

# 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 G8X Stack



**We stack it.**

SolydEra SpA  
Via ai Manfredi 24  
Frazione Ciré

38057 Pergine  
Valsugana (TN)  
Italy

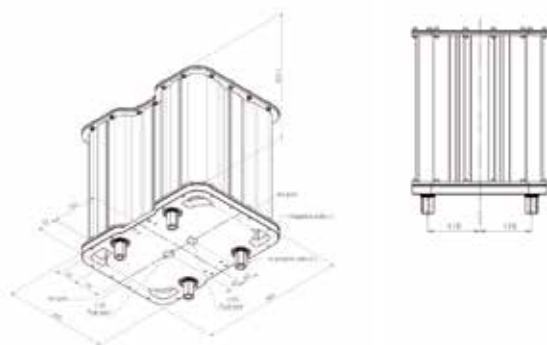
+39 0461 1755 068  
info@solydera.com  
www.solydera.com

# SolydEra G8X Stack

## Technical data

### Physical data

Stack	G8X
Number of cells	320 cells, 80 layers
Size (w-h-d)	306 mm x 379 mm (excluding compression system) x 424 mm
Weight	130 kg
Fuels	H <sub>2</sub> , reformat of natural gas, biogas, reformat of LPG, ammonia



### Performance data

	Power production SOFC	H <sub>2</sub> production SOE
Rated Power	8 kW	20 kW
Max. Power	8.2 kW	25 kW
Efficiency in SOFC: > 60% in SMR		
Fuel utilization (SOFC): up to 83%		
Steam conversion (SOE): up to 90%		
Nominal current (SOFC): 128 A		
Nominal current (SOE): 192 A		
Open Circuit Voltage: > 96 V in dry diluted H <sub>2</sub>		
Voltage under polarization (SOFC): > 62 V		
Voltage under polarization (SOE): 104 V @ TNV		
Operating temperature: 650 - 800°C		
Lifetime (target): 60.000 h		
Degradation 0.2% (efficiency decay per 1000h at constant power)		

## Advantages

- Proprietary design with integrated compression system and current collectors
- Performances
  - high efficiency
- 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 H<sub>2</sub>
- NG reformat up to 90% internal reforming

### G8X - H<sub>2</sub> PRODUCTION PERFORMANCE

