BALLARD®

FUEL CELL POWERED
ZERO EMISSION

HEAVY DUTY MOTIVE MODULES

FCveloCity®-XD

FCveloCity®-HD

FCveloCity®-MD

FCveloCity®

BALLARD FCveloCity® FUEL CELL MODULES offer a complete portfolio of power solutions to meet the requirements of a wide range of heavy duty vehicles with different operating cycles and levels of electric hybridization.

FCveloCity® fuel cell modules feature:

- **Zero-emission operation**
- **Configurations from 30kW to 200kW**
- **Modular design for flexible integration**
- **Durable performance across a wide range of operating conditions**

FCveloCity® Motive Module **Product Portfolio**

PRODUCT SERIES	FCveloCity®-MD	FCveloCity®-HD	FCveloCity®-XD
TECHNOLOGY	Proton exchange membrane (PEM) hydrogen fuel cells		
NET POWER LEVEL	30kW	60kW / 85kW / 100kW	200kW
FUEL CELL MODULE DIMENSION	900 x 480 x 375 mm	1130 to 1200 x 869 x 506 mm	Custom configurations available
WEIGHT	125kg fuel cell module 40kg air sub-system	244 to 285kg fuel cell module 105kg air and cooling sub-systems	Custom configurations available
APPLICATIONS	small transit buses, battery hybrid range extenders	full size hybrid electric buses, trucks	rail and marine

*Ballard reserves the right to change specifications at any time.

Ballard **FCveloCity**® heavy duty motive modules, based on Ballard's proprietary PEM fuel cell stack technology, continue to lead the industry in performance, durability, cost, and overall road experience.

FCveloCity® Technical Advantage

FEATURE	BALLARD®	CLOSEST COMPETITOR	BALLARD ADVANTAGE
PROVEN DURABILITY	+	−	Exceptional bus availability and fuel cell lifetime, with >23,000 hours of operation of a motive module in the field without failure
MEA TECHNOLOGY	+	−	Proprietary MEA technology designed to meet the tough duty cycles of motive applications
HIGH PRESSURE SYSTEM	+	−	Ensures maximum system robustness throughout entire power range and enables the use of smaller radiators
INTEGRATED HUMIDIFICATION	+	−	Provides maximum system performance and durability through a wide range of environmental conditions
REMOTE DIAGNOSTICS	+	−	Direct or wireless connection allows customer to remotely monitor performance data and anticipate preventative maintenance
INTEGRATED SAFETY SYSTEM	+	−	Ventilation fans, H2 sensors, and smoke detectors built into the module to ensure safety and ease of installation

MOTIVE MODULE EXPERIENCE

Ballard supplies the FCveloCity® motive module to mass transit vehicle manufacturers for integration into buses and light rail vehicles. Partnered with more than 15 commercial vehicle manufacturers, FCveloCity® products offer a low risk, versatile and easy installation solution for system integrators, backed by Ballard's unmatched experience and support.

WHY BALLARD

- The world's premier PEM fuel cell company
- Extensive field experience
- Premium customer support, with regional service centers
- A focus on safety, reliability and quality
- World-class, specialized engineering services
- Deep intellectual property (IP) portfolio and know-how

BALLARD LEADERSHIP

- Powered 150 fuel cell buses worldwide
- Partnered with more than 10 bus manufacturers
- Growing fuel cell bus fleets in China, Europe and USA
- Buses have travelled 10 million kilometers of revenue service
- 23,000+ hours of fuel cell module operation in a single bus
- Seventh generation of product development
- First fuel cell light rail system

CONNECT WITH BALLARD®

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