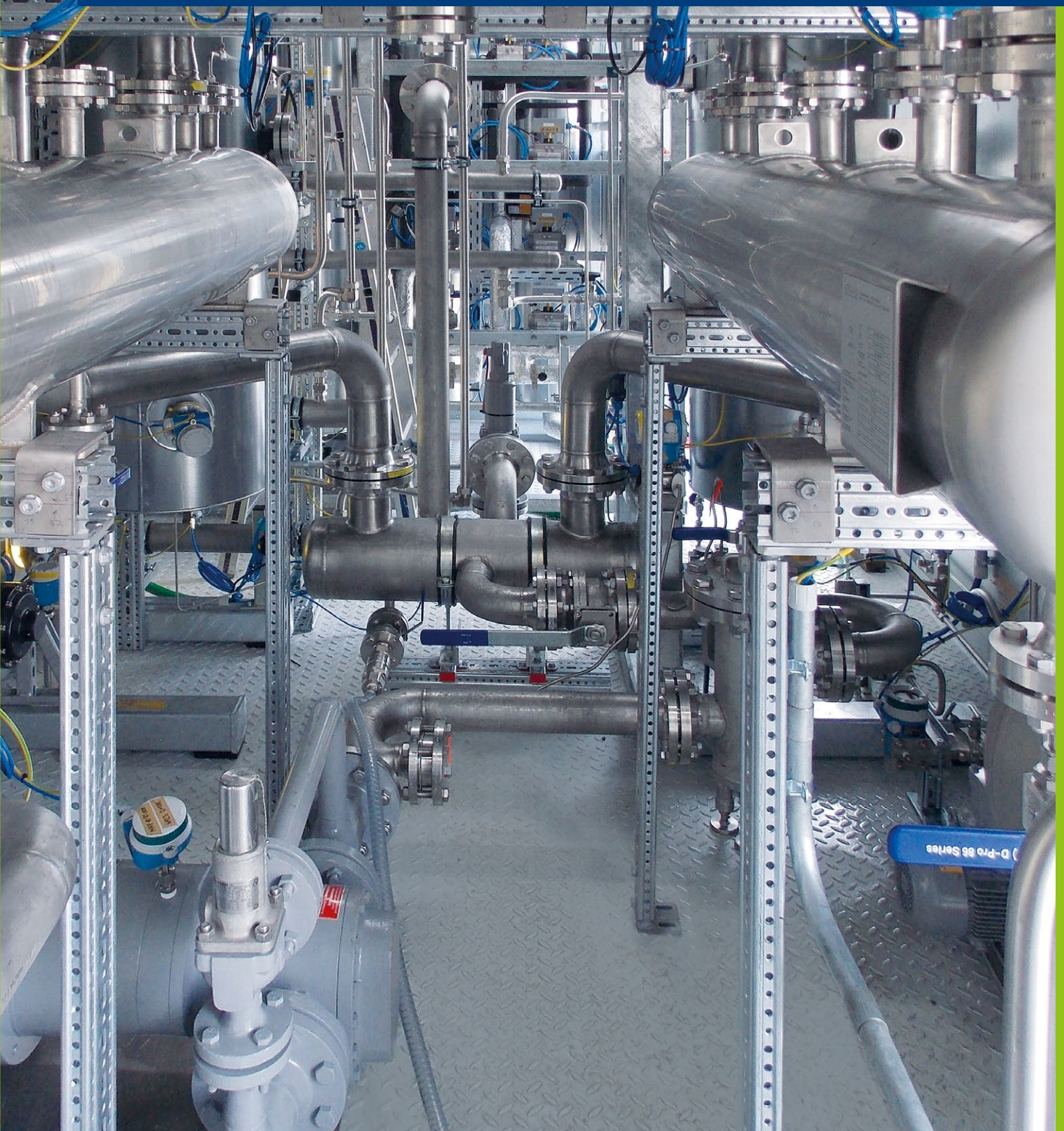


Hitachi Zosen
INOVA

HZI Alkaline Electrolysis – for Green Hydrogen Production



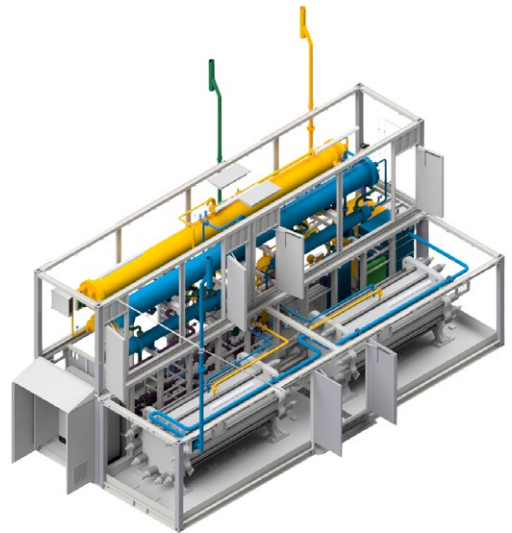
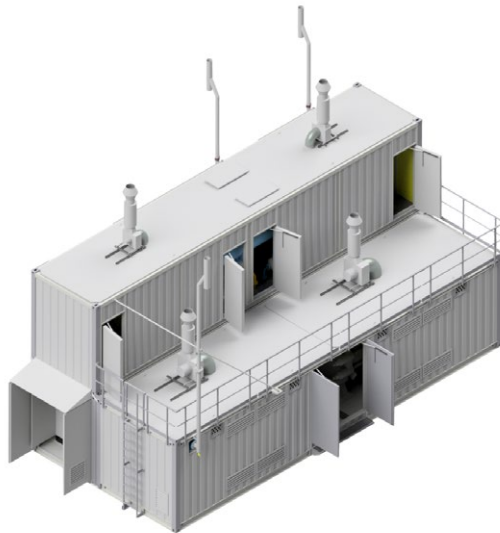
Electrolyser Technology for Optimised Hydrogen Production

Hitachi Zosen Inova's alkaline electrolyser is designed to convert water into hydrogen with the use of renewable electricity. As an advanced gaseous energy carrier, hydrogen is essential to help decarbonise mobility, industry and other energy sectors.

Leveraging our experience as system integrator, our proprietary electrolyser solutions are provided in standardised, modular configurations, and are fully integrated in customer's infrastructures as a turnkey plant. Our overall proposal encompasses hydrogen production, compression, storage, and distribution for gas off-take. We are a partner of choice throughout the project life cycle, from feasibility study and permitting support to engineering, execution, commissioning, supervision, and O&M service of complex hydrogen plants. This broad spectrum coverage allows us to offer a unique and cost-competitive solution to optimise levelized cost of hydrogen.

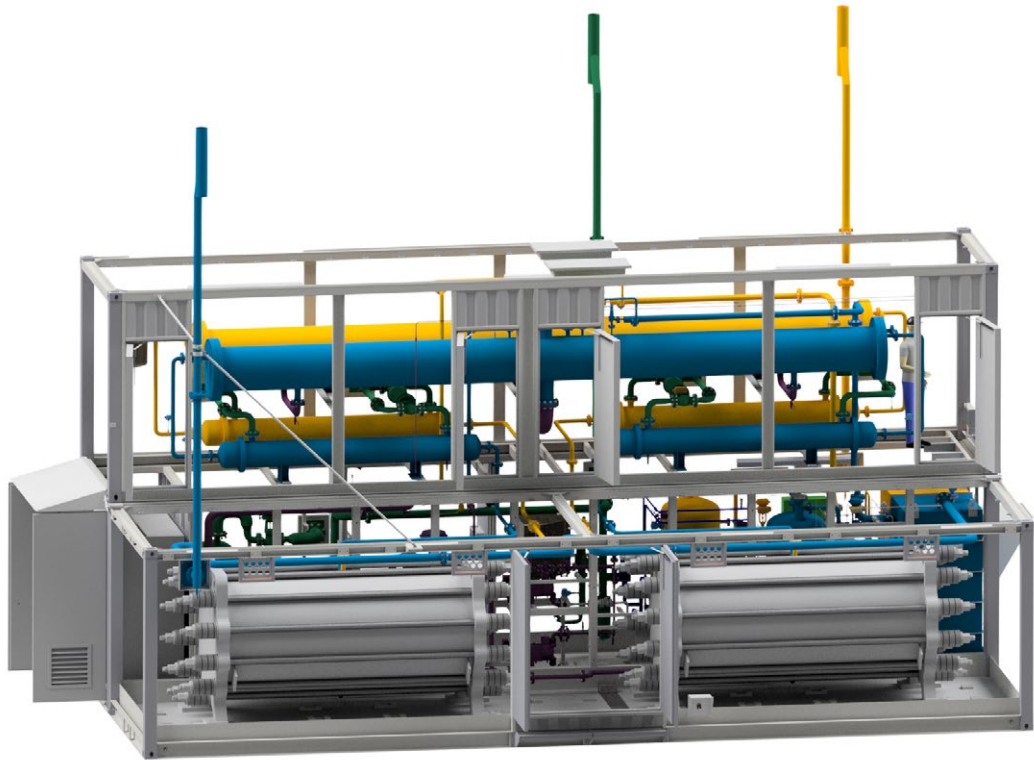
The HZI-electrolyser technology offers optimised energy conversion efficiency, versatility and scalability. Our proprietary technology and design allows us to offer one of the most robust and efficient alkaline electrolysers available today.

The result is consistently high hydrogen production, low power consumption and $\leq 99.999\%$ of pure compressed and dry hydrogen, ideal for further compression, storage, or direct use.



Your Benefits:

- › Production of high-quality gas
- › High conversion efficiency
- › Robust design and high operational availability
- › Dynamic operation possible
- › Providing flexibility and balancing energy
- › Compact footprint
- › Advanced control and automation systems
- › High safety standards
- › Environmental friendliness
- › Low operation and maintenance cost
- › On-time delivery
- › Europe-wide service network in cooperation with local partners



Our standard single module consists of a 550 Nm³/h containerized unit, ready for outdoor installation. The plants are qualified for fully dynamic as well as continuous operation modes. They can operate as stand-alone or as a cluster to meet the required volumes of green hydrogen, up to multi-MW scale.

The HZI electrolyser scope consists of power supply, electrolysis, water treatment and gas upgrading. As optional downstream components such as compression, storage, trailer filling and dispensers can be offered as add on.



Illustration of HZI turnkey solution – plant under construction – including electrolyser (550 Nm³/h), compression, storage and distributed via tube trailers. Compact small-scale plant for commercial operation.

General Product Data

Electrolysis		Module550
Type		pressurized alkaline electrolysis
Stack Pressure (H ₂ Output)	barg	15 (up to 900 as add on)

Output

Hydrogen at 100% load BoL	Nm ³ /h	550
Oxygen at 100% load BoL	Nm ³ /h	275
Water at 100% load BoL	litres/h	250

Gas Purity

Hydrogen	%	99.999
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Input

Power at 100% load BoL	MW	2,675
Tap Water at 100% load BoL	litres/h	800

Scope of Supply / Features

Electrical load range	%	20–100
Dynamics in operation	%/s	0.7
Grid connection	kV AC	6–36
AC power consumption 100% load BOL:	kWh/Nm ³	≤ 4.86
Total Footprint Area	m ²	18 x 20
Temperature Range (Outdoor)	°C	–20 up to +40
Housing		3 x 40' container (core module) 2 x 20' container (cooling & water) 1 x 40' container (AC/DC conversion) 3.5 x 2 m outdoor with roof (purification unit)
Design Standard		CE certificate