



# BELL UNVEILS 'VIGILANT' UNMANNED TILTROTOR FOR U.S. MARINE CORPS

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**Bell Helicopter unveiled a new unmanned tiltrotor aircraft—the V-247 Vigilant—it is proposing for the U.S. Marine Corps. The manufacturer displayed a one-eighth-scale model of the aircraft with a working swiveling wing at a briefing September 22 in Washington, D.C.**

**Bell has designed the Vigilant to meet a need expressed in the 2016 Marine Aviation Plan for a large, “sea-baseable” unmanned aircraft system (UAS) capable of performing multiple missions. It would be a Group 5 UAS—weighing 16,000 pounds empty, with the ability to carry 13,000 pounds in fuel, weapons such as the MK-50 torpedo, Hellfire or JAGM missiles, and sensors including sonobuoys and LiDAR or radar modules. Advertised mission range is 450 nm, with time on station of 11 hours.**

**The vertical takeoff and landing machine builds on Bell’s development of the V-280 manned tiltrotor for the U.S. Army’s joint multi-role demonstration program. There is “significant leveraging of V-280 technology” in the Vigilant, said Vince Tobin, Bell vice president for advanced tiltrotor systems. The design also benefits from Bell’s work on tiltrotors dating to the XV-3 in the 1950s, a legacy that includes the unmanned Eagle Eye developed—but never purchased—for a U.S. Navy requirement in the 1990s and the V-22 Osprey used by the Marine Corps, the Air Force Special Operations Command and eventually by the Navy as the CMV-22B.**

Sized to be compatible with the Navy’s DDG-class guided-missile destroyers, the single-engine Vigilant has a V-shaped empennage and fixed center wing that swivels from an in-line position to

perpendicular of the fuselage. Outboard prop-rotors and wingtips rotate up for vertical flight and down for horizontal flight. The aircraft's wingspan is 65 feet; its rotors fold out to a diameter of 30 feet. The wingtips fold back over the center wing, which swivels back over the fuselage for stowage.

The Vigilant promises "expeditionary capability with increased operational flexibility and a reduced logistical footprint," said Tobin. "The real advantage of this is it colocates with the maneuver force and it isn't reliant on a runway."

Bell expects the Marine Corps will establish a formal requirement for the ship-based UAS capability soon, leading to the selection of a contractor to begin engineering and manufacturing development. Bell contends it can start building Vigilants by 2023. "The question that we're asked is how fast can you go? We interpret that [as being] a near-term need," Tobin said.

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