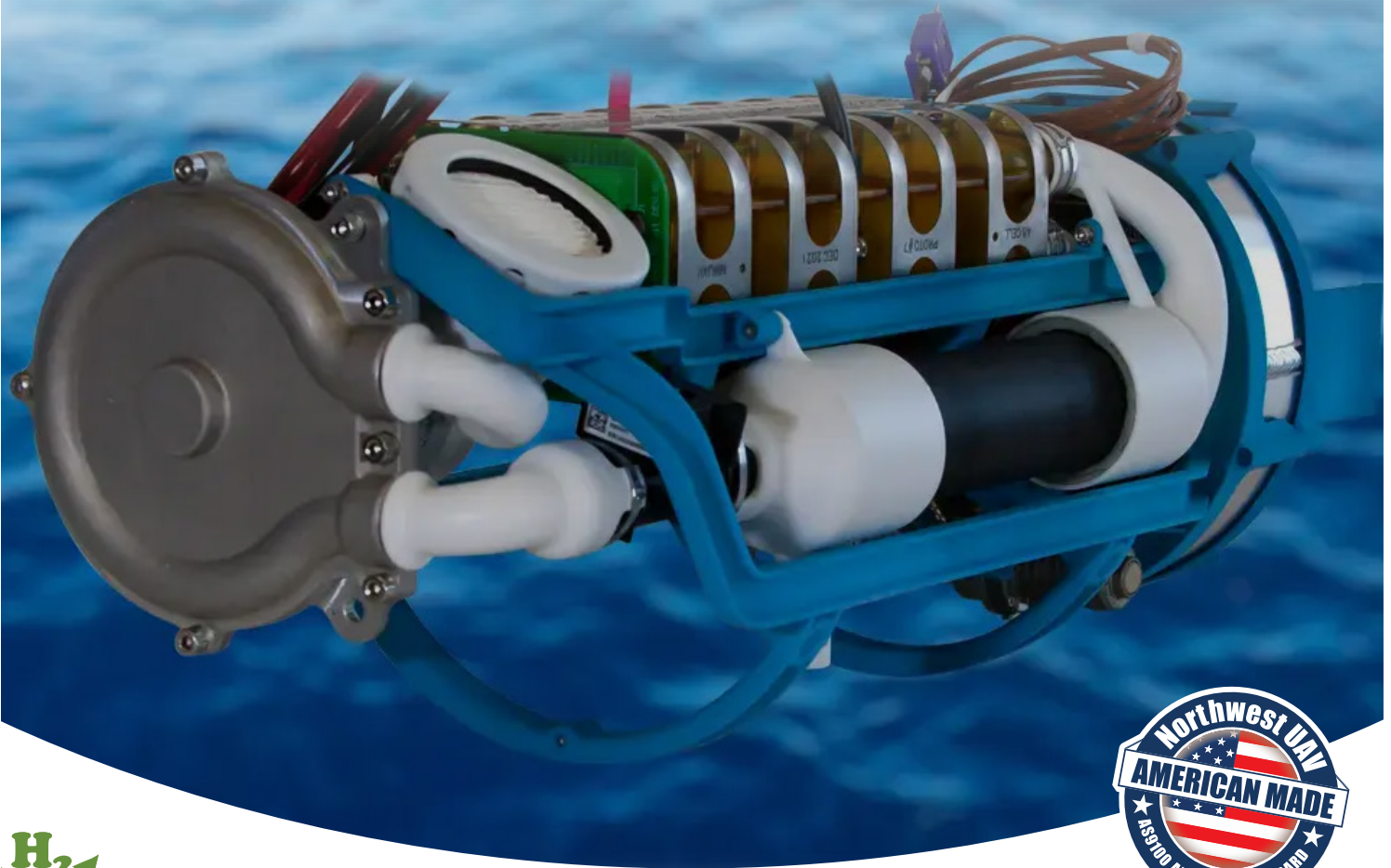


NWFC-1500 PEM Fuel Cell



Clean Reliable Energy

MISSION-GRADE HYDROGEN PROPULSION

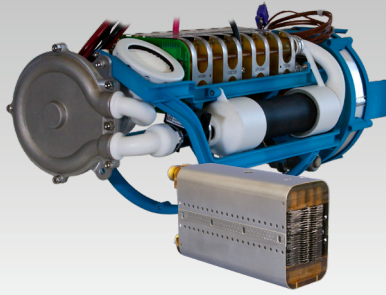
BREAKING THE BATTERY BARRIER

The NWFC-1500 is a high-density Proton Exchange Membrane (PEM) Fuel Cell system engineered in cooperation with the U.S. Government for the 18–34 kg (40–75 lbs) UAS class. Designed to displace traditional battery arrays, the NWFC-1500 offers a modular, AS9100-compliant power solution that significantly extends mission radius while maintaining the low-observable characteristics of electric flight.

01. Classification: Proton Exchange Membrane (PEM) Fuel Cell
02. Origin: Made in the USA | AS9100 Aerospace Standard Architecture
03. Platform Class: Group 2 UAS (MTOW)

MILITARY PROVEN PROPULSION SOLUTIONS!





H₂ FUEL CELL - STRATEGIC RELIABILITY & LOGISTICS

The NWFC-1500 is designed to lower Total Cost of Ownership (TCO) through reduced maintenance cycles and long-term fueled storage capabilities. Its modular and scalable design allows it to adapt to varying power requirements, providing a flexible propulsion baseline for the next generation of Remotely Operated and Autonomous Systems.

01. SYSTEM SPECIFICATIONS

PARAMETER	SPECIFICATION
Technology	Proton Exchange Membrane (PEM)
Rated Power (Gross)	1500 W / 1200 W (Customer Available)
Rated Performance	24V @ 50A
Number of Cells	48
Fuel Type	Hydrogen, SAE J2719 Standard (or Better)
Cooling Type	Liquid; 50/50 glycol/de-ionized water, type 1
Hydrogen Consumption at Rated Power	1.8 grams/min (20 slpm) 5.3 gpm STP
Hydrogen Consumption at Cruise Power (500 W)	0.5 grams/min (5.8 slpm) 1.5 gpm STP
Hydrogen Supply Pressure	10-20 psig 69-138 kPa
Weight²	8.8 lbs (3990 g ± 100 g)
System Dimensions (Diameter x Length)	6.8 x 16 in 17.3 x 40.6 cm
Sound Rating (Max)	66 dBa
Power-to-Weight Ratio	330 W/kg
System Efficiency at Cruise (500 W)	53%
Time Between Overhaul	500 hours
Service Life	1500 hours

NOTE: This product is under development, a reduction in weight, improvements to the power-to-weight ratio, and increased TBO and service life are expected. ¹Depending upon aircraft. | ²Excludes fuel tank. Includes balance of plant and radiator, and in-flight cell voltage monitoring.

PEM Fuel Cell application is dependent on airframe factors including: Aerodynamics, propeller, and operational concept. Please contact NWUAV for guidance.



RELIABLE



LIGHTWEIGHT



INSTANT ON



SCALABLE



CUSTOMIZABLE



REMOTE OPERATION

02. TACTICAL ADVANTAGES & SYSTEM ARCHITECTURE

- Advanced Low-Observable Profile:** Engineered for near-silent operation with a minimal thermal signature, providing a decisive advantage in covert ISR and high-sensitivity reconnaissance missions.
- Rapid Deployment Readiness:** Features a Quick-start capability, ensuring immediate power-up for time-critical launches—a significant upgrade over legacy fuel cell systems.
- Energy Density Optimization:** Offers superior energy-to-weight ratios compared to traditional battery systems, allowing for increased “on-station” duration and environmentally responsible operations.
- AS9100-Compliant Engineering:** Unlike commercial-off-the-shelf cells, this is an American-made, purpose-built system designed for the rigors of flight, featuring a compact envelope and customizable layout for streamlined airframe integration.

03. OPERATIONAL BENEFITS

- Stealth Optimization:** Lowest audible and thermal signatures in the class.
- Reduced Logistics:** Lower maintenance requirements and operating costs compared to internal combustion engines of similar output.
- Configuration:** Lightweight, compact envelope designed for customizable internal airframe layouts.



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