



NA

12V & 230V Slimline Axial Fans Installation Manual



IPX4 | **C** **E** EMC Directive
2014/30/EU
LVD Directive
2014/35/EU

1.0 SAFETY INFORMATION

- The provision of the electrical supply and the connection of the unit to the mains must be carried out by a qualified electrician.
- Isolate from power supply before removing any covers. During installation / maintenance ensure all covers are fitted before switching on the mains supply.
- All-pole disconnection from the mains as shown in the wiring diagram must be incorporated within the fixed wiring and shall have a minimum contact separation of 3mm in accordance with latest edition of the wiring regulations.
- Ducting must be securely fixed with screws to the spigot to prevent access to live parts. Duct runs terminating close to the fan must be adequately protected by suitable guards.
- 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.
- This appliance should not be used by children or persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning the safe use of the appliance by a person responsible for their safety. Children shall not play with the appliance. Cleaning and user maintenance shall not be carried out by children.

1.1 Hazard Symbols



GENERAL WARNING

Signifies a general warning regarding hazard specified by supplementary information.



ELECTRIC SHOCK

This unit must be completely electrically isolated before any panels are removed. Check mains supply and control connections.



ROTATING PARTS

This unit contains fast moving rotational parts which may start automatically. It is the sole responsibility of the installer to adequately guard these components.



REFER TO INSTRUCTION MANUAL

Read and understand the installation and maintenance manual before installing, operating or maintaining this product.

1.2 Important Information

This manual contains important information on the safe and appropriate assembly, transport, commissioning, operation, maintenance, disassembly and simple troubleshooting of the product.

While the product has been manufactured according to the accepted rules of current technology, there is still a danger of personal injury or damage to equipment if the following general safety instructions and the warnings contained in these instructions are not complied with.

- **Read these instructions completely and thoroughly before working with the product.**
- **Keep these instructions in a location where they are accessible to all users at all times.**
- **Always include the operating instructions when you pass the product on to third parties.**

1.3 Personal Protective Equipment

The following minimum Personal Protective Equipment (PPE) is recommended when interacting with Nuaire product:

- **Protective Steel Toed Shoes** - when handling heavy objects.
- **Full Finger Gloves (Marigold PU800 or equivalent)** - when handling sheet metal components.
- **Semi Fingerless Gloves (Marigold PU3000 3DO or equivalent)** - when conducting light work on the unit requiring tactile dexterity.
- **Safety Glasses** - when conducting any cleaning/cutting operation or exchanging filters.
- **Reusable Half Mask Respirators** - when replacing filters which have been in contact with normal room or environmental air.

Nuaire would always recommend a site specific risk assessment by a competent person to determine if any additional PPE is required.

2.0 INTRODUCTION

This range of slimline axial fans incorporates several different models. These IPX4, splash proof fans are specifically designed to ventilate small rooms, such as toilets, bathrooms, shower rooms, utility rooms and kitchens. They are ideal for wall, ceiling or panel installation and extract directly to outside or through a short length of ducting.

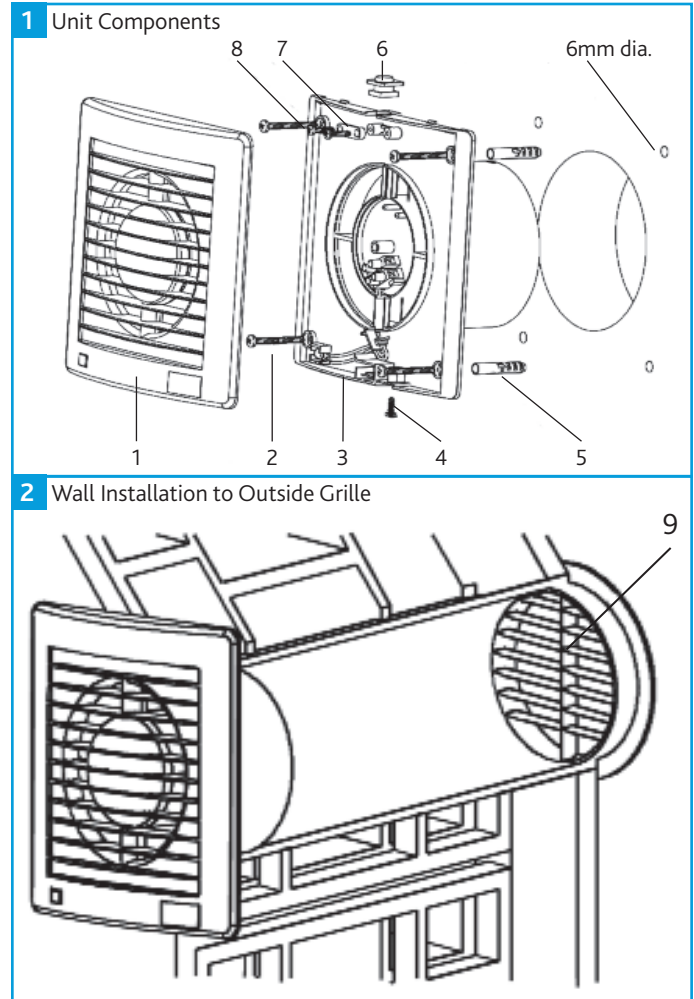
Unit Codes	Operation Type	Weight (Kg)
NA100	4" Axial with remote switch operation.	0.5
NA100PC	4" Axial with pull cord operation.	0.5
NA100T	4" Axial with remote switch operation and integral overrun timer.	0.5
NA100HT	4" Axial with integral humidistat operation and overrun timer.	0.5
NA100PIR	4" Axial with integral passive infrared sensor and overrun timer.	0.5
NA100-12	12V version of 4" Axial with remote switch operation.	0.5
NA100T-12	12V version of 4" Axial with pull cord operation.	0.5
NA150	6" Axial with remote switch operation.	1.5
NA150PC	6" Axial with pull cord operation.	1.5
NA150T	6" Axial with remote switch operation and integral overrun timer.	1.5
NA150HT	6" Axial with integral humidistat operation and overrun timer.	1.5

Unit Codes	Operation Type	Weight (Kg)
NA150PIR	6" Axial with integral passive infrared sensor and overrun timer.	1.5

3.0 MECHANICAL INSTALLATION

Installation must be completed by competent persons, in accordance with good industry practice and should conform to all governing and statutory bodies i.e. IEE, CIBSE, etc.

This product should not be used in an ambient temperature higher than 40°C (104°F) and should not be exposed to atmospheric agents (rain, sun, snow, etc). The product or any part of it should not be placed in water or other liquids.



3.1 Component Key

- | | |
|-----------------------------|------------------------|
| 1. Front Cover | 5. Wall Plug |
| 2. Wall Fixing Screws | 6. Cable Grommet |
| 3. Motor Fan Assembly | 7. Cable Clamp |
| 4. Front Cover Fixing Screw | 8. Cable Fixing Screws |
| | 9. Outside Grille |

A neon indicator is incorporated on the front of some models to indicate the fan is operating.

3.2 Surface Mounting

Remove the fan from the box, taking care to dispose of the packing material properly.

Check the location of existing wiring for ease of connection and that the voltage and frequency correspond with those marked on the fan rating label.

For optimum performance site the fan a minimum of 2.3m above ground level and should be away from a heat source (e.g. a heater), any direct light (sunlight, lamp etc.) or any air conditioning unit. Take care to ensure that the sensor (PIR unit) is free of any obstruction (such as a cupboard).

LV models must be installed using the remote transformer, which should be sited outside the scope of any water source (see current IEE Regulations for guidance).

The fan must not be used in an ambient temperature higher than 40°C.

Before fixing the fan to the wall/ceiling, decide whether to have the cable entering the fan through the knocked-out hole on the top of the Motor Fan Assembly or through the back of the Motor Fan Assembly. In the first case the included cable clamp and grommet will need to be used. In the second option the cable entry hole will need to be knocked out.

Use the appropriate size core cutter to obtain a hole diameter of 100mm or 150mm in the wall/ceiling allowing if necessary for the thickness of any ducting to be used.

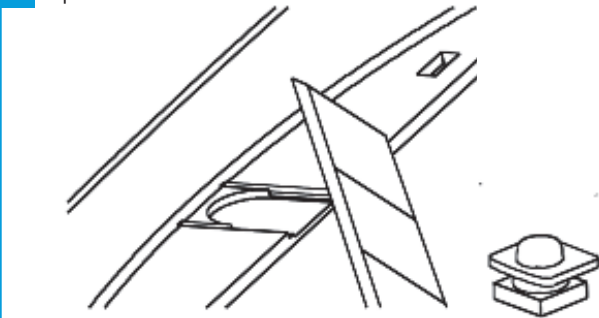
The fan must not be exhausted into a duct which is already used for any other purpose (see Approved Document F1 2006 for guidance).

Dismantle the fan:

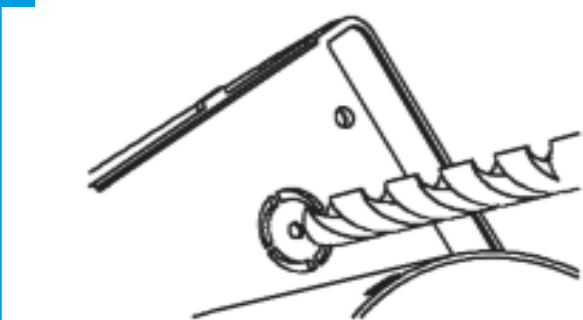
- Remove the front cover (1) by unscrewing front fixing screw (4).
- Using the Motor Fan Assembly (3) of the fan as a template, mark the hole drilling positions to fix the fan to the wall or ceiling.
- Drill the fixing holes and using the wall plugs and long screws provided, fix the Motor Fan Assembly (3) to the wall/ceiling.

With the front cover removed connect the mains supply cable to the terminal block then replace front cover of the fan.

3 Top Cable Knockout & Cable Grommet



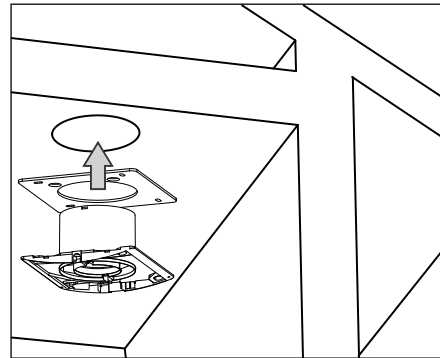
4 Wall Installation to Outside Grille



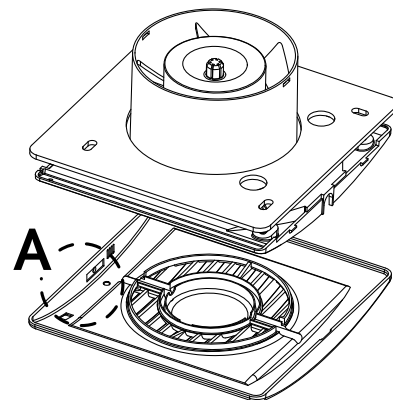
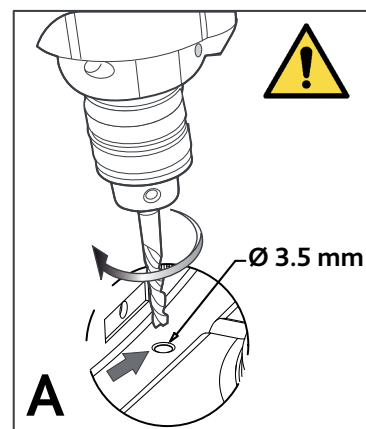
3.3 Ceiling Mounting

In case of ceiling installation, it is recommended to drill the pre-set hole (A) for condensate drainage.

5 Ceiling Mounting Unit



6 Drilling Condensate Drain Hole



4.0 ELECTRICAL INSTALLATION

Isolation - Before commencing work make sure that the unit is electrically isolated from the mains and switched live supply.

Unit Codes	m ³ /hr @ 0Pa	W	dBA @ 3m
NA100	95	11	40
NA150	280	26	49

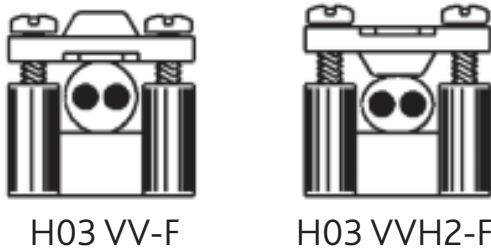
4.1 Electrical Information

It is recommended that the installation be carried out by a qualified electrician. All electrical connections must comply with current IEE wiring regulations. The fan is a fixed appliance, and the electrical supply must therefore be by a fixed wired and fused (3 amp) spur incorporating a double or triple pole switch with contact openings of at least 3mm. Use twin conductor cable of at least 1mm³ in section (Figure 9).

The fan is double insulated and does not require earthing. The fan complies with current electrical safety regulations, including Electromagnetic Compatibility (EMC) Directive 2014/30/EU and Low Voltage Directive (LVD) 2014/35/EU.

The fan must not be used as a switch for water heaters, stoves etc. The printed circuit board in these fans has been protected to make it compatible with the majority of fluorescent light fittings available on the market today. However, it is impossible to be aware of all new products introduced. We suggest, therefore, that you contact your supplier to establish the compatibility of any fluorescent light fittings you intend to use.

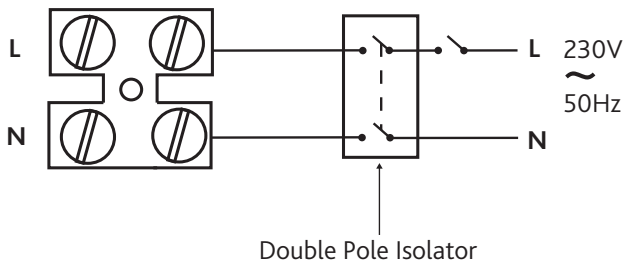
7 Twin Conductor Cable



4.2 Wiring Diagrams

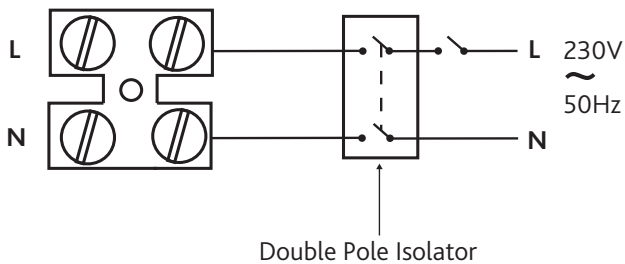
4.2.1 NA 100/150 with Remote Switch

8 Wiring - NA 100/150



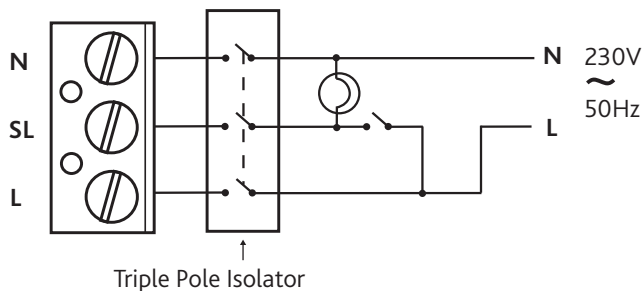
4.2.2 NA 100PC/150PC with Pull Cord

9 Wiring - NA 100PC/150PC



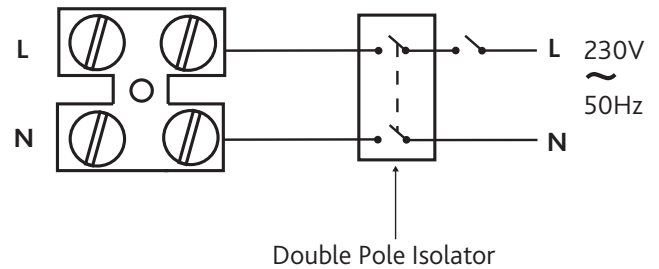
4.2.3 NA 100T/100HT/150T/150HT with Light / Remote Switch

10 Wiring - NA 100T/100HT/150T/150HT



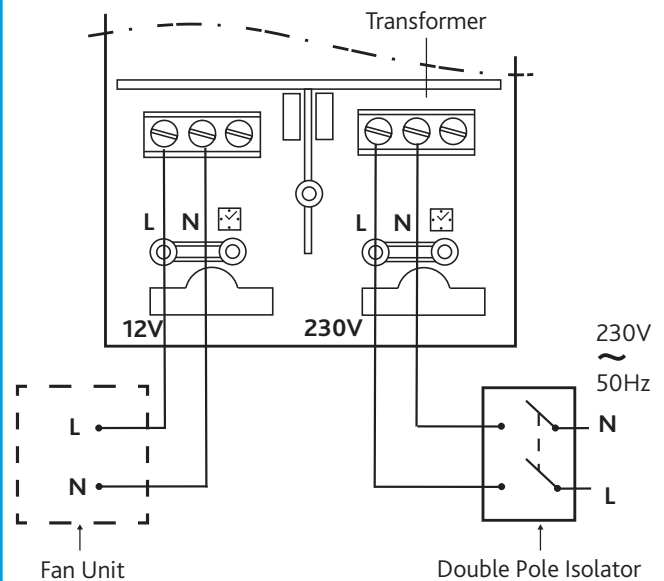
4.2.4 NA 100HT/100PIR/150HT/150PIR with Humidistat and Integral Sensor Only

11 Wiring - NA 100T/100HT/150T/150HT



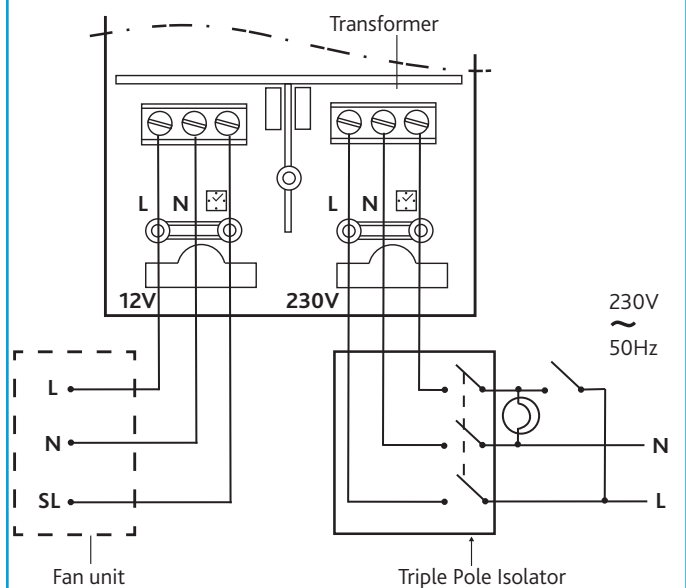
4.2.5 NA 100-12 (Must Be Installed with Remote Transformer)

12 Wiring - NA 100-12



4.2.6 NA 100T-12 with Light / Remote Switch (Must Be Installed with Remote Transformer)

13 Wiring - NA 100T-12

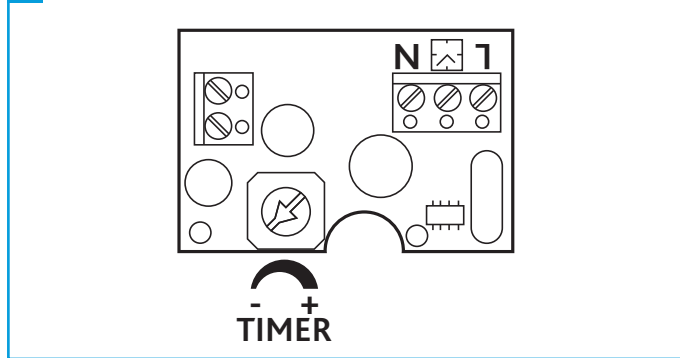


5.0 CONTROLS

5.1 Timer / Humidistat Adjustment

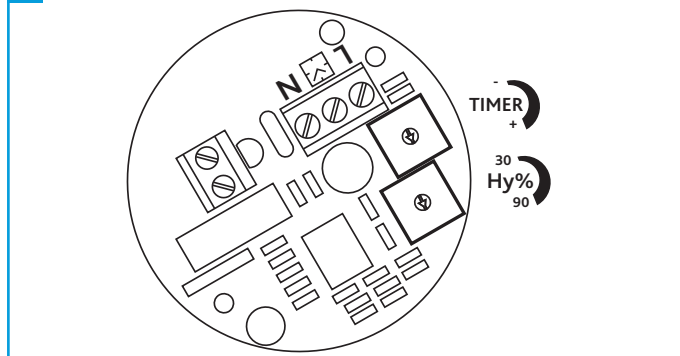
5.1.1 'T' Models

14 'T' Models Timer Adjustment



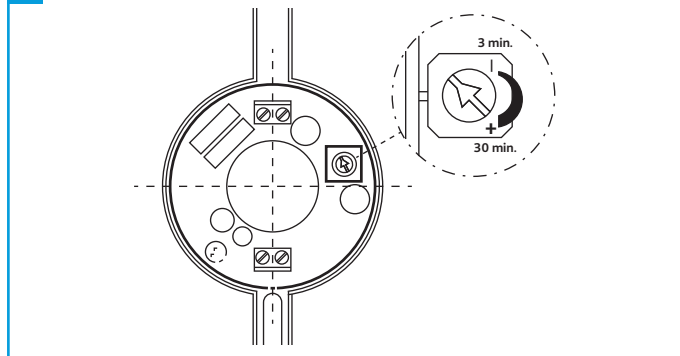
5.1.2 'HT' Models

15 'HT' Models Timer / Humidity Adjustment



5.1.3 'PIR' Models

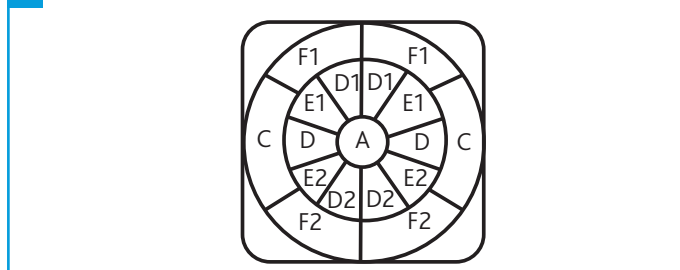
16 'PIR' Models Timer Adjustment



5.2 'PIR' Detection Area

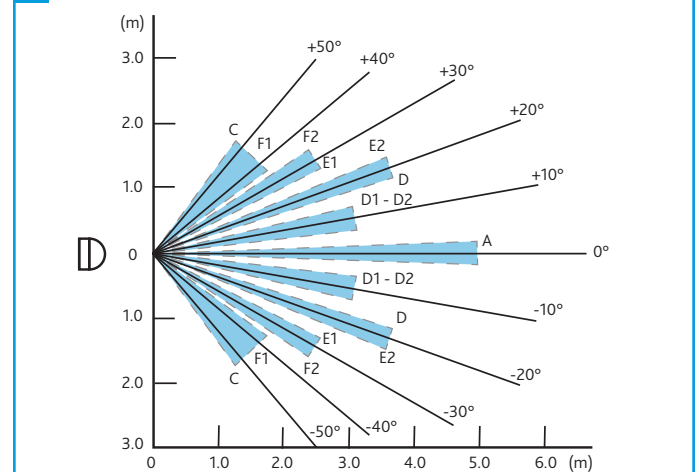
5.2.1 Detection Area Zones

17 PIR Detection Zones



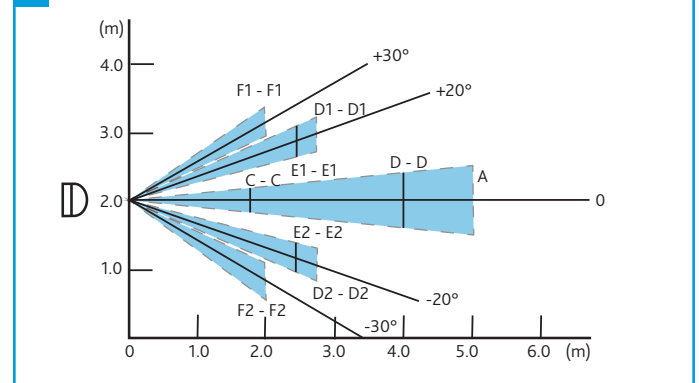
5.2.2 Horizontal Detection Area

18 Horizontal PIR Detection Area



5.2.3 Vertical Detection Area

19 Vertical PIR Detection Area



6.0 MAINTENANCE

It is important that maintenance checks are recorded and that the schedule is always adhered to, in all cases, the previous report should be referred to.

6.1 Annually

- Thoroughly inspect the unit and its components for corrosion, acting immediately to treat/restore any damaged areas. The front cover can be removed and cleaned with water and a mild detergent using a soft cloth and the motor fan assembly can be cleaned with a dry brush or dry cloth. Ensure the unit does not come into contact with any kind of liquid or solvent.

- All electrical terminals within the unit should be tightened.

7.0 WARRANTY

The 1 year warranty starts from the day of delivery.

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 Nuair International Sales office for further details.

Failure to maintain the unit as recommended will invalidate the warranty.

8.0 END-OF-LIFE AND RECYCLING

Where possible Nuaire use components which can be largely recycled when the product reaches its end-of-life:

- Fans, motors, controls, actuators, cabling and other electrical components can be segregated into WEEE recycling streams.
- Sheet metal parts, aluminium extrusion, heating/cooling coils and other metallic items can be segregated and fully recycled.
- EPP, plastic ducting, nylon corner pieces, plastic heat exchangers, packaging material and other plastic components can be segregated into mixed plastic and widely recycled.
- Cardboard packaging, wood, used filters and other paper components can be largely recycled or fully processed in energy from waste centres.
- Remaining Items can be further segregated and processed in accordance with the zero waste hierarchy. Please call After Sales Support for further information on items not listed above.

Ensure that Nuaire product is made safe from any electrical / water / refrigerant supplies before dismantling commences. This work should only be undertaken by a qualified person in accordance with local authority regulations and guidelines, taking into account all site based risks.

9.0 AFTER SALES

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

Telephone 02920 858 400
aftersales@nuaire.co.uk

Technical or commercial considerations may, from time to time, make it necessary to alter the design, performance and dimensions of equipment and the right is reserved to make such changes without prior notice.

