mild detergent and subsequently dry it thoroughly. Clean the inside of the unit with a vacuum cleaner if necessary. N.B. Keep water away from all electrical components and wiring inside and outside the appliance and also take care not to damage the fan impellers; which are balanced to prevent vibration.

5. Replace the heat exchanger.

6. Replace the access panel and tighten the captive retaining screws.

7. Switch on the mains electrical supply and check for satisfactory operation.

FIG 1. DIMENSIONS

FIG 1.1 VENTILATION UNIT

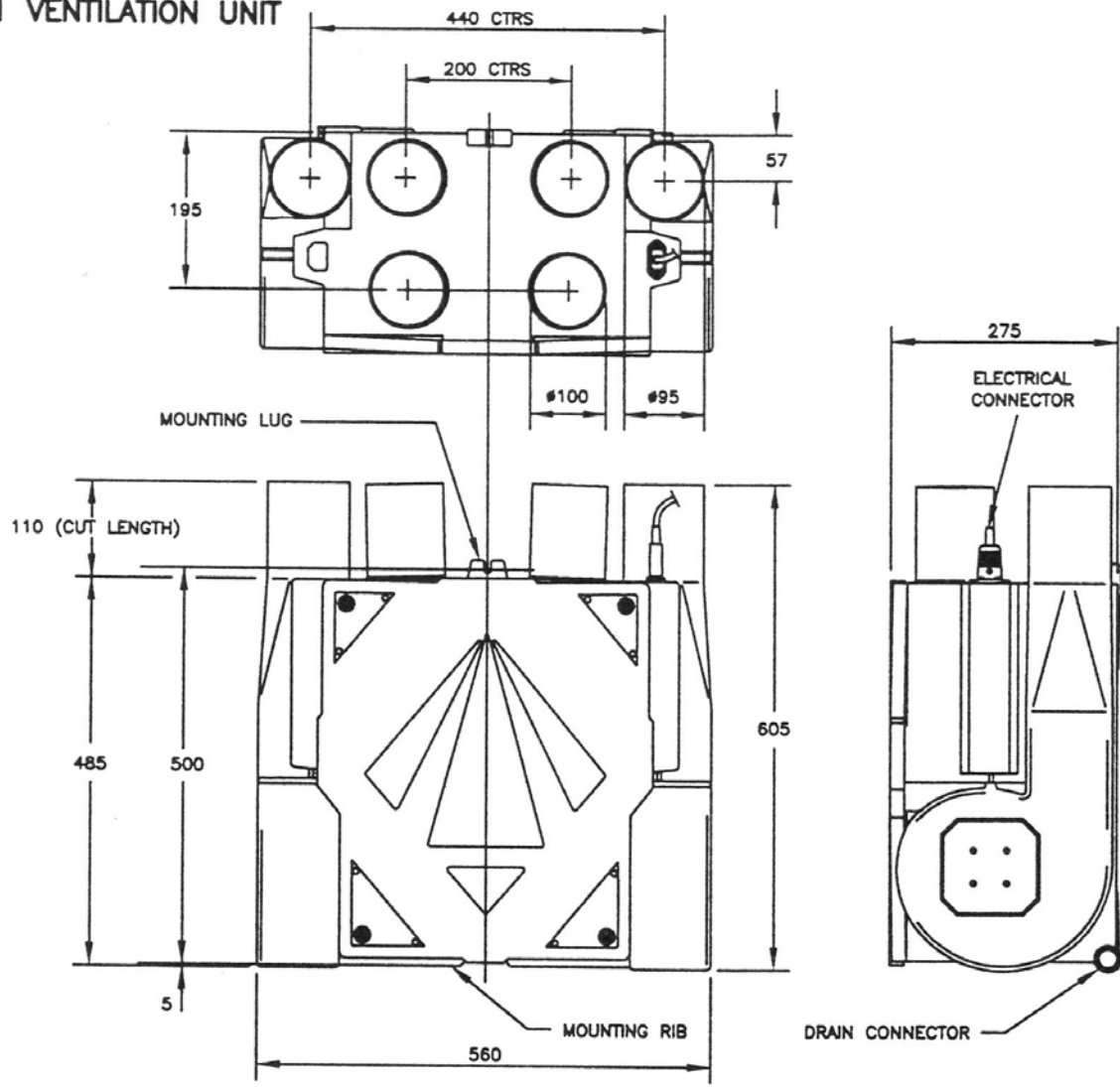


FIG 1.2 150VA TRANSFORMER (Part No. 563538)

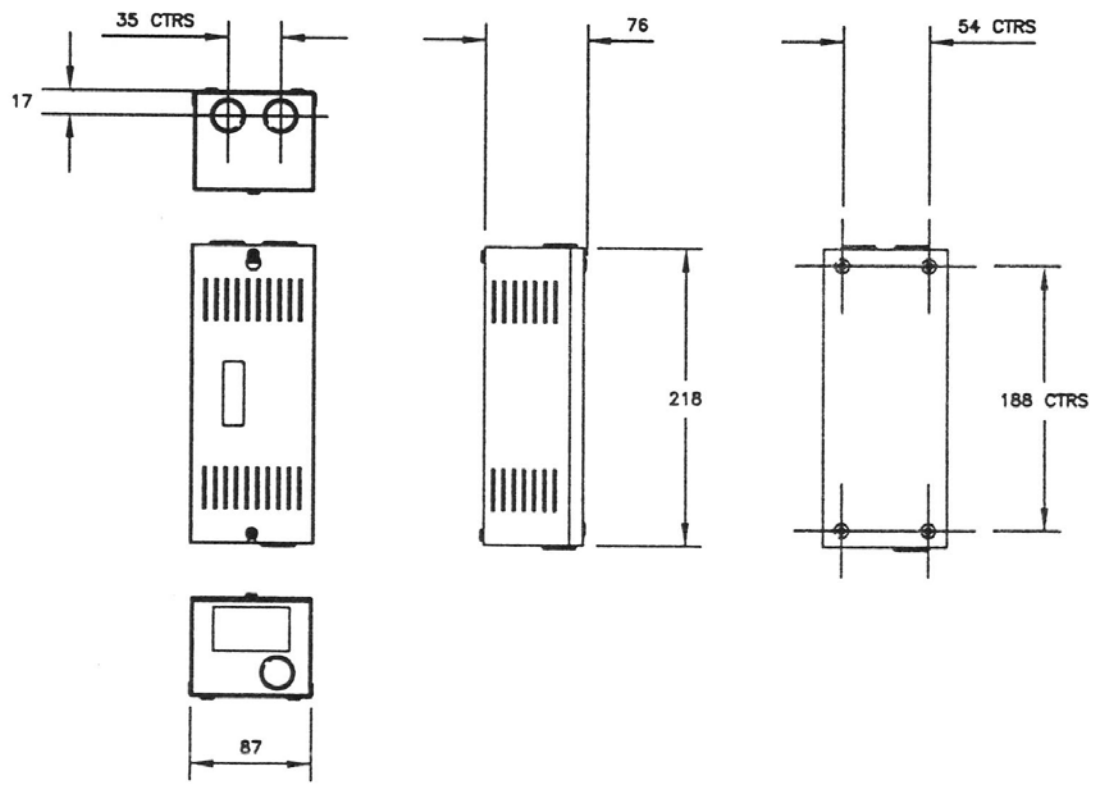
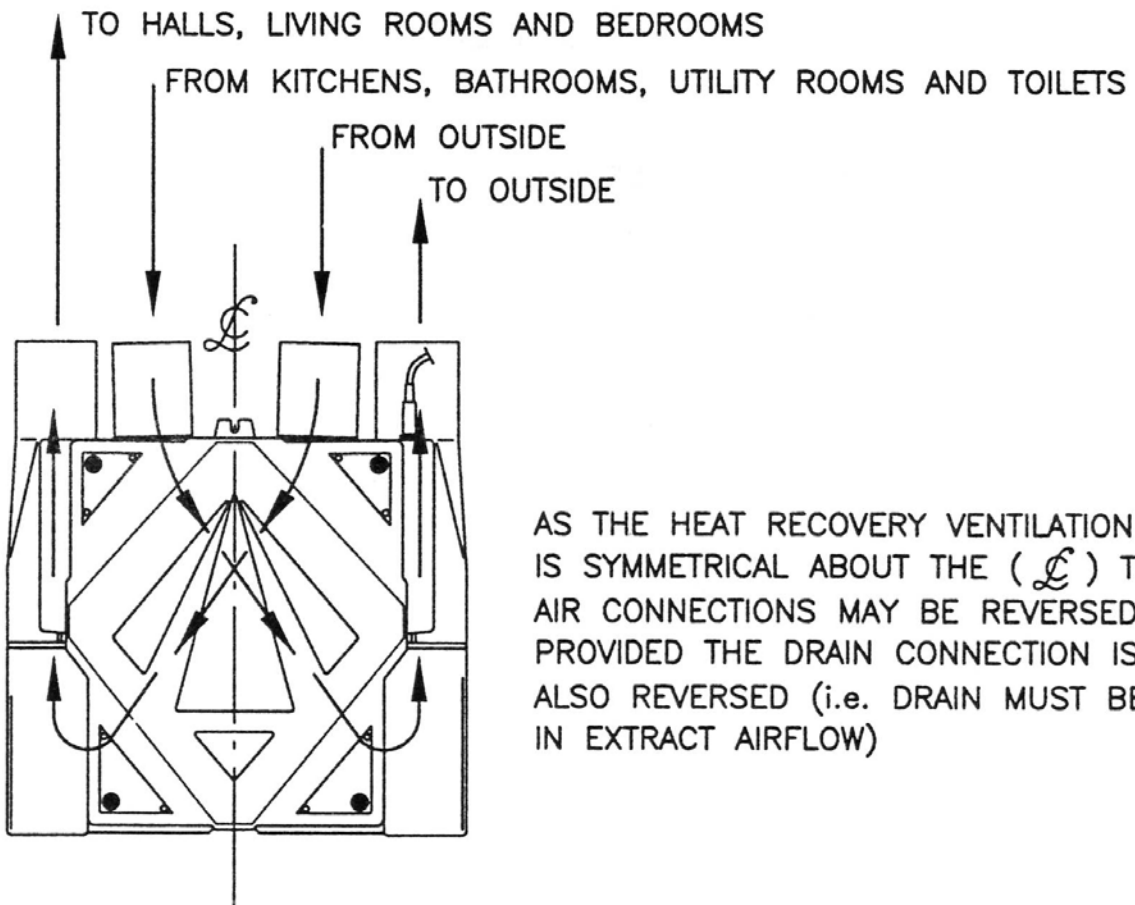
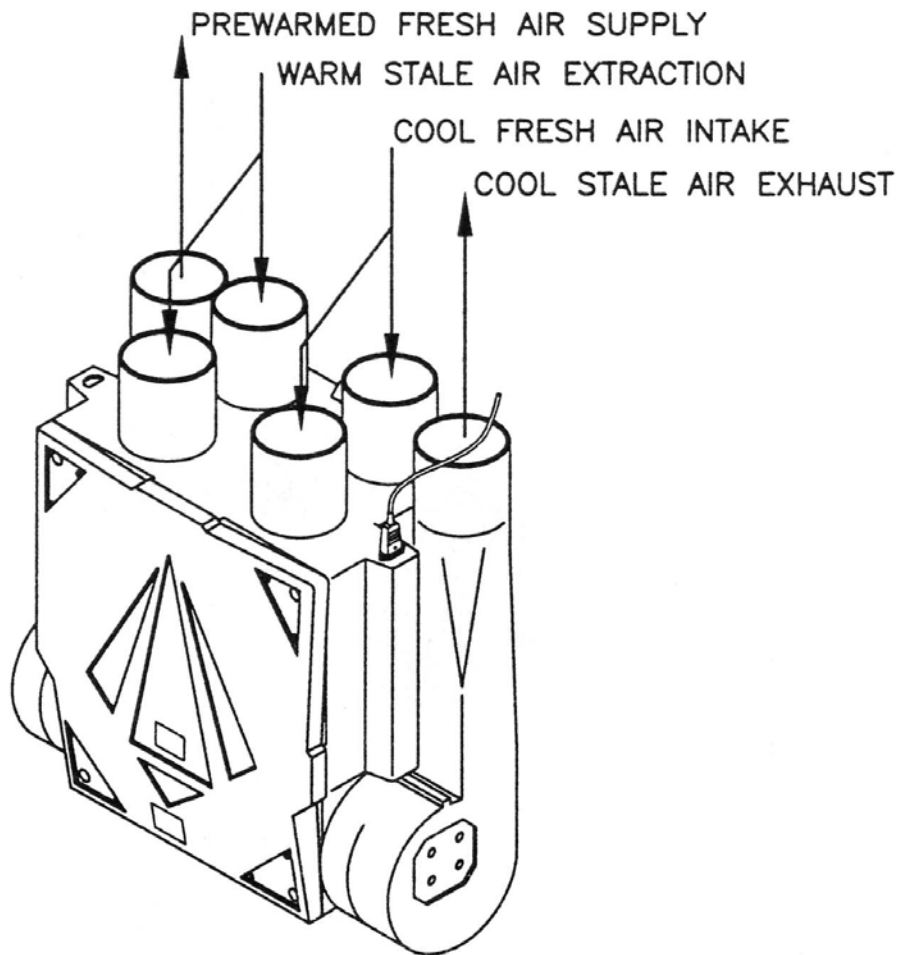


FIG 2. AIRFLOW



AS THE HEAT RECOVERY VENTILATION UNIT IS SYMMETRICAL ABOUT THE (L) THE AIR CONNECTIONS MAY BE REVERSED, PROVIDED THE DRAIN CONNECTION IS ALSO REVERSED (i.e. DRAIN MUST BE IN EXTRACT AIRFLOW)

FIG 3. INSTALLATION DETAILS

FIG 3.1 HEAT RECOVERY VENTILATION UNIT

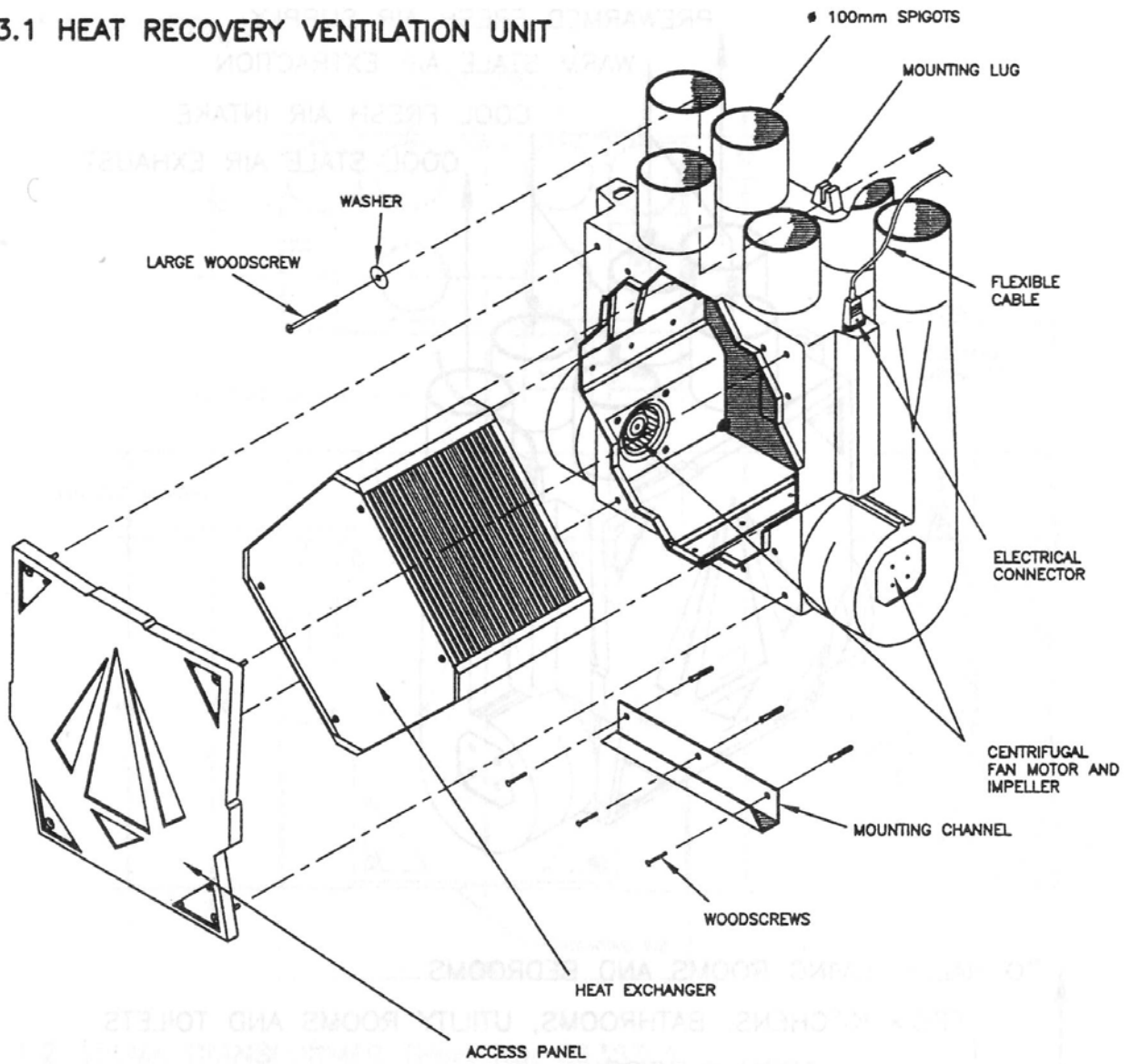


FIG 3.2 150VA TRANSFORMER (Part No. 563538)

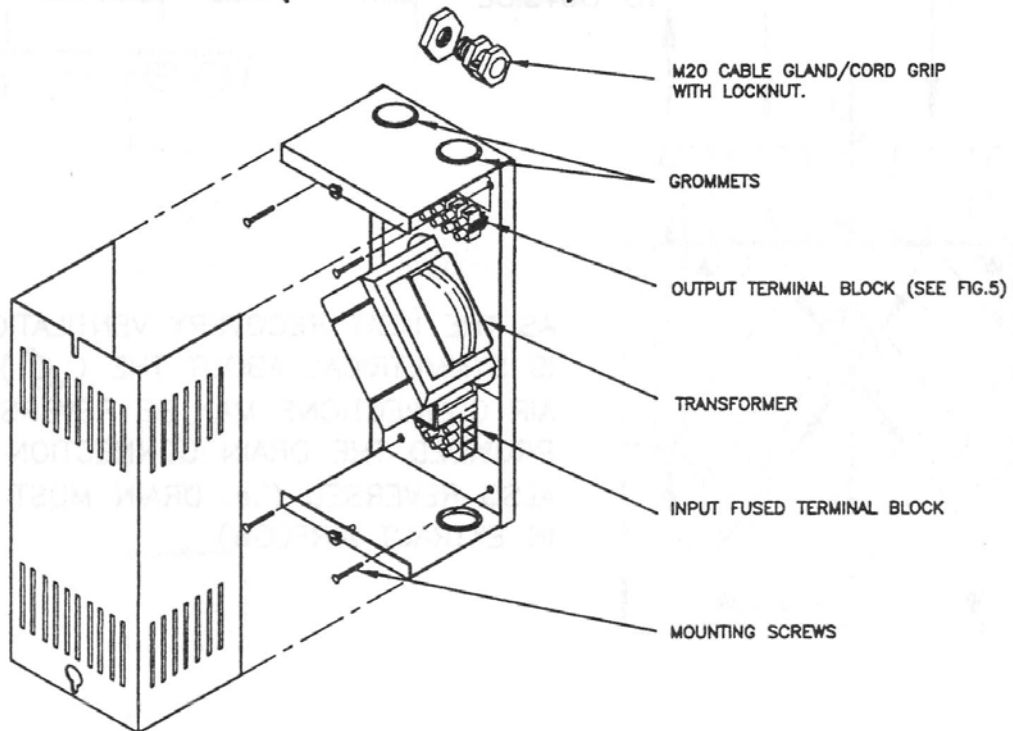


FIG 4 WIRING ARRANGEMENTS

FIG 4.1 CONTINUOUS TRICKLE OR BOOST VENTILATION.

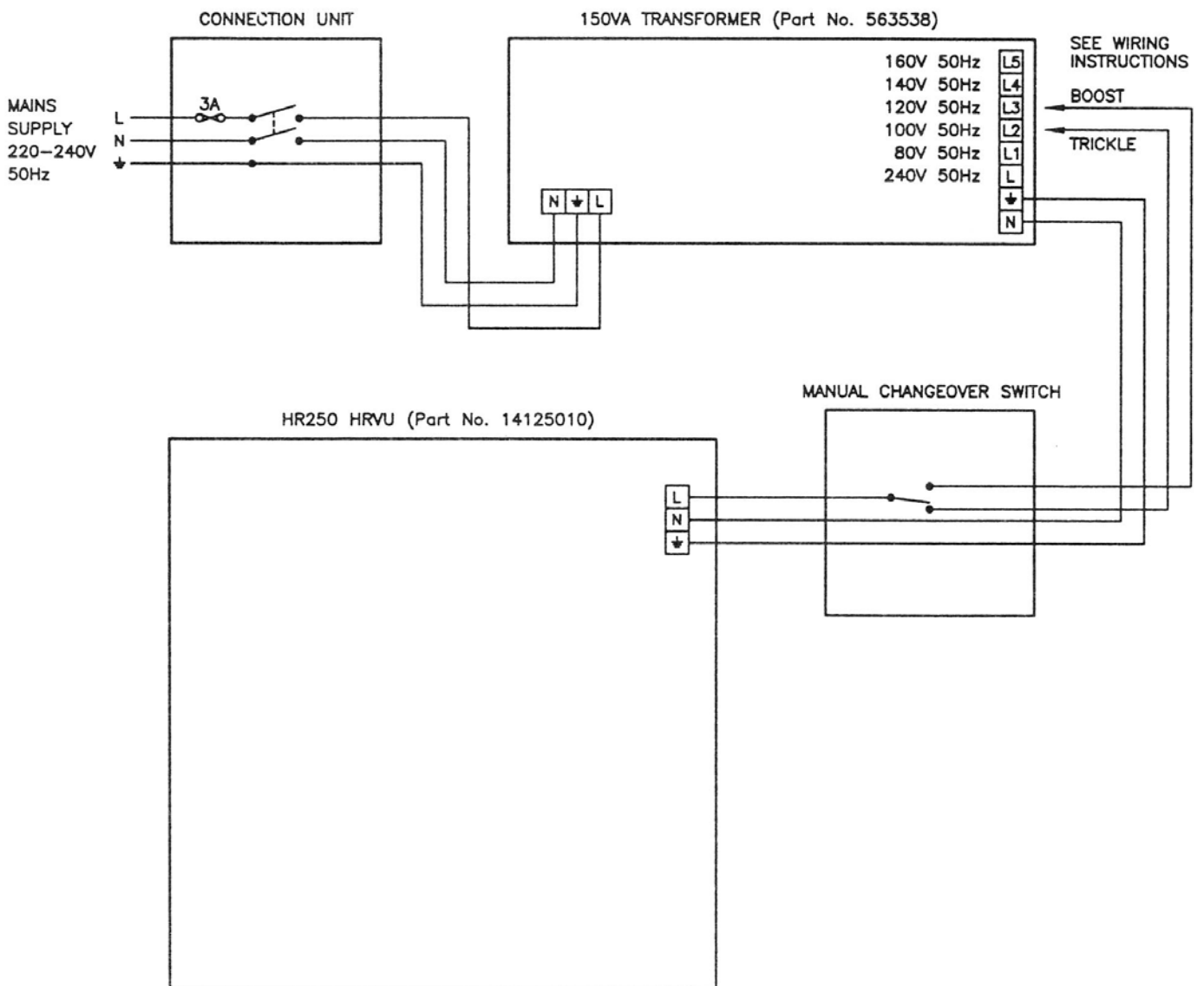


FIG 4.2 CONTINUOUS TRICKLE VENTILATION WITH HUMIDITY ACTIVATED FULL SPEED BOOST VENTILATION – SINGLE HUMIDITY SENSOR.

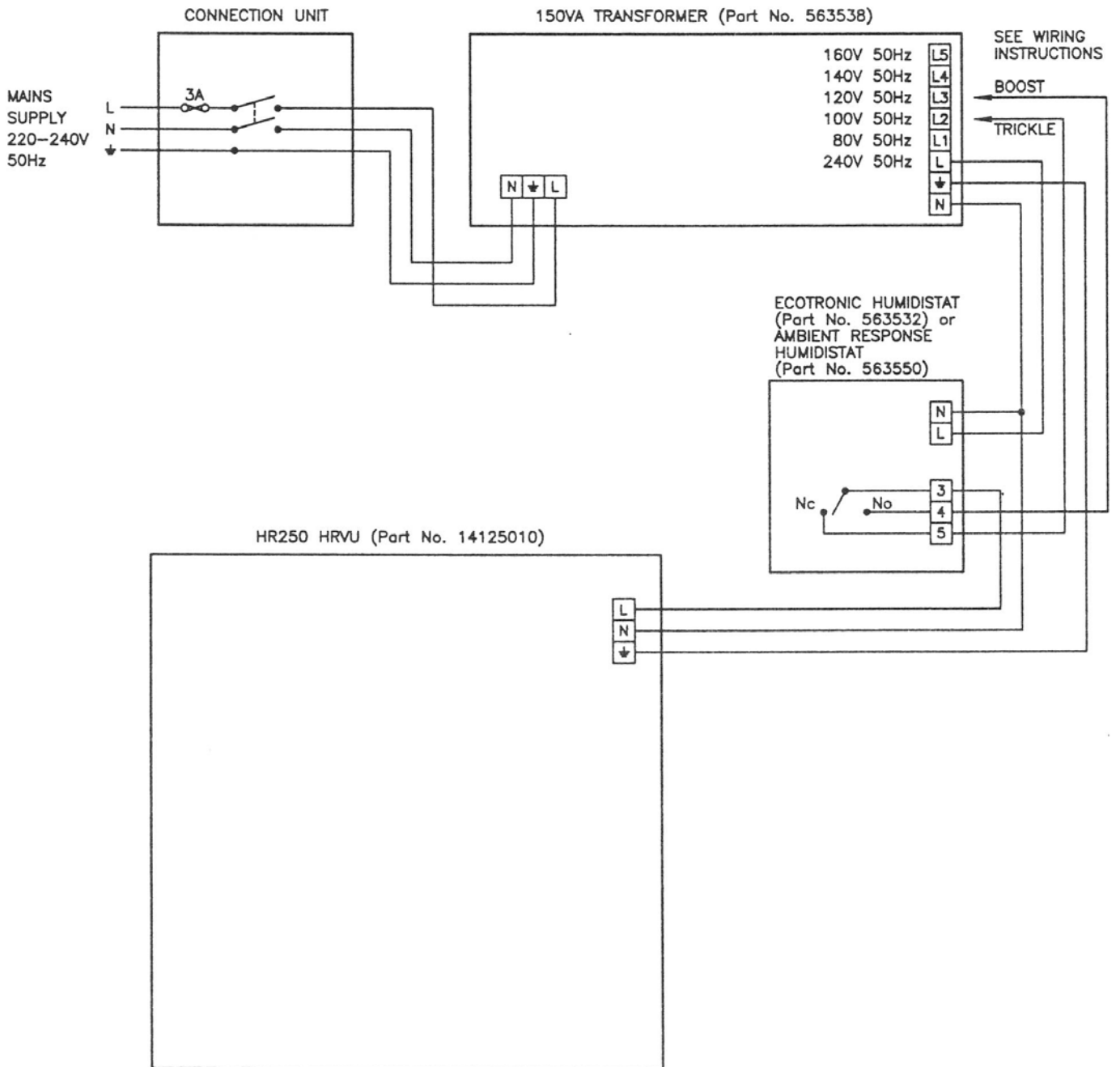


FIG 4.3 CONTINUOUS TRICKLE VENTILATION WITH HUMIDITY ACTIVATED FULL SPEED BOOST VENTILATION – MULTIPLE HUMIDITY SENSORS.

