



Hydrogen Generators for GC Applications

High-Purity Hydrogen from Parker Balston® and Domnick Hunter®

- Provide a safe, reliable source of hydrogen with purity to 99.9999+%
- Eliminate the cost and inconvenience of dealing with hydrogen and helium cylinders
- Promote compliance with OSHA and NPFA guidelines for indoor hydrogen use
- Includes a wide range of flows to meet your needs

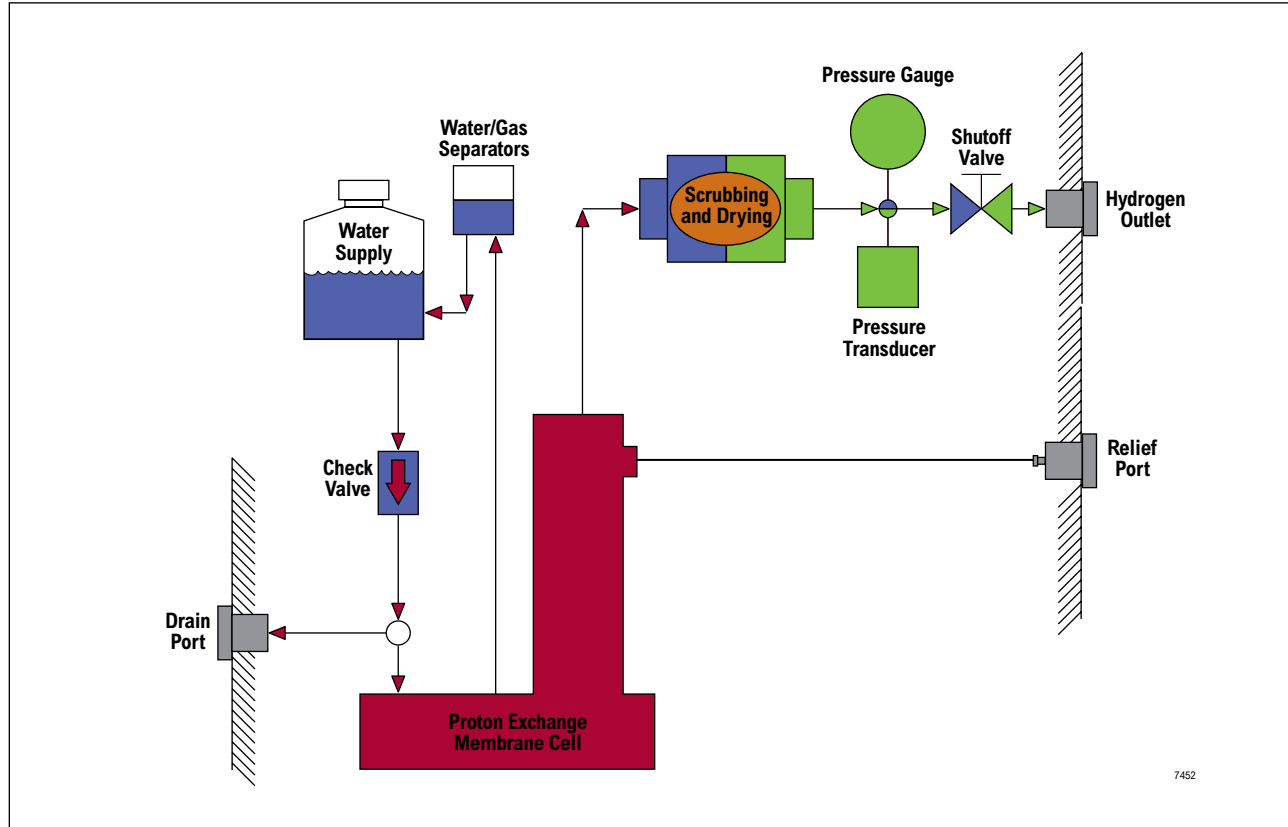
Parker Balston® and Domnick Hunter® are now one company offering exceptional gas generation technologies from a single source. Both brands offer different technologies and several flow rates to accommodate either single or multiple GC applications.

GC instrumentation uses hydrogen as either a fuel gas (FID, FPD, and NPD) or carrier gas. Each application requires specific and unique gas purity. Parker Balston® offers both a desiccant cartridge caustic-free system for fuel applications and a palladium-based carrier gas range providing the purest hydrogen commercially available. Domnick Hunter® offers a caustic free, carrier grade generator with a durable, built in micro-dryer that eliminates the need for regular desiccant cartridge replacement.



gc instruments

Parker Balston® Hydrogen Generator Technology



Hydrogen Generators for GC Applications

| Hydrogen Generators Specifications | | | | | | | | | |
|---------------------------------------|---|-----------|-----------|-----------|---|--------|---|--------|--------|
| Model | Parker Balston | | | | | | Domnick Hunter | | |
| | H2PEM-100 | H2PEM-165 | H2PEM-260 | H2PEM-510 | H2-150 | H2-300 | 20H-MD | 40H-MD | 60H-MD |
| Flow (cc/min): | 100 | 165 | 260 | 510 | 150 | 300 | 160 | 250 | 500 |
| Use: | Fuel Gas | | | | Fuel and Carrier | | Fuel and Carrier | | |
| Max. Number of FIDs: | 2 | 4 | 6 | 12 | 3 | 6 | 4 | 6 | 12 |
| Max. Number of Injectors/FIDs: | N/A | | | | 1 | 2 | 1 | 2 | 4 |
| Purity: | 99.9995% | | | | 99.99999% | | 99.9999% | | |
| Water Quality: | DI Water | | | | NaOH Solution | | DI Water | | |
| Purifier Type: | Dessicant | | | | Palladium | | Dessicant | | |
| Regenerative Purifier: | No | | | | No | | Yes | | |
| Maximum Pressure (psig): | 100 | | | | 60 | | 100 | | |
| Dimensions (h x w x d): | 17.1" x 13.5" x 17.9" (43.5cm x 34.2cm x 45.6cm) | | | | 22" x 12" x 13" (58cm x 30cm x 33cm) | | 18" x 13.5" x 17.2" (45.6cm x 13.5cm x 43.7cm) | | |
| Weight: | 40lb (18kg) | | | | 58lb (26kg) | | 62lb (28kg) | | |

Hydrogen Generators

| Description | Part No. |
|-------------------------------------|----------------|
| <i>Parker Balston®</i> | |
| Parker Balston® H2PEM-100, 110/220V | 8619101 |
| Parker Balston® H2PEM-165, 110/220V | 8619102 |
| Parker Balston® H2PEM-260, 110/220V | 8619103 |
| Parker Balston® H2PEM-510, 110/220V | 8619104 |
| Parker Balston® H2-150, 110V | 80109 |
| Parker Balston® H2-150, 220V | 80113 |
| Parker Balston® H2-300, 110V | 80112 |
| Parker Balston® H2-300, 220V | 80115 |
| <i>Domnick Hunter®</i> | |
| Domnick Hunter® 20H-MD, 110/220V | 8618711 |
| Domnick Hunter® 40H-MD, 110/220V | 8618712 |
| Domnick Hunter® 60H-MD, 110/220V | 8618713 |

Parker HydroGen Mate® DI Water System

Economically Provide DI Water to Your Hydrogen Generator

- Removes organics, phosphates, chlorine, and most ionizable constituents
- Quick and easy installation
- Easy-fill dispensing nozzle
- No electrical requirements

The Parker HydroGen Mate® DI Water System provides high purity deionized water to all types of Parker hydrogen generators. The system is ready to install and includes prefiltration, two DI resin exchange cartridges, dispensing nozzle, and a final filter.

Parker HydroGen Mate® DI Water System

| Description | Part No. |
|--------------------------|----------------|
| Complete DI Water System | 8619043 |
| Maintenance Kit* | 8619044 |

*Includes two replacement cartridges and one replacement final filter.



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Parker Balston® FID Gas Station

Hydrogen and Zero Air from a Single Generator

- Safer and more convenient than gas cylinders
- Save bench space with a single unit
- Minimal operator attention required
- Quiet operation

The Parker Balston® FID Gas Station combines Parker's zero air and hydrogen generation technologies into a single unit, eliminating the inconveniences and cost of hydrogen and gas cylinders. The Model FID-1000 gas station will supply 90cc/min hydrogen and 1000cc/min of zero grade air and can supply fuel gas for two flame ionization detectors. With a 250cc/min hydrogen and 2500cc/min zero air generating capacity, the FID-2500 gas station can supply gases for up to six flame ionization detectors.

Hydrogen Generation

Hydrogen gas is produced from deionized water using a Proton exchange membrane cell. The hydrogen supplied is 99.9995% pure with pressures up to 60psig.

Zero Air Generation

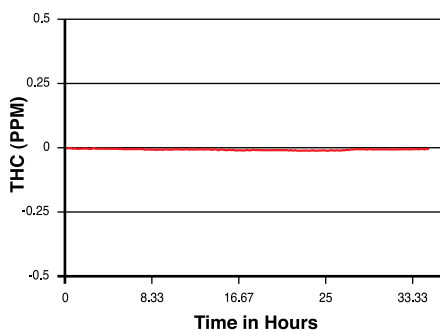
The FID Gas station improves FID baseline stability by providing zero grade air from an on-site compressed air source. The FID-1000 produces zero air containing <0.1ppm hydrocarbons (measured as methane), while the FID-2500 produces zero air with <0.05ppm hydrocarbon purity.



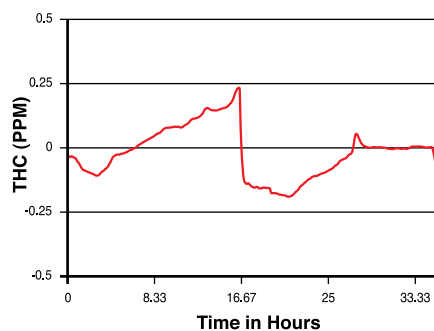
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**Parker Balston®
Zero Air Generator**



Bottled Air



FID Gas Station Specifications

| Model | Hydrogen Flow | Hydrogen Purity | Hydrogen Pressure | Zero Air Flow | Zero Air Purity | Zero Air Pressure | Number of FIDs | Dimensions (h x w x d) | Weight |
|-----------------|---------------|-----------------|-------------------|---------------|-----------------|-------------------|----------------|------------------------|--------|
| FID-1000 | 90 | 99.9995% | 60psig | 1000cc/min | <0.1ppm | 40–125psig | 2 | 16.5" x 10.5" x 17" | 53lb |
| FID-2500 | 250 | 99.9995% | 60psig | 2500cc/min | <0.05ppm | 40–125psig | 6 | (42cm x 27cm x 43cm) | (24kg) |

FID Gas Stations

| Description | 110V Part No. | 220V Part No. |
|----------------------|---------------|---------------|
| FID-1000 Gas Station | 97128 | 97185 |
| FID-2500 Gas Station | 97211 | 97212 |

FID-1000 and FID-2500 Accessories

| Description | Part No. |
|-------------------------------------|----------------|
| Desiccant Cartridge | 90723 |
| Deionizer Resin Bags, 2pk | 1647728 |
| In-Line Filter (Zero Air) | 1647729 |
| Maintenance Kit | 1647731 |
| Inlet/Outlet Filters Zero Air, 1 ea | 1647732 |

Zero Air Generators

Improve your Productivity by Using Air Generators Instead of Cylinders

- Replace bulky cylinders that need frequent changing
- Consistently high-purity for high-quality GC results

Gas Chromatography requires zero air or air <0.1ppm hydrocarbons and methane. Higher levels of methane and other hydrocarbons can cause unstable baselines. Parker and Domnick Hunter® offer high-quality zero air generators.



Parker ChromGas® Zero Air Generator



Parker Balston® Zero Air Generator



Domnick Hunter® Zero Air Generator

| Zero Air Generator Specifications | | | | | | |
|-----------------------------------|---------------------------|----------------|-----------------------------------|--------------------|---|-----------------|
| Model | Maximum Flow Rate (L/min) | Number of FIDs | Outlet Hydrocarbon Concentration* | Inlet Air Pressure | Dimensions (h x w x d) | Weight |
| Parker ChromGas® | | | | | | |
| 1000 | 1 | 3 | <0.1ppm | 2–125psig | 5.8" x 9.8" x 12" (14.6cm x 24.8cm x 30.5cm) | 11lb (5kg) |
| 3500 | 3.5 | 11 | | | 6.8" x 12" x 15" (17cm x 30.5cm x 38 cm) | 20lb (9kg) |
| Parker Balston® | | | | | | |
| 75-83 | 1 | 3 | <0.1ppm | 40–125psig | 10" x 12" x 3" (25cm x 30cm x 8 cm) | 7lb (3kg) |
| HPZA-3500 | 3.5 | 11 | <0.05ppm | | 11" x 16" x 13" (27cm x 42cm x 34 cm) | 41lb (19kg) |
| HPZA-7000 | 7 | 23 | | | | |
| HPZA-1800 | 18 | 60 | | | | |
| HPZA-30000 | 30 | 100 | <0.1ppm | | | |
| Domnick Hunter® | | | | | | |
| UHP-10ZA | 1 | 3 | <0.1ppm | 45–145psig | 13.5" x 13" x 16" (32cm x 33cm x 40 cm) | 21lb (9.5kg) |
| UHP-35ZA | 3.5 | 11 | | | | |

*As methane.

Zero Air Generators

| Model | 110V Part No. | 220V Part No. |
|-------------------------|---------------|---------------|
| <i>Parker ChromGas®</i> | | |
| 1000 | 91454 | 91002 |
| 3500 | 92501 | 92503 |
| <i>Parker Balston®</i> | | |
| 75-83 | 80142 | 80152 |
| HPZA-3500 | 80144 | 80154 |
| HPZA-7000 | 80146 | 80156 |
| HPZA-1800 | 80148 | 80158 |
| HPZA-30000 | 80140 | 80150 |
| <i>Domnick Hunter®</i> | | |
| UHP-10ZA | 500936 | 500937 |
| UHP-35ZA | 500938 | 500939 |

Parker ChromGas® Zero Air Replacement Filters

| Model | Part No. |
|--|----------|
| <i>Serial No. <407841</i> | |
| Model 1000 Inlet | 92520 |
| Model 1000 Outlet | 92530 |
| Model 2500 Inlet | 92531 |
| Model 2500 Outlet | 92532 |
| Model 3500 Inlet | 92509 |
| Model 3500 Outlet | 92530 |
| <i>Serial No. >407840, ≤ZA10000036, ≤ZA35000033</i> | |
| Model 1000 Inlet | 92505 |
| Model 1000 Outlet | 92507 |
| Model 3500 Inlet | 92508 |
| Model 3500 Outlet | 92509 |
| <i>Serial No. >ZA10000036</i> | |
| Model 1000 Inlet and Outlet | 92533 |
| <i>Serial No. >ZA35000033</i> | |
| Model 3500 Inlet and Outlet | 92533 |