# Thermo Scientific Model 111 Zero Air Supply

Designed for NO, NO<sub>2</sub>, O<sub>3</sub>, SO<sub>2</sub>, CO and hydrocarbon requirements

The Thermo Scientific<sup>™</sup> Model 111 Zero Air Supply uses an external compressor; the pressure regulators, chemical scrubbers, reactor and temperature controller are all contained in a single convenient case.

- Critical components are self contained
- Limited Maintenance
- · Exceptional ease of use



The Thermo Scientific Model 111 Zero Air Supply uses an external compressor; the pressure regulators, chemical scrubbers, reactor and temperature controller are all contained in a single convenient case.

Designed for any application where pollutant free levels of NO,  $NO_2$ ,  $O_3$ ,  $SO_2$ , CO and hydrocarbons are required, with flows up to 20 liters per minute at pressure of 30 PSI.

The room air enters the compressor, where it is raised to a pressure of 80-90 PSI. The output of the compressor contains a coalescing filter and a pressure regulator where the pressure is reduced to 70 PSIG. The air then passes into a column of Purafil (potassium permanganate on alumina) which oxidizes NO to  $NO_2$ . Finally, the air passes through a column of activated charcoal which removes  $NO_2$ ,  $SO_2$ ,  $O_3$  and hydrocarbons.

Lastly, the air then goes into the reactor where it is heated to  $350^{\circ}$ C over a catalytic surface which converts CO to CO<sub>2</sub> and any remaining hydrocarbons, including methane, to water and CO<sub>2</sub>. This process results in a pollutant free stream of air.





## Thermo Scientific Model 111 Zero Air Supply

Pressure	10 - 30 PSI
Standard Flow Rate	0-10 liters/min
Water Vapor	0°C Dew point
Physical Dimensions	
Size Weight	15" (D) x 19" (W) x 12.25" (H) [381 mm (D) x 482.6 mm (W) x 311.15 mm (H)] 20 lbs. (9.07 kg)
Compressor	
Size	120" (D) x 12" (W) x 17" (H). [508 mm D) x 304.8 mm (W) x 431.8 mm (H)].
Weight	40 lbs. (18.14 kg)
Flow Rate	0-10 LPM Standard 0-20 LPM (optional)
Pollutant Concentration Levels	
	CO < 0.1 ppm
	HC < 0.1 ppm
	NO < 0.5 ppb
Vater Vapor Physical Dimensions Size Weight Compressor Size Weight Iow Rate	$NO_2 < 0.5 \text{ ppb}$
	$0_{3} - < 0.8 \text{ ppb}$
	$     O_{3} < 0.8 \text{ ppb}      SO_{2} < 0.5 \text{ ppb} $
	H <sub>2</sub> Š < 0.5 ppb
	NH <sub>3</sub> < 0.5 ppb

## **Ordering Information**

## Model 111 Zero Air Supply

Choose from the following configurations/options to customize your own Model 111

#### **1. Voltage Options:**

A = 120 Vac 60 HzB = 220 Vac 50/60 Hz

### 2. Compressor Size:

1 = No Compressor2 = 10 LPM Compressor3 = 20 LPM Compressor

#### 3. CO Reactor:

N = No CO ReactorR = CO Reactor Setup

# **Options:**

Rack Mount

Rear Extender Your Order Code: Model 111 - \_\_\_\_\_

To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your air quality equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product life cycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific products.

#### For more information, visit our website at thermoscientific.com/ambient

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This product is manafactured in a plant whose quality management system is ISO 9001 certified.

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Flow Diagram: Model 111 Zero Air Supply

