

HOME'N'DRY XL

POSITIVE INPUT VENTILATION UNIT

With and Without Integral Duct Heater

INSTALLATION INSTRUCTIONS

WARNING: THIS APPLIANCE MUST BE EARTHED

1. GENERAL DESCRIPTION

- 1.1 The **HOME'N'DRY XL** unit must be installed by a competent person. All electrical wiring must be installed by a suitably qualified person, and conform with I.E.E. Regulations (current edition.).
- 1.2 **HOME'N'DRY XL** is a domestic ventilation unit that provides thermostatically controlled filtered air to the dwelling, thereby improving the living environment. **HOME'N'DRY XL** combats condensation and its effects by increasing the saturation point of the air within the dwelling. Air volume provided by **HOME'N'DRY XL** is selectable between 30l/s at position 1, and 60l/s at position 4, by adjustment of a potentiometer situated on the printed circuit board (PCB). Due to the increase in power consumption at position 4, this setting should only be used in extreme circumstances.
- 1.3 **HOME'N'DRY XL** automatically operates within the temperature range of 5°C (minimum) and 24°C (maximum). The facility for fitment of Low and High temperature override controls, and a humidistat is provided by removing the required link and connecting the desired control to the PCB, referring to Fig. 2 for wiring configuration.
- 1.4 Additional air filtration can be provided by fitting a **HOME'N'DRY XL PLUS** kit, which replaces the external side filters with externally fitted filters, giving increased surface area of the filter medium.

2. INSTALLATION REQUIREMENTS

- 2.1 **INSTALLATION AND DUCTING:** The **HOME'N'DRY XL** ventilation unit is to be installed in the loft space, mounted on the 4 anti-vibration grommets, fitted to 2 battens (38 x 25 mm) which in turn are secured to the ceiling joists. The air discharge outlet is connected to the ceiling diffuser by 8 inch flexible ducting (provided).
- 2.2 **ELECTRICAL:** Electrical installation requires the provision of a 3 amp fused, 230V 50 Hz supply incorporating a protective earth link. Connection to the unit shall be made using 3 core (Brown-Blue-Green/yellow), 6A, 0.75mm² cross sectional area (provided), via a double pole switch having a contact separation of at least 3mm at each pole.
- 2.3 **CEILING DIFFUSER:** Utilises 4 x plasterboard fixings to secure the diffuser to the ceiling, and connect to the 'HOME'N'DRY' ventilation unit ducting.

3. INSTALLATION

- 3.1 Separate the three component parts that make up the ceiling diffuser and use the fixing plate flush against the ceiling in order to mark and cut a 210mm dia. hole at the required position.
- 3.2 Turn the fixing plate over and push the spigot into the newly cut hole. Mark the 4 fixing holes in the ceiling, drill and secure using the 4 x plaster board fixings and 4 x 1 in. No. 8 screws provided.
- 3.3 If 360° dispersal is required, the air deflector can be discarded. However, if deflection is required, for example to deflect air away from a wall, the required collar sections can be removed by bending until the section separates from the collar. Care must be taken to avoid splitting the Diffuser Collar.

Note: If the diffuser is fitted within a narrow passage (i.e., hallway), then remove opposite sections of the collar and use the collar to blank off airflow near the walls; or if the diffuser is fitted in a corner situation, remove adjacent sections of the collar and use the collar to again blank off airflow near the walls.

- 3.4 Fit the diffuser plate and collar to the spigot plate.
- 3.5 Secure the 2 battens to the ceiling joists in the required position using 4 x 1 in. No. 8 screws provided (see fig. 2)
- 3.6 Release the screw securing the Filter Box in the closed position and hinge the unit open.
- 3.7 Referring to Fig. 3, mount the **HOME'N'DRY XL** to the battens using the 4 wood screws and penny washers provided into the anti vibration grommets, ensuring that the penny washers are situated on the inside of the unit.
- 3.8 Connect the flexible ducting to the **HOME'N'DRY XL** unit and ceiling diffuser spigots and secure using the duct clips provided, ensuring that the ducting is kept as straight as possible to minimise pressure drop through it.
- 3.9 Ensure that the electrical supply is isolated, and connect the unit to the electrical supply as follows:

Green/yellow wire to 'EARTH'

Blue wire to 'NEUTRAL'

Brown wire to 'LIVE'

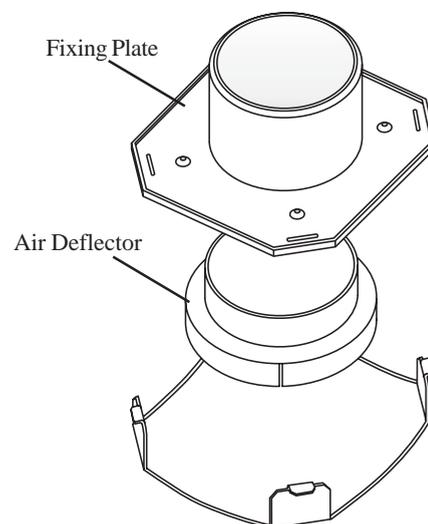


Fig 1.
Ceiling Diffuser
Assembly

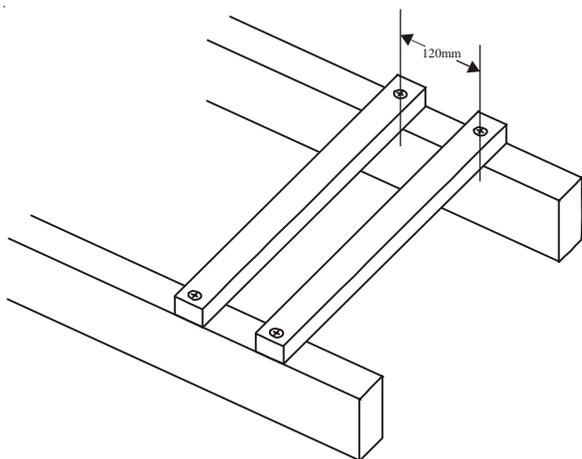


Fig.2
Mounting Batts

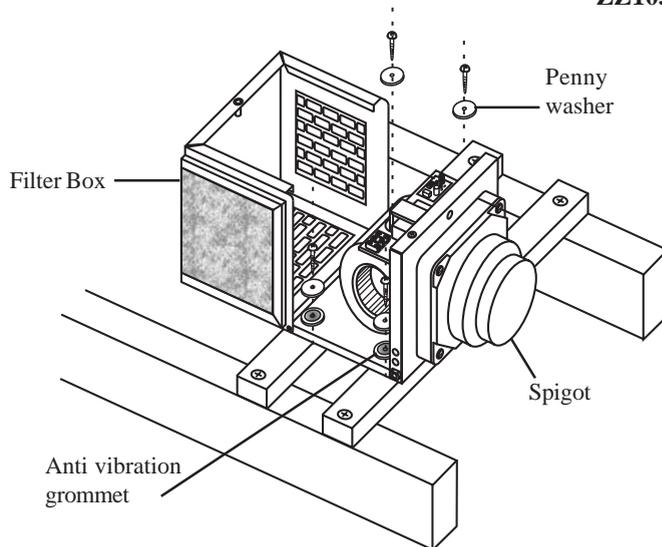


Fig.3

3.10 Locating Remote Switch (Units With Integral Duct Heater)

- 3.10.1 Locate the remote switch in its desired position and secure the surface box to a sound flat surface away from moisture and condensation.
- 3.10.2 Using sheathed cable (not supplied) with a minimum core size of 0.75mm², wire the switch as shown in fig.5

Note: the remote switch requires three cores that are live and therefore under no circumstances should you use flat twin and earth, or any other cable with an unshielded core!

- 3.10.3 Fit the Heyco bush to the cable running from the remote switch and push the Heyco bush into the spare hole on the side of the unit until it locks, ensuring that there is a minimum of 300mm of cable inside the unit.
- 3.10.4 Wire the remote switch as shown in the circuit diagram (fig. 5)
- 3.11 Hinge the cover closed and secure with the fixing screw (See fig. 4)

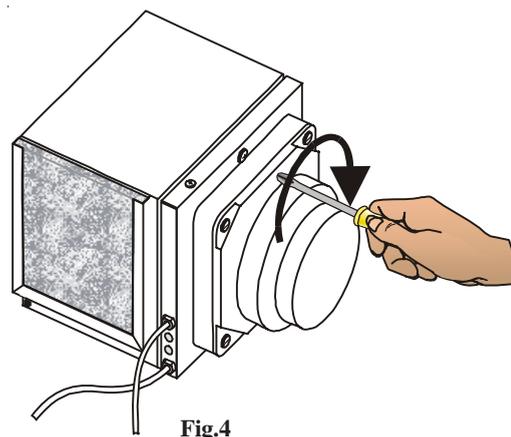


Fig.4

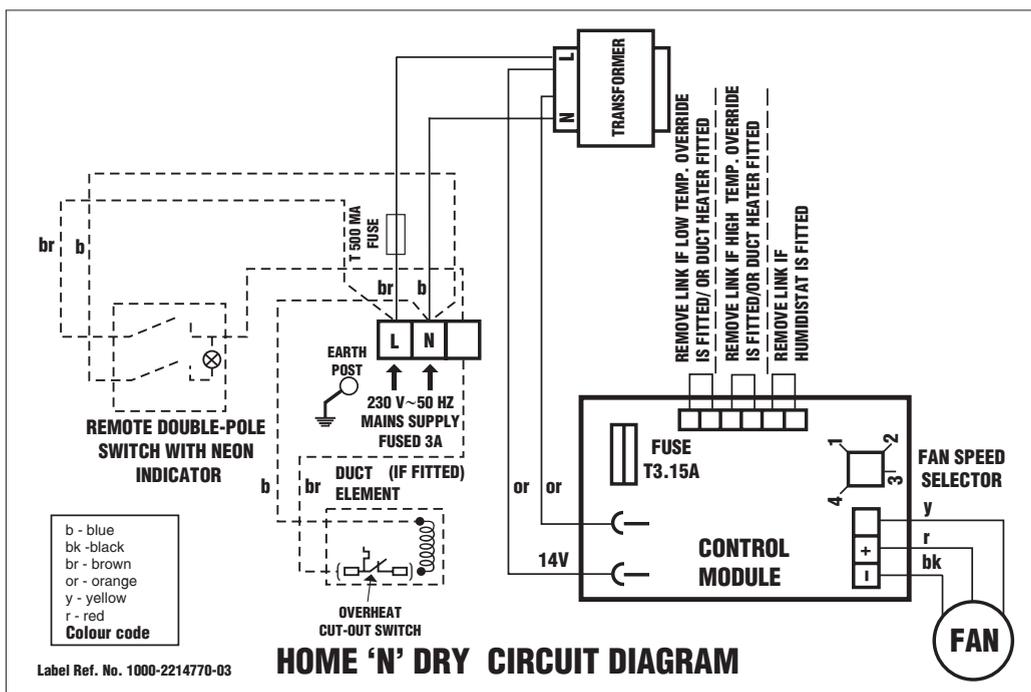


Fig. 5
Circuit Diagram

4. COMMISSIONING

- 4.1 The air volume provided is controlled by setting the Fan Speed potentiometer situated on the PCB, and is dependant upon the size of dwelling.
Setting 1 provides 30l/s, which equates to a 50% air change in a dwelling with a floor area of up to 100m², taking an average ceiling height of 2.4m (air volume up to 240m³).
Setting 2 provides 40l/s, which equates to a 50% air change in a dwelling with a floor area of up to 120m², taking an average ceiling height of 2.4m (air volume up to 288m³).
Setting 3 provides 50l/s, which equates to a 50% air change in a dwelling with a floor area of up to 150m², taking an average ceiling height of 2.4m (air volume up to 360m³).
- 4.2 Referring to para 4.1, set the Fan Speed potentiometer to the setting suitable to the size of dwelling. More accurate delivery of air volume can be achieved by calculating the flow rate required, measuring the output at the ceiling diffuser using a suitable monitoring device and setting the Fan Speed potentiometer to provide the required flow rate.

5. MAINTENANCE

IMPORTANT: Following any maintenance task, the HOME'N'DRY XL is to be fully re-commissioned in accordance with Section 4 of these instructions.

5.1 **FANREMOVALANDCLEANING:**

- 5.1.1 Ensure that the electrical supply to the unit is switched OFF and isolated.
- 5.1.2 Release the screw securing the Filter Box in the closed position and hinge the unit open.
- 5.1.3 Disconnect the '**RED**', '**BLACK**' and '**YELLOW**' fan conductors from the PCB, noting their positions for subsequent reconnection.
- 5.1.4 Release the 4 x securing screws and withdraw the fan, taking care to avoid causing damage to the fan blades.
- 5.1.5 Remove all dust from the impeller blades using a soft brush or vacuum cleaner, taking care to avoid causing damage to the impeller.
- 5.1.6 Refitment or replacement is in reverse order.

5.2 **TRANSFORMER REMOVAL:**

- 5.2.1 Ensure that the electrical supply to the unit is switched OFF and isolated.
- 5.2.2 Release the screw securing the Filter Box in the closed position and hinge the unit open.
- 5.2.3 Disconnect the following:
- BROWN** transformer conductor from the terminal block terminal marked '**L**',
 - BLUE** transformer conductor from the terminal block terminal marked '**N**',
 - 2 x **ORANGE** transformer conductors from the PCB spade connections.
- 5.2.4 Release the 2 x securing screws and nuts, and withdraw the transformer.
- 5.2.5 Refitment or replacement is in reverse order.

5.3 **PCB REMOVAL:**

- 5.3.1 Ensure that the electrical supply to the unit is switched OFF and isolated.
- 5.3.2 Release the screw securing the Filter Box in the closed position and hinge the unit open.
- 5.3.3 Disconnect the '**RED**', '**BLACK**' and '**YELLOW**' fan conductors from the PCB, noting their positions for subsequent reconnection.
- 5.3.4 Disconnect the 2 x **ORANGE** transformer conductors from the PCB spade connections.
- 5.3.5 If fitted, disconnect the Low temperature override, High Temperature override and/or Humidistat from the PCB ancillary terminal block.
- 5.3.6 Depress the lug on each of the 4 PCB mounting pillars, and ease the PCB upwards to remove.
- 5.3.7 Refitment or replacement is in reverse order.

5.4 **FILTER PAD REMOVAL (XL model):**

- 5.4.1 Withdraw the side and rear Filter Pads from the filter box channels.
- 5.4.2 Refitment or replacement is in reverse order.

5.5 **FILTER PAD REMOVAL (XL PLUS model):**

- 5.5.1 Remove the outer side filters from the filter frames. These are retained by a drawstring hem around the filter opening.
- 5.5.2 Withdraw the rear Filter Pad from the filter box channel.
- 5.5.3 Refitment or replacement is in reverse order.

6.

SPARES LIST

Description	Part No.	Qty.
Centrifugal Fan	1000-0519460	1
Printed Circuit Board	1000-0520130	1
Transformer	1000-0520120	1
Filter Media Pack XL	1000-0013310	1
Filter Media Pack XL Plus	1000-0013320	1
Duct Heater (Where Fitted)	1000-0522360	1

Johnson and Starley prides itself on its ability to supply spare parts quickly and efficiently. If your service engineer indicates a problem in obtaining a spare part, advise him to contact Johnson and Starley Spares Department at the address below.

Telephone: 01604 762881

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