



## Overview

The Zero Air Generator is a low-cost, handheld source of zero air (air that has been scrubbed of CO<sub>2</sub> and water vapor) to be used for zeroing infrared gas analyzers (IRGAs). The 31022

consists of a small pump and a molecular sieve. The pump is powered by 2 AA batteries. A "Test" port located on the 31022 can be used to determine when to replace the molecular sieve.

## Detailed Description

The 31022 Zero Air Generator provides a source of zero air for zeroing infrared gas analyzers (IRGAs) in both open-path (zero/span shroud required) and closed-path configurations. The zero air generator contains "In," "Out," and "Test" ports, as well as a small battery-powered pump.

During normal operation, air enters the top of the bottle (via the "In" port), which is filled with a molecular sieve. The air flows (0.2 LPM) down the entire length of the bottle, where the molecular sieve removes CO<sub>2</sub> and water. The air is pushed into

the end of a tube at the bottom of the bottle and then to the "Out" port.

The "Test" port pulls the air from only partway down the bottle, 2 in. above the bottom. Because the unscrubbed air enters the top and flows downward, the molecular sieve is consumed from the top down. Comparing CO<sub>2</sub> and water vapor from the "Test" port with the "Out" port indicates when the molecular sieve needs to be replaced.

## Specifications

Operating Temperature Range	-20° to +50°C
Capacity	750 ml (holds approximately 450 g molecular sieve)
Flow Rate	0.2 LPM (typical)

Power	2 AA batteries
Dimensions	13.97 x 9.65 x 27.43 cm (5.5 x 3.8 x 10.8 in.)
Weight	1.13 kg (2.5 lb)

For comprehensive details, visit: [www.campbellsci.com/31022](http://www.campbellsci.com/31022) 