

## MV-22B Osprey - 2010

### United States

Type: Transport

Min Speed: 140 kt

Max Speed: 305 kt

Commissioned: 2010

Length: 17.5 m

Wingspan: 14.0 m

Height: 5.5 m

Crew: 4

Empty Weight: 15032 kg

Max Weight: 27400 kg

Max Payload: 9000 kg

Propulsion: 2x T406-AD-400



Sensors / EW: - AN/AAR-47A(V)2 - (2007) Infrared, MAWS, Missile Approach Warning System, Max range: 9.3 km  
- AN/APR-39A(V)2 - (USN/USMC) ESM, RWR, Radar Warning Receiver, Max range: 222.2 km  
- AN/AAQ-27 [FLIR] - (USN/USMC) Infrared, Infrared, Surveillance & Navigation Camera, Max range: 27.8 km  
- AN/APN-217 - (1983) Radar, Radar, Navigation, Max range: 64.8 km

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#### Weapons / Loadouts:

- Marine Infantry - Troops.
- Cargo [Air Drop, 9 tons] - Cargo.
- Cargo [Air Drop, 6 tons] - Cargo.
- 7.62mm Minigun Burst [100 rnds] - (Aircraft) Gun. Surface Max: 1.1 km. Land Max: 1.1 km.

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**OVERVIEW:** The Bell Boeing V-22 Osprey is an American multi-mission, military, tiltrotor aircraft with both a vertical takeoff and landing (VTOL), and short takeoff and landing (STOL) capability. It is designed to combine the functionality of a conventional helicopter with the long-range, high-speed cruise performance of a turboprop aircraft.

The V-22 originated from the United States Department of Defense Joint-service Vertical take-off/landing Experimental (JVX) aircraft program started in 1981. The team of Bell Helicopter and Boeing Helicopters was awarded a development contract in 1983 for the tiltrotor aircraft. The Bell Boeing team jointly produce the aircraft. The V-22 first flew in 1989, and began flight testing and design alterations; the complexity and difficulties of being the first tiltrotor intended for military service in the world led to many years of development.

The United States Marine Corps began crew training for the Osprey in 2000, and fielded it in 2007; it is supplementing and will eventually replace their Boeing Vertol CH-46 Sea Knights. The Osprey's other operator, the U.S. Air Force, fielded their version of the tiltrotor in 2009. Since entering service with the U.S. Marine Corps and Air Force, the

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Osprey has been deployed in both combat and rescue operations over Iraq, Afghanistan, Sudan and Libya.

**DETAILS:** The Osprey is the world's first production tiltrotor aircraft, with one three-bladed proprotor, turboprop engine, and transmission nacelle mounted on each wingtip. It is classified as a powered lift aircraft by the Federal Aviation Administration. For takeoff and landing, it typically operates as a helicopter with the nacelles vertical and rotors horizontal. Once airborne, the nacelles rotate forward 90 degrees in as little as 12 seconds for horizontal flight, converting the V-22 to a more fuel efficient, higher speed turboprop aircraft. STOL rolling-takeoff and landing capability is achieved by having the nacelles tilted forward up to 45 degrees. Other orientations are possible, such as the "80 Jump" takeoff which uses nacelles at 80 degrees to quickly achieve high altitude and speed.

**TYPE:** Multi-Mission (VSTOL) Tiltrotor Aircraft.

**SPECIFICATIONS:** Crew: (4) - pilot, copilot and two flight engineers/crew chiefs || Capacity: (24) troops (seated), 32 troops (floor loaded), or 20,000 lb (9,070 kg) of internal cargo, or up to 15,000 lb (6,800 kg) of external cargo (dual hook), (1) Growler light internally transportable ground vehicle || Length: 57 ft 4 in (17.5 m) || Rotor diameter: 38 ft 0 in (11.6 m) || Wingspan: 45 ft 10 in (14 m) || Width with rotors: 84 ft 7 in (25.8 m) || Height: 22 ft 1 in/6.73 m; overall with nacelles vertical (17 ft 11 in/5.5 m; at top of tailfins) || Max. takeoff weight: 60,500 lb (27,400 kg) || Powerplant: (2) Rolls-Royce Allison T406/AE 1107C-Liberty turboshafts, 6,150 hp (4,590 kW) each.

**PERFORMANCE:** Max Speed: 275 knots (509 km/h, 316 mph) at sea level / 305 kn (565 km/h; 351 mph) at 15,000 ft (4,600 m) || Cruise speed: 241 kn (277 mph, 446 km/h) at sea level || Range: 879 nmi (1,011 mi, 1,627 km) || Combat radius: 390 nmi (426 mi, 722 km) || Ferry range: 1,940 nmi (2,230 mi, 3,590 km) with auxiliary internal fuel tanks || Service ceiling: 25,000 ft (7,620 m) || Rate of climb: 2,320 - 4,000 ft/min (11.8 m/s) || Glide ratio: 4.5:1.

**SENSORS:** AN/APN-217 Navigation Radar || AN/AAQ-27 Infrared FLIR || AN/AAR-47a (MAWS) Missile Approach Warning System || AN/APR-39A (RWR) Radar Warning Receiver.

**ARMAMENT:** (1) 7.62 mm (0.308 in) M240 machine gun or 0.50 in (12.7 mm) M2 Browning machine gun on ramp, removable || (1) 7.62 mm (.308 in) GAU-17 minigun, belly-mounted, retractable, video remote control in the Remote Guardian System.

**SOURCE:** [SCO] Wikipedia <http://en.wikipedia.org>