



Leman Instruments

HYDRO50L - HIGH PURITY HYDROGEN GENERATOR



H₂

APPLICATIONS

- ✓ **Combustion gas for FID Analyzers**
- ✓ **Carrier gas for Gas Chromatographers**
- ✓ **Protection gas**

DESCRIPTION

LEMAN-Instruments designed the **HYDRO50L** product line of **High Purity Hydrogen Generators** for FID and CARRIER GAS, to fit almost any type of application which needs High purity H₂ production close to the consumer in laboratory environment.

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 (ZEROWATER). This process can be started on demand and does not require any caustic solution.

The produced Hydrogen is available 24/7 with constant purity superior to **99.999%** at output flows of **100 to 750 Ncc/min** (depending on the model). The H₂ output pressure is regulated electronically and can be set from 0.5 to 10 bar (7 to 140 psig).

Each instrument is equipped with high performance communication interfaces (RS485, Ethernet, WLAN) 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 High Purity Hydrogen Generators** are easy to install, reliable, safe and pleasant to operate.

BENEFITS

- ✓ Reduces in operation costs. Return on investment within 2 years.
- ✓ 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 any piping and can be easily moved around the laboratory. Remote control from PC, I-phone and I-pad
- ✓ Stackable casing for low footprint gas generator network assembly.
- ✓ Very 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 5L water tank.

HYDRO 50L - HIGH PURITY HYDROGEN GENERATOR

SPECIFICATIONS

Models	HYDRO50L-100, HYDRO50L-160, HYDRO50L-250, HYDRO50L-300, HYDRO50L-500, HYDRO50L-600, HYDRO50L-750
H2 Outflow @ 1013/20°C	HYDRO50L-100 = 100 Nml/min ; HYDRO50L-160 = 160 Nml/min HYDRO50L-250 = 250 Nml/min ; HYDRO50L-300 = 300 Nml/min HYDRO50L-500 = 500 Nml/min ; HYDRO50L-600 = 600 Nml/min HYDRO50L-750 = 750 Nml/min
H2 purity	>99.999% (maximum HC content: 0.1ppm)
Dew point	-40°C
Outlet Pressure	From 0.5 to 10 bar (7 to 140 psig), adjustable by software.
Water quality	High purity deionised water. TOC free.
Water source	5L external tank or auto-refill (option) .
Water consumption	5L water generates about 6000L Hydrogen
Safety	Low H2 stored volume; over pressure valve; internal leak test; automatic shut down; maximum current limit, water quality, over temperature.
Manual control	Through a 4.3" TFT-LCD color display with touch screen, located on the front panel. Display of major parameters, pressure, functioning status and alarms. Intuitive navigation to functions by menus and sub menus. (option)
Remote control, Communications	<ul style="list-style-type: none"> ■ USB. RS485 (Mod-Bus) or Display.. ■ Trough Ethernet 10/100 network (option) ■ Trough WLAN network, with PC, I-Phone, I-Pad (option) ■ Log book 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)	HYDRO50L-100 to HYDRO50L-300: maximum 150W HYDRO50L-500 and HYDRO50L-750: maximum 300W
Ambient temperature	+5 to +35°C, non condensing.
Dimensions	W=230mm/8.7ins, H=135mm/5.3ins, D=380mm/14.9ins , stackable
Net weight (Kg/lbs)	HYDRO50L-100 to HYDRO50L-300: 9 Kg / 20 Lbs HYDRO50L-500 and HYDRO50L-750 : 14Kg / 28Lbs
Certification	CE

ORDERING NUMBERS

Model	Article #
HYDRO50L-100	731101
HYDRO50L-160	731102
HYDRO50L-250	731103
WLAN Interface (option)	731181

Model	Article #
HYDRO50L-300	731104
HYDRO50L-500	731106
HYDRO50L-600	731107
HYDRO50L-750	731112
Auto-refill (option)	731188

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