



Operating & Maintenance Manual

Vertical Laminar Flow Cabinets

VLF80E / VLF120E / VLF160E

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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 LabHub on +44 (0) 845 094 0951**

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SECTION 1

DESCRIPTION OF THE CABINET

The LabHub range of Vertical Laminar Flow cabinets provide Class 100 clean air at a velocity >0.35m/second above the entire working area. The cabinets are supplied in 3 sizes to suit most applications. They are manufactured in epoxy powder painted 'zintec' steel and have clear acrylic glazing at the front and sides. All cabinets are fitted with a fan boost function which may be used to temporarily increase the airflow to purge the cabinet when switched on. The entire unit is designed and manufactured in the UK by our own engineers.

	LabHub VLF80E	LabHub VLF120E	LabHub VLF160E
External Dimensions	800mm wide 680mm deep 1110mm high	1200mm wide 680mm deep 1110mm high	1600mm wide 680mm deep 1110mm high
Internal Dimensions	760mm wide 640mm deep 750mm high	1160mm wide 640mm deep 750mm high	1560mm wide 640mm deep 750mm high

SECTION 2

INSTALLATION

GENERAL

The cabinet is normally delivered fully assembled and ready for use.

The following guidelines should be observed when installing the cabinet:

- Site the cabinet in a draught free position with a minimum of 200mm from the top of the cabinet to the ceiling to prevent obstructing the air inlet and to provide access to change the pre-filter.
- Connect the cabinet to a 13A socket.
- Switch the cabinet on.
- The boost function may be used to purge the air in the work area.

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 main HEPA filter will have been factory tested before delivery.
A DOP filter challenge test should be carried out to verify filter integrity when the cabinet is installed.

THE CABINET SHOULD BE TESTED EVERY 12 MONTHS.

SECTION 3

OPERATION

The cabinet is started using the illuminated rocker switch on the control panel. When the cabinet is switched on, there is about a 30 second delay while the fans start up and increase speed to the correct level. After this, the cabinet may be purged using the boost function. The boost function will need to be switched off to return the cabinet to the normal running condition and allow the airflow to stabilise prior to starting any procedure within the cabinet. The internal low energy LED lighting will switch on automatically and remain on at all times when the cabinet is running

The cabinet should be left running for a minimum of 10 minutes prior to starting any procedure to allow the working area to purge and achieve class 100 status.

Power and Boost
switch panel on front
right end of cabinet



AIRFLOW

The airflow should be periodically checked to ensure the cabinet is running with the airflow at the correct velocity. The cabinet is fitted with a pressure gauge as shown below.



When the reading is within the green segment, this indicates that airflow through the cabinet is within the required parameters.

In the unlikely event that the reading is within the lower red segment, the fan speed is too low and will need adjustment and re-calibration (by a trained service engineer)

If the reading rises to the upper red segment, this indicates that the cabinet resistance is too high, which will cause the airflow to be too low. The most likely cause for the airflow to reduce is a blocked pre-filter. The pre-filter is located on the top of the cabinet, and a visual inspection should determine if it is blocked and needs to be changed (see page 10).

Pre-filters are available from LabHub – Part No PF-0061

SECTION 4

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 back of the cabinet. Remove the mains lead and withdraw the fuses using a small screwdriver. Always replace with the correct type and rating – 5A Type T.

LED LIGHTING

The high efficiency, low voltage LED light tubes are fitted to the inside of the enclosure. They should provide many years of service without requiring replacement.

If required, the fittings can be changed from inside the work area enclosure.

Replacement tubes are available from LabHub :-

For VLF80E Part No GS-01514

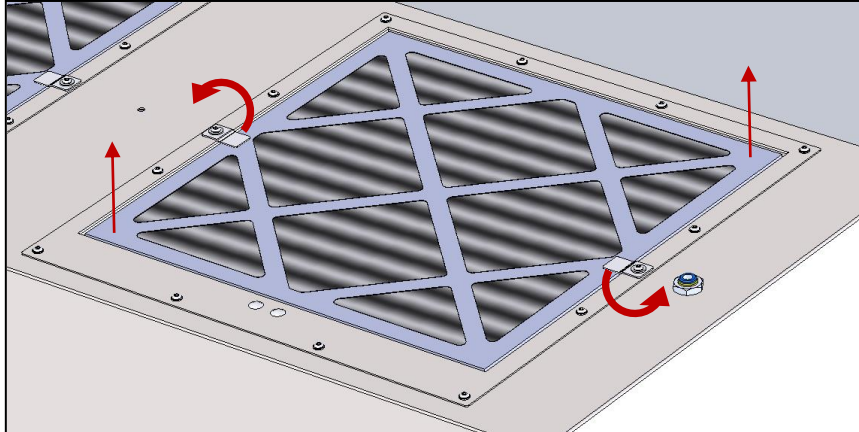
For VLF120E Part No GS-01539

For VLF160E Part No GS-01540

NOTE – Care should be taken to ensure the tubes are fitted in the correct orientation with the red+ marking on the tube aligning with red mark on the fitting.

PRE-FILTER

Located on top of the cabinet, these are changed by loosening the screw on each of the securing tabs and rotating the tabs clear of the pre-filter. Filter will then lift out for replacement.



Replacement Pre-Filters Part No. K-PF0061 are available from LabHub :-

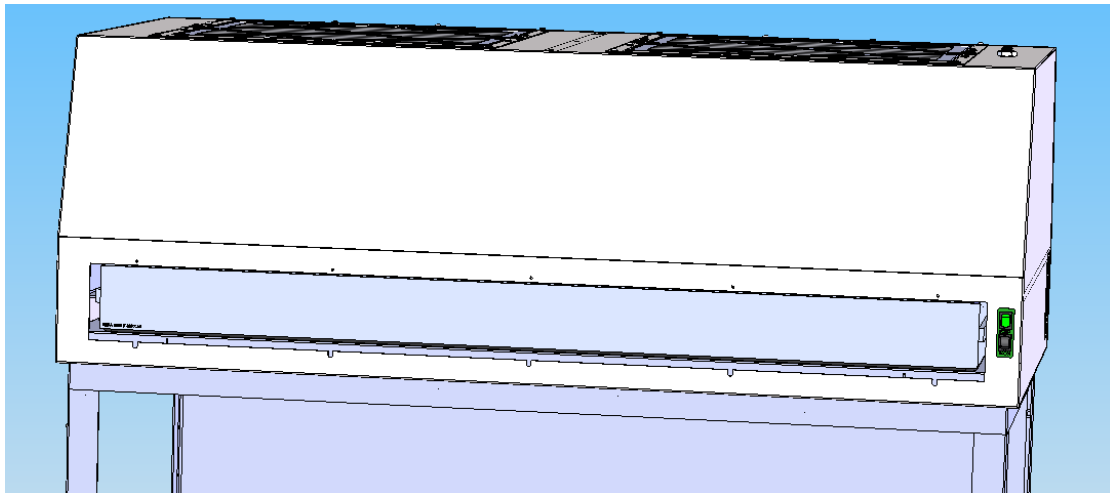
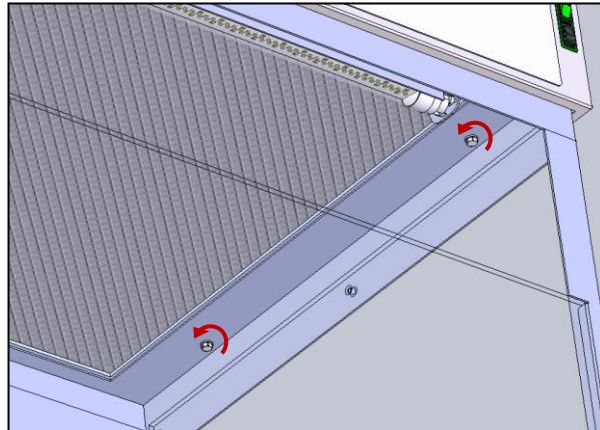
VLF800E – 1 off required

VLF1200E – 2 off required

VLF1600E – 2 off required

MAIN HEPA FILTER

Access to the main HEPA filter is gained by removing the front cover. Remove all small screws along the top of the cover. Lift the cover slightly to release it. The filtration head section will now need to be raised sufficiently to release the filter. This is done by rotating anti-clockwise the four clamp hexagon head screws, two at each end inside the work area enclosure.



When the filtration head metal edge is clear of the upper filter seal, the filter may be withdrawn from the cabinet through the front aperture and a replacement fitted.

Replacement main filters are available from LabHub :-

For VLF80E Part No K-HF0179

For VLF120E Part No K-HF0180

For VLF160E Part No K-HF0181

The replacement filter should be DOP tested prior to use and the airflow and alarm re-calibrated if necessary.

SECTION 6

SERVICING

An annual service is recommended to maintain optimum operating conditions and will include the following points:

- Check / replace pre-filter (s)
- DOP test the main HEPA filter
- Check and record downflow velocity readings
- Check general condition of cabinet – glazing etc.
- Inspect electrical components, lighting, cables etc.
- Issue test report and airflow certificate.

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