

HYDROCLEAR

Ultra High Purity Hydrogen Purifier



DESCRIPTION:

LEMAN Instruments designed the HYDROCLEAR product line of High Flow, Ultra High Purity Hydrogen Purifier to aliment GCs, for research on fuel cell and to fit almost any type of application which needs H₂ production on demand close to the consumer in an elegant casing with full color display and touch screen.

Based on on drying technology, the H₂ is purified and dried by passing through a SMART No Maintenance PSA. H₂ is available 24/7 with constant purity >99.999995%. Output pressure is regulated electronically and could be set from 0.5 to 10 bar. This process can be started on demand and does not require any 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.

Model can purify from 100 to 600 L/min H₂ based on model

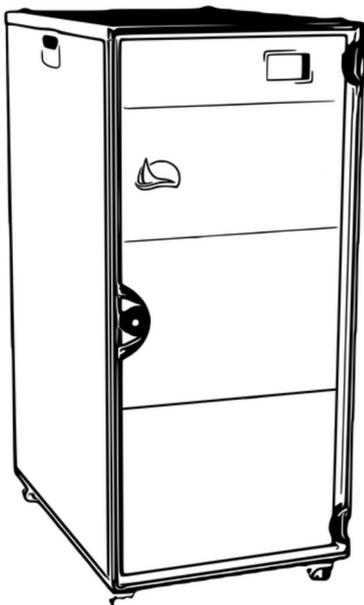
Each instrument is equipped with high performance communication interfaces (Ethernet) create a very flexible gas network with local or central control.

Due to the software being focused on safety, automatic regulation, and intuitive and reliable communications, the HYDROCLEAR 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



FEATURES:

- Reduces in operation costs. Return on investment within 2 years.
- No maintenance.
- Improves resolution and detection limit versus Helium-only usage.
- Provides high-pressure stability.
- H₂ is available on demand 24/7 at constant purity. No contamination.
- An independent, on-demand 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.
- With this product, you can say goodbye to the hassle of handling and storing cumbersome gas cylinders, and the additional cost of cylinder rental fees.
- *based on O₂ content independently verified by National Physical Laboratory, UK



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MODELS	HYDROCLEAR
LMP Outflow @1013/20°C	HYDROCLEAR-5: 5 LMP HYDROCLEAR-10: 10 LMP HYDROCLEAR-15: 15 LMP
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: 80cm / l: 55cm / H: 120cm (Variable) L: 31.4in / l: 21.6in / H: 47.2in (Variable)
Net weight (kg/lbs)	80kg-100kg / 176lb-246lb

Water quality	High-purity deionized water (DI water). TOC free
Water source	Connection to central distribution network Onboard Deionized water generator
Water consumption	12L water generates about 12 m ³ of Hydrogen
Safety	Low H ₂ 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	<ul style="list-style-type: none"> Through 2 potential free relay contacts (I/O) RS485 (Mod-Bus), USB Through Ethernet 10/100 network
H ₂ outlet fitting	Stainless steel 1/4" OD compression
Power supply	Automatic switching from 90 VAC to 260 VAC, 47 to 63 Hz
Power consumption (max at full flow)	HYDRO50LS2-5: maximum 2000W HYDRO50LS2-10: maximum 2500W HYDRO50LS2-15: maximum 3000w
Ambient temperature	+5 to +35°C, non condensing.

