PRODUCT DATASHEET

PEM Hydrogen Generator for Gas Chromatography

On-site PEM hydrogen for GC carrier and fuel gas





DETAIL – CONTROL DISPLAY

OVERVIEW

The Tech Inc. PEM Hydrogen Generator for Gas Chromatography (model TI-H2-300) makes hydrogen from deionised water at the gas chromatograph (GC), for use as carrier gas or as fuel for the flame ionisation detector. A proton-exchange membrane (PEM) cell splits the water electrically, which means no liquid caustic electrolyte and no hydrogen cylinders in the laboratory.

MODELS AND CONFIGURATIONS

- **TI-H2-300** – PEM hydrogen generator for GC carrier and fuel gas.
- **Fuel-gas duty** – hydrogen for flame ionisation detectors.
- **Carrier-gas duty** – dried hydrogen as GC carrier gas.
- **With zero air** – the GC Gas Station supplies hydrogen and zero air from one unit.

TYPICAL DESIGN DATA

Hydrogen output	Sized to the GC duty, or to client specification
Outlet pressure	Up to 7 bar (PEM cell rating), or to client specification
Hydrogen purity	To the GC instrument specification
Feed	Deionised water, with mains power to client specification
Electrolysis	PEM, with no liquid caustic electrolyte
Safety	Internal leak detection, pressure relief and automatic shut-down
Electrical safety	Designed to IEC 61010-1 or client specification
Service	Yearly service plan

APPLICATIONS

GC carrier gas, flame ionisation detector fuel, refinery and gas plant laboratories, petrochemical quality control, environmental testing, and pharmaceutical and food laboratories.

KEY ADVANTAGES

- **No hydrogen cylinders** – the generator holds only a small volume of hydrogen at any time
- **Water and power only** – no caustic electrolyte to handle or top up
- **On-demand supply** – hydrogen made as the GC draws it
- **Built-in safety** – leak detection and automatic shut-down
- **Yearly service plan** – preventive maintenance included with every generator

Designed and built by Tech Inc. · **Part of the Davey Group since 1990**

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