Hydrogen Generators

Flow Capacities
up to 500 cc/min

Analytical Gas Systems

Features

Eliminates dangerous hydrogen gas cylinders from the laboratory

Safe - produces only as much gas as you need

Produces a continuous supply of 99·9999% pure hydrogen gas at 6.9 barg

Designed to run continuously 24 hours/day

Simple maintenance

Certified for laboratory use by CSA, UL, IEC 1010, and CE Marked

Hydrogen On Demand, Up to 500 cc/minute

Ultra high purity (UHP) hydrogen generators from Parker are designed as hazard-free alternatives to high-pressure gas cylinders. They 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 500 cc/minute, one generator can now supply 99.9999% pure carrier gas to several GC's, and fuel gas to 12 FID's. Based on cylinder gas savings alone, a Parker Balston hydrogen generator can pay for itself in less than a year.

Certified Safety

Parker's hydrogen generators use an exclusive **Proton Exchange Membrane** to produce hydrogen on demand. Only 100 ml is stored in the system at any time and at low pressure. A built-in sensing circuit shuts the generator down if a hydrogen leak is detected. That's why Parker hydrogen generators meet 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, they are the only hydrogen generators certified for laboratory use by CSA, UL and IEC 1010. Compliance with European regulations means generators are CE marked.

Proven Technology

Parker's exclusive Proton Exchange electrolyte Electrolyzer eliminates the use of liquid electrolytes with hydrogen generators. Proven in over 20,000 GC installations worldwide, Parker'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 beige. And if contaminated water or low water level is detected, the system activates a warning light and shuts off the generator — avoiding damage to the electrolytic cell.

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Hydrogen Generators
Flow Capacities
up to 500 cc/min

Analytical Gas Systems

Principal Specifications

Hydrogen Generator 9000 Series

Model	9090	9150	9200	9400
Purity	99.9999%[1]	99.9999%[1]	99.9999%[1]	99.9999%[1]
Flow Rates	90 cc/minute	160 cc/minute	250 cc/minute	500 cc/minute
Outlet Port	1/8” compression	1/8” compression	1/8” compression	1/8” compression
Electrical	234 Vac	234 Vac	234 Vac	234 Vac
Delivery Pressure	0 to 2 barg ±3%	0 to 2 barg ±3%	0 to 2 barg ±3%	0 to 2 barg ±3%
	2 to 6.9 barg ±2%	2 to 6.9 barg ±2%	2 to 6.9 barg ±2%	2 to 6.9 barg ±2%
Pressure Control	0.3 to 1.3 barg ±0.5%	0.3 to 1.3 barg ±0.5%	0.3 to 1.3 barg ±0.5%	0.3 to 1.3 barg ±0.5%
	1.3 to 6.9 barg ±0.2%	1.3 to 6.9 barg ±0.2%	1.3 to 6.9 barg ±0.2%	1.3 to 6.9 barg ±0.2%
Shipping Weight	18 kg dry	18 kg dry	18 kg dry	18 kg dry
Dimensions	378x333x359 mm	378x333x359 mm	378x333x359 mm	378x333x359 mm

1 With respect to Oxygen

Ordering Information

Description	Model Number
90 cc/minute	A909000-220
160 cc/minute	A915000-220
250 cc/minute	B920000-220
500 cc/minute	B940000-220
Dessicant cartridge (1 each)	1647727
Deionizer bags (2 each)	7601132

* For 110 Vac versions contact Parker

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Hydrogen Generators

Flow Capacities
up to 300 cc/min

Analytical Gas Systems

Features

Eliminates expensive and potentially dangerous hydrogen gas cylinders from the laboratory

Automatic water feed standard

Exceeds OSHA 1910.103 safety requirements

Safe - produces only as much gas as you need

Produces a continuous supply of 99·99999+% pure hydrogen gas, ideal for carrier and fuel gas applications

Compact and reliable – minimal bench space required and designed to run continuously 24 hours/day

Simple annual maintenance, no desiccants

Certified for laboratory use by CSA, UL, IEC 1010 and CE Marked

Parker Balston Hydrogen Generators eliminate the need for expensive, potentially 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.

The 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 99·99999+% consistently. This technology produces hydrogen at a 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 low-water audible alarms to indicate when the water reservoir needs filling and automatic shutdown to protect expensive laboratory equipment.

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.

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Hydrogen Generators
Flow Capacities
up to 300 cc/min

Analytical Gas Systems

Principal Specifications

Hydrogen Generators

Hydrogen Purity		99.99999+% <0·01 ppm Oxygen Content <1·0 ppm Moisture Content
Max Hydrogen Flow Rate	H2-150 H2-300	150 cc/min 300 cc/min
Electrical Requirements(1)		240 VAC/60 Hz
Hydrogen Outlet Pressure		Adjustable, 0 to 4·1 barg (0 to 60 psig)
Certifications		IEC 1010-1; CSA 1010; UL 3101; CE Mark
Dimensions		300 x 330 x 580 mm (12 x 12 x 22”)
Outlet Port		1/8” Compression
Shipping Weight		26 kg (58 lbs)

Notes:
1 Generator models for operation with other global electrical supplies available. Please contact your local representative

Ordering Information

Description	Model Number
Hydrogen Gas Generator	H2-150 H2-300
Electrolyte Solution	REAG-920071
Installation Kit	IK7532

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HydroGen Mate™ DI Water System

Analytical Gas Systems

Features

Economical means of providing deionized water to hydrogen generators

Minimal maintenance

Visual indication for cartridge changes

Easy fill dispensing gun

Removal of organics, phosphates, chlorine and essentially all ionizable constituents from your water supply

Quick and easy installation

No electrical requirements

Parker Balston Deionized Water Systems

The Parker HydroGen Mate DI Water System is specifically designed to provide high purity deionized water to all types of Parker hydrogen generators. The system is ready to install and is shipped complete with prefiltration, two DI resin exchange cartridges, dispensing gun and a final filter.

The only required maintenance on the system is to change the resin non-exchange cartridges and to replace the filter cartridges as needed.

Parker Balston Type 72-230 HydroGen Mate™ DI Water System

Principal Specifications

	72-230
Type 72-230 DI Water System	
Maximum Flow Rate:	1 lpm
Water Inlet:	1/4" "Push to connect"
Maximum Water Supply Pressure:	3.4 barg
Maximum Water Supply Temperature:	27°C
Physical Dimensions:	310mm x 460mm x 70mm
Shipping Weight:	5.5kg

Ordering Information

Description	Type Number
Complete DI Water System ready to install	72-230
Maintenance Kit	72236

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