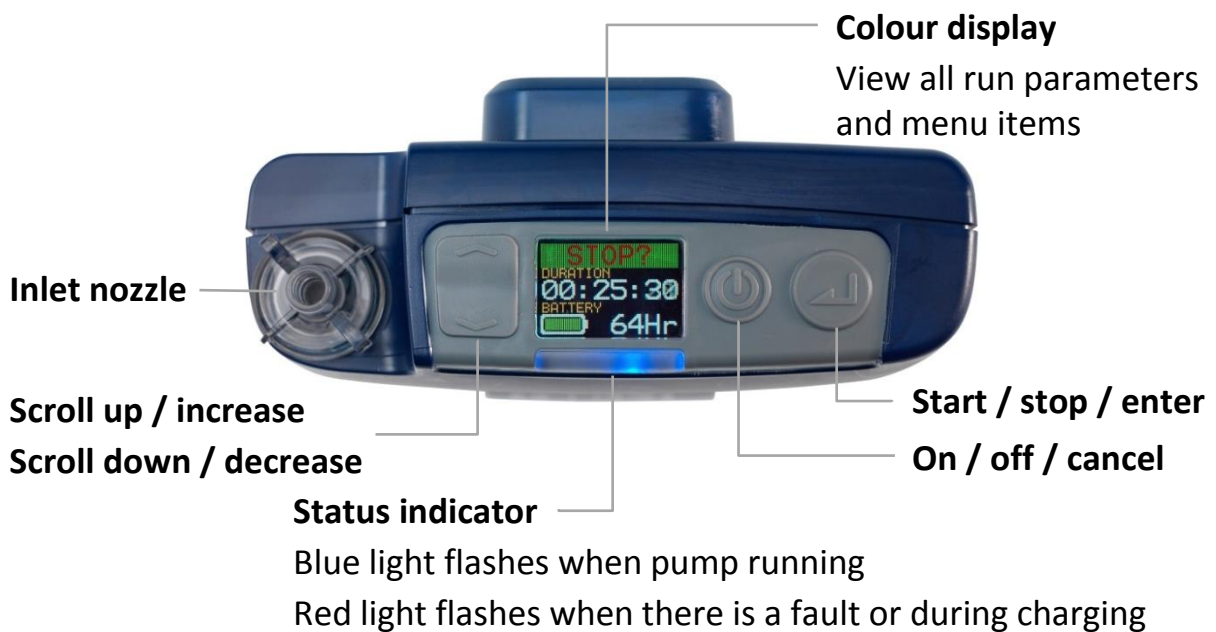## Safety ⚠️

For important safety information relating to Intrinsic Safety, please refer to the Apex 2 IS user manual (HB4058) available for download at www.casellasolutions.com.

Controls

Colour display
View all run parameters and menu items

Inlet nozzle

Scroll up / increase
Scroll down / decrease

Status indicator
Blue light flashes when pump running
Red light flashes when there is a fault or during charging

Start / stop / enter
On / off / cancel
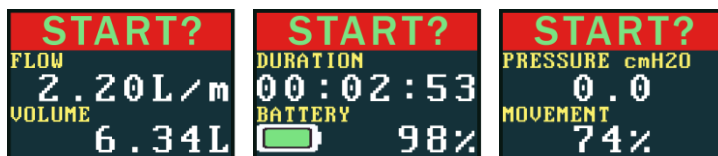
Turn the pump on/off

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.

SHUTDOWN in 3	SHUTDOWN in 2	SHUTDOWN in 1

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

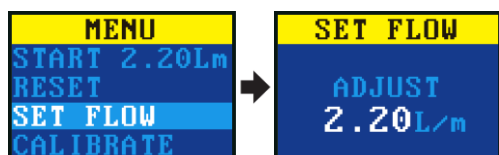# Setup before starting a run

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 ⏎.

MENU		SET FLOW
START 2.20Lm	➡	ADJUST
RESET		2.20L/m
SET FLOW		
CALIBRATE		

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.

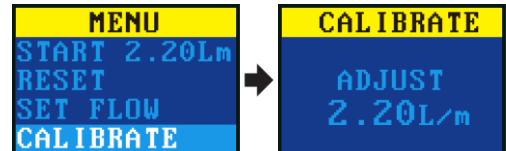| MENU		RESET	RESET	RESET
START 2.20Lm	➡	RESET VALUES 3	RESET VALUES 2	RESET VALUES 1
RESET				
SET FLOW				
CALIBRATE				

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.
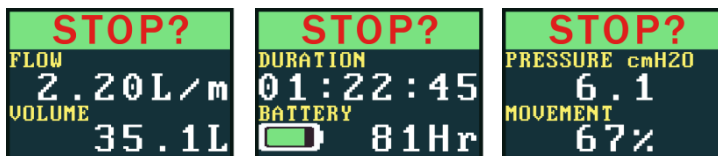
Start/stop a sampling run

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.
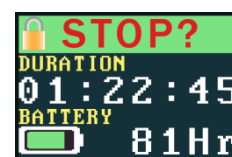
To partially lock and unlock the pump:

- 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.