



Leman Instruments

SWISS TECHNOLOGY

HYDRO65LS – HIGH FLOW, NO MAINTENANCE ULTRA HIGH PURITY HYDROGEN GENERATOR



H₂

APPLICATIONS

- ✓ Carrier gas for Gas Chromatographer
- ✓ Combustion gas for FID
- ✓ 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.
- ✓ 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 tablet. Connection to Internet (opt)
- ✓ 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. No cylinder rental fee.
- ✓ Extended autonomy with internal 8L water tanks or connection to deionised water distribution network (opt).

DESCRIPTION

LEMAN-INSTRUMENTS designed the **HYDRO65LS** product line of **High Flow, No Maintenance Ultra High Purity Hydrogen Generators** to aliment GCs, for research on fuel cell and to fit almost any type of application which needs H₂ production 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, H₂ is dried first by a passive dryer and then purified and dried. H₂ is available 24/7 with constant purity **>99.99995%**. Output pressure is regulated electronically and could be set from 0.5 to 7 bar. This process can be started on demand and does not require any caustic solution. The device is composed of one or two independent modules 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.

Models with outflows of **1 to 4 L/min H₂** are available.

Each instrument is equipped with high performance communication interfaces USB, RS485, Ethernet 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 **HYDRO65LS High Flow, Ultra High Purity Hydrogen Generators** are easy to install, reliable and pleasant to operate.

HYDRO65LS HIGH FLOW, ULTRA HIGH PURITY HYDROGEN GENERATOR

SPECIFICATIONS

Models	HYDRO65LS-1, HYDRO65LS-2, HYDRO65LS-3, HYDRO65LS-4
H2 Outflow @ 1013/20°C	HYDRO65LS-1 = 1 NI/min ; HYDRO65LS-2= 2 NI/min, HYDRO65LS-3 = 3 NI/min ; HYDRO65LS-4 = 4 NI/min
H2 purity	>99.99995% (HCnm<0.05ppm, CH4<0.05ppm)
Outlet Pressure	From 0.5 to 7 bar (7 to 100 psig), adjustable by software.
Water quality	High purity distilled + filtered water. TOC free.
Water alimentation	Internal tank, 8L or central distribution network (option)
Water consumption	8L water generates about 10 m ³ 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 touchscreen, 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"> ■ Trough Ethernet 10/100 network ■ Trough WLAN network, with PC, I-Phone, tablet (option) ■ RS485 and USB as standard.
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)	HYDRO65LS-1 : maximum 500W; HYDRO65LS-2 : maximum 750W HYDRO65LS-3: maximum 1000W; HYDRO65LS-4: maximum 1500W
Dimensions	W=23cm, H=45cm, D=45cm
Net weight, without water	HYDRO65LS-1 : 35Kg; HYDRO65LS-2 : 40Kg; HYDRO65LS-3 : 50Kg; HYDRO65LS-4 : 55Kg
Certification	CE

ORDERING NUMBERS

Model	Article #
HYDRO65LS-1	741320
HYDRO65LS-2	741321

Model	Article #
HYDRO65LS-3	741322
HYDRO65LS-4	741323

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