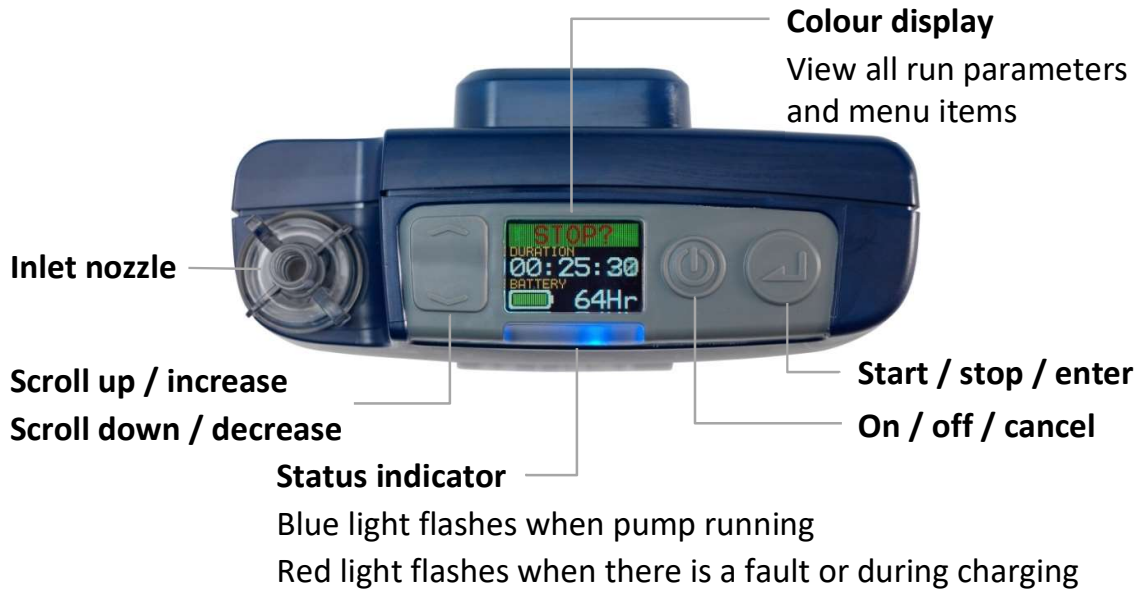


### Safety


For important safety information relating to Intrinsic Safety, please refer to the Apex 2 IS user manual (HB4058).

### Controls



### Turn the pump on/off

#### To turn on the pump:

On the top of the pump, press .

The sequence on the right is displayed:



This is followed by the three alternating dashboard screens, showing data from the last run. Notice that the screen header is prompting you to start a sampling run.



**To turn off the pump:**

On the top of the pump, press and hold  until the countdown has finished and the screen goes blank.







**Note:** You can't turn off the pump during a sampling run or when a programme timer is set.

**Setup before starting a run**

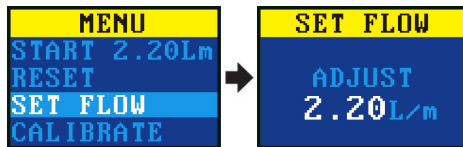
Depending on your sampling requirements you may want to perform one or more of the following setup procedures before starting a sampling run.

**To access the menu items described below:**

1. Ensure the pump is turned on, and then press  to display the menu.
2. Press  or  to highlight the menu item you want to alter, and then press .

**Set the flow rate**


1. Navigate to **SET FLOW**, and then press .

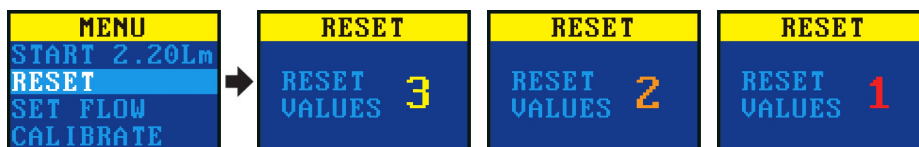


2. Press  or  to change the flow rate, and then press the enter key.

**Reset the data**

Use this menu item to reset the accumulated run time, motion index and volume data to zero.





1. Navigate to **RESET**.
2. Press  for 3 seconds.



### Calibrate the pump

Always calibrate the pump at the sampling flow rate for greatest accuracy.

**Note:** If using a filter with a small pore size or if operating at a high flow rate, which results in a high back pressure, it may take the pump a little longer to stabilise when adjusting the calibrated value.


1. Attach a sampling head or flow tube or other flow-measuring device to the pump's inlet nozzle.
2. Navigate to **CALIBRATE**.
3. Press  to start the test.
4. Press  or  to change the pump speed until the meter flow rate and the pump flow rate match.
5. Press  to stop the test.



### Start/stop a sampling run

Ensure your pump is calibrated, set to the correct flow rate and you have reset the accumulated data if necessary.

#### To start a sampling run:

1. Turn on the pump.
2. Press  for 3 seconds.



The following screens should be visible.



#### To stop or pause a sampling run:

- Press  for 3 seconds.



## Lock and unlock the pump

### Partial lock

Partial Lock mode is denoted by a half open padlock icon and can be set in **Run** or **Stop** modes. While partially locked, the wearer may stop and start the sampling pump but has no access to the menu or other functions.



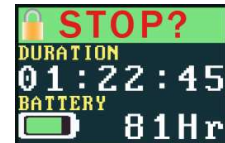
### To partially lock and unlock the pump:

- Press and hold , and then press  3 times in quick succession. The partial lock icon will be displayed.


**Note:** If you try to remove a partial lock when the pump is running you will need to apply the above procedure twice, which applies and then removes a full lock.

### Full lock


The full lock can only be set when the pump is running and is denoted by a closed padlock icon. While fully locked, the keypad is fully de-activated. The wearer cannot stop or disturb the pump by any key presses.



### To fully lock the pump:

- Press and hold , and then press  6 times in quick succession. The full lock icon will be displayed.

### To unlock the pump:

- Press and hold , and then press  3 times in quick succession.

## Errors

If the pump cannot maintain the target flow rate within 5% for more than 20 seconds (due to a kinked tube or inlet blockage) then it will automatically stop sampling and show the Blocked Retry message.



After one minute the pump will attempt to re-start. If the pump has not been able to re-start after the specified number of retry attempts, the pump will terminate the current sampling run and display an error message.