

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 G8 Stack



We stack it.

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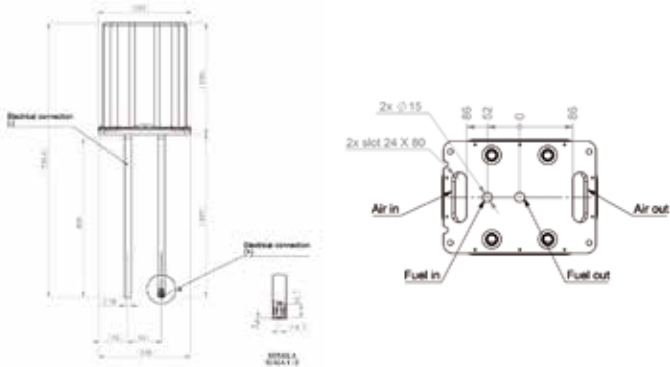
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SolydEra G8 Stack

Technical data

Physical data

Stack	G8
Number of cells	70 repeating elements
Size (w-h-d)	184 mm x 299 mm (excluding compression system) x 250 mm
Weight	31.5 kg
Fuels	H ₂ , reformat of natural gas, biogas, reformat of LPG, ammonia



Performance data

	Power Production SOFC	H ₂ production SOE
Rated Power	1.7 kW	4.5 kW
Max. Power	1,8 kW	5 kW
Efficiency in SOFC: > 60% in SMR		
Fuel utilization (SOFC): up to 83%		
Steam conversion (SOE): up to 90%		
Nominal current (SOFC): 32 A		
Nominal current (SOE): 48 A		
Open Circuit Voltage: > 84 V in dry diluted H ₂		
Voltage under polarization (SOFC): > 55 V		
Voltage under polarization (SOE): 91 V @ TNV		
Operating temperature: 650 - 800°C		
Lifetime (target): 60.000 h		
Degradation 0.2% (efficiency decay per 1000 h at constant power)		

Advantages

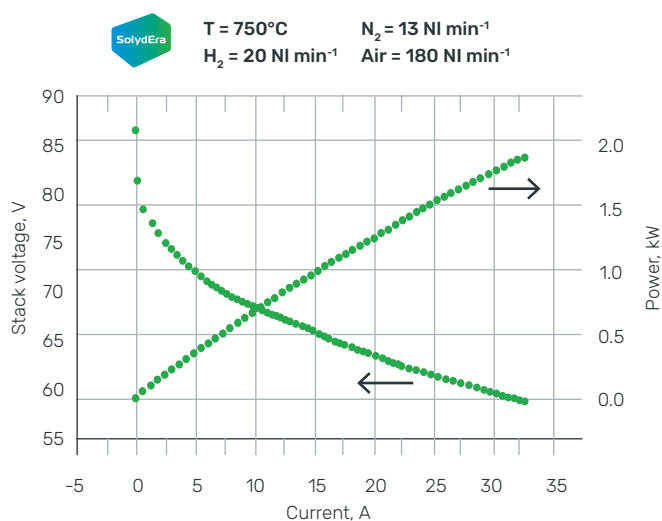
- Proprietary design with integrated compression system and current collectors
- Performances
 - high efficiency and proven lifetime in the field
- Robustness:
 - capability to perform thermal cycling
- Low pressure drops

Application Areas

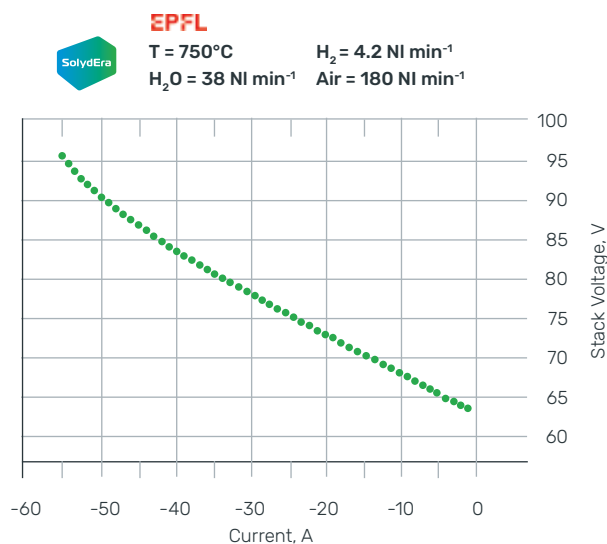
- Power Generators CHP
- (Combined Heat and Power)
- Electrolyzers
 - Reversible Systems

How it works

- Operation in H₂
- NG reformat up to 90% internal reforming



G8 performance in SOFC



G8 performance in SOE