



Leman Instruments

GC STATION 60LC : ULTRA HIGH PURITY HYDROGEN & ZERO AIR & NITROGEN GENERATORS WITH ON BOARD COMPRESSOR



H₂ + AIR + N₂

APPLICATION

- ✓ Combustion, carrier and make up gases for GC and GC/MS

DESCRIPTION

LEMAN-INSTRUMENTS designed the **GCSTATION 60LC** product line of **Ultra 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 an elegant casing with full color display and touchscreen.

The GCStation is composed of an Ultra High purity Hydrogen generator, an Ultra 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 first by a passive dryer and then purified by passing through a No Maintenance PSA module. It is available 24/7 with constant purity >99.9999%. 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.

Compressed AIR is first dried and passes throughout a hot catalytic chamber to remove HC, CO and CH₄; then ZERO 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 60LC** is easy to install, reliable, safe and pleasant to operate.

BENEFITS

- ✓ Reduces in operation costs. Return on investment within 12 months.
- ✓ Improves resolution and detection limit versus Helium only usage. Provides High pressure stability and constant purity of gases
- ✓ H₂, Zero Air and N₂ available 24/7 at constant purity. No contamination.
- ✓ Independent source of Hydrogen, Zero Air and Nitrogen, does not require any piping and can be easily moved around the laboratory. Remote control from PC
- ✓ 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 60LC

SPECIFICATIONS

Models	GCSTATION60LC-70/700/50 ; GCSTATION60LC-100/1000/100 GCSTATION60LC-160/1500/160; GCSTATION60LC-250/3000/250
Outflow capacities @ 1013/20°C	GCSTATION60LC-70/700/70 : 70 Nml/ min H2 & 700 Nml/min AIR & 50 Nml/min N2 GCSTATION60LC-100/1000/100 : 100 Nml/ min H2 & 1000 Nml/min AIR & 100 Nml/min N2 GCSTATION60LC-160/1500/160 : 160 Nml/ min H2 & 1500 Nml/min AIR & 160 Nml/min N2 GCSTATION60LC-250/3000/250 : 250 Nml/ min H2 & 3000 Nml/min AIR & 250 Nml/min N2
H2 purity	>99.9999% (maximum HC content: 0.02ppm) ; dew point <-70°C
AIR purity	< 0.03 ppm HCnm ; < 0.03 ppm CO and CH4; dew point < -40°C
N2 purity	>99.9995%, < 5ppm O2: HC<0.005ppm, dew point < -50°C
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 distilled+filtered water. TOC free.
Water source	5L tank or auto-refill (option) .
Water capacity	5L water generates about 6000L Hydrogen
Compressed Air	Supplied by internal oil free piston compressor
Safety	Low H2 stored volume; over pressure valve; internal leak test; automatic shut down; maximum current limit, water quality, over temperature.
Sound pressure	< 55 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, pressure, water level, 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 (option) ■ 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	90 to 120 VAC, 50-60Hz or 220 to 260 VAC, 50-60Hz
Power consumption (max at full flow)	GCSTATION60LC-70/700/50 : maximum 450W GCSTATION60LC-100/1000/100 : maximum 600W GCSTATION60LC-160/1500/160 : maximum 700W GCSTATION60LC-250/3000/250 : maximum 850W
Ambient temperature	+5 to +35°C, non condensing.
Dimensions	W=230mm, H=600mm, D=500mm with castors
Net weight	GCSTATION60LC-xx/xx/xx : 45 Kg
Certification	CE

ORDERING NUMBERS

Model	Article #
GCSTATION60LC-70/700/50	743200
GCSTATION60LC-100/1000/100	743201
GCSTATION60LC-160/1500/160	743203
GCSTATION60LC-250/3000/250	743205

Model	Article #
LAN Interface option	743282
WLAN Interface option	743281
Auto-refill (option)	743288

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