IAQ-V125

125mm Ø Carbon Filtered Valve Installation Manual

1.0 SAFETY INFORMATION

- 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.
- To ensure levels of NO2 are being reduced, the carbon filters should be replaced every 2 years as per our recommended maintenance.
- Carbon filters/pellets are not to be ingested, ensure hands are thoroughly washed after handling.

1.1 Hazard Symbols

GENERAL WARNING

Signifies a general warning regarding hazard specified by supplementary information.

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

- **Full Finger Gloves (Marigold PU800 or equivalent) -** when handling sheet metal components or knives. When using silicone, Butyl rubber gloves (0.4mm) are recommended.
- **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

Nuaire's 125mm diameter Carbon Filtered Supply Valve has been specifically designed to reduce the level of airborne contaminants entering the property, in particular up to 91% of nitrogen dioxide (NO_2), thus improving indoor air quality (IAQ).

The IAQ-V125 valves incorporate a carbon filter. The valve is adjustable for commissioning purposes, lockable and spring loaded to prevent vibration. Replacing the carbon filter is quick and easy and leaves the valve adjustment unaffected.

An airflow screen is provided and can be fitted to deflect the airflow away from walls and other obstructions, such as smoke alarms.

IAQ-V125 valves should be fitted on the supply leg of the ducting and therefore do not require insulation (Figure 2).

To aid in maintenance, the valves are easily removable and do not require re-commissioning.

2.1 Main Features

- IAQ-V125 can remove up to 91% NO2 entering the property.
- Low profile.
- Adjustable for commissioning purposes.
- Decorative panel to cover commissioning screw.
- Spring loaded to prevent vibration.
- Valve easily removed for maintenance and does not require re-commissioning.
- Quick and easy carbon filter replacement.
- Supplied with airflow screen to enable air to be directed away from obstacles.

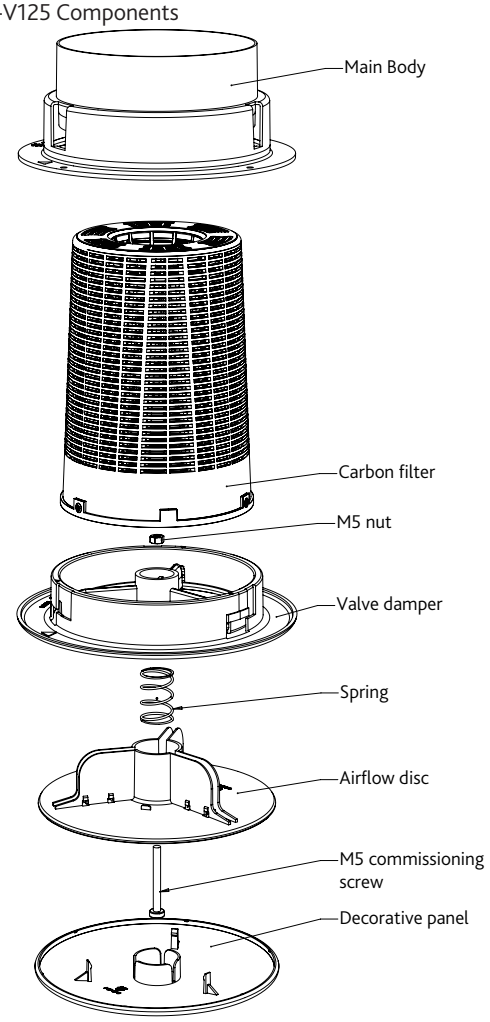
2.2 Performance Data

Nuaire's carbon filters have been independently tested and offer up to 91% reduction in NO2. The unit meets planning obligations and world health organisation's recommendations.

2.3 Resistance Data

When selecting the MVHR unit please ensure that the resistance through the carbon filter has been allowed for. Please see www.nuaire.co.uk/iaq-valve for further details.

1 IAQ-V125 Components



3.0 MECHANICAL INSTALLATION

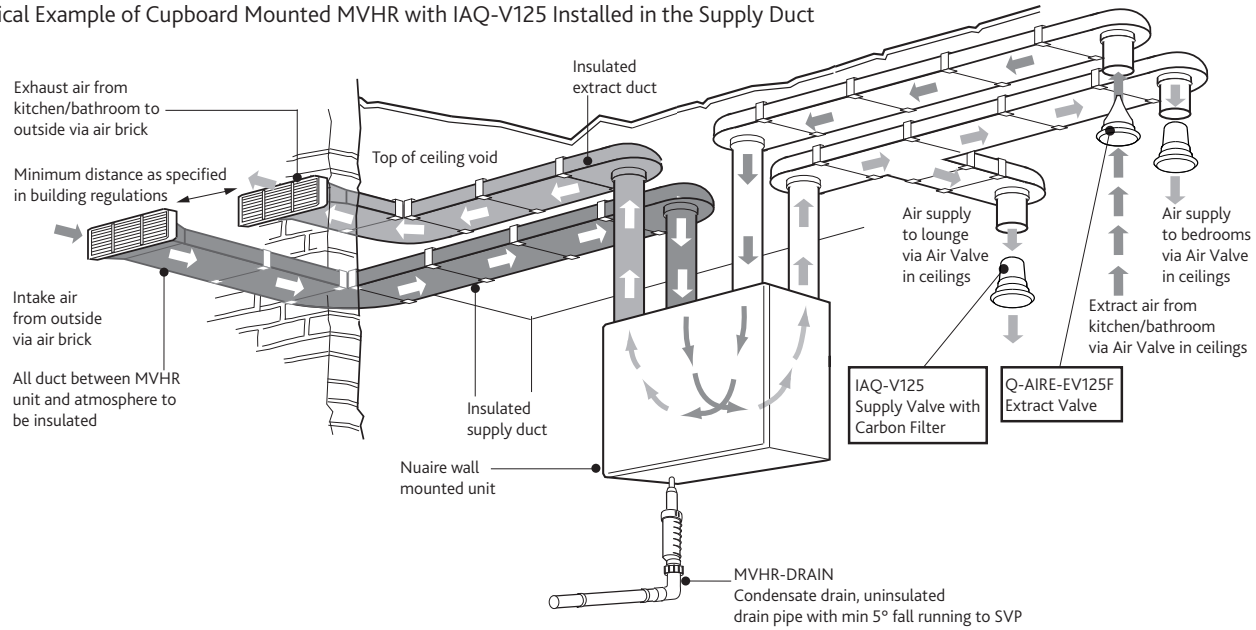
Installation must be completed by competent persons, in accordance with good industry practice and should conform to all governing and statutory bodies i.e. IEE, CIBSE, etc.

3.1 Installation - Void Depths Exceeding 200mm

- It's recommended that ridged ducting and a plenum is used for void depths exceeding 200mm.
- The vertical ducting is to be fitted below the specified ceiling level and cut to length after ceilings have been installed.
- Ceilings to be installed with a 145mm hole to accommodate the ducting (Note: this is a larger hole to accommodate the main body installed at a later stage).
- Cut the length of duct 35mm above the underside of the ceiling (Figure 3).
- Insert the main body into the hole and mark the fixing positions.
- Remove the main body from the hole, drill and insert with appropriate fixings.
- Apply a thick bead of sealant around the outer section of the spigot before re-fitting and fixing in place with appropriate fixings (not supplied). Ensure a good seal is achieved between the duct and the main body (Figure 4).
- See important note and (Figure 13) regarding fixing within 1 metre of a wall (Section 2.3).
- Place the carbon filter in the valve damper assembly (ensure the filter sits level on the valve assembly).
- Fit the combined assemblies to main body by aligning the triangle symbols, then press together and twist damper assembly clock wise, (you will hear a click when damper is in a 'locked' position (Figure 5).
- Once all valves are in position they can be commissioned using the adjustment screw.
- On completion, clip decorative panel in place (Figure 6).
- Wash hands thoroughly after handling.

Note: The gap between the airflow disk and the main body determines the airflow that can pass through the valve. This gap can be adjusted using the screw on the underside of the flow disk **(clockwise to reduce the gap and flow), (anti-clockwise to increase the gap and flow).**

2 Typical Example of Cupboard Mounted MVHR with IAQ-V125 Installed in the Supply Duct



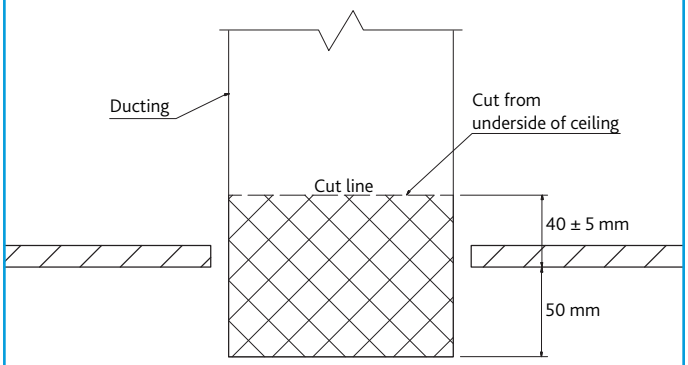
3.2 Installation - Plenum Box

Minimum ceiling void depth of 180mm, maximum 440mm. For voids exceeding 440mm, rigid ducting should be used.

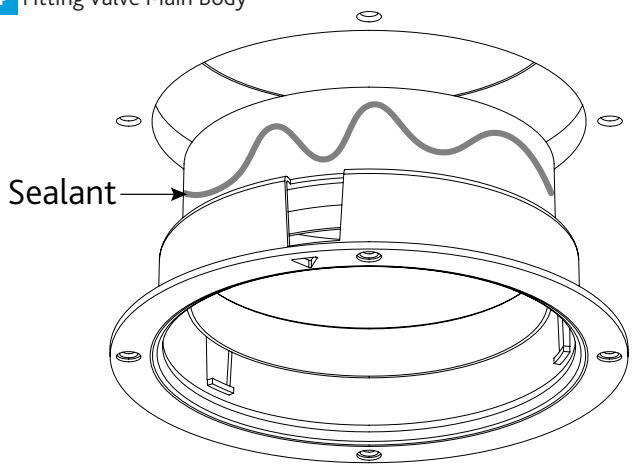
IMPORTANT

If a valve is situated within 1 metre of an obstruction (e.g. a wall or smoke alarm), then the airflow screen should be fitted to guide the airflow away from the obstruction (Section 2.3).

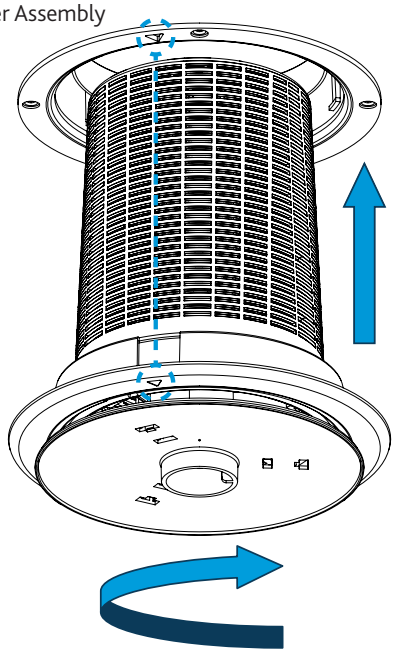
3 Cutting Vertical Duct



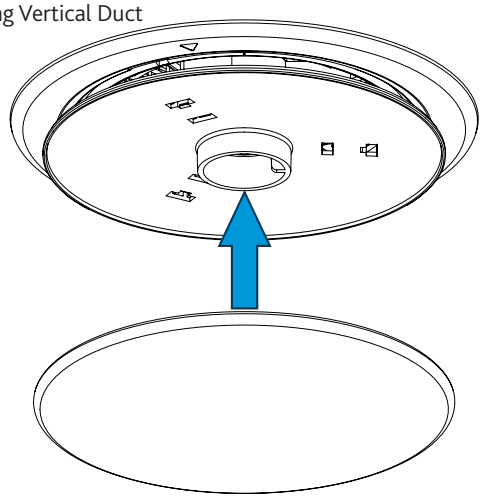
4 Fitting Valve Main Body



5 Fitting Filter Assembly



6 Cutting Vertical Duct



3.2.1 First Fix Installation of IAQ-PLENUM (Plenum box)

Prior to the ceilings being installed:

- Using a maximum length of 300mm flexible ducting, connect to the ridged ducting installed and seal appropriately.
  Note: To comply with building regulations the flexible ducting must be pulled taught to 90% of its length.
- Position the IAQ-PLENUM directly above the allocated hole position for the IAQ-V125 and secure the unit to surface above using an appropriate fixing (Figure 8).
  Note: The fixing will need to be removed later to fit the IAQ-V125 (once ceilings are installed). Access to the fixing is through the hole in the base of the unit and through the ceiling below.
- Connect the free end of flexible ducting to a short length of 204 x 60 rigid ducting and insert duct into the spigot of the plenum box and seal all joints appropriately.

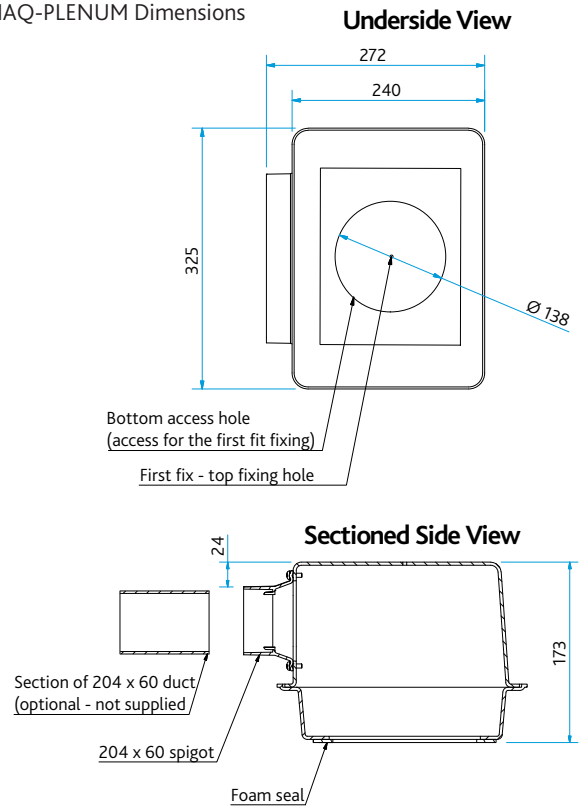
3.2.2 Installation of IAQ-V125 (Carbon Filter Valve)

Following the ceilings being suspended:

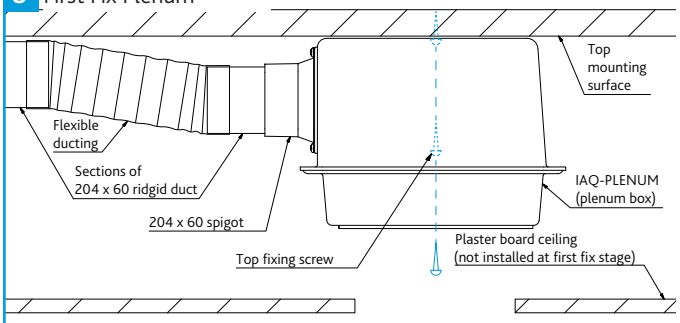
- Cut a 145mm Ø hole in the ceiling at designated vent position (Note: this is a larger hole to accommodate the main body installed at a later stage).
- Remove the fixing screw from inside the plenum box and replace with the sealing plug provided. Lower the Plenum box into position over the hole cut in the ceiling (Figure 9).
- Place the main body into the hole and fix with appropriate screws.
- See important note and Section 2.3 regarding fixing within 1 metre of a wall. If required fit Airflow screen to flow disk (Figure 13).
- Place the carbon filter in the valve damper assembly (ensure the filter sits level on the valve assembly).
- Fit the combined assemblies to main body by aligning the triangle symbols, then press together and twist damper assembly clock wise, (you will hear a click when damper is in a 'locked' position (Figure 5).
- Once all valves are in position they can be commissioned using the adjustment screw.
- On completion, clip decorative panel in place (Figure 6).
- Wash hands thoroughly after handling.

Note: The gap between the airflow disk and the main body determines the airflow that can pass through the valve. This gap can be adjusted using the screw on the underside of the flow disk **(clockwise to reduce the gap and flow, anti-clockwise to increase the gap and flow).**

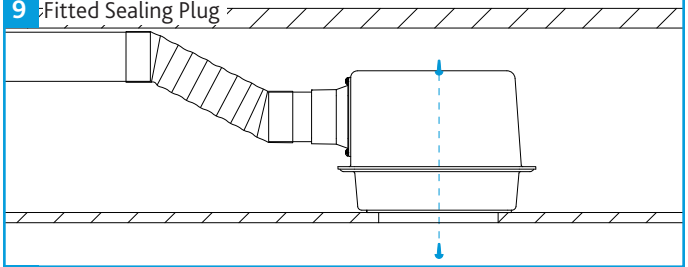
7 IAQ-PLENUM Dimensions



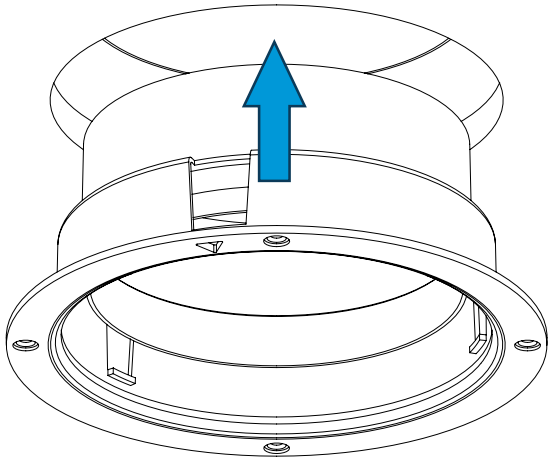
8 First Fix Plenum



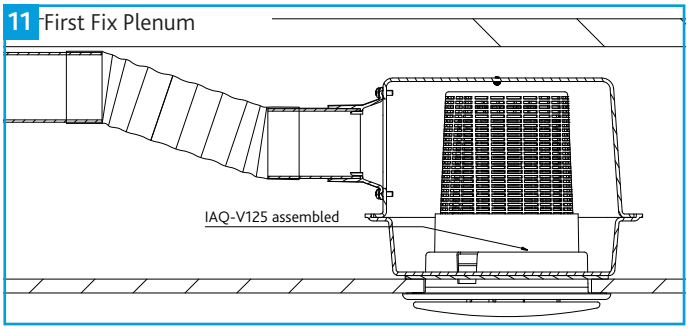
9 Fitted Sealing Plug



10 Fitting Valve Main Body to IAQ-PLENUM



11 First Fix Plenum



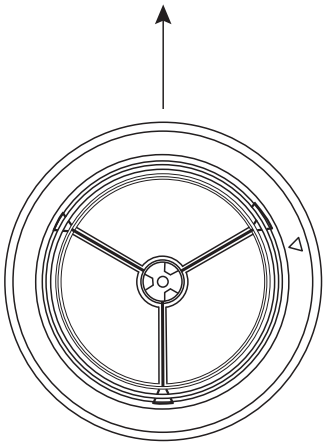
3.3 Fitting the Airflow Screen

If a valve is situated within 1 metre of an obstruction (e.g. a wall or smoke alarm) then the airflow screen should be fitted to guide the airflow away from the obstruction (Figure 13).

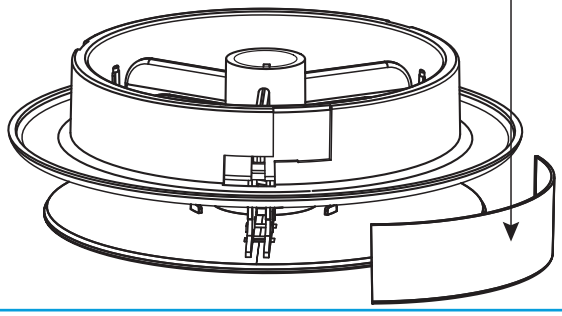
- Fully unscrew the damper assembly.
- Slide the airflow screen into place ensuring a positive fit (an audible click will be heard).
- Once in its locked position, re-tighten the fixing screw.

12 First Fix Plenum

If the valve is 1m or less to an obstruction or wall, position main body/damper so that one of the tri-sectors points towards the obstruction. **It can then be blanked off using the airflow screen.**



The airflow screen.



4.0 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.

To ensure the carbon filter maintains its high reduction of NO2, the filter must be replaced once the end of its lifespan has been reached. The lifespan of the carbon filter in normal conditions is shown in Section 3.2.

4.1 Annually

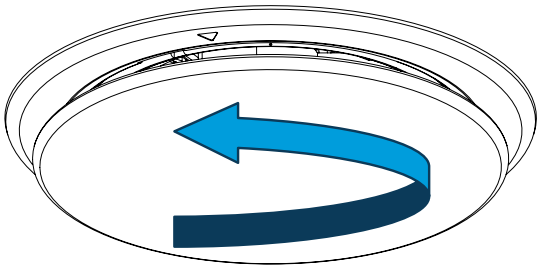
- Clean all areas of unit and treat any areas of corrosion.

4.2 Carbon Filter Lifespan & Replacement Codes

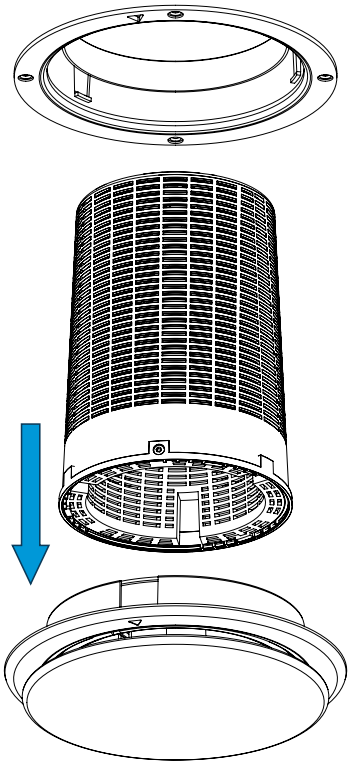
Replacement filters can be purchased direct from Nuaire using the code provided in the table below.

Unit Code	Carbon Filter	Carbon Filter Lifespan	Carbon Filter Weight
IAQ-V125	IAQ-V125-FILTER	2 years	0.6 Kg

13 Removing Filter Cover



14 Removing Carbon Filter



4.3 Carbon Filter Replacement

- Rotate the valve in an anti-clock wise direction (Figure 14).
- The damper and filter assembly will release and can be removed from the main valve body.
- Separate the damper assembly and carbon filter assembly (Figure 15).
- Place the carbon filter cartridge in a sealable bag to capture any loose particles.
- Fit a new carbon filter cartridge in the damper assembly and re-fit the combined assembly in the reverse to the procedure detailed above.
- Wash hands thoroughly after handling.

5.0 WARRANTY

The 5 year warranty starts from the day of delivery and includes parts and labour for the first year. The remaining period covers replacement parts only.

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.

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

6.0 END-OF-LIFE AND RECYCLING

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

- 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.

IMPORTANT

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.

7.0 AFTER SALES AND REPLACEMENT PARTS

For technical assistance or further product information, including spare parts and replacement components, please contact the After Sales Department.

If ordering spares please quote the serial number of the unit together with the part number, if the part number is not known please give a full description of the part required. The serial number will be found on the identification plate attached to the unit casing.

Telephone 02920 858 400
aftersales@nuaire.co.uk

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