

## **Hydrogen Generator - Always Ensuring High Safety**

**Mayura Analytical LLP** is a leading organisation in analytical instrumentation that provides solutions to research institutions and industries to diagnose and resolve their analytical needs. Our pioneering products are made in India for the Indian market and beyond since our inception in 1984. We are widely acknowledged for our approach to chemical analysis and to customer troubleshooting. As recognised suppliers of analytical equipment to the **Indian Institute of Science (IISc)**, **Bangalore and Indian Institute of Technology (All India**), preeminent research and technology institutions of India as well as large industries such as **BIOCON**, we have cemented our standing in the market with our cutting edge expertise and solution focussed approach.

#### Advantages of using a Hydrogen Generator versus a Hydrogen Cylinder

The biggest concern while using a Hydrogen gas cylinder is a safety. Hydrogen gas under pressure is highly explosive, endangering human life and causing damage to property. Cylinders are susceptible to leaks. Leakage of Hydrogen is normally unobservable due to

the lack of associated smell. These cylinders are also risky to move around due to their weight. In laboratories with flammable organic solvents, operating a Hydrogen cylinder is unadvisable.

The advantage of using a Hydrogen Generator instead is the risk of explosion is fully eliminated. The digital flow display helps detect any leakage or abnormalities in the Hydrogen Generator or the connecting pipe or the Gas Chromatography systems. This special feature is not available with most suppliers and therefore, makes the Mayura Analytical Hydrogen Generator a special equipment.



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If a disparity in flow is observed between the GC and the display pressure, the generator can be immediately turned off to check for any leaks. Another very important safety parameter is that our Hydrogen Generator has a built in leakage sensor. Any internal leak will shut off the power to the Generator and a buzzer will start to beep continuously to draw user attention.

The Hydrogen gas is produced on demand. So when the generator is turned off, the production automatically turns off with little or no Hydrogen gas being stored in the equipment. This makes the Hydrogen Generator a risk free way to ensure high purity, constant pressure Hydrogen to the GC. The generator is highly economical to operate and maintain. Easy installation process makes this equipment almost a plug and play device, which can be used around the clock.

### USPs of the Hydrogen Generator

- Hydrogen is produced through the process of electrolysis of water, which produces pure Hydrogen at very low cost
- Visual water level indication with 'MIN' and 'MAX' markings helps ensure timely top up of water
- The built in auto shut off ensures high safety upon detection of any leakage
- The generator instantly produces dry Hydrogen with high constant purity better than 99.9995%
- The instant gas production is maintained at constant temperature, which is displayed on the front
- Low internal storage volume, which further enhances the safety
- Low footprint as the generator occupies a small table space
- Comes in two models with 0-300 ml/ min and 0-600 ml/ min flow rate

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#### **Specifications**

• Flow Rate

<ul> <li>Model H2 I</li> </ul>	:	0-300 ml/min
<ul> <li>Model H2 II</li> </ul>	:	0-600 ml/min
<ul> <li>Pressure (Fixed)</li> </ul>	:	4 Kg/cm <sup>2</sup> (0-60PSI)
<ul> <li>Pressure Indication</li> </ul>	:	Gauge
<ul> <li>Flow Indication</li> </ul>	:	Digital Display
<ul> <li>Hydrogen Purity</li> </ul>	:	>99.9995%
<ul> <li>Gaseous Impurities</li> </ul>	:	Not Detectable
<ul> <li>Moisture Content</li> </ul>	:	< 5 PPM
<ul> <li>Nitrogen Content</li> </ul>	:	< 1 PPM
<ul> <li>Oxygen Content</li> </ul>	:	< 1 PPM
• Water Consumption at full capacity	:	25 ml/hr @ 500 ml/min
Dimensions (H x W x D) in mm	:	350 x 420 x 230
<ul> <li>Weight</li> </ul>	:	10 KGs approx.
<ul> <li>Operating Voltage</li> </ul>	:	220 V AC, 50 Hz
<ul> <li>Power Consumption</li> </ul>	:	200 watts

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