

HySTAT™ Hydrogen Station

Bringing onsite hydrogen production to the next stage



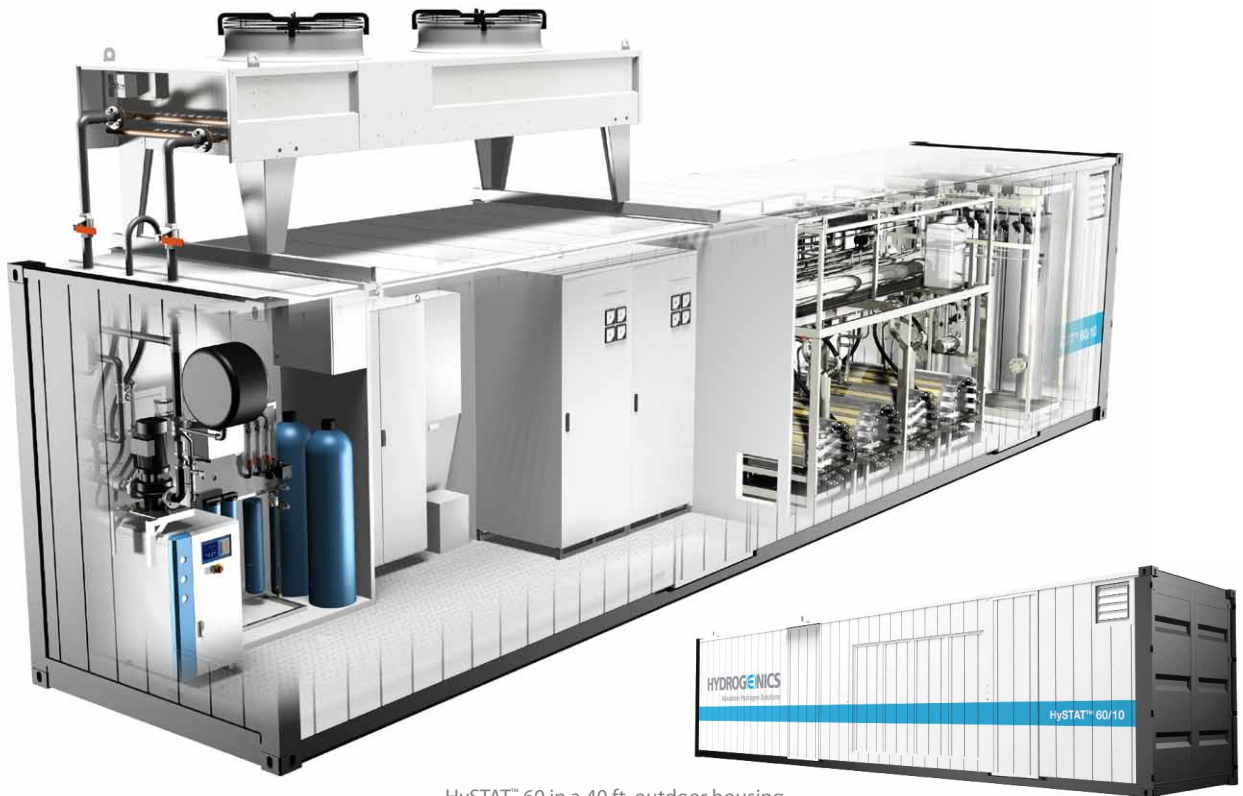
Hydrogenics is a world leading provider of clean hydrogen products and infrastructure. The HySTAT™ water electrolyser supplies hydrogen to a wide range of industrial applications, fueling stations and renewable energy systems.

The HySTAT™ uses our advanced electrolysis technology to split water into hydrogen and oxygen using only electricity. The process is quiet, reliable, safe and completely emission free. Contact us to find out how the HySTAT™ technology can conveniently and economically produce your hydrogen.

HySTAT™ Outdoor System:

a turnkey solution

Our outdoor system is integrated to manage the utilities and operation of the electrolyser reducing worry and minimizing operator time. The HySTAT™ is available in 4 capacities: 10, 15, 30 and 60 Nm³/hour of hydrogen (oxygen can also be used as an option).



HySTAT™ 60 in a 40 ft. outdoor housing

OUTDOOR HOUSING FEATURES

- The process skid with cell stacks where the electrolysis reaction occurs to produce hydrogen and oxygen
- Control panel with PLC and Human Machine Interface
- Hydrogen purification system (99.998% purity)
- Transformer/rectifier for AC to DC conversion & on-demand production
- Closed loop water cooling systems for both electrolyte and hydrogen gas cooling
- Water treatment system (Reverse Osmosis)
- Heating and ventilation
- All mechanical & electrical interconnections inside the outdoor housing

HySTAT™'s BENEFITS:

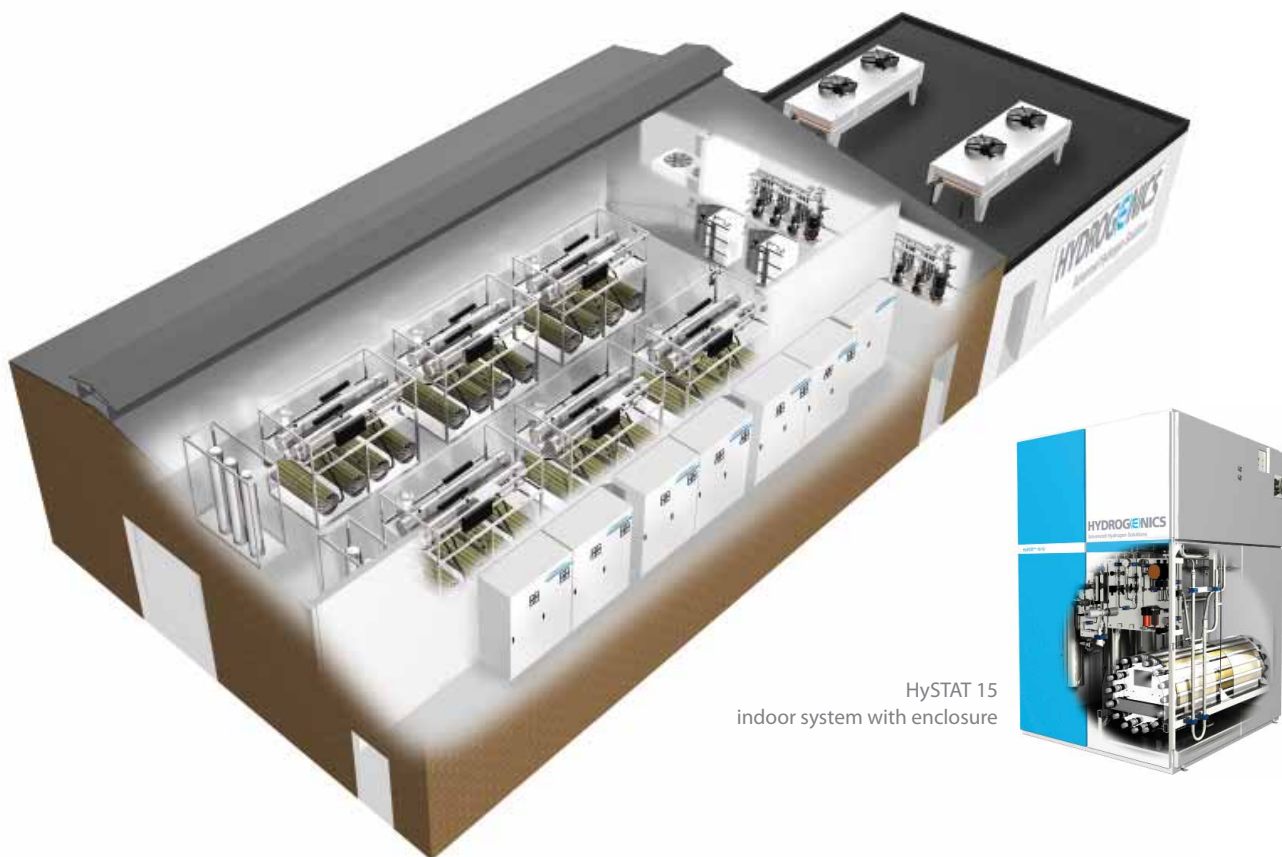
- Easy to install & fully automated operation
- On-site and on demand hydrogen production
- High purity up to 99.999%
- Pressurized production (10 barg) without compressor
- High efficiency (all-in 5.2 kWh/Nm³ H₂) and reliability
- Low maintenance cost (limited moving parts)
- Full control of your H₂ supply
- Carbon free - Emission free
- Low operating temperature (70-75°C)
- Worldwide start-up and after-sales service
- 100's of references worldwide
- ISO 9001, 14001 and OHSAS certified

HySTAT™ Indoor Solution:

a modular and flexible approach

The HySTAT™ product range includes 4 models for production of 10, 15, 30, 60 Nm³/h of hydrogen. Our technology is modular and easily scalable inside a building to reach capacities in excess of 500 Nm³/h, allowing economies of scale. The utilities can be supplied by the customer or come from our peripheral systems. The final design is optimized to provide redundancy and ease of maintenance.

The following is an example of a HySTAT™ plant producing 360 Nm³/h of hydrogen.



HySTAT 15
indoor system with enclosure

INDOOR 360NM³/HOUR HYSTAT™ HYDROGEN PLANT INCLUDING:

- 6 Skids producing 60Nm³/h each
- 2 Dry coolers
- 2 Control panels to have two separate lines allowing redundancy
- 12 Power racks
- 2 Hydrogen purification systems (HPS)
- 2 Chillers
- 2 Feed water treatment systems

HYDROGENICS EXPERIENCE

Hydrogenics' 60-year history with hydrogen installations will help you successfully shift to more advanced, cost effective and alternative energy sources. HySTAT™ is designed to the highest safety standards and in compliance with all major international standards (CE, GOST, NRTL).

HySTAT™ Specifications



OUTDOOR SOLUTION

	HySTAT™ 10	HySTAT™ 15	HySTAT™ 30	HySTAT™ 60
Flow range (Nm ³ /h)	4-10	6-15	12-30	24-60
Operating pressure (barg)	10 or 25	10	10	10
Estimated power consumption all in (kWh/Nm ³)	5.4	5.4	5.2	5.2
Ambient temperature range	-20°C to +40°C (-4°F to 104°F); -40°C (-40°F) as an option			
Purity	99.998% (99.999% as an option); O ₂ < 2ppm; N ₂ < 12 ppm Atm. dew point: -60°C or -76°F (-75°C or -103°F as an option)			
Voltage and Frequency	3 X 400 / 480 / 575 VAC; 50 / 60 Hz			
Included in Scope of Supply	Process part, Control panel, Power rack, Hydrogen Purification System (HPS), Water treatment system, Chiller, Dry cooler, All interconnections in the container			
Dimensions (W x H x D)	20 ft. Housing 6.1 x 2.9 x 2.4 m	30 ft. Housing 9.1 x 2.9 x 2.4 m	40 ft. Housing 12.2 x 2.9 x 2.4 m	



INDOOR SOLUTION

	HySTAT™ 10	HySTAT™ 15	HySTAT™ 30	HySTAT™ 60	Large Scale
Flow range (Nm ³ /h)	4-10	6-15	12-30	24-60	120 and larger
Operating pressure (barg)	10 or 25	10	10	10	10
Estimated power consumption (kWh/Nm ³)	5.0	5.0	5.0	4.9	4.9
Ambient temperature range	+5°C to +40°C (41°F to 104°F)				
Purity	99.9% (99.999% as an option) H ₂ O saturated, O ₂ < 1.000 ppm				
Voltage and frequency	3 X 400 / 480 / 575 VAC; 50 / 60 Hz				
Included in scope of supply	Process part, Control panel, Power rack				
Options	Hydrogen Purification System (HPS), Water treatment system, Chiller, Dry cooler				
Dimensions Process part (W x H x D)	1.67 x 2.53 x 1.81 m (for HySTAT™ 10,15 and 30); 3.22 x 2.53 x 1.81 m (for HySTAT™ 60 and larger)				



Romenia: Float Glass



Ukraine: Metallurgy



Turkey: Float Glass



South Africa: Chemicals

Hydrogenics is also a leading manufacturer of fuel cells and integrated systems for backup power and mobility applications such as buses and forklifts. For more information about our full line of products and services go to www.hydrogenics.com or contact us at sales@hydrogenics.com

We're Ready.

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