

A detailed view of a Ballard FCmove fuel cell engine, showing various components like hoses, pipes, and electrical connectors. The engine is primarily white and black, with blue accents. The Ballard logo is visible on a black cover. The background is a gradient from dark blue to light green.

BALLARD™

FCmove®

FCmove® Fuel Cell Products
Solutions for Zero-Emission Heavy-Duty Mobility



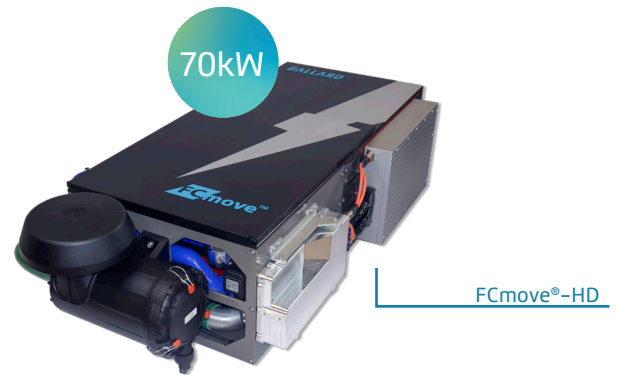
Introducing the FCmove® family of products

The FCmove® fuel cell modules are the culmination of more than 8 generations of product development and learnings from 200 million kilometers of road experience across a wide variety of applications and climates. Today > 4,000 buses and trucks are powered by Ballard technology.

The FCmove family of products is purpose-built to power heavy duty electric vehicles including buses and trucks.



FCmove®-MD



FCmove®-HD



FCmove®-HD+

FCmove®-XD



120kW

The smartest solution to achieve zero-emission mobility

Fuel cell electric buses and trucks using renewable hydrogen are the most reliable, true zero-emission solution.

Ballard provides a full range of fuel cell engines to transition commercial vehicles to zero-emission mobility using our proven technology and experience.

With FCmove® engines, bus and truck fleet operators will enjoy all the benefits of hydrogen mobility with longer range, no payload compromise and fast refueling.



No compromise zero-emission mobility



Reliability

Continual R&D supporting generations of product development has resulted in >97% fuel cell power availability in service. Ballard-powered fuel cell electric buses have exceeded 25,000 hours of operation without having to replace the fuel cell stack.



Ease of integration

FCmove® are smaller, powerful modules which enable greater flexibility in commercial vehicle design. By reducing the volume and weight, Ballard has produced low-profile modules that is ready to install in tight spaces like the roof top or engine bay of a vehicle.



Robustness

The FCmove® products are designed with a generation of more robust balance of plant components to improve reliability. A freeze start from -25°C makes it possible to tolerate a wide range of operating conditions.

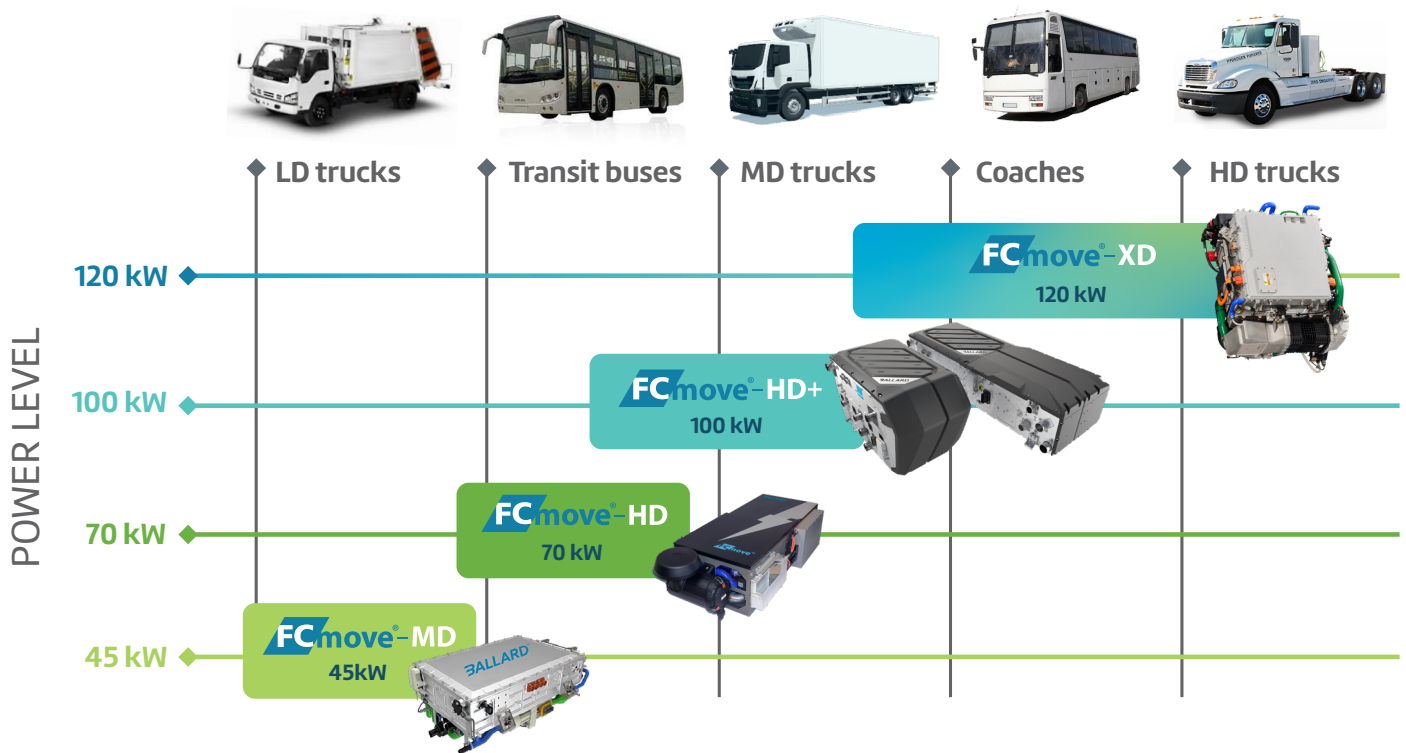


Low life cycle cost

Ballard's goal is to reduce the total cost of ownership of our fuel cell products without compromising lifetime or performance; and with fewer parts, we deliver more robust components and less maintenance.

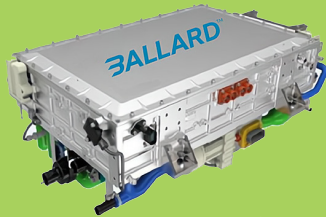
The growing FCmove[®] product platform

Ballard's FCmove[®] family of products are designed to address different commercial fuel cell vehicle types and duty cycles.



FCmove®-MD

- Power output: 45kW
- Voltage: 140V-280V
- Dimensions: 1070x595x395mm
- Weight: 145kg
- Stack: FCgen®-LCS
- IP rating: IP67
- Freeze start: -25 °C



FCmove®-HD

- Power output: 70kW
- Voltage: 250V-500V
- Configuration: roof top
- Dimensions: 1496x850x367mm
- Weight: 240kg
- Stack: FCgen®-LCS
- IP rating: IP56
- Freeze start: -25 °C



FCmove®-HD+

- Power output: 100kW
- Voltage: 280-560V
- Configuration:
 - Roof top: 1705 x 714 x 360
 - Engine bay: 1056 x 630 x 650
- Weight: 275kg
- Stack: FCgen®-LCS-M2
- IP rating: IP6K9K
- Freeze start: -25 °C



FCmove®-XD

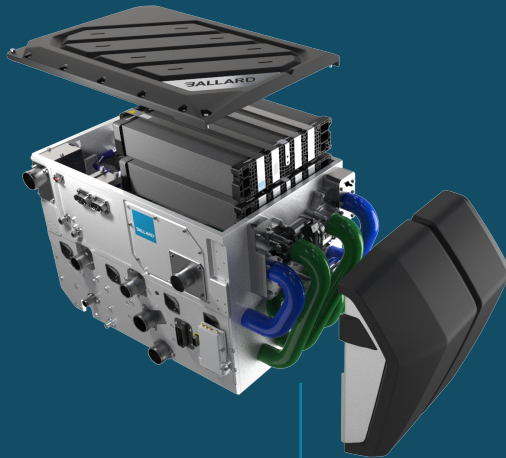
- Power output: 120kW
- Voltage: 520-750V
- Dimensions: 737 x 565 x 902
- Weight: 238kg
- Stack: FCgen®-HPS
- IP rating: IP6K9K
- Freeze start: -30 °C



FCmove® product specifications

The FCmove® products are developed for easy and flexible installation and are available as a 45 kW, 70kW, 100kW or 120kW heavy duty power module.

Each module offers a complete package, with all subsystems fully integrated in one enclosure, and with interfaces located on one panel proving easier access for connections and maintenance.



FCmove®- HD+ Engine Bay





8 
GENERATIONS
OF PRODUCT
DEVELOPMENT


200m
OPERATING
KILOMETRES

Service and support

Our customers benefit from Ballard's Customer Care program developed to support thousands of fuel cell vehicles, operating globally.



Integration – Insights from our many years of experience help accelerate and optimize our customer's overall fuel cell vehicle design work. We provide on-site support during integration, certification, and commissioning.



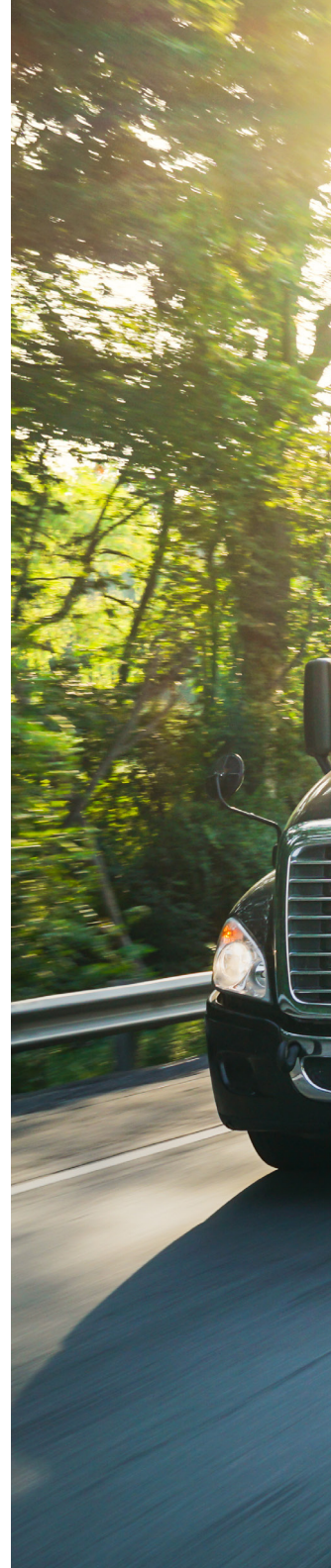
Service – Ballard provides comprehensive and flexible service packages that cover the FCmove® module's lifetime. Service includes preventative maintenance, remote monitoring, spare parts, and on-site service.



Support – Ballard's highly skilled technicians with extensive product knowledge are available to provide technical support. The team can be accessed through a global call centre 24/7.



Training – We offer an extensive training program to support the installation, operation, and maintenance of the FCmove® products. Upon completion of the training program, attendees will be certified as a qualified technician, able to service the fuel cell engine.





On the road to sustainable zero-emission mobility

At Ballard we are striving towards sustainability across the entire life cycle of our products, and every year we recycle and refurbish thousands of fuel cells stacks.

When it comes to product lifecycle management, Ballard is at the leading edge of innovation in applying the three “Rs” to its fuel cell stacks. Our expertise in **Refurbishing, Reusing, and Reclaiming** fuel cell components means our solution is both zero-emission and zero-waste.

www.ballard.com/about-ballard/our-sustainability



With more than 45 years of experience designing and implementing PEM fuel cell technology for heavy-duty vehicles, we are confident that the FCmove® product platform is the right choice for your zero-emission fleet.



We deliver fuel cell power for a sustainable planet



Here for life™

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