



Operating & Maintenance Manual

## Horizontal Laminar Flow Cabinets

HLF80E / HLF120E / HLF160E

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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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For permission requests, please write to Monmouth Scientific Limited  
Units 5 & 6 Kilnside, East Quay, Bridgwater, Somerset TA6 4DB.  
Email: [info@labhub.co.uk](mailto:info@labhub.co.uk). Phone : +44 (0)845 094 0951



# SECTION 1

## DESCRIPTION OF THE CABINET

The LabHub range of Horizontal Laminar Flow cabinets provide Class 100 clean air at a velocity >0.35m/second across 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 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.

	<b>LabHub HLF80E</b>	<b>LabHub HLF120E</b>	<b>LabHub HLF160E</b>
External Dimensions	800mm wide 680mm deep 1110mm high	1200mm wide 680mm deep 1110mm high	1600mm wide 680mm deep 1110mm high
Internal Dimensions	750mm wide 480mm deep 700mm high	1150mm wide 480mm deep 700mm high	1550mm wide 480mm deep 700mm 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.
- If the cabinet has been purchased without a fitted optional stainless steel or Trespa work-surface, care should be taken to seal the underside of the cabinet to the table or work-surface on which it stands. This will prevent the possibility of room air being drawn into the work area beneath the filter. Foam self-adhesive sealing tape is provided for this purpose.
- 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

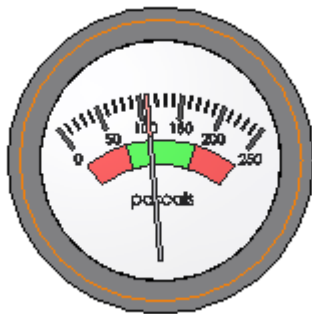
The cabinet should be left running for a minimum of 10 minutes prior to starting any procedure to allow the working area to purge and achieve Class 100 status.

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**

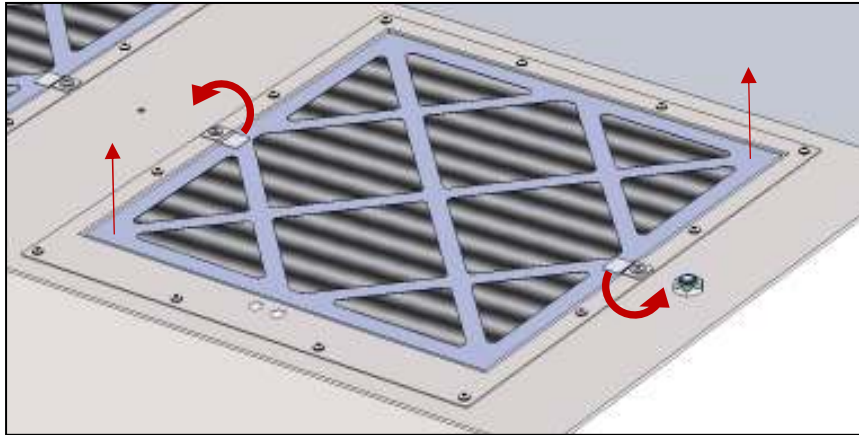
The high efficiency, low voltage LED light tubes are fitted behind the translucent plastic panel above the work area. They should provide many years of service without requiring replacement. If access is required to the tubes, the cabinet must be unplugged from the electricity supply. The plastic panel is taken out by removing the two screws at the front, sliding the panel forward slightly which releases the back edge and allows it to move down and out.

Replacement tubes are available from LabHub :-  
For HLF80E Part No GS-01514  
For HLF120E Part No GS-01539  
For HLF160E 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.



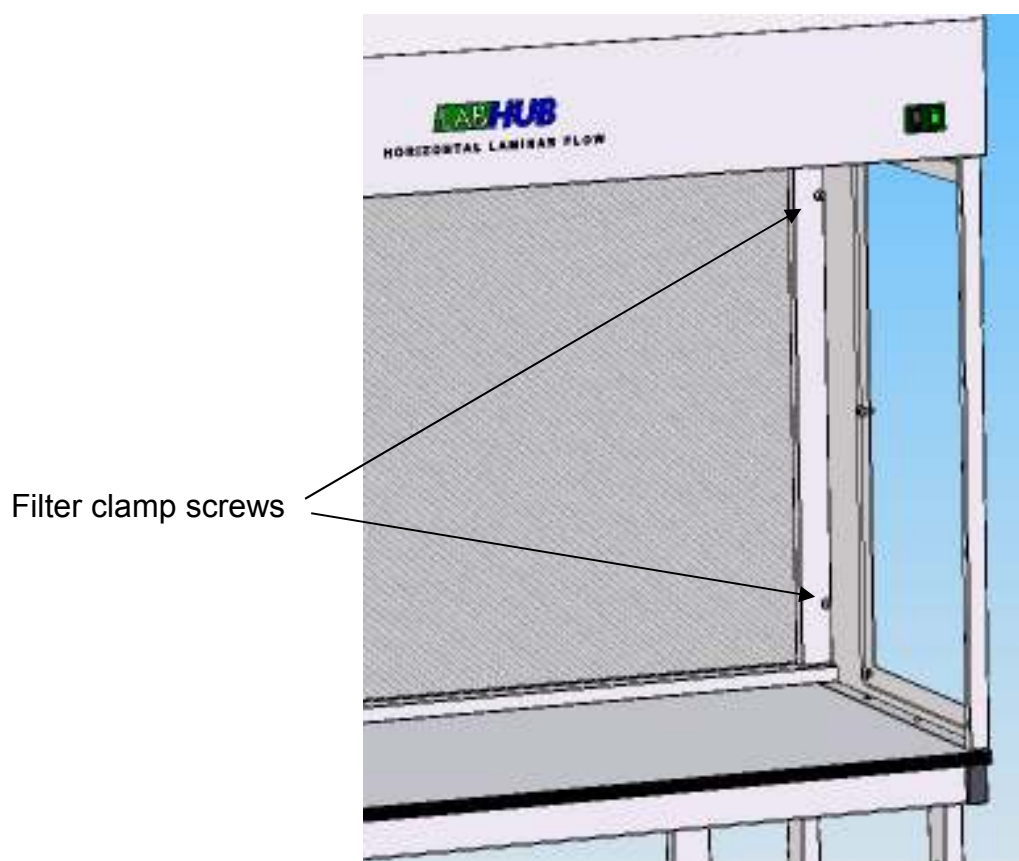
Replacement Pre-Filters Part No. K-PF0061 are available from LabHub :-  
HLF800E – 1 off required  
HLF1200E – 2 off required  
HLF1600E – 2 off required

## MAIN HEPA FILTER

The main HEPA filter is removed from the front within the work area. Place a few pieces of paper or card on the work-surface to protect it. To release the filter, remove the four screws in the clamp frame (two at each end), slide the frame to one end and move the other end out of the front of the cabinet.

The filter can now be moved directly forward and removed from the front of the cabinet.

When fitting the replacement filter ensure it is centrally positioned.



Replacement main filters are available from LabHub :-

For HLF80E Part No K-HF0210

For HLF120E Part No K-HF0211

For HLF160E Part No K-HF0212

**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.

**For parts or service information  
please contact LabHub on +44 (0) 845 094 0951**



**LabHub Limited**

**UK Headquarters**

Monmouth House,  
Peninsula Business Park,  
Bridgwater,  
Somerset,  
TA6 4QB.

**+44(0)1278 458090**

**[www.labhub.co.uk](http://www.labhub.co.uk)**

**[info@labhub.co.uk](mailto:info@labhub.co.uk)**

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