



Leman Instruments

GC STATION ULTRA RC: HIGH PURITY HYDROGEN NITROGEN & ZERO AIR GENERATORS WITH ON BOARD COMPRESSOR



H₂ + N₂ + AIR

APPLICATION

- ✓ Combustion gases for FID,
- ✓ Carrier gases for GC

DESCRIPTION

LEMAN-INSTRUMENTS designed the **GCSTATION ULTRA RC** product line of **High Purity Hydrogen & Zero Air & Nitrogen generators with compressor** to supply independently all gases necessary to aliment GC and GC/MS, close to the consumer in 2 elegant 19" Rack casing with full color display and touchscreen.

The **GCSTATION ULTRA RC** is composed of an High purity Hydrogen generator, an Zero Air and Nitrogen generators and an AIR compressor system.

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 by a passive dryer. It is available 24/7 with constant purity >99.9999%. 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.

Compressed AIR passes through a Pressure Swing Adsorption (PSA) module to dry and filter it from pollutant gases. Based on the same concept, Nitrogen is then extracted from a set of filters filled up with CMS.

Both Output pressures are regulated electronically from 0.5 to 5 bar.

Due to the software being focused on safety, automatic regulation and reliable communications, the **GCSTATION ULTRA RC** 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, N₂ and Zero Air available 24/7 at constant purity. No contamination.
- ✓ Independent source of Hydrogen, N₂ and Zero Air that does not require any piping and can be easily moved around the laboratory. Remote control from PC, I-phone and I-pad
- ✓ Low noise compressor < 55dB(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.
- ✓ Long life compressor with power economy function.

GC STATION ULTRA RC

SPECIFICATIONS

Models	GCSTATION ULTRA RC-70/700/70; GCSTATION ULTRA RC -100/1000/100; GCSTATION ULTRA RC 160/2000/160; GCSTATION ULTRA RC -250/3000/250
Outflow capacities @ 1013/20°C	GCSTATION ULTRA RC-70/700/70 : 70 Nml/ min H2 & N2, 700 Nml/min AIR GCSTATION ULTRA RC -100/1000/100 : 100 Nml/ min H2 & N2, 1000 Nml/min AIR GCSTATION ULTRA RC -160/2000/160 : 160 Nml/ min H2 & N2, 2000 Nml/min AIR GCSTATION ULTRA RC -250/3000/250 : 250 Nml/ min H2 & N2, 3000 Nml/min AIR
H2 purity	>99.9999% (maximum HC content : 0.05ppm), Dew point -75°C
AIR purity	< 10ppm H2O (<-60°C DP); < 50 ppb HC ; < 50 ppb CO and CH4; Particulates <0.1µm
N2 purity	> 99.9999% ; < -75°C dew point, < 1 ppm H2O, particulates <0.1µm; <0.05ppm HC-CH4
Outlet Pressures	H2: from 0.5 to 7 bar (7 to 100 psig), adjustable by software. AIR& N2: from 0.5 to 5 bar (7 to 70 psig), adjustable by software.
Water quality	High purity deionised+filtered water. TOC free.
Water capacity	5L external tank. Generates about 6000L Hydrogen
Compressed Air	On Board compressor / If without on board compressor: Oil free, supplied by external source.
Safety	Low H2 stored volume; over pressure valve; internal leak test; automatic shut down; maximum current limit, water quality, over temperature.
Sound pressure	< 59 dB(A), measured at 1m
Manual control	Through a 4.3" TFT-LCD color display with touch screen, 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"> ■ USB. RS485 (Mod-Bus) or Display. ■ Trough Ethernet 10/100 network ■ Trough WLAN network, with PC, I-Phone, I-Pad (option) ■ Log book download by USB.
Outlet fittings	Stainless steel 1/8" OD compression
Power supply	Automatic switching from 90VAC to 260VAC, 47 to 63 Hz
Power consumption (max at full flow)	GCSTATION ULTRA RC-70/700/70 : maximum 480W GCSTATION ULTRA RC-100/1000/100 : maximum 550W GCSTATION ULTRA RC -160/2000/160 : maximum 600W GCSTATION ULTRA RC -250/3000/250 : maximum 650W
Dimensions	W=483mm/19ins, H=265mm/10.5ins (2x3U), D=520mm/21ins
Net weight	GCSTATION ULTRA RC -XX/XX/XX: 55 to 65 Kg
Certification	CE

ORDERING NUMBERS

Model	Article #
GCSTATION ULTRA RC-70/700/70	723290
GCSTATION ULTRA RC -100/1000/100	723291

Model	Article #
GCSTATION ULTRA RC -160/2000/160	723292
GCSTATION ULTRA RC -250/3000/250	723293

LEMAN - INSTRUMENTS SAS

Archamps Technopole, 60 Avenue Marie-Curie
F – 74160 ARCHAMPS

info@leman-instruments.com

Telephone: +33 4 50 39 49 22

www.leman-instruments.com