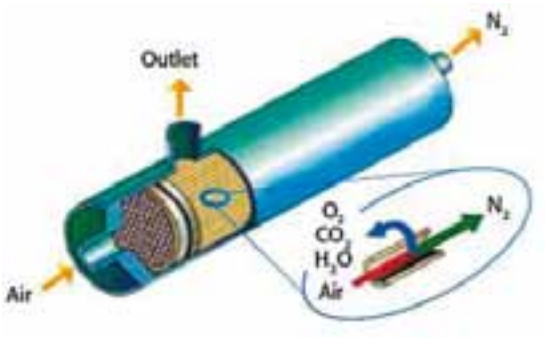
GAS Generator

Desire More We Make Better

Nitrogen Generator

Whisper-N_2 Series

Membrane Technology



Compressed air is forced through a hollow fiber membrane, with selective permeation of the different components - nitrogen, oxygen, CO_2, water vapor and traces of rare gases - depending on the rate of diffusion. The rate of diffusion of nitrogen trough the membrane is slower than the other components, which thus flow outside of the fiber membrane, leaving just nitrogen inside; this is then discharged subsequently, ready for use.

Features

Superior Result from Analytical Instruments

- The constant purity of the nitrogen improves system stability and ensures reproducible results

Better Lab Efficiency

- The large nitrogen volumes used in analytical labs for LC-MS techniques to ensure good lab productivity
- Wall-mounted installation available to save space

Cost Saving

- The investment can normally be paid back in less than a year
- No pipeline is required to carry the gas from the storeroom to the lab

Improved Safety

- Nitrogen produced at low pressure at room temperature eliminates the risks relating to high pressure gasbottle use and handling of liquid nitrogen

Simple Installation

- No need of power connection (Built-in compressor models)

Silent Operation

- The exclusive "Split System" design(Compressor built-in models) allows the section containing the compressor to be installed separately from the nitrogen production assembly which means no interruption by noise from the compressor

Whisper-N_2 Series Specifications

	Compressor Built-in		External Compressor	
	N_2-Whisper-C-35	N_2-Whisper-Hybrid	N_2-Mini-Whisper	N_2-Whisper-0 Series
Model				
Max flow	35L/min	5L/min (80psi)	8L/min	40, 80, 120L/min
Purity	> 98~99.5%	> 99%	> 98~99.5%	> 98~99.5%
Input pressure	Internal compressor	Source air gas : ~26L/min (100psi)	5~8bar	8~10bar
Outlet pressure	7.5bar	Exhaust air gas: ~10L/min (80psi)	7bar	7bar
Residual particulate	< 0.01㎛	< 0.01㎛	< 0.01㎛	< 0.01㎛
Air compressor supplied	270L/min Dual Compressor	270L/min Dual Compressor	No(option)	No(option)
Background noise	< 60dB or Split System	< 60dB or Split System	None	None
Electrical spec.	220V, 50~60Hz	220V, 50~60Hz	None	None
Connections	1/4"G			
Weight(kg)	160	150	8	15~21
Dimension(cm)	130H x 48W x 98D	130H x 48W x 98D	74H x 35W x 35D	115H x 48W x 26D
Production type	Membrane	Membrane	Membrane	Membrane
Application	with LC-MS	N_2/Air Generation	with ELSD	Large N_2 volumes

High Purity N_2 Generator Specifications

The high purity N_2 generator produces purified nitrogen removing oxygen and hydrocarbon pollutants. This instrument can be provided with an internal compressor as an option and is mainly used for carrier gas of GC, ICP, ELSD applications.

	Compressor Built-in				External Compressor			
Model	N_2-C-500	N_2-C-750	N_2-C-1300	N_2-C-4000	N_2-NC-500	N_2-NC-750	N_2-NC-1300	N_2-NC-4000
Flow Rate	500 ml/min	750 ml/min	1300 ml/min	4000 ml/min	500 ml/min	750 ml/min	1300 ml/min	4000 ml/min
Purity	99.999 %		99.995 %	98 %	99.999 %		99.995 %	98 %
Pressure	Delivery Pressure				Input Pressure			
	Up to 75 psi				Up to 100 psi			
Particle Filtration Level	50 um							
Noise level	<60dB				None			
Fittings	Outlet Air 1/4" swagelock				Inlet Air			
Dimension(mm)	360W x 640D x 670H				350W x 400D x 300H			
Application	GC carrier gas, ICP, ELSD, etc.,							

Hydrogen Generator

NM-H_2 Series

The NM-H_2 series hydrogen generators use the latest polymer electrolyte membrane (PEM) technology to produce high purity hydrogen. The exclusive "**No Maintenance**"gas column dryer regeneration system eliminates all down time for maintenance that is typical of other systems on the market, guaranteeing the best hydrogen purity at all times.

Features

Superior Chromatograph Results

- Hydrogen as a carrier gas is faster and more sensitive than the more-expensive helium.
- Run time savings of 25% to 35% without a decline in resolution.

Improved Safety

- The very limited internal volume (less than 50 ml) allows safe use of the gas generators where the use of cylinders is risky or prohibited.
- The application of tested safety technologies stops the unit in the event of leaks or malfunctions.

Cost Saving

- Hydrogen gas generators avoid the need for expensive installation of gas pipelines from the cylinder storerooms to the labs, as well as the need to repeatedly change the bottles.
- The patented automatic regeneration system ensures the maximum grade of hydrogen purity with no expense for change of cartridge and Deionized bag.

Extended Analytical Column Life

- The use of hydrogen as a carrier gas allows lower temperature elution, thus extending the life of the chromatograph column.

Excellent Lab Productivity

- Continuous operation 24 hours a day allows maximum lab productivity, cutting dead time for gas bottle changeover and maintenance of the drying system.
- The exclusive cascading option allows up to 10 units to be connected in series, producing flow rates of up to 10 liters.

Intuitive Control

- LCD display interface: real time outlet pressure, water quality, auto diagnostics with alarms
- Outlet pressure: adjustable by electronic controller up to 10 bar

PG-H_2 Series

The PG-H_2 series hydrogen generators use the latest polymer electrolyte membrane (PEM) technology to produce high purity hydrogen. It meets most features of NM-H_2 series except for automatic regeneration system at economic cost. Supplying ultra pure water, DI(Deionized) bag is not to be replaced.

NM-H_2 Series Specifications

Model	NM-H_2-100	NM-H_2-160	NM-H_2-250	NM-H_2-300	NM-H_2-500	NM-H_2-600	NM-H_2-1000
Flow rate (ml/min)	100	160	250	300	500	600	1000
Technology	Polymer Electrolyte Membrane (PEM)						
Dryer	Exclusive Dual Automatic Regeneration System						
Purity	99.9999%						
Cascading	NO	NO	YES	YES	YES	YES	YES
Water quality	Deionized or Demineralized						
Outlet pressure	1~155psig / 0.1~10barg						
Internal vol.	< 50ml at max pressure						
Display	Operating parameters, System status, Alarms						
Dimension(mm)	230W x 430H x 353D						
Weight (kg)	17	17	17	17	18	18	20
Options	RS 232C or RS 485, Autorefill, external contacts, PC control						
Applications	- Ionization Flame Detector (FID), Carrier gas : GC & GC-MS - Fast GC, Collisions : ICP-MS - Small Fuel-Cell Cylinder Refills						

PG-H_2 Series Specifications

Model	PG-H_2-Series
Flow rate (ml/min)	100-160-250-300-500-600
Electrolysis Cell	Membrane Type
Delivery Pressure	Max. 100psig (7barg)
Purity	99.999%
Safety	Auto Shut-off
Water	Deionized or Distilled
Dimension(mm)	230W x 350H x 410D
Weight (kg)	16
Options	Remote Control
Cascading	250-300-500-600 (requires I/O Board option)

NM-H_2 Series

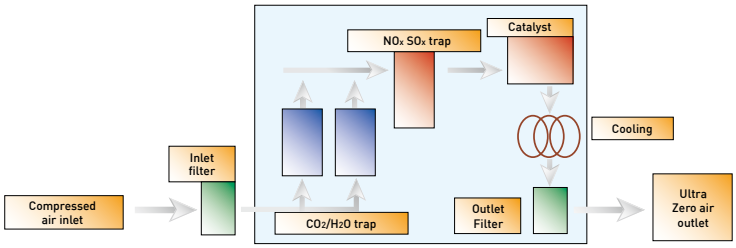
PG-H_2 Series

Ultra Zero Air Generator

GT Series

The GT Series produce ultra zero air removing CO and HC pollutants to less than 0.1 ppm, and NOx contaminants to 1 ppm. Carbon dioxide is also removed to about 1 ppm levels. With this ultra zero air, you can decrease the background noise level and gives the baseline much better stability, considerably increasing detector sensitivity and ensuring precise analytical results.

Operation of the generator requires low levels of air consumption and electrical power. This complete turnkey system is engineered with the highest quality components, is easy to install, and requires only minimal annual maintenance.

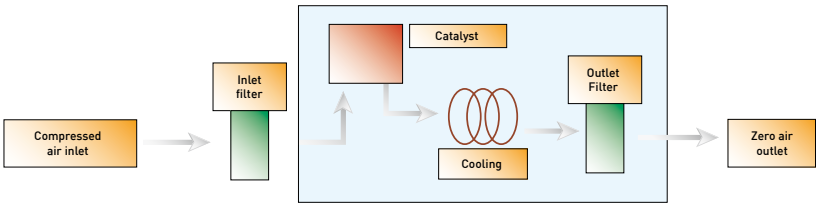


Operating Diagram of GT Series

Zero Air Generator

GC Series

The GC Series produce dry and hydrocarbon-free air using air from oil-free compressors, thus avoiding the need to use traditional bottles that are often complex to change.



Operating Diagram of GC Series

Features

Easy Installation

- Just connect a suitable oil free compressor (optional) to almost immediately have air at the right grade.To save bench space, the unit can be easily installed on the lab wall.

Lab Safety

- No more bottles in the lab and expensive pipelines for air distribution.

Save Money

- The unit only requires connection to a suitable oil free compressor and the mains: the investment can be paid back in less than a year.

Improved Lab Efficiency

- Continuous operation 24 hours a day cuts dead times for gas bottle changeover and avoids the need for tedious instrument recalibrations.

GT Series Specifications

Model	GT-1500	GT-3000	GT-6000	GT-15000	GT-30000
Flow(L/min)	1.5	3	6	15	30
HC & CO out	< 0.1ppm	< 0.1ppm	< 0.1ppm	< 0.1ppm	< 0.1ppm
CO_2 out	< 5ppm	< 5ppm	< 5ppm	< 5ppm	< 5ppm
NO_x, SO_x out	< 0.1ppm	< 0.1ppm	< 0.1ppm	< 0.1ppm	< 0.1ppm
Max. Inlet CO level	50ppm	50ppm	50ppm	50ppm	50ppm
Max. Inlet HC level	100ppm	100ppm	100ppm	100ppm	100ppm
Max. Inlet temp.	40℃	40℃	40℃	40℃	40℃
Pressure in(*)	4.5~10bar	4.5~10bar	4.5~10bar	4.5~10bar	4.5~10bar
Pressure drop	< 1bar	< 1bar	< 1bar	< 1bar	< 1bar
Stability(min)	45	45	45	45	45
In/Out Connections	1/4~1/8"(NPT)	1/4~1/8"(NPT)	1/4~1/8"(NPT)	1/4~1/8"(NPT)	1/4~1/8"(NPT)
Power	220V/50Hz or 110V/60Hz				
Weight(kg)	9	9	25	25	25
Dimensions(cm)	40H x 47W x 25D			47H x 63W x 31D	
Working temp.	Amb. + 15℃	Amb. + 15℃	Amb. + 15℃	Amb. + 15℃	Amb. + 15℃
Applications	GC-FID/GC-NPD/GC-FPD/GC-PFPD, THA, Flame Gas, HTC, TOC, ELSD, TGA, DSC				

GC Series Specifications

Model	GC-1500	GC-3000	GC-6000	GC-15000	GC-30000
Flow(L/min)	1.5	3	6	15	30
HC & CO out	< 0.1ppm	< 0.1ppm	< 0.1ppm	< 0.1ppm	< 0.1ppm
Max. Inlet CO level	50ppm	50ppm	50ppm	50ppm	50ppm
Max. Inlet HC level	100ppm	100ppm	100ppm	100ppm	100ppm
Max. Inlet temp.	40℃	40℃	40℃	40℃	40℃
Pressure in(*)	4.5~10bar	4.5~10bar	4.5~10bar	4.5~10bar	4.5~10bar
Pressure drop	< 1bar	< 1bar	< 1bar	< 1bar	< 1bar
Stability(min)	45	45	45	45	45
In/Out Connections	1/4~1/8(NPT)	1/4~1/8(NPT)	1/4~1/8(NPT)	1/4~1/8(NPT)	1/4~1/8(NPT)
Power	220V/50Hz or 110V/60Hz				
Weight(kg)	13	13	15	22	22
Dimensions(cm)	40H x 47W x 25D				
Working temp.	Amb. + 15℃	Amb. + 15℃	Amb. + 15℃	Amb. + 15℃	Amb. + 15℃
Applications	GC-FID/GC-NPD/GC-FPD/GC-PFPD, THA, Flame Gas				

These Products are manufactured by Young Lin
ISO 9001-certified facility that is periodically
audited by the registering body to ensure compliance

YL INSTRUMENT CO., LTD.
Young Lin Bldg., 899-6 Hogye-dong, Anyang, 431-836, Korea
TEL : 82-31-428-8700 / FAX : 82-31-428-8779
E-mail : export@younglin.com Homepage : www.ylinstrument.com

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