MARINE FUEL CELL SOLUTIONS

ZERO-EMISSION POWER from 100 kW to 2 MW

The state-of-the-art fuel cell technology in compliance with the latest marine environmental regulations

Main features

- Modular and scalable
- Power range : from 100 kW to 2+ MW
- Indoor / Outdoor applications
- Containerized and transportable
- Easy gas refueling
- Robust : designed for heavy-duty applications
- Predictive maintenance tool
- Operational time before overhaul : 25,000 hours
- Marine approval by Bureau Veritas*

OUR PRODUCT : FC-RACK ™

BENEFITS

- Zero-emission
- Low maintenance
- Reliable & Efficient
- Innovative solution
- E-Monitoring tool
- Containerized or integrated in machinery rooms
- Certified solution*

Helion HYDROGEN POWER by ALSTOM

TECHNICAL DATA

	FC-RACK ™160	FC-RACK ™180	FC-RACK ™200
Electrical performance			
· Maximum Net Power available (kW)	168	187	207
· Voltage range (V)	352 - 672	396 - 756	440 - 840
· Operating maximum current (A)	470	470	470
· Maximum efficiency		57%	
Mechanical structure			
· Dimensions L x W x H (mm)		2200 x 700 x 2200	
· Weight (kg)	1340	1370	1400
Hydrogen			
· Purity requirements		Gaseous hydrogen satisfying ISO 14687 (2019)	
· Pressure storage compatibility		Any pressure over 10 barg	
Air			
· Air quality		Ambient filtered by default / Adaptable depending on environmental conditions	
· Pressure		Atmospheric	
Thermal management			
· Cooling temperature		70°C	
· Stack coolant		Glycol and deionized water	
Operating conditions			
· Inlet water max temperature		+ 37°C	
· Operating temperature		-20°C / + 40°C	
· Storage temperature		-20°C / + 70°C	
· Humidity		≤ 95%	
E-Monitoring			
· ALSTOM HEALTH-HUB™		Remote monitoring and predictive maintenance	
Casing			
		Ventilated gastight enclosure	
Marinization			
		* Approval in principle by Bureau Veritas expected Q4 2022	

APPLICATIONS

Shore to ship power supply

Allowing ships docked in ports to shut down their auxiliary engines and reduce their emissions drastically

Hotel-load activities

Supplying power to offshore vessels and remote locations at sea

Zero-emission propulsion

Replacing diesel engines with a sustainable and competitive propulsion

Power supply for harbour infrastructures

Enabling logistics chain actors to reduce their carbon footprint and to free up space in marine terminals

ALSTOM Hydrogène S.A.S

Domaine du Petit Arbois - Bâtiment Jules Verne - Avenue Louis Philibert
CS10656 - 13547 AIX-EN-PROVENCE CEDEX 04 - France +33(0)4 42 90 81 50
www.helion-hydrogen-power.alstom.com

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