



**Leman Instruments**

## **HYDRO65LS2 – HIGH FLOW, ULTRA HIGH PURITY HYDROGEN GENERATOR**



# H<sub>2</sub>

### **DESCRIPTION**

**Leman-Instruments** designed the **HYDRO65LS2** product line of **High Flow, Ultra High Purity Hydrogen Generator** to aliment GCs, for research on fuel cell and to fit almost any type of application which needs H<sub>2</sub> production on demand close to the consumer in an elegant casing with 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, H<sub>2</sub> is dried first by a passive dryer and then purified and dried by passing through a No Maintenance PSA module. H<sub>2</sub> is available 24/7 with constant purity **>99.99995%**. Output pressure is regulated electronically and could be set from 0.5 to 8 bar. This process can be started on demand and does not require any caustic solution. The device is composed of several independent modules (1 L/min by module), connected in parallel and controlled by an RS485 internal bus (cogeneration). 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 **5, 10 & 15 L/min H<sub>2</sub>** are available.

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

Due to the software being focused on safety, automatic regulation and intuitive and reliable communications, the **HYDRO65LS2 High Flow, Ultra High Purity Hydrogen Generators** are easy to install, reliable and pleasant to operate.

### **APPLICATIONS**

- ✓ **Carrier gas for Gas Chromatographs**
- ✓ **Fuel Cell research, Protection gas**

### **BENEFITS**

- ✓ Reduces in operation costs. Return on investment within 1.5 year.
- ✓ No Maintenance. Easy supervision and diagnosis by module.
- ✓ Improves resolution and detection limit versus Helium only usage.
- ✓ Provides High pressure stability.
- ✓ H<sub>2</sub> 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.
- ✓ Very safe operation, internal leak-test, automatic shut-down, over-pressure valve, H<sub>2</sub>-cell current and voltage limits.
- ✓ No handling and storage of cumbersome gas cylinders. No cylinder rental fee.
- ✓ Extended autonomy with internal 20L water tanks or connection to water distribution network. (opt)

# HYDRO65LS2 HIGH FLOW, ULTRA HIGH PURITY HYDROGEN GENERATOR

## SPECIFICATIONS

<b>Models</b>	<b>HYDRO65LS2-5, HYDRO65LS2-10, HYDRO65LS2-15</b>
H2 Outflow maximum @ 1013/20°C	HYDRO65LS2-5 = 5 NI/min ; HYDRO65LS2-10 = 10 NI/min HYDRO65LS2-15 = 15 NI/min
H2 purity	<b>&gt;99.99995% (HC&lt;0.1ppm), CH4&lt;0.05ppm</b>
Dew point	< -65°C
Outlet Pressure	From 0.5 to 8 bar (7 to 110 psig), adjustable by software.
Water quality	High purity distilled + filtered water. TOC free. Conductivity < 1µS/cm
Water alimentation	Internal tank on request or by central distribution network (option)
Water consumption	20L water generates about 22 m <sup>3</sup> Hydrogen
Safety	Low H2 stored volume; over pressure valve; leak test; automatic shut down; maximum current limit, water quality
Sound pressure	< 50 dB(A), measured at 1m
Manual control	Through a 4.3" TFT-LCD color display with touchpad, located on the front panel. Display of major parameters, functioning status and alarms. Intuitive navigation to functions by menus and sub menus.
Remote control, Communications	<ul style="list-style-type: none"> <li>■ Trough Ethernet 10/100 network</li> <li>■ Trough WLAN network, with PC, I-Phone, I-Pad (option)</li> <li>■ Log book download by USB.</li> </ul>
H2 outlet fitting	Stainless steel 1/4" OD compression
Power supply	Automatic switching from 90VAC to 260VAC, 47 to 63 Hz
Power consumption ( max at full flow)	HYDRO65LS2-5 : maximum 2500W; HYDRO65LS2-10 : maximum 5000W HYDRO65LS2-15 : maximum 8000W
Dimensions	W=55cm, H=105cm, D=60cm, with castors Depend on the model
Net weight, without water	HYDRO65LS2-5: 80Kg; HYDRO65LS2-10 : 160Kg; HYDRO65LS2-15: 240Kg
Certification	CE

## ORDERING NUMBERS

Model	Article #
HYDRO65LS2-5	751811
HYDRO65LS2-10	751812

Model	Article #
HYDRO65LS2-15	751813

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