

ZAG-6L

ZERO AIR GENERATOR



**MEETS 40 CFR
PART 1065
REQUIREMENTS**

OPTIONS

- External Buffer Tank (3 liter)
- NEMA 4 Enclosure
- Tabletop Mounting Rack
- Inlet Particulate and Coalescing Filters
- Inlet and Outlet Pressure Regulators

FEATURES

- Less expensive than cylinders
- Flow Rate 6 Liters/Minute
- Convenient Wall Mount
- No Consumable Supplies
- No Service Required



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DESCRIPTION

The California Analytical Model ZAG-6L has been designed to operate continuously 24hours/day, 7 days/week to provide a pure air source of "zero air" for use in analytical gas analysis equipment. The ZAG-6L completely eliminates the inconvenience and high costs of precision blended zero air cylinders. This is particularly important with instrumentation which, in addition to zero calibration air, requires pure air for burner combustion flame ionization detectors and ozone production for chemiluminescence analyzers. In these types of applications requiring a continuous supply of zero air, payback for the ZAG is usually less than six months. The generator is quiet and easy to install requiring only AC power and a source of compressed air. The ZAG-6L will continuously provide up to 6 liters per minute of zero air and requires no consumable supplies or routine maintenance. The unit will meet the specifications for zero air requirements for Inspection and Maintenance emissions test programs.

METHOD OF OPERATION

The California Analytical Model ZAG-6L Zero Air Generator utilizes the principle of oxidation to provide a clean and dry supply of pure air for use in analytical instrumentation.

The customer supplied compressed air source is introduced to the ZAG-6L which is then purified for use in analytical gas monitoring equipment. The ZAG reduces a contaminated air supply to provide pure air with less than 1 ppm carbon monoxide, carbon dioxide, total hydrocarbons (including methane), and of oxides of nitrogen. The reduction meets the 1 ppm pure air specification even with background concentrations of 500 ppm C THC, 200 ppm CO, 1,500 ppm CO₂ and 50 ppm NO_x. The contaminated air source is first passed through an oxidizer to reduce all hydrocarbons including methane. The air is then passed through one of two switched tubes containing a molecular sieve for NO₂, H₂O, CO and CO₂ removal.

SPECIFICATIONS

Reduction Method: Molecular Sieve Oxidation

Output Flow Rate: Maximum of 6.0 liters/min.
(Free flow at atmospheric pressure)

Output pressure: 15-60 psig
Based on inlet pressure

Input Air: 12 liters/min. @ 80 psig +/- 10 psig
And at a dew point of 3°C or less

Maximum Background Concentration:

10 ppm NO_x
20 ppm THC (as methane)
20 ppm CO
500 ppm CO₂

Maximum Outlet Concentration:

≤ 0.02 ppm NO_x
≤ 0.05 ppm N₂O
≤ 0.05ppm THC (C₁ equivalent)
≤1.0 ppm CO
≤10.0 ppm CO₂

Shut off Alarm: Loss of compressed air triggers alarm and shuts off voltage

Front Panel: Status indicating lights (neon)

Output Dew Point: -73°C (-100°F)

Ambient Temperature: 5-45°C

Warm-Up Time: 60 minutes

Fittings: 1/4" tube

Power Requirements: 115/230 VAC 50/60 Hz, 600 Watts

Dimensions: 26"H x 17"W x 5"D

Relative Humidity: 25 Less than 90% RH

Weight: 46 lbs. (21 kg.)

AIR REQUIREMENTS

1. Air supply shall be at least 80 ±10 psig at 25 CFH (12 l/m) and have a maximum dewpoint of 3.0°C (37.5°F)
2. Particulate matter filtration of solid liquid water and oil particles shall be less than 1 micron (1.0ppm weight/weight maximum remaining oil content).
3. Particulate matter filtration of fine oil aerosols shall be less than 0.01 micron (0.001ppm w/w maximum remaining oil content).
4. Oil vapor removal normally absorbable by activated carbon shall be less than 0.01 micron (0.333ppm weight/weight maximum remaining oil content).

Specifications subject to change without notice.



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