

# HYDRO70 L

Non-Maintenance Ultra-High-Purity Hydrogen generators to aliment an FID and GC



## DESCRIPTION:

LEMAN Instruments designed the HYDRO70L product line of Non-Maintenance Ultra-High-Purity Hydrogen generators to aliment an FID and GC close to the consumer in an elegant compact bench table casing with a full-color touchscreen.

Based on the field-proven Solid Polymer Electrolyte (PEM) cell technology, pure Hydrogen is produced at low pressure from electricity and high-quality distilled water. After production, H<sub>2</sub> is dried and purified by an exclusive system called Pulsed H<sub>2</sub> Smart PSA, a technology patented.

H<sub>2</sub> is available 24/7 with constant purity >99.99999%.

Output pressure is regulated electronically and could be set from 0.5 to 7 bar. This process can be started on demand without a caustic solution.

Models with outflows of a maximum of 100, 160, and 300 Nml/min H<sub>2</sub> are available.

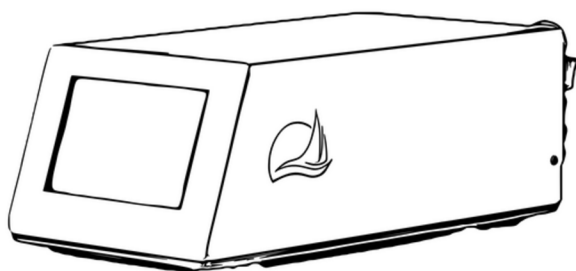
Each instrument is equipped with high-performance communication interfaces RS485, USB, and Ethernet to create a very flexible gas network with local or central control.

Due to the software being focused on safety, automatic regulation, and reliable communications, the HYDRO70L High Purity Hydrogen Generator modules are easy to install, reliable, 100% safe, and pleasant to operate.



## APPLICATION TYPES:

- Combustion gas for FID Analyzers
- Reaction gas for ICP-MS
- Protection gas
- Any high-end purity H<sub>2</sub> requirements
- MOCVD or Gems Growing



## FEATURES:

- Reduces in operation costs. Return on investment within 6 months.
- No heavy maintenance.
- Improves resolution and detection limit versus Helium-only usage. Provides high-pressure stability.
- H<sub>2</sub> is available 24/7 at constant purity. No contamination.
- Independent source of Hydrogen that does not require complex piping and can be easily moved around the laboratory.
- Remote control
- Our product guarantees 100% 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 a 2L water tank.



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Leman Instruments

MODELS	HYDRO70 L-100 HYDRO70 L-160 HYDRO70 L-300
LMP Outflow @1013 HPA / 20°C	HYDRO70 L-100: 0.100 LMP HYDRO70 L-160: 0.160 LMP HYDRO70 L-300: 0.300 LMP
H2 purity	>99.99999%
Outlet Pressure	From 0.5 to 7 bar (7 to 102 psig)

Dimensions cm / in	L: 43cm / 1:23.5cm/H: 16cm L: 17in/ 1:9in H: 6.2in
Net weight (kg/lbs)	L: 43cm / 1:23.5cm/H: 16cm L: 17in/ 1:9in H: 6.2in

Water quality	<ul style="list-style-type: none"><li>• High-purity deionized water (DI water).</li><li>• TOC free.</li><li>• Conductivity &lt; 1µS/cm</li></ul>
Water source	2L external tank or auto-refill
Water consumption	5L water generates about 6000L Hydrogen
Safety	Overpressure valve; internal leak test; automatic shut down; maximum current limit, water quality
Manual control	Through a 7" TFT-LCD color display with a touchpad located on the front panel. Display of major parameters, pressure, functioning status, and alarms. Intuitive navigation to functions by menus and sub-menus
Remote control, Communications	<ul style="list-style-type: none"><li>• RS485 (Mod-Bus), USB</li><li>• Through Ethernet 10/100 network</li><li>• Logbook download by USB</li></ul>
Input & Output fittings	Stainless steel 1/8" OD compression
Power supply	Automatic switching from 90 to 260 VAC, 47 to 63 Hz
Power consumption (max at full flow)	Maximum 150W
Ambient temperature	+5 to +35°C, non condensing

