zepp.X150

Drop-in PEM fuel cell system for heavy-duty applications.

The zepp.X150 fuel cell system offers a unique level of integration at industry leading power density.

The system has been designed with a modular power system in mind. Multiple modules can be connected to the application's electric DC power bus to supply higher power capacities up to (multi-)megawatt applications.



Benefits.

Drop-in solution
The completely integrated supply-scope of the zepp.X150 fuel cell system makes it an ideal turn-key solution with minimum engineering effort and lower cost of integration.

Extended functionality
Integrated energy management, thermal management and hydrogen storage control capability for reduced integration effort. Remote diagnosics minimize downtime.

Scalable
Multiple modules can be connected to the application's electric DC power bus to supply higher power capacities up to (multi-)megawatt applications

Reduced cost
The advanced control system with real-time monitoring and data-driven optimization enables exceptional efficiency, operational robustness and prolonged system lifetime.

Robust & reliable
Designed, built and tested for heavy duty applications. Best in-class power density unlocks new possibilities for zero-emission vehicles.

Safe
The safety of our systems is our highest priority. The module is built according to European safety standards and equipped with internal hydrogen leakage detection and ventilation.

Zero-Emission
Hydrogen and oxygen in, water and electricity out. No harmful emissions and low noise and vibrations.

Flexible
Custom hydrogen storage systems and energy control strategies are developed to fit your needs.

Specifications.[1]

Net rated power output[2] (EoL, Continuous)	150 kWe
Efficiency at net rated power	51% LHV
Efficiency at 50% net rated power	57.5% LHV
Dimensions (outer)[3]	860 x 685 x 1010 (L x W x H)
Volume (outer)	607.5 L
Volume (actual)	± 530 L
Mass	355 kg
Output voltage range	520-850 VDC (integrated DCDC converter output)
Low voltage supply	24 VDC (max 350 W)
Communication	CANbus
Diagnostics	SAE J1939
Fuel type	Hydrogen gas
Fuel quality	ISO 14687:2019, SAE J2719
Oxidant	Ambient air
Coolant	Glysantin® FC G20 RM
Ambient operating temperature	–30-50 °C
IP protection	IP67

1. Specifications can be subject to change without notice.
2. Also at end of design life (25.000h).
3. Alternative packaging concepts are available

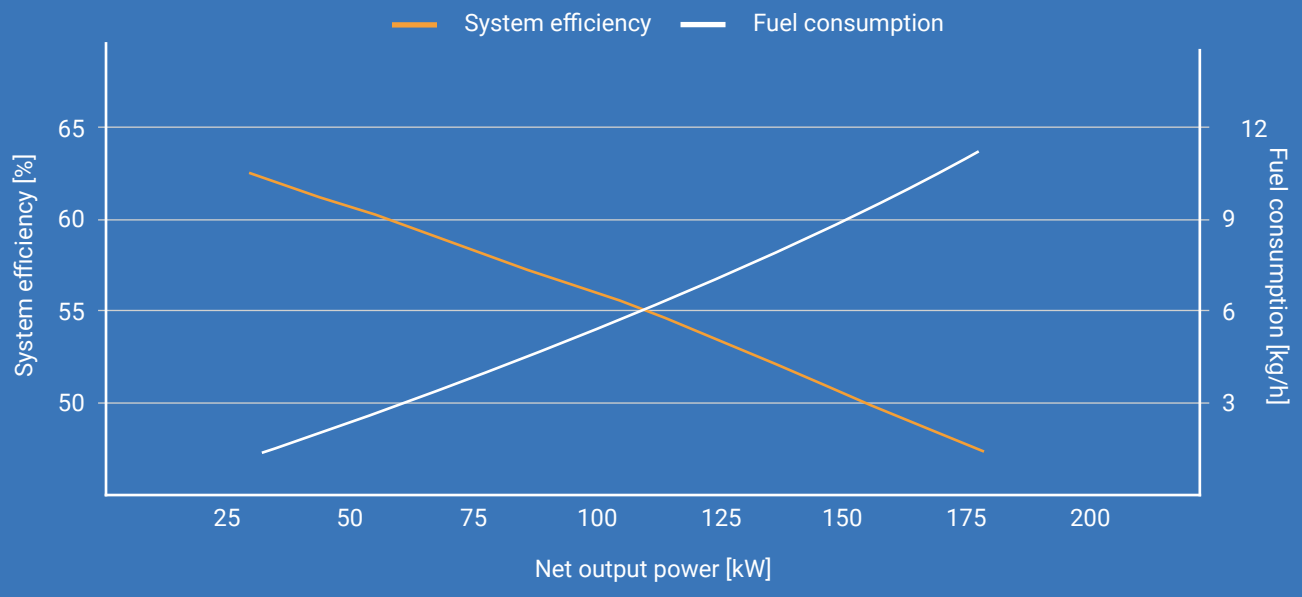

Figure: typical system efficiency and fuel consumption at beginning of life, 20°C ambient at sea level, with ±3% tolerance.

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