BALLARD™

FCmove™-HD

Fuel Cell Power for Medium Duty Applications

Ballard's FCmove™-HD is the next-generation medium duty fuel cell power module for use in zero-emission motive applications. The FCmove™-HD offers a durable, compact and easy installation solution for system integrators and vehicle OEMs, backed by Ballard's proven experience, unmatched product performance, and service quality promise.

Features

Lower Life Cycle Cost

With better fuel economy and fewer maintenance requirements, total cost of ownership is 35% lower than previous product generations.

Simplified Integration

This complete package, with all subsystems fully integrated, has interfaces located on one panel to provide easier access for connections as well as maintenance.

Robust Components

Designed with a new generation of more robust balance of plant components to improve reliability.

System Integration Flexibility

Reducing the volume by 40% and weight by 35% has produced a low-profile power module that enables greater flexibility in commercial vehicle design.

Freeze-Start Capability

Freeze start from -25°C, with no need to plug in the vehicle or use special start procedures.

Humidification

Integrated humidification system provides maximum system performance and durability through a wide range of environmental conditions.

High Performance

Robust PEM fuel cells deliver the power, range, and efficiency demanded by fleet operators.

Proven Reliability & Durability

Demonstrated through exceptional fuel cell stack lifetime, with >25,000 hours of operation and 97% module availability in service.

High Temperature Operation

Permits a smaller cooling package for integration flexibility and generates HVAC heating, significantly improving overall vehicle fuel economy.

Climate Protection

IP56-rated enclosure system guards against premature deterioration of key module components in extreme climates.

High Pressure System

Offers better performance, fuel efficiency and durability by preventing degradation of the fuel cell power module.

Fuel Efficiency

Two to three times more efficient than CNG/diesel engines, fuel cell buses reduce overall fuel consumption.

Remote Diagnostics

Direct or wireless connection allows customer to monitor performance data remotely, and anticipate preventative maintenance.

Safety Features

Integrated safety system with ventilation fans, and hydrogen sensor built into the module to ensure highest safety and ease of installation.

Product Specifications*

Performance	
Net system power	70kW
Operating system current	20 - 240 A
Operating system voltage	250 - 500 V
Idle power	8kW
Physical	
Dimensions (l x w x h) mm, excluding air filter	1495 x 822 x 368
Dimensions (l x w x h) mm, including air filter	1783 x 822 x 415
Weight	247 kg
Environmental protection	IP56
Operating temperature	-30°C – +50°C
Minimum start-up temperature	-25°C
Short-term storage temp	-40°C – +80°C
Reactants and Coolant	
Fuel Type	Gaseous hydrogen
Fuel purity	As per SAE specification J2719 or ISO 14687:2019 grade D
Fuel supply pressure	8 barg nominal
Peak fuel efficiency	57%
Oxidant	Air
Coolant	Ethylene glycol min 0% to max 60% by volume, balance DI water
Radiator coolant outlet temperature	60°C nominal
Safety Compliance	
Certifications[1]	ISO 6469-2:2009,ISO 6469-3:2011,ISO 23273:2013, SAE J2578,UNECE Reg 10, ECE/Trans/180/Add.13, REACH
Monitoring	
Control Interface	CANbus
Emissions	
Exhaust	Zero-emissions (no PM, NOx, SOx, CO or CO^2)

[1] Specific clauses within each standard * Specifications are subject to change without notice

Here for life™

Ballard Power Systems
9000 Glenlyon Parkway
Burnaby, BC V5J 5J8
Canada

Ballard Power Systems
Majsmarken 1
DK-9500 Hobro
Denmark

Contact us
marketing@ballard.com
ballard.com