



**Next generation electrolyzers
to enable the industry of tomorrow**



stargatehydrogen.com

Notes:



A world where green hydrogen is a commodity

“Affordable green hydrogen is essential to reduce carbon emissions in hard-to-abate sectors such as steelmaking, fertiliser and chemical industries.

Stargate’s breakthrough ceramic catalysts will increase the efficiency of the electrolysis process. Our electrolyzers will reduce the cost of green hydrogen thanks to high efficiency at low capital cost.

We are looking for partners on the journey of building the industry of tomorrow.”

Marko Virkebau
CEO of Stargate Hydrogen



Stargate develops electrolyzers with novel catalysts, called Stardust, with the support from IPCEI*

* IPCEI - Important Project of Common European Interest



stargate IPCEI

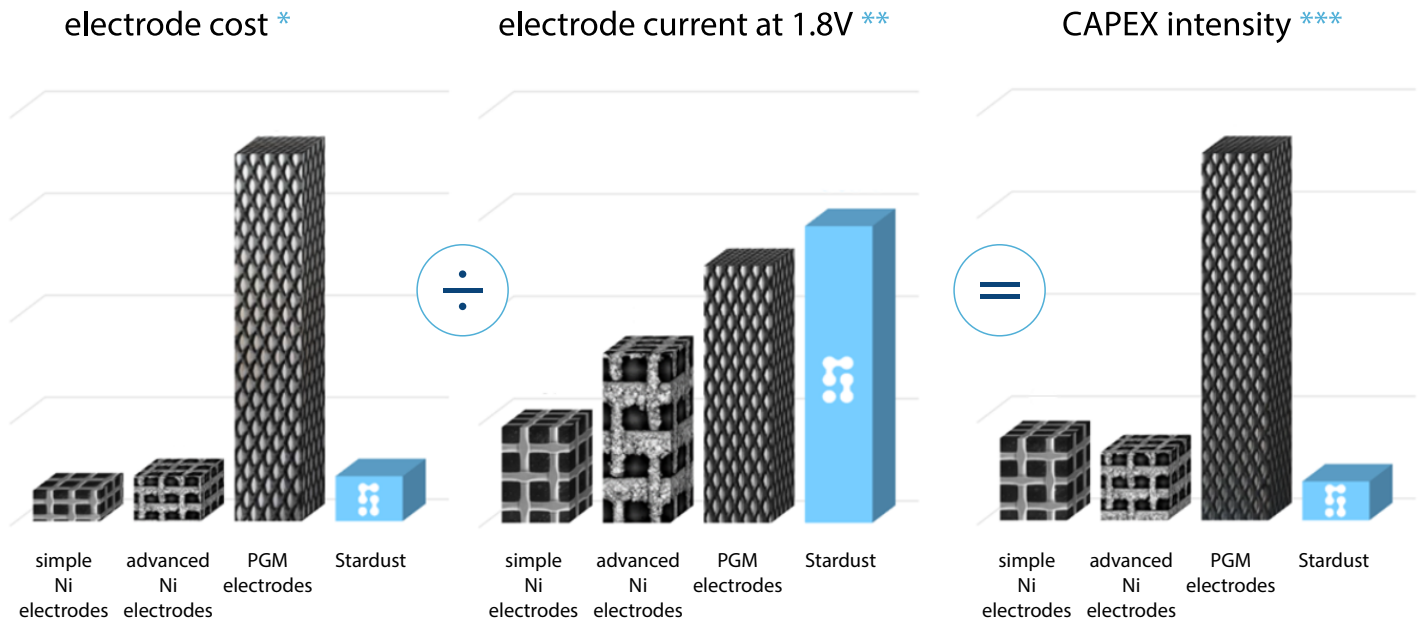


Stargate has patents pending in ceramic catalysts and stack design

Stardust electrode technology

Stargate's innovative catalyst material - Stardust - increases the current density of the electrodes used for green hydrogen production without additional investment.

Higher current densities allow to reduce the stack size and thus CAPEX.



* Based on commercial quotations for 1000 cm² electrodes.

** Electrode current is directly proportional to H₂ production. Measured at 5 barg, 80°C, 30% KOH, Zirfon diaphragm, Raney Ni as cathode. 1.8 V/cell = 47.9 kWh/kg H₂.

*** How much investment is needed at fixed H₂ production rate?

Pressurised alkaline stacks for system integrators.

Two footprints, unlimited possibilities

stellar
S E R I E S

The Stellar series is offered in two different stack sizes:

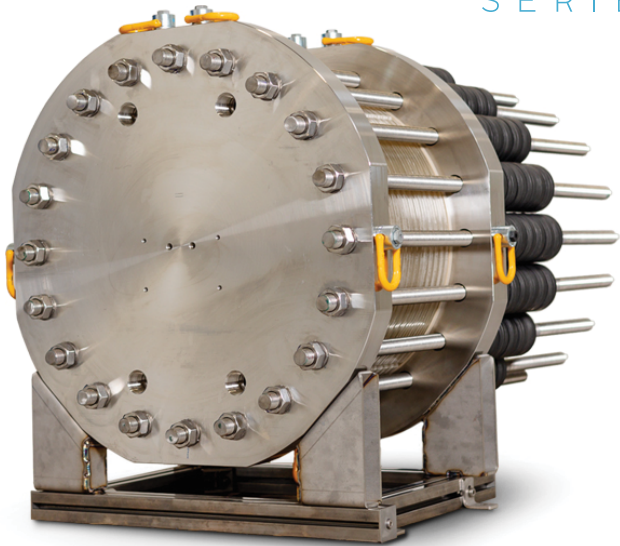
Customizable current density, cell count, and pressurized operation up to 32 barg

Stellar Light:

- Lab & Prototyping
- Small scale applications
- Max output 20 Nm³/h
- For lab use we offer smaller footprint stacks

Stellar Standard:

- Field applications
- Industrial installations
- Max output 100 Nm³/h



Customizeable configurations



Performance guarantee for 10 years



Full Integration support



Fast delivery
6 months lead time



Up to
100 Nm³/h

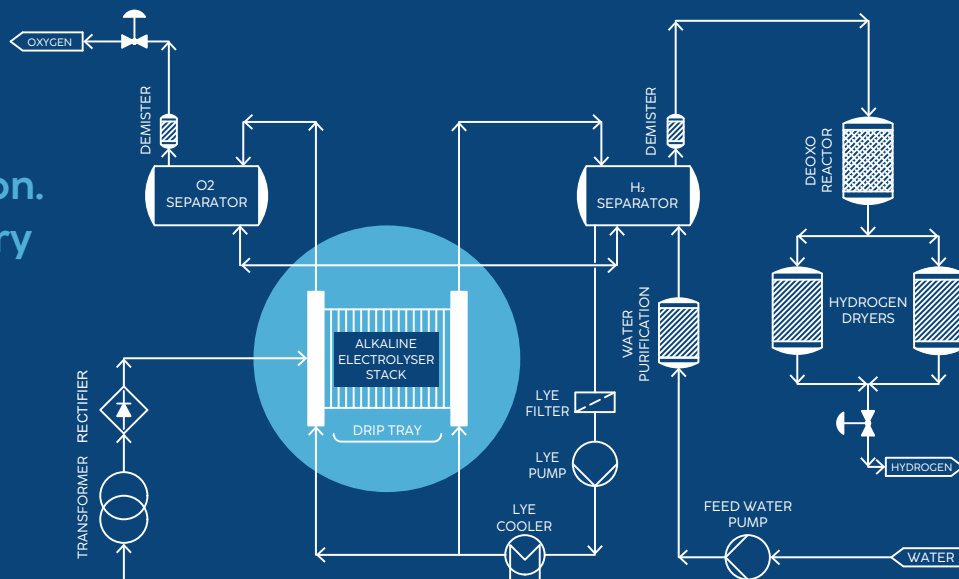


High Efficiency

	efficiency	current density	stack lifetime	CAPEX	downturn ratio	stack dimensions
Max Efficiency	● ● ●	● ○ ○	● ● ●	€€€	low	
Balanced	● ● ○	● ● ○	● ● ○	€€	medium	
Max Power	● ○ ○	● ● ●	● ○ ○	€	high	

Stargate Hydrogen enabling the industry of tomorrow

From stack to seamless integration. We're with you every step of the way!



Within a joint development project Stargate delivered its alkaline stacks to **Rockfin's** and **Milani's** custom-built systems.



Rockfin and **Milani** build customized green hydrogen production systems based on Stargate's pressurised alkaline stacks.

"We aspire to lead the way in hydrogen technology within Italy and extend our solutions to clients across Europe. With Stargate Hydrogen by our side, we envision a collaborative future and are resolute in our commitment to nurturing a robust and enduring partnership."

Paola Quadri - Tech BU Manager



"The passion for electrolyser stack technology and the determination of the Stargate Team has been crucial to achieve this major milestone. We strongly believe in the long-term potential of hydrogen as a clean energy solution."

Michał Wróblewski, Rockfin CEO



Next generation electrolyzers

Full turn-key solution for green hydrogen applications.

Each 40ft container consumes 1 MW of electricity and produces 200 Nm³/h of hydrogen, pressurised to 30 bar as output. The systems can be ordered with a 12-month lead time and come with an industry-leading performance guarantee. The electrolyzers are highly suitable for a wide range of applications such as chemical feedstock, process heat, blending, transport fuel and energy storage.



High Purity Hydrogen



High Efficiency



Leading Performance



Full Maintenance Support



Low CAPEX



Turn-key electrolyzers for project developers

gateway
S E R I E S

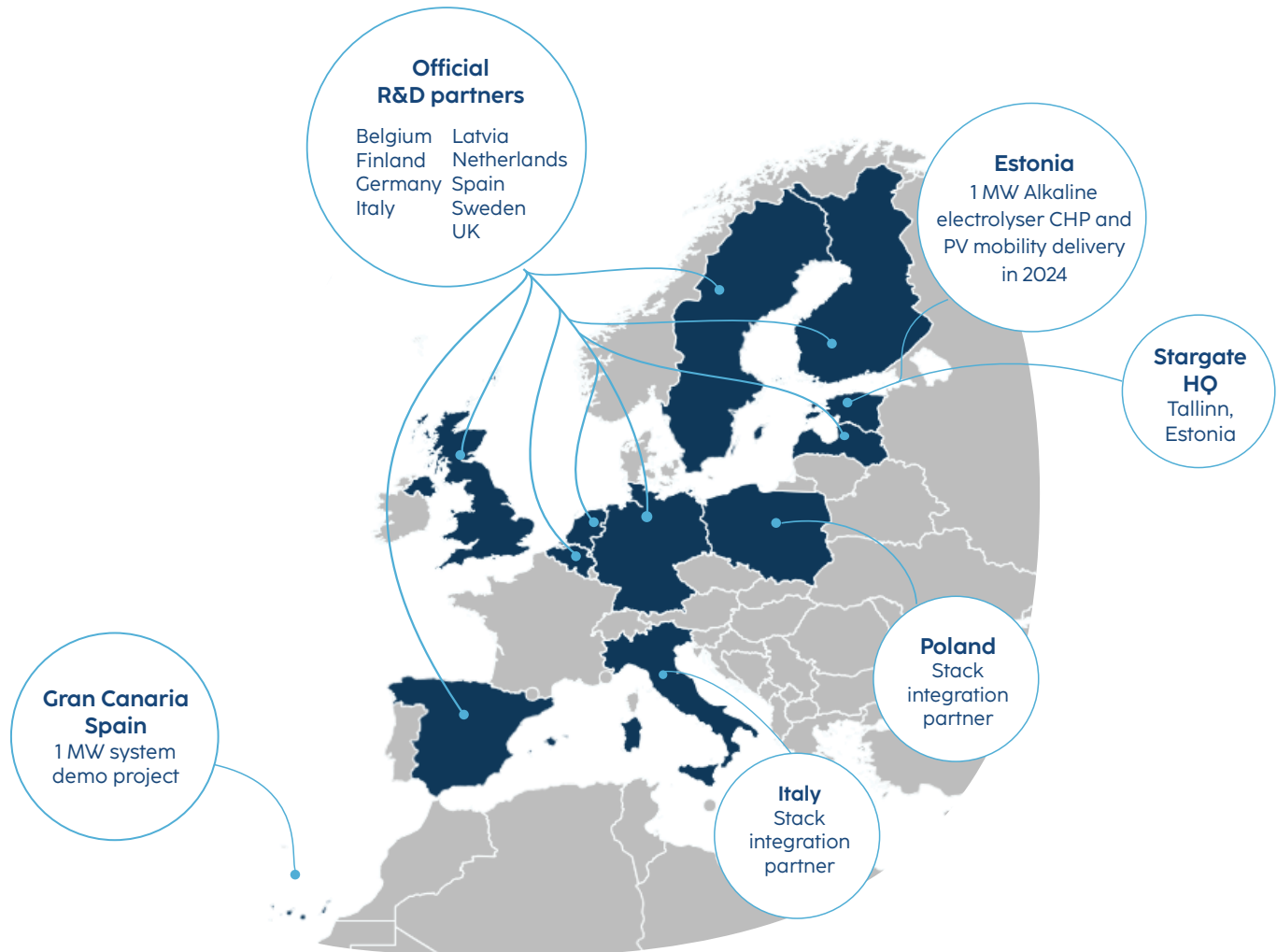
Product	Production capacity Nm³/h (kg/h)	Installed electrical power kVA	Operating range %	Delivery pressure barg	System efficiency kWh/kg	Hydrogen purity %	Electrical input	Ambient temperature range °C	Certification
Gateway 200	200 (18)	1200	20-100	30	53-55	>99.999 ¹	0.4 kV, 3-ph 50/60 Hz	-20 to +40 ²	CE-mark
Gateway 400	400 (36)	2400	10-100	30	53-55	>99.999 ¹	0.4 kV, 3-ph 50/60 Hz	-20 to +40 ²	CE-mark
Gateway 800	800 (72)	4800	5-100	30	53-55	>99.999 ¹	0.4 kV, 3-ph 50/60 Hz	-20 to +40 ²	CE-mark
Gateway 1600	1600 (144)	9600	5-100	30	53-55	>99.999 ¹	0.4 kV, 3-ph 50/60 Hz	-20 to +40 ²	CE-mark
Gateway 2000	2000 (180)	12000	5-100	30	53-55	>99.999 ¹	0.4 kV, 3-ph 50/60 Hz	-20 to +40 ²	CE-mark

1 Target purity achievable with optional purification system
2 Target temperature range available with optional extra package standard: +5 to +40 C

The first Gateway electrolyser will operate in Tallinn in 2024, including waste heat recovery for the district heating network



Stargate in Europe





Here you will find us soon.

54
M EUR

45
KWH/KG

1
GW/YEAR



contact us

Aniket Choudhari

Senior Business Development Manager

aniket.choudhari@stargatehydrogen.com

+372 5198 9887

Valukoja 8/2, 11415,

Tallinn, Estonia



stargatehydrogen.com