FCgen®–HPS
Durable heavy duty fuel cell stack

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. This innovative design incorporates ports on both sides of our end plates for integration flexibility and 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 Total Cost of Ownership

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 total cost of ownership 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.

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.

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.

Product Specifications

Performance	
Max Power[1]	160 kW
Current at Max Power	705 A
Voltage at Max Power[1]	227 V
Power Density[2]	4.4 kW/L
Reactants and Coolant	
Fuel	SAE J2719; ISO14687:2019/Grade D
Oxidant	2.6 bara
Coolant[3]	Fuel Cell grade glycol
Temperatures	
External ambient temperature (Operating)	-30°C to +90°C
Minimum start up temperature	-30°C
Maximum Coolant Temperature	+95°C
Storage temperature	-40°C to +85°C, ISO16750-4
Physical Dimensions	
Width	551 mm
Height	160 mm
Length[4]	572 mm
Mass[1]	65 kg

Notes:
Specifications are subject to change without notice

[1]Based on maximum cell count (336 cells).
[2]Power Density excludes end hardware.
[3]DI water may be used but limited to temperatures above freezing.
[4]Length refers to the stacking direction of the stack (336 cells).

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