



AgustaWestland AW101
Maritime



AW101

THE SUPERIOR SOLUTION

EXTENDING THE LIMITS OF MARITIME OPERATIONS

The AW101 is the most advanced and capable multi-role maritime helicopter available today.

The AW101 has proven its capability in the harshest of maritime environments, from the North Atlantic to the Indian Ocean. From Frigates to Carriers, the AW101 has demonstrated its Maritime pedigree in a wide range of operational theatres. The AW101 is the most versatile and flexible platform in its class for multirole maritime missions.



SUPERIOR TECHNOLOGY

- Open architecture avionics provides flexibility and growth
- Unique Active Vibration System minimises crew fatigue
- Advanced profile blade design reduces noise and vibration



ENHANCED SAFETY AND SURVIVABILITY

- Inherent system and structural redundancy
- Demonstrated 30 minute transmission run dry
- Deck lock securing system
- Fully integrated Defensive Aids Suite



LARGEST CABIN IN CLASS

- Flexible cabin layouts with discrete work zones
- Simultaneous role capability
- High density 38 troop capacity amphibious support



EXTENDED RANGE

- Exceptional OEI safety with 3 powerful engines
- Unrivalled radius of action greater than 350 nm
- Extended time on station using Twin Engine Cruise



PROVEN ALL WEATHER OPERATIONS

- Designed from concept for harsh Maritime environments
- Deck operations in wind speeds up to 50 kt
- Flight operations with typical ship roll of 10°



PROVEN MARITIME CAPABILITY

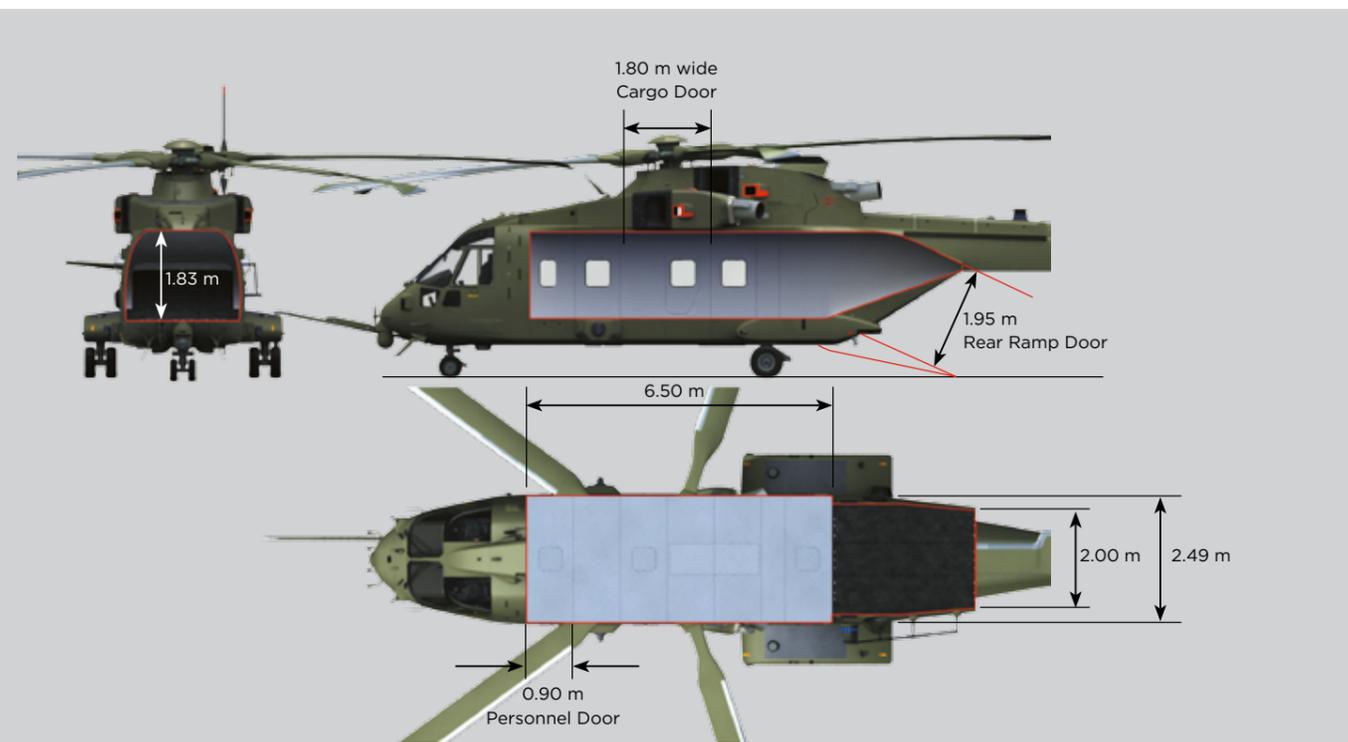
Selected by leading SAR customers worldwide, the AW101 has earned an unparalleled reputation as the most capable long range and high capacity platform. Paramount to the success of the AW101 is the large, wide body cabin which has the capacity to deliver multi-mission capability for all specialist and routine maritime roles.



LARGEST CABIN IN CLASS

With the largest cabin in its class, the AW101 provides customers with greater operational flexibility. Extensive role equipment provisions coupled with a comprehensive range of optional equipment enable the AW101 to be configured for simultaneous roles, thereby increasing operational effectiveness.

The 6.5 m long, 2.5 m wide, full-standing height cabin provides the AW101 with the versatility to be configured for simultaneous missions. Whether equipped for autonomous ASW / ASuW or amphibious assault with 38 troops, the AW101 offers total flexibility to fleet commanders.



UNRIVALLED VERSATILITY

The AW101 is a flexible multi-mission platform with extensive provisions to conduct a diverse range of primary and secondary roles. The capabilities of the platform allow many of these missions to be conducted simultaneously through the use of modular role equipment and rapid reconfiguration within the cabin.



MULTI-MISSION CAPABILITY

ANTI-SURFACE WARFARE (ASuW):

- Fully integrated mission system with advanced 360° Radar
- Passive Surveillance with ESM and EO device
- Two long range anti-ship missiles

ANTI-SUBMARINE WARFARE (ASW):

- Fully autonomous ASW operations
- Active Dipping Sonar and two Sonobuoy carrousel
- Four torpedoes or four depth charges

AIRBORNE MINE COUNTER MEASURES (AMCM):

- Excellent endurance ideal for mine hunting, neutralisation and sweeping missions
- Large cabin and rear ramp aperture compatible with future AMCM systems
- High power margins and OEI safety for towing missions

AIRBORNE SURVEILLANCE AND CONTROL:

- Advanced 360° Radar for Surface / Ground / Air surveillance
- Fully integrated mission system (Radar, EOSS, AIS and IFF Interrogator)
- Twin engine cruise extends endurance > 5 hours

PATROL AND INTERDICTION:

- Long range surveillance with HD Electro Optics and Radar
- Weapons options, including 12.7 mm machine gun
- Multiple fast roping / rappelling stations for insertion / boarding

ADDITIONAL ROLE CAPABILITIES:

- Amphibious Support (Troop / Vehicle / Equipment)
- Search and Rescue / Combat Search and Rescue
- Special Forces Missions
- Logistics Support: Ship to Ship / Ship to Shore
- Casualty / Medical Evacuation
- Humanitarian Relief

AIRCRAFT SPECIFICATION AND OPTIONS



ADDITIONAL EQUIPMENT

Maritime Equipment:

- Overwater Kit (Flotation & Liferafts)
- Decklock System
- Automatic Main Blade Fold & Tail Fold
- Aerial Refuelling (AAR)
- Hover In-Flight Refuelling (HIFR)
- Full Ice Protection System

Mission Equipment:

- Synthetic Vision System
- TCAS, HTAWS, Digital Maps
- Obstacle Detection System (LIDAR) Proximity Detection System
- Helmet Displays with Head Tracker
- Advanced AESA (360°) Radar
- Integrated Mission Console
- HD EO Sensor (Optional Laser Payloads)
- Direction Finding & AIS Detection
- Mission Recorder

Utility Equipment:

- Fast Roping/Rappelling (both doors & ramp)
- Cargo Hook (3,000 kg or 4,500 kg)
- Dual Rescue Hoist Installation (Fore/Aft)
- Stretcher racks (3 or 4 Litters)
- Internal Auxiliary Fuel

SUPERIOR MISSION PERFORMANCE

LONG RANGE

With a typical range of 750 nm (over 1,300 km) in standard configuration the AW101 is the most capable Maritime helicopter in the world today. The AW101 has demonstrated over 900 nm continuous flying when configured with auxiliary fuel tanks.

In addition to its already excellent capabilities, the AW101 range can be further extended when using the optional Air-to-Air refuelling and Hover-In-Flight refuelling capabilities.

CLASS LEADING OEI CAPABILITY

The AW101 is equipped with three civil certified (FAA Type Certificate E8NE) General Electric CT7-8E engines, each controlled by dual channel FADEC units. This engine configuration provides:

- Superior One Engine Inoperative (OEI) performance provides capability to safely complete missions on two engines
- Minimised exposure in critical phases of flight; takeoff, landing and hovering
- Reduced Category A takeoff and landing distances
- Twin Engine Cruise (TEC) option to further extend the range



LEADING TECHNOLOGIES

The AW101's design harnesses technologies at the forefront of industry to ensure the AW101 safely and reliably responds to the diverse nature of Maritime missions worldwide.

UNPRECEDENTED SAFETY

The AW101's design is focussed on safety and survivability, driven by customer demands to operate autonomously in harsh weathers and hostile locations. Extensive redundancy in structures, avionics and critical systems, combined with the three engine configuration and proven 30 minute run dry capability ensure the highest standards of safety.



SHIP OR SHORE BASED

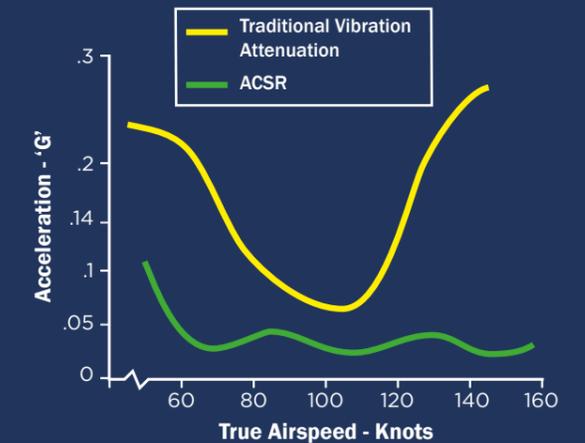
Designed specifically for ship operations in extreme weather conditions. Large main and tail rotor thrust margins and excellent control response provides the agility needed for operations in rough sea states.

Equipped with an (optional) Deck Lock system, enabling 360° rotation on the deck for optimal positioning. This feature, coupled with the negative thrust capability assures maximum safety during deck operations in adverse conditions up to Sea State 6.

The AW101 can be equipped with an automatic main rotor and tail rotor folding system, enabling stowage, transport and maintenance, even within a confined hangar space.

ACTIVE CONTROL OF STRUCTURAL RESPONSE (ACSR)

The ACSR is part of the innovative Vibration Management System which continuously monitors and adapts its operation to minimise vibration across the whole aircraft. This key technology reduces crew fatigue, thereby improving mission effectiveness over longer operations. The system also has the benefit of increasing component life through the reduction of vibration.





CUSTOMER SUPPORT & TRAINING

Leonardo Helicopters understands that rotary wing operations are complex. To be successful our Customers require the highest levels of safety, availability, reliability and maintainability; with access to the right support and training whenever and wherever it is needed.

INTEGRATED SOLUTIONS

Leonardo Helicopters' worldwide Customer Support & Training network delivers an extensive range of support solutions that are tailored to meet the unique requirements of each customer's organisation and mission.

Customer Support & Training's highly experienced teams will work with our customers to develop and deliver the training and services you require from individual solution elements, such as pilot training courses or spares delivery, through to fully integrated operational solutions.

SUPPORT SOLUTIONS

Customer Support & Training has a complete range of support services which will deliver all our customer's requirements for material, technical support and maintenance manpower. The Fleet Operations Centre provides a 24 hour service to respond to our global AW101 fleet.

TRAINING SOLUTIONS

Customer Support & Training designs, develops and delivers integrated training solutions and services for the AW101 in the live and virtual training domains, from type conversion through to full operational and mission capability. The training solutions deliver pilot, maintainer and ground crew training and can be expanded to cover all aspects of helicopter operations and facility management.



AW101 CHARACTERISTICS

Dimensions

Overall Length	22.83 m	74 ft 11 in
Overall Height	6.66 m	21 ft 10 in
Rotor Diameter	18.60 m	61 ft 0 in
Overall Length (folded)	15.75 m	51 ft 8 in
Overall Height (folded)	5.23 m	17 ft 2 in
Width (folded)	5.72 m	18 ft 9 in

Engine Ratings (3 x CT7-8E)

Take-off Power (5 min)	3 x 1,884 kW	3 x 2,527 shp
Intermediate (30 min)	3 x 1,855 kW	3 x 2,488 shp
Max Continuous	3 x 1,522 kW	3 x 2,041 shp
OEI 2 Minute Rating	2 x 1,880 kW	2 x 2,522 shp
OEI Continuous Rating	2 x 1,855 kW	2 x 2,488 shp

Transmission Ratings

Max Take-off power (2.5 min)	4,161 kW	5,580 shp
Intermediate (30 min)	3,955 kW	5,304 shp
Maximum Continuous	3,715 kW	4,982 shp
Maximum Contingency OEI	3,096 kW	4,152 shp
Maximum Continuous OEI	2,774 kW	3,720 shp

Fuel Capacity

Standard Internal Fuel Tanks	5,135 l	1,357 USG
Small USG Auxiliary Fuel Tank	649 l	171 USG
Large USG Auxiliary Fuel Tank	1,389 l	367 USG

Weights

Maximum Gross Weight	15,600 kg	34,390 lb
Empty Weight	>5,500 kg	>12,125 lb
Maximum External Load	4,536 kg	10,000 lb

Seating

Cockpit / Cabin	2 / 25+ crashworthy	
-----------------	---------------------	--

All Engines Operating Performance (MGW)

ISA		
Maximum Cruise Speed (SL - MCP)	277 kph	150 kt
Rate of Climb (SL - MCP)	8.5 m/s	1,680 ft/min
Service Ceiling	4,570 m	15,000 ft
Hovering IGE	3,307 m	10,850 ft
Maximum Range (All engine cruise) ⁽¹⁾	1,363 km	735 nm
Maximum Range (Twin Engine Cruise) ⁽¹⁾	1,500 km	810 nm
Maximum Endurance (Twin Engine Cruise) ⁽¹⁾		6 hours 50 min
ISA+20 Hovering IGE	2,420 m	7,950 ft
ISA+35 Hovering IGE	1,325 m	4,350 ft

One Engine In Operative Performance (MGW)

ISA		
Forward Rate of Climb (MCP)	4.06 m/s	800 ft/min
Service Ceiling (MCP)	3,108 m	10,200 ft
ISA+20 Service Ceiling (MCP)	2,270 m	7,460 ft
ISA+35 Service Ceiling (MCP)	1,220 m	4,000 ft

⁽¹⁾ No reserves, standard fuel tanks, 6,000 ft cruise



Leonardo - Società per azioni
Registered Head Office:
Piazza Monte Grappa, 4 - 00195 Rome - Italy
Tel. +39 06 324731 - Fax +39 06 3208621
Leonardo Helicopters
Head Office:
Via Giovanni Agusta, 520 - 21017 Cascina Costa di Samarate - Italy
Tel. +39 0331 229111



© Leonardo - Società per azioni

This document contains information that is proprietary to Leonardo - Società per azioni and is supplied on the express condition that it may not be reproduced in whole or in part, or used for manufacture, or used for any purpose other than for which it is supplied.

leonardocompany.com