

# Thermo Scientific 111iQ

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™ 111iQ 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<sub>2</sub>, O<sub>3</sub>, SO<sub>2</sub>, 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<sub>2</sub>. From there the air passes through a column of activated charcoal which removes NO<sub>2</sub>, SO<sub>2</sub>, O<sub>3</sub> and hydrocarbons.

Lastly, the air then goes into the reactor where it is heated to 350°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 111iQ Zero Air Supply

Specifications	
Approvals and certifications	ETL, CE
Compressor size & weight	20" (D) x 12" (W) x 17" (H), 40 lbs 508 mm (D) x 304.8 mm (W) x 431.8 mm (H), 18.14kg
Converter temperature	325°C - 450°C
Flow Rate options	0-10 LPM 0-20 LPM
Mounting options	Rack mounting, table top
Operating temperature	0°C - 45°C
Physical dimensions	24 in (D) x 16.75 in (W) x 8.72 in (H) 609 mm (D) 425.45mm (W) x 221.48 mm (H)
Pollutant concentration levels	CO < 0.1 ppm      O <sub>3</sub> < 0.8 ppb HC < 0.1 ppm      SO <sub>2</sub> < 0.5 ppb NO < 0.5 ppb      H <sub>2</sub> S < 0.5 ppb NO <sub>2</sub> < 0.5 ppb    NH <sub>3</sub> < 0.5 ppb
Power requirements	115–240 VAC 50/60 Hz 120–190 W
Pressure	10-30 PSI
Storage temperature	-20°C - 60°C
Water vapor	0°C Dew point
Weight	22 lbs (9.98kg)

## Ordering information

### 111iQ Zero Air Supply

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

#### 1. Nominal Supply Voltage and Frequency

N = No Power Requirements

A = 120 VAC 50/60 Hz (NA)

B = 220 VAC 50/60 Hz (EU)

D = 220 VAC 50/60 Hz (CHN)

#### 2. Compressor sizes

N = No Compressor

1 = 10 LPM Compressor

2 = 20 LPM Compressor

#### 3. CO reactor

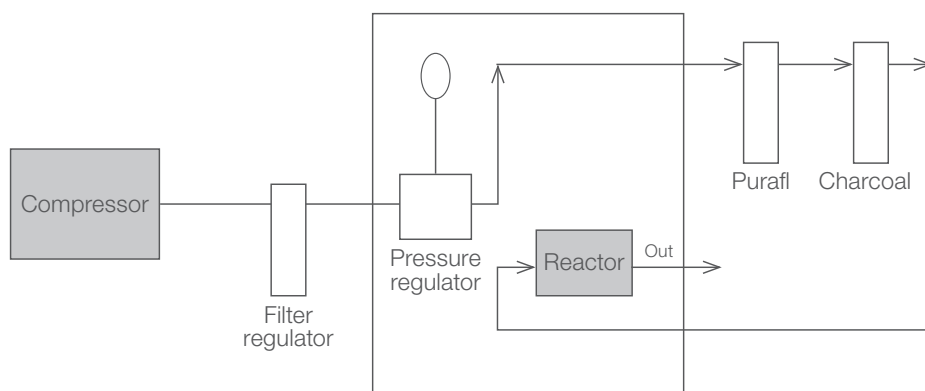
N = No CO Reactor

1 = 1 Reactor

#### Your Order Code: 111iQ

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## Flow diagram: 111iQ



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