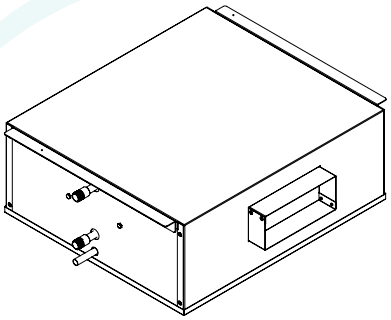
MRXBOX Inline Chilled Water Coil

Installation and Maintenance Manual



1.0 IMPORTANT SAFETY INFORMATION

- Ducting must be securely fixed with screws to the spigot to prevent unintended disconnection.
- 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.

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 Toe Capped Footwear**: 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.

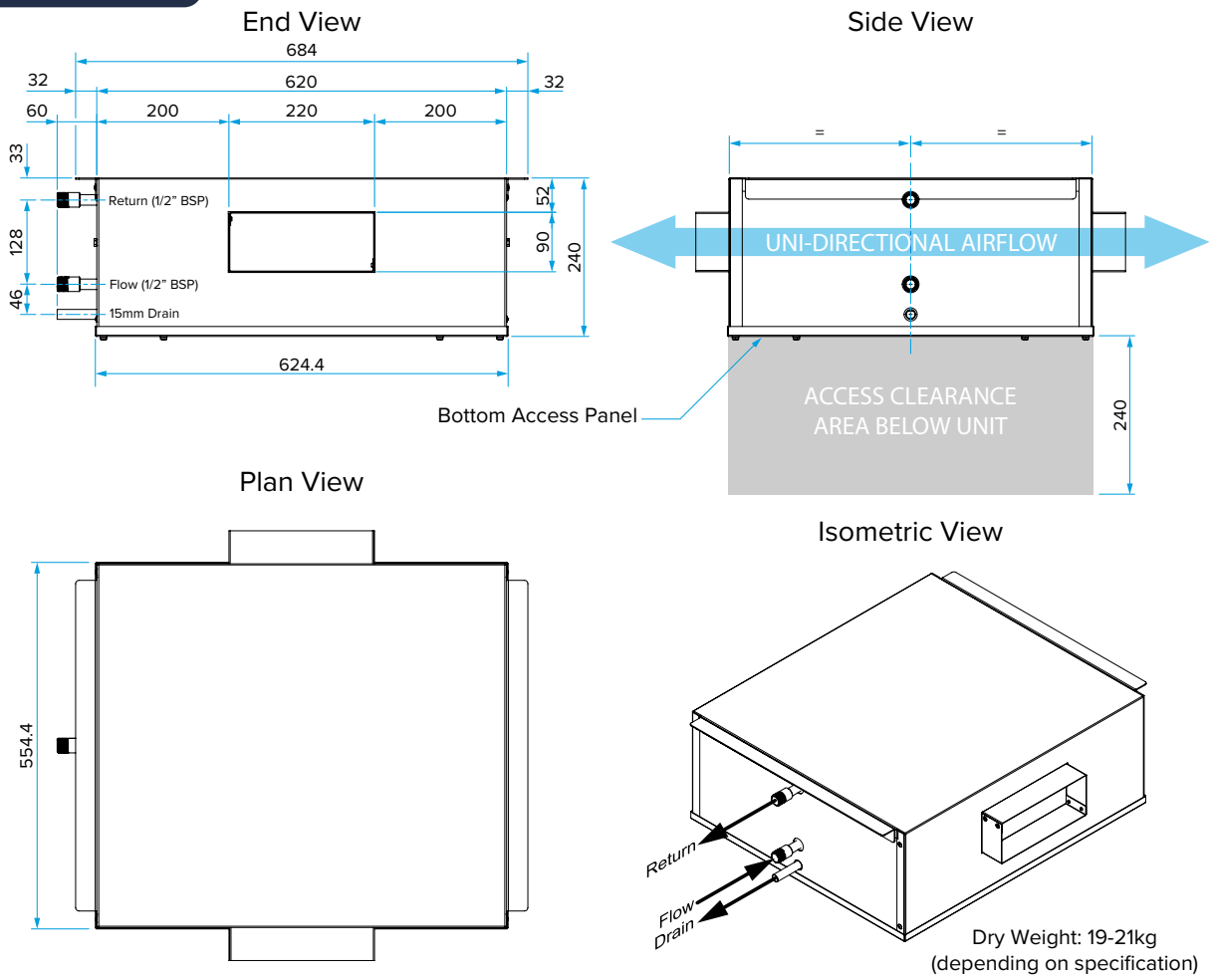
2.0 INTRODUCTION

The MRXBOX inline chilled water coil has been specially designed to complement the existing MRXBOXAB-ECO5 heat recovery units to provide cooling to the supply airstream.

The unit casing is manufactured from galvanized steel with thermal insulation lining.

The unit is unhanded and uni-directional for the airflow, with bottom access for cleaning and maintenance.

Fig 1: Unit Dimensions



3.0 DELIVERY & HANDLING

All equipment is inspected prior to despatch and leaves the factory in good condition. Upon receipt of the equipment an inspection should be made and any damage indicated on the delivery note.

Particulars of damage and/or incomplete delivery should be endorsed by the driver delivering the goods before offloading by the purchaser. No responsibility will be accepted for damage sustained during the offloading from the vehicle or on the site thereafter. All claims for damage and/or incomplete delivery must be reported to Nuaire within two days of receipt of the equipment.

3.1 OFFLOADING AND HANDLING

The weight of the cased coil and palletised items are displayed on the packaging. Some of the items have an uneven weight distribution, and this will be indicated by labelling where appropriate.

Offloading and positioning of the equipment is the responsibility of the purchaser. Items should only be lifted by competent personnel following appropriate risk assessment.

Always handle with care to avoid damage and distortion, and where lifting slings are employed use spreaders to ensure slings do not come into contact with the unit case, or control pack.

4.0 MECHANICAL INSTALLATION

Installation of the cased chilled water coil, including all external services and controls should be in accordance with the appropriate authority and MUST conform to all governing regulations e.g. CDM, CIBSE, IEE, and in strict accordance with the applicable Building Regulations. These units may only be mounted horizontally.

The correct installation position for the units shall be decided with due regard to access and maintenance requirements, and the objective of minimising the system ductwork resistance.

The units are heavy, and should be mounted using the fixing brackets supplied or other suitable methods of support. The supporting structure must be assessed for structural suitability.

The recommended installation method is to use standard Unistrut channel secured to the slab / steelwork above the unit.

Four suitable drop rods should be secured to the Unistrut channel and extended to be fixed to the unit's mounting brackets. Drilling will be required on site through the brackets, taking care not to drill through the casing of the coil.

All coils should be connected with the flow at the bottom and the return at the top unless otherwise advised. Drain and bleed valves should be provided in the system pipe-work to ensure performance of the coil. Any pipework should be adequately insulated.

Pipe-work connections should be made to the unit using appropriate techniques, and must be independently supported.

The connections should be pressure tested.

Within the casing, the coil is located above a condensate tray. Condensate drains under gravity.

4.1 DUCTING

Before commencing ducting installation reference should be made to building regulations document "**Domestic Ventilation Compliance Guide**". This document supports ADF2010 and details installation, testing and commissioning of all ventilation systems.

It is recommended that rigid ducting must be used it all times.

Fresh-air Intake and stale air exhaust ducts will carry cold air in winter. Supply air duct will carry cold air when the cooling coil is operating. Therefore intake, exhaust and supply ducts will be at risk of condensation forming on external surfaces and should all be thermally insulated.

Ducts and any ancillaries such as carbon filters installed down stream of the cooling coil should be insulated to the same level as the intake and exhaust ducts. Flexible connections should be avoided. Nuaire Ductmaster thermal ducting should be used on Intake, Exhaust and Supply duct runs. If flexible connections cannot be avoided, FLDI150 Insulated Flexible Duct should be used.

Ducting must be installed in such a way that resistance to airflow is minimised. Bends should be kept to a minimum.

Ducting joints must be sealed with suitable duct sealant and needs to be taped. Ducting shall be adequately and reliably fixed.

Ducting to cased cooling coil must be securely fixed with screws to the spigots to prevent access to live parts.

4.2 SUPPLY TEMPERATURES

Supply air temperature is critical to ensure good cooling distribution.

There is a possibility of condensation forming on grilles or valves at low airflows. If this occurs supply air temperature should be increased.

4.3 CONDENSATE DRAIN

This unit provides a 15mm copper tail to allow for a condensate drain connection.

Ensure the cased cooling coil is installed level.

If the condensate pipe is fitted in an unheated space the pipe should be insulated to prevent freezing. Ensure the cooling module has its own dry trap separate to the MVHR.

5.0 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.

5.1 ROUTINE MAINTENANCE

- Clean all areas of unit and treat any areas of corrosion.
- Check all access doors for leakage and if necessary screws should be adjusted and any replacement gasket materials should be replaced as required.
- Coils should have their finned surface examined for accumulation of dirt, lint and biological contaminants or similar. If necessary, wash down affected areas with a mild detergent solution and a soft brush. Care should be taken not to damage the finned surface, and any cleaning fluids should be rinsed away with water.
- A compressed air line may be used to blow out any solids between fins. Do not probe the coil fin block with metal objects

6.0 WARRANTY

The 2 year warranty starts from the day of delivery and includes parts and labour.

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.

7.0 END-OF-LIFE AND RECYCLING

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.

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.

8.0 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

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.

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