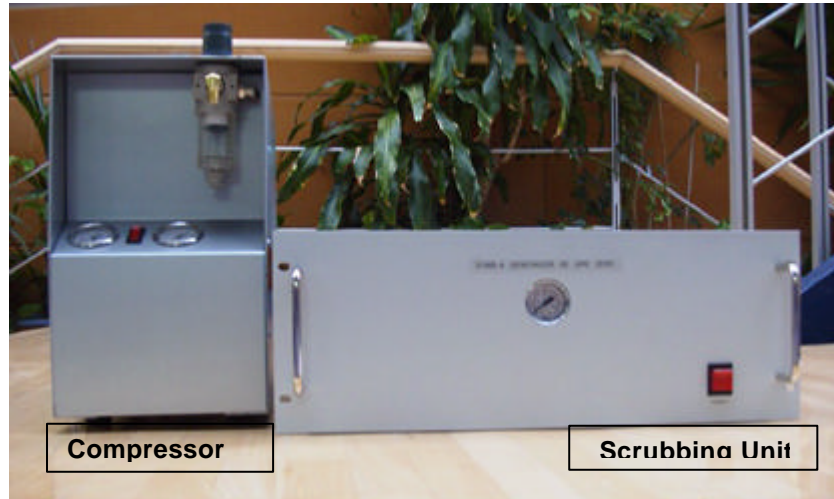


MODEL S-1000

Zero Air Unit



Advantages – Features

- ♦ **Consist** of Two Inter-Connecting Modules: Scrubbing Unit and Compressor.
- ♦ **Provide** Up To 20 LPM of Flow at 30 psig.
- ♦ **Modular design** allows “Field” Installation of CO and/or CH₄ Hydrocarbon Reactor(s) to the Basic Configuration (Model 1000-A).
- ♦ **Removal** of Water Through Use of Compression and Coalescence.
- ♦ **Scrubbing Unit** May Be Sold Independently and Used With Lower-flow Compressors for Applications Which Do Not Require High Flow Rate.

PRINCIPLES OF OPERATION

The purpose of the Series 1000 zero air units is to provide pollutant-free air from "shop air" in order to allow users of ambient air monitors to "zero" those units. The 1000 configuration selection depends upon the monitors that are to be calibrated.

Water vapour is removed by compressor with a holding tank and a coalescing filter. The 1000 series does not use a drying system to provide super-dry air (dew point less than -30°C since water vapour is not generally considered a pollutant. A dew point of 3°C obtained through the use of a compressor should suffice.

The Series 1000 can either be transported for utilization at several sites, or left at one remote site virtually unattended except for periodic maintenance requirements.

· Model 1000-B

Added to the basic unit (Model 100-A), is an internal reactor chamber that removes Carbon Monoxide in addition to the gases mentioned before. The reactor is situated downstream of the charcoal and chemisorbant tubes and converts CO and CO_2 by use of a palladium catalyst heated between $80-85^{\circ}\text{C}$.

· Model 1000-C

Added to the Model 1000-B, is an internal reactor chamber that removes Methane Hydrocarbons in addition to the gases mentioned before. The HC reactor assembly is located down-stream of the CO reactor and converts Methane Hydrocarbons to water vapour and CO_2 .

CONFIGURATIONS

· Model 1000-A

This is the most basic configuration of the zero air unit. It is able to remove O_3 , SO_2 , H_2S , non-Methane Hydrocarbons, NO, and NO_2 . It accomplished this by use of air flow provided by an external compressor which enters the scrubbing unit and passes through a tube for the removal of O_3 , SO_2 , H_2S , non-Methane Hydrocarbons by means of activated charcoal. The flow then enters another tube which removes NO by means of chemisorbant granules which change colour from violet to brown as they are used up.

OPTIONS

· Rack Mounting

The unit can be purchased with rack mounting slides and/or rack mounting brackets (ears) for installation in standard cabinets.

DIMENSIONS

Bench Mount	Rack Mount
17.8 cm (7")	17.8 cm (7")
43.5 cm (17")	48 cm (19")
59 cm (23")	59 cm (23")

SPECIFICATIONS

Removal of Impurities (Chemical Conversion, all Models):

NO:	< 1 ppb
NO_2 :	< 1 ppb
SO_2 :	< 1 ppb
O_3 :	< 1 ppb
Non-Methane:	< 1 ppb

Removal of Impurities (Heated Reactor):

CO (Mod: 1000B/C):	< 0.1 ppm
Methane (Mod: 1000-C):	< 0.1 ppm
Dew Point:	3°C

