



**XL**

## **User Manual**

### **Specifications:- (tested with 8.0µm MCE filter)**

Flow Range: Adjustable 5 - 17 l/min

Battery Pack: 14.4 Volt 26.Ah Lithium Li-on

Charge Time: 6-8 hours

Duration: 10+ Hours @ 16 l/min, 22+ Hours @ 8 l/min

Display: OLED, elapsed run time and battery indicator

Material: HF ABS

Waterproof: IP65

Dimensions: H38cm x W24cm x D12cm

Mast extends: (Up to) 2 meters

Weight: 4.2kg

CE Marked





### Warranty Registration

Don't forget to register your new Airbox product by filling in the registration form provided and returning it to us at the address below.

Alternatively you can do this online at: [www.airboxsp.com](http://www.airboxsp.com)

### Technical support

For all technical support or customer service enquiries please contact us:

**telephone:** +44(0)1903 524 600

**email:** [sales@airboxsp.com](mailto:sales@airboxsp.com)

**Airbox Sampling Products**, Technology Centre,  
Easting Close, Worthing, West Sussex BN14 8HQ

Thank you for choosing this Airbox product. To ensure that you get the best possible use from it, please read this manual carefully.

**Airbox Sampling Products** is part of the FermionX Group

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## 1. Setting up and using the XL pump

Before you use the XL pump make sure it is fully charged. A battery level indicator shows the available power when the unit is first switched on.

### 1.1 Charging the battery

When the charger is plugged into the charging socket a red LED will be illuminated. The LED will change to green when the battery is fully charged. It takes approximately 6-8 hours to completely charge the battery.

### 1.2 Removing the waterproof covers

**IMPORTANT:** Before switching the unit on, ensure any yellow waterproof covers are removed from the air outlet and from the bottom of the air sampling head.

## 2. Switching on and setting the flow rate

Before switching on the XL, connect a flow meter to the air sampling head.

Press **start/pause** to switch on the unit. The display will show, in this order, the serial number, the current firmware version and the battery status.

If **start/pause** is pressed the display shows 'Flow not set'.

Press either arrow to open and start Calibration Mode and to Set Flow.

The pump is set at approx 8 l/min as a default, to fine tune this:-

Press **start/pause** to start calibration. NOTE: Run for 45 seconds to allow to stabilise.

Press up/down arrows to adjust flow rate. (A single press advances the display by one increment, holding while pressing advances the display by 10 increments). Check the flow rate against the flow meter and adjust according to flow requirements. (Any increment changes will be saved for the post test flow check, see 2.3).

To confirm and set the flow rate press **stop**.

**IMPORTANT:** If pump is shutdown between setting the flow and starting the test, flow will have to be re-calibrated by repeating the steps above.

### 2.1 Setting test mode

Press **start/pause** the display will show 'Set test mode'.

Press arrows to select 'Free Running' or 'Timed test'.

### 2.2 If Free Running is selected

Press **start/pause** the pump runs and the timer starts counting, (you can pause during the test by pressing **start/pause**)

Press **stop** during test and the display shows 'Test Stop? Are you sure?' If you are not sure, press **start/pause** to continue test, if you are sure:-

Press **stop** display shows 'Test completed - Check Flow'.

Press **stop** display shows 'Connect flow meter' (now reconnect your flow meter to check the flow rate).

Press **start/pause**, display shows 'Flow Check' (any increment changes made when setting the flow rate (see 2) will be shown).

**NOTE:** Wait 45 seconds for flow rate to stabilise.

Press **stop** display shows 'Flow Check Complete'.

Press **stop** to shutdown.

### 2.3 If Timed Test is selected

Press **start/pause** the display shows 'Enter Run Time'

Press arrows to adjust time:-

Press **start/pause** to move between (Hrs) 00 (Mins) 00 (Sec) 00.

Press **start/pause** the pump runs and the timer starts. When the time has elapsed the display shows 'Test Completed - Check Flow'.

Press **stop** display shows 'Test completed - Check Flow'.

Press **stop** display shows 'Connect flow meter' (now reconnect your flow meter to check the flow rate).

Press **start/pause** display shows 'Flow Check' (any increment changes made when setting the flow rate (see 2) will be shown).

**NOTE:** Wait 45 seconds for flow rate to stabilise.

Press **stop** display shows 'Flow Check Complete'

Press **stop** to shutdown.

**Note:** If the pump switches itself off during either Free Running or Timed Test (i.e if the battery dies or the sampling head gets blocked) on restart it will either show:-

1. 'Test Incomplete, Restart Test?'; Press **start/pause** to resume test and see where the previous test got to.
2. 'Test Completed Check Flow', in which case continue as instructions above.
3. 'Low battery', in which case either replace battery (within 10 minutes of disconnecting old one).

## 3. Maintenance

### 3.1 Replacing the battery

The XL pump has been specifically designed to make replacing the battery a quick and easy task. Simply undo the two screws on the front of the battery housing, pull off the terminal connectors, remove the battery and replace.

**NOTE:** This process is made easier if pump is lying on it's back.

**IMPORTANT:** The terminals on the battery are colour coded red and black to match the red and black wires of the unit. When fitting a new battery make sure that these match up correctly.

### 3.2 Replacing the mast

The mast is secured on the unit in a threaded housing, so to replace just unscrew and remove. We would also recommend removing the mast when cleaning the unit (3.3).



### 3.3 Cleaning the unit

The casing of the XL pump is made from a hard wearing ABS structural foam, making it incredibly rugged and also very easy to clean. Tested to IP65 standards ('Protected against low pressure water jets from any direction.') the unit can be cleaned under a shower hose.

**NOTE:** Do NOT Submerge the product fully in water.



### 3.4 Servicing & Warranty

The XL pump is covered by our exclusive warranty and in the event that the unit fails we will undertake the repair free of charge for up to 2 years from the date of purchase. The warranty covers the costs of materials and labour (with the shipping costs to be covered by the customer) and is valid under the following conditions:-

- a) Please complete and return the warranty registration card.
- b) The defect must not have been caused by improper handling or misuse.
- c) Return the unit to us in the decontamination bag provided by Airbox. We will not assume responsibility for transport damage under any circumstances.
- d) A short description of the defect must be included with the returned unit.

A full warranty statement is available on our website or from our customer service team.

### 4. Troubleshooting

#### **Pump will not start, red LED illuminated**

Battery voltage may be too low, check the battery level and recharge the battery.

If the pump still doesn't start, contact the Airbox service department.

#### **Pump will not start, no display**

Flat battery, recharge or replace the battery.

#### **Flow rate doesn't reach required level**

Ensure any yellow waterproof safety caps have been removed.

Check tube for kinks and that the sampling head is not blocked.

If flow rate is still insufficient, contact the Airbox service department.

#### **Pump stops while running, red LED illuminated**

Check tube for kinks and that the sampling head is not blocked.

Check the battery level and recharge if required. Replace the battery if necessary.

If the flow rate is still insufficient, contact the Airbox service department.

#### **Pump fails to run for specified duration**

Check the battery level and recharge if required. Replace the battery if necessary.

### 5. Parts

Product Code	Name	Description
P02008	Variflow XL	VARIFLOW XL Pump
P02008/KIT	Variflow XL Kit	Sampling pump + Kit (incl head, spare mast)
P01839	Sampling head	AIRBOX SAMPLING HEAD + 2x O-rings + 2x Filter support pads
P029347LF	Charger for Variflow 1Ah	Charger for P029347LF - 12V 1Ah Lead acid SLA - (Choose lead)
PT27259	Battery for Variflow/V8/Lowflow	Battery for Variflow/V8/Lowflow - Lead acid 12V 9Ah Recharge
PT29482LF	Variflow XL mast	Telescopic mast for Variflow - 2m
PT28297LF KIT	Cap + plug Kit (x10)	Sampling head cap + plug Kit (pack of 10)