

SAFE, GREEN, AND SUSTAINABLE HYDROGENATION IN CONTINUOUS FLOW



**CLEAN
HYDROGENATION**



**CONTINUOUS
FLOW TECHNOLOGY**




**IMPROVED
SAFETY**

The Phyto-Flow™ is an easy-to-use continuous flow reactor platform designed for safe and green high temperature/high pressure reactions, enabling the synthesis of new compounds in a parameter space not achievable with standard laboratory equipment. Its versatility allows the users to fine-tune the reaction parameters, choose from loop or column reactors in various sizes, and with this, create a reaction system that suits the chemistry best.

The H-Genie® is a compact hydrogen generator that utilizes patented technology to produce 4.0 purity hydrogen gas from water at pressures up to 100 bar (14.5–1450 psi) at flow rates up to 1 NL/min. The system is designed to be used in any laboratory as a safer and simpler replacement for hydrogen cylinders and to expand your chemistry capabilities.

The combination of the H-Genie® with the Phyto-Flow™ offers unparalleled hydrogenation synthesis, scale-up, or catalyst testing capabilities.



Designed to be used safely in any research and development, production, or catalyst screening lab, this hydrogenation platform combines in situ high pressure hydrogen generation from water with high temperature reactor capability, and a precise gas data monitoring system. Chemists and chemical engineers can now run hydrogen-based experiments with homogeneous or heterogeneous catalysts up to 450°C and 100 bar, without the need for hydrogen cylinders or hydrogen infrastructure.

FEATURES

Safe: Hydrogen gas is generated on-demand, from the electrolysis of water, up to 1 NL/min gas flow rate. Safe enough to use in any lab. No more cylinders.

Versatile: Up to 450°C and 100 bar. Homogeneous and heterogeneous reactor sets are available.

Scalable: Range from self-fillable cartridges or pre-filled CatCarts® for catalyst optimization, to synthesis from milligram to kilogram scale quantities.

Green: Reusable catalyst system, gas generation from water, effective process, clean products.

Precise: In-built mass flow controller to monitor hydrogen pressure and flow rate data. All data is exportable.

Fast: Temperature, hydrogen pressure and flow rate can be changed quickly on the fly for rapid optimization.

Simple: Easy to set up and learn how to use.

Modular: System set-ups can be customized as per customers' needs.

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