



ASTER

ANTI-AIR MISSILES

ASTER missiles form the cornerstone of Europe's naval and land-based air defence programmes.

The ASTER missile family comprises ASTER 15 for short to medium range and ASTER 30 for short to long range. There is extensive commonality between the two variants with both missiles featuring the same terminal dart.

ASTER's terminal dart is a lightweight, highly manoeuvring and agile missile equipped with a high-performance active RF seeker. Thanks to the unique combination of aerodynamic control and direct thrust vector control (PIF-PAF), the missile is capable of high G manoeuvres. Together, these features give ASTER an unmatched hit-to-kill capability.

ASTER missiles provide ships with an all-round anti-missile and anti-air capability to ensure self-defence and consort protection. In addition, ASTER 30 also provides long range interception capability for area defence. For extended air defence with ATBM protection, the family also includes ASTER 30 B1 and ASTER Block 1 NT.

Both the ASTER 15 and the ASTER 30 missiles are vertically launched and autonomously guided to provide the best means of coping with saturating attacks. Due to very short missile preparation time and very high speed, the ASTER weapon system has a very quick engagement capability.

ASTER 15 and ASTER 30 missiles are in service on the latest vessels brought into service by three of Europe's major navies: Italy, France and the United Kingdom. ASTER 15 missiles are integrated with different types of multi-function radars and C2 in the SAAM system (the Charles de Gaulle and Conte di Cavour aircraft carriers).

Operational advantages

- **Capable of defending a naval force against saturating attacks of manoeuvring supersonic anti-ship missiles and late detected threats**
- **Only one system required to carry out the full spectrum of air defence missions (self, local and area defence) with 360° coverage against all air threats in complex environments (brown waters, high density of air and maritime activity)**
- **Capable of providing support to deployed land forces**
- **Able to cope with emerging threats (anti-ship ballistic missile, stealthy targets, etc)**
- **Offers growth potential for multi-platform engagement capability**
- **Based on a flexible architecture with a simplified ship's topside**

ASTER 15 and ASTER 30 missiles are integrated with different types of multi-function radars and C2 in the PAAMS system (on the Type 45 destroyer where the system is known as Sea Viper, and on Horizon and Orizzonte frigates) and with the French and Italian FREMM frigates.

Naval air defence systems deploying ASTER missiles are also in service with several other navies around the world.

MARITIME/GROUND BASED AIR DEFENCE

MBDA contacts

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Four missions

- Self-defence
- Local Area Defence for protection of consort ships
- Area Defence
- Extended Area Defence (against ballistic missiles)

ASTER 15 and ASTER 30 missile capabilities

- Protection against the full spectrum of air threats: supersonic and subsonic missiles, anti-radiation missiles/high divers, combat aircraft, MPAs, UAVs, helicopters
- Anti-ballistic missile capability (ASTER 30 B1 and ASTER Block 1 NT)
- All-weather capability
- Extremely quick reaction time
- Very high speed
- 360° coverage
- Autonomous guidance with active RF seeker with capability against stealthy targets
- 'PIF-PAF' control for Hit-to-Kill capability
- Multiple engagement capability with high rate of fire

Technical characteristics/specifications

Missile characteristics ASTER 15

| | |
|-----------------------|--|
| Weight: | 310kg |
| Length: | 4.2m |
| Diameter: | 180mm |
| Propulsion: | Solid propellant, two-stage motor |
| Maximum speed: | Mach 3 |
| Range: | In excess of 30km |
| Altitude: | 13km |



Missile characteristics ASTER 30

| | |
|-----------------------|--|
| Weight: | 450kg |
| Length: | 4.9m |
| Diameter: | 180mm |
| Propulsion: | Solid propellant, two-stage motor |
| Maximum speed: | Mach 4.5 |
| Range: | In excess of 120km |
| Altitude: | 20km |

