



## Ecotec E3000 Operating Instructions

### Start-up:

Turn ON power with the main power switch located on the back side of the unit. The instrument will automatically run a self test and run-up procedure. When the instrument is ready for measurement, a bar graph menu will be displayed and a beep will sound. The instrument is now in measurement mode.

### Calibration:

The Ecotec E3000 may be calibrated using the built-in ECO-Check reference leak. To ensure accurate calibration wait for a minimum of 20 min after start-up (warm-up time).

To verify the correct calibration of the Ecotec E3000 insert the sniffer tip into the test leak opening. When prompted for it remove the sniffer tip from the test leak opening. If a new calibration is required the software will show in the results screen.

To re-calibrate the unit insert the sniffer tip into the cone-shaped test leak opening with the right probe button pressed. When prompted for it remove the sniffer tip from the test leak opening. Confirm to save the new calibration factor(s) by pressing the lower right menu button.

The system is now ready for measurement again.

### Selecting gases and trigger values:

Press the MENU button on the main unit display to enter the main menu. Go to GAS / TRIGGER and select the gas you want to edit with one of the right four menu buttons.

In the EDIT GAS menu, to change the gas type highlight the NAME menu line and press the EDIT button. In the opening gas library highlight the appropriate gas type by scrolling through the list with the arrow keys and press OK. The default mass position for the chosen gas will be selected automatically. If you want to use a different mass position for measurement go to the mass position menu line and press EDIT. You can toggle through the available mass positions with the arrow key and select one with OK.

To change the trigger value, in the EDIT GAS menu select the trigger menu line and press edit. In the opening menu change the trigger value by the ↑ and ↓ buttons and press OK.

### Shut Down:

Turn OFF power with the main power switch out of any operating mode. It will take some minutes for the turbo pump to come to a halt. Do not move the instrument while the turbo pump is still running.



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### Measuring in Standard Operation Mode:

Before each measurement briefly operate the left push button (ZERO button) on the sniffer probe to compensate for any levels of refrigerant in the environment that may interfere with the actual leak detection.

If a pin hole needs to be tested point the sniffer tip at the suspected leak for about one second. If a welded seam or alike needs to be tested move the tip at a velocity of approx. 10 cm/s (about 4 in/s) along the welded seam. In both cases keep the sniffer tip as close as possible to the testing sample.

If a leak is detected (the measured value exceeds the trigger level) the background colour of the probe display will change from green to red and an acoustic alarm will sound. Remove the tip somewhat from the suspected leak, operate the ZERO button and repeat the test to avoid incorrect measurements and to locate the leak precisely.

### Measuring in I-Guide Operating Mode:

The I-Guide Mode can be activated in the SET-UP I-GUIDE MENU by switching to ON.

After activating the I-Guide Mode briefly operate the ZERO (left) probe button, move the sniffer tip to the first position and press the right probe button. A ticking sound will be issued until the required measuring time has expired. Now retract the sniffer tip from the testing location and press the ZERO (left) probe button before you move the sniffer tip to the next location and press the right probe button again for the next measure.

Repeat until all necessary locations have been leak checked and a beeping sound is issued to indicate that all locations for this unit under test have been checked. The global leak rate for the total unit under test will be displayed and if the global trigger value has been exceeded an alarm will sound accompanied by the background colour of the probe display changing to red. The message "test failed" will be displayed on the probe display in this case. If the unit under test is leak tight, the message "test ok." Will be displayed. Acknowledge the testing result by pressing the right probe button.

If the same I-Guide program can be used for the next unit under test just move to the first testing location and start the program by pressing the right probe button. Otherwise select the appropriate I-Guide program by pressing the program button (third button on right side of the display), highlight the desired program and press ok.

To leave the I-Guide operating mode and go back into standard operating mode, go to SET-UP I-GUIDE and choose OFF.