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In a major development for India's air superiority, Moscow recently greenlit the sale of its formidable R-37M ultra-long-range air-to-air missile to New Delhi.

R-37M Missile

The R-37M missile, known by its NATO reporting name AA-13 Axehead, is a long-range air-to-air missile developed by Russia.

It is designed to eliminate enemy fighter jets and drones beyond visual range (BVR).

People often call the R-37M an "AWACS Killer" because it can go after large and important enemy aircraft. These include radar planes like AWACS, refuelling tankers, and even jamming aircraft that help enemy fighters.

Indian engineers expect the missile to fit smoothly onto the IAF's Su-30MKI fighters because the weapon is already approved for the Russian Su-30SM, which is almost the same type of aircraft.

Features

Measuring approximately 4.2 metres long and weighing nearly 600 kilograms, the R-37M carries a 60-kilogram high-explosive fragmentation warhead intended for large airborne targets.

Its guidance architecture combines inertial navigation, mid-course data-link updates, and active radar homing during the terminal phase, allowing the launching aircraft to adjust targeting information dynamically.

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It also employs a lofted trajectory profile, enabling the missile to climb before descending toward its target, thereby conserving energy and extending effective engagement range.

It features a jettisonable rocket booster that allows it to achieve a range of 300 to 400 kilometers, making it one of the longest-reaching air-to-air missiles in service globally.

Its speed can reach hypersonic levels, up to Mach 6, which is crucial for intercepting fast-moving targets. It is the world's fastest known air-to-air missile class.

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