

# Zero Air Generators

## Flow Capacities

up to 30 lpm



Analytical Gas Systems

### Features

Produces UHP Zero Air from house compressed air (<0.05 ppm THC)

Eliminates inconvenient and potentially dangerous zero air cylinders from the laboratory

Increases the accuracy of analysis and reduces the cleaning requirement of the detector

Recommended and used by many GC and column manufacturers

Payback period is typically less than 1 year

Silent operation and minimal operator attention required

Models available to service up to 100 FIDs



| Model Number | Number of FIDs* |
|--------------|-----------------|
| 75-83        | Up to 3         |
| HPZA-3500    | Up to 11        |
| HPZA-7000    | Up to 23        |
| HPZA-18000   | Up to 60        |
| HPZA-30000   | Up to 100       |

\*Based on a 300 cc/min fuel air rate.

Parker Balston Zero Air Generators are complete systems with state-of-the-art, highly reliable components engineered for easy installation, operation, and long term performance. Parker Balston Zero Air Generators are much easier to install than potentially dangerous, high-pressure gas cylinders, and only need to be installed once! All that is required is a standard compressed air line and an electrical outlet.

Parker Balston Zero Air Generators are easy to operate, there is no complicated operating procedure to learn or any intensive monitoring required.

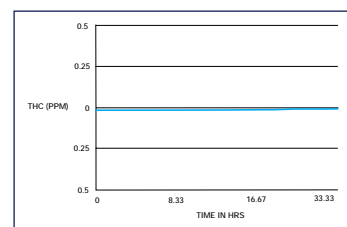
Parker Balston Zero Air Generators eliminate all the inconveniences and costs of cylinder gas supplies and dependence on outside vendors. Uncontrollable vendor price increases, contract negotiations, long-term commitments and tank rentals are no longer a concern; Parker Balston Zero Air Generators offer long term cost stability.

There is no need to use valuable laboratory floor space to store excessive reserves to protect you from late deliveries, transportation interruptions, or periods of tight supplies. With Parker Balston Zero Air Generator, you control your supply.

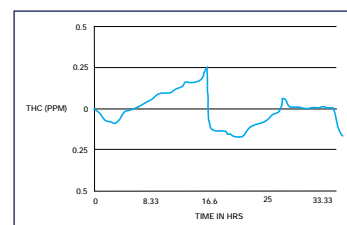
### Baseline Comparison

The Chromatograms compare baselines produced by a Parker Balston Zero Air Generator and bottled fuel air. The baseline produced by the Parker Balston Generator is very flat, with no fluctuations or peaks, in comparison with the chromatogram of the bottled air fuel supply, which has many peaks ranging from 0.25 ppm to -0.25 ppm.

Balston Zero Air Generator



Non-Hydrocarbon Free Fuel Air Supply



# Zero Air Generators

## Flow Capacities

up to 30 lpm



Analytical Gas Systems

### Principal Specifications

#### Zero Air Generators

|   |   |   |
|---|---|---|
| Max Zero Air Flow Rate                                | 75-83<br>HPZA-3500<br>HPZA-7000<br>HPZA-18000<br>HPZA-30000 | 1,000 cc/min<br>3,500 cc/min<br>7,000 cc/min<br>1,8000 cc/min<br>30,000 cc/min    |
| Outlet Hydrocarbon Concentration (as methane)*        |   | < 0.05 ppm  |
| Min/Max Inlet Air Pressure                            |   | 2.8 barg/ 8.6 barg (40 psig/125 psig)   |
| Max Inlet Hydrocarbon Concentration (as methane)      |   | 100 ppm   |
| Pressure Drop at Max Flow Rate                        |   | 0.3 barg (4 psig)   |
| Max Inlet Air Temperature                             |   | 25°C (78°F)   |
| Inlet/Outlet Ports                                    |   | 1/4" NPT (female)   |
| Start-up Time for Specified Hydrocarbon Concentration |   | 45 minutes  |
| Electrical Requirements                               | 75-83<br>HPZA-3500<br>HPZA-7000<br>HPZA-18000<br>HPZA-30000 | 240 VAC/50 Hz<br>240 VAC/50 Hz<br>240 VAC/50 Hz<br>240 VAC/50 Hz<br>240 VAC/50 Hz |
| Dimensions  | 75-83<br>Other Models                                       | 250 x 80 x 300 mm (10 x 3 x 12")<br>270 x 340 x 420 mm (11 x 13 x 16")            |
| Shipping Weight                                       | 75-83<br>Other Models                                       | 3 kg (7 lbs)<br>19 kg (41 lbs)  |

\* Outlet hydrocarbon concentration (as methane) for models 75-83 and HPZA-30000 is less than 0.1 ppm.

### Ordering Information

| Description  | Model Number  |
|--|---|
| Zero Air Generator   | 75-83-220<br>HPZA-3500<br>HPZA-7000<br>HPZA-18000<br>HPZA 30000 |
| Maintenance Kit for Model 75-83                                      | MK7583**  |
| Maintenance Kit for Models HPZA-3500/HPZA-7000/HPZA-18000/HPZA-30000 | MK7840**  |
| Installation kit for all models                                      | IK76803   |

\*\* Maintenance Kit includes a one-year supply of pre-filters and final filter.

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ZERO-AIR 1.0 JULY 03



# Explosion Proof Zero Air Generator

## Features

**Fuel air supply to process  
GC-FIDs**

**Zero grade gas supplies/zero  
reference for process  
analytical instruments**

**Compact design, mounts  
directly on to Unistrut® framing**

**Produces high purity zero grade  
air with total hydrocarbon  
concentrations of less than  
0.1 ppm measured as methane**

**650 ml/min continuous  
output capacity**

**Safe, operates at low regulated  
pressures and is designed for  
explosive environments**

**Attractive payback period**

**Very reliable, no moving parts**

**Virtually maintenance free**

**The 75-82EU has been  
CENELEC approved to  
EEx d IIB +H2 T6**



## Explosion Proof Zero Air Generator

The Type 75-82EU Zero Air Generator produces up to 650 ml/min of high purity zero grade air from standard house compressed air supply. The generator utilises state-of-the-art catalytic technology to convert standard compressed air into zero grade air at safe regulated pressures on a continuous basis without the need of operator attention.

The housing is a standard Crouse-Hinds® explosion proof enclosure designed to operate in a Class 1, Division 1, Groups B, C, D environment. This system completely eliminates the need for expensive, inconvenient gas cylinders. It is a turnkey system, ready to install on Unistrut® frames or mount directly to the wall.

The unit is designed to operate with any compressed air supply - no matter what the quality (an optional pretreatment system is available for oily, highly contaminated compressed air supplies).

Zero grade air is produced from compressed air by means of catalytic oxidation. The compressed air is channelled into a heated catalyst bed where the hydrocarbons are converted to carbon dioxide and water vapour producing zero grade air with less than 0.1 ppm hydrocarbon content (measured as methane). The use of a type 75-82EU Zero Air Generator has advantages over the conventional sources of fuel air for GC analysis. A lower and more stable baseline signal can be obtained. Due to lower baseline noise, the signal-to-noise ratio is larger, giving rise to higher sensitivity or larger peak areas. The result is increased accuracy and reliability.

## Principal Specifications

| Type                                | 75-82EU  |
|-------------------------------------|--|
| Maximum Flow Rate:                  | 650 ml/min   |
| Minimum/Maximum Inlet Pressure:     | 2.8 barg/8.5 barg                                      |
| Maximum Inlet Hydrocarbon Content:  | 100 ppm  |
| Pressure Drop at Maximum Flow Rate: | <0.55 barg   |
| Outlet Air Temperature:             | 5°C above ambient                                      |
| Start-up Time:                      | 45 min   |
| Electrical Requirements:            | 220-240 V AC 50 Hz, 0.25 A<br>(110V version available) |
| Shipping Weight:                    | 14kg   |
| Physical Dimensions:                | 280 x 180 x 150mm                                      |

## Ordering Information

| Type    | Description                        |
|---------|------------------------------------|
| 75-82EU | Explosion Proof Zero Air Generator |
| 75394   | Replacement Catalyst Module        |

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