HydrogenPro

High-pressure alkaline electrolyzers

HydrogenPro is a global tech company contributing to the energy transition. We aim to develop the best and most cost-efficient electrolyzers in the world.
We are an original equipment manufacturer with a high focus on R&D. Our core product is high-pressure alkaline electrolyzers. Our system responds well to intermittent power, making it a perfect fit for large-scale installations paired with renewable energy.

We have been producing electrolyzers since 2013. Our technology supplies high-performance and zero emission energy, to help you reach your production and sustainability goals all at the same time.

TECHNICAL DATA (single electrolyzer stack)

H_2 / O_2 gas production	
Normal H_2 flow (dry)	1020 Nm^3/h
Flow range (load)	40%-100%
Delivery pressure	15 barg
H_2 purity out of stack	> 99.6% (100% load)
O_2 purity out of stack	> 99.5% (100% load)
Electrical requirements	
Guaranteed stack consumption (DC)*	4.6 KWh/Nm^3
Electrode lifetime	~ 10 years
Feed water and electrolyte	
Water conductivity required	0.1 S/cm
Demineralized water consumption	9.4 kg/ kg H_2
Electrolyte (KOH at 90°C)	30 wt%
Electrolyte per stack	20 tonnes
Dimensions & Weight	
Train footprint (LxHxW)	19.2 x 5.9 x 7.5 m
Stack dimensions (LxHxW)	8.4 x 2.9 x 2.7 m
Stack weight	72.2 tonnes

Certificates: CE, ASME, ISO 9001, ISO 14001, ISO 45001

*Target: 4.4 KWh/Nm^3

TECHNICAL DATA (Gas separation skid)

Capacity	Up to 2400 Nm^3/h
Dimension (LxWxH)	6.8 x 4.3 x 5.3 m
Weight	22.6 tonnes

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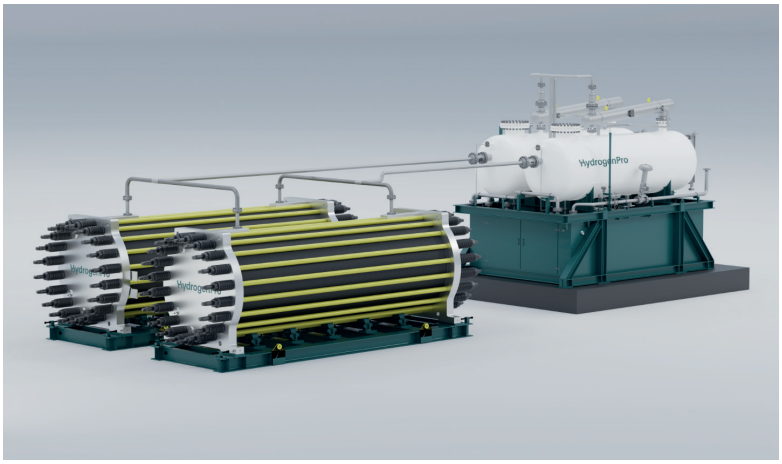
Large scale modular solution



OUR STANDARD SCOPE:

- Electrolyzers (in pairs, with a capacity of 1050 Nm³/h each, total 2100 Nm³/h)
- Gas separator units, with separate lye circulation systems and gas scrubbers with instrumentation
- Gas analyzers for detection of H_2 in O_2
- Gas analyzers for detection of O_2 in H_2

OPTIONS:

- Feed water tanks and pumps
- Lye mixing tanks and pumps

Sustainable

Scalable

Flexible

Powerful

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