

# FUEL CELL STACK

## TECHNOLOGY

Fuel cell stacks are at the heart of every hydrogen-based energy system. We offer an extensive portfolio of fuel cell stacks with metallic and graphitic bipolar plates (BPPs). Benefit from metallic stacks that offer excellent power density or opt for graphitic stacks that offer remarkable durability and reliability.

Our flexible, modular design ensures customized solutions by adjusting the number of cells per stack or even adapting operation conditions to perfectly match your specific application requirements. Our stacks are continuously developed to ensure optimal performance combined with cost efficiency.

## FEATURES

- Wide product range for various applications
- Graphitic as well as metallic fuel cell stack products
- Power range of 5 kW to 200 kW
- Operation temperature from -30 °C to 85 °C
- High stack efficiency
- Environmental protection at IP67 available
- Integrated CVM
- Optimized for cost-efficient production

## USE CASES

### Custom Cabinet Integration

Fuel cell stacks for specialized stationary cabinets. Configurable power output and operating conditions for maximum integration flexibility. Scaled production processes and a versatile stack platform.

### Plug-in Units

Pre-assembled housed stack units from 30 kW for direct system integration. Standardized architecture and IP67 housing deliver flexibility and cost benefits for mobile and stationary use.

### Module Core

Unified stack architecture powers all our modules. This ensures scalability and substantial cost benefits across applications.

## PRODUCT SPECIFICATIONS

### W1 METALLIC FUEL CELL STACK



	Series Product	Next Gen
Rated power (max)	120 up to 130 kW	≥ 300 kW
Volumetric power density (excl. endplates)	5.4 kW/l	≥ 6.0 kW/l
Gravimetric power density (incl. endplates)	> 2.6 kW/kg	≥ 3.5 kW/kg

### A1 GRAPHITIC FUEL CELL STACK



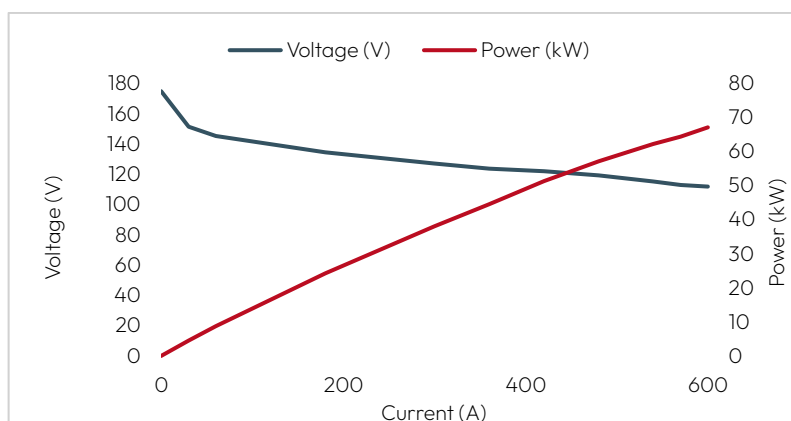
	Series Product	Next Gen
Rated power (max)	42 up to 85 kW	150 to 200 kW
Volumetric power density (excl. endplates)	3.5 kW/l	4.5 kW/l
Gravimetric power density (incl. endplates)	2.1 kW/kg	2.5 kW/kg

## PERFORMANCE

### PERFORMANCE OF A 60 kW GRAPHITIC STACK

#### Test conditions:

- Temperature: 70 °C
- Humidity: 40 % Anode / 60 % Cathode
- Inlet pressure: 150 kPa Anode / 130 kPa Cathode
- Stoich.: 1.6 Anode / 1.8 Cathode



## ABOUT VINUITY

We are a dedicated and dynamic team committed to advancing clean energy technologies across Europe. Our German location, combined with extensive practical experience and field-tested data, forms the basis of our work and ensures measurable added value for our partners.

As part of the Vision Group, we use established production capacities and a comprehensive product portfolio to deliver optimal fuel cell solutions for every requirement. From individual fuel cell stacks and modules to fully integrated energy

systems, we offer customized solutions that set new standards in terms of efficiency and reliability. Our international customers benefit from a reliable service network of over 40 countries and regions worldwide.

### GET IN TOUCH

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