V3

Specifications:-(tested with 0.8µm NUCLPR filter)

Flow Range: Adjustable 5 -12 litres/min with 0.8 micron cellulose filter
Flow Stability: +/- 3%
Battery Pack: 12.8V Lifepo4 Pack12Ah Lithium
Charge Time: 6 - 8 Hours Max
Duration: 12+Hours @ 8 litres/min
Display: OLED, Elapsed run time and battery indicator
Material: HF ABS
Waterproof: To IP65
Dimensions: H38cm x W24cm x D12cm
Mast extends to: Up to 2.0 metres
Weight: 4.6 kg

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

Technical support

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

telephone: +44(0)1903 524 600
email: sales@airboxsp.com
web: www.airboxsp.com

■ ■ ■ ■ thank you for choosing this Airbox product

Dear Customer

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

Your sincerely

The Airbox Team

Airbox Sampling Products is a wholly owned subsidiary of:

FermionX Ltd,
Technology Centre,
Easting Close, Worthing
West Sussex BN14 8HQ

Table of contents

1. Installing the Airbox Dataflow Software

Before you can preset and download data from your DATAFLOW pump you will need to install the Airbox Dataflow Application.

1.1 Compatible operating systems

The application is only compatible with Microsoft Windows operating systems and will not work on the Mac OS X platform. The minimum recommended requirement is Windows 7.

1.2 Locating and loading the software

Load the USB stick provided with your DATAFLOW pump into your computer, open the **Airbox Dataflow Firmware** folder and click on **SETUP**

The **Welcome to Airbox Dataflow 1.1.0 Setup** window opens. Click **Next.**

The **Choose Install Location window** opens Click on **Browse** and choose a destination on your computer to store the software for easy access.

Click Install

When the install is complete the **Completing Airbox Dataflow 1.1.0 Setup** window opens.

Click Finish

The **Welcome to the Device Driver Installation Wizard** window opens.

Click **Next**

The **License Agreement** window opens

Click on **I accept this agreement** and click **Next**

The **Completing the Device Driver Installation Wizard** window opens

Click **Finish**

The **Airbox Dataflow** application appears in your destination and automatically places a short cut icon on your desktop.

1.3 Airbox Dataflow Application

Pump not connected to computer   To website

Download   Troubleshooting   Exit
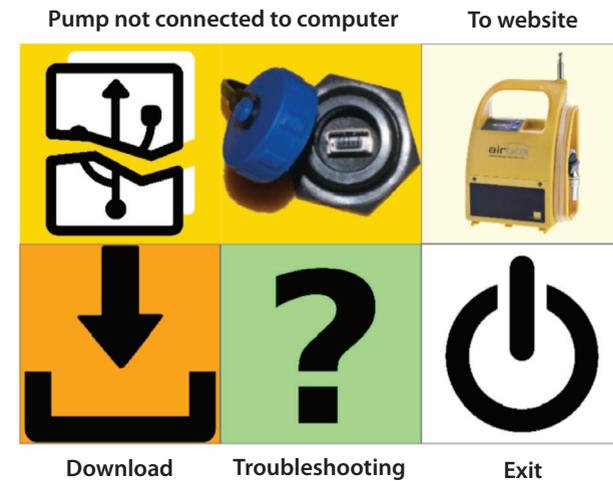
1.4 Airbox Dataflow Application when connected to the pump

Settings   Calibration   To website

Download   Troubleshooting   Exit
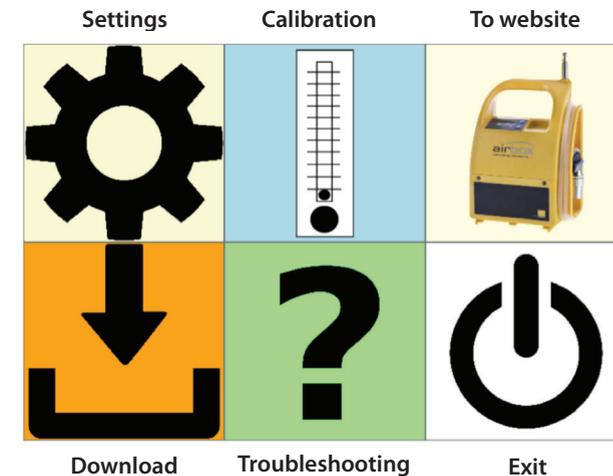
2. Preparing the DATAFLOW pump for use

Before you use the DATAFLOW pump make sure it is fully charged.

2.1 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.

2.2 Running the DATAFLOW from the mains

The DATAFLOW pump can be run from the mains by leaving the battery charger cable connected to the pump and the mains socket. This can only be done by leaving the battery connected inside the pump.

2.3 Removing the waterproof covers

CAUTION: Before switching the unit on, remove the yellow waterproof cover on the air outlet and from the bottom of the air sampling head.

3. Calibration

Airbox Sampling Products follows the guidelines laid out in HSG248. We calibrate the pumps flow rate against our calibrated master flow meter.

Our calibrated master flow receives annual calibrations by a UKAS accredited calibration provider. A copy of this certificate is available upon request.

IMPORTANT:

Airbox Sampling Products (FermionX Ltd) is not a UKAS calibration provider.

All users are recommended to calibrate the pumps prior to use in order to meet air sampling protocols as per their local standards.

3.1 Calibration

Make sure the application is open on the computer. Connect the USB cable to the computer and to the pump.

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

3.1 Calibration (cont)

With the pump now connected the application interface now changes to the 'connected' window (**see 1.4**).

Click on the **Calibration** button (see **1.4**) and the following window opens.
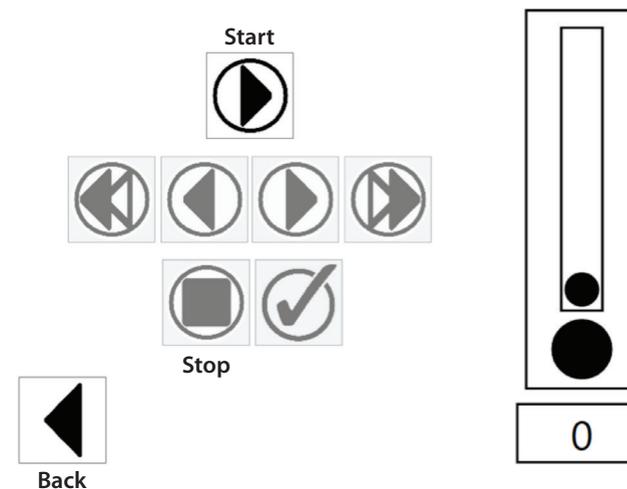
Attach a flow meter to the pump and then click on the **start** button to start the calibration.

Adjust the flow as required, using the **forward or backward** buttons either by increments of 1(inner buttons) or 10 (outer buttons).

Once the flow meter shows 3 litres/minute, press the **Tick** button and this setting will be confirmed and the display will show a number indicating the next required calibration level.

Adjust the flow level again until that flow level is achieved and press the **tick** button to confirm.

Continue this process through to 12 litres/minute when the calibration will be complete.

Your pump is now ready to set up test data.

Press **Stop** button at any time to cancel

Press **Back** button to go back to main page

4. Presetting jobs on the DATAFLOW

The best way to use the DATAFLOW is to preset the jobs onto the pump before it is taken out on site. Multiple jobs can be preset and saved in the application.

4.1 Connecting the unit to the computer

Open the **Airbox Dataflow Application** from the shortcut on your desktop. Connect the USB cable to the computer and to the pump.

Press **start/pause** to switch on the unit. The display will show (in this order) the serial number, the current software version and **USB Connected**.

4.2 Set up Test Data on Airbox Dataflow Application

Press the **Settings** button on the application interface (see **1.4**).
A new window opens.

Here you can set up all the data required to run a test.

First choose your **language**

4.2 Set up Test Data on Airbox Dataflow Application (cont)

Enter a **job Name**

Enter a **Location**

Set up either a **Capacity Test** or **Timed Test** using the drop down menu in **Mode**

Enter the **Flow (L/Min)**

For **Capacity Test**, when entering the required **Capacity (L)** the **Time (Mins)** will automatically be calculated.

For **Timed Test** when entering the required **Time (Mins)** the **Capacity (L)** will automatically be calculated.

Choose a **Sample Rate** for data collection (**see 5.3**).

Set a **pin** number if required (**see 5.4**).

Once all required fields are completed click on the **Tick**

The window will close and the job will now be stored on the Dataflow pump.

NOTE: You can set up multiple jobs.

When you have completed the set up, click on **Disconnect From Unit** and remove the USB cable.

5. Selecting and entering jobs on the DATAFLOW

You now have a choice. When using the DATAFLOW, you can either:

Select the job you have previously set (see **4.2**).

Or if no job has been previously set, you can manually **Enter** a job directly on to the pump.

To choose an option, press **start/pause** to switch on the unit. The display will show the serial number and the current firmware version.

Press the **start/pause** to **Select/Enter Job.** Use the **arrow keys** to move between **Select** and **Enter.**

To **Select** a previously saved job (see **5.1).**

To manually **Enter** a new job into the pump (see **5.2).**

5.1 Selecting a previously saved job

To **select** a job you have previously set up on the pump, (**see section 4 on presetting jobs**) with **Select** showing on the display, press **start/pause**. Use the **arrow keys** to scroll through and find the job you want to run.

Once you have located the correct job, press **start/pause** and **Start Job - OK Yes** is displayed. Use the arrows to choose **YES/NO/DELAY.** Press **start/pause** to choose option.

If DELAY is chosen, use the arrow keys to change the values and the **start/pause** to scroll across the numbers. Once the values have been set, press **start/pause** and the time will run down and start the test.

5.2 Manually entering a job

To manually enter a new job, with **Enter** showing on the display, press **start/pause**.

To **Enter Job Number** use the arrow keys to enter letters or numbers (up to a maximum of 10 digits) The up arrow starts on the letter A, the down arrow on the number 9. Pressing the **start/pause** moves the cursor on to the next digit.

When your happy with your job number press **start/pause** to set. If you enter it incorrectly, press **stop** to clear the display and start again.

Once you have entered the job number you now have the choice of doing a **Capacity Test** or a **Timed Test.** Use the **arrow keys** to choose.

5.2.1 Capacity Test

With **Select Test Mode Capacity Test** showing in the display, press **start/pause**. The display will now show the default capacity of 480 litres.

Use the arrow keys to change the values and the **start/pause** to scroll across the numbers. Once the values have been set, press **start/pause** until the display changes to **Enter Flow Rate** and shows the default value of 08.0 litres/min.

Use the arrow keys to change the values and the **start/pause** to scroll across the numbers. Once the values have been set, press **start/pause** until the display changes to **'Logging Period'** and shows the default value of 1 second(s). **Continue from 5.3.**

5.2.2 Timed Test

With **Select Test Mode Timed Test** showing in the display, press **start/pause**. The display will now show the default flow rate of 08.0 litres/min.

Use the arrow keys to change the values and the **start/pause** to scroll across the numbers. Once the values have been set, press **start/pause** until the display changes to **Enter Run Time** and shows the default value 01:00:00.

5.2.2 Timed Test (cont)

Use the arrow keys to change the values and the **start/pause** to scroll across the numbers. Once the values have been set, press **start/pause** until the display changes to **Logging Period** and shows the default value of 1 second(s).

5.3 Logging Period (Sample rate)

The **Logging Period** (Sample Rate) allows data capture every 1 second, 30 seconds or 60 seconds.
Use the **arrow keys** to choose the required time then press **start/pause** until the display shows **Set Pin Number.**

5.4 Pin Number

Pin Number allows you to enter a four digit security number to pin protect an individual pump so that it can only be accessed by the person who sets the pin. Use the **arrow keys** to select yes or no.

If Yes is selected, **Enter Pin Number** is displayed. Use the **arrow keys** to enter values and **start/pause** to scroll across them. Press **start/pause** to continue and job is saved to memory and **Start Job - OK Yes** is displayed.

Use the arrows to choose **YES/NO/DELAY.** Press **start/pause** to choose option.

If DELAY is chosen, use the arrow keys to change the values and the **start/pause** to scroll across the numbers. Once the values have been set, press **start/pause** and the time will run down and start the test.

If no is selected, job is saved to memory and you will be taken back to main screen.

5.5 Running Test

Press **start/pause** to start test.

You can pause the test by pressing **start/pause.**

You can stop the test by pressing **stop**. You will be asked if you are sure. If yes press **stop.**

When the job is completed, the pump will stop. **Test Completed** and the accumulated capacity will be displayed.

Press **stop** to return to the start menu. Press **stop** again to shut the unit down. Data is saved and ready for download.

6. Downloading data from the DATAFLOW

Make sure the application is open on the computer. Connect the USB cable to the computer and to the pump.

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

6.1 Download Test Data

Press the **Download icon (**see **1.4)** on the application interface. A new window opens showing a list of the saved jobs on the pump.
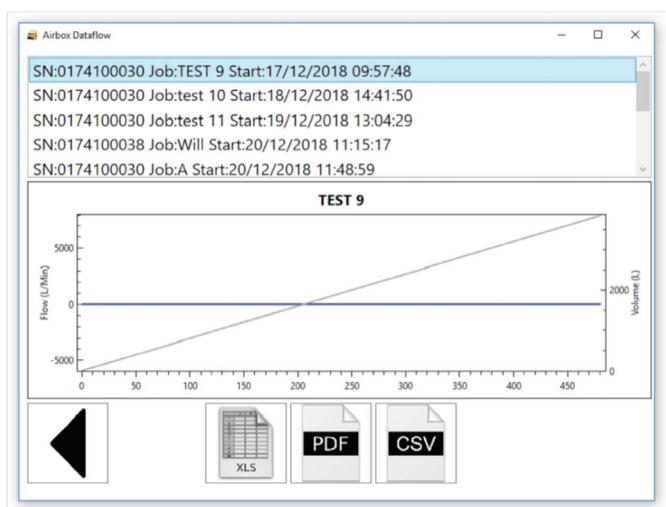
Click on the correct job number and choose a file format (XLS, PDF or CSV) to download.

7. Configure unit storage

The DATAFLOW can store a large number of jobs in it's memory. The application interface will show how many jobs are stored and how much memory has been used and is left.

You can easily manage this memory by clicking on the **Settings** button (see **1.4**). This brings up a new window where you can erase the complete device data.

Caution: Make sure you have downloaded and saved the test data for each job before you erase the complete memory.

8. Maintenance

8.1 Replacing the battery

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

NOTE: This is made easier if you lay the pump on its 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. For additional safety this is fuse protected by a PTC resetting fuse.

8.2 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 (8.3).

8.3 Cleaning the unit

The casing of the DATAFLOW 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.

9. Service and Warranty

The DATAFLOW 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 (excluding the battery and mast and with the shipping costs to be covered by the customer) and is valid under the following conditions:-

a) The warranty registration card must be received by us within four weeks of the date of purchase. This can be done online in the service section of the website.

b) The defect must not have been caused by improper handling or misuse.

c) Return the unit to us only in its original packing and 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.

10. Troubleshooting

Pump will not start, red LED illuminated.

Battery voltage maybe too low, check the battery level and recharge the battery.
If the pump still doesn't start, contact the Airbox team.

Pump will not start, no display

Flat battery, recharge or replace the battery.
If the pump still doesn't start, contact the Airbox team.

Flow rate doesn't reach required level

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

Battery voltage maybe too low, check the battery level and recharge the battery.
If flow rate is still insufficient, contact the Airbox team.

Pump stops while running, red LED illuminated

Check tube for kinks and that the sampling head is not blocked.
Flat battery, recharge or replace the battery.
If this still doesn't work, contact the Airbox team.

Contact the team at sales@airboxsp.com

11. Parts

Product Code	Name	Description
PO1726	DATAFLOW	DATAFLOW Air Sampling Pump (with UK/ EU charger)
PO1726/KIT	DATAFLOW kit	DATAFLOW Air Sampling Pump (with UK/ EU charger, sampling head & spare mast)
PO1839	Sampling head	Air sampling head
PT33520LF	Dataflow Charger	Battery charger DATAFLOW 14.6V 3A Lithium
PT33521	DATAFLOW Battery	12.8V Lifepo4 12Ah Lithium
PT29482LF	DATAFLOW mast	Telescopic mast for DATAFLOW/VARIFLOW -2m
PT28297LFKIT	Cap & Plug Kit	Sampling head cap & plug kit - (pack of 10)
PT28299LF	White filter support pad	Filter support pad 25mm porous plastic (pack of 10)
PT28551LF	Metal filter support grid	Filter support grid 25mm mesh metal
PT28301LF	Thin sampling head O-ring	25mm/OD 1.9mm/CS Virgin PTFE (pack of10)
PT27550LF	Thick sampling head O-ring	25mm/OD 2.75mm/CS Virgin PTFE