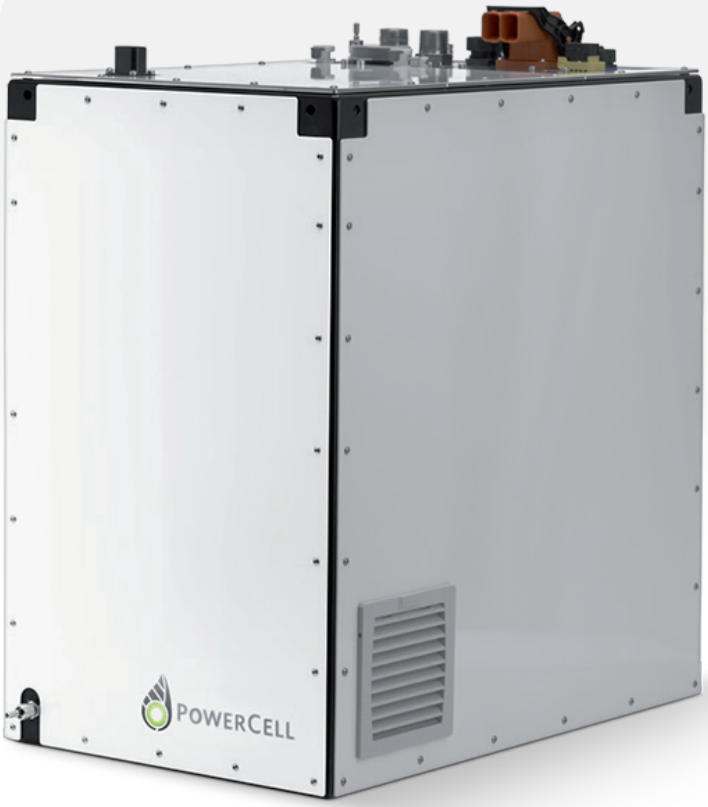
PowerCell MS-30

10-30 kW PEM Fuel Cell System

Prototype

PowerCell MS-30 can e.g. be used as a range extender (REX) for battery-operated electrical vehicles. By integrating this system with hydrogen tanks and power electronics, the vehicle's range can be extended, without this leading to emissions. PowerCell MS-30 runs on hydrogen and has a fully automated system for cell voltage monitoring. PowerCell MS-30 is easy to integrate, with low fuel consumption, and is based on the robust PowerCell S2 stack.



Safe and automated control system with fault detection

Suitable for light to heavy duty maritime applications

Easy to integrate
-Complete BoP included
-High level of integration

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Physical Data:

Net electric power	10 / 20 / 30 kW
Voltage output	63-141 / 123-273 / 134-290 V DC
Start-up time	30 s
Expected lifetime power generation	10 000 h
Expected lifetime	5 years
Temperature & RH ambient range	-20°C to 50°C, 5-95% non-condensing
Installation environment	Outdoor, Pollution degree 3
Dimensions (WxDxH)	415 x 641 x 656 mm
Weight	145 kg
Maximum cooling inlet temperature	
- HT cooling (fuel cell stack)	70°C
- LT cooling (cathode compressor)	45°C
Fuel supply pressure	10 barG
Fuel quality	Hydrogen grade 3.5 or higher
Fuel consumption	158 / 316 / 437 slpm @ 10 / 20 / 30 kW
Maximum system efficiency	>53%
Sound level	<80 dBA at 1 meter at max. power
IP classification	IP54
BoP supply power	
- HV input	3,5 / 5 kWe @ 300 – 440 V DC
- LV input	0,5 / 1,5 kWe @ 24 V DC
Communication	CAN-bus, relay dry contact (em.stop) or other on request
Standby power consumption	
- Non-freezing	60 W
- Sub-zero	350 W

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PEM Fuel Cell System

PS-100 is a stationary system which generates 20–100 kW, built from reliable industrial components. The system runs on hydrogen and can be used as an electrical power system and to equalise imbalances in industry's energy requirements, called peak shaving. PS-100 can be connected in parallel, which facilitates a high power output, for example to generate electricity for society by integration with solar or wind power. The system is based on PowerCell S2 alternatively S3.

Adaptable to customer requirements

Connected in series for even higher power output

Suitable for peak shaving and integration with renewables

PowerCell