S Series S130 **Hydrogen Generator**

The Methanol to Hydrogen fuel delivery solution for luxury marine vessels and work boats.

The e1 Marine S Series S130 Features:

- Produces high purity Hydrogen at pressures up to 2 Barg
- Can support up to 10 kW fuel cells
- Low vibration, no noise, no pollution
- Small size allows easy fitting and discrete positioning

Hydrogen on demand - when you need it, where you need it!

e1® Marine
Getting hydrogen to work

S Series S130 **Hydrogen Generator**

Hydrogen on demand - when you need it, where you need it!

The e1 Marine S Series S130 is compact and designed for ease of use on board the vessel as part of a quiet, vibration free, low emission power solution for luxury boats, or as a range extender for a battery centric power solution for work boats. The S Series S130 easily integrates with PEMFCs, as part of an efficient, highly reliable power solution.

Marine Power Applications:

- Secondary auxiliary power while in ports with emission restrictions
- Vessel range extender to reduce battery size
- Diesel Genset replacement

Advantages:

- On-demand fuel cell grade Hydrogen production to support fuel cell power solutions
- Eliminates the need for high pressure hydrogen tanks
- Modular, scalable power support for up to 100 kW fuel cell power
- Low noise - low vibration
- Zero NOx, SOx, and particulate matter emissions
- Net zero CO_2 emission with renewable Methanol feedstock
- High energy efficiency: >70% (typically 77% to 78% at rated output)
- Uses low-cost, readily available Methanol/DI water feedstock
- Designed for cyclic & variable operations

SYSTEM ARCHITECTURE	
H_2 Generator System	Includes fuel pump, air blower, fuel reformer, H_2 purifier, controls
H_2 Purifier	Proprietary bi-metallic membrane purifier
H_2 PRODUCT	
Output	130 sLm | 0.7 kg/hr (max output)
Purity	≥99.97% with <0.2 ppm CO2 (meets ISO 14687 purity standard)
H_2 Buffer Tank Delivery Pressure	0.7-2.0 barg | 10-30 psig
EFFICIENCY	
Methanol/Water Consumption	10.56 L/hr | 2.79 gal/hr average at 130 sLm hydrogen production
Efficiency at Steady State Optimal	>70%. Typically 77% to 78% at rated output.
CONTROL OPTIONS	
Controls	Fuel Processor Controller
Communication Protocol	RS485
Operating Modes	Automated
ELECTRICAL POWER REQUIREMENTS	
Cold Startup Mode	≤700 W at 48 VDC/VAC | <8 kWh at 25°C
Hot Standby	≤700 W at 48 VDC at 25°C maximum | ≤350 W at 48 VDC average
H_2 Production Mode	≤150 W at 48 VDC
Minimum Power to H_2 Generator	1 kW 48 VDC at 25°C power supply recommended
STARTUP TIME	
From Ambient Temperature	Typically, < 8 hrs. depending on system power conditions & ambient temp.
From Hot Standby	130 slm < 5 min.
ENVIRONMENT	
Temperature Range	+5°C to 45°C | 41°F to 113°F
Maximum Altitude	2,500 m | 8,200 ft
DIMENSIONS	
Size (L x W x H)	0.21 M^3 (595mm x 700mm x 500mm) | 7.06 ft3 (3" x 27" x 20")
Weight	140 kg (305 lbs.)
FEEDSTOCK REQUIREMENTS	
Methanol/Water DI Blend Ratio	Premixed | Methanol 62.5+/- 0.5 wt% with balance DI water
Methanol Specifications	Methanol must meet IMPCA purity standard
De-Ionized Water Specifications	DI water must ≥ 14MΩ-cm

Place QR Code here

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* Specifications subject to change