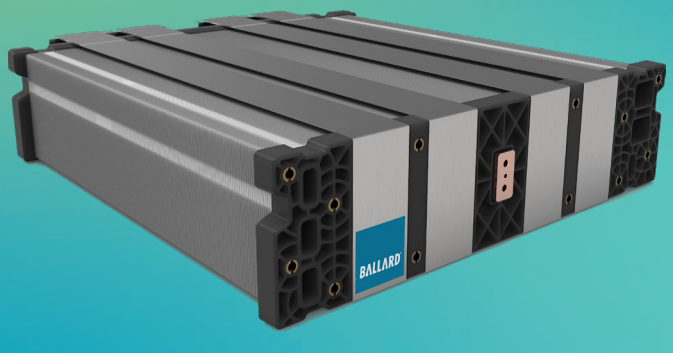
FCgen®–LCS
Durable heavy duty fuel cell stack



Ballard's FCgen®–LCS 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 from 2.5kW to 93kW over a wide range of operating and environmental conditions.

Features

High Performance

FCgen®–LCS 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]	93 kW
Current at Max Power	500 A
Voltage at Max Power[1]	187 V
Power Density[2]	4.3 kW/L
Reactants and Coolant[3]	
Fuel	SAE J2719; ISO14687:2019/Grade D
Oxidant	Air up to 2.5 bara
Coolant	DI water or Fuel Cell grade glycol
Temperatures	
External ambient temperature (Operating)	-30°C to +80°C
Minimum start up temperature	-30°C
Fluid Inlet temperature (operating)	+2°C to +85°C
Maximum Coolant Temperature	+86°C
Storage temperature	-40°C to +60°C
Physical Dimensions	
Width	443 mm
Height	110 mm
Length[4]	131 mm to 601 mm
Mass[4]	10.2 kg to 26.7 kg

Notes:
Specifications are subject to change without notice

[1]Based on Maximum cell count of 311 cell.
[2]Power Density excludes end hardware.
[3]Refer to Ballard product specification document for detailed quality requirement
[4]The values range is from the smallest sized stack (20 cell) to the largest sized stack (311 cell).

Here for life™

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