HYDRO50 L

Ultra High Purity Hydrogen generator

Leman Instruments

DESCRIPTION:

LEMAN Instruments designed the HYDRO50L product line of Ultra High Purity Hydrogen generator to aliment anything related to the use of ultra-high purity H2, close to the consumer in an elegant compact bench table casing with 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, H2 is dried and purified by 2 different techniques of permeation allowing the dew point to reach the best level, then a final special dryer to remove all the other elements.

H2 is available 24/7 with constant purity >99.9995%. Output pressure is regulated electronically and could be set from 0.5 to 10 bar. This process can be started on demand and does not require any caustic solution.

Models with outflows of maximum 100, 160, 300, 600 Nml/min H2 are available.

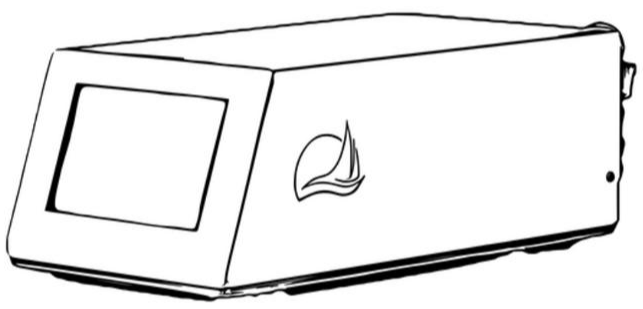
Each instrument is equipped with high performance communication interfaces RS485, USB and Ethernet to create a very flexible gas network with local or central control.

Due to the software being focused on safety, automatic regulation, and reliable communications, the HYDRO50L modules are easy to install, reliable, 100% safe, and pleasant to operate.



APPLICATION TYPES:

- Combustion gas for FID Analyzers
- Carrier gas for GC and GC/MS-MS
- Reaction gas for ICP-MS



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.
- H2 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
- 100% safe operation, internal leak-test, automatic shut-down, over-pressure valve, current and voltage limits.
- No handling and storage of cumbersome gas cylinders. No cylinder rental fee.
- Extended autonomy with 2L water tank.



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MODELS	HYDRO50 L-100 HYDRO50 L-160 HYDRO50 L-300 HYDRO50 L-600
LMP Outflow @1013 HPA / 20°C	HYDRO50 L-100: 0.100 LPM HYDRO50 -L160: 0.160 LPM HYDRO50 L-300: 0.300 LPM HYDRO50 L-600: 0.600 LPM
H2 purity	>99,9995% (maximum HC content: 0.1ppm)
Dew point	-50°C (L-100/160/300) · -55°C (L-600)
Outlet Pressure	From 0.5 – 10 bar (7 – 145 psig)
Dimensions cm / in	L-100/160/300 – L: 43cm / l: 23.5cm / H: 16cm (17in / 9in / 6.2in) L-600 – W: 22cm / D: 43cm / H: 15cm
Net weight (kg/lbs)	L-100/160/300: 12kg / 26lb · L-600: 15kg / 27lb

Water quality	• High-purity deionized water (DI water) • TOC free, conductivity < 1µS/cm
Water source	2L external tanks
Water consumption	5L water generates about 6000L Hydrogen
Sound pressure	< 45 dB(A), measured at 1m (L-600)
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. (option)
Remote control, Communications	• Through Ethernet 10/100 network • Through the WLAN network • Logbook download by USB
H2 outlet fitting	Stainless steel 1/8″ OD compression
Power supply	Automatic switching from 90VAC to 260VAC, 47 to 63 Hz
Power consumption (max at full flow)	L-100 to L-300: max 150W · L-600: max 300W
Ambient temperature	+5 to +35°C, non condensing

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