



Product sheet
Battolyser® 500



Mission #truegreen

We are on a mission to realize a transition towards a net zero world in which energy is secure and affordable.

Green hydrogen will play an important role in achieving this mission as it can be used to decarbonize hard-to-abate sectors.

But hydrogen is only truly green if it is produced using renewable energy. Battolyser® 500 is a flexible electrolyser which produces hydrogen from renewable sources with high efficiency, easily handles any fluctuations in supply, and even allows you to sell power back to the grid at peak prices.

This ensures the delivery of the lowest possible Levelised Cost of Hydrogen and hydrogen that is truly green.

Imagine... Always Clean Energy

Why Battolyser®?

As we move towards a net zero energy system, we encounter many challenges. Power supplies become more non-steerable, leading to congested grids and volatile prices. We also need access to green molecules to decarbonize the hard-to-abate sectors.

Battolyser® allows operators to produce true green hydrogen at the lowest Levelised Cost of Hydrogen and helps to balance the grid.

The combination of flexibility, high efficiency and industrial robustness makes the Battolyser® uniquely suitable for the scale of the energy transition. Battolyser® is the only electrolyser that complies with existing and upcoming EU regulations (the RED II Delegated Act, Net Zero Industry Act and Critical Raw Materials Act).



Efficient

- Up to 90% H₂ generation efficiency (stack-level).
- Efficient material use, with an uptime of nearly 100%, functioning primarily as an electrolyser and at peak price moments as an electricity store pushing your green power to the grid.



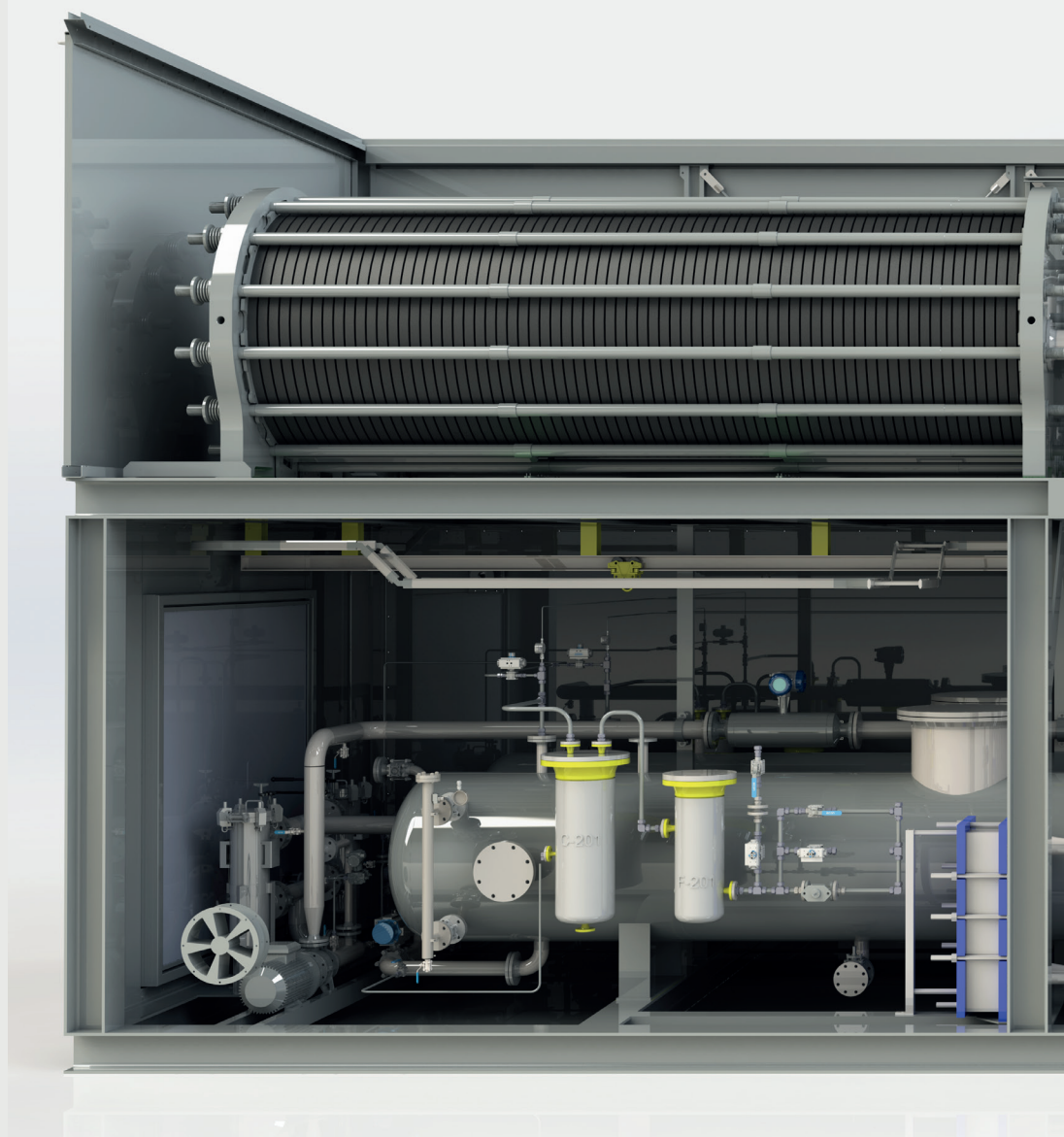
Flexible

- Lower average cost of power, operators can choose to buy power only when prices are low.
- Ability to arbitrage between hydrogen and power markets.
- Sufficient flexibility to allow for hydrogen production from only variable renewable energy sources.
- Complies with strictest rules for temporal correlation and local electricity production.
- Reduced need for back-up power, given flexibility and built-in electricity storage capacity.



Scalable

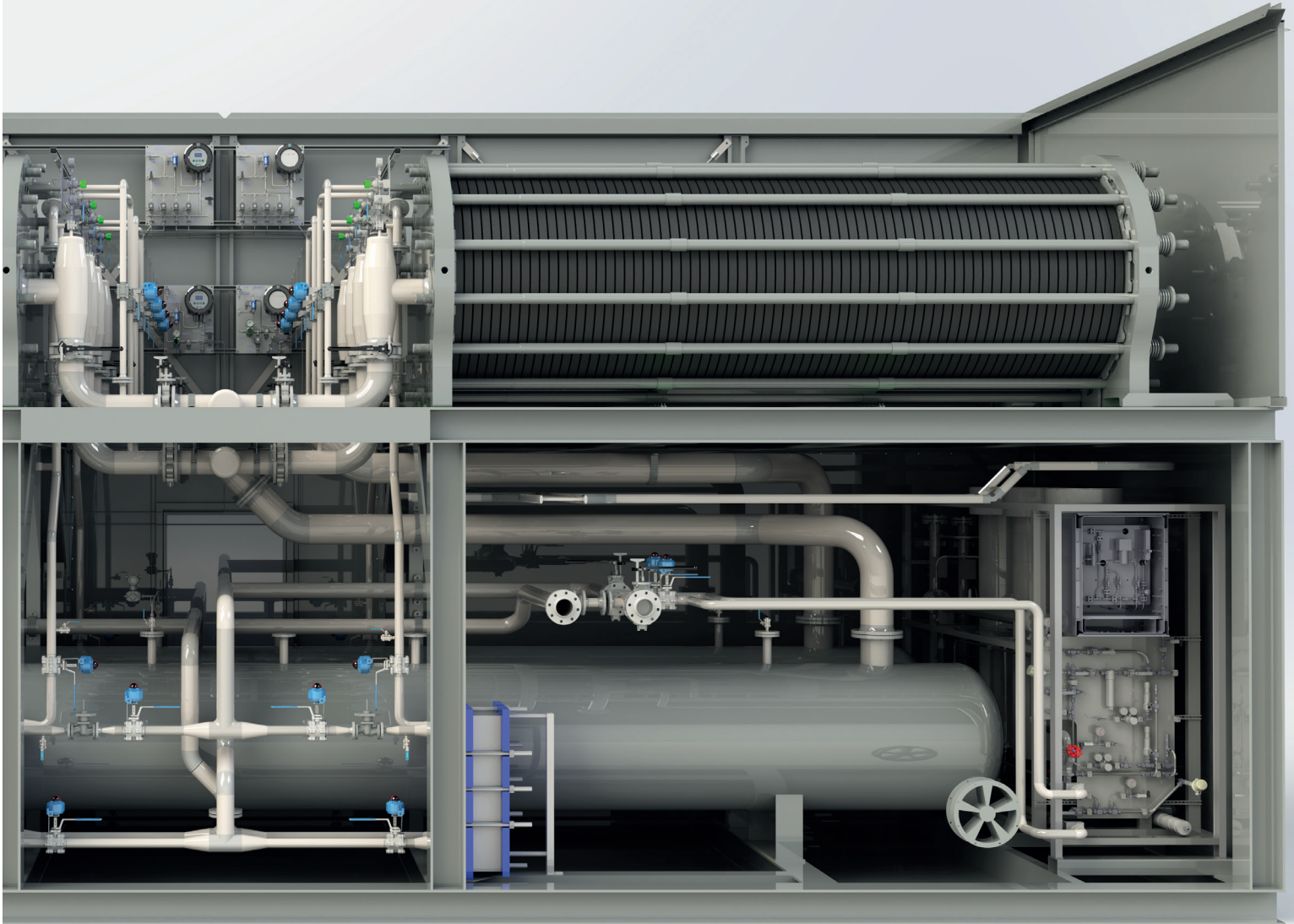
- Long lifetime, no electrochemical degradation due to stable chemistry. The low operational temperature ensures conditions are more benign, resulting in increased longevity.
- Use of abundant iron and nickel, no rare earth metals. All raw materials sourced locally and without geopolitical constraints.
- PFAS-free and designed for easy recycling at end-of-life.



Battolyser® 500 offering

Battolyser Systems offers Battolyser® 500 modules of up to 5 MW with 4 to 10 stacks. These units are skid-mounted with fully equipped balance of system.

A Battolyser® 500 unit commercial demonstration unit offers a unique opportunity to validate the Battolyser® technology and business model for implementation at scale.



The scope of supply for a Battolyser® 500 includes: stacks, control system, power supply unit and product purification equipment. Power grid connection, permissions, civils works and any utility supplies are out of scope.

Battolyser® 500 Product Specifications

Number of stacks per module	4 to 10
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Stack capacity

Electrolysis	0.5 MW
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Electricity storage	0.25 MWh
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Stack efficiency

H ₂ production	49 kWh/kg
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Electricity storage	80% ¹
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Operating range

Electrolysis	0-100%
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Electricity storage	5% - 100%
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H₂ output conditions

Purity ²	99,9995%
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Pressure	30 barg
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¹ Roundtrip

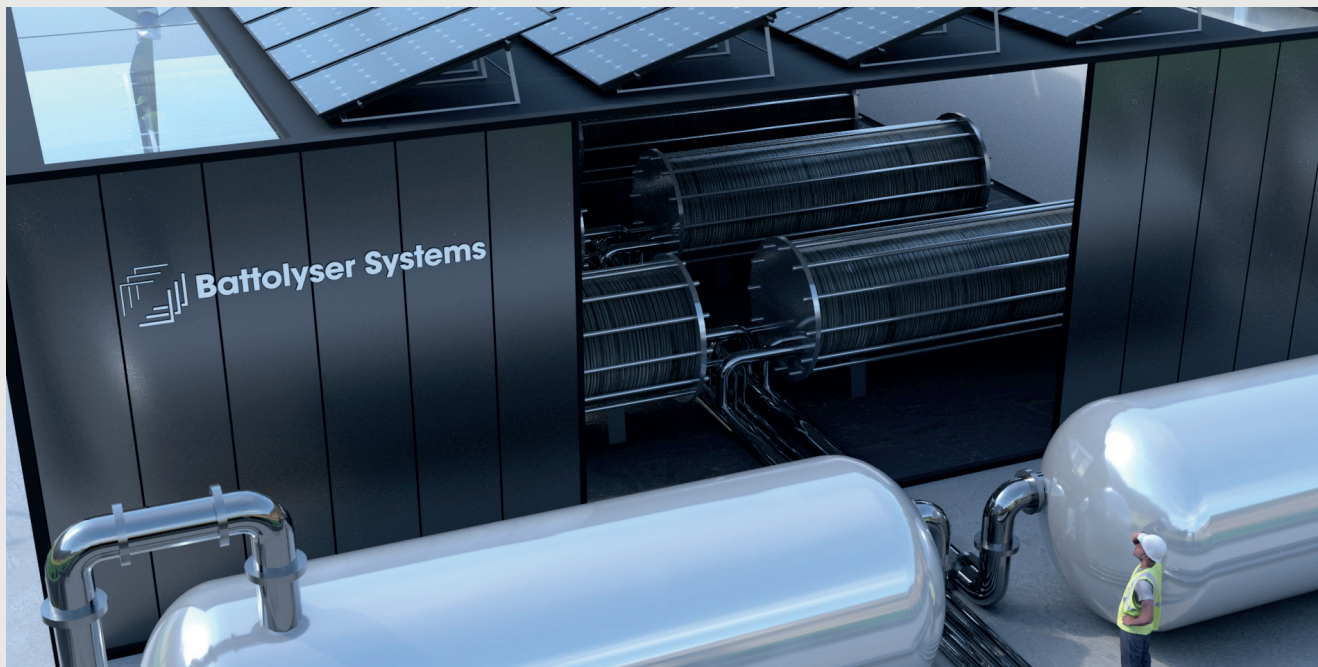
² Post purification and drying



Roadmap to Battolyser® 1000

Battolyser® 1000 is being developed for deployment in large scale applications.

Battolyser® 500 customers will be prioritized for Battolyser® 1000 production capacity.



Battolyser® generation	Battolyser® 250	Battolyser® 500	Battolyser® 1000
Ready for delivery	Q2 2024	Q4 2024	Q4 2025
Number of stacks per module	4	4 to 10	10+
Electrolysis capacity (per stack)	0.25 MW	0.5 MW	1 MW
Electricity storage (per stack)	0.25 MWh	0.25 MWh	0.25 MWh
H ₂ production (per MW input)	Up to 19 kg/hr	Up to 19 kg/hr	Up to 20.5 kg/hr
Project delivery	Skid-mounted	Skid-mounted/ Stick-built	Stick-built
Delivery scope	Stacks + Balance of stack	Stacks + Balance of stack	Stacks + Power Supply Unit + Control System

Battolyser® is a registered trademark of Battolyser Systems.



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