

# Operation Sindoor: The Rise of Aatmanirbhar Innovation in National Security



Operation Sindoor emerged as a calibrated military response to an evolving pattern of asymmetric warfare, one that increasingly targets unarmed civilians along with military personnel. The terrorist attack on tourists in Pahalgam in April 2025 served as grim reminder of this shift. India's response was deliberate, precise and strategic. Without crossing the Line of Control or international boundary, Indian forces struck terrorist infrastructure and eliminated multiple threats. However, beyond tactical brilliance, what stood out was the seamless integration of indigenous hi-tech systems into national defence. Whether in drone warfare, layered air defence or electronic warfare, Operation Sindoor marked a milestone in India's journey towards technological self-reliance in military operations.

## Air defence capabilities: Tech as the first line of protection

On the night of 7–8 May 2025, Pakistan attempted to engage a number of military targets in Northern and Western India including Awantipura, Srinagar, Jammu, Pathankot, Amritsar, Kapurthala, Jalandhar, Ludhiana, Adampur, Bhatinda, Chandigarh, Nal, Phalodi, Uttarlai and Bhuj, using drones and missiles. These were neutralised by the Integrated Counter UAS (Unmanned Aerial Systems) Grid and air defence systems. On the morning of 8 May, the Indian Armed Forces targeted air defence radars and systems at a number of locations in Pakistan. An air defence system at Lahore was neutralised. As part of Operation Sindoor, the following were used: Battle-proven AD (Air Defence) systems like the Pechora, OSA-AK and LLAD guns (Low-level air defence guns). Indigenous systems such as the Akash, which demonstrated stellar performance.

India's air defence systems, combining assets from the Army, Navy and primarily the Air Force, performed with exceptional synergy. These systems created an impenetrable wall, foiling multiple attempts by Pakistan to retaliate. The Integrated Air Command and Control System (IACCS) of the Indian Air Force brought all these elements together,

providing the net-centric operational capability vital for modern warfare.

## Offensive actions with pinpoint accuracy

India's offensive strikes targeted key Pakistani airbases— Noor Khan and Rahimyar Khan with surgical precision. Loitering munitions were used to devastating effect, each finding and destroying high value targets, including enemy

radar and missile systems. All strikes were executed without loss of Indian assets, underscoring the effectiveness of our surveillance, planning, and delivery systems. The use of modern indigenous technology, from long range drones to guided munitions, made these strikes highly effective and politically calibrated.

## Evidence of neutralised threats

Operation Sindoor also produced concrete evidence of hostile technologies neutralised by Indian systems: Pieces of PL-15 missiles (of Chinese origin), Turkish-origin UAVs, named "Yiha" or "Yeehaw" and long-range rockets, quadcopters and commercial drones. These were recovered and identified, showing that despite Pakistan's attempts to exploit advanced foreign supplied weaponry, India's indigenous air defence and electronic warfare networks remained superior.

## Performance of systems: Air defence measures of the Indian Army

On 12 May, Lt Gen Rajiv Ghai, Director General Military Operations, in the Operation Sindoor press briefing highlighted the excellent performance of a mix of legacy and modern systems.

Since precise strikes on terrorists were conducted without crossing the Line of Control or International Boundary, it was anticipated Pakistan's response would come from across the border. A unique blend of counter unmanned aerial systems, electronic warfare assets and air defence weapons from both Army and Air Force were utilised which included counter unmanned aerial systems, shoulder fired weapons, legacy air defence weapons and modern air defence weapon systems.

This multi-tier defence prevented Pakistan Air Force attacks on our airfields and logistic installations during the night of 9/10 May. These systems, built over the last decade with continuous government investment, proved to be force