

Ballard's FCgen®-HPS stack utilizes our proprietary heavy-duty membrane electrode assembly (MEA) and low-cost durable carbon plates to deliver performance and compelling total cost of ownership (TCO). The solution provides stable electrical power - scalable over a wide range of operating and environmental conditions.



Features

High Performance

FCgen®-HPS fuel cell stack has industry-leading power output and efficiency. It has a wide operating range, making it flexible in varying conditions, and can deliver high power output consistently.

Extended Durability

Designed with a robust and durable structure, using proprietary materials that resist corrosion and degradation. The advanced manufacturing techniques ensure consistent quality and long life, making it reliable for operation in wide range of environments.

High Power Density

The fuel cell stack has a high power output in a small package. Its optimized unit cell design is an ideal choice for applications that require high power output in a compact space.

Low Product TCO

The fuel cell stack is optimized for cost and efficiency to help lower both upfront and operating cost. In addition, the stack life can be renewed with Ballard's refurbishment program, which further lowers the TCO over the application's lifetime.

Packaging Flexibility for Easier Integration

The fuel cell stack has a modular design for easy scalability. Its compact footprint saves space, and ports on both side of the stack allow for versatile mounting and placement. This packaging flexibility allows for easier integration into a variety of applications.

Freeze-Start Capability

The freeze-start capability ensures that the fuel cell stack can be relied on to deliver power when it's needed, regardless of the weather conditions.

Recyclable with Ballard Refurbishment

The fuel cell stack is environmentally responsible, with an end-of-life refurbishment program that extends the product life and reduces waste. Most components on the stack are re-usable and the MEA is recyclable.

Performance

Rated power ²	160 kW
Lifetime ³	25,000 hours
Volumetric power density (excluding hardware)	4.5 kW/L
Current at rated power	705 A
Voltage at rated power	226 V

Physical

Width	551 mm
Height	160 mm
Length ²	572 mm
Mass ^{2,4}	< 65 kg

Environmental

External ambient temperature range (operating)	-30°C - +90°C
Minimum start-up temperature	-30°C

Fluids

Fuel	ISO14687:2019/Grade D, SAE J2719
Oxidant supply pressure	<3.2 bar
Coolant	Ethylene glycol concentrate (fuel cell grade) balanced by DI water

Standards

Codes, standards, directives ⁵	IEC 62282-2, REACH, RoHS
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¹ Specifications are subject to change.

² Lower power/smaller stack may be available.

³ Average product lifetime is based on operation under standard operating conditions. Operation outside specified limits may reduce product lifetime and performance. Please contact Ballard for an application-specific assessment.

⁴ Dry.

⁵ The Product is designed and manufactured with reference to applicable provisions of the standards listed, to the extent relevant to the Product as a component. As many of these standards apply at the vehicle or system level, the Product in isolation is not intended to demonstrate full compliance with such standards. Certification and compliance of any system incorporating the Product remains the responsibility of the integrator. This information is provided for general guidance and does not constitute certification of compliance with these standards.