

**SMART
AND TO THE
POINT.**



IRON BEAM™

High Energy Laser Weapon System

A New Dimension in Air Defense

The increasingly sophisticated capabilities of evolving aerial threats present a significant challenge for military forces and strategic installations.

RAFAEL's IRON BEAM, the first system of its kind, is a 100 kW Class HELWS Air Defense effector that addresses this issue. The system engages and neutralizes a wide array of aerial threats with pinpoint accuracy at ranges of up to 10 km.

RAFAEL's global leadership in the area of HEL systems is based on its three decades of experience and recognized expertise. The company serves as Israel's HEL National Center for Excellence and National Lethality Lab, and works closely with the Israeli Defense Ministry.

Benefits

- Neutralizes a wide range of threats with pinpoint accuracy
- Protects military forces and civilian populations
- Uses an unlimited magazine
- Limited collateral damage
- Almost zero cost per intercept
- Flexible design; operates as standalone system or as part of multilayered defense system
- Transportable via ISO-compatible pallets





Transforming the Battlespace with Breakthrough Technology

IRON BEAM provides protection for ground forces, sensitive facilities, and civilian population centers. The system neutralizes multiple threat types including RAM and cruise missiles as well as UAVs – with rapid retargeting enabling engagement with swarms of attacking drones.

As a HEL system, IRON BEAM engages at the speed of light, with an unlimited magazine and almost zero cost per interception. Focusing on a specific point on an aerial threat enables neutralization within seconds. This exceptional precision ensures minimal collateral and environmental damage.

IRON BEAM's advanced technologies include multifunction Beam Directors implementing RAFAEL's high-performance Coherent Beam Combination and built-in Adaptive Optics – enabling extended tracking and stabilization. The system's operator console, deployed remotely, is connected via a data link.

Exceptionally versatile, IRON BEAM can operate as a standalone unit, be integrated with a variety of platforms, or become part of a multilayered air defense system.



Main Capabilities

- Defends against UAVs, mortars, rockets, artillery, and cruise missiles
- 100 kW class laser power
- Extended tracking enabled by multifunction Beam Directors
- Built-in Adaptive Optics for stabilization
- Coherent Beam Combination
- Rapid retargeting for swarm engagement
- Focus on specific part of a threat for neutralization within seconds
- Remote deployment of operator console



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