

NW-88 UAV Multi-fuel Engine

Flown Up To
18,000 FT



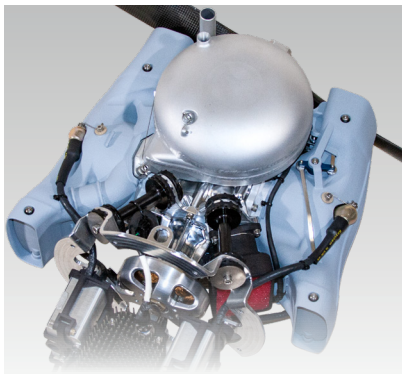
COMBAT-PROVEN POWER FOR GROUP 3 UAS THE INDUSTRIAL STANDARD FOR HEAVY-LIFT ENDURANCE

The NW-88 is a purpose-built, twin-stack or large-bore propulsion system engineered specifically for the 34–68 kg (75–150 lbs) airframe class. As a combat-proven solution, the NW-88 eliminates the power-to-weight anxieties of large-scale UAS deployment, providing a stable, high-output platform for aircraft requiring significant payload capacity and extended “on-station” duration.

01. Classification: Group 3 UAS Heavy-Fuel Engine
02. Origin: Made in the USA | Export-Approved / EAR99
03. Status: Combat-Proven / Operational Readiness Level (ORL) High

MILITARY PROVEN PROPULSION SOLUTIONS!





NW-88 UAV HFE - STRATEGIC RELIABILITY

Made in the USA and **Approved for Export**, the NW-88 is designed for rapid integration into global fleet architectures. Its "purpose-built" pedigree means it bypasses the reliability hurdles of hobby engines, offering a mature 400-500 hour TBO (Time Between Overhaul) schedule that lowers the Total Cost of Ownership (TCO) for fleet operators.

01. TECHNICAL ARCHITECTURE & FLIGHT ENVELOPE

- **Advanced Fuel Management:** Integrated Electronic Fuel Injection (EFI) provides seamless multi-fuel transitions (Heavy-Fuel/Gasoline) and superior atomization for high-altitude performance.
- **Operational Ceiling:** Validated flight performance up to 18,000 ft MSL, ensuring mission success in high-density altitude environments and contested airspace.
- **Precision Avionics Integration:** RPM Hold Capable logic allows for rock-solid station-keeping and predictable power curves, essential for high-resolution SAR (Synthetic Aperture Radar) and EO/IR imaging stability.
- **Two-Stroke Efficiency:** Optimized power-to-weight ratio designed for low-altitude loitering and long-endurance transit without the thermal overhead of modified consumer engines.

02. NW-88 SPECIFICATIONS

PARAMETER	SPECIFICATION
Engine Type	Two-stroke, Multi-Fuel Twin
Weight ¹	7800 ± 200 grams
Displacement	88 cc
Max Speed	7500 rpm (Continuous)
Rated Power	7.3 hp (@ 7250 rpm)
BSFC ³	395-456 g/kw-hr / 0.65-0.75 lb/hp-hr (@ Cruise 5000 rpm @ Sea Level)
Ignition	Shielded Twin 25kv CDI (Capacitive Discharge Ignition)
Cooling	Air with ACHT (Active Cylinder Head Temperature Control)
Fuel Delivery	High-Pressure FADEC (Full Authority Digital Engine Control), EFI (Electronic Fuel Injection)
Fuel/Oil Mix	32:1 Ratio by Volume (Heavy Fuel or Gasoline)
ECU Data	1,000 hours (Storage) @ 1Hz Recording Rate

NOTE: Actual performance will vary depending on PMU configuration, application, propeller, fuel type, oil, environmental conditions, type of operation, direction of rotation, generator losses, and cowling configuration.
| ¹Total weight with propeller and interface harness. | ²Fuel is subject to regional and seasonal variations. The user is responsible for testing, validating, and defining operational limits with their local gasoline source.

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



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03. CORE TECHNOLOGIES

- **Heavy-Fuel Optimization:** Advanced injection timing ensures efficient combustion of JP-5, JP-8, and Jet-A to meet global military logistics requirements. Additionally, the system supports non-ethanol gasoline (R+M)/2² (93–100 Octane).
- **Precision RPM Governance:** The "RPM Hold" capability ensures constant propeller speed despite varying atmospheric conditions, critical for stable sensor data acquisition.
- **High-Altitude Calibration:** Map-switching logic automatically compensates for ambient pressure changes, preventing "flame-outs" or power degradation in thin air.
- **Streamlined Integration:** Developed with a modular footprint to simplify installation in both pusher and tractor configurations, reducing airframe assembly man-hours.

04. OPERATIONAL ADVANTAGES

- **Combat-Proven Reliability:** Extensive flight hours in theater ensure a mature platform with a documented service history.
- **American Manufacturing:** Fabricated in the USA under AS9100-compliant processes, ensuring sovereign supply chain security and component traceability.
- **Versatile Power Generation:** Integrated architecture supports high-output alternators to power sophisticated Group 3 sensor suites and encrypted comms links. Available 6/12/21 or 28 VDC, 280-Watts.

05. PROCUREMENT & COMPLIANCE

- **Field-Ready Deployment:** The NW-88 is a serialized, production engine designed for immediate integration into tactical fleets. It meets all standard criteria for international export EAR99.