PG PLUS HYDROGEN GENERATOR

North America, South America, & Australia/Oceania contact:

VALCO INSTRUMENTS CO. INC.
tel: 800-367-8424
fax: 713-688-8106

Europe, Asia, & Africa contact:

VICI AG INTERNATIONAL
tel: Int + 41 41 925-6200
fax: Int + 41 41 925-6201

(ES) Equipements Scientifiques SA - Département Bio-tests & Industries - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 90 - Fax. 01 47 01 16 22 - e-mail: bio@es-france.com - Site Web: www.es-france.com

DESCRIPTION

The VICI DBS hydrogen generators offer the optimum combination of safe operation, reliability and performance. Designed as a hazard free alternative to high pressure cylinders, all that is required is deionized water and a standard electrical supply for weeks of continuous operation.

Utilizing the VICI DBS propriety prepared field proven PEM (Proton Exchange Membrane) incorporated inside a 100% titanium cell, provides superior generator performance and cell life. The unique high pressure Nafion membrane drying system eliminates the requirement for desiccant cartridges along with the associated downtime and cost. Innovative software control allows unrivaled operational performance and safety as well as the additional options of auto water feed, remote networking and cascading for built in redundancy.

With a maximum output capacity of 600 ml/min, one generator can supply up to 14 GC's. The compact design allows the generator to be installed directly in the laboratory eliminating the requirement for long gas lines and guaranteeing the delivery of high purity gas to your GC.

A sophisticated control system connected to a touch screen control, continuously monitors the vital operating parameters to ensure a safe and consistent performance. Built in sensors will shut the generator down if internal/external leaks are present, contaminated water, low water or over pressure. This is why the VICI DBS generators meet the strict safety guidelines to be certified for CE, MET & FCC.

INCREASE EFFICIENCY

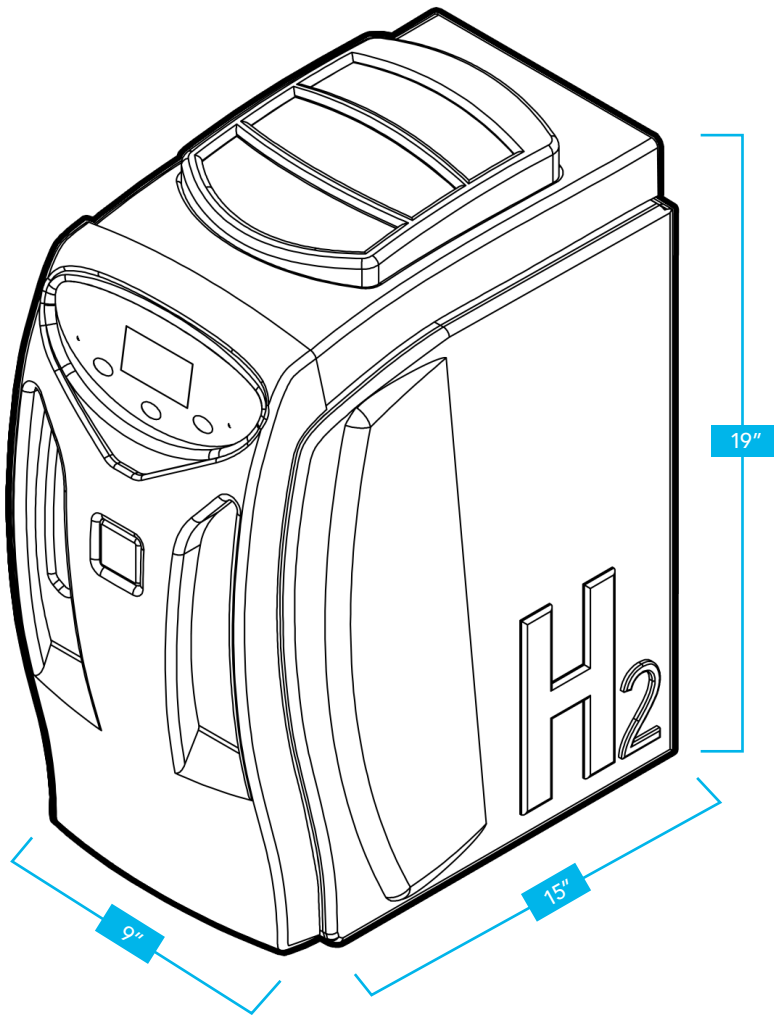
A constant gas supply with a guarenteed purity, eliminates interruptions of analyses to change cylinders and reduces the amount of instrument re-calibration required.

IMPROVE SAFETY

On-demand gas allows for the safe use of the hydrogen generator when cylinders are prohibited or regarded as potentially dangerous. Sophisticated software control and full alarm capability, including for hydrogen leaks, gives the user full control of the gas supply.

ENHANCE PERFORMANCE

Gas generators can be installed in the lab close to the instrument, eliminating the need for long gas lines from external cylinder supplies. A constant guarenteed high purity gas supply improves stability and ensures greater



Dimensions in mm: 230W x 480H x 370D

FEATURES

Produces a continuous supply of H2 | On-demand supply 24/7 | Flow rate: 100 to 600 mL/min | Purity: 99.9996% | Pressure: 11 bar | Proprietary 100% titanium cell technology | Unique Nafion membrane drying system | USB connectivity | 2-year complete cell and product warranty | Easy to install, operate and maintain

BENEFITS

Eliminates dangerous high pressure cylinders | Removes the logistics, inconvenience, downtime and costs of a cylinder system | Flow capacity to match your specific instrument demands | Ideal for all GC detector applications | Exceeds the requirements for the most demanding GC applications | Superior hydrogen production with reliable long life cell | Minimal maintenance - no desiccant cartridges to change | PC monitoring for maintenance, diagnostics and remote connection | Peace of mind | Improve your laboratory work flow and productivity

OPTIONS

I/O board | Remote control software (RS232 or USB) | Cascading hardware (standard or high purity) | Autorefill | H2 sensor

APPLICATIONS

GC APPLICATIONS

- GC-FID fuel gas
- GC-NPD plasma gas
- GC-FPD fuel gas

ANALYZER APPLICATIONS

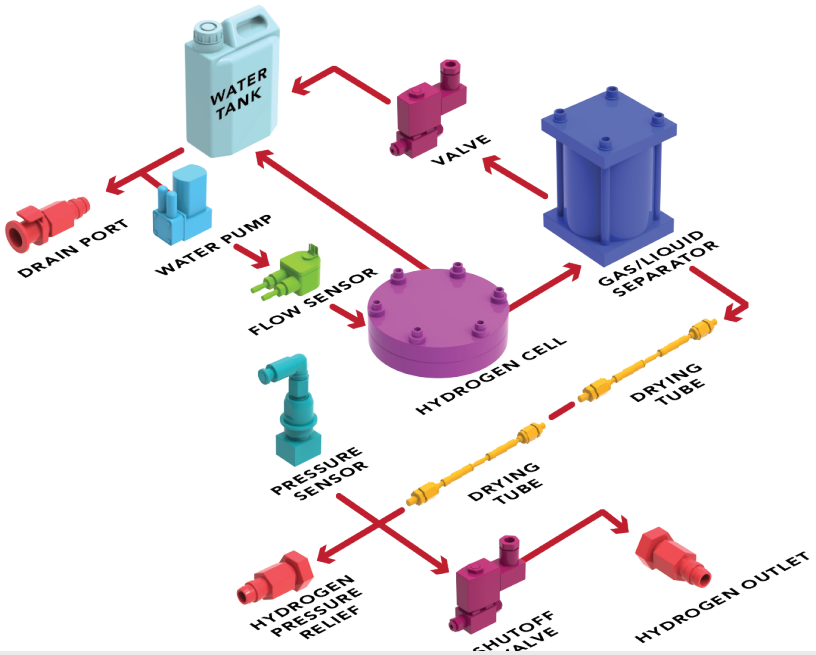
- Total Hydrocarbon Analyzer (THA) fuel gas

OTHER LAB APPLICATIONS

- Hydrogenation reactors
- Hydrogen fuel cells

OPERATING DIAGRAM

Hydrogen is produced using distilled or deionized water from hydrolysis, through a polymer membrane. Electrolytic dissociation separates the water into its two main components: hydrogen ready for analytical use, and ogygen that is released into the air. No acid no alkaline solutions are used in the hydrogen generation cycle. The drying filter is easy to remove for regeneration; a signal is shown on the display when filter regeneration is required. The exclusive vascading option allows up to 32 units to be connected in series, producing flow-rates of up to 20 liters.



(ES) Equipements Scientifiques SA - Département Bio-tests & Industries - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 90 - Fax. 01 47 01 16 22 - e-mail: bio@es-france.com - Site Web: www.es-france.com

MODELS & SPECS	PG-100 PLUS	PG-160 PLUS	PG-250 PLUS	PG-300 PLUS	PG-500 PLUS	PG-600 PLUS
Flow mL/min	100	160	250	300	500	600
Purity	99.9996%	99.9996%	99.9996%	99.9996%	99.9996%	99.9996%
Dew point at 7 bar	-25 °C (-77 °F)					
Outlet pressure bar (psi)	0.5 to 11 (7 to 160)					
Technology	PEM (Proton Exchange Membrane) - 100% Titanium cell					
Drying system	Regenerative Permeation Membrane					
Deionized water quality	Minimum < 1 micro S/cm @25oC - 1 Mohm-cm@25oC - ASTM II recommended < 0.2 microS/cm @25oC - 5 Mohm-cm @25oC - ASTM II					
Internal water tank (liters)	2.5					
Safety	Automatic shut down - internal/external hydrogen leak, overpressure and low water					
Display	Touch screen with operating parameters, system status and safety alarms					
LED indicators	Power on / off, system ready, errors					
Interface	USB mod A					
Electrical supply	110-120V 60Hz / 220-240V 50Hz					
Power consumption	75	95	140	180	190	230
Dimensions mm (inches)	230W x 480H x 370D (9W x 19H x 15D)					
Weight kg (lbs)	13 (28.5)	13 (28.5)	13 (28.5)	14 (31)	15 (33)	15 (33)
Shipping dimensions mm	580W x 570H x 400D (22.8W x 22.4H x 15.7D)					
Shipping weight kg (lbs)	17 (37.5)	17 (37.5)	17 (37.5)	18 (39.5)	19 (42)	19 (42)
Operating temp °C (°F)	15 to 35 (59 to 95)					
Outlet connection	1 /8" Compression					
Certification	CE, MET, FCC					
OPTIONS						
Auto water refill	Continuous water feed from an external water supply					
Cascading	Up to 10 units – built in redundancy for guaranteed up-time					
Interface	RS232/RS485, external contacts, PC control and intranet					

ORDERING INFORMATION (for best service, please call to discuss your application before placing your order).

PG-100 PLUS	
DB-PHG100-EU	230-240V/50-60Hz
DB-PHG100-US	115V/60Hz
DB-PHG100-JP	100V/60Hz

PG-160 PLUS	
DB-PHG160-EU	230-240V/50-60Hz
DB-PHG160-US	115V/60Hz
DB-PHG160-JP	100V/60Hz

PG-250 PLUS	
DB-PHG250-EU	230-240V/50-60Hz
DB-PHG250-US	115V/60Hz
DB-PHG250-JP	100V/60Hz

PG-300 PLUS	
DB-PHG300-EU	230-240V/50-60Hz
DB-PHG300-US	115V/60Hz
DB-PHG300-JP	100V/60Hz

PG-500 PLUS	
DB-PHG500-EU	230-240V/50-60Hz
DB-PHG500-US	115V/60Hz
DB-PHG500-JP	100V/60Hz

PG-600 PLUS	
DB-PHG600-EU	230-240V/50-60Hz
DB-PHG600-US	115V/60Hz
DB-PHG600-JP	100V/60Hz

(ES) Equipements Scientifiques SA - Département Bio-tests & Industries - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 90 - Fax. 01 47 01 16 22 - e-mail: bio@es-france.com - Site Web: www.es-france.com