

The H-Genie[®]

Benchtop Hydrogen Generator

Simple, accessible, monitored Hydrogen production



Take the pain out of Hydrogenation

Compact high pressure, benchtop Hydrogen generator that produces 99.99% pure, 100 bar hydrogen safely through water electrolysis.

Typical applications include:

- Filling reaction vessels to a required volume or pressure, then maintaining the H₂ pressure as it is consumed during a reaction
- Supplying high-pressure H₂ for flow chemistry reactions
- Filling H₂ balloons
- Monitoring H₂ consumption during reactions - data is saved onto a USB stick for post-reaction analysis
- Multi-use laboratories, where simple 'plug-and-play' design allows swapping between systems

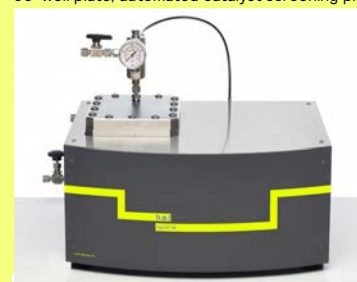
FlowCAT
High pressure flow catalysis platform



CAT 7, 18 and 24
Manual catalyst screening reactor



DigiCAT 96
96-well plate, automated catalyst screening platform



BioXplorer 5000
Automated bioreactor system



BioXplorer 100 and 400
Automated parallel biotechnology platform



PolyCAT
Automated parallel catalyst screening platform



ChemSCAN
Automated parallel catalyst screening and development platform



The **H-Genie®** is a compact standalone high-pressure benchtop Hydrogen generator that produces Hydrogen safely from water electrolysis. The **H-Genie** is designed to be the first smart Hydrogen generator for chemists. The **H-Genie** is the only Hydrogen generator that offers variable gas flow rates, reaction monitoring, and pressure capability for expanded and faster chemistry.

When safety or cost concerns make it difficult to use compressed Hydrogen gas cylinders or prohibit the installation of fixed-line H₂ supplies, the **H-Genie** is an ideal solution to providing high-pressure Hydrogen for both batch chemistry and flow chemistry applications. The **H-Genie** is designed to easily fit within a standard fume hood and requires no special training to start using, unlike Hydrogen cylinders. Real-time monitoring and data recording capabilities allow the **H-Genie** to enter a safe shut-down mode if it detects an issue such as a pressure drop. Using just water as a starting material, the **H-Genie** generates Hydrogen gas (H₂) at 100 bar (1450 psi), at flow rates of 0.1-1 NL/min

Specification

| | |
|------------------------------------|--|
| Hydrogen Production Rate | 0.1 – 1 NL/min |
| Output Pressure Range | 1 – 100 bar |
| Gas Purity | Gas Purity ≥99.99% (4.0 purity at 100 bar) |
| Water Purity | Deionized water, recommended purity of < 1 µS/cm |
| Water Consumption Rate | < 200 cm ³ /hour |
| Water Reservoir Capacity | Internal: 3 L |
| Power Requirements | Mains 100V to 240 V AC, 47-63 Hz |
| Power Consumption | max. 1500 VA |
| Unit Dimensions (H x W x D) | 345 X 365 X 460 mm |
| Unit Weight | 38 kg |
| Outlet | Tubing OD: 1/8" – The output valve can accept any 1/8" pipe as it is an 1/8" compression fitting |
| Operating environment | 10-35 °C; <80% Relative Humidity |
| Compatible Instruments | <ul style="list-style-type: none"> - FlowCAT: Bench-top, high pressure flow catalysis platform - ChemSCAN: Bench-top, automated parallel catalyst screening and development platform - PolyCAT: Bench-top, automated parallel catalyst screening platform - BioXplorer 100 and BioXplorer 400: Bench-top, automated parallel biotechnology platform - BioXplorer 5000: Automated, lab-scale bioreactor system |



About H.E.L Group

H.E.L Group's mission is to work together with chemistry, safety and biotechnology experts to engineer and unleash the full potential of the scientific community. To this end, H.E.L develops and manufactures innovative scientific instruments and software designed to optimize the efficiency, safety and productivity of key processes in chemistry and biology applications.

The H.E.L team of 70 includes highly skilled process and software engineers, based at their extensive research and manufacturing facilities in the UK, as well as sales and support offices around the world.

H.E.L has a long history of solving complex challenges for customers. For more than 30 years the Company has worked with businesses and laboratories globally, providing proprietary automated solutions for the pharma, biotechnology, chemical, battery and petrochemical sectors.

H.E.L is accredited with ISO 9001 : 2015

- With a strong focus on the customer, our **service and support** enables our customers to keep working efficiently
- Our **wide range of customizable products** put the customer at the heart of what we do, with solutions designed around their needs



H.E.L Group

UK - London
US - New Jersey
China - Beijing
India - Thane

e: sales@helgroup.com
e: sales@helgroup.com
e: info@helchina.com
e: info@helindia.com

t: +44 208 7360 640
t: +1 609 912 1551
t: +86 10 8210 1033
t: +91 22 4153 3317

For a complete listing of all global contacts, visit www.helgroup.com/contact/

 H.E.L Group  HEL.Ltd  hel_group

Copyright ©2021, H.E.L Group. All rights reserved. h.e.l® and labCONSOL® are registered trademarks of H.E.L Group. H-Genie, ScavCart, and ThalesNano Energy are all TradeMarks of ThalesNano Energy Zrt. All other trademarks are the property of their respective owners.

H.E.L Group is a distributor for the H-Genie® and ScavCart™ products.

www.helgroup.com