BLOOH SOLUTION
LTD.

BS – PLATINUM-BASED

ELECTROLYZERS

HIGH-EFFICIENCY HYDROGEN SYSTEMS
THROUGH PLATINUM INNOVATION

www.blooh-solution.com

HIGH-EFFICIENCY ELECTROLYZERS FOR A GREEN HYDROGEN FUTURE

Hydrogen is a key pillar of the energy transition—but only if it is produced sustainably. As a clean storage solution for renewable energy, hydrogen is gaining importance in both industry and mobility. Efficient and cost-effective production is therefore critical to driving the global shift toward climate-friendly energy systems.

BLOOH Solution's platinum-based electrolyzers are engineered to optimize green hydrogen generation through cutting-edge materials science and catalytic precision. The use of platinum ensures high reaction yield, long system lifespan, and stable operation under variable load conditions.

Our systems can be flexibly integrated into existing energy infrastructures and are suitable for both on-grid and off-grid applications.

Whether in centralized industrial plants or decentralized energy hubs—our electrolyzers enable clean hydrogen production at an industrial scale with minimal environmental impact.

TECHNOLOGICAL EDGE OF BLOOH SOLUTION

BLOOH Solution's electrolysis systems are built on applied electrochemistry, catalyst innovation, and hydrogen integration. Our platinum-coated electrodes offer superior electrochemical reactivity, reduce energy consumption, and increase current density.

The electrode architecture is designed for optimal gas distribution and thermal stability, which extends component lifespan and minimizes maintenance. Thanks to advanced cell construction, our systems ensure precise gas separation, scalability, and industrial-grade durability.

KEY ADVANTAGES

High efficiency with minimal energy loss

Long service life with minimal performance degradation

Chemical resistance for harsh operating environments

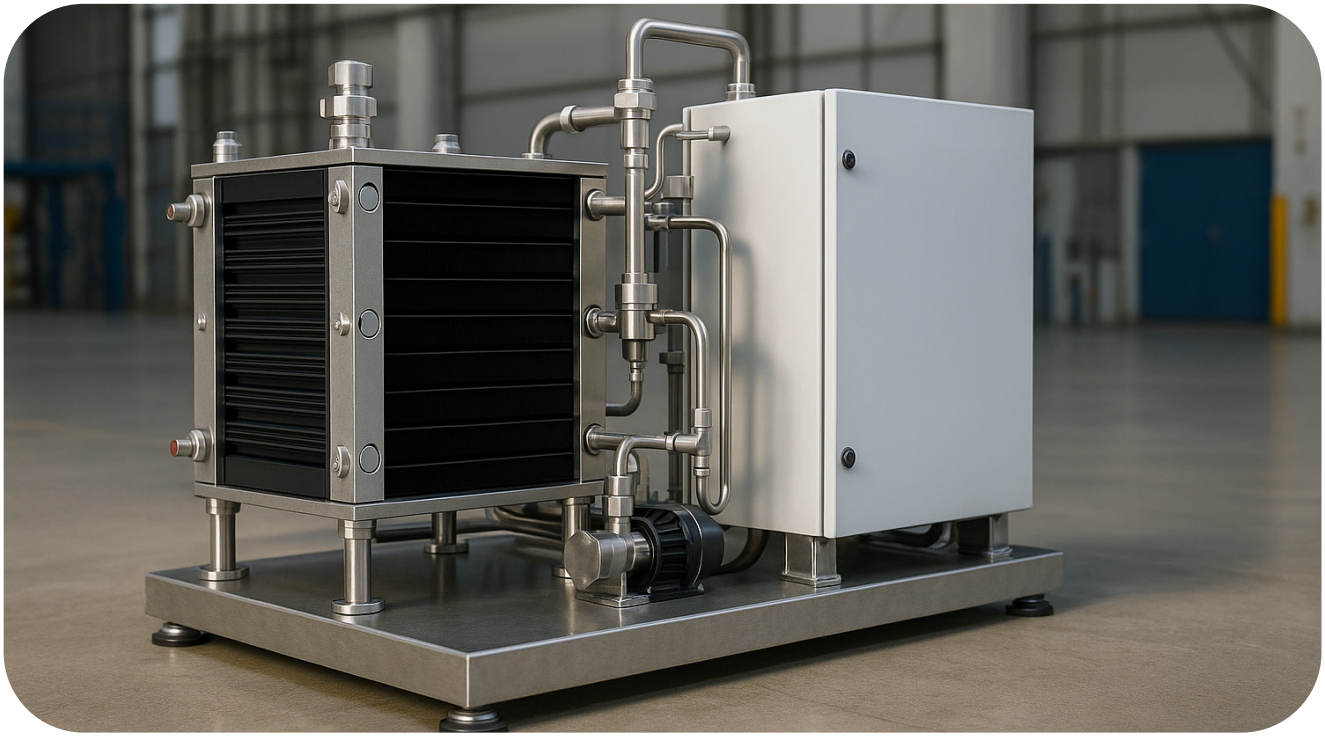
Compliant with EU standards and global hydrogen targets

Through continuous internal research and pilot projects under real-world conditions, we validate our performance metrics and ensure compatibility with renewable energy sources and regulatory frameworks.

PORTFOLIO

HP-PEM 100 – COMPACT PEM ELECTROLYZER

A compact, high-performance PEM-based electrolyzer for decentralized hydrogen production. Seamlessly integrable with renewable energy sources, it delivers high-purity hydrogen with outstanding efficiency.



TECHNICAL SPECIFICATION

Hydrogen Production: 100 Nm³/h

Power Consumption: ~500 kW

Efficiency (HHV): 70–74%

Cooling: Closed-loop water system

Electrode Coating: High-activity platinum-iridium blend

Application: Integration into decentralized energy grids, hydrogen refueling stations

This model is ideal for regional energy projects, municipalities, or industrial parks aiming to generate clean hydrogen on-site.

PORTFOLIO

HP-PEM 500 – MODULAR SYSTEM FOR LARGE-SCALE OPERATIONS

Scalable PEM system for reliable production of large hydrogen volumes. Containerized for easy transport and rapid deployment, even in remote or offshore environments.

TECHNICAL SPECIFICATION

Hydrogen Production: 500 Nm³/h

System Voltage: 800–1000 V DC

Footprint: 12.5 m × 3.5 m (container solution)

Stack Lifetime: >60,000 operating hours

Automation: Fully integrated with PLC/SCADA

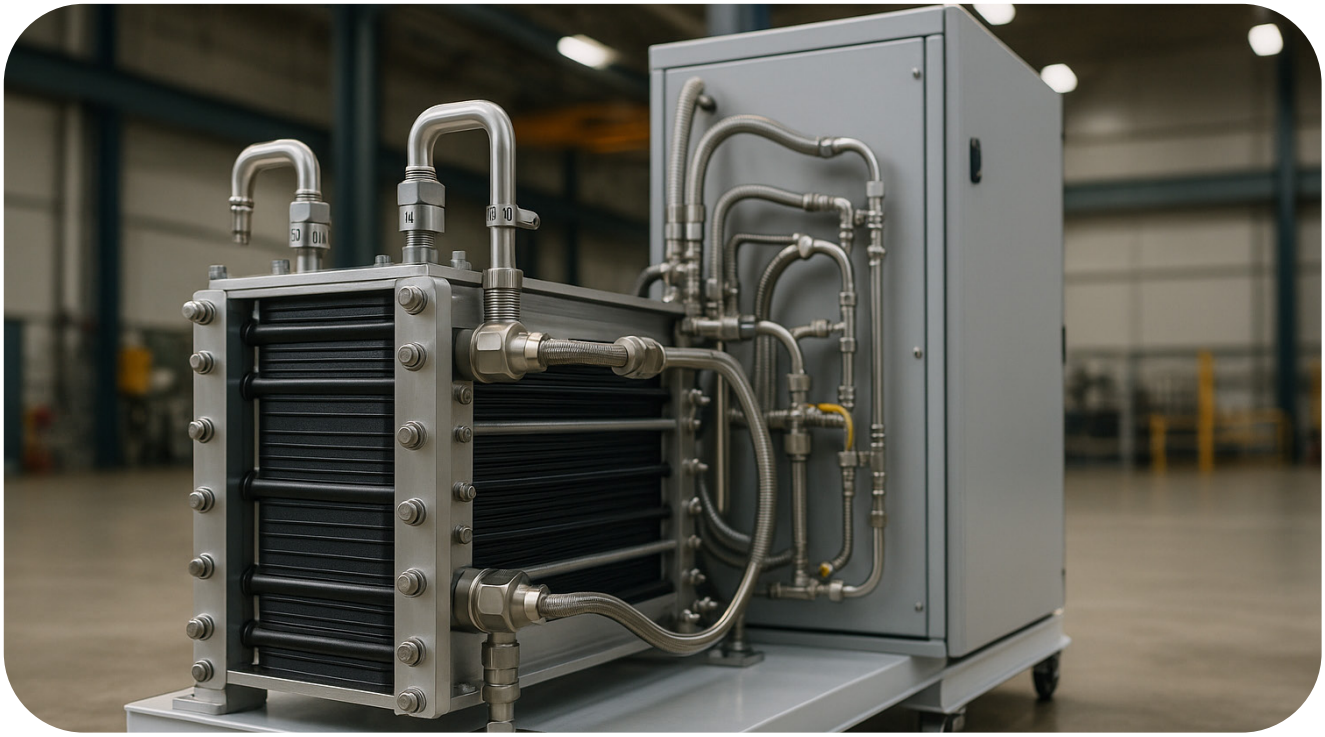
Application: Industrial hydrogen production, offshore platforms

With its modular design, this system is particularly well-suited for use in the chemical industry, energy supply, and hydrogen export projects.

PORTFOLIO

HP-ALKALI 300 – ALKALINE ELECTROLYZER FOR UTILITIES

A robust, cost-effective alkaline system for large-scale hydrogen production. Platinum-reinforced anodes ensure long-term stability and easy maintenance in chemical processing environments.



TECHNICAL SPECIFICATION

Hydrogen Production: 300 Nm³/h

Electrolyte: 30% KOH

Operating Temperature: 65–90°C

Cycle Stability: Stable over 20,000 operating cycles

Material: Nickel-plated steel frame with platinum-reinforced anodes

Application: Grid stabilization, chemical industry, refineries

Ideal for industrial operations requiring hydrogen for process heat or as a reducing agent—while maintaining high efficiency and long system life.

DRIVING INNOVATION FORWARD!

FOR MORE INFORMATION PLEASE CONTACT:

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