



Leman Instruments

HYDROSTATION 50R : HIGH PURITY HYDROGEN GENERATOR



H₂

APPLICATION

- ✓ Combustion gas for FID and GC

DESCRIPTION

LEMAN-Instruments designed the **HYDROSTATION50R** product line of **High Purity Hydrogen generator** to aliment an FID detector and GC, close to the consumer in an elegant 19" casing with full color display and touchpad.

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 by passing through a cartridge filled with molecular sieve (optionally Opt1, the efficiency of passive dryer could be improved with curtain of dry Air). H₂ is available 24/7 with constant purity **>99.999%**. 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.

Models with outflows of **100, 160, 250 and 500 Nml/min H₂** are available.

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

Due to the software being focused on safety, automatic regulation and up to date communications, the **HYDROSTATION50R** is easy to install, reliable, safe and pleasant to operate.

BENEFITS

- ✓ Reduces in operation costs. Return on investment within 15 months.
- ✓ 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, can be easily moved around the laboratory.
- ✓ Remote control from PC
- ✓ Low functioning noise < 45dB(A).
- ✓ 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.

HYDROSTATION 50R

SPECIFICATIONS

Models	HYDROSTATION50R-100 ; HYDROSTATION50R-160 HYDROSTATION50R-250 ; HYDROSTATION50R-500
Outflow capacities @ 1013/20°C	HYDROSTATION50R-100 : 100 Nml/ min H2 HYDROSTATION50R-160 : 160 Nml/ min H2 HYDROSTATION50R-250 : 250 Nml/ min H2 HYDROSTATION50R-500 : 500 Nml/ min H2
H2 purity	>99.999% (maximum HC content: 0.05ppm) Dew point <-50°C
Outlet Pressures	H2 : from 0.5 to 8 bar (7 to 100 psig), adjustable by software.
Water quality	High purity distilled+filtered water. TOC free.
Water capacity	5L external tank. Generates about 6000L Hydrogen
H2 Drying cartridge	2 L capacity
Drying Air (opt1)	300 to 400 ml/min Air with dew point < -30°C; inlet pressure 2.5 to 5 bar
Safety	Low H2 stored volume; over pressure valve; internal leak test; automatic shut down; maximum current limit, water quality, over temperature.
Sound pressure	< 45 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"> ■ Through 2 potential free relay contacts (I/O) ■ USB. RS485 (Mod-Bus) or Display. ■ Trough Ethernet 10/100 network (option) ■ Log book download by USB.
Outlet fittings	Stainless steel 1/8" OD compression .
Drying Air Inlet fitting	Brass 1/8" OD compression
Power supply	Automatic switching from 90VAC to 260VAC, 47 to 63 Hz
Power consumption (max at full flow)	HYDROSTATION50R-100 & -160: maximum 80W HYDROSTATION50R-250 : maximum 130W HYDROSTATION50R-500 : maximum 250W
Dimensions	W=483mm/19ins, H=132mm/5.2ins (3U), D=500mm/20ins
Net weight	HYDROSTATION50R-100 to HYDROSTATION50R-250 : 13.5 Kg HYDROSTATION50R-500: 15.5 Kg
Certification	CE

ORDERING NUMBERS

Model	Article #
HYDROSTATION50R-100	721101
HYDROSTATION50R-250	721103
Dying Air (Option)	721151
LAN Interface (option)	722182

Model	Article #
HYDROSTATION50R-160	721102
HYDROSTATION50R-500	721105
ZERO WATER 3x5L refill	711091
RS485 Interface (option)	722180

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