



# ON-DEMAND HYDROGEN GENERATION



**ON-DEMAND  
HYDROGEN  
GENERATION**



**IMPROVED  
SAFETY**



**WIDE CHEMICAL  
SPACE FOR  
SYNTHESIS**

**UTILIZING OUR PATENTED, AWARD WINNING TECHNOLOGY, HYDROGENATION CAN BE PERFORMED SAFELY IN A STANDARD LABORATORY FUME HOOD**

## NO CYLINDERS - NO PROBLEM

- 100 bar pressure
- Monitors hydrogen consumption
- Compatible with batch and flow reactors, gas chromatographs and balloons

## IMPROVED SAFETY

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 (1450 psi) and 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.

## FEATURES

- Hydrogen generation from deionized water - no cylinders needed
- High pressure to expand your chemistry capabilities
- Compatible with any reactors, gas chromatographs and balloons
- Simple setup and use: Click & go
- Run multiple reactors with one H-Genie®
- Compact footprint to save space
- Internal hydrogen detector for improved safety
- Variable flow rate, pressure, and volume control
- Monitors hydrogen consumption with data export functionality
- Suitable for any laboratory or fume hood

## TECHNICAL PARAMETERS

Hydrogen production rate	0.1 - 1 NL/min
Output pressure range	1-100 bar
Gas purity	≥ 99.99% (4.0 @100 bar)
Water purity	Deionized water with recommended purity of < 1 µS/cm
Water consumption rate	< 200 ml/hr
Water reservoir capacity	Internal: 3L
Recommended environment	Ventilated laboratory fume hood
Power requirements	Mains: 100V to 240V AC, 47-63Hz
Power consumption	Max. 1500 VA
Dimensions (H x W x D)	345 mm × 365 mm × 460 mm
Weight	38 kg
Outlet parameter	Tubing OD: 1/8", the output valve can accept any connector with a male thread Press 1/8"
Operating and storage/transport environment	10-35°C; < 80% RH

## HYDROGENATION PLATFORM FOR SCALING UP CONTINUOUS FLOW REACTIONS

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

Designed to be used safely in any discovery, development, process, petrochemical 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.



For more information, please visit  
[www.thalesnano.com](http://www.thalesnano.com)  
 LinkedIn: /company/thalesnano-inc-  
 Twitter: /thales\_nano  
 Instagram: /thalesnano\_inc/  
 Facebook: /ThalesNano/

**ThalesNano Inc.**  
 Záhony utca 7. | H-1031 Budapest | Hungary  
**Phone:** +36 1 880 8500  
**Fax:** +36 1 880 8501  
**Email:** sales@thalesnano.com  
[www.thalesnano.com](http://www.thalesnano.com)

**US Office**  
 50 S. Penn St. Suite B-2  
 Hatboro PA. 19040  
 USA  
**Phone:** 215-534-3365  
**E-mail:** USAsales@thalesnano.com

