

# H<sub>3</sub> 2500/5000



- 5 or 2.5 kW power output
- World-leading efficiency of 45%
  - No preventive maintenance
  - Extended runtime operation
- Simple installation and autonomous operation

**Reformed methanol hybrid systems.** The Reformed Methanol Fuel Cell (RMFC) works in parallel with an external battery pack existing on-site or installed with the system. The embedded charge controller enables regulated DC power for different applications and battery types. The RMFC features catalytic startup enabling a minimum power consumption in standby and during the startup process.

**Methanol fueled.** High temperature PEM with an integrated methanol reformer for on-site hydrogen generation enables high power density and high energy density. The fuel is a methanol water mix readily available through several global suppliers. The integration of fuel cell and reformer enables a highly energy efficient system due to reuse of waste heat from fuel cell in the reformation process.

**Multiple applications.** The RMFC has multiple applications within three main segments: Stationary, Mobility and Marine. Stationary; backup and supplemental power for telecommunication and off-grid generator replacement. Mobility; Range extender for hybrid electric vehicle in high utilization scenarios. Marine; Auxiliary generators for larger vessels and propulsion for small ships.

# Specifications

## Electrical characteristics

Parameter	H3 2500	H3 5000	
Power output [W]	2500	5000	
Voltage input [ $V_{DC}$ ]	36 - 60	36 - 60	-
Voltage input [ $V_{AC}$ ]	-	-	230
Voltage output [ $V_{DC}$ ]	42 - 58	42 - 58	-
	-	-	375
	-	-	560
Turn down [%]	0-100		

## Operational characteristics

Parameter	H3 2500	H3 5000
Fuel mix	60% vol methanol 40% vol deionized water	
Fuel consumption [L/kWh]	0,7 - 0,8	
Net electric efficiency [%]	40 - 45	
Ambient temperature [°C]	-20 to 50	
Installation temperature <sup>1</sup> [°C]	-40 to 50	
Communications	AUX, LAN (HTTP/SNMP), CAN	

## Mechanical characteristics

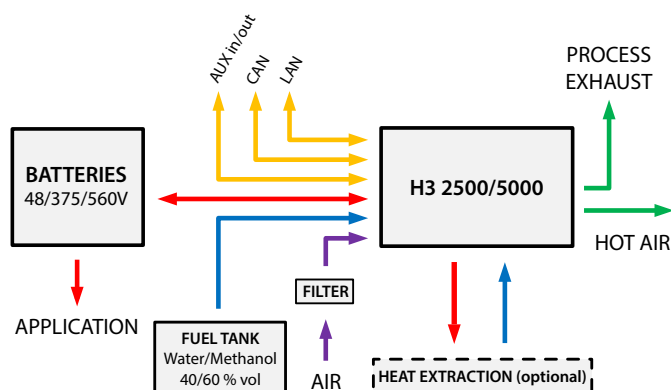
Parameter	H3 2500	H3 5000
Height - [mm] / Rack Units [U]	267 / 6U	
Width [in]	19" Rack size	
Length <sup>2</sup> [mm]	702	
Weight [Kg]	57	65
Volume [L]	83	

<sup>1</sup> Sub-zero temperature possible with added heater solution.

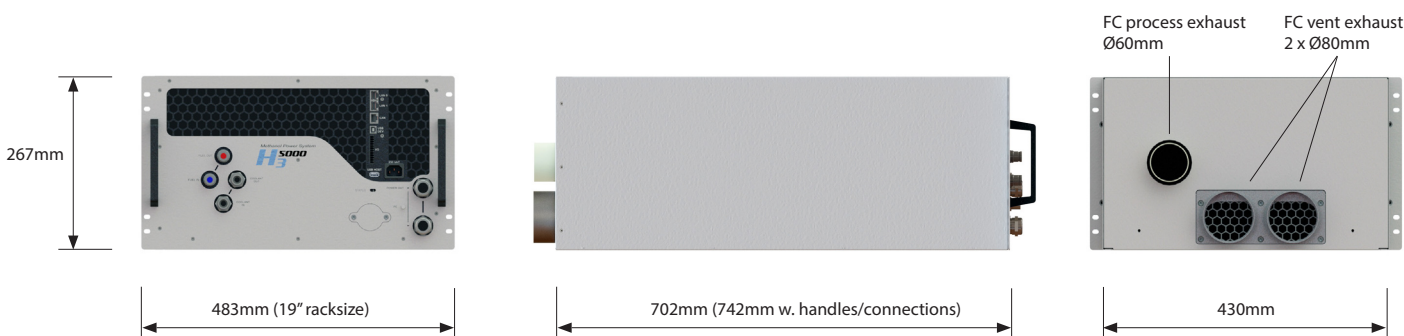
<sup>2</sup> Length excluding handles, connectors on front and exhaust pipes on rear.

More Serenergy fuel cell modules can be used in a system for obtaining higher power ranges as demanded by application. Serenergy offers complete system engineering and support to ensure performance while simplicity is maintained.

Write to us at [sales@serenergy.com](mailto:sales@serenergy.com) for more information, pricing and availability.



H3 5000 system diagram



H3 5000 dimensions (H3 2500 version identical)

Serenergy A/S reserves the right to change specifications and descriptions without notice.