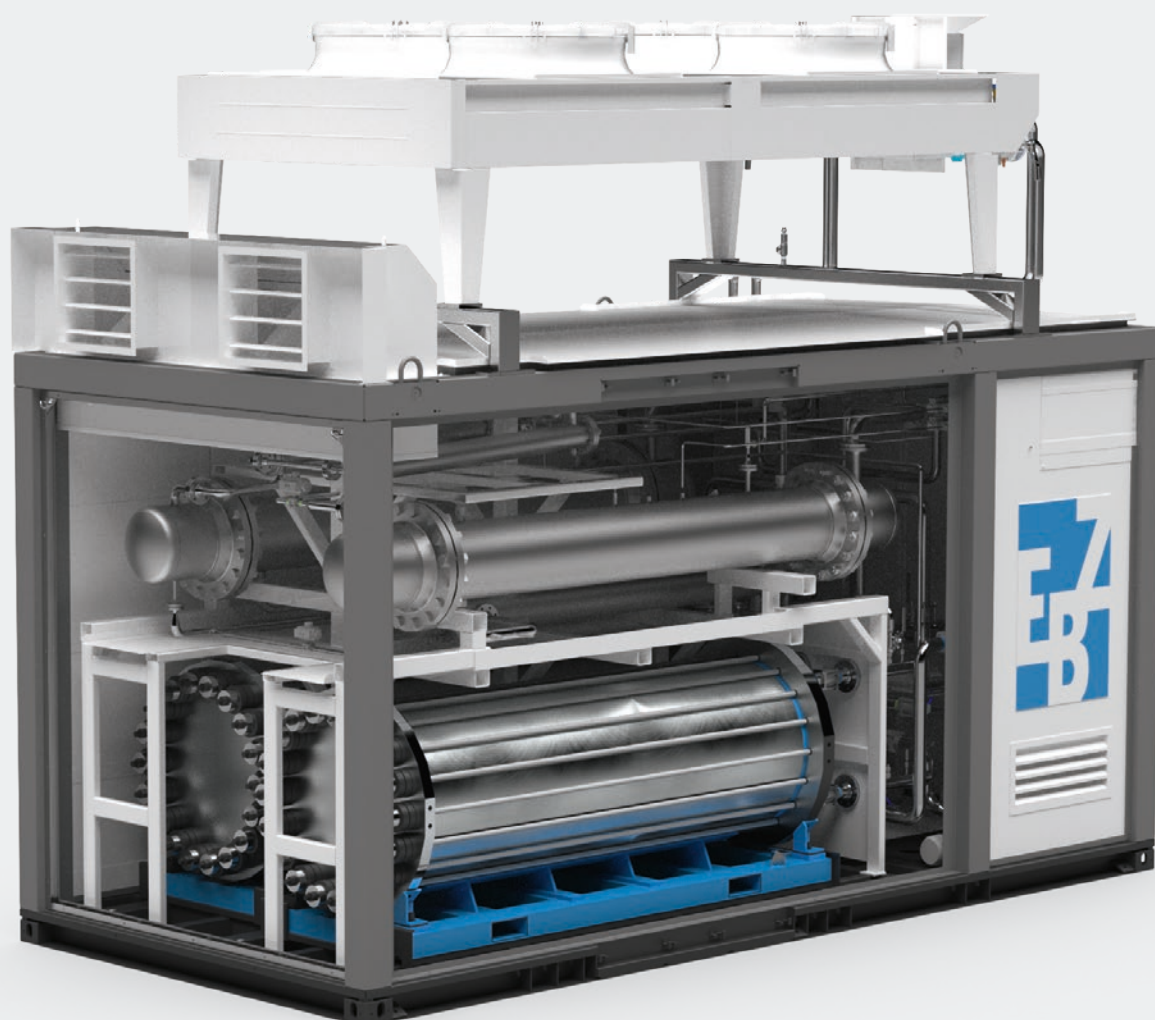




HYDROGEN.
CHALLENGE ACCEPTED!



EBZ ALKALINE ELECTROLYZER SYSTEM FOR GREEN HYDROGEN PRODUCTION



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ELECTROLYZER SYSTEM

DEVELOPMENT AND PRODUCTION OF PRESSURIZED ALKALINE ELECTROLYZER SYSTEMS

EBZ Group's pressurized alkaline electrolyzer systems provide optimal conditions for the cost-effective production of green hydrogen on an industrial scale.

By specializing in the development and manufacturing of pressurized alkaline electrolyzer systems, we are able to offer standardized, turnkey solutions that meet a wide range of requirements while allowing for customer-specific adaptations where needed.

Our extensive expertise in toolmaking and plant engineering enables EBZ to manufacture electrolyzer systems in series with consistently high quality. This is complemented by our in-depth expertise in chemistry, metallurgy and plastics technology.



The electrolyzer system is primarily characterized by the following properties:



HIGH HYDROGEN OUTPUT

With a rated power of 1 MW, hydrogen output can be up to 200 Nm³/h per system.



HYDROGEN PURITY

Dedicated electrolyte circuits on H₂ and O₂ side to enhance gas purity.



HIGH-PRESSURE ELECTROLYSIS

30 bar(g) hydrogen production boosts efficiency and cuts downstream compression costs.



HIGH DYNAMIC RANGE

Independent stack operation enables 10-100% dynamic load range.



HEAT RECOVERY

Heat from H₂ production can be recovered and utilized.



FOOTPRINT

Systems consist of two 20-ft containers or alternatively of a 40-ft container.



IDEAL FOR GRID- SUPPORTIVE OPERATION

Reaching 100% load from standby within seconds.



EU REGULATORY COMPLIANCE

Full compliance with the European Hydrogen Bank regulations – produced and assembled in Germany.



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ELECTROLYSIS STACK

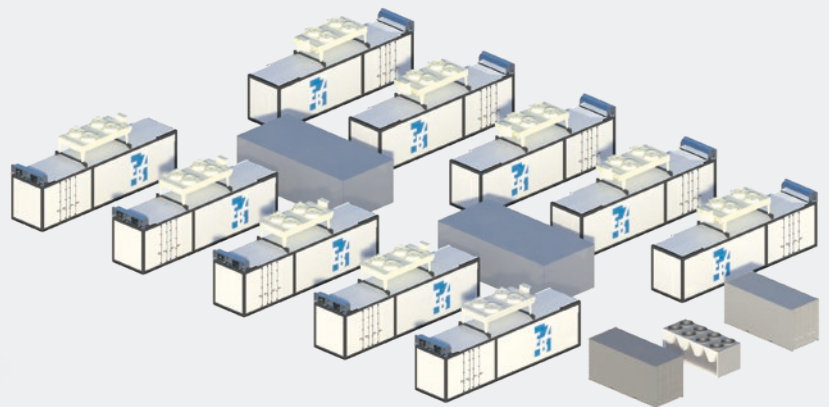
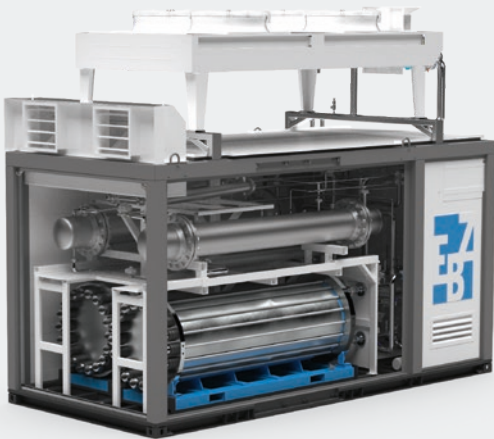
**THE STACK IS THE HEART OF AN ELECTROLYZER SYSTEM
AND PLAYS A KEY ROLE IN OVERALL PERFORMANCE**

High-performance electrodes:

- Coated with a highly functional, catalytically active layer.
- No use of precious metals.
- Developed in-house and manufactured in Ravensburg.

Patented cell frame:

- Robust construction for long-term durability under alkaline conditions.
- Integrated gas/electrolyte channels for use in pressurized electrolysis up to 30 bar(g).



SCALABILITY

**CONTAINERIZED SOLUTIONS AND LARGE-SCALE
HYDROGEN PRODUCTION FACILITIES**

Our pressurized alkaline electrolyzer systems are designed as containerized solutions. The standard 1 MW system is delivered in two 20-ft containers or one 40-ft container. For higher capacities, mul-

tiples 1 MW units can be combined. Depending on project size and requirements, systems can also be configured with a shared balance of plant to maximize efficiency and reduce overall costs.



**H₂ OUTPUT
PRESSURE**
30 bar



**INSTALLED
ELECTRICAL POWER**
1200 kVA (incl. BoP)



H₂ OUTPUT
200 Nm³/h
or 18 kg/h



**POWER
CONSUMPTION**
~ 56 kWh/kg
(on system level)



TOTAL FOOTPRINT
2x 20-ft container or
1x 40-ft container



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Our alkaline electrolysis technology is based on the research and development work of our cooperation partner Center for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW).



Baden-Württemberg

MINISTERIUM FÜR WIRTSCHAFT, ARBEIT UND TOURISMUS

invest**bw**

Our research and development is supported by the Baden-Württemberg Ministry of Economic Affairs, Labour and Tourism.



Federal Ministry
for Economic Affairs
and Climate Action

Our research and development is supported by the Federal Ministry for Economic Affairs and Climate Action.

EBZ ELECTROLYZER SYSTEM

<https://www.ebz-group.com/en/range-of-services/electrolyzer-systems>

