

ELECTRONICS & DEFENSE

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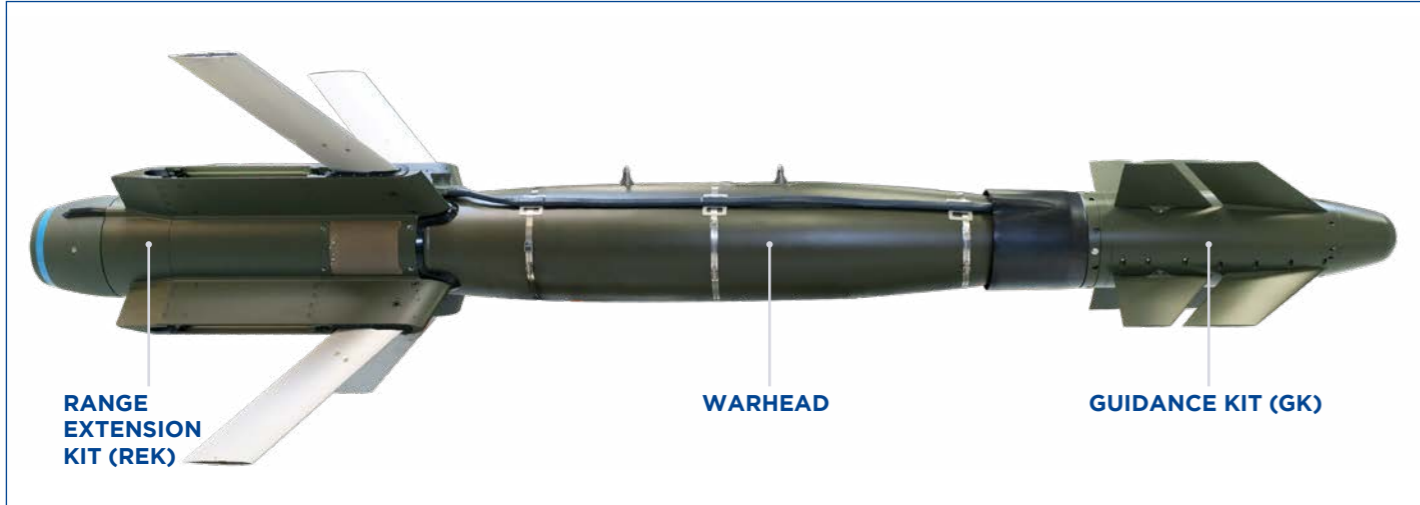
AASM HAMMER™

Smart tactical air-to-surface weapon family

 **SAFRAN**

AASM HAMMER™ FAMILY

SMART STAND-OFF AIR-TO-SURFACE WEAPON



HIGHLY
AGILE
MODULAR
MUNITION
EXTENDED
RANGE

MAIN FEATURES



VERSATILE CONFIGURATION



ACCURACY UNDER ALL WEATHER CONDITIONS AND GNSS*-DENIED ENVIRONMENTS



FIRE & FORGET AND USER FRIENDLY



MULTI-TARGETS ENGAGEMENT



STANDOFF FIRING RANGE FROM VERY LOW TO HIGH ALTITUDE

*Global Navigation Satellite System



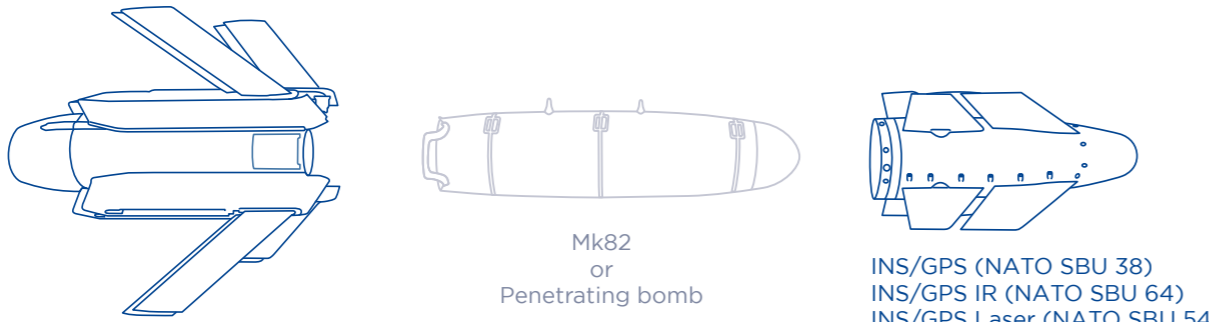
100% IN-HOUSE AND ITAR-FREE

HAMMER™ weapon system calls on Safran Electronics & Defense extensive technological expertise, especially for inertial navigation, mission planning avionics and guidance optronics.

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A VERSATILE AND MODULAR WEAPON SYSTEM

HAMMER 250 KG

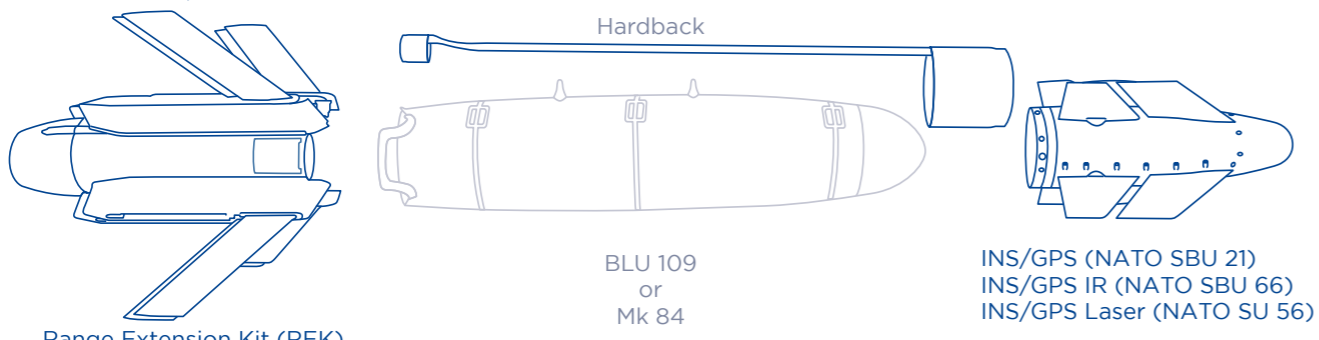


Range Extension Kit (REK)
Active/Inactive

Mk82
or
Penetrating bomb

INS/GPS (NATO SBU 38)
INS/GPS IR (NATO SBU 64)
INS/GPS Laser (NATO SBU 54)

HAMMER 1000 KG



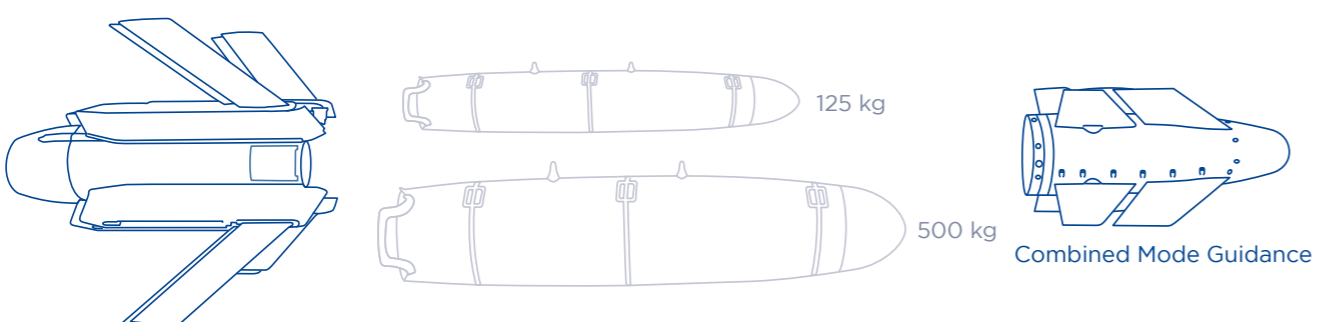
Range Extension Kit (REK)
Active/Inactive

Hardback

BLU 109
or
Mk 84

INS/GPS (NATO SBU 21)
INS/GPS IR (NATO SBU 66)
INS/GPS Laser (NATO SU 56)

UNDER CONSIDERATION



Augmented Range Extension Kit (REK)
Active/Inactive

125 kg

500 kg

Combined Mode Guidance Kit

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 geopositioning or GNSS-denied environment

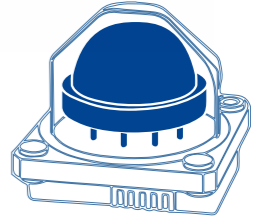
- ▶ Use of digital scene matching algorithms in terminal phase
- ▶ Design to work with vertical AOI**

+ LASER GUIDANCE



Poor geopositioning, GNSS-denied environment or moving targets

- ▶ Use of laser sensor in terminal phase
- ▶ Fast-moving targets



HRG CRYSTAL™
Rebooting the navigation revolution

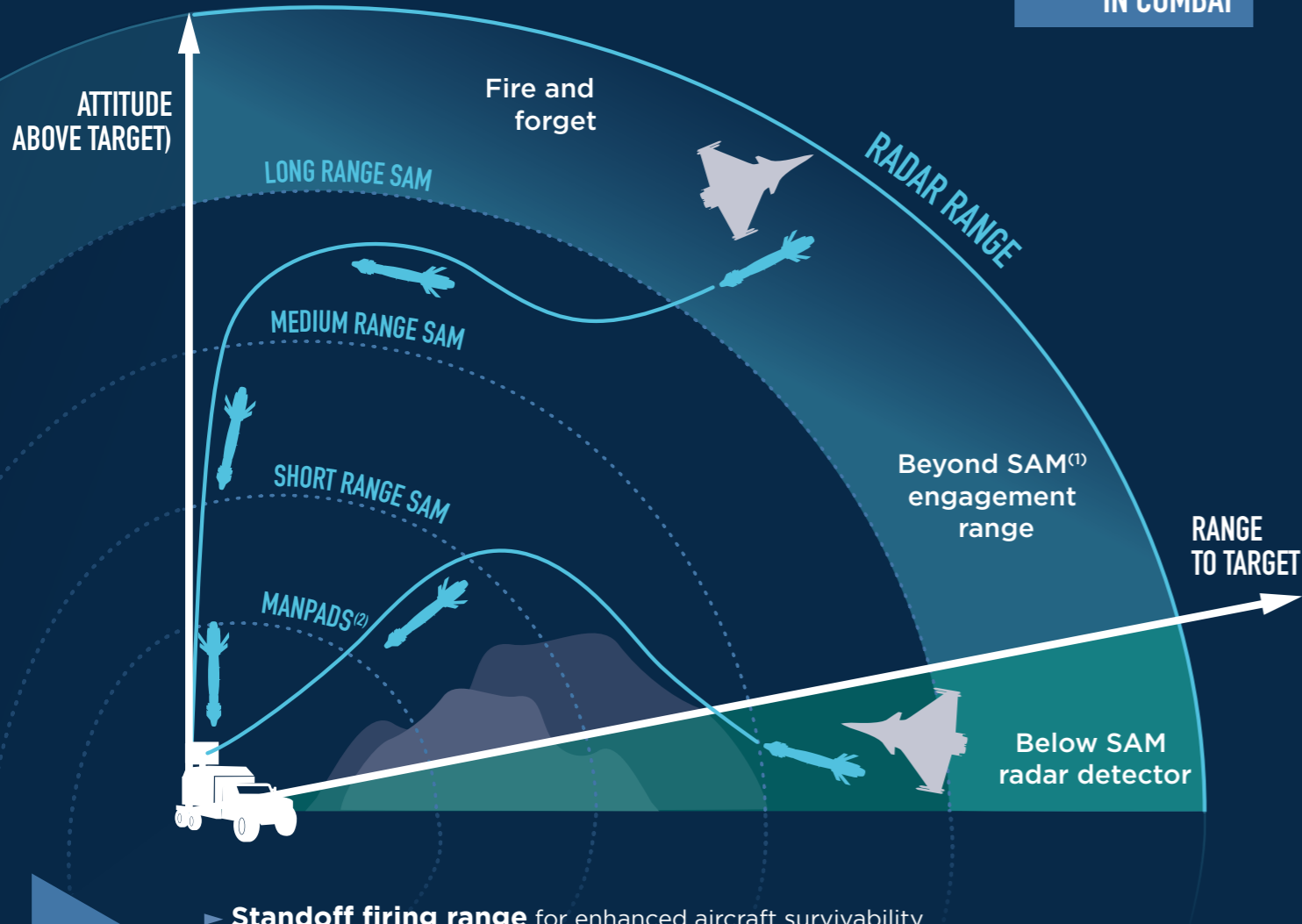
Mass-produced in Montluçon in France, Safran's HRG*** Crystal™ is the latest generation of cutting-edge resonating gyroscope designed to address the most demanding military navigation requirements.

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

NO PLACE TO HIDE

99%
SUCCESSFUL STRIKES
IN COMBAT



- ▶ **Standoff firing range** for enhanced aircraft survivability
- ▶ **Selection of angle and speed of impact** whichever the weapon release options
- ▶ **Unmatched firing envelope** even in GNSS-denied environments

(1) SAM: Surface-Air Missile. (2) MANPADS: Man-Portable Air-Defence System



TACTICAL GAME-CHANGER



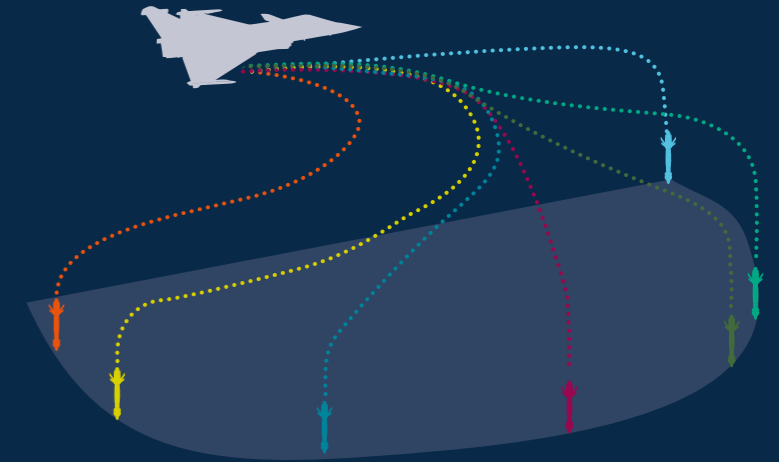
INFRA-RED FOR
PRECISION STRIKES
ON FACILITIES



AIRBURST⁽³⁾
FOR SOFT TARGETS
AND AERIALS



LASER FOR
FIXED OR FAST
MOVING TARGETS



- ▶ **FIRE & FORGET**
- ▶ **MULTI-TARGETS ENGAGEMENT**
- ▶ **OFF-BORESIGHT CAPABILITY AND WIDE LAR⁽⁴⁾**

(3) Airburst is the detonation of an explosive device above the ground instead of on contact with the target.
(4) Launch Acceptable Region.



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15 YEARS OF MISSION SUCCESS

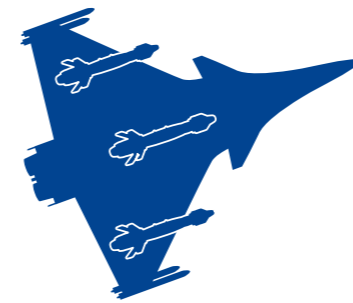
COMBAT PROVEN WEAPON SYSTEM

- ▶ DEAD/SEAD operations⁽¹⁾
- ▶ CAS operations⁽²⁾
- ▶ TST engagement⁽³⁾
- ▶ Critical infrastructure strikes

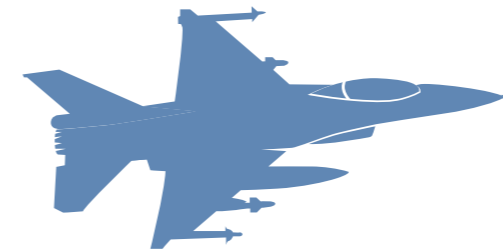


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MULTI CARRIER



FROM ITS NATIVE CARRIER
fully integrated with Dassault Rafale Aircraft



AND FIGHTERS WITH LIGHT INTEGRATION

already fired from Lockheed Martin F16, Dassault Mirage 2000 and Mirage F1 with Hasas (Hammer Stand Alone System), a cost effective stand alone system



TO TAILORED INTEGRATION TO FULFILL SPECIFIC NEEDS:

- Transport aircrafts
- Light attack fighters

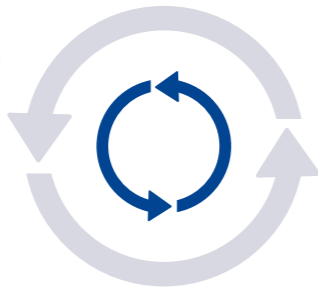
(1) DEAD: Destruction of Enemy Air Defenses
(1) SEAD: Suppression of Enemy Air Defenses
(2) CAS: Close Air Support
(3) TST: Time Sensitive Target

PREMIUM SERVICES

Safran elaborated an optimized concept to prevent heavy maintenance. With trainings and documentation, it helps to reduce the system's life cycle cost.



HAMMER™ does not require preventive maintenance. It is a truly **life cycle costs effective solution**.



Safran provides electronic documentation with **data modules** that are **S1000D compliant**.



Missions planning systems follows each step of the planning to provide operators an overview of assigned missions.



The CBT (Computer Based Training) makes efficient trainings available for pilots as well as for armorers. This **includes initial** and **refresh trainings**. Safran **accompanies** you through all the process.



A LIVING FAMILY

Capitalizing on nearly 15 years of operations, Safran is continuously upgrading HAMMER™ with new state of the art guidance kits, range extension kits and warheads while staying at the heart of collaborative future combat and digital challenges.

CONTINUOUS DEVELOPMENT

- ▶ NEW DUAL SEEKER MODES GUIDANCE KIT
- ▶ NEW RANGE EXTENSION KIT
- ▶ INCREMENTAL FUNCTIONS TO EXTEND MODULARITY

CONSTANT ADAPTATION

- ▶ COLLABORATIVE COMBAT
- ▶ HIGH INTENSITY BATTLEFIELD



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