



Hydrogen Gas Generator

Hydrogen Gas Generators



	ATH-300	ATH-500	ATH-1000
Max Hydrogen Flow rate	300 ml/min	500 ml/min	1000 ml/min
Delivery Pressure	0-60 psig (0-4 kg/cm ² or bar)		
% purity	>99.999%		
Power Consumption	150 W	180 W	220 W
Power	198-242V (AC); 50Hz, 1 Phase		
Min/max Temperature	5-40°C		
Max. Ambient Humidity	<85% RH		
Suitable Environment	non-corrosive and dust-free		
Dimensions	420 x 210 x 350mm (LxWxH)		
Weight	12 kg (approx)		
Fluid Tank Capacity	1.5 L		
Fluid Consumption	Weekly or when level falls below 0.6		

Note: Higher capacity model also available like 2 LPM & 3 LPM

Working Principle :

- Hydrogen is produced in the ATH Series Hydrogen Generators by the most advanced electrolytic membrane technology.
- The application of voltage across the electrolyte results in hydrolysis, breaking down the water molecule into hydrogen and oxygen gas, which are separated by the gas permeable membrane.
- Once separated, the hydrogen gas goes through a series of purification and moisture removal systems to achieve the desired level of purity while the oxygen gas is being discharged into the atmosphere.
- Electrolytic membrane technology has its advantages over alternative hydrogen generating techniques as it is clean, requires less maintenance and there is no need to store chemicals to maintain operation.
- Only pure double distilled water (initially some KOH), is required to provide trouble free long term operation.
- Membrane separation is also less time consuming as only water is needed for routine maintenance.



Applications:

Instruments	Gas Requirement	Purity	Flow Rate	Generator Recommendation
Products for Gas Chromatography				
GC-FID	Hydrogen for fuel gas	UHP Hydrocarbon-free	30-50 cc/min	Hydrogen
	Hydrogen for capillary	UHP, Zero grade	up to 10 cc/min	Hydrogen
GC-FPD	Hydrogen for fuel gas	UHP	60-90 cc/min	Hydrogen
GC-NPD	Hydrogen for capillary gas	UHP	up to 50 cc/min	Hydrogen
GC-TCD	Hydrogen as carrier gas	UHP	up to 50 cc/min	Hydrogen
GC-ELCD	Hydrogen as reaction gas	UHP	70 to 200 cc/min	Hydrogen
Products for Analyzers				
THA	Hydrogen for fuel gas	UHP	5 to 50 cc/min	Hydrogen

Hydrogen Generators provide an onsite supply of hydrogen gas, eliminating the need of gas cylinders, which can be bulky and require special cylinder storage space. They provide ultra-high purity hydrogen gas. The ATH Series Hydrogen Generator have been used in a wide variety of applications such as general industrial, military, wastewater treatment and especially in laboratory gas chromatography. ATH Hydrogen Generators employs the most advance velum separation technology for the electrolytic production of hydrogen gas.

Easy to operate, safe and reliable, generating hydrogen through electrolyzing pure water, switching power on to produce gas.

High reliability, easy to maintain. Match with all kinds of GC.



ATHENA TECHNOLOGY

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