



Storm Shadow / SCALP is the air-launched long range, conventionally armed, deep strike weapon, designed to meet the demanding requirements of pre-planned attacks against high value fixed or stationary targets.

Able to be operated in extreme conditions, the weapon offers operators a highly flexible, deep-strike capability based around a sophisticated mission planning system.

After launch, the Storm Shadow / SCALP missile descends to a low cruising altitude powered by a turbojet engine. Guidance is based around a robust triple navigation system that uses Inertial Navigation, GPS (Global Positioning System) and Terrain Reference Navigation, ensuring that the route selected by the mission planners can be achieved over land and water, even in the most severe counter measures environments. This three-level system provides the weapon with a high degree of navigational precision. The missile is equipped with an imaging infrared seeker that is activated during the final target approach phase. Automatic target recognition algorithms then compare the real scene with the target impact point designated during the mission planning phase, in order to hit the target exactly where required. Alternatively an Attack On Co-ordinate capability is available for more time constrained missions.

Fitted with the acclaimed «BROACH» penetrator and warhead, and with the ability to select direction and dive angle of attack, Storm Shadow / SCALP is able to effectively engage a variety of targets such as control centres, hardened aircraft shelters, runways, buildings and bridges, SAM Systems and ships in port.

Storm Shadow / SCALP entered service with the Royal Air Force and the French Air Force in 2003 and has seen operational service in the Gulf, Iraq and Libya. The weapon is now in service with three other nations giving unrivalled deep strike capability.

Storm Shadow / SCALP is operated from Tornado, Rafale, Mirage 2000 and in the future from Eurofighter Typhoon and the F-35 Joint Strike Fighter.

- **Combat proven**
- **Selected by six nations**
- **Long range deep strike**
- **High survivability**

STORM SHADOW SCALP

**CONVENTIONALLY ARMED
LONG RANGE DEEP STRIKE
WEAPON**

MBDA
MISSILE SYSTEMS



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High survivability

Launch aircraft survivability is achieved through the missile's long stand-off range and low observability. Long flight time and sophisticated mission planning allow the missile to avoid enemy ground based air defence systems. High levels of navigation accuracy are provided by the INS, GPS and Terrain Reference Navigation system.

Pinpoint terminal accuracy

A high resolution IIR seeker and Automatic Target Recognition (ATR) ensure outstanding terminal performance and minimal collateral damage.

Terminal effectiveness

Provided by high final dive and tandem warhead, including a precursor charge and a large explosive / kinetic energy penetrator. The missile provides a choice of airburst, impact and penetrative modes depending on the target to be attacked.

Minimal crew workload

Enabling single-seat aircraft to operate the weapon system.

Name

- **STORM SHADOW / SCALP**

Missile characteristics

- **Weight:** 1300 kg
- **Length:** 5.10 m
- **Propulsion:** turbojet
- **Navigation:**
INS, GPS and Terrain Reference Navigation

Reference Navigation

- **Warhead:** blast / penetrator
- **Range in excess of 300km**

