HYDRO70 LS

High-Purity Hydrogen Generators to aliment GCs, for research on fuel cells

Leman Instruments

DESCRIPTION:

LEMAN Instruments designed the HYDRO70LS product line of High-Purity Hydrogen Generators to aliment GCs, for research on fuel cells, and to fit almost any type of application that needs H2 production on demand close to the consumer in an elegant casing with a full-color display and touch screen.

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 by a passive dryer and then purified and dried by passing through a No Maintenance Smart Pulse PSA module. H2 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. The device is composed of several independent modules connected in parallel. In case of failure, each module could be switched off and removed from the device without interrupting the production of other modules.

Models with outflows of 1 and 2 L/min H2 are available.

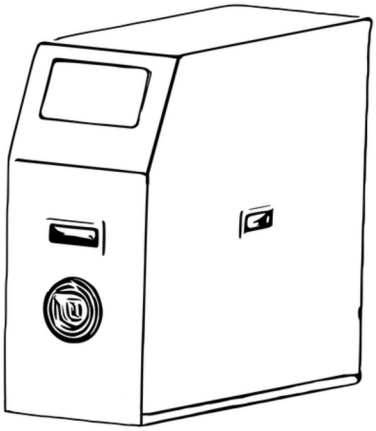
Each instrument has high-performance communication interfaces (Ethernet) to create a flexible gas network with local or central control.

A cogeneration network can be installed as an option.

Due to the software being focused on safety, automatic regulation, and intuitive and reliable communications, the HYDRO70LS High Flow, Ultra High Purity Hydrogen Generators are easy to install, reliable, and pleasant to operate.

APPLICATION TYPES:

- Combustion gas for FID Analyzers
- Carrier gas for GC and GC/MS-MS
- Reaction gas for ICP-MS
- Protection gas
- Any high-end purity H2 requirements
- MOCVD or Gems Growing



FEATURES:

- Reduces in operation costs. Return on investment within 1.5 years. Then free H2.
- Easy supervision and diagnosis by module.
- Low maintenance costs
- Improves resolution and detection limit for analytics.
- 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 around the laboratory.
- Remote control
- Very safe operation, internal leak-test, automatic shut-down, over-pressure valve, H2-cell current, and voltage limits.
- No handling and storage of cumbersome gas cylinders. There is no cylinder rental fee.

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MODELS	HYDRO70 LS-1 HYDRO70 LS-2
LMP Outflow @1013 HPA / 20°C	HYDRO70 LS-1: 1 LMP HYDRO70 LS-2: 2 LMP
H2 purity	>99.99999%
Outlet Pressure	From 0.5 to 7 bar (7 to 102 psig)
Dew point	-80°C

Dimensions cm / in	L: 60cm / l: 22.5cm / H: 50cm L: 23.6in / l: 8.6in / H: 19.6in
Net weight (kg/lbs)	15kg / 33lbs

Water quality	• High-purity deionized water (DI water) • TOC free • Conductivity < 1µS/cm
Water source	5L 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	• RS485 (Mod-Bus), USB • Through Ethernet 10/100 network • Logbook download by USB
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)	HYDRO70LS-1: maximum 1000W HYDRO70LS-2: maximum 1500W
Ambient temperature	+5 to +35°C, non condensing