HK PLUS
HYDROGEN GENERATOR

VICI DBS®
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DESCRIPTION

The VICI DBS® HK Plus 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 proprietary prepared field proven PEM (Proton Exchange Membrane) incorporated inside a 100% titanium cell, provides superior generator performance and cell life. The unique high pressure permeation 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.

With a maximum output capacity of 250 mL/min, one generator can supply up to 5 GCs. 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 fuel gas to your GC.

A sophisticated and easy to use 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, FCC, MET (UL and CSA compliant).

INCREASE EFFICIENCY

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

IMPROVE SAFETY

Gas is produced on demand, which 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 laboratory close to the instrument, eliminating the need for long gas lines from external cylinder supplies. A constant guaranteed high purity gas supply improves stability and ensures greater reproducibility of results.

FEATURES

Produces a continuous supply of H2 | On-demand supply 24/7 | Flow rate: 100 to 250 mL/min | Purity: 99.999% | Pressure: 7 barg (100 psig) | Proprietary 100% titanium cell technology | Unique permeation membrane drying system | USB connectivity | 2-year complete cell and product warranty | Easy to install, operate and maintain

BENEFITS

Eliminates dangerous high pressure cylinders helping to keep your employees safer | 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 | Meets and 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

APPLICATIONS

GC APPLICATIONS

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

ANALYZER APPLICATIONS

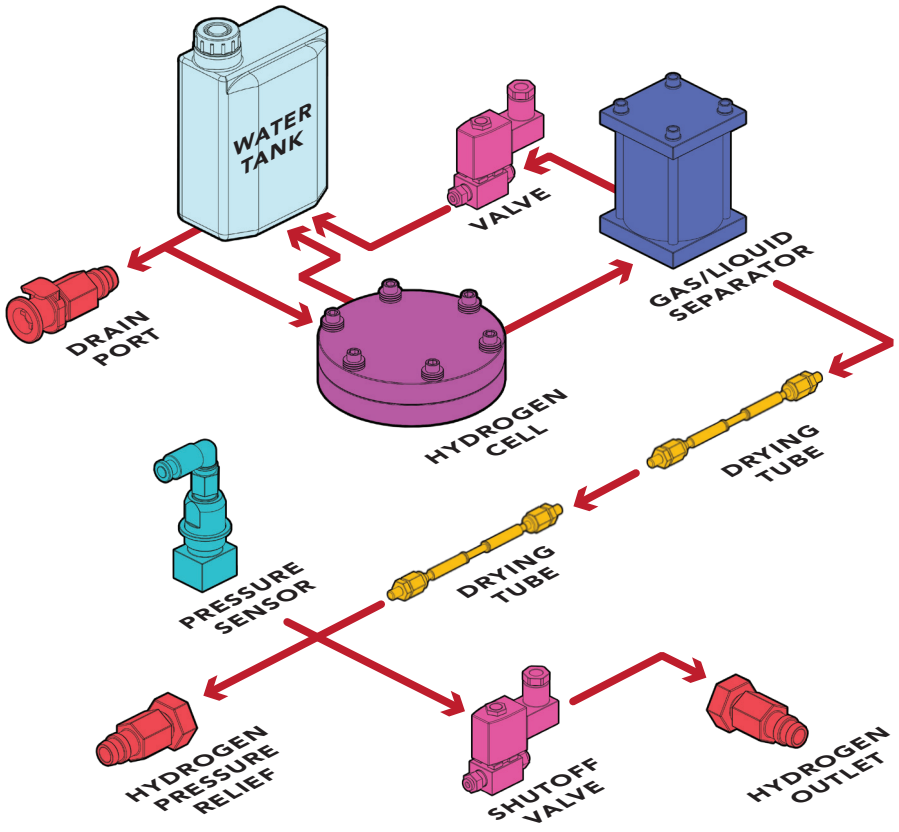
- Total Hydrocarbon Analyzer (THA) fuel gas

OTHER LAB APPLICATIONS

- Hydrogenation reactors
- Hydrogen fuel cells

OPERATING DIAGRAM

Hydrogen is produced from the hydrolysis of deionized water across a PEM (proton exchange membrane), housed in a 100% titanium cell. The resultant hydrogen is dried via a dual stage process, a gas liquid separator and a unique dual high performance permeation membrane dryer.
In addition to water all that the generator requires is a standard connection and supply of electricity for a continuous 24/7 supply of high purity hydrogen. Consumable items are limited to the replacement of a deionizer bag every six months.



MODELS & SPECS

	HK PLUS 100	HK PLUS 160	HK PLUS 250
Flow mL/min	100	160	250
Purity	99.999%	99.999%	99.999%
Dew point at 7 barg (100 psig)	-25 °C (-77 °F)		
Outlet pressure barg (psig)	0.5 to 7 (7 to 100)		
Technology	PEM (Proton Exchange Membrane) - 100% Titanium cell		
Drying system	Regenerative Permeation Membrane		
Deionized water quality	Minimum < 1 micro S/cm @25°C - 1 Mohm-cm@25°C - ASTM II Recommended < 0.2 microS/cm @25°C - 5 Mohm-cm @25°C - 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 (watts)	75	95	140
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)
Shipping dimensions mm (in)	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)
Operating temp °C (°F)	15 to 35 (59 to 95)		
Outlet connection	1/8" Compression		
Certification	CE, FCC, MET (UL and CSA compliant)		

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

HK PLUS 100

DB-PHK100-EU 230-240V/50-60Hz
DB-PHK100-US 115V/60Hz
DB-PHK100-JP 100V/60Hz

HK PLUS 160

DB-PHK160-EU 230-240V/50-60Hz
DB-PHK160-US 115V/60Hz
DB-PHK160-JP 100V/60Hz

HK PLUS 250

DB-PHK250-EU 230-240V/50-60Hz
DB-PHK250-US 115V/60Hz
DB-PHK250-JP 100V/60Hz