

TRIDENT

The TRIDENT is an intercontinental ballistic missile (ICBM) launched from submarines.

Submarine launched ballistic missiles (SLBMs) have been an integral part of the strategic deterrent for six generations, starting in 1956 with the US Navy fleet ballistic missile (FBM) Polaris (A1) program. Since then, the SLBM has evolved through Polaris (A2), Polaris (A3), Poseidon (C3) and today's force of Trident I (C4) and Trident II (D5). Each generation has been continuously deployed at sea as a survivable retaliatory force and has been routinely operationally tested and evaluated to maintain confidence and credibility in the deterrent.

Trident I (C4) was first deployed in 1979 and is planned to be deployed until phased out in the early 2000s. Trident II (D5) was first deployed in 1990 and is planned to be deployed past 2020. The Trident II (D5) missile has also been provided to the United Kingdom which equips the missile with UK warheads and deploys the missile on Vanguard Class UK submarines.

FEATURES

Trident I (C4) and Trident II (D5) missiles are deployed in Ohio-class (Trident) submarines, each carrying 24 missiles.



The Trident II (D5) is a three-stage, solid-propellant, inertially guided FBM with a range of more than 4,000 nautical miles (4,600 statute miles). Trident II is more sophisticated than Trident I (C4) with a significantly greater payload capability. All three stages of the Trident II are made of lighter, stronger, stiffer graphite epoxy, whose integrated structure means considerable weight saving. The missiles range is increased by the aerospike, a telescoping outward extension that reduces frontal drag by about 50 percent. Trident II is launched by the pressure of expanding gas within the launch tube. When the missile attains sufficient distance from the submarine, the first stage motor ignites, the aerospike extends and the boost stage begins. Within about two minutes, after the third stage motor kicks in, the missile is traveling in excess of 20,000 feet (6,096 meters) per second.

GENERAL CHARACTERISTICS, TRIDENT I (C4)

Primary Function: Strategic nuclear deterrence.

Propulsion: Three-stage solid-propellant rocket.

Length: 34 feet (10.2 meters).

Weight: 73,000 pounds (32,850 kg).

Diameter: 74 inches (1.8 meters).



Range: 4,000 nautical miles (4,600 statute miles or 7,360 km).

Guidance System Inertial.

Warhead: Nuclear MIRV (multiple independently targetable reentry vehicles).

GENERAL CHARACTERISTICS, TRIDENT II (D5)

Primary Function: Strategic nuclear deterrence.

Power Plant: Three-stage solid-propellant rocket.

Length: 44 feet (13.41 meters).

Weight: 130,000 pounds (58,500 kg).

Diameter: 83 inches (2.11 meters).

Range: Greater than 4,000 nautical miles (4,600 statute miles, or 7,360 km).

Guidance System: Inertial.

Warheads: Nuclear MIRV (multiple independently targetable re-entry vehicle).

