Saildrone Unveils Spectre High-speed USV for Naval Operations

A rendering of the Saildrone Spectre with its sail, and in sail-less kinetic strike mode. CREDIT: Saildrone

Saildrone (Booth 1315) today released the design of the Saildrone Spectre, a 52-meter-long, 250-ton uncrewed surface vessel intended for anti-submarine warfare.

Capable of speeds up to 30 knots, Spectre is the largest, fastest, and most capable Saildrone platform to date, the company said. It leverages the endurance and reliability of the company's Saildrone wing system but is designed to operate without the wing for kinetic strikes.

"Spectre is the result of 25 years of continually pushing the boundaries of what's possible. A unique design evolved through the hard lessons of operational experience in the real world," said Richard Jenkins, Saildrone's founder and CEO. "Spectre is not a craft hurriedly readied to meet a particular RFP,

but diligently evolved over multiple years to meet the operational requirements of our customers and fill critical capability gaps in the ASW domain."

Cruising at 25 knots with a 25,000 kilogram payload, Spectre has a range of 3,280 nautical miles in flat water and 2,790 nautical mile range in Sea State 4 head sea. Controllable-pitch propellers enable efficient operations throughout the speed range, allowing for controllable acoustic signatures and near-silent slow-speed operations for tow bodies such as thin-line towed arrays and variable-depth sonar systems.

The concealed payload deck provides room for containerized payloads, ranging from dual 40-foot containers, up to five 20-foot containers, or a mixture of configurations. Spectre's maximum payload capacity is over 70 tons.

"Spectre represents a transformative step forward for naval surface warfare. Its endurance, payload flexibility, and seamless integration with advanced missile and sonar systems will give the U.S. Navy a persistent, low observable USV that can deliver on a spectrum of maritime missions," said Paul Lemmo, vice president and general manager, sensors, effectors, and mission systems at Lockheed Martin. "Lockheed Martin is proud to partner with Saildrone to bring this capability to life, and we look forward to demonstrating its power at upcoming on-water, live fire demonstrations."

Spectre performance has been verified and tested at Force Technologies' tow tank in Copenhagen, Denmark, the company said.

Spectre is constructed from aluminum and will be built in Wisconsin at the Fincantieri system of shipyards, which has the capacity to manufacture five Spectre vessels per year. Construction will begin shortly, with the first vessel

undergoing sea trials in early 2027.

The 43-meter (140-foot) composite Saildrone Wing will be manufactured by American Magic Services (AMS) at the American Magic High Performance Center in Pensacola, Florida. Building on its experience serving the marine, aerospace, and defense industries, AMS is capable of producing five Spectre wings per year.

Working with Lockheed Martin, Saildrone has ensured Spectre design compatibility with a wide range of Lockheed Martin payloads, including thin-line towed arrays such as the TB29 and the Mk70 VLS Launcher. Spectre can carry two Mk70s and is capable of deploying the CAPTAS-4 variable-depth sonar system from Thales/AAC.