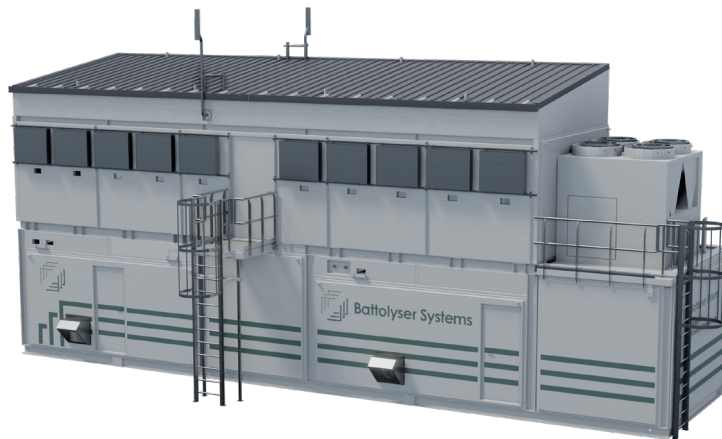


# UNLOCKING 100% GREEN HYDROGEN



A Battolyser® at its core, is an electrolyser with battery functionality powered by patented Battolyser® technology. With electrodes composed of iron and nickel, we provide a solution that operates at 100% flexibility and is intrinsically safe and robust. The Battolyser® signifies a breakthrough in technology and is available in modules of 2.5MW, 5MW and 25MW.

## Specifications

Module	2.5MW	5MW	25MW
Availability date	Delivery Q1 2025	Delivery Q3 2025	Delivery Q2 2027
Electrolysis capacity	2.5MW	5MW	25MW
Electricity storage capacity	0.8MWh	1.6MWh	6.25MWh
<b>Hydrogen production</b>			
Electrolysis efficiency Stack System	49.2 kWh/kg 53.2 kWh/kg	49.2 kWh/kg 53.2 kWh/kg	46.3 kWh/kg 50.1 kWh/kg
Net production rate Volume of H <sub>2</sub> Mass of H <sub>2</sub>	556 Nm <sup>3</sup> H <sub>2</sub> /hr 50 kg/hr	1,113 Nm <sup>3</sup> H <sub>2</sub> /hr 100 kg/hr	5,913 Nm <sup>3</sup> H <sub>2</sub> /hr 532 kg/hr
Operating range (electrolysis)	0 – 100%		
Operating temperature	45° Celsius		60° Celsius
Ramp-up rate Ramp-down rate	20% of nominal capacity/s 20% of nominal capacity/s		
H <sub>2</sub> purity H <sub>2</sub> delivery pressure	Up to 99.999% (Grade 5.0) 30 barg		
Water quality requirements	ISO 3696:1995 Grade 2, ASTM D1193-6 type 2		
<b>Battery function</b>			
Round trip efficiency Stack System	70 % 68 %	70 % 68 %	80 % 78 %
Operating range (battery)	0 – 100%		
Charging rate Discharging rate	1C C/4	1C C/4	1C C/2
<b>Physical characteristics</b>			
Build	Skid	Stick	
Footprint (including stacks, Balance of Stack & clearances)	75 m <sup>2</sup>	285m <sup>2</sup>	770m <sup>2</sup>

Specifications are subject to change and dependent on operating conditions and configuration. Please contact Battolyser Systems for the solution that best suits your needs.

Battolyser® is a registered trademark of Battolyser Systems.

# Why Battolyser®

The Battolyser® is the world's first electrolyser that can instantly switch on and off following intermittent renewable energy production. It unlocks the full power of renewable energies getting us to net zero faster and more affordably. With its 100% flexibility, Battolyser® unlocks new ways to significantly reduce your LCOH. It allows production of hydrogen when cheap renewable power is available and to simply turn off production when renewable power is not available. This way it delivers 100% green hydrogen. In addition, its integrated battery functionality unlocks revenues from trading electricity and lowers required investments in off-grid renewable projects. This results in the lowest possible LCOH.

Battolyser® is intrinsically safe in any operational mode, even at low and rapidly changing loads. Its patented nickel-iron technology is inherently robust and has industry leading efficiency and durability.



## Flexible

- By instantly following the intermittent nature of renewable energies, the Battolyser® ensures the production of 100% green hydrogen and enables the lowest cost green hydrogen in comparison to conventional electrolysers.
- It's the world's only commercially available electrolyser with battery capacity.
- Battolyser® produces green hydrogen only when electricity prices are low enough and can sell electricity back to the grid when prices are high to generate additional revenues.



## Safe & robust

- Intrinsically safe and robust in any operational mode (charge, discharge, idle) without causing any system degradation.
- The electrodes have a regenerative catalyst that ensures robust and long-lasting electrolysis.
- Battolyser® electrodes are proven in nickel-iron batteries that have been in operation for over 40 years.
- Battolyser® stacks can be easily recycled at end of life.



## Versatile

- Battolyser Systems' technology is a platform technology that due to its flexibility and battery capacity can enable lowest cost green hydrogen for a wide array of applications and use cases.
- Typically, Battolyser Systems can deliver solutions that add value in on and off-grid applications as well as in flexible and base load hydrogen offtake applications.

## Unlocking 100% green hydrogen



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