

AW159



AgustaWestland
A Finmeccanica Company

A TRUE FORCE MULTIPLIER



INTRODUCTION

The Lynx helicopter has faithfully served 15 nations over the last 25 years in both the land and maritime operational domains. The aircraft has been continuously developed, to deliver greater payload and additional capability and is already an accepted world leader in the 5 tonne class.

The AW159 is the latest variant and increases the aircraft's maximum all up mass to 6 tonnes, providing a significant capability upgrade in terms of both lift and operational effect. A host of advanced mission system and weapon options deliver an advanced day/night all weather, network enabled capability, to find, fix, strike and fully integrate into any digital battlespace.

MARITIME SURVEILLANCE AND ATTACK

Operating worldwide in all environments, the AW159 extends the area capability and operational effect of its host maritime platform. It has the ability to autonomously detect, identify and engage surface, land and sub-surface targets.

Armaments include air to surface missiles, torpedoes, depth charges, 2.75 inch air to ground rockets, 20mm cannons and 12.7mm door mounted heavy machine gun. The helicopter has a comprehensive and highly capable integrated avionics suite, enabling advanced navigation, communication, theatre integration and stores management functionality.

The mission sensor options include a state-of-the-art radar, active dipping sonar, electro-optical imaging, electronic surveillance measures and an integrated self-defence capability. The AW159 will provide added utility and effect through its multi-role design and unique ability to integrate into the smallest maritime frigates, OPV's and Corvettes.

- Over The Horizon Targeting
- Surface surveillance
- Offensive and defensive surface warfare
- Sub-surface warfare
- Maritime Counter Terrorism
- Search and Rescue
- Coastal & hydrographical operations
- Utility support
- Maritime counter piracy and narcotics



BATTLEFIELD RECONNAISSANCE AND SUPPORT

The Battlefield variant of the AW159, in common with the Naval variant, will have a fully marinised airframe and provisions for a range of mission and role equipment to enable a true multi-role capability, including:

- Reconnaissance
- Surveillance
- Target acquisition
- Direct artillery, Close Air Support or Naval Gunfire Support.
- Utility support
- Weapon options include rapid fire 2.75 inch ground attack rockets and 20mm cannons, both integrated with the pilot's head-up display, plus 7.62mm or 12.7mm door mounted machine guns.

The AW159 provides air manoeuvre for command and specialist teams, counter-terrorism tasks, close battle casualty evacuation and additional command and control. With its agility and ability to change roles rapidly, coupled with a superior communications suite, the network enabled AW159 is a true force multiplier.



AIRCRAFT SPECIFICATION

Airframe and Transmission growth enabled to 6250 kg

2 x LHTEC CTS800 engines allow power growth to meet 6250 kg MAUM

High reliability built in throughout

Conformal antenna

Large capacity avionics bay

Common undercarriage with strengthened attachments optimised for energy absorption

Provisions for missile, rocket and gun capability

Self-sealing crashworthy fuel system

Auxiliary Fuel Tanks

Active Dipping Sonar



OPERATIONAL ADVANTAGES

- Proven ability to take-off and land in extreme environments in hot and high conditions with excellent single engine performance
- Aircraft cleared to operate from +50°C to -26°C
- MAUM at 6000 kg with growth capability to 6250 kg
- Superior situational and mission awareness using large Multi Functional Displays with a network enabled mission system
- Extended range and operational time on station through use of auxiliary fuel tank(s)
- Capable of carrying a range of armaments for a flexible response to each situation
- Marineised aircraft suitable for operating from limited spaces on small vessels in high sea states
- High end mission equipment including SAR / ISAR capable radar and Electro-optical device
- Open architecture and built-in capacity for future capability enhancements

INTEGRATED AVIONICS SYSTEM

- Aircraft Management System – centralised control of communications, navigation, observation and weapons systems
- GPS (IGI/INS) Navigation System and Attitude and Heading Reference System
- Automatic Flight Control System
- Health and Usage Monitoring System
- 4 large format 10 x 8 inch Multi Functional Cockpit Displays
- Tactical Processor
- Stores Management System
- Secure voice intercom system
- Secure tactical voice and data VHF-UHF / AM/FM
- NVG compatible cockpit displays
- Embedded training capability
- Homing capable
- Identification Friend or Foe (IFF)
- Data Modem for inter-aircraft and ground station communication



ROLE EQUIPMENT

- Electric rescue hoist (externally mounted)
- 4 position simultaneous fast roping frame
- Cargo hook
- Stretchers
- Searchlight
- Armoured floor
- Auxiliary fuel tank(s)
- Wire strike protection
- Helicopter Collective Training System including door gun training system using eye-safe laser

MISSION EQUIPMENT

- Dipping or deployable sonar
- Integrated Defensive Aids Suite
- Onboard and Offboard Mission Planning System
- Weapons fit options including heavy machine guns, cannon pods, unguided or guided rockets, air to surface missiles, torpedoes and depth charges
- Radar with SAR / ISAR capability
- Tactical Data Link
- Electro-Optic Device with Laser Range Finder and Laser Target Designator and downlink capable



COMPREHENSIVE SERVICES AND TRAINING SOLUTION

AgustaWestland has a comprehensive range of support solutions for its products. This includes traditional spares support through to total capability services based on our award winning Integrated Operational Support service. Dedicated logistic and maintenance teams co-ordinate spares supply, repair and overhaul support services throughout the lifecycle of the product to minimise through life costs and maximise aircraft availability.

Our flexible support solutions, designed to meet the individual needs of each customer, can be combined with the provision of instructors and state of the art ground based training environments to produce turn-key solutions or complete availability based training services incorporating:

- Full flight and mission simulation
- Procedures trainers
- The latest multi-media courseware
- Training management information systems
- Facilities design and management



IN ADDITION THE AW159 OFFERS:

- Design features aimed at minimising maintenance costs, contributing to overall low operating cost, such as a high airframe fatigue life and widespread use of monolithic machined aluminium panels to reduce parts count
- Low set symmetric tailplane for improved flying qualities
- Large cockpit doors and avionic bay doors for easy entry and egress
- A built-in mass growth provision to allow incremental cost-effective upgrades.
- A new design tail rotor designed to meet the performance and increased load requirements of an aircraft MAUM of 6250 kg
- Twin CTS800-4N engines with a modern FADEC, relatively low fuel consumption and high reliability.
- Integrated Health and Usage Monitoring System (HUMS) developed from proven technology.
- A range of advanced survivability features including:
 - crashworthy/armoured crew seating
 - crashworthy troop seating
 - 'role fit' armoured cabin floor
 - wire strike protection system
 - a proven Integrated Defensive Aids Suite
 - an engine Infra-Red Suppression system
 - radar/IR signature improvements

DIMENSIONS



AW159

PERFORMANCE

Take-Off Mass
6000 kg (13228 lb)

Growth option to
6250 kg (13779 lb)

Maximum Speed
296 kph (160 knots)

Seats 2+7

Engines
2 x LHTEC CTS800-4N

Power Rating - Take-Off
1,015 kW (1,362 shp)

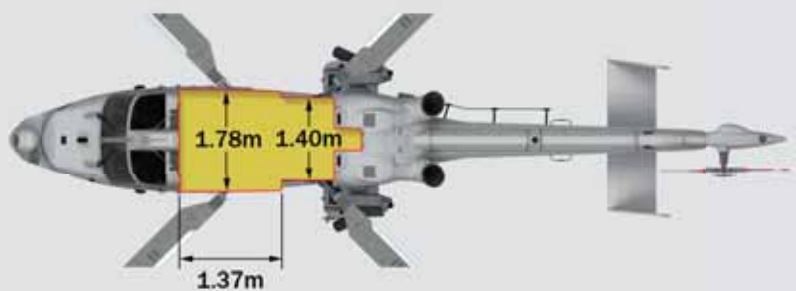
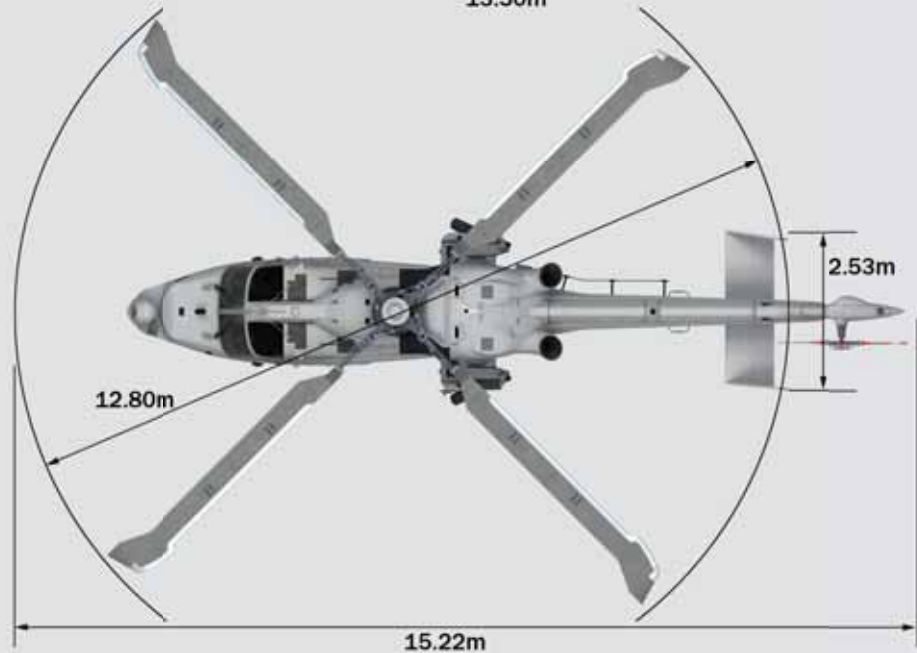
Internal Fuel Capacity
940 litres (207 gal)

AUXILIARY FUEL CONFIGURATION OPTIONS INCLUDING INTERNAL AND EXTERNAL ROLE FIT TANKS TO ENABLE:

Estimated Maximum Ferry Range
963 km (520 nm)

Estimated Maximum Endurance
4:30 hrs

Estimated Endurance in ASW
configuration 2:55 hrs



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