

SOEC ELECTROLYZER

Sunfire-HyLink SOEC

Sunfire's solid oxide electrolyzers (SOEC) are highly efficient enabling lowest LCOH. Leading the way in SOEC development, Sunfire has implemented the most industrial demonstration projects worldwide.¹⁾



Most powerful standardized SOEC module ready for large-scale applications



Skid based and pre-assembled for minimal installation effort



Record efficiency of 88%_{LHV, AC} enabling lowest OPEX²⁾



Outdoor installation saving building and HVAC costs



Constant efficiency and constant nameplate capacity for maximum CAPEX utilization³⁾

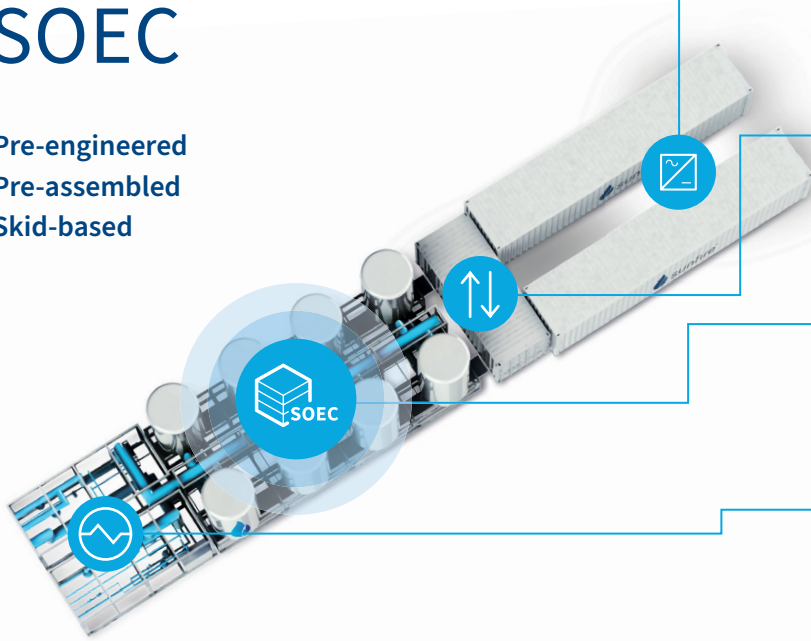
**For Industrial Applications:**

- Sustainable aviation fuel
- Green ammonia
- Green methanol
- Green methane
- Green refining
- Green steel
- And more

1) As of 10/2024 · 2) Expected efficiency of GEN 3 of Sunfire's SOEC electrolyzers. Efficiency of 84%_{LHV, AC} proven in EU-funded GrInHy2.0 project in 2022 with GEN 1 · 3) Efficiency and capacity guaranteed via Full LTSA (Long-Term Service Agreement) including all required stack replacements

Sunfire-HyLink SOEC

Pre-engineered
Pre-assembled
Skid-based



Power Supply Unit

- Highly-efficient AC-DC conversion
- Grid conformity

Module Control Unit

- Fully automated, remote-controlled operation
- LV power distribution and control logic

Plug & Play Hotboxes

- Efficient, powerful, and durable SOEC stacks
- Heat recuperation

Coldbox

- Feed gas control
- Product gas cooling

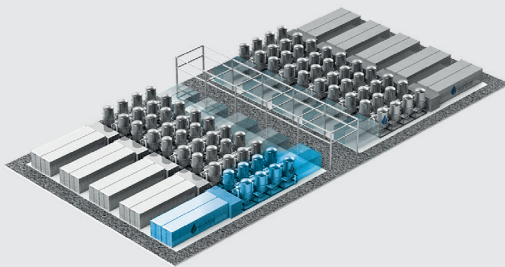
TECHNICAL SPECIFICATIONS

10 MW Module



100+ MW

Schematic graphic of a 100 MW plant



99.9 %

Hydrogen purity
after drying, before
cleaning¹⁾

88 % _{LHV, AC}

Record efficiency
of Sunfire-HyLink
SOEC GEN 3²⁾

Hydrogen Production

Nameplate capacity	284 kg/h · 3,153 Nm ³ /h
Flexibility	50–100 % and 10 %/min
Delivery pressure	0.1 bar(g)
Oxygen	2,251 kg/h · 99.9% purity

Electrical Efficiency

AC-Power	10.7 MW
Specific consumption	3.40 kWh/Nm ³ 37.8 kWh/kg
Hot standby	170 kW

Feed Gas

Steam consumption	12 kg/kg H ₂
Condition	> 3 bar(g) · > 150 °C
Composition	95 mol% H ₂ O · 5 mol% H ₂

Hardware

Stack service life	4 years
Footprint ³⁾	24 m ² /MW

This document is accurate as of 10 2024. All specifications relate to the standardized Sunfire-HyLink SOEC GEN 3 product. Graphics and illustrations may vary. · 1) ISO 14687 Grade B, Product gas is water-saturated with < 0.1 mol/mol depending on temperature · 2) Expected efficiency of GEN 3 of Sunfire's SOEC electrolyzers. Efficiency of 84 % LHV, AC proven in EU-funded GrInHy2.0 project in 2022 with GEN 1 · 3) Net Module footprint (34 x 7.5m)