

HG BASIC M *series*

PEM Hydrogen generator

H₂

N

Main Applications

- GC-FID
- Fuel cell
- Hydrogeneration
- Industrial
- CVD

Main advantages

- ✓ New long life multilayer PEM cell
- ✓ Easy use
- ✓ High flow rate up to 20 L/min
- ✓ High pressure up to 30 bar (435 psi)
- ✓ RS 232/485 and USB standard
- ✓ Auto refill standard
- ✓ High purity: 99.999%
- ✓ Safety routine and self monitoring
- ✓ High pressure GLS electronically controlled (patented)

The HydroGen series **HG BASIC M** can generate up to 20 L/min of Hydrogen with purity better than 99.999% and pressure up to 30 bar (435 psi). The HG BASIC M includes a new long life multilayer electrolytic cell with polymeric membrane (PEM) using ultra pure water. No acid or alkaline solutions are used.

The drying system ensures the maximum grade of hydrogen purity and it is completely maintenance-free.

The HG BASIC M series provides the ideal Hydrogen for many applications, such as CVD, Central Laboratory Supply and other applications in need for reliable supply. The on-board CPU constantly controls the operating parameters to guarantee full safety. The touch-screen LCD interface provides simple and user-friendly management of all functions on the unit.



Specifications



Model: HG BASIC	4M	8M	16M	20M
General data				
Electrolytic cell	PEM technology			
H2 purity ^[1]	>99.999%			
Dew-point ^[2]	-20°C (-4 °F)			
Outlet pressure	10 to 30 bar (145 to 435 psi)			
H2 flow-rate (Max) ^[3]	4 SLPM	8 SLPM	16 SLPM	20 SLPM
Dimensions (W x H x D)	45 x 66 x 66.5 cm		51 x 69 x 83 cm	
Net weight (no water)	60 kg	62 kg	86 kg	88 kg
Communication				
RS-232 / USB / RS-485 / Digital I/O	Standard			
LAN	Optional			
Software functions				
Parallel mode	Ready on board			
Fill canister	Standard			
Water				
Quality Required	Deionized, ASTM II, <0.1uS			
Supply pressure for autorefill	0.1 bar (1.45 psi) to 0.5 bar (7.25 psi)			
Internal tank capacity	12 L			
Electrical data				
Power connection	IEC320-C14	IEC-C20	Power cable pre-connected with 16A plug	
Power supply voltage	Single-phase 180~264VAC 50/60 Hz		Three-phases 4-wires (+ one ground wire) / Y 340~530VAC 50/60 Hz or optionally Three-phase 3-wires (+ one ground wire) /△196~305VAC 50/60 Hz	
Power Consumption ^[4]	5.6 kWh/Nm ³			
Nominal power at max flow (Max)	1.92 kW	3.32 kW	7 kW	8 kW
Unit protection system	Fuse 10A (5x20mm) (250Vac-T)	Fuse 16A (10x38mm) (500Vac-T-class CC)	Magneto-thermic switch	
Connections				
Hydrogen outlet	1/8" compression fitting		¼" VCR (see options)	
Water	Quick release push-in fitting			
Vent(s)	1/4" BSPF female thread (quick fitting for tube 10mm)			
Operating/storage conditions				
Working / Storage Temperature ^[4]	5-35°C (41-95°F) / 1-50°C (34-122°F)			
Humidity (Max)	70% (Non condensing)			
Noise	< 55 dB(A) @ 1m front		< 58 dB(A) @ 1m front	
Heat value (BTU/h) ^[5]	1100 to 4600	2200 to 5700	4400 to 8000	5500 to 9000
IP rating	IP20			
Pollution degree rating	2 (with no aromatic compounds)			
Altitude	< 2000m			

(1) Referred to N₂/O₂

(2) Atmospheric Dew Point (ADP)

(3) At 21°C, 1 bar

(4) With temperature > 35°C (> 95°F) the H₂ purity could be less

(5) In relation to PEM Cell conditions

Ordering codes

Gas Generators

6920.31.004	HG BASIC 4M	10 bar (145 psi)
6920.31.008	HG BASIC 8M	
6920.31.016	HG BASIC 16M	
6920.31.020	HG BASIC 20M	
6920.31.004.2	HG BASIC 4M 20B	20 bar (290 psi)
6920.31.008.2	HG BASIC 8M 20B	
6920.31.016.2	HG BASIC 16M 20B	
6920.31.020.2	HG BASIC 20M 20B	
6920.31.004.3	HG BASIC 4M 30B	30 bar (435 psi)
6920.31.008.3	HG BASIC 8M 30B	
6920.31.016.3	HG BASIC 16M 30B	
6920.31.020.3	HG BASIC 20M 30B	

Consumable

6930.30.000	Deionizer water filter for HG PRO/BASIC M
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Options

6930.00.067	Outlet port 6mm for HG PRO/BASIC M series
6930.00.071	Outlet port 1/4" for HG PRO/BASIC M series