



**Monmouth
Scientific**

Operating & Maintenance Manual

Circulaire®

Air Filtration Box

FB250



THE MARKET LEADER IN *CLEAN AIR SOLUTIONS*

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Warning

This cabinet must be used in compliance with these instructions and any repairs or maintenance carried out by qualified personnel.

For parts or service information please contact Monmouth Scientific.

SECTION 1

DESCRIPTION OF THE UNIT

The FB250 Air Filtration Box can treat 250m³/h and may be utilized in a variety of applications where fume extraction and filtration is required. The system is totally self contained and requires no connection to external ventilation. Air is drawn into the unit via the duct inlet spigot/s or via an optional articulated arm, the contaminated air is passed through an electrostatically charged pre-filter to remove particulate and then through an Activated Carbon main filter to remove chemical fumes it then passes through an optional HEPA filter before exhausting the air back to the laboratory. The airflow is continuously monitored and will provide an audible and visual alarm if the airflow drops below a safe level. The exhaust air is also monitored by an optional hydrocarbon sensor to provide an indication of carbon filter condition.

SECTION 2

INSTALLATION

- The filtration box should be placed on a flat surface and levelled using the adjustable feet or wheels if fitted.
- The box is recirculating and requires no connection to ductwork

TESTING / COMMISSIONING

A test certificate will be supplied for conformity to CE marking, and electrical test. The airflow should be checked using a vane anemometer and the results recorded.

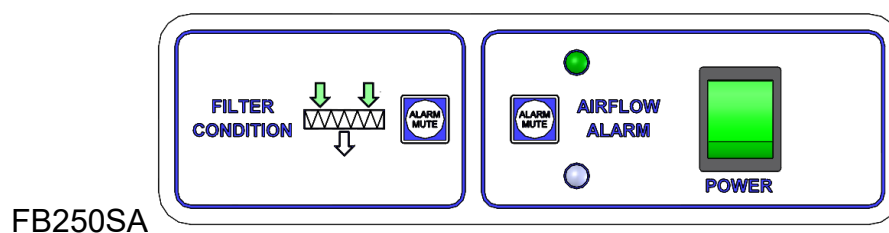
THE CABINET MUST BE TESTED EVERY 14 MONTHS TO COMPLY WITH C.O.S.H.H REGULATIONS.

SECTION 3

OPERATION

To turn the cabinet on, press the illuminated rocker switch on the control panel. During start up the low airflow alarm light will flash until the cabinet reaches correct operating speed.

Control panel

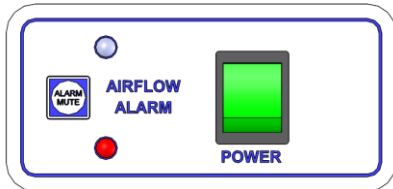


Alarm systems

Airflow monitoring alarm (all units)

The airflow is continuously monitored by an airflow monitoring system and will provide a visual and audible alarm if the airflow drops below a set level.

The alarm sound can be temporarily silenced by pressing the “Alarm Mute” button.



Filter condition alarm (fitted to FB250SA)

This uses a Hydrocarbon carbon detection sensor and is suitable for organic substances/fumes. It is NOT suitable for non-organic applications (eg Acids). When fitted, the exhaust air is monitored and will provide a visual and audible alarm if filter breakthrough is detected. The alarm sound can be temporarily silenced by pressing the “Alarm Mute” button.



This is for indicative purposes only and should not be considered the sole method for safety and personal protection. It is suggested a secondary means of regular testing is employed for safety critical applications.

This guidance does not supersede or overrule any local safety practices or procedures you may have in-place.

SECTION 4

FILTERS

Filters concentrate dust, pollutants etc and care must be taken when changing filters.

IMPORTANT: Personal Protective Equipment must be worn when changing filters.

The exact filter(s) fitted to your unit are detailed on the filter label located near the serial number label.

PRE-FILTER - CHANGING

1. Remove the front access cover on the filter unit using the key provided.
2. The pre-filter is located on top of the main carbon filter and can be easily removed and bagged for disposal.
3. Replacement pre-filters can be obtained from Monmouth Scientific – Part No: K-PF0019 (Pack of 10)

MAIN CARBON FILTER - CHANGING

1. Remove the front access cover on the filter module using the key provided.
2. The carbon filter can be removed and bagged for disposal.
3. When replacing the carbon filter it is best to replace the pre-filter at the same time.
4. Replacement carbon filters can be obtained from Monmouth Scientific. Please contact us for advice on the correct grade for your application.

MAIN HEPA FILTER - CHANGING

1. Remove the front access cover on the filter module using the key provided.
2. The filter is clamped with a frame that is secured with 4 x screws. These should be released and the filter frame removed.
3. The HEPA filter can be removed and bagged for disposal.
4. When replacing the HEPA filter, it is best to replace the pre-filter at the same time.
5. Replacement filter. Monmouth Scientific – part No. K-HF0093.

SECONDARY (EXHAUST) HEPA FILTER – CHANGING

1. Remove the Main filter as detailed above
2. The HEPA filter can be removed and bagged for disposal.
3. Once replaced, the filter should be DOP tested to confirm integrity and functionality.
4. Replacement filters can be obtained from Monmouth Scientific. K-HF0093.

SECTION 5

MAINTENANCE

The cabinet should be isolated from the electricity supply before carrying out any maintenance procedures.

FUSES

The main fuses are located in the mains inlet socket on the side of the filter module. Remove the mains lead and withdraw the fuses using a small screwdriver. **Always replace fuses with the correct type and rating.**

SECTION 6

SERVICING

An annual service is recommended and testing is mandatory under C.O.S.H.H regulations and will include the following points:

- Check / replace pre-filter
- Check and record downflow velocity readings
- Check airflow monitor and re-calibrate if necessary
- Inspect electrical components, cables etc.
- Issue test report and airflow certificate.

For parts or service information please contact Monmouth Scientific.

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