

Honeywell

THE POWER OF **CONNECTED**

ADVANCED WATERJET TECHNOLOGY FOR MARINE PROPULSION

High Performance From A Light Weight, Compact,
Cost-Effective Design



Waterjet Propulsion

Powerful Solutions for Marine Propulsion

Honeywell propulsion systems deliver unparalleled power, performance and reliability for applications around the globe. With extensive military and commercial experience, Honeywell continues to provide operators with innovative technology for higher performance, enhanced reliability and reduced cost of operations.

Why Honeywell?

- Dedicated Marine Propulsion Resources
- Advanced Technological Development
- Responsive Problem Solving
- Reduced Cost of Operation

Waterjet Propulsion Advantages

- State-of-the-Art Propulsion Efficiency
- Lightweight and Cost-Effective Approach
- Modular Construction for Simplified Maintenance
- Robust Single Rotor Design

Superior Waterjet Propulsion

Honeywell's compact and high-power waterjet propulsion for amphibious vehicles and high-speed hullforms comes from a completely new design concept that delivers 11,000 lbs. of thrust from a 23-inch diameter impeller. Using Computational Fluid Dynamics tools and Six-Sigma design practices, Honeywell's waterjet incorporates a unique rotor and stator design resulting in a single rotating blade row that produces higher rotor and pump efficiencies than competing designs. With fewer moving parts and a lightweight, modular construction, Honeywell's waterjet results in a more reliable propulsor that is compact, easy to maintain, and less costly to manufacture.

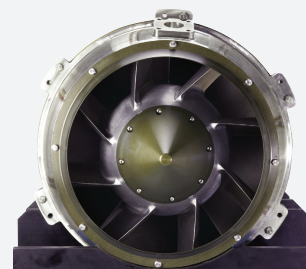
Honeywell Innovation

Honeywell's advanced waterjet design originated from the United States Marine Corps' challenges with an under performing engine for the Expeditionary Fighting Vehicle (EFV). Honeywell was charged to develop a new propulsion solution that not only improved the overall performance of the EFV in the water mode but also met the vehicle specification with respect to weight capacity, acceleration time, and vehicle speed. The result was a compact waterjet 15 inches shorter in overall length than the previous design and able to absorb more power without

cavitation. Testing was recently conducted utilizing Honeywell's new waterjet design and the United States Marine Corps has favorably received the improved performance. While achieving speeds in excess of 35 knots, the vehicle acceleration time to planing speed has been reduced from over two minutes to less than 30 seconds, and the weight carrying capacity of the vehicle has been increased by 4,000 lbs. All of these parameters exceed the EFV's original operational objectives.

EFV Performance Specifications

- System Type: Waterjet Propulsion with flush inlet
- Power Range: 1300 hp
- Thrust: 15,000 lbf (bollard) 11,000 lbf @ 25 knots
- Size: 110" l x 25" w x 28" h (23" diameter impeller)
- Weight: 900 lbs.
- Features: Single-stage rotor, stator, exit nozzle, flush inlet



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