



DRI-365

Anti-Condensation and Whole House Positive Input Ventilation Unit

Installation and Maintenance

CE The EMC Directive
2014/30/EU
The Low Voltage
Directive
2014/35/EU

1.0 INTRODUCTION

The unit is a unique low energy Positive Input Ventilation (PIV) unit. Unlike conventional PIV units which only draw in external air via the loft in a "cold roof", the unit is capable of drawing in external air from a roof location via an inlet spigot fitted with a low energy open/close damper.

It is not necessary for the home owner to program or operate the unit in any way, as the 365 is fully automatic and intelligently decides which location the fresh air will be supplied from.

If the loft temperature is below 24°C then the unit will take fresh air from the loft.

If the loft temperature is above 24°C then cool fresh air will be taken from outside the dwelling.

If the loft temperature is 19°C to 24°C and the house is cooler than this, then the unit goes into heat recovery mode. The unit will increase in speed and supply more air to the property.

The unit can be boosted to obtain maximum ventilation by the operation of a boost switch.

2.0 IMPORTANT NOTES TO INSTALLERS

Successful operation of the fan depends entirely upon the unit being installed strictly in accordance with these instructions.

Please read through this guide in its entirety before commencing installation and follow step by step to ensure a satisfactory completion.

Whilst the installation of the DRI-365 unit may be achieved by suitable persons, the provision of the electrical supply and the connection of the unit to the mains must be carried out by a qualified electrician.

Warning: Isolate from power supply before removing any covers. During installation/maintenance ensure all covers are fitted before switching on the mains supply.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.

Means for disconnection must be incorporated in the fixed wiring as shown in the wiring diagram in accordance with IEE wiring or national wiring rules.

CAUTION: In order to avoid a hazard due to inadvertent resetting of the thermal cut-out, this appliance must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off by the utility.

3.0 LOFT INSPECTION

Check to ensure that the loft has adequate ventilation. There may be occasions where a loft is so well sealed that additional ventilation may have to be provided by the owner/occupier.

Ensure that all water tanks are covered and sealed.

Check that all water pipes are lagged.

Ensure that any extract fans are discharging to outside and not into the loft.

Check that the loft hatch is tightly sealed.

Ensure that all holes in the ceilings are sealed i.e. ceiling light fittings etc.

A visual inspection of any flues or chimneys for leakage in the loft should be carried out by the installer.

If any leakage points are found, or if there is any doubt at all, then the installer should advise the house owner/provider as soon as possible and seek instruction from them before proceeding with the installation.

4.0 DIFFUSER INSTALLATION

4.1 Siting the Diffuser Position

The diffuser has a unique air throw pattern and it is essential that it is located correctly in the central hallway in single storey properties or in the ceiling of the top floor landing on 2 or more storey dwellings.

The diffuser discharges air evenly in all directions along the underside of the ceiling.

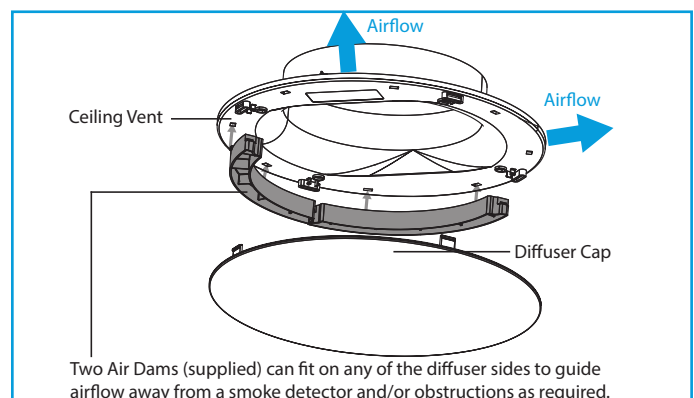
Speed Setting	Minimum distance of diffuser from wall
1	100mm
2	155mm
3	400mm
4	625mm
5	850mm
6	1000mm

Note: SMOKE ALARMS -It is also important to ensure that the diffuser is NOT placed within 1 metre of a smoke alarm.

If the diffuser cannot be repositioned, two sides of the diffuser must be closed off using the air dams supplied to encourage the air through the remaining open sides that faces at least 1.5 metres of unobstructed area away from the smoke alarm sensor.

4.2 Fitting the Air Dams

Air dams should be fitted as needed, to alter the direction of airflow required. 2 air dams are supplied and will fit on any of the diffuser sides to guide airflow away from a smoke detector and/or obstructions.

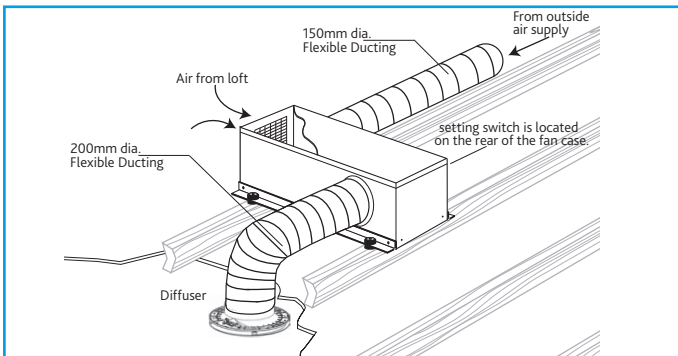


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4.3 Fitting the Ceiling Diffuser

To install the diffuser, use the tear-out template from the lid of the unit packaging and trace the shape onto the ceiling between two convenient joists. Once the shape has been cut out, position the ceiling vent by aligning the label on the ceiling vent with the narrowest point of the ellipse and secure it in place using the 4 screws and plugs provided.

Finally attach the diffuser cap to the frame using the four built-in press on clips provided.



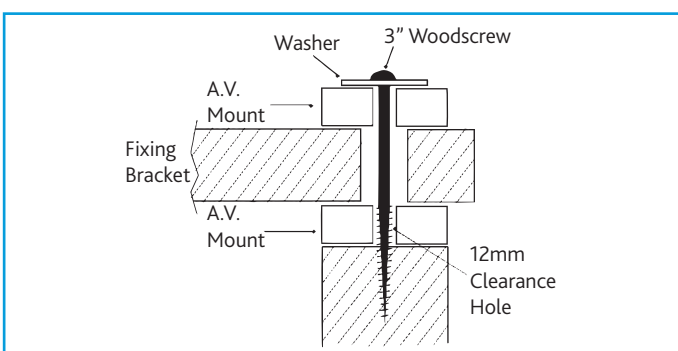
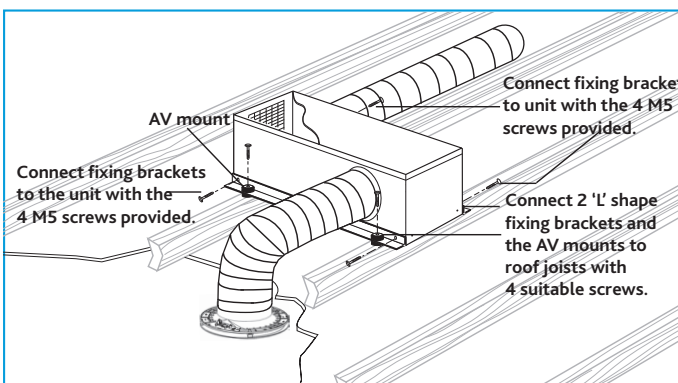
5.0 DRI-365 INSTALLATION

5.1 Fitting the unit (Standard Configuration)

Connect the two 'L' shape fixing brackets to the long sides of the unit with the M5 screws (provided) then lower the unit with the "L" shape fixing brackets attached to the unit onto the joists. Mark 4 holes through the brackets so that the holes will be centrally positioned over a joist.

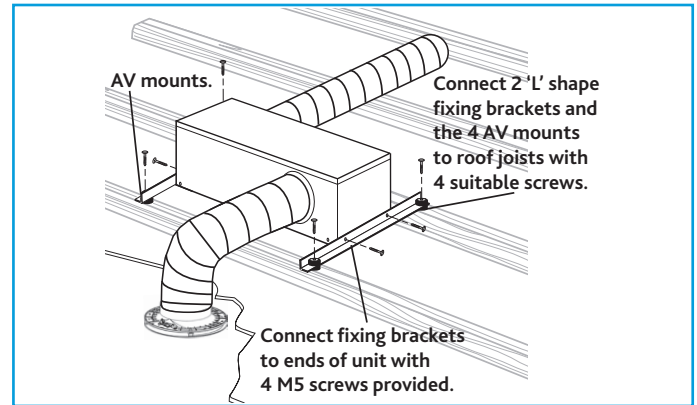
Locate anti-vibration mounts (supplied) above and below each bracket fixing joint hole and, using 4 suitable screws (not provided) and washers, fix the unit to the joists.

Note: Do not overtighten the fixings.



5.2 Fitting the unit (Optional Configuration)

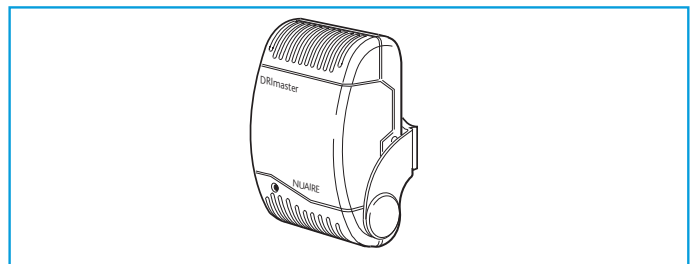
Using a similar procedure the two 'L' shape fixing brackets can also be mounted on the short sides of the DRI-365 unit if an alternative mounting position is required.



6.0 THE REMOTE SENSOR

DRI-365 units are supplied with 15 metres of 2 core cable prewired and ready to connect to the Remote Sensor.

The Remote Sensor is used in conjunction with the units internal sensor to allow the system to operate in "Heat Recovery Mode".



The sensor is fitted with an LED indicator which is capable of providing various status information if required.

As supplied the LED provides only the default setting of flashing RED after 5 years from commissioning to indicate that the filters need cleaning or replacement and permanent RED to indicate a failure.

Two other indications are available by closing the sprung gate latch. These are: GREEN to indicate when the system is in 'Heat Recovery Mode' and AMBER which indicates normal operation.

If it is desired to disable the LED function completely the LED itself may be 'bent' over to one side in order to render it 'blind' to the user.

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7.0 SITING THE REMOTE SENSOR

The Remote Temperature Sensor incorporates a clip-in fixing bracket which can be removed for easy fitting to a suitable surface.

- a) Select a suitable location for the sensor e.g. close to ceiling height in a bedroom or hallway **BUT NOT WITHIN 3 METRES** of the diffuser.
- b) Arrange the connecting cable in position. Leave approx. 75mm of the cable free at the mounting point to ease the connection of the cable.
- c) Carefully separate the sensor from the fixing bracket using a small screwdriver.
- d) Fix the bracket to the wall and arrange the end of the cable to fall through the slot cut in the bracket.
- e) Carefully separate the two sensor halves to reveal the wiring connection terminals.
- f) Feed the twin cable through the cut out rear half and connect the two wires to the terminals.
- g) Reassemble the sensor body halves.
- h) Clip the sensor body in the fixing bracket arms and adjust the sensor body to the desired position.

The remote sensor is connected to the circuit board via the supplied 2 core cable and into the connector labelled 'Remote Sensor' on the circuit board.

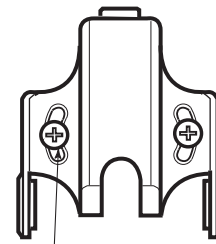
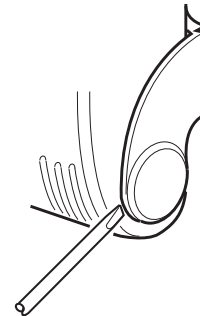
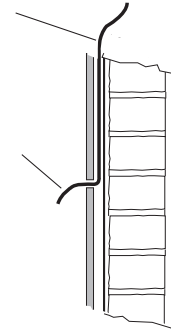
IMPORTANT

For good EMC engineering practice, the DRI-ECO-LC power supply output cable and any sensor cables should not be placed within 50mm of other cables or each other.

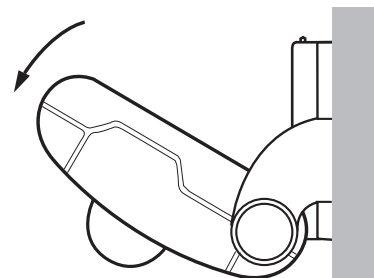
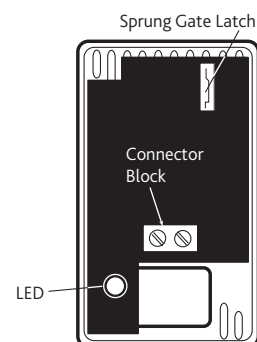
15m sensor connection wire (pre-wired to unit).

Allow approx 75mm of wire through for fitting to the backplate.

Wire can be located behind a wall panel or fixed to wall surface.



Bracket Fixing Screws



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8.0 AIR INLET & ASSOCIATED SENSOR CONNECTIONS

As explained previously the unit is capable of drawing in external air from different roof locations via an air inlet spigot (see overleaf).

Air inlet locations are as follows:

- A.** Soffit Installation - The soffit through a grille and ducting, supplied by others.
- B.** Wall Installation - Wall grille and ducting, supplied by others.

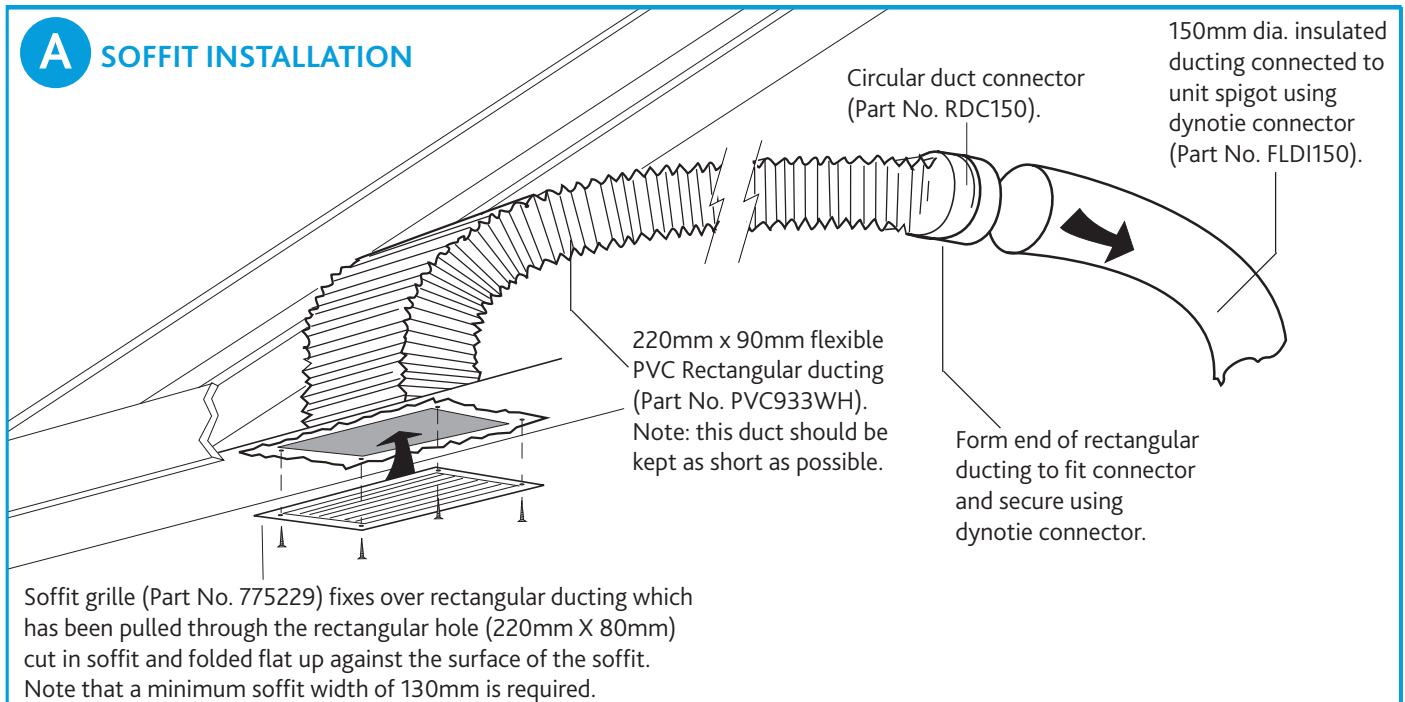
The following installation materials, not supplied with the unit, can be purchased separately, direct from Nuair.

Tel: 02920 858500

Fax: 02920 858555

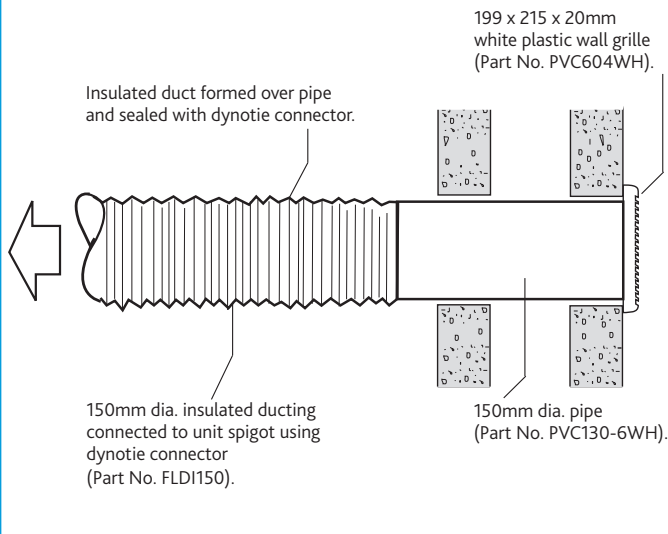
E-mail: info@nuaire.co.uk

Part No.	Description
DRI365-SOFITKIT	
775229	128mm x 260mm soffit grille
PVC933WH	3m length of 222mm x 90mm flexible PVC ducting for use on soffit inlets
FLDI150	5m length of 150mm dia insulated ducting
RDC150	150mm duct connector for connecting 222 x 90 flexible duct to 150mm duct
777483	2m length insulated flexible ducting
DT33	Qty 8 dynotie zip ties, used for connecting ducting to spigots
DRI365-WALLKIT	
FLD1150	5m length of 150mm dia. Insulated ducting
777483	2m length insulated flexible ducting.
PVC604WH	Outlet grille
PVC130-6WH	150mm telescopic pipe
DT33	Qty 8 dynotie zip ties, used for connecting ducting to spigots



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B WALL INSTALLATION



IMPORTANT

Any air intake terminal **MUST** be installed in accordance with appropriate regulation.

As a guide, the BS5440 series of British Standards deals with this issue and currently states that an air intake must be at a minimum distance of 300mm from a gas boiler balanced flue. Installers are advised to be aware of the requirements of this standard when installing 'through the wall' supply air ducting. Similarly, supply and extract air grilles should be at least 300mm apart.

9.0 ELECTRICAL CONNECTION

Please note: the electrical connection of the unit must be carried out by a qualified electrician.

Electrical details:-
Voltage: 230V 1ph 50Hz
Consumption: 2W(min) 24W(max)
Fuse size: 3 Amp

Note: This unit **MUST** be earthed.

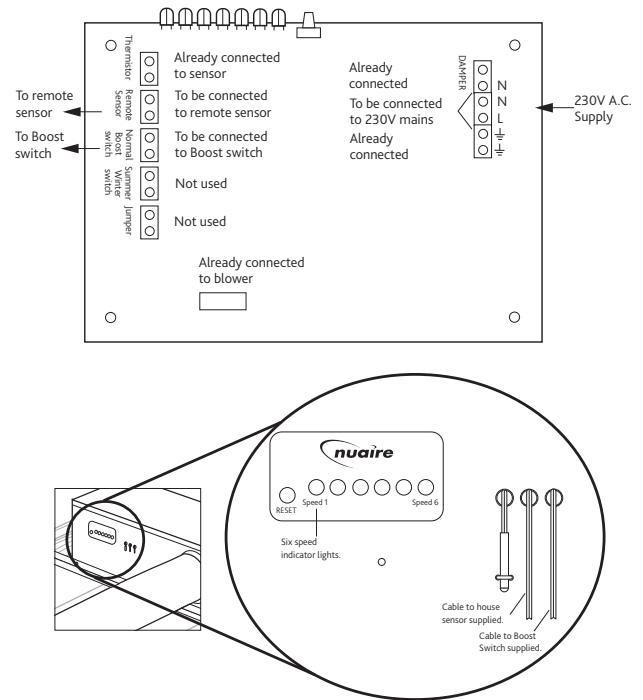
The three core cable from the mains power supply should be connected to a fixed wiring installation, via a fused isolator, in accordance with current IEE wiring regulations.

9.1 Additional electrical connection by installer

When removing the lid for any reason disconnect the 230V power supply.

Before the unit is operational, additional wiring is necessary.

1. A 230V single phase supply is required to be connected to the circuit board within the unit, via the electrical gland (supplied) on the side of the Drimaster365.
2. A boost switch (supplied) is to be connected to the circuit board with two core cable (supplied), via the grommet at the front of the unit.
3. The remote sensor (supplied) is to be connected to the circuit board with two core cable (supplied), via the grommet at the front of the unit.



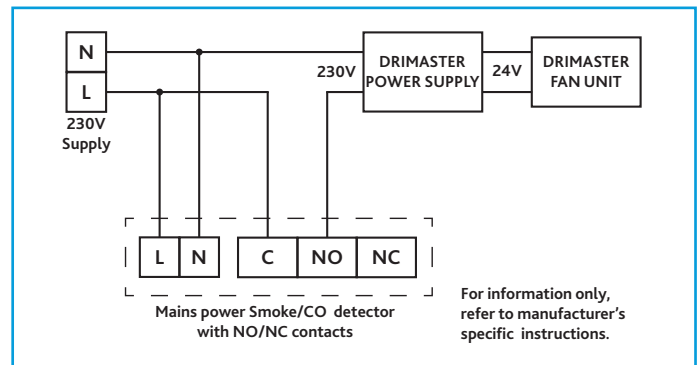
10.0 SMOKE / CARBON MONOXIDE ALARM AUTOMATIC SHUT DOWN

If the unit is required to switch off in the event of smoke/CO detection, alarms are available with separate relay bases from companies such as:

Kidde – www.kiddesafetyeurope.co.uk

Aico Ltd – www.aico.co.uk

Note: This is a mandatory requirement for all units installed in a 3 Storey property.



11.0 AIRFLOW ADJUSTMENT ON FAN UNIT

The unit has 6 air volume (speed) settings. The setting switch is located on the rear of the fan case.

6 speed indicator lights on the rear panel of the fan unit include LED's that, when illuminated, indicate the corresponding air volume for the unit.

For example, a one bedroom, one person bungalow recommended setting would be speed 1. A five bedroom, seven person detached house recommended setting would be speed 6. The installer would advise this on install.

On initial set up when power is connected the first 3 LED's will flash randomly for approximately 2 minutes and will then set at its default factory setting (speed 2). To select another speed setting simply press the reset button until the required setting is selected.

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A boost switch (supplied) is to be connected to the circuit board within the unit with 2 core cable (supplied). This 2 core cable is to pass through the unit as shown opposite.

The switch is to be located within the home for the householder to be able to boost the unit if required.

The unit air volume can be manually boosted to maximum speed by operation of the boost switch. This is to obtain maximum ventilation from the unit should the householder require it.

12.0 MAINTENANCE

The unit does not require any maintenance other than a filter change and a check of electrical connections every 5 years. New filters can be purchased direct from Nuaire using the following code: **777389** (5 year filter). Dust can occasionally accumulate through static, on the diffuser and the adjacent ceiling. This can be removed if required by vacuuming.

Note: A clear distance of 500mm should be available above the unit to allow access for maintenance.

13.0 FILTER CHANGE

Once every 5 years the filters require replacement.

- a) Make sure the power to the unit is off.
- b) Open the lid of the Air Handling Unit by removing the 5 screws which hold the lid on.
- c) Remove the filter.
- d) Replace the filter.
- e) Replace and secure the lid.

11.0 FREQUENTLY ASKED QUESTIONS

While very rare, issues with newly installed units can occur. Typically these issues can be easily solved by referring to the below table.

Symptom	Cause	Solution
Fan not running.	NO power to the unit (Display is NOT lit).	Ensure unit has not been switched off or that the local fuse has not blown.
	Software error - Power to the unit (Display is lit).	If electricity present, power off, wait and power on again – this may restart the unit.
	Fan failure - Power to the unit ('F' is flashing on display).	Fan has failed and a replacement unit is required.
	High loft temperature.	This is normal, see temperature control options.

12.0 WARRANTY

The unit has a 5 year warranty starting from the day of delivery and includes parts and labour for the first year. The remaining 4 years covers parts only. This warranty is conditional on the following:

- a) That the unit is installed strictly in accordance with this guide.
- b) That the unit filters are removed and cleaned or replaced at the recommended intervals.
- c) Where a floor/room is more than 4.5m tall, the fan unit must be fitted with a 3 storey aluminium diffuser and requirements in section 8.0 followed.

This warranty is void if the equipment is modified without authorisation, is incorrectly applied, misused, disassembled, or not installed, commissioned and maintained in accordance with the details contained in this manual and general good practice.

The product warranty applies to the UK mainland and in accordance with Clause 14 of our Conditions of Sale. Customers purchasing from outside of the UK should contact Nuaire International Sales office for further details.

13.0 AFTER SALES ENQUIRIES

A QR code linking directly to the Nuaire Ltd. website is located behind the diffuser plate and can be used to order spare parts and replacement components.

For technical assistance or further product information, please contact the After Sales Department.

Telephone 02920 858 400
technicalsupport@nuaire.co.uk