



Power to change the world®

## High Performance Fuel Cell Stack

### Introducing FCgen®-HPS

Ballard's high performance proton exchange membrane (PEM) liquid cooled fuel cell stack.

FCgen®-HPS incorporates our latest technology, design and materials to meet the requirements of the most demanding mobility applications delivering one of the highest fuel cell stack power densities in the industry.

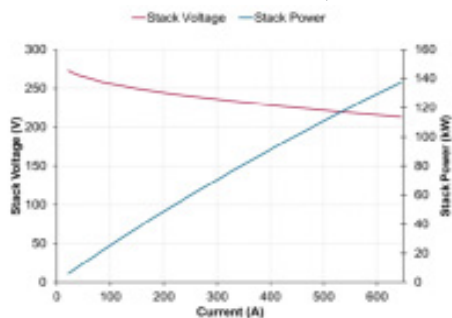
The FCgen®-HPS stack uses Ballard's latest generation of proprietary membrane electrode assemblies (MEA) and thin carbon plates to deliver performance and durability.

The FCgen®-HPS stack provides up to 140kW of stable electrical power over a wide range of operating and environmental conditions. The FCgen®-HPS stack can be configured to different power outputs to meet customer requirements.

Designed for motive applications, the FCgen®-HPS features fast, dynamic response and robust and reliable operation. The FCgen®-HPS establishes a new industry standard for power density, performance and product reliability.

#### Key attributes:

- High power density<sup>1</sup> fuel cell stack
  - o ~ 4.3kW/L
  - o ~ 4.7kW/kg
- Designed to automotive standards
- Freeze start capability



## PRODUCT SPECIFICATIONS

PEM (Proton Exchange Membrane) fuel cell stack	
Rated Power	up to 140 kW
Cell Count	309
Rated Current	645 A
Rated Voltage	202 V
Mass (dry)	55 kg
Length	484 mm
Width	555 mm
Height	195 mm
Fuel Standard	ISO 14687-2
Oxidant	Air up to 2.5 bara
Coolant	DI water or Fuel Cell Grade Glycol
Max Coolant Temp.	95°C
Min. Start Temp.	-28°C
Storage Temp. (<12 hrs)	-40°C to 95°C
Storage Temp. (long term)	2°C to 40°C

(1) excludes end plate hardware