

Select Set Flow then set the flow to less than 0.8 litre/min to activate the mode.

In Bag Mode, the display shows **BAG**. The speed of the pump motor is fixed and the display shows only percentage flow, with no volume or time information.

Once the pump has started, or may be used to change the flow rate to a different percentage.

Fixed Duration Sampling (DUR)

The duration of a sample can be selected from the instrument keypad. On the Apex Pro it can also be selected via Pump Manager software.

This mode allows the pump to sample for a fixed period and switch off automatically when the period has ended. This is useful when a stated volume of air must be sampled over a long period.

In Hold Mode press or several times until **DUR** blinks on the display. Press to select.

The programmed duration blinks to indicate it can be changed by and . Run durations between 3 minutes and 1 hour can be set in 1-minute steps, and durations between 1 and 25 hours in 10-minute steps.

Press to accept a duration and start sampling.

In addition to the symbol, the display shows **PROG.** to indicate that a program is active. While the program is running, the display cycles through current sample time, volume sampled, air temperature, and programmed duration.

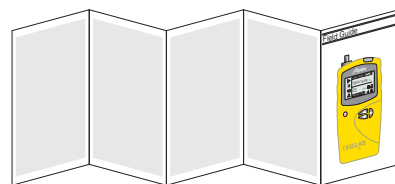
Once completed, the pump will switch off and the display show and a **PROGEnd** message.

Press any key to return the pump to Hold Mode.

Locking The Keypad

The keypad may be partially or fully locked to prevent unauthorised tampering with instrument settings.

Press three times within 2 seconds to activate Partial Lock Mode at any time. The symbol is displayed, the counters and flow cannot be changed but the following options remain available: start/stop sampling, switch the pump off, unlock



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Press three times within 2 seconds to activate Partial Lock Mode at any time. The symbol is displayed, the counters and flow cannot be changed but the following options remain available: start/stop sampling, switch the pump off, unlock

Partial Lock, and select Full Lock. (Press three times within 2 seconds to unlock.)

Only when the PUMP IS RUNNING, press three times again within 2 seconds while in Partial Lock Mode to activate Full Lock Mode. The symbol is displayed, the pump cannot be switched off and the only option available is to release Full Lock Mode by pressing three times within 2 seconds.

TWA Sampling (Apex Pro only)

This feature is available only when the Apex Pro Program Mode has been enabled from within Configuration Mode.

This allows the pump to operate for a fixed percentage of a specified sample time. The instrument calculates the required on/off cycle automatically to spread the total exposure time over the entire sample time (as shown).

In Hold Mode press or several times until **TWA** blinks on the display. Press to select.

RUN is displayed and the sample time blinks to indicate that it can be changed by and . Run times between 3 minutes and 1 hour can be set in 1-minute steps, and times between 1 and 25 hours in 10-minute steps.

Press to accept a sample time.

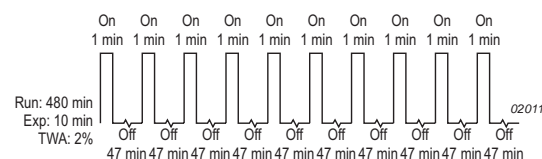
EXP is displayed, and the exposure time blinks to show it can be changed by and .

The available range is 2 minutes to 1-minute-less-than-the-run-time, in 1-minute steps.

Press to accept an exposure time and start sampling. In addition to the usual and symbols the display shows **PROG.** to indicate that a program is active.

The pump exposure (on) times are fixed at 1 minute, and the instrument calculates the necessary off-times to spread these 1 minute intervals throughout the sample time. While the program is running, the display cycles through current accumulated sample time, volume sampled, air temperature and calculated TWA (as percentage of run time).

During off-times (pump not running) the and symbols are displayed to show the instrument is paused.



Once the sample is completed, the pump will switch off and the display show the symbol and a **PROGEnd** message. Press any key to return to Hold Mode.

User Program Modes (Apex Pro only)

This feature is available only when the Apex Pro Program Mode has been enabled from within Configuration Mode. For more comprehensive information, please refer to the User Handbook.

This allows complex sampling schedules (created by the user in Pump Manager PC software and downloaded via the infrared link) to be run by the pump. The programs are stored in two user program areas **Pr1** and **Pr2**.

In Hold Mode, repeatedly press or until **Pr1** or **Pr2** blink. Press to select the program.

The various steps in the program can be viewed using and . Press to accept the program and start it running.

In addition to the usual and symbols the display shows **PROG.** to indicate that a program is active.

During off-times (when the motor is not operating) and are displayed to show the unit is paused.

Once the run is completed, the display will show the symbol and a **PROGEnd** message.

Press any key to return the pump to Hold Mode.

To terminate the program early, press and hold to show the **STOP** option, keep pressed until the pump reverts to Hold Mode.

Calibrating The Pump

This procedure changes the basic calibration for the entire flow range of the pump.

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As the pump will have been accurately calibrated at the factory, DO NOT undertake this procedure without first referring to the Users Handbook.

Casella Instrumentation and Software is designed, manufactured and serviced by:

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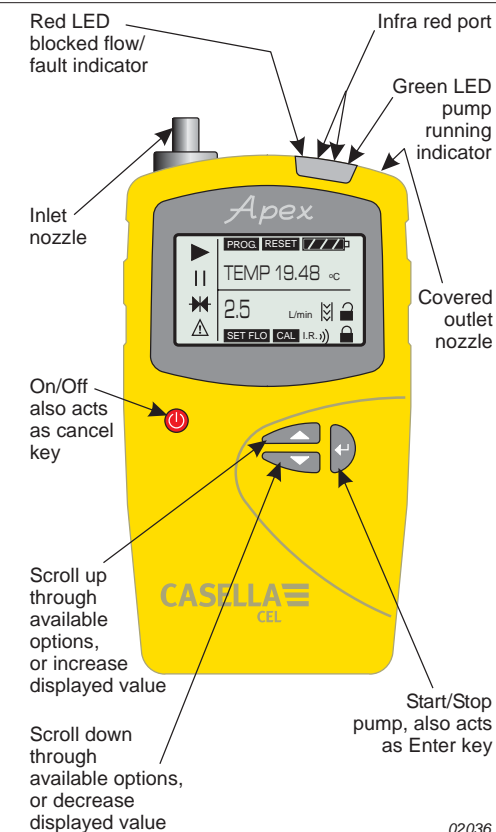
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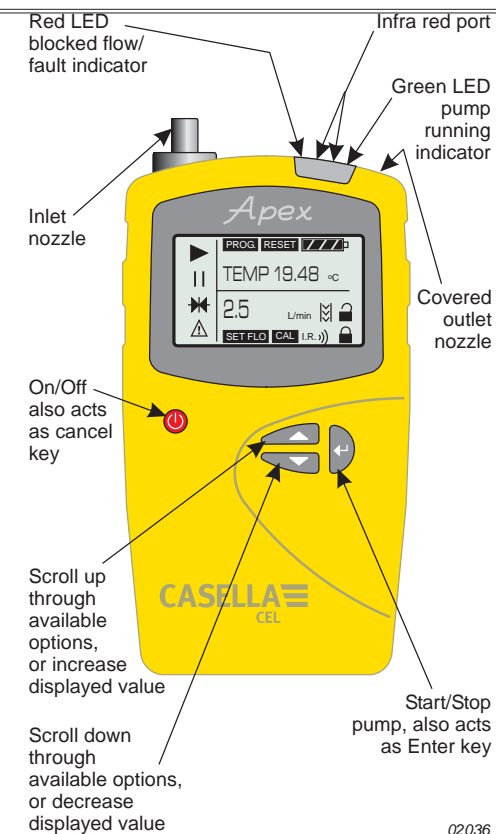
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