

# Solid Oxide Fuel Cells and Electrolyzers from the largest stack production facility in Europe

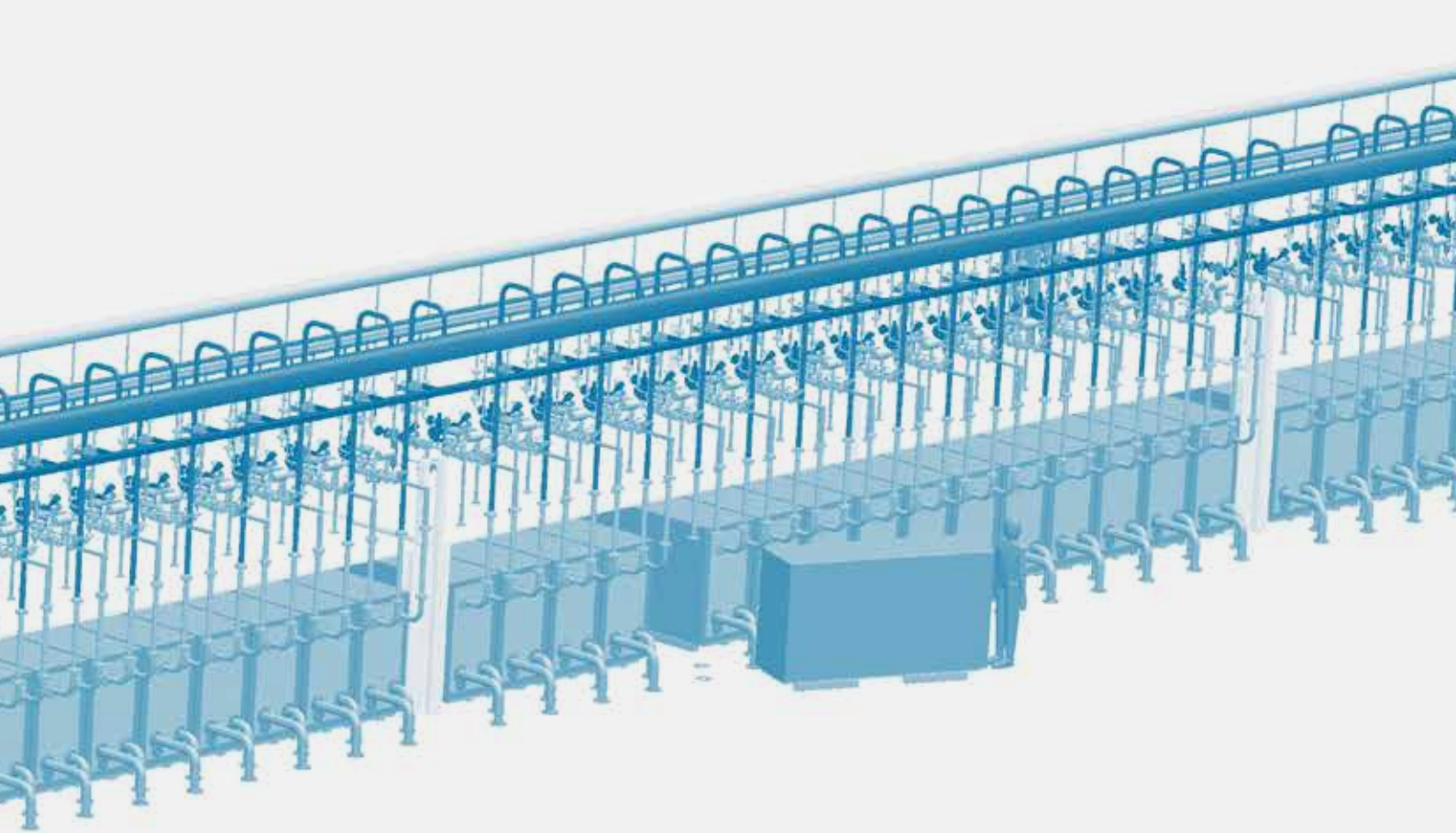
SolydEra

SolydEra is a key world player in the market of Solid Oxide Cells, Stacks and Solutions, with an annual production capacity of 25MW SOFC (75MW SOE) on its industrial site in Pergine Valsugana, Italy. Our Solid Oxide Technology has a proven track record in the field and delivers top in class performance and durability in both fuel cell and electrolysis mode. Our highly efficient solid oxide stacks can be integrated into systems from a few kW to MW sizes.

**Would you like to know more? Please contact us!**



## SolydEra Electrolyzer Array - ECA



**We stack it.**

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# SolydEra ECA Array – Pure Electrolysis

## Technical data

### General

ECA Array	
Stack platform	G8X
Module type	EMX-125
Control	Individual EMX module control Array Master Control
Safety systems	Safety PLC
Operation	Electrolysis Only
Installation	Indoor / Sheltered
Layout	modular, 16 modules for 2 MW
Footprint	< 90m <sup>2</sup> /MW

### Performance data

	ECA-1	ECA-2
<b>Electrical</b>		
Nominal DC power	0.8 MW	1.6 MW
Max DC power*	1.00 MW	2.00 MW
Forward compatibility**	1.25 MW	2.50 MW
<b>System Efficiency</b>		
Specific consumption System*** (AC)	37-39 kWh/kg	
Specific consumption Stack*** (DC)	34.6 kWh/kg	
Steam conversion nominal	80%-90%	
<b>Product</b>		
Nominal H <sub>2</sub> production	23 kg/h	46 kg/h
Max H <sub>2</sub> production	28.6 kg/h	57.2 kg/h
Delivery pressure	< 25 mbar (g)	
Delivery temperature	< 200°C	
<b>Steam</b>		
Steam pressure	2.6 bar(g)	
Steam temperature	150-200°C	
Steam consumption	10-11 kg <sub>H<sub>2</sub>O</sub> /kg <sub>H<sub>2</sub></sub>	
<b>Dynamics</b>		
Modulation range	2.5%-100%	
Ramp-up/down time****	< 1 min	
<b>Temperature</b>		
Operating temperature	650-800°C	

\* Other configurations possible on request

\*\* Forward compatibility to 2<sup>nd</sup> generation stacks

\*\*\* Steam generation excluded

\*\*\*\* From 0-100% capacity at nominal temperature, if not limited by downstream/upstream systems

### Advantages

- Performances
  - High system efficiency
  - High steam conversion
- Robustness
- Fast modulation
- Hot-swappable EMX modules
- Versatile customer process integration
- Optional reversible operation
- Centralized auxiliaries for multi-array arrangements
- Customizable

### Application Areas

- Hydrogen production
- Ammonia production
- Synthetic fuels
- Co-electrolysis
- Grid services