IAQBOX

Indoor Air Quality Box

Installation and Maintenance Manual



1.0 INTRODUCTION

Nuaire's range of inline carbon supply filters has been specifically designed to reduce the level of airborne contaminants entering a building, in particular nitrogen dioxide (NO2), thus improving indoor air quality (IAQ). The filter unit incorporates a carbon filter and a range of particulate pre-filters are available. Units should be fitted on the supply leg of ducting and therefore do not require insulation (see Fig 1).

1.1 CODE DESCRIPTION

1	-	2	-	3
IAQBOX	-	S	-	PM2.5

1. Range: **XBOXER**

2. Unit Width: **S** = Single Width
D = Double Width

3. Particulate Filter: [none] = No particulate filter included
PM2.5 = PM2.5 particulate filter included (removal of particulate matter 2.5 microns and larger)

1.2 PARTICULATE FILTER (OPTIONAL)

High urban PM (particulate matter) emissions may require an additional filter to meet air quality standards.

1.3 PERFORMANCE DATA

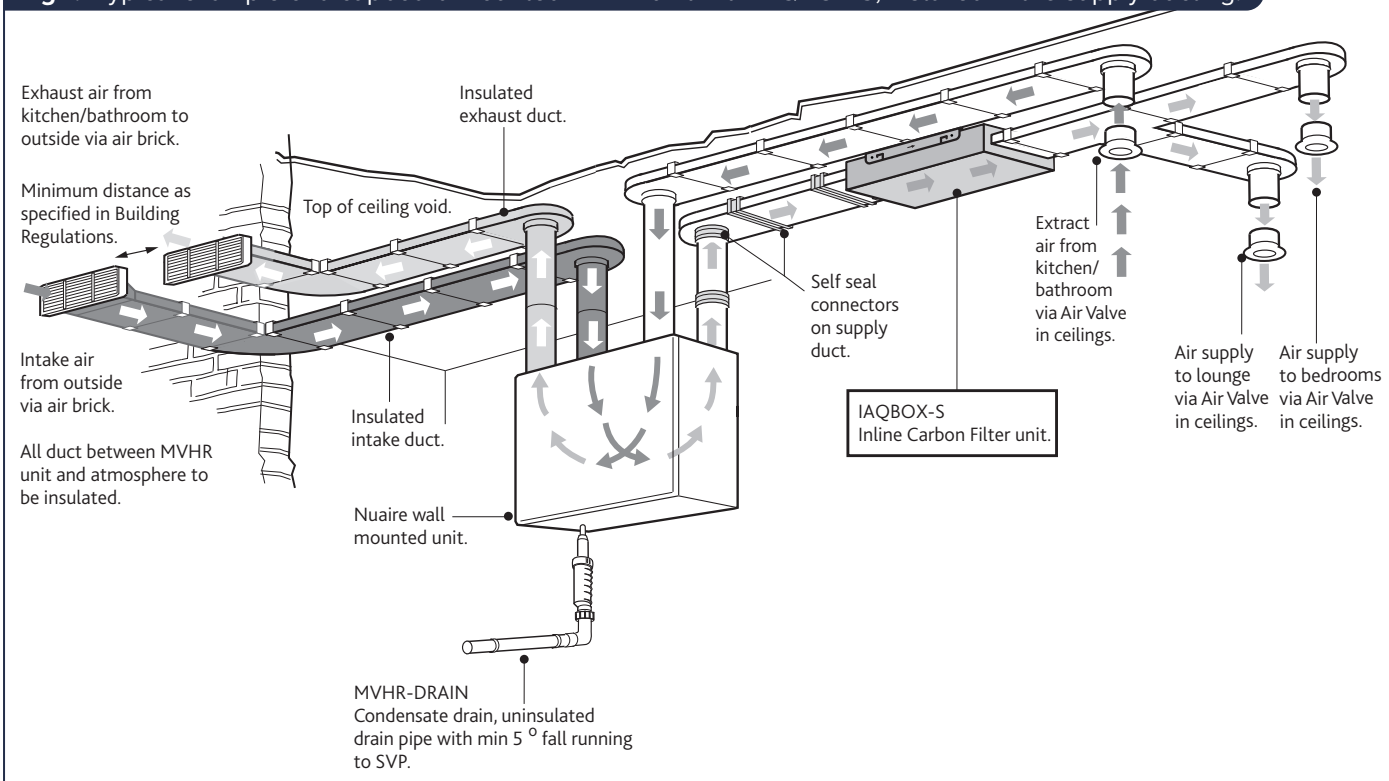
Nuaire's carbon filters have been independently tested and offer up to 99.5% reduction in NO_2. The unit meets planning obligations and world health organisation's recommendations.

1.4 RESISTANCE DATA

When selecting the MVHR unit please ensure that the resistance through the carbon filter has been allowed for.

Please refer to **www.nuaire.co.uk** for the product brochure which contains the relevant resistance data or contact us via email at **info@nuaire.co.uk**.

Fig 1: Typical example of a cupboard mounted MVHR unit with IAQBOX-S, installed in the supply ducting.



1.5 DIMENSIONS

Fig 2: IAQBOX-S Dimensions

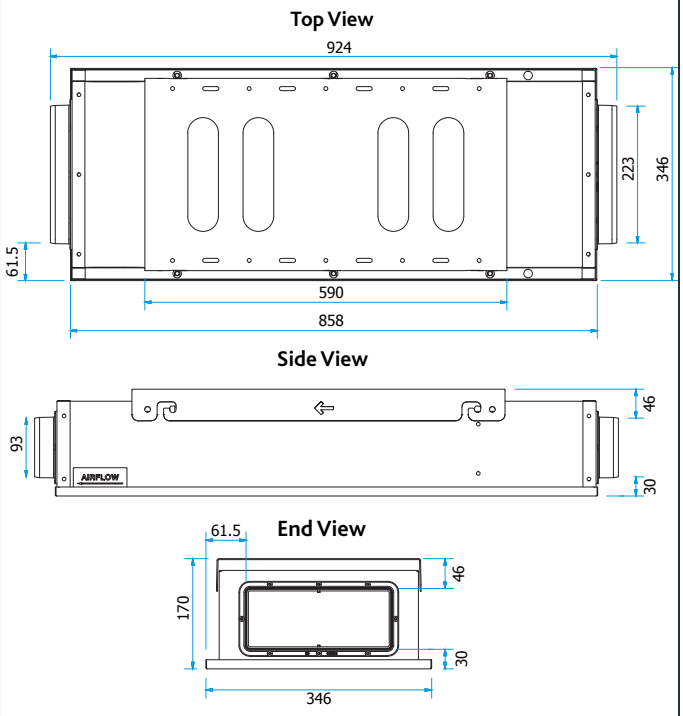
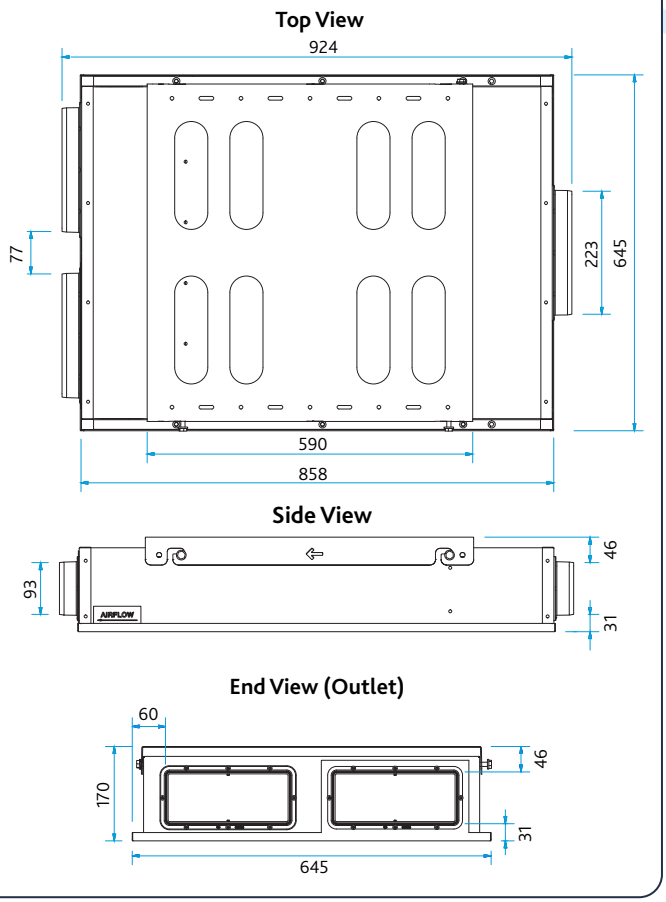


Fig 3: IAQBOX-D Dimensions



2.0 INSTALLATION

Installation must be carried out by competent personnel, in accordance with good industry practice, the appropriate authority and in conformance with all statutory and governing regulations.

The mounting surface must be of a solid construction and capable of supporting the full weight of the unit.

Units are supplied complete with a mounting bracket for quick and easy surface mounted installation.

Access to the unit for maintenance is granted via the bottom panel. Ensure that an access panel has been allowed for maintenance to the unit, the space required is shown below.

2.1 ACCESS RQUIREMENTS

Code	Width (mm)	Length (mm)
IAQBOX-S	386	898
IAQBOX-D	685	924

2.2 CHOOSING A SPIGOT (IAQBOX-D ONLY)

Refer to the system design drawing for the spigot configuration requirements for each installlation.

Once the required spigot configuration is known, the relevant aperture(s) can be cut out. Fix the required spigot(s) to the unit with the self-tapping screws provided and seal with silicone to eliminate air leakage.

If choosing the single spigot configuration, the aperture that is not required must be sealed off with the blanking plate provided. Fix the plate with the self-tapping screws provided and seal with silicone.

2.3 CEILING MOUNTING

- Remove unit from packaging and unscrew the outer locking bolts (two bolts on the left and right side of the unit) from the mounting bracket, storing them for later use (Fig 4).
- Loosen the inner mounting bolts and slide/lift the mounting bracket off the unit (Fig 5).
- Locate the mounting bracket into the desired position, with the arrows pointing in the direction of airflow. Use the bracket to mark the required drill holes.
- Using the appropriate fixings, secure the bracket to the ceiling.
- Check the orientation of the unit matches that of the mounting bracket by aligning the direction of the arrow on the bracket with the direction of the arrow on the units' airflow label.
- With the inner mounting bolts still protruding from the unit (5mm), offer the unit up to the mounting bracket, sliding up and across so that all four bolts rest in the bracket slots. Tighten all bolts.
- Lock the unit in position by refitting the outer locking bolts that were removed earlier.

Fig 4: Mounting Bracket Fixings

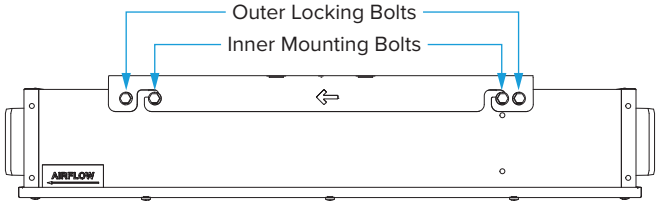
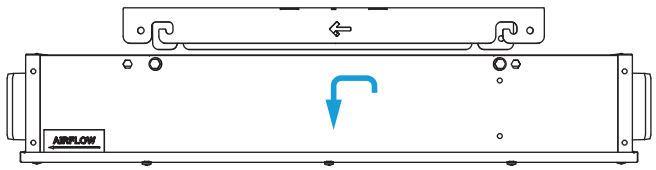


Fig 5: Removing Mounting Bracket



2.4 LIMITED ACCESS

It is possible to fit this unit close to a wall/obstacle which prevents the locking bolts from being installed along one side. The two unused locking bolt holes should be plugged by screwing in the rubber plugs provided before installing. All four mounting bolts MUST be tightened and the remaining two locking bolts MUST be used.

3.0 MAINTENANCE

Appropriate PPE (Personal Protective Equipment) should be worn during maintenance. Precautions may also be needed to protect the surrounding area from excess carbon residue.

To ensure the carbon filter maintains its high reduction of NO_2 the filter must be replaced once the end of its lifespan has been reached. The lifespan of the carbon filter in normal circumstances is shown in the table below.

Code	Carbon Filter Lifespan	Carbon Filter Weight
IAQBOX-S	2 Years	6kg
IAQBOX-D	4 Years	12kg

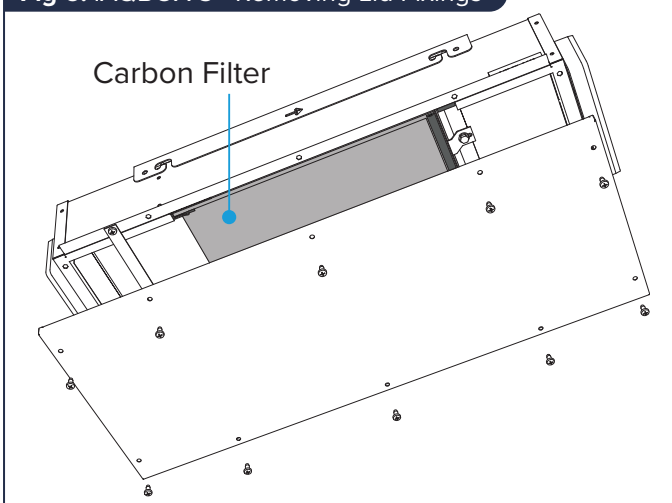
IMPORTANT

The carbon filter block is supported by a retaining clamp, loosening the clamp will result in the filter being freed.Be prepared to support the whole weight of the carbon filter block.

3.1 REPLACING SINGLE CARBON FILTER - IAQBOX-S

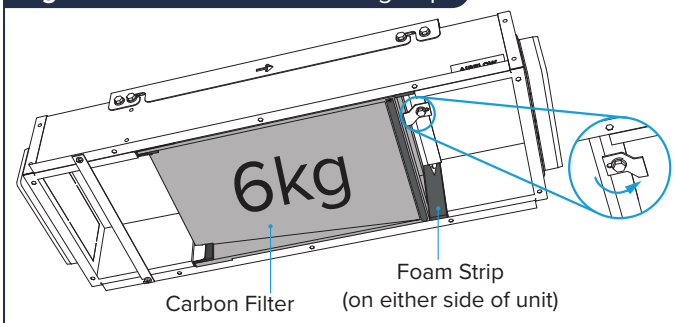
- Unscrew the fixings securing the lid in place and remove lid from unit (Fig 6).

Fig 6: IAQBOX-S - Removing Lid Fixings



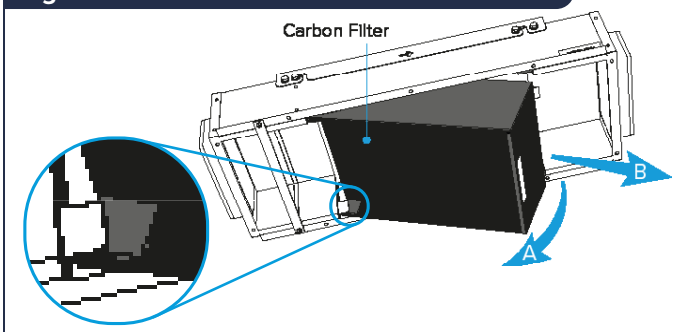
- Whilst supporting the back of the carbon filter block, loosen the retaining clamp bolt and rotate the clamp in order to release the block (Fig 7).

Fig 7: IAQBOX-S Filter Retaining Clip



- Pulling firmly on the rear edge of the carbon filter block will lever the filter to approximately a 45° angle (A). At this position it can be removed from the unit (B) (Fig 8).

Fig 8: IAQBOX-S Carbon Filter Block Removal

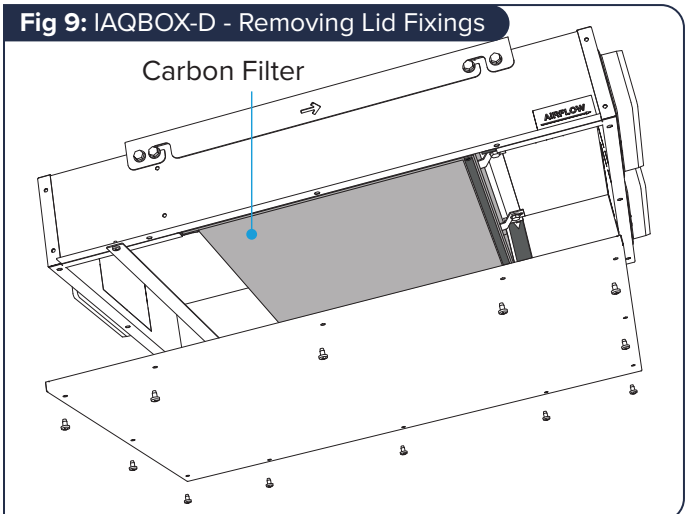


- Replace the carbon filter in the reverse operation to the above process. Ensure the filter is fitted in the same orientation as before. Firmly push the filter back into position to compress the rubber seal. Rotate the clamps back and tighten clamp bolt prior to removing support from the replacement carbon filter block.
- If the foam strips behind the carbon filter (Fig 7) sustain any damage during the removal or installation. Remove and replace foam strips with new foam supplied with replacement filter.
- Refit the unit lid.
- Wash hands thoroughly after handling.

3.2 REPLACING DOUBLE CARBON FILTER - IAQBOX-D

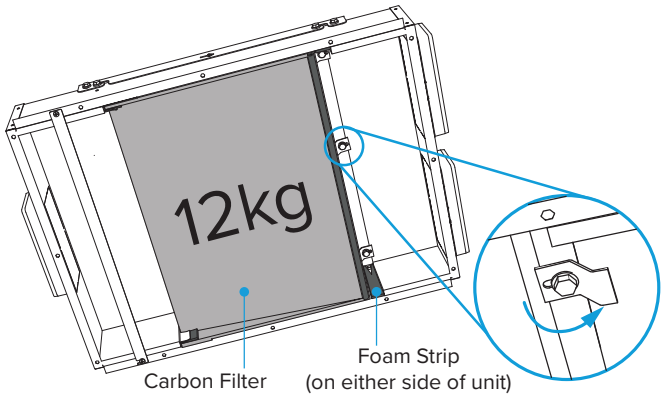
- Unscrew the fixings securing the lid in place and remove lid from unit (Fig 9).

Fig 9: IAQBOX-D - Removing Lid Fixings



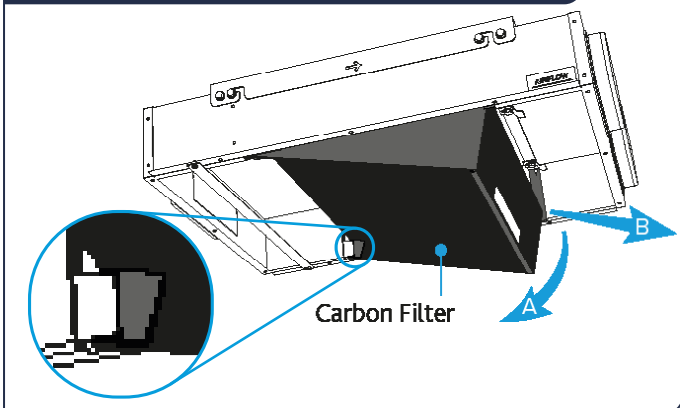
- Whilst supporting the back of the carbon filter block, loosen the retaining clamp bolt and rotate the clamp in order to release the block (Fig 10).

Fig 10: IAQBOX-D Filter Retaining Clip



- Pulling firmly on the rear edge of the carbon filter block will lever the filter to approximately a 45° angle (A). At this position it can be removed from the unit (B) (Fig 11).

Fig 11: IAQBOX-D Carbon Filter Block Removal



- Replace the carbon filter in the reverse operation to the above process. Ensure the filter is fitted in the same orientation as before. Firmly push the filter back into position to compress the rubber seal. Rotate the clamps back and tighten clamp bolt prior to removing support from the replacement carbon filter block.
- If the foam strips behind the carbon filter (Fig 10) sustain any damage during the removal or installation. Remove and replace foam strips with new foam supplied with replacement filter.
- Refit the unit lid.
- Wash hands thoroughly after handling.

IMPORTANT
Carbon filter pellets are not to be ingested.

3.3 REPLACING PARTICULATE AIR FILTER (IF APPLICABLE)

To ensure effective particulate filtration and low system resistance, optional air filters must be replaced every 12 months. Replacement filters are available for purchase direct from Nuaire, with the relevant part codes shown in section 3.3 of this document.

- Unscrew the fixings securing the lid in place and remove lid from unit.
- Rotate the strap through 90° to allow removal of the filter, the fixing screw may need to be loosened to allow strap to rotate (Fig 12 and Fig 13).

Fig 12: IAQBOX-S Particulate Filter Removal

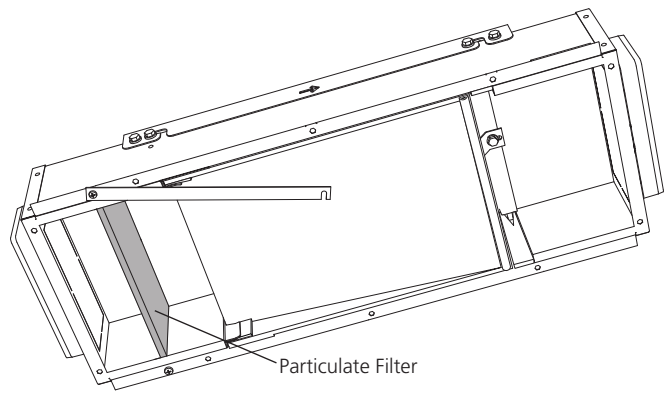
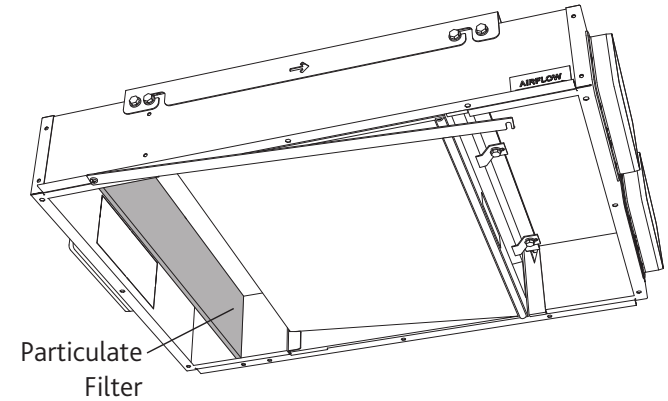


Fig 13: IAQBOX-D Particulate Filter Removal



- Fit the replacement filter ensuring the airflow direction matches the air flow of the unit (if applicable).
- Rotate strap back into position and refit unit lid.

3.4 REPLACEMENT FILTERS

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

Unit Code	Carbon Filter Code	Particulate Filter Code
IAQBOX-S	CARBON-FILTERKIT-S	n/a
IAQBOX-S-PM2.5		PM2.5-FILTERKIT-S
IAQBOX-D	CARBON-FILTERKIT-D	n/a
IAQBOX-D-PM2.5		PM2.5-FILTERKIT-D

4.0 WARRANTY

The 5 year warranty starts from the day of delivery and includes parts and labour for the first year. The remaining period covers parts only, filter replacement is not covered by the unit warranty.

This warranty is void if the equipment is modified without authorisation, is incorrectly applied, misused, disassembled, or not installed, commissioned and mainta For technical assistance or further product information, including spare parts and replacement components, please contact the After Sales Department.

Telephone 02920 858 400
aftersales@nuaire.co.uk