

Hydrogen Generator

Nothing is more worth than your safety.

YCM Hydrogen Generators use the latest polymer electrolyte membrane (PEM) technology to produce high purity hydrogen. There are 2 types of hydrogen generators provided, which are NM-H₂ Plus series and PG-H₂ Plus series to be used in the proper application depending on the purity of hydrogen and the way of cartridge maintenance. The exclusive cascading option allows up to 32 units to be connected in series producing flow-rates of up to 32 L/min with NM-H₂ Plus series and 20 L/min with PG-H₂ Plus series.

Hydrogen is produced by using distilled or deionized water from hydrolysis, through a polymer membrane.

Electrolytic dissociation separates the water into its two main components: hydrogen ready for analytical use, and oxygen that is released into the air. No acid or no alkaline solutions are used in the hydrogen generation cycle.

Benefits

- **IMPROVED CHROMATOGRAPHY RESULT**

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

- **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.

- **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.

- **LONGER ANALYTICAL COLUMN LIFE**

The use of hydrogen as a carrier gas allows lower temperature elution, thus extends the life of the chromatography column.

- **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.



NM-H₂ Plus Series (Purity 99.99996 %)

The exclusive “No Maintenance” gas column cold dryer regeneration system eliminates all down time for maintenance that is typical of other systems on the market, assuring the best hydrogen purity at all times.



● NM-H₂ Plus Series Specifications

Model	NM-H ₂ Plus-100	NM-H ₂ Plus-160	NM-H ₂ Plus-250	NM-H ₂ Plus-300	NM-H ₂ Plus-500	NM-H ₂ Plus-600	NM-H ₂ Plus-1000
Flow Rate(ml/min)	100	160	250	300	500	600	1000
Purity	99.99996 %						
Cascading	Up to 32 units						
Dryer	Cold Dual Dynamic Regeneration System						
Outlet Pressure	1~160 psig/0.1~11 barg						
Internal Volume	< 50 ml at max. pressure						
Display	Real time outlet pressure/ Water quality/ Auto-Diagnostics with alarms / Flowmeter						
Safety Sensor	Leak detector, Water level and quality sensor, Earthquake/ Shock sensor						
Water Quality	Deionized or Demineralized Water						
Application	<ul style="list-style-type: none"> • Carrier gas for GC and GC-MS • Collisions on ICP-MS • Small fuel-cell cylinder refills 						

PG-H₂ Plus Series (Purity 99.9996 %)

The static self-healing system eliminates dryer maintenance which allows for an increase in laboratory productivity. The deionizer bag is used for maintaining the high purity of deionized water for a long time and it's easy to change the bag.



● PG-H₂ Plus Series Specifications

Model	PG-H ₂ Plus-100	PG-H ₂ Plus-160	PG-H ₂ Plus-250	PG-H ₂ Plus-300	PG-H ₂ Plus-500	PG-H ₂ Plus-600
Flow Rate(ml/min)	100	160	250	300	500	600
Purity	99.9996 %					
Cascading	Up to 32 units					
Outlet Pressure	1~160 psig/0.1~11 barg					
Internal Volume	< 50 ml at max. pressure					
Display	Real time outlet pressure/ Water quality/ Auto-Diagnostics with alarms / Flowmeter					
Safety Sensor	Leak detector, Water level and quality sensor, Earthquake/ Shock sensor					
Water Quality	Deionized or Demineralized Water					
Application	<ul style="list-style-type: none"> • Fuel gas for GC - FID(Flame Ionization Detector) / FPD(Flame Photometric Detector) • Collisions on ICP-MS • Small fuel-cell cylinder refills 					