

HG PRO

PEM Hydrogen generator

H₂

The HydroGen series **HG PRO** is able to generate up to 1500 cc/min of Hydrogen with purity better than 99.99999% and pressure up to 16 Bar (232 psi). The HG PRO includes a new long life multilayer electrolytic cell with polymeric membrane (PEM) using distilled water. No acid or alkaline solutions are used.

The innovative gas drying system (two-column drying PSA system with automatic regeneration) ensures the maximum grade of hydrogen purity, it is completely maintenance-free and allows continuous operation, 24 hours a day.

The on-board CPU automatically checks for internal leaks and constantly control the operating parameters to guarantee full safety. Up to 20 units can be connected in parallel using an external control box.

The touch-screen LCD interface provides simple and user-friendly management of all functions on the unit.

Main Applications

- Carrier gas for GC and GS-MS
- GC-FID / GC-NPD / GC-FPD / THA
- ICP-MS collision gas
- Refilling metal hydride tanks for use with fuel cells

Main advantages

- ✓ New long life multilayer PEM cell
- ✓ High flow rate up to 1500 cc/min
- ✓ High pressure up to 16 Bar (232 psi)
- ✓ RS 232/485 and USB standard
- ✓ LAN optional
- ✓ Auto refill standard
- ✓ High purity: 99.99999%
- ✓ Dryer with no maintenance
- ✓ Safety routine and self monitoring
- ✓ Reduced foot print
- ✓ High pressure GLS electronically controlled (patented)



Specifications



Model: HG PRO	120	180	260	350	500	700	900	1100	1300	1500
General data										
Electrolytic cell	Long life Multilayer PEM technology									
Drying system	PSA (Pressure Swing Adsorption)									
H2 purity ⁽¹⁾	>99.99999%									
Outlet pressure	12 Bar (174 psi) / 16 Bar (232 psi) (optional)									
H2 flow-rate (Max)	120	180	260	350	500	700	900	1100	1300	1500
Dimensions (W x D x H)	27 x 44 x 41 cm									
Net weight (no water in tank)	20 Kg				22.5 Kg			25 Kg		26 Kg
Communication										
RS-232 / USB / RS-485						Standard				
Digital I/O						Standard				
LAN						Optional				
Software functions										
Parallel mode						Ready on board				
Automatic tank refill						Standard				
Fill Hydride canister function						Standard				
Water										
Quality Required						Deionized, ASTM II, < 1.0 µS ⁽²⁾				
Supply pressure (min, Max)						0.1 Bar (1.45 psi), 0.5 Bar (7.25 psi)				
Supply flow rate (min, Max)						0.2 L/min, 1.5 L/min				
Internal tank capacity						3 L				
External tank capacity						5 or 10 L (optional)				
Electrical data										
Type of connection						IEC 320-C14				
Power supply voltage						100-240 Vac (±10%) 50/60 Hz				
Nominal power (Max)	320W					640W				
Fuse rating	4A (250 Vac – T) – 5x20mm					6.3A (250 Vac – T) – 5x20mm				
Connections										
Hydrogen outlet						Double ferrule compression fitting, tube 1/8"				
Water						Quick release push-in fitting				
Vent(s)						1/8" BSPP female				
Operating/storage conditions										
Working Temperature						5-40°C (41-104°F) ⁽³⁾				
Storage Temperature						1-50°C (34-122°F)				
Humidity (max, non condensing)						70% [5-40°C (41-104°F)]				
Noise						< 39 dB(A)				
IP rating						IP20				
Pollution degree rating						2 (with no aromatic compounds)				
Altitude						< 2000m				

(1) Referred to O₂ - Dew-Point < -75°C (<-103°F), Atmospheric Dew Point (ADP)

(2) For optimal performance, use water with a conductivity < 0.1 µS/cm at the source.

(3) with temperature > 35°C (> 95°F) the H₂ purity could be less

Ordering codes

Gas Generators

6920.15.012	HG PRO 120
6920.15.018	HG PRO 180
6920.15.026	HG PRO 260
6920.15.035	HG PRO 350
6920.15.050	HG PRO 500
6920.15.070	HG PRO 700
6920.15.090	HG PRO 900
6920.15.105	HG PRO 1100
6920.15.130	HG PRO 1300
6920.15.150	HG PRO 1500

Consumable

6930.00.091	Deionizer water filter for HG BASIC/PRO/KUBE last series with silver
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