Parker BALSTON®

Analytical Gas Systems

Analytical Gas Systems Product Catalog

Products for the Laboratory

Bulletin AGS B

anything Parker Possible™

FID Gas Stations

- **Ideal for up to 5-6 FIDs**
- **Produces UHP zero air from house compressed air (<0.01 ppm THC) and 99.9995% pure hydrogen in one enclosure**
- **Eliminates inconvenient and dangerous zero air and hydrogen 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 of typically less than one year**
- **Automatic water fill as standard**
- **Silent operation and minimal operator attention required**

FID Gas Station

Parker Balston's FID-1000 and FID-2500 Gas Stations can provide both hydrogen gas and zero grade air to FID detectors on Gas Chromatographs. These systems are specifically designed to provide fuel gas and support air to 5-6 Flame Ionization Detectors, Flame Photometric Detectors or Total Hydrocarbon Analyzers.

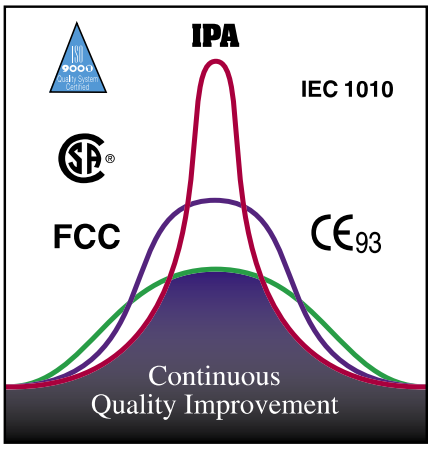
Hydrogen gas is produced from deionized water using a Proton Exchange Membrane Cell. The hydrogen generator compartment utilizes the principle of electrolytic dissociation of water and hydrogen proton conduction through the membrane. The hydrogen supply produces up to 250 cc/min of 99.9995% pure hydrogen with pressures to 60 psig.

Zero air is produced by purifying on-site compressed air to a total hydrocarbon concentration of < 0.1 ppm (measured as methane). The zero air compartment produces up to 2500 cc/min of Zero Grade Air.

The FID Gas Stations are complete systems with state-of-the-art, highly reliable components engineered for easy installation, operation, and long term performance. The Parker Balston® FID-1000 and FID-2500 eliminate all the inconveniences and cost of zero air and hydrogen cylinder gas supplies and dependence on outside vendors. Uncontrollable price increases, contract negotiations, long term commitments, and tank rentals are no longer a concern. With an FID Gas station, you control your gas supply.

All Parker Balston gas generators meet NFPA 50A and OSHA 1910.103 regulations governing the storage of hydrogen.

Produced and supported by an ISO 9001 registered organization, Parker Balston's hydrogen generators are the first built to meet the toughest laboratory standards in the world: CSA, UL, CE and IEC 1010.



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FID Gas Stations

Principal Specifications

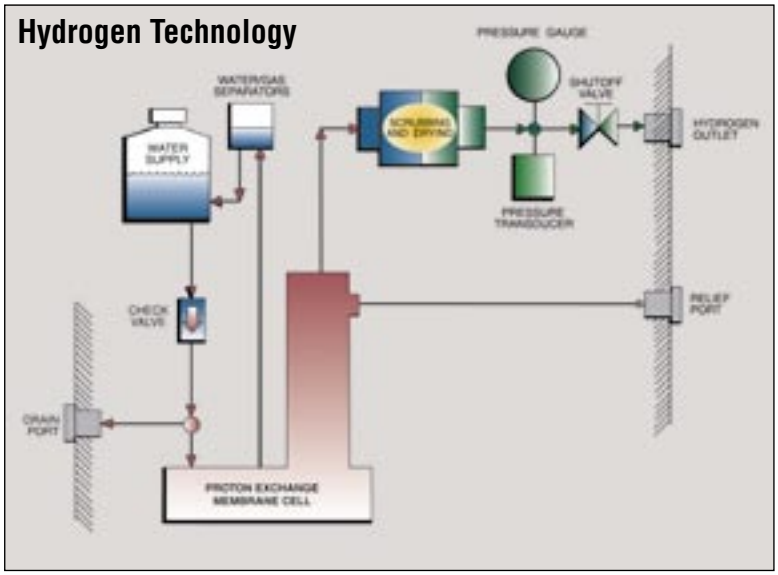
FID Gas Stations

Hydrogen Purity	99.9995%
Zero Air Purity	<0.1 ppm (total hydrocarbon as methane)
Maximum Hydrogen Flow Rate	FID-1000: 90 cc/min FID-2500: 250 cc/min
Maximum Zero Air Flow Rate	FID-1000: 1000 cc/min FID-2500: 2500 cc/min
Electrical Requirements	120 VAC, 60 Hz, 400 Watts
Hydrogen Outlet Pressure	60 psig
Zero Air Outlet Pressure	40-125 psig
Certifications	IEC 1010-1; CSA 1010; UL 3101; CE Mark
Dimensions	10.5"w x 17"d x 16.5"h (27cm x 43cm x 42cm)
Inlet Port	1/4" NPT (female) compressed air supply
Outlet Port	1/8" Compression
Shipping Weight	53 lbs/24 kg

Ordering Information for assistance, call 800-343-4048, 8 to 5 Eastern Time

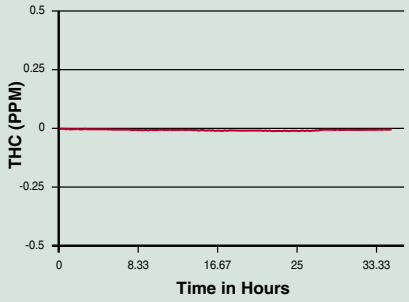
Model	Description
B02-0323	Resin Bed Cartridge
1647727	Desiccant Cartridge
FID-1000, FID-2500	FID Gas Station
MKFID1000	Maintenance Kit (Includes 1 each desiccant cartridge, 1 each resin bed cartridge, and 1 each filter cartridge)
Preventative Maintenance Contract	LFFIDGS-PM
Extended Support with 24 Month Warranty	FID-1000-DN2, FID-2500-DN2

Hydrogen Technology

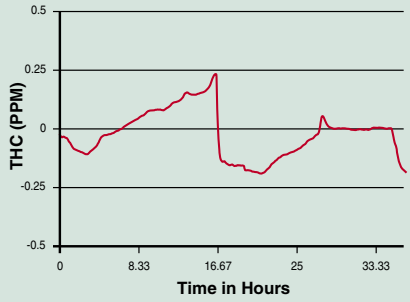


The Chromatograms (below) compare baselines produced by a Parker Balston Zero Air Generator and bottled fuel air. The baseline produced by the Parker Balston Generator is very flat, with no fluctuations or peaks, in comparison with the chromatogram of the bottled air fuel supply, which has many peaks ranging from .25 ppm to -.25 ppm.

Baseline FID-2500 Gas Station



Baseline Bottled Fuel Air



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Hydrogen Generators for Fuel Gas

- **Ideal for fuel gas, up to 14 FID's**
- **Eliminates dangerous and expensive hydrogen gas cylinders from the laboratory**
- **Certified for laboratory use by CSA, UL, IEC, 1010, and CE Mark**
- **Compact and reliable - only one square foot of bench space required**
- **Uses no liquid caustics**

Model 9400 Hydrogen Generator

Parker Balston's Proton Exchange Membrane (PEM) Cell eliminates the use of liquid electrolytes with hydrogen generators.

Proven in over 40,000 GC installations worldwide. Parker Balston's generators are the most reliable hydrogen generators on the market. Maintenance requires only a few moments per year - no inconvenient, extended downtime.

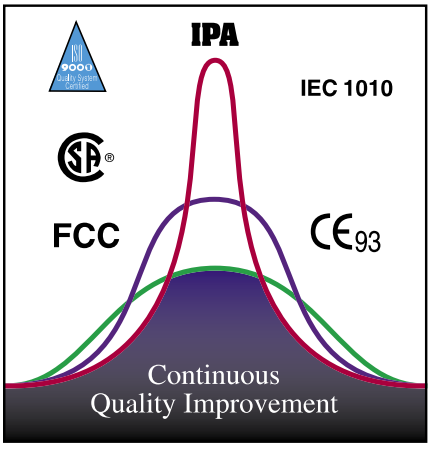
Simply change the deionizer bag every six months and the desiccant cartridge whenever it turns from light blue to grey.

Deionized water is all that is required to generate hydrogen for weeks of continuous operation.

With an output capacity of up to 500 cc/minute, one generator can supply 99.9995% pure hydrogen for up to several FID's. Based on cylinder gas savings alone, a Parker Balston® hydrogen generator pays for itself in less than a year.

All Parker Balston hydrogen generators meet NFPA requirements and OSHA 1910.103 regulations governing the storage of hydrogen.

Produced and supported by an ISO 9001 registered organization, Parker Balston's hydrogen generators are the first built to meet the toughest laboratory standards in the world: CSA, UL, CE and IEC 1010.



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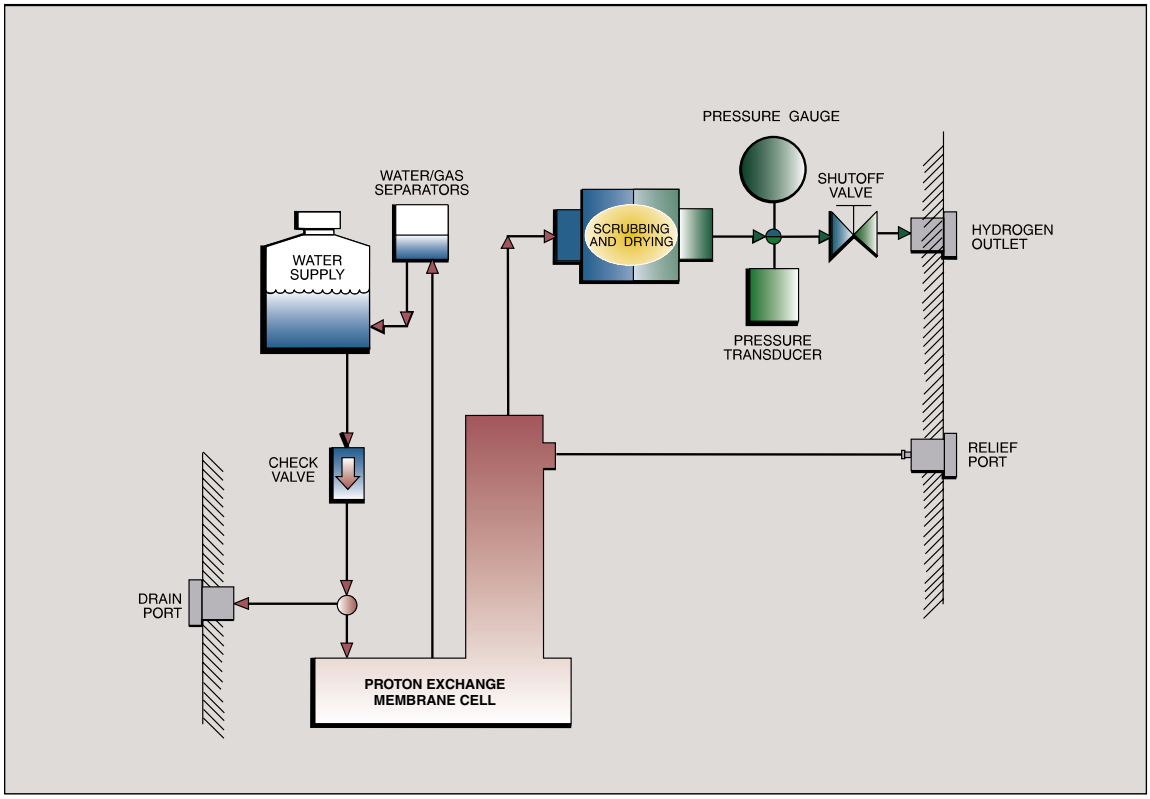
Hydrogen Generators for Fuel Gas

Principal Specifications

Model Number	H2-90NA	9150	9200	9400
Purity	99.9995%	99.9995%	99.9995%	99.9995%
Flow Rates	90 cc/min	160 cc/min	250 cc/min	500 cc/min
Outlet Port	1/8" compression	1/8" compression	1/8" compression	1/8" compression
Electrical	117 Vac/234 Vac	117 Vac/234 Vac	117 Vac/234 Vac	117 Vac/234 Vac
Pressure Control	5 to 20 psig±0.5% 20 to 90 psig±0.2%	5 to 20 psig±0.5% 20 to 90 psig±0.2%	5 to 20 psig±0.5% 20 to 90 psig±0.2%	5 to 20 psig±0.5% 20 to 90 psig±0.2%
Delivery Pressure	2 to 30 psig±0.3% 30 to 90 psig±0.2%	2 to 30 psig±0.3% 30 to 90 psig±0.2%	2 to 30 psig±0.3% 30 to 90 psig±0.2%	2 to 30 psig±0.3% 30 to 90 psig±0.2%
Shipping Weight	40 lb (18 kg) dry	40 lb (18 kg) dry	40 lb (18 kg) dry	40 lb (18 kg) dry
Dimensions	13"H x 15"W x 14"D (33cm x 38cm x 36cm)	13"H x 15"W x 14"D (33cm x 38cm x 36cm)	13"H x 15"W x 14"D (33cm x 38cm x 36cm)	13"H x 15"W x 14"D (33cm x 38cm x 36cm)

Ordering Information for assistance, call 800-343-4048, 8 to 5 Eastern Time

Model	Description
1647727	Dessicant cartridge (1 each)
7601132	Deionizer bags (2 each)
Preventative Maintenance Contract	SPEH2-PM
Extended Support with 24 Month Warranty	H2-90-DN2, 9150-DN2, 9200-DN2, 9400-DN2



Hydrogen Technology

Hydrogen Generators for Fuel and Carrier Gas

- **Eliminates dangerous and expensive hydrogen gas cylinders from the laboratory**
- **Exceeds OSHA 1910.103 and NFPA 50A safety requirements**
- **Safe - produces only as much gas as you need**
- **Unique electron beam palladium cell technology**
- **Produces a continuous supply of 99.99999+% pure hydrogen gas, ideal for carrier and fuel gas applications**
- **Compact and reliable - only one square foot of bench space required and designed to run continuously 24 hours/day - includes automatic water fill**
- **Simple annual maintenance, no desiccant cartridges**
- **Certified for laboratory use by CSA, UL, IEC 1010, and CE Mark**

Model H2PD-300 UHP Hydrogen Generator

Parker Balston® Hydrogen Generators eliminate the need for expensive, dangerous, high pressure cylinders of hydrogen in the laboratory. It is no longer necessary to interrupt important analysis to change cylinders.

Generator flow capacities of up to 300 cc/min. of ultra high purity hydrogen are available.

Parker Balston Hydrogen Generators are compact benchtop units designed for use in the laboratory or in the field.

Hydrogen gas is produced by electrolytic dissociation of water. The resultant hydrogen stream then passes through a palladium membrane to assure carrier grade purity.

Only hydrogen and its isotopes can penetrate the palladium membrane; therefore, the purity of the output gas is guaranteed to be 99.99999+% consistently. This technology produces hydrogen at a guaranteed purity two orders of magnitude greater than desiccant or silica gel technologies.

Parker Balston Hydrogen Generators offer many special features to ensure safe and convenient operation. These features include smart-display technology system status at a glance and automatic water fill for endless operation.

Applications

Gas Chromatographs

Emmissions Test Equipment

Hydrogenation Reactors

ICP-MS Collision Gas

Fuel Cells

Hydrogen Generators for Fuel and Carrier Gas

Principal Specifications

Hydrogen Generators	Models	Specifications
Hydrogen Purity		99.99999+%
Oxygen Content		<.01 ppm
Moisture Content		<1.0 ppm
Max Hydrogen Flow Rate	H2PD-150 H2PD-300	150 cc/min 300 cc/min
Electrical Requirements		120 VAC/60 Hz, 3.15 Amps
Hydrogen Outlet Pressure		Adjustable, 0 to 60 psig
Certifications		IEC 1010-1; CSA UL 3101; CE Mark
Dimensions		12"w x 12"d x 22"h (30cm x 33cm x 58cm)
Outlet Port		1/8" Compression
Shipping Weight		58 lbs (26 kg)

Ordering Information for assistance, call 800-343-4048, 8 to 5 Eastern Time

Description	Model Number
Hydrogen Gas Generator	H2PD-150, H2PD-300
Electrolyte Solution	920071
Pressure Regulator	W-425-4032-000
Installation Kit	IK7532
Preventative Maintenance Contract	PDH2-PM
Extended Support with 24 Month Warranty	H2PD-150-DN2, H2PD-300-DN2

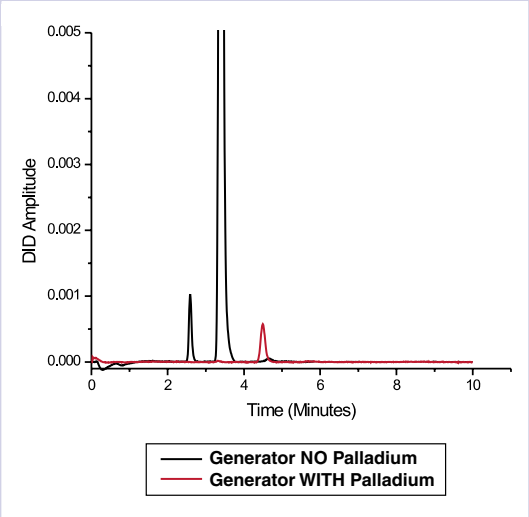
The Parker Balston® Hydrogen Generator is an excellent source of ultra pure, dry hydrogen for a wide range of laboratory uses. The generator is used extensively with Gas Chromatographs, as a fuel gas for Flame Ionization Detectors (FID), as a reaction gas for Hall Detectors, and as a carrier gas to ensure absolute repeatability of retention times. In high sensitivity Trace Hydrocarbon Analyzers and air pollution monitors, the hydrogen produced ensures the lowest possible background noise.

Other applications include using hydrogen for hydrogenation reactions and for FID's used in the analysis of engine gas emissions in the automobile industry.

In all applications the Parker Balston Hydrogen Generator sets the standard for safety, operational performance, and dependability.

Simple Experimental: The two merged baselines in the right chromatogram were created using a Gow-Mac Gas Chromatograph Series 590 equipped with a (DID) discharge ionization detector with hydrogen separator. In creating both baselines (black and red) the gas sample is hydrogen from a hydrogen generator. Both generators are the same - as hydrogen gas is produced from water via electrolytic disassociation, but differ slightly as one generator incorporates a desiccant drying tube as a final purifier while the second generator has a palladium membrane as the final purifier.

The large black peak represents a combined 12 ppm concentration of oxygen and nitrogen, suitable for hydrogen fuel gas while the corresponding point in the red baseline represents a combined 12 ppb concentration of oxygen and nitrogen, suitable for either fuel or carrier gas.



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Hydrogen Generators for Fuel and Carrier Gas

- ▲ Flow capacity up to 1,200 cc/min
- ▲ Ideal for high speed and fast GC applications
- ▲ Eliminates dangerous and expensive helium and hydrogen gas cylinders from the laboratory
- ▲ Safe — produces only as much gas as you need
- ▲ Produces a continuous supply of 99.99999% pure hydrogen gas at 100 psig, ideal for carrier and fuel gas applications
- ▲ Compact and reliable — only one square foot of bench space required and designed to run continuously 24 hours/day
- ▲ Smart display indicates system status at a glance
- ▲ Automatic water feed for continuous operation
- ▲ Simple maintenance, without desiccants
- ▲ Certified for laboratory use by CSA, UL, IEC 1010, and CE Mark

Model H2-1200NA UHP Hydrogen Generator

The Parker Balston® Hydrogen Generator is designed as a hazard-free alternative to high pressure gas cylinders. The generator can be used with any instrumentation requiring high purity hydrogen - anywhere a standard electrical supply is available. Deionized water is all that is required to generate hydrogen for weeks of continuous operation.

With an output capacity of up to 1,200 cc/minute, one generator can supply 99.99999% pure carrier gas, at 100 psig, to multiple GCs, and fuel gas up to 40 FIDs. Based on cylinder gas savings alone, a Parker Balston hydrogen generator pays for itself in less than one year.

The Parker Balston H2-500NA, H2-800NA and H2-1200NA Hydrogen generators use a Proton Exchange Membrane (PEM) to produce UHP hydrogen on demand. Each generator incorporates a palladium purifier module to remove oxygen down to less than 0.01 ppm and moisture down to <1.0 ppm. Only 100 mL of hydrogen gas is stored in the system at any time and at a maximum of 140 psig. That's why the Parker Balston hydrogen generator meets the strict, safety guidelines of the National Fire Protection Agency (NFPA) and the regulations of the Occupational Safety and Health Association (OSHA - 1910.103). Most importantly, the Parker Balston hydrogen generator is certified for laboratory use by CSA, UL, IEC 1010, and CE. Proven in over 40,000 GC installations worldwide, Parker Balston's generators are the most reliable hydrogen generators on the market. Maintenance requires only a few moments per year - no inconvenient, extended downtime. Simply change the deionizer bag every six months. If contaminated water or low water level is detected, the system activates a warning light and shuts off the generator - avoiding harm to the system.

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Hydrogen Generators for Fuel and Carrier Gas

Principal Specifications

Purity	99.99999+% pure H2 Oxygen < .01 ppm Moisture < 1 ppm
Max Hydrogen Flow Rate	H2-500NA 500 cc/min* H2-800NA 800 cc/min H2-1200NA 1200 cc/min
Delivery Pressure	0 to 100 psig
Pressure Control	5 to 20 psig ± 0.5% 30 to 100 ± 0.2%
Electrical Requirement	60Hz, 100 - 130 VAC
Power Consumption	5.5 Amp @ 120 VAC
Certifications	IEC 1010-1; CSA; UL 3101, CE Mark
Dimensions, H2-800NA and H2-1200 NA	13"w x 17"d x 14.5"h
Dimensions, H2-500NA	15"w x 18"d x 13"h
Outlet Port	1/8" Compression
Shipping Weight	45 lbs (20.4 kg) dry (All)

Ordering Information for assistance, call 800-343-4048, 8 to 5 Eastern Time

Description	Model Number
UHP Hydrogen Gas Generator	H2-500NA*
UHP Hydrogen Gas Generator	H2-800NA
UHP Hydrogen Gas Generator	H2-1200NA
Deionizer Bags (2 each)	7601132
Preventative Maintenance Contract	SPEPDH2-PM
Extended Support with 24 Month Warranty	H2-500-DN2, H2-800-DN2, H2-1200-DN2

The Parker Balston® Hydrogen Generator is an excellent source of ultra pure, dry hydrogen for a wide range of laboratory uses. The generator is used extensively with Gas Chromatographs, as a fuel gas for Flame Ionization Detectors (FID), as a reaction gas for Hall Detectors, and as a carrier gas to ensure absolute repeatability of retention times. In high sensitivity Trace Hydrocarbon Analyzers and air pollution monitors, the hydrogen produced ensures the lowest possible background noise.

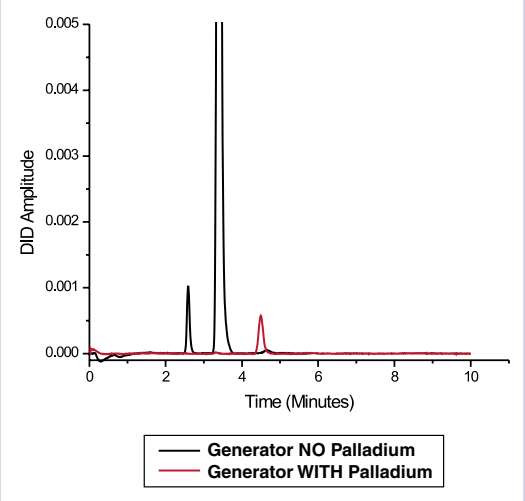
Other applications include using hydrogen for hydrogenation reactions and for FID's used in the analysis of engine gas emissions in the automobile industry.

In all applications the Parker Balston Hydrogen Generator sets the standard for safety, operational performance, and dependability.

*Does not include automatic waterfeed feature and has maximum pressure output of 90 psig.

Simple Experimental: The two merged baselines in the right chromatogram were created using a Gow-Mac Gas Chromatograph Series 590 equipped with a (DID) discharge ionization detector with hydrogen separator. In creating both baselines (black and red) the gas sample is hydrogen from a hydrogen generator. Both generators are the same - as hydrogen gas is produced from water via electrolytic disassociation, but differ slightly as one generator incorporates a desiccant drying tube as a final purifier while the second generator has a palladium membrane as the final purifier.

The large black peak represents a combined 12 ppm concentration of oxygen and nitrogen, suitable for hydrogen fuel gas while the corresponding point in the red baseline represents a combined 12 ppb concentration of oxygen and nitrogen, suitable for either fuel or carrier gas.



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Zero Air Generators

- **Produces UHP Zero Air from house compressed air (<0.05 ppm THC)**
- **Eliminates inconvenient and dangerous zero air cylinders from the laboratory**
- **Increases the accuracy of analysis and reduces the cleaning requirement of the detector**
- **Qualitative SMART-Display provides operational status at a glance**
- **Recommended and used by many GC and column manufacturers**
- **Payback period of typically less than 1 year**
- **Silent operation and minimal operator attention required**
- **Models available to service up to 66 FIDs**

Model HPZA-3500

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 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 labor 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.

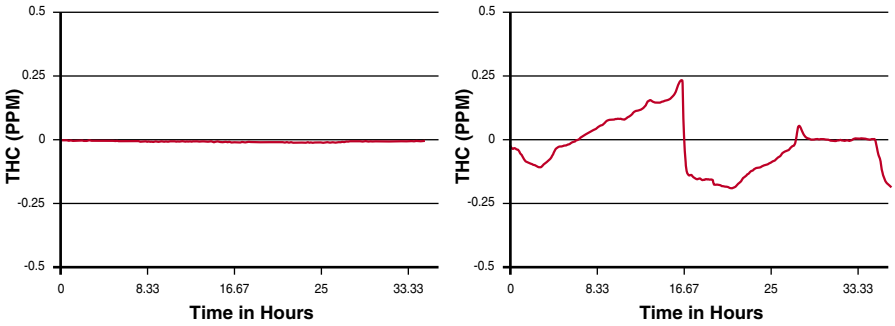
There is no need to use valuable laboratory floor space to store excessive reserves to protect yourself from late deliveries, transportation interruptions, or periods of tight supplies. With a Parker Balston Zero Air Generator, you control your supply.

Model Number	Number of FIDs*
75-83NA	Up to 2
HPZA-3500	Up to 8
HPZA-7000	Up to 16
HPZA-18000	Up to 40
HPZA-30000	Up to 66

*Based on a 450 ccm fuel air rate.

Zero Air Generators

Baseline Comparison



The Chromatograms (left) 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 .25 ppm to -.25 ppm.

Principal Specifications

Parker Balston Models 75-83NA, HPZA-3500, HPZA-7000, HPZA-18000, HPZA-30000

Max Zero Air Flow Rate	75-83NA	1 lpm
	HPZA-3500	3.5 lpm
	HPZA-7000	7 lpm
	HPZA-18000	18 lpm
	HPZA-30000	30 lpm
Outlet Hydrocarbon Concentration (as methane)*	<0.05 ppm	
Min/Max Inlet Air Pressure		40 psig/125 psig
Max Inlet Hydrocarbon Concentration (as methane)		100 ppm
Pressure Drop at Max Flow Rate		4 psig
Max Inlet Air Temperature		78°F (25°C)
Inlet/Outlet Ports		1/4" NPT (female)
Start-up Time for Specifie Hydrocarbon Concentration (as methane)		45 minutes
Electrical Requirements	75-83NA	120 VAC/60 Hz, 0.5 amps
	HPZA-3500	120 VAC/60 Hz, 2.0amps
	HPZA-7000	120 VAC/60 Hz, 2.0 amps
	HPZA-18000	120 VAC/60 Hz, 4.0 amps
	HPZA-30000	120 VAC/60 Hz, 4.0 amps
Dimensions	75-83NA	10"w x 3"d x 12"h (25cm x 8cm x 30cm)
	Other Models	11"w x 13"d x 16"h (27cm x 34cm x 42cm)
Shipping Weight	75-83NA	7 lbs.(3 kg)
	Other Models	41 lbs.(19 kg)

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

Ordering Information for assistance, call 800-343-4048, 8 to 5 Eastern Time

Description	Model Number
Zero Air Generator	75-83NA, HPZA-3500, HPZA-7000, HPZA-18000, HPZA-30000
Maintenance Kit for Model 75-83NA	MK7583
Maintenance Kit for All Other Models	MK7840
Installation kit for all models	IK76803
Preventative Maintenance Contract	LFZA-PM, MFZATOC-PM
Extended Support with 24 Month Warranty	75-83-DN2, HPZA-3500-DN2, HPZA-7000-DN2, HPZA-18000-DN2, HPZA-30000-DN2

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Nitrogen Generators with Research Grade Purity

- **Produces a continuous supply of high purity nitrogen gas from existing compressed air**
- **Eliminates the need for costly, dangerous, inconvenient nitrogen cylinders in the laboratory**
- **Compact design frees up valuable laboratory floor space**
- **Offers long term cost stability - uncontrollable vendor price increases, contract negotiations, long term commitments and tank rentals are no longer a concern**
- **Ideal for carrier gas, make-up gas applications**

Model UHPN2-1100

The Parker Balston® Models HPN2 and UHPN2 Series Nitrogen Generators are completely engineered to transform standard compressed air into 99.99% or 99.9999% nitrogen, exceeding the specification of UHP cylinder gas. These systems can produce up to 1.1 lpm of UHP nitrogen gas and up to 2.0 lpm of research grade purity nitrogen gas. Nitrogen is produced by utilizing a combination of state-of-the art purification technologies and high efficiency filtration.

Pressure swing adsorption removes O_2, CO_2, and water vapor. A catalyst module is incorporated in the UHPN2 Series to oxidize hydrocarbons from the inlet air supply. High efficiency coalescing prefilters and a 0.01 micron (absolute) membrane filter is also incorporated into the design of the generators.

The Parker Balston UHPN2 and HPN2 Series Nitrogen Generators are engineered and packaged in a small cabinet to fit on or under any benchtop. The systems eliminate the need for costly, inconvenient high pressure nitrogen cylinders. Typical applications include GC carrier and make-up gas and low flow sample concentrators.

Flow Table

Inlet Air Pressure (psig)	Max Outlet Flow (cc/min.)	Max Outlet Pressure (psig)
Models HPN2-1100 and UHPN2-1100		
125	1100	85
110	1000	75
100	900	65
90	800	60
80	700	50
70	600	45
60	500	35
Model HPN2-2000		
75-120	2000	90

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Nitrogen Generators with Research Grade Purity

Principal Specifications

Model	HPN2-1100, UHPN2-1100	HPN2-2000
Max Nitrogen flow rate	See Flow Table	2 lpm
Nitrogen Purity	99.9999%	99.99%
Max Nitrogen output pressure	See Table	90 psig
CO_2 concentration	< 1 ppm	< 1 ppm
O_2 concentration	< 1 ppm	< 100 ppm
H_2O Concentration	< 1 ppm	< 2 ppm
Hydrocarbon concentration (1)	< 0.1 ppm	NA
Argon concentration (2)	0.9%	0.9%
Min/Max inlet pressure	60 psig/125 psig	75 psig/120 psig
Recommended inlet temperature	78°F (25°C)	78°F (25°C)
Ambient operating temperature	60°F-100°F (16°C-38°C)	60°F-100°F (16°C-38°C)
Max air consumption	42 lpm (1.5 scfm)	42 lpm (1.5 scfm)
Inlet connection	1/4" NPT (female)	1/4" NPT (female)
Outlet connection	1/8" compression	1/8" NPT compression
Electrical requirements (3)	120 VAC/60 Hz	120 VAC/60 Hz
Dimensions	12" w x 16" d x 35" h (30cm x 41cm x 89cm)	12" w x 16" d x 35" h (30cm x 41cm x 89cm)
Shipping Weight	110 lbs. (50 kg)	110 lbs. (50 kg)

Notes:

1. Models HPN2-1100 and HPN2-2000 do not remove hydrocarbons.
2. Purity specification for Nitrogen does not include Argon concentration.
3. Power Consumption is as follows: Model HPN2-1100 = 25 Watts, Model UHPN2-1100 = 700 Watts, Model HPN2-2000 = 25 Watts.

Ordering Information call 800-343-4048, 8 to 5 EST

Description	Model Numbers
High Purity Nitrogen Generator	HPN2-2000
Ultra High Purity Nitrogen Generator	HPN2-1100 and UHPN2-1100
Purity Indicator/Scrubber	72092
Optional Prefilter Assembly	2002N-1B1-DX
Pressure Regulator	W-425-4032-000
Maintenance Kit	MK7692, MK7694
Installation Kit for all models	IK7694
Preventative Maintenance Contract	LFHPN2-PM, LFUHPN2-PM, MFHPN2-PM
Extended Support with 24 Month Warranty	HPN2-1100-DN2, UHPN2-1100-DN2, HPN2-2000-DN2

Explosion-Proof Zero Air Generator

- ▲ **Eliminates dangerous, expensive, and inconvenient gas cylinders from the laboratory**
- ▲ **Safe, even in explosive environments**
- ▲ **Low maintenance**
- ▲ **Produces a continuous supply of ultra high purity zero grade air**
- ▲ **Compact and reliable**
- ▲ **Designed to mount on Unistrut® framing or directly on the wall**
- ▲ **Certified by CSA (CSA NRTL/C)**

Model 75-82S

The Parker Balston® Model 75-82S Zero Air Generator produces up to 1,000 cc/min. of high purity zero grade air from a standard compressed air supply. The generator utilizes state-of-the-art catalytic technology to convert 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 environments. The internals are all stainless steel. This generator completely eliminates the need for expensive, inconvenient and dangerous gas cylinders. It is a turnkey system, ready to install on Unistrut frames or directly to the wall.

The Parker Balston® Model 75-82S Zero Air Generator can be used as: a fuel air supply to process GC-FIDs, and zero grade gas supply/zero reference for process analytical instruments.

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

Principal Specifications

Model 75-82S Zero Air Generator	
Explosion Proof Certification (CSA NRTL/C)	Class 1, Division1, Groups B, C, and D
Maximum Flow Rate	1000 cc/min.
Total Hydrocarbon Concentration	< 0.1 ppm (measured as methane)
Min./Max. Inlet Pressure	40 psig/125 psig
Maximum Inlet Hydrocarbon Content	100 ppm
Maximum Inlet Air Dewpoint	10°F (5°C) above ambient
Pressure Drop at Max. Flow Rate	< 8 psid
Outlet Air Temperature	Ambient +20°F (+11°C)
Start-up Time	45 min.
Electrical Requirements	120 VAC/60 Hz, 0.5 amps
Shipping Weight	28 lbs. (13 kg)
Dimensions	11"w X 7"h X 6"d (28 cm X 18 cm X 15 cm)

Ordering Information

Description	**Model Number**
Zero Air Generator	75-82S
Replacement Catalyst Module	75398
Final Filter Cartridge	75820
Optional Prefilter Assemblies	2002N-1B1-DX, 2002N-1B1-BX
Installation Kit	IK76803
Preventative Maintenance Contract	EXZA-PM
Extended Support with 24 Month Warranty	75-82S-DN2

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Application Notes