

# HYDROGEN GENERATOR PG-H2



**100 ml/min**  
**160 ml/min**  
**250 ml/min**  
**500 ml/min**

*Cascading Option: a unique technology !!*

The PG-H series Hydrogen Pure Gas Generators employ the newest membrane technology available for electrolytic production of pure hydrogen gas.

The patented LGS PG-H series of Hydrogen Pure Gas Generators is ideal for operation with gas analysers, as fuel gas for flame tools, or as a source of pure hydrogen in plasma chambers and other isolated environments.

## **TECHNICAL FEATURES**

**The smallest in the market**

**4 models available (100, 160, 250, 500 cc/mn)**

**Electronic pressure regulator (max. 10 bar)**

**Micro processor controlled**

**LCD display**

-shows set points , operating conditions (display of H2 product flow , H2 pressure and water quality ) and status of the system (normal, pre -alarm, alarm)

**No caustic solutions required**

**No pump required**

Quieter generator and less servicing

**Safety increased**

-low internal volume of H2 < 50 ml

-Auto shut-off procedure place the unit in standby in the event of an internal error and self test fault diagnosis with digital display and audible alarm

**Easy servicing**

-The desiccant cartridge can be refilled and the deioniser bag is indicated in the LCD display when needs to be changed

**Cascading of 2 or more units ( optional )**

**Remote control ( optional )**

**CE Mark and CSA compliant**

## **BENEFITS**

**Improved productivity and chromatography results**

-Hydrogen is a faster carrier gas and more sensitive when compared to helium, reducing analysis times by 25% to 35% without significant loss of resolution.

**Safety:**

-Hydrogen production at low pressure and only when required , eliminates the risks of explosion.

-Eliminates problems relating to handling gas cylinders.

**Extended column life**

-Hydrogen, when used as a carrier gas, requires lower elution temperatures and thus improves the column service life

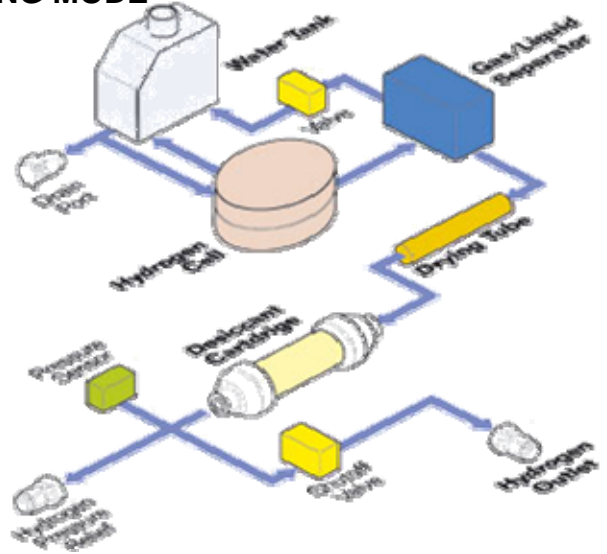
**Increased efficiency in the laboratory**

-24Hour operation

-No interruption of analysis due to cylinder changes

## OPERATING MODE

Electrolytic membrane technology is preferred over alternative hydrogen generating techniques because it is clean, requires less maintenance and there is no need to store chemicals to maintain operation. Only pure water, either distilled or deionised, is required to provide trouble free long-term operation. Use of the electrolytic dissociation process enables water to be broken down into hydrogen and oxygen. The oxygen is released into the air, while the hydrogen is retained to form the product flow. A desiccant cartridge purifies the hydrogen even further so that it attains the desired grade of purity and ensures constant reproducible results. These generators are designed for total safety and reliability of operation. Hydrogen is only generated on demand at low pressure and the volume stored within the unit is minimal. A unique digital display gives system status and diagnosis capabilities not available on any other competitive hydrogen generator.



## TECHNICAL SPECIFICATIONS

Models	PG-H2 100	PG-H2 160	PG-H2 250	PG-H2 500
H2 flow rate cc/min	100	160	250	500
Electrolysis cell	Solid polymeric membrane			
H2 purity	> 99.999%			
Delivery pressure	1 - 100 psig / 0.1 – 7.0 barg			
Safety	Auto shut-off , low internal volume of H2 < 50 ml			
LCD display	Shows set points, operating conditions and status			
Indicator lights	Power on , system error			
Options	-remote control by potential free relay contacts -RS485 for cascading up to ten units in parallel -software for PC control capability ( requires RS485 option )			
Water quality	Deionised or distilled			
Dimensions (LxHxP)	220 x 390 x 330 mm			
Outlet port	1/8 Swagelok			
Weight Kg	16 kg (PGH2-100-160-250) / 17 kg (PGH2-500)			
Certification	Compliant			

## MAINTENANCE

Part numbers	Description
H200-003	Desiccant cartridge
H200-019	Refill kit for desiccant cartridge (3 cartridges)
H200-020	De ioniser bag

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