

LAND

DUAL MODE BRIMSTONE (DMB) is the latest member of the proven Brimstone Weapon System family. DMB provides a low collateral, close air support weapon offering the fast jet operator the unique capability of engaging a wide range of target types, including fast moving vehicles/vessels in both a land and naval environment, in both direct and indirect fire modes.

This DMB Weapon builds upon the successful DMB Urgent Operational Requirement (UOR) which deployed the weapon into front line operations with the RAF. Operationally deployed in the Afghanistan and Libya conflicts, DMB has proved to be the weapon of choice with its unique ability to perform surgical strikes in time critical missions with a true day / night capability.

The UK MOD's SPEAR Capability 2 requirement leverages DMB's capabilities with an overall increase in performance with improvements in range and engagement footprint, from fixed wing jets. The system can be operated in three separate modes, each providing the user with unique flexibility and high confidence in mission success;

Mode 1: Semi-Active Laser (SAL) guidance, to engage static targets with limited or no radar cross section (RCS)

Mode 2: Both SAL and Millimetric Wave guidance for fast moving targets, in cluttered environments

Mode 3: Fire and Forget anti-armour mode is also available

DMB is fully integrated onto Tornado GR4 and is intended for integration on Typhoon, F-35 Joint Strike Fighter and Future Attack Helicopter. The weapon system is also suitable for deployment on a wide range of UAVs, land and surface platforms.

- Proven effectiveness both static and moving / manoeuvring targets
- Pin point accuracy and low collateral damage
- Human-In-The-Loop capability to meet restrictive rules of engagement
- Triples the weapon load out per pylon
- Standard interface assisting rapid integration to a large number of platforms
- IM Compliant
- Improves upon Brimstone airframe and energetics
- Builds upon in service and combat proven DMB UOR

DUAL MODE BRIMSTONE

ADVANCED MULTI-ROLE CLOSE AIR SUPPORT WEAPON



MBDA
MISSILE SYSTEMS

LAND

The UK MoD Programme (known as SPEAR Capability 2), replaces the legacy Brimstone missile's energetics and airframe with a new Insensitive Munition (IM) compliant warhead, rocket motor and an improved airframe providing improved life, operator safety and reducing the logistic burden imposed by non-IM systems. The warhead has been designed to produce minimal collateral damage from a precision strike. DMB's wide range of target types include, fast moving vehicles, tanks and armoured cars, bunkers, as well as naval vessels including swarming and individual fast in-shore attack craft (FIAC).

Combat aircraft armed with the DMB weapon offer reach, speed, flexibility, precision and the ability to engage multiple targets with a single mission load. When used from a fixed wing platform DMB provides a rapid response for Close Air Support and Counter Insurgency that are not possible from rotary wing assets alone.

Programmes are underway to enhance DMB further, providing greater user flexibility and weapon lethality and rapid integration onto other platforms.

Seeker

- Millimetric Wave radar
- Semi-active laser (SAL)

Modes of Engagement

- SAL, SAL/mmW or mmW only modes allow precision attack of a wide range of targets

Navigation & Guidance

- Inertial mid-course navigation and seeker determination for target acquisition
- Terminal phase determined by the mode selected. Mode 1 utilises SAL guidance whilst the radar provides 'range to go' information. Mode 2 utilises SAL guidance initially and then hands over to mmW guidance for increased accuracy once the missile determines the exact target being designated. Mode 3 utilises mmW autonomous target recognition, identification and terminal guidance
- Compatible with all STANAG 3733 laser designators
- Tandem Shaped Charge warhead effective against all ground targets
- Defeats all known conventional and reactive armour
- Minimal collateral damage in restrictive engagement scenarios

Propulsion

- Cast double base propellant rocket motor
- Strip Steel Laminate Motor Case

Architecture

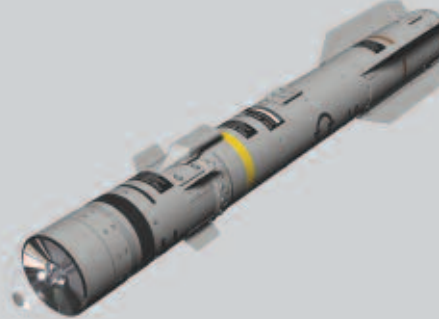
- Mil Std 1760 for maximum Platform compatibility

Name

- DMB - Dual Mode Brimstone

Missile characteristics

- Weight: 50 kg
- Length: 1.8 m
- Diameter: 0.18 m
- Guidance: Millimetric Wave Radar and Semi-Active Laser
- Warhead: Tandem Shaped Charge



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