

HYDRO50 R

High-Purity Hydrogen Generator modules
for FID and carrier gas for GC



DESCRIPTION:

LEMAN Instruments designed the HYDRO50R product line of High-Purity Hydrogen Generator modules for FID and carrier gas for GC to fit almost any application that needs H₂ production close to the consumer.

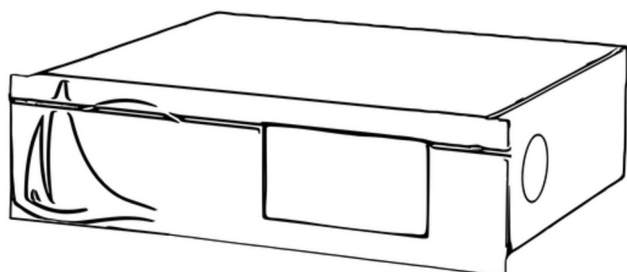
Based on the field-proven Solid Polymer Electrolyte (PEM) cell technology, pure Hydrogen is produced at low pressure from electricity and high-quality deionized water (Zero Water). This process can be started on demand without a caustic solution. The instrument could be alimented directly from a bi-distilled water distribution network (option).

The produced Hydrogen is available 24/7 with a constant purity of 99.9995% at output flow.

There are three outputs of 100, 160, or 300 Nml/min (depending on the model). The H₂ output pressure is regulated electronically and can be set from 0.5 to 10 bar (7 to 145 psig).

Each instrument is equipped with high performance communication interfaces RS485, USB and Ethernet, empowering you to create a very flexible gas network with local or central control, giving you the control you need over your operations.

With a focus on safety, automatic regulation, and reliable communications, the HYDRO50R High Purity Hydrogen Generator modules are designed to keep you and your operations safe, providing you with a sense of security and protection.



APPLICATION TYPES:

- Combustion gas for FID Analyzers
- Carrier gas for Gas Chromatographs
- Protection gas

FEATURES:

- Our hydrogen generator stands out with its ability to reduce operation costs, offering a return on investment within 13 months.
- Improves resolution and detection limit versus Helium-only usage. Provides high-pressure stability.
- H₂ is available 24/7 at constant purity. No contamination.
- Independent source of Hydrogen that does not require complex piping and can be easily moved.
- Remote control.
- Our hydrogen generator ensures a very safe operation with its internal leak-test, automatic shut-down, over-pressure valve, and current and voltage limits.
- No handling and storage of cumbersome gas cylinders. There is no cylinder rental fee.
- Extended autonomy with 5L water tank, optionally 19" Rack 3U water tank.



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MODELS	HYDRO50 R-100 HYDRO50 R-160 HYDRO50 R-300
LMP Outflow @1013/20°C	HYDRO50 R-100: 0.100 LMP HYDRO50 R-160: 0.160 LMP HYDRO50 R-300: 0.300 LMP
H2 purity	>99,9995% (maximum HC content: 0.1ppm)
Dew point	-50°C
Outlet Pressure	From 0.5 – 10 bar (7 -145 psig)

Dimensions cm / in	L: 35cm / l: 41.5cm / H: 12cm (3U) L: 13.7in / l: 16.1in / H: 4.7in (3U)
Net weight (kg/lbs)	12gk / 26kg

Water quality	<ul style="list-style-type: none">• High-purity deionized water (DI water)• TOC free
Water source	By external 5L tank or central distribution network
Water consumption	5L water generates about 6000L of Hydrogen
Safety	Low H2 stored volume; overpressure valve; internal leak test; automatic shut down; maximum current limit; water quality; over temperature.
Manual control	Through a 7" TFT-LCD color display with a touch screen on the front panel. Display of significant parameters, pressure, functioning status, and alarms. Intuitive navigation to functions by menus and sub-menus
Remote control, Communications	<ul style="list-style-type: none">• RS485 (ModBus), USB• Through Ethernet 10/100 network• Logbook download by USB
H2 outlet fitting	Stainless steel 1/8" OD compression
Power supply	Automatic switching from 90 VAC to 260 VAC, 47 to 63 Hz
Power consumption (max at full flow)	Max 150W
Ambient temperature	+5 to +35°C, non condensing.

