# Hydrogen Generators

Eliminate high pressure hydrogen cylinders from the laboratory by generating a continuous source of UHP hydrogen gas for applications such as:

- GC-FID, NPD, FPD, TCD, ELCD, HALL
- GC-carrier gas
- THA

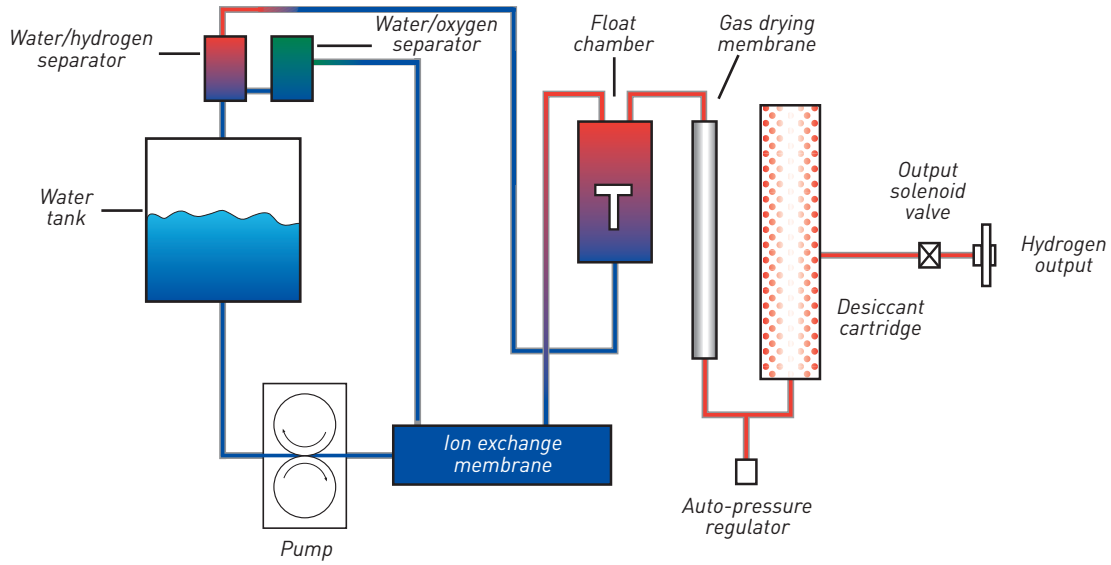
## Benefits

- **Continuous supply of GC quality hydrogen gas on demand**
- **Ultra compact design**
- **Improved productivity and chromatography results -** Hydrogen is a faster carrier gas and more sensitive when compared to helium, reducing analysis times by 25 to 35% without significant loss of resolution
- **Extended column life -** Hydrogen, when used as a carrier gas, requires lower elution temperatures and thus improves the column service life
- **Safety -** Hydrogen production at low pressure and only when required, eliminates the risks of explosion. Eliminates problems relating to handling gas cylinders.
- **Improved laboratory safety -** Through automatic leak and low water detection, remote start/stop/alarm and elimination of long gas lines
- **Economy -** No gas cylinder rental, no price inflation
- **Increased efficiency in the laboratory -** 24 hour operation; no interruption of analysis due to cylinder changes
- **No caustic solutions required**
- **Recommended by major instrument manufacturers**

## Technical Features

- Self test fault diagnosis with digital display and audible alarm: detection of internal and external $H_2$ leaks, $H_2$ overpressure, water level, water conductivity, display of $H_2$ product flow and total flow
- Simplified use and attention by easy access to maintenance components (desiccant cartridge and de-ionisation cartridge)
- Improved independent operation due to its 5 litre water tank
- Automatic water filling (optional feature)
- Generator protected against the harsh lab environment by means of domnick hunter patented filters (avoids rapid degradation of the generator water quality and thus increases service life)

# How the generator works




**domnick hunter hydrogen generators use a special ion exchange membrane to produce a flow of ultra-pure hydrogen. Use of the electrolytic dissociation process enables water to be broken down into hydrogen and oxygen.**

**The oxygen is released into the air, while the hydrogen is retained to form the product flow.**

**A long-life desiccant cartridge purifies the hydrogen even further so that it attains the desired grade of purity and ensures constant reproducible results.**

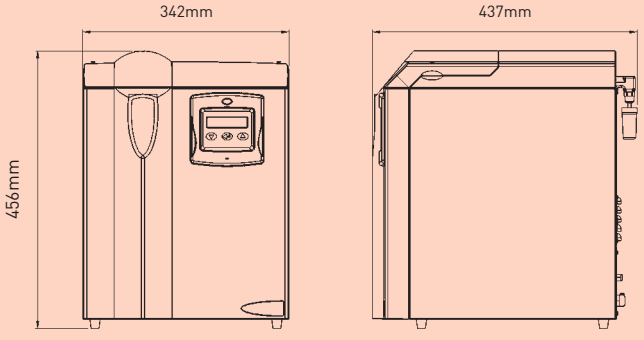
**Having proved its worth in thousands of systems throughout the world, this technology eliminates the need to use liquid electrolytes, such as caustic solutions; since it only uses de-ionised water and electricity, continuous operation is assured.**

## Technical Specifications

| Model | 20H | 40H | 60H |
|---|---|---|---|
| $H_2$ Flow rate cc/min | 160 | 250 | 500 |
| $H_2$ Purity * | >99.99999% | | |
| $H_2$ Pressure (electronically adjustable) | 0-7 bar (0-100 psi) | | |
| De-ionised Water Quality | >1 Megohm | | |
| Water Capacity | 5 Litres | | |
| Supply Voltage | 90 - 264 Volts (47 - 63 Hz) | | |
| Electrical Consumption | 100W | 170W | 240W |
| Weight (Empty) | 24Kg (53 lbs) | | |
| Drying Type | Desiccant | | |
| Ambient Operating Temperature | +5 - 40°C (41 - 104°F) | | |
| Outlet Connector | ⅛" Compression (Swagelok) | | |

* When used with palladium purifier

## Dimensions

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