

MILITARY

HH-65A Dolphin

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The United States Coast Guard has added 96 short range HH-65A helicopters to its fleet to replace the HH-52A Sikorsky Sea Guard. The twin-engine Dolphins operate up to 150 miles off shore and will fly comfortably at 120 knots for three hours. The HH-65A is not able to perform water landings. Though normally stationed ashore, the HH-65A can land and take-off from 210-foot WMEC, 270-foot WMEC, and 378-foot WHEC Coast Guard Cutters. These cutters are capable of refueling and supporting the helicopter for the duration of a cutter patrol.

Though normally stationed ashore, the Dolphins can be carried on board medium and high endurance Coast Guard Cutters. They assist in the missions of search and rescue, enforcement of laws and treaties, including drug interdiction, polar ice breaking, marine environmental protection including pollution control, and military readiness. Helicopters stationed aboard icebreakers are the ship's eyes to find thinner and more navigable ice channels. They also airlift supplies to ships and to villages isolated by winter.

The HH-65A minimum equipment requirements exceed anything previously packaged into one helicopter weighing in at less than 10,000 pounds. HH-65As are made of corrosion-resistant, composite-structure materials. The shrouded tail rotor is unique to the Dolphin. Also a unique feature of the Dolphin is its computerized flight management system which integrates state-of-the-art communications and navigation equipment. This system provides automatic flight control. At the pilot's direction, the system will bring the aircraft to a stable hover 50 feet above a selected object. This is an important safety feature in darkness or inclement weather. Selected search patterns can be flown automatically, freeing the pilot and copilot to concentrate on sighting the search object.

The Dolphin is manufactured by Aerospatiale Helicopter Corporation in Grand Prairie, Texas. Textron Lycoming builds the LTS-101 750B-2 turboshaft engines in Williamport, Pennsylvania and Rockwell International, Collins Avionics Group manufactures the electronics system in Cedar Rapids, Iowa.

The HH-65A planned service life would end in 2006. An SRR mission analysis began in 2000. IOC would follow in 2004, with the project complete in 2008. A Service Life Extension Program (SLEP), including updated avionics, increased payload, and increased power from the LTS-101 engines, was evaluated for the HH-65A. If implemented, the SLEP will extend Coast Guard HH-65 operations through 2015. Efforts are already underway to upgrade the HH-65A fleet by adding an NVG compatible cockpit, TCAS, GPS, an upgraded Environmental Control System utilizing R-134, a refrigerant, and an upgraded main gear box to increase payload.

The Dolphin is primarily a Short Range Recovery (SRR) aircraft. There are total of 96 Dolphins in the Coast Guard Fleet. The Dolphin replaced the old HH-52A Sea Guard helicopter. The fleet has home ports in 17 cities on the Atlantic and Pacific Oceans, Hawaii, and the Great Lakes region.

The Dolphin is a twin engine helicopter powered by, two Lycoming LTS-101-750B-2 each producing 742 shaft HP. The Dolphin is usually deployed from shore but it can be deployed from medium and high endurance Coast Guard Cutters, as well as the Polar Icebreakers. The Dolphin's main jobs are: search and rescue, enforcement of laws and treaties (including drug interdiction), polar ice breaking, marine environmental protection including pollution control, and military readiness.

When deployed from an icebreaker, the helicopter acts as the ship's eyes, searching out thinner and more navigable ice channels. They also have the job of airlifting supplies to villages isolated by winter, or transporting scientists to conduct remote research.

The minimum equipment requirements exceed anything previously put into one helicopter under 10,000 pounds. The material used to make the helicopter is corrosion-resistant, composite-structure materials. The shrouded tail rotor is also unique to the Dolphin. Another powerful tool that the Dolphin wields is its state-of-the-art communication and navigation equipment. This system provides automatic flight control. At the pilot's direction, the system will bring the aircraft to a stable hover 50 feet above a selected object.

The first proposed rotary-wing aircraft under the Integrated Deepwater System (IDS) Program is an upgraded version of the legacy short-range recovery helicopter, HH-65. Redesignated as the Multi-Mission Cutter Helicopter (MCH), the HH-65 will undergo a Service Life Extension Plan (SLEP) that will yield a like-new aircraft. The MCH will assist in the missions of search and rescue, enforcement of laws and treaties, as well as maritime homeland security missions.

Additional Specifications and Characteristics:

- The MCH will have increased communications, increased Common Operating Picture (COP) capability, and night/all-weather capability with radar and Electro-Optic/Infrared sensors.
- The MCH will be capable of deployment from flight deck equipped cutters like the National Security Cutter (NSC) and the Offshore Patrol Cutter (OPC), as well as existing legacy assets.
- The MCH has a rapid response capability and is used to extend classification and identification ability of the cutter to which it is embarked.
- The combined asset pairing of a Flight Deck Equipped Cutter with a deployed MCH will allow the Commanding Officer of the ship to utilize the air asset to investigate, classify, and identify a threat and then to vector the cutter to the target.
- The MCH meets the requirements associated with cutters deploying on defense operations and peacetime military engagements, and may also be used to meet non-Deepwater aviation demand missions currently being conducted by existing HH-65s.
- The MCH will increase the monitoring range for small boat operations.

Improvements (as proposed under the ICGS contract):

- Low-cost, low-risk major airframe upgrades.
- Avionics common with Recovery and Surveillance Aircraft (VRS); accommodates flexible payload.
- Engine upgrades for mission performance.
- N3+ Gear Box transmission.
- Landing gear replacement.
- Improved fenestron.
- Extension of nose.
- Additional fuel-carrying capabilities.
- Maximum air speed of 175 knots.
- Ability to deploy on most major cutters.

* Note: While information on near-term efforts is kept up to date, information on asserts that will be acquired in the far-term is considered notional. For far-term assets, the provided information reflects the proposed system solution at time of award, and is likely to change over time.