

# Nuvera<sup>®</sup> E-Series Fuel Cell Engine



## Product Specification

**E-45**

**E-60**

### PERFORMANCE\*

Net output power**	47 kW	59 kW***
Operating voltage	175–290 VDC	
Maximum operating current	312.5 A	375 A
Peak efficiency	58%	

### PHYSICAL

Dimensions (L x W x H)	1000 x 600 x 500 mm	
Mass	188 kg	190 kg

### OPERATION

Ambient operating / starting temperature	-30°C to 45°C	
Coolant	De-ionized water or fuel cell glycol mix	
Oxidant	Air	
Fuel quality	SAE J2719, ISO 14687-2	
Air supply pressure	0.70–1.05 bara	
Fuel supply pressure	12.5–15.0 bara	
Input power for balance-of-plant	1.2 kW at 27 VDC 4.0 kW at 375 VDC	1.2 kW at 27 VDC 8.0 kW at 375 VDC
Input power -30°C freeze start module†	3.5 kW	
Vehicle communication	CAN 2.0B	

### STANDARDS

Nuvera certifications	ISO-9001, ISO-14001, ISO-45001	
Regulatory conformance	2006/42/EC, 2011/65/EU, 2014/30/EU IEC 62282-2, GB/T 29838, GB/T 33978, CE- Declaration of Incorporation	
Functional safety	ISO 13849-1:2015	

\*Beginning of life \*\*±5% tolerance on power measurements \*\*\*Power and efficiency data verified by Shanghai Motor Vehicle Inspection Center †Power required during -30°C freeze prestart cycle only

On-Road

Off-Road

Port Vehicles and Equipment

Stationary and Portable

Maritime



# E-Series Engine Components

- Fuel cell stack
- Air compressor
- Air sensors
- Coolant pump
- Cooling thermostat
- Hydrogen valve
- Engine control unit
- Stack control / water balance software



Nuvera® E-Series Fuel Cell Engines are **Buy America Act 49 CFR § 661.11 Compliant**.



Fuel Efficiency



Reliability



Proven Performance

## Nuvera® E-60 Fuel Cell Engine

