

Chrysalis® II Hydrogen Generator

Standard Economy Purified Gas (SEPG) Series

Description

The Chrysalis® II "SEPG" (Standard Economy Purified Gas) Hydrogen Generator employs the newest membrane technology available for electrolytic production of pure hydrogen gas and is ideal for operation with Gas Chromatography Analyzers. The primary application for the "SEPG" model is to supply fuel gas for FID operation or as a source of pure hydrogen in plasma chambers and other isolated environments. Electrolytic membrane technology is preferred over alternative hydrogen sources (i.e. gas cylinders) because it is clean, requires less maintenance and there is no need to utilize chemicals to maintain operation. Only deionized water is required to provide trouble-free, long-term performance.

Chrysalis® II Hydrogen Generators clearly out perform all other gas generators that use caustic solutions to generate hydrogen. The benefits of utilizing electrolytic membrane hydrogen production in the laboratory are significant. Impurities in caustic solutions can affect the purity of hydrogen product and they can cause premature system degradation over time. Membrane separation is also less time consuming, because routine maintenance means "just add water." There is no need to store caustic compounds/solutions or to perform time-consuming cell clean-up procedures. The output of hydrogen is based upon instrument demand. A user-friendly digital control display provides system operating status and diagnostic capabilities. The Chrysalis® II "SEPG" Hydrogen Generator produces a reliable continuous output of pure hydrogen >99.999% using only deionized water.

Applications

- Carrier gas for gas chromatography
- Fuel gas for flame ionization detectors

Product Features

- Small 9" wide x 14" deep footprint conserves lab bench space
- Manual adjustment of gas delivery pressure
- Provides continuous LCD indication and monitoring of gas delivery pressure, hydrogen flow and water quality
- Utilizes deionized water for operation (No caustic solutions)
- Desiccant cartridge (replaceable) provides final purification step to remove moisture
- LCD based display and membrane control pad provide simplified operation
- Universal power (voltage) supply compatibility
- "Cascading" flow control allows multiple units (up to 32) to be connected as a system to provide larger capacity flows
- PC interface permits remote monitoring of selected functions
- Multiple alarms alert user to low water level, poor water quality, low pressure (leak) and power supply conditions
- CE and CSA certified



Operating and Physical Specifications

Electrolysis Cell:	Solid Polymer Membrane Type
H ₂ Purity:	>99.999%
Delivery Pressure:	1 - 90 psig
H ₂ Flow Rate:	100 - 160 - 250 - 500 ccm
Safety:	Auto shut-off with multiple operating alarms
User Interface:	Set points, system status, flow control, pressure control configuration menu, diagnostic menu
Display:	LCD based with set points, status, alarms
Indicator Lights:	Power ON, H ₂ Production, System Error
Options:	Cascading Flow Control PC Remote Control (RS-232C) Remote Alarm Indication
Water:	Deionized (2µS or .5 Mohm)
Desiccant Cartridge:	Replace when red beads turn to light yellow/white
Power Source:	110 - 120 VAC / 60 Hz; 230 VAC / 50 Hz
Dimensions :	9"W x 14"D x 16" H
Net Weight:	35 lbs (16 kg)
Certification:	CE and CSA compliant
Warranty:	1 year



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Ordering Information

Model No.	Description	Capacity
Standard Economy Purified Gas ("SEPG") Series		
HYC-SEPG100	SEPG Hydrogen Generator	100 ccm
HYC-SEPG160	SEPG Hydrogen Generator	160 ccm
HYC-SEPG250	SEPG Hydrogen Generator	250 ccm
HYC-SEPG500	SEPG Hydrogen Generator	500 ccm

Standard Economy Purified Gas ("SEPG") Series with PC Remote Control Option*

HYC-SEPG100-PC	SEPG Hydrogen Generator w/PC Remote Control Option	100 ccm
HYC-SEPG160-PC	SEPG Hydrogen Generator w/PC Remote Control Option	160 ccm
HYC-SEPG250-PC	SEPG Hydrogen Generator w/PC Remote Control Option	250 ccm
HYC-SEPG500-PC	SEPG Hydrogen Generator w/PC Remote Control Option	500 ccm

*The PC Remote Control option permits on/off control and review of the operating status of the Hydrogen Generator from a remote location and is furnished with an RS-232C, 15-PIN Interface Cable Connection.

Standard Economy Purified Gas ("SEPG") Series with Cascading Flow Option**

HYC-SEPG250-CF	SEPG Hydrogen Generator w/Cascading Flow Option	250 ccm
HYC-SEPG500-CF	SEPG Hydrogen Generator w/Cascading Flow Option	500 ccm

**The Cascading Flow option allows a minimum of '2' units (up to 32) to be connected in parallel operation to deliver a large flow of hydrogen. Each individual unit is set-up for "Cascading Flow" operation and is furnished with an external RS-485 interface cable to coordinate the functions of the individual units. All units operating within a large flow capacity system must be configured with the "Cascading Flow" feature.

Optional Features

Model No.	Description
HYC-PC-SEP6	PC Interface Software with Control I/O Board

Spare Parts

Model No.	Description
DI-BAG	Deionizer Bag (replacement)
DI-TBAG	High Performance Deionizer Bag
PUR-DC	Desiccant Cartridge w/fittings (replacement)
HYC-BGS-KIT	Auxiliary Back-Up Gas Supply Kit

Warranty: One (1) year parts & labor

Chrysalis® is a registered trademark of Matheson Tri-Gas, Inc.

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