

## DRDO Pioneers "Multiple Kill Vehicle" System to Counter Advanced Missile Threats



India's Defence Research and Development Organisation (DRDO) is developing a sophisticated "Multiple Kill Vehicle" (MKV) system to strengthen the nation's Ballistic Missile Defence (BMD) shield against advanced missile attacks. This cutting-edge initiative is designed to neutralize a complex threat posed by Multiple Independently Targetable Reentry Vehicles (MIRVs), where a single missile carries several warheads capable of striking different targets. The MKV system is being engineered to overcome the challenge of intercepting these multiple threats, which can also be accompanied by decoys to confuse conventional defense systems.

The core of the MKV technology is a ground-launched interceptor missile that carries a single carrier vehicle. This carrier, guided by a high-resolution telescope, is designed to deploy several smaller, autonomous "kill vehicles." Each of these smaller interceptors will independently track and destroy its assigned target in the terminal phase of the attack, just before it re-enters the atmosphere. By launching a swarm of kill vehicles from a single interceptor, the system significantly increases the probability of destroying all incoming enemy warheads.

This "high-firepower" approach is a strategic upgrade to India's existing two-tiered BMD program. The development of a robust defense against MIRVs is considered strategically vital, as several nations, including some in India's neighborhood, have developed or are in the process of developing this advanced capability. The successful deployment of the MKV system would represent a major leap in India's strategic defense infrastructure and position the country

among a select group of nations with the technology to counter such sophisticated missile threats.

The MKV system will undergo extensive and rigorous testing to confirm its reliability and effectiveness before it is integrated into the armed forces. The development shows a national commitment to creating a credible deterrence posture and enhancing India's defense capabilities. This new technology is expected to provide a crucial layer of protection, particularly against missile systems that employ countermeasures and decoys, making India's defense shield more robust and effective.