HYDRO50 LS

High-Purity Hydrogen Generator

Leman Instruments

DESCRIPTION:

LEMAN Instruments designed the HYDRO50LS 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).

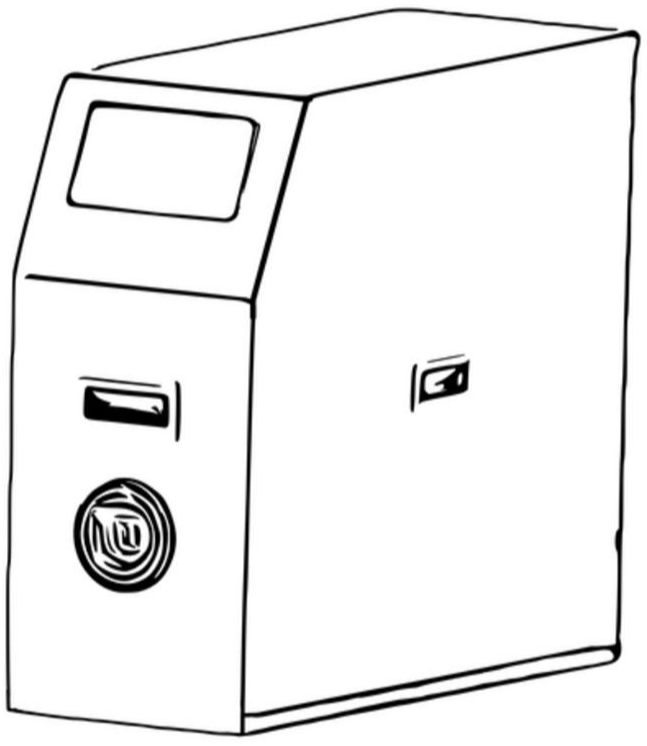
The produced Hydrogen is available 24/7 with a constant purity of 99.9995% at output flows of 1 to 3 NL/min (depending on the model). The H2 output pressure is regulated electronically and can be set from 0.5 to 10 bar (7 to 145 psig).

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.



APPLICATION TYPES:

- Combustion gas for FID Analyzers
- Carrier gas for Gas Chromatographs
- Fuel Cell Research, Protection gas



FEATURES:

- Reduces in operation costs. Return on investment within nine 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 around the laboratory.
- Smallest footprint on the market.
- 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.

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MODELS	HYDRO50 LS-1 HYDRO50 LS-2 HYDRO50 LS-3
LMP Outflow @1013 / 20°C	HYDRO50 LS-1: 1 LPM HYDRO50 LS-2: 2 LPM HYDRO50 LS-3: 3 LPM
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: 60cm / l: 22.5cm / H: 50cm L: 23.6in / l: 8.6in / H: 19.6in
Net weight (kg/lbs)	35–50kg / 88–110lb

Water quality	High-purity deionized water (DI water). TOC free
Water source	2L external tanks or auto-refill
Water consumption	5L water generates about 6000L 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	• 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)	LS-1: max 500W LS-2: max 800W LS-3: max 1000W
Ambient temperature	+5 to +35°C, non condensing