



Parker Balston® PEM Hydrogen Generators

- Proton Exchange Membrane (PEM) cell eliminates the need for liquid electrolytes.
- Reliably generate 99.9995% pure hydrogen—for better chromatography.
- Eliminates high-pressure cylinders—greater convenience and improved lab safety.
- Compact unit, requiring only one square foot of bench space.
- Quick and easy to service and maintain; unique display lighting changes color for easy status checks and water level indication.
- Comes with a set of universal power adapters for US, European, and Asian plug types.



Fuel-grade high purity hydrogen generators are safer alternatives to high-pressure gas cylinders. The new Proton Exchange Membrane (PEM) cell eliminates the use of liquid electrolytes with hydrogen generators. Deionized water is all that is required to generate hydrogen for weeks of continuous operation. With an output capacity of up to 510cc/minute, one generator can supply 99.9995% pure hydrogen for up to several FIDs. Based on cylinder gas savings alone, a hydrogen generator pays for itself in one or two years.

Produced and supported by an ISO 9001 registered organization, Parker Balston® hydrogen generators are the first built to meet the toughest laboratory standards in the world: CSA, UL, cUL, and CE Mark. A great safety feature is the built-in sensing circuit, which shuts the generator down if a hydrogen leak is detected.

Specifications

Purity:	99.9995% pure hydrogen
Delivery Pressure:	10-100psig ± 1psig (69-689kPa ± 7kPa)
Outlet Port:	1/8" compression
Electrical Requirements:	100-230VAC/50-60Hz
Physical Dimensions:	17.12"h x 13.46"w x 17.95"d (43.48 x 34.19 x 45.6cm)
Shipping Weight:	40 lbs. (18kg) dry



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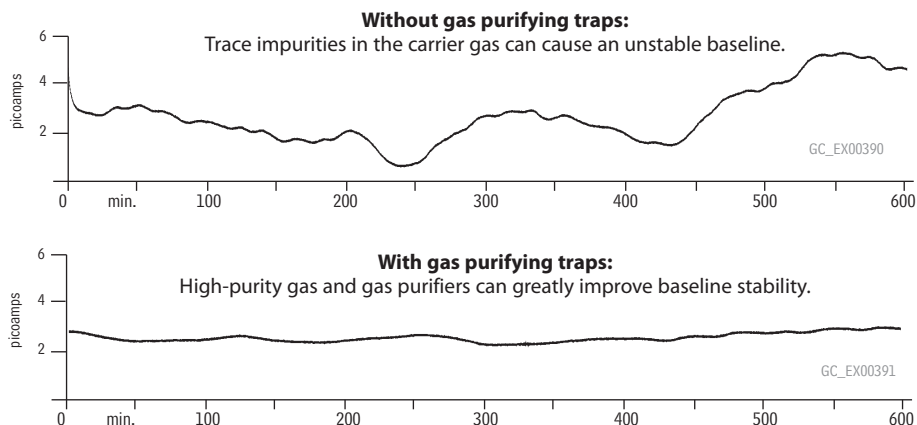
Parker Balston® Hydrogen Generators

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Fast Facts
lit. cat.# 580053A

Description	Capacity	qty.	cat.#	price
Hydrogen Generator H2PEM-100	100cc/min.	ea.	23065	enquire
Hydrogen Generator H2PEM-165	165cc/min.	ea.	23066	enquire
Hydrogen Generator H2PEM-260	260cc/min.	ea.	23067	enquire
Hydrogen Generator H2PEM-510	510cc/min.	ea.	23068	enquire
Replacement and Maintenance Components for Hydrogen Generators (for all models listed above)				
Replacement Desiccant Cartridge for H2PEM Generators		ea.	23069	enquire
6-Month Maintenance Kit for H2PEM Generators (Includes: 1 deionizer cartridge, 1 water filter, 3 environmental filters)		kit	23070	enquire
24-Month Maintenance Kit for H2PEM Generators (Includes: 1 deionizer cartridge, 1 water filter, 3 environmental filters, 1 water level sensor, 1 water pump, and 1 desiccant cartridge)		kit	23071	enquire

The combination of high-purity gas and gas purifying traps can save analytical time in the long run.



i tech tip
Using purifying gas traps in combination with a gas generator can improve chromatography tremendously and improve column lifetime.

Parker Balston® Model FID-1000 and FID-2500 Gas Stations

- Single unit produces UHP zero air from house compressed air and 99.9995% pure hydrogen from deionized water.
- Ideal for supplying up to 5-6 FIDs.
- Eliminates inconvenient and dangerous gas cylinders.
- Silent operation, minimal operator attention required.

Parker Balston® Gas Stations provide both UHP grade hydrogen gas and zero grade air for flame ionization detectors. The system is specifically designed to supply gas to FIDs and to support flame thermionic and flame photometric detectors. The units produce zero air by purifying compressed air to a total hydrocarbon concentration of 0.1ppm or less (measured as methane).

The hydrogen generators produce hydrogen gas from deionized water, using the principle of electrolytic dissociation of water and hydrogen proton conduction through a proton exchange membrane cell.



Produce zero air and pure hydrogen from one unit!

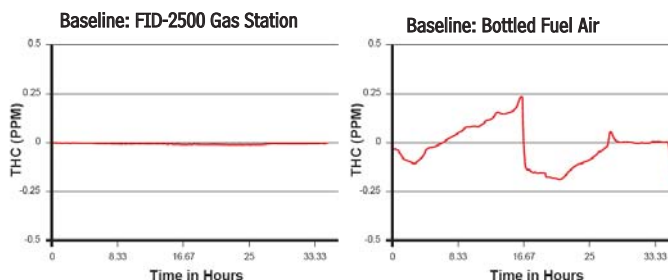
Specifications

Hydrogen Purity:	99.9995%	Power:	120VAC/amp, 60Hz, 400 watts
Zero Air Purity:	FID-1000:	Hydrogen Outlet Pressure:	60 psig (414kPa)
	< 0.1ppm total hydrocarbons as methane	Zero Air Outlet Pressure:	40-125 psig* (276-862kPa)
	FID-2500:	Inlet Connection:	3/4" NPT (female)
	< 0.05ppm total hydrocarbons as methane	Outlet:	1/8" compression
Max. Hydrogen Flow Rate:	FID-1000: 90cc/min.	Dimensions:	16.5"h x 10.5"w x 17"d
	FID-2500: 250cc/min.		(42cm x 27cm x 43cm)
Max. Zero Air Flow Rate:	FID-1000: 1000cc/min.	Weight:	53 lbs. (24kg)
	FID-2500: 2500cc/min.		

*Zero air inlet requires minimum of 40psig (276kPa) compressed air pressure.



Compare baselines produced by a Parker Balston® FID Gas Station and bottled fuel air. The baseline produced by the Parker Balston® Generator is flat, with no fluctuations or peaks; the chromatogram from the bottled air fuel supply has many peaks ranging from 0.25 ppm to -0.25 ppm total hydrocarbons.



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FID Gas Stations

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Fast Facts
lit. cat.# 580051

Description	qty.	cat. #	price
Model FID-1000 Gas Station (ideal for 1-2 FIDs)	ea.	20177	enquire
Model FID-2500 Gas Station (ideal for 5-6 FIDs)	ea.	24913	enquire
Replacement Components for FID Gas Stations			
Resin Bed Cartridge for Hydrogen Generators in FID-1000 and FID-2500 Gas Stations	ea.	24914	enquire
Replacement Desiccant Cartridge	ea.	21671	enquire
FID Gas Station Maintenance Kit (Includes 1 desiccant cartridge, 1 resin bed cartridge, 1 filter cartridge)	ea.	24915	enquire

ordering note

For international orders, please add the appropriate power cord suffix from the table below.

International Power Cord Sets

Just add the proper suffix to the catalog number for the gas generator you are ordering.

Location	qty.	cat.# suffix	price
United Kingdom (230VAC, 50/50Hz)	ea.	-550	N/C
European (230VAC, 50/60Hz)	ea.	-551	N/C
IEC Connector Only (230VAC, 50/60Hz)	ea.	-552	N/C
Japanese (200VAC, 50/60Hz)	ea.	-556	N/C
Japanese for Zero Air (100VAC, 50/60Hz)	ea.	-553	enquire
Japanese for Hydrogen (100VAC, 50/60Hz)	ea.	-554	enquire
Japanese for Nitrogen (100VAC, 50/60Hz)	ea.	-555	enquire

Select the power cord you need.



Parker Balston® Zero Air Generators

- Turn in-house compressed air into ultra-pure air (<0.1ppm total hydrocarbons).
- Remove hydrocarbons to less than 0.1ppm by catalytic oxidation.
- Operate at 40 to 125psi (276-862kPa).
- Typical payback is less than one year, based on cylinder costs.
- Install easily and take up little bench space.
- Maintenance kits include a one year supply of prefilters and final filter.



CE

Model	Number of FIDs*
75-83NA	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

Specifications

Maximum 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):	75-83NA	< 0.1 ppm
	HPZA-30000	< 0.1 ppm
	Other Models	< .05 ppm
Minimum/Maximum Inlet Air Pressure:	40 psig/125 psig (276/862kPa)	
Maximum Inlet Hydrocarbon Concentration (as methane):	100 ppm	
Pressure Drop at Maximum Flow Rate:	4 psi (28kPa) differential	
Maximum Inlet Air Temperature:	78°F (25°C)	
Inlet/Outlet Ports:	1/4" NPT (female)	
Start-up Time to Specified Hydrocarbon Concentration:	45 minutes	
Electrical Requirements:	75-83NA	120 VAC/60 Hz, 0.5 amps
	Other Models	120 VAC/60 Hz, 3.5 amps
Dimensions:	75-83NA	12"h x 10"w x 3"d (30cm x 25cm x 8cm)
	Other Models	16"h x 11"w x 13"d (42cm x 27cm x 34cm)
Shipping Weight:	75-83NA	7 lbs. (3 kg)
	Other Models	41 lbs. (19 kg)

Zero Air Generator	Capacity	qty.	cat. #	price
Zero Air Generator Model 75-83NA	1000cc/min.	ea.	20684	enquire
Zero Air Generator Model 75-83NA with United Kingdom Power Cord	1000cc/min.	ea.	20684-550	enquire
Zero Air Generator Model HPZA-3500	3500cc/min.	ea.	20680	enquire
Zero Air Generator Model HPZA-3500 with European Power Cord	3500cc/min.	ea.	20680-551	enquire
Zero Air Generator Model HPZA-7000	7000cc/min.	ea.	20681	enquire
Zero Air Generator Model HPZA-18000	18,000cc/min.	ea.	20682	enquire
Zero Air Generator Model HPZA-30000	30,000cc/min.	ea.	20683	enquire

Maintenance Kits (includes a one-year supply of prefilters and final filter)

Maintenance Kit	qty.	cat. #	price
Maintenance Kit for Model 75-83NA	kit	21646	enquire
Maintenance Kit for Models HPZA-3500, HPZA-7000, HPZA-18000, HPZA-30000	kit	21647	enquire

Replacement Catalyst Towers	Capacity	qty.	cat. #	price
Replacement Catalyst Tower for Model 75-83NA	1000cc/min.	ea.	22005	enquire
Replacement Catalyst Tower for Model HPZA-3500	3500cc/min.	ea.	22004	enquire
Replacement Catalyst Tower for Model HPZA-7000	7000cc/min.	ea.	22006	enquire
Replacement Catalyst Tower for Model HPZA-18000	18,000cc/min.	ea.	22007	enquire
Replacement Catalyst Tower for Model HPZA-30000	30,000cc/min.	ea.	22008	enquire

International Power Cord Sets

Just add the proper suffix to the catalog number for the gas generator you are ordering.

Location	qty.	cat.# suffix	price
United Kingdom (230VAC, 50/50Hz)	ea.	-550	N/C
European (230VAC, 50/60Hz)	ea.	-551	N/C
IEC Connector Only (230VAC, 50/60Hz)	ea.	-552	N/C
Japanese (200VAC, 50/60Hz)	ea.	-556	N/C
Japanese for Zero Air (100VAC, 50/60Hz)	ea.	-553	enquire
Japanese for Hydrogen (100VAC, 50/60Hz)	ea.	-554	enquire
Japanese for Nitrogen (100VAC, 50/60Hz)	ea.	-555	enquire

ordering note

For international orders, please add the appropriate power cord suffix from the table below.



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Zero Air Generators

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Fast Facts

lit. cat.# 580050

Parker Balston® Nitrogen Gas Generators

- Turn compressed air into ultra-pure nitrogen (up to 99.9995%).
- Flows from 1 to 75+ Lpm.
- Require only a compressed air source and 110 volt AC power.
- Safe, reliable, low maintenance.
- Maintenance kits include replacement filters.
- N2-14 and N2-14A can be used for LC/MS.

Specifications

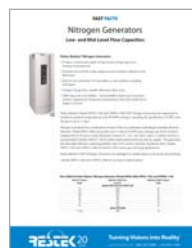
	Model HPN2-1100 or UHPN2-1100	Model HPN2-2000	Model N2-14 or N2-14A
Maximum Nitrogen Flow Rate:	See Flow Table	2 lpm	78scfh** at 95% purity
Nitrogen Purity:	99.9999%	99.99%	95.0%–99.5%
Maximum Nitrogen Outlet Pressure:	See Flow Table	90 psig	
CO Concentration:	< 1.0 ppm	NA	
CO ₂ Concentration:	< 1 ppm	< 1 ppm	
O ₂ Concentration:	< 1 ppm	< 100 ppm	
H ₂ O Concentration:	≤ 2 ppm	≤ 2 ppm	
Hydrocarbon Concentration ¹ :	< 0.1 ppm	NA	
Argon Concentration ² :	0.9%	0.9%	
Atmospheric Dewpoint:			-58°F (-50°C)
Suspended Liquids:			None
Particles > 0.01μm:			None
Oxygen Analyzer:			Included with Model 75-720NA
Commercially Sterile:			Yes
Minimum/Maximum Inlet Pressure:	60 psig/125 psig (414/862kPa)	75 psig/120 psig (517/827kPa)	60 psig/145 psig (414/1,000kPa)
Maximum Pressure Drop (99% N ₂ Purity, 125 psig):			10 psig (69kPa)
Recommended Inlet Temperature:	≤ 78°F (25°C)	≤ 78°F (25°C)	≤ 68°F (25°C) (Max.)
Ambient Operating Temperature:	60°F–100°F (16°C–38°C)	40°F–100°F (4°C–38°C)	110°F (43°C) (Max.)
Maximum Air Consumption:	42 lpm (1.5 scfm)*	42 lpm (1.5 scfm)*	
Inlet Connection:	1/4" NPT (female)	1/4" NPT (female)	1/4" NPT
Outlet Connection:	1/4" compression	1/8" NPT compression	1/8" NPT
Electrical Requirements ³ :	120 VAC/60 Hz	120 VAC/60 Hz	N2-14: None N2-14A: 120 VAC/60 Hz/25 Watts
Dimensions:	35" h x 12" w x 16" d (89cm x 30cm x 41cm)	35" h x 12" w x 16" d (89cm x 30cm x 41cm)	50" h x 16" w x 16" d (127cm x 41cm x 41cm)
Shipping Weight:	115 lbs. (52 kg)	115 lbs. (52 kg)	N2-14: 75 lbs. (34 kg) N2-14A: 80 lbs. (36 kg)



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Flow Table for Models HPN2-2000, HPN2-1100, and UHPN2-1100

Inlet Air Pressure	Maximum Outlet Flow (cc/min.)	Maximum Outlet Pressure
Models HPN2-1100 and UHPN2-1100		
125 psig (862kPa)	1100	85 psig (586kPa)
110 psig (758kPa)	1000	75 psig (517kPa)
100 psig (689kPa)	900	65 psig (448kPa)
90 psig (621kPa)	800	60 psig (414kPa)
80 psig (552kPa)	700	50 psig (345kPa)
70 psig (483kPa)	600	45 psig (310kPa)
60 psig (414kPa)	500	35 psig (241kPa)
Model HPN2-2000		
75-120 psig (517-827kPa)	2000	90 psig (621kPa)



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Nitrogen Generators

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Fast Facts
lit. cat. # 580052

¹Models HPN2-1100 and HPN2-2000 do not remove hydrocarbons.

²Purity specification for nitrogen does not include argon concentration.

³Power consumption is:
Model HPN2-1100 = 25 Watts
Model UHPN2-1100 = 700 Watts
Model HPN2-2000 = 25 Watts

Parker Balston® Nitrogen Generators for LC/MS or General Purposes

Nitrogen Generators for LC/MS or General Purpose

	qty.	cat.#	price
Nitrogen Generator N2-14 (general purpose) 78 scfh** max. flow at 95% purity	ea.	20677	enquire
Nitrogen Generator N2-14 with European Power Cord	ea.	20677-551	enquire
Nitrogen Generator N2-14A (general purpose w/oxygen analyzer) 78 scfh** max. flow at 95% purity	ea.	21652	enquire

Nitrogen Generators

	qty.	cat.#	price
Nitrogen Generator HPN2-2000 (high purity—99.99%) 2.0 lpm max. flow	ea.	21654	enquire
Nitrogen Generator HPN2-1100 (ultra-high purity—99.9995%) 1.1 lpm max. flow	ea.	21653	enquire
Nitrogen Generator UHPN2-1100 (ultra-high purity—99.9995%); [HC<0.1ppm] 1.1 lpm max. flow	ea.	20697	enquire

Maintenance Kits

	qty.	cat.#	price
Maintenance Kit for Models N2-14, N2-14A, 75-72, 75-720NA	kit	21648	enquire
Maintenance Kit for Models HPN2-1100, HPN2-2000, 76-96, 76-92	kit	21649	enquire
Maintenance Kit for Models UHPN2-1100, 76-94	kit	21655	enquire

*Standard cubic feet per minute.

**Standard cubic feet per hour

ordering note

For international orders, please add the appropriate power cord suffix from the table on the previous page.