

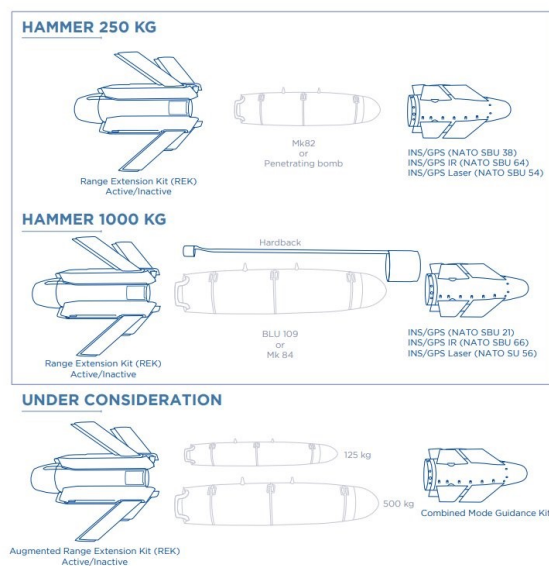
HAMMER Weapon System

Why in News?

Bharat Electronics Limited (BEL) and France's Safran Electronics & Defense have formed to produce the HAMMER Weapon System.

- **HAMMER** - Highly Agile Modular Munition Extended Range.
- It is a **smart precision guided air-to-ground weapon** in India.
- **Capabilities** - It is an all-weather smart air-to-surface weapon with an extended stand-off capacity.
- It provides accurate targeting of ground assets.
- **Coverage** - It is a **combat-proven weapon system** known for its high accuracy and modular design making it adaptable for multiple platforms including the Rafale and LCA Tejas.
- All the tactical requirements of air forces due to different guidance kits.

A VERSATILE AND MODULAR WEAPON SYSTEM




UNCHALLENGED ACCURACY


- HRG Crystal™ high-grade inertial system ensuring accuracy in GNSS-denied environment in all weather conditions.
- Three guidance kit versions to cover the full spectrum of air-to-surface tactical mission requirements.
- Common INS/GPS guidance for each guidance kit.




+ IR GUIDANCE



Poor geopotential or GNSS-denied environment




Use of digital scene matching algorithms in terminal phase




Design to work with vertical AOI**


+ LASER GUIDANCE



Poor geopotential, GNSS-denied environment or moving targets



Use of laser sensor in terminal phase



Fast-moving targets

HRG CRYSTAL™ Rebooting the navigation revolution

Mass-produced in Montluçon in France, Safran's HRG*** Crystal™ is the latest generation of cutting-edge resonating gyroscope designed to address the most demanding military navigation requirements. Embedded with HRG Crystal™, Safran's HAMMER has successfully reached its target in more than **3,000 strikes with the highest level of accuracy.**

*For all weather conditions. **AOI: Angle of Impact - ***Hemispherical Resonator Gyroscope

- **Focus** - Joint venture on localizing the production of the HAMMER weapon system, supporting India's Atmanirbhar Bharat initiative to reduce imports.
- The partnership will involve technology transfer from Safran to BEL, allowing BEL to manage final assembly, testing, and quality assurance, creating opportunities for Indian industries, especially SMEs.
- Establishment of centre of excellence to enhance India's defense capabilities in optronics and navigation equipment for military applications.
- **Long-term agreement** - HAL's agreement with Safran for the LEAP engine includes producing forged turbine components to boost India's aviation manufacturing and self-

sufficiency.

- **Employment Opportunity** - It will facilitate to create 400 jobs and aim to produce 30,000 equipment units annually by 2026.
- **Past collaborations** - HAL and Safran include the Shakti helicopter engine and current developments for the Indian Multi-Role Helicopter.
- It underscores the importance of localizing defense production and enhancing India's manufacturing capabilities in advanced technologies.

References

1. [The Hindu| HAMMER Weapon](#)
2. [Safran| AASM HAMMER](#)

