

OFF-HIGHWAY FUEL CELL SOLUTIONS

ZERO-EMISSION POWER from 100 kW to 2 MW

Emission-free technology for construction trucks
and heavy-duty vehicles

Main features

- Quick start PEM fuel cell technology
- Power range :
from 100 kW to 2+ MW
- Modular and scalable
- Resistant to shocks and vibrations
- Reliable and reduced stand-by time
- Adapted to harsh conditions and
tropical environments :
from -20°C to +40°C
- Digital maintenance tool
& associated services
- Operational time before overhaul :
25,000 hours
- Undisturbed operation during
refueling



OUR PRODUCT : FC-RACK™



BENEFITS



Zero-emission



Low maintenance



Reliable
& Robust



Innovative solution



e-Monitoring
tool



Suitable for
retrofitting

Electrical performance

- Maximum Net Power available (kW)
- Voltage range (V)
- Operating maximum current (A)
- Maximum efficiency

FC-RACK™160

FC-RACK™180

FC-RACK™200

168	187	207
352 - 672	396 - 756	440 - 840
470	470	470
	57%	

Mechanical structure

- Dimensions L x W x H (mm)
- Weight (kg)

	2200 x 700 x 2200	
1200	1230	1260

Hydrogen

- Purity requirements
- Pressure storage compatibility

Gaseous hydrogen satisfying ISO 14687 (2019)
Any pressure over 10 barg

Air

- Air quality
- Pressure

Ambient filtered by default / Adaptable depending on environmental conditions (sea, dust, etc.)
Atmospheric

Thermal management

- Cooling temperature
- Stack coolant

70°C
Glycol and deionized water

Operating conditions

- Operating temperature
- Storage temperature
- Humidity

-20°C / + 40°C
-20°C / + 70°C
≤ 95%

E-Monitoring

- ALSTOM HEALTH-HUB™

Remote monitoring and predictive maintenance
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APPLICATIONS



Construction vehicles

Complying with environmental and emission measures



Agricultural machines

Replacing diesel engines with a zero-emission technology



Mine vehicles

Producing minerals with low carbon footprint



Urban vehicles

Decarbonizing urban areas

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