HG BASIC

PEM Hydrogen generator

The HydroGen series **HG BASIC** is able to generate up to 700 cc/min of Hydrogen with purity better than 99.9999% and pressure up to 10 bar (145 psi). The HG BASIC includes a new long life multilayer electrolytic cell with polymeric membrane (PEM) using distilled water. No acid or alkaline solutions are used.

The innovative drying system ensures the maximum grade of hydrogen purity, protects the GC thanks to its innovative humidity safe guard, HG BASIC 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 mode using an external control box.

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

Main Applications

- 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 700 cc/min
- ✔ High pressure up to 10 bar (145 psi)
- ✔ RS 232/485 and USB standard
- ✔ LAN optional
- ✔ Auto refill standard
- ✔ High purity: 99.9999%
- ✔ Static dryer no maintenance
- ✔ Safety routine and self monitoring
- ✔ Reduced foot print
- ✔ Smart humidity safe guard (patented)
- ✔ High pressure GLS electronically controlled (patented)



Evolution in Gas Generators

Specifications

Model: HG BASIC	120	180	260	350	500	700
General data						
Electrolytic cell	PEM technology					
Drying system	Static dryer					
H2 purity (1)	>99.9999%					
Outlet pressure	10 bar (145 psi)					
H2 flow-rate (Max)	120	180	260	350	500	700
Dimensions (W x D x H)	27 x 44 x 41 cm					
Net weight (no water in tank)	19 kg				20 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					
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 (5x20mm)	4A (250VAC – T)					6.3A (250VAC – T)
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	< 39dB(A)					
IP rating	IP20					
Pollution degree rating	2 (with no aromatic compounds)					
Altitude	< 2000m					

(1) Referred to O2 – Dew-Point < -20°C (<-4°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

6920.10.012	HG BASIC 120
6920.10.018	HG BASIC 180
6920.10.026	HG BASIC 260
6920.10.035	HG BASIC 350
6920.10.050	HG BASIC 500
6920.10.070	HG BASIC 700

Consumable

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

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