

A photograph of an AgustaWestland AW101 helicopter in flight, viewed from a low angle. The helicopter is olive green with yellow accents on the cabin and rotor hub. Two crew members are visible in the cockpit. The background is a light blue sky. The image is overlaid with a white geometric pattern consisting of a large circle and several intersecting lines, and a cluster of small white squares in the upper right quadrant.

AgustaWestland AW101
Search and Rescue



AW101

THE SUPERIOR SOLUTION

EXTENDING THE LIMITS OF SEARCH & RESCUE

The AW101 is the most advanced SAR helicopter, with a proven record, conducting demanding missions worldwide. Delivering a high capacity and long range SAR capability with exceptional OEI safety. Leading technologies including Synthetic Vision and AESA radar set the new benchmark for all weather SAR operations.



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 capability
- Full crashworthy design to latest EASA standards



LARGEST CABIN IN CLASS

- Emergency evacuation of 50+ people
- Medical evacuation of 16 stretcher patients
- Flexible cabin layouts with discrete work zones



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 (TEC)



PROVEN ALL WEATHER OPERATIONS

- Comprehensive Ice & Snow Protection
- Extensive 40 kt cross wind envelope
- Reliable and high integrity navigation solution



PROVEN SAR 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 capability to evacuate more than 50 people in an emergency.



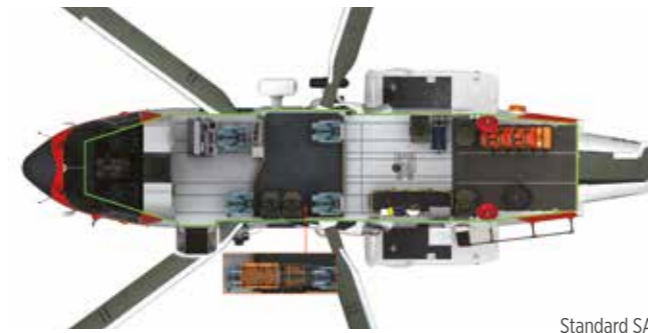
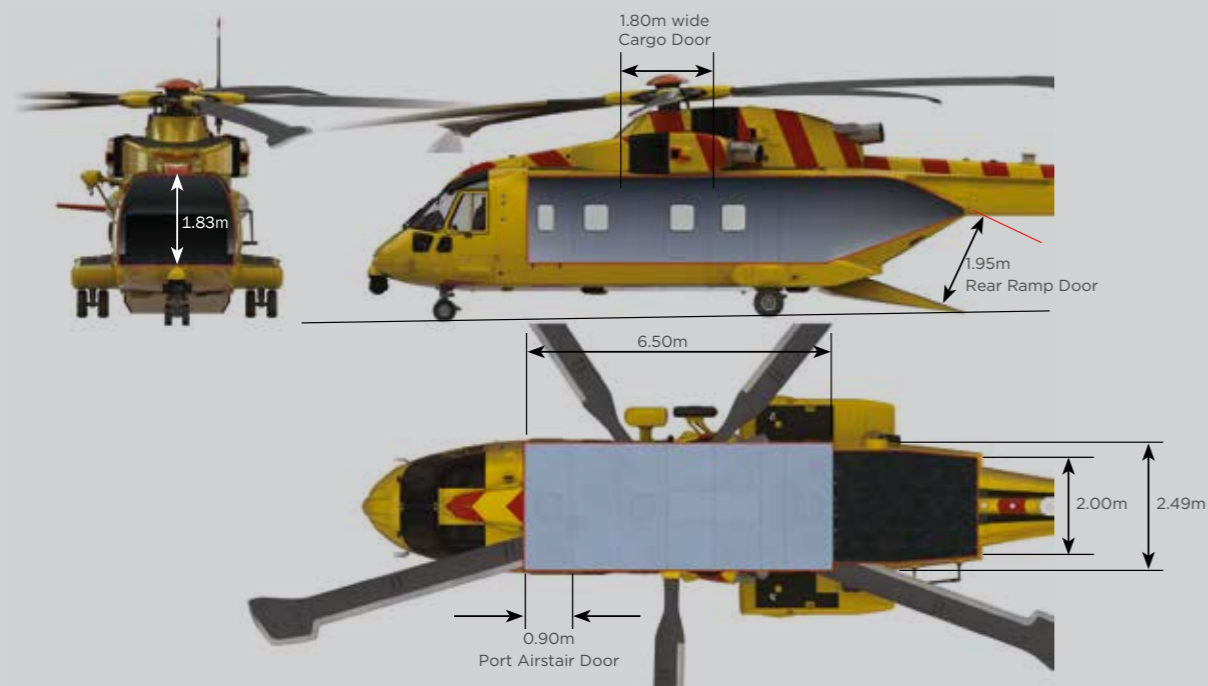
LARGEST CABIN IN CLASS

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.

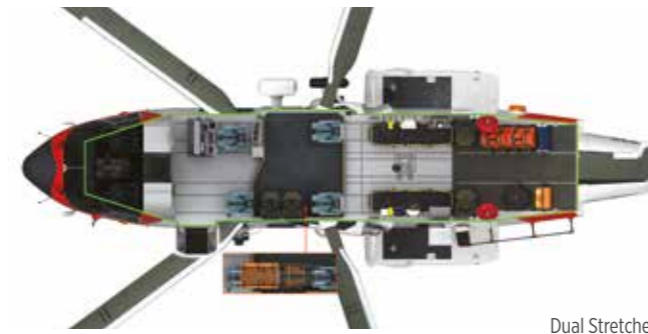


The 6.5 m long, 2.5 m wide, full-standing height cabin is key to responding to all SAR missions. Configured with 4 - 6 crew, the AW101 can rescue more than 20 survivors in a single mission whilst simultaneously delivering specialised trauma treatment with a dedicated medical team.

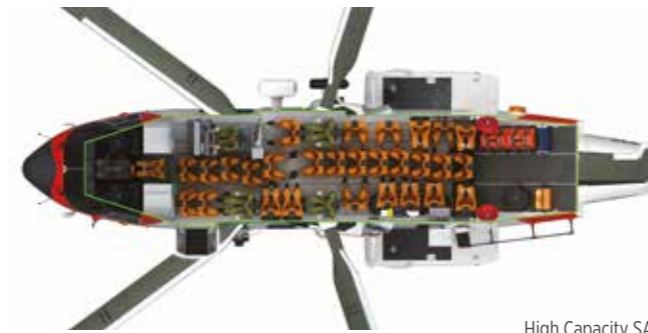
The wide cargo door and versatile rear ramp enable uncompromised recovery of survivors, stretchers and equipment.



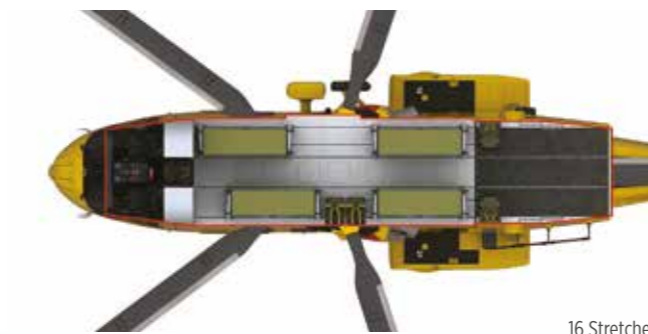
Standard SAR



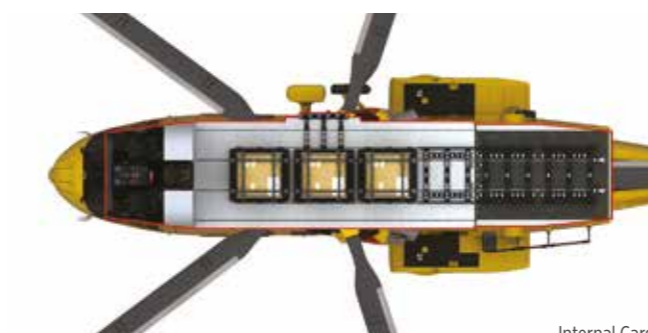
Dual Stretches



High Capacity SAR



16 Stretches



Internal Cargo

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.

The AW101 Search and Rescue helicopter is capable of performing a wide range of additional roles including:

- Medical Treatment/Transfer
- Fire Fighting Support
- Internal / External Cargo Movements
- Maritime Surveillance
- Disaster Response & Relief
- Casualty / Medical Evacuation
- Passenger Transit

Leonardo Helicopters provide an extensive range of additional role kits to further expand the capabilities of the AW101.



AIRCRAFT SPECIFICATION AND OPTIONS



ADDITIONAL EQUIPMENT

SAR Equipment:

- Stretcher racks (3 or 4 Litters)
- Fast Roping/Rappelling (both doors & ramp)
- Dual Rescue Hoist Installation (Fore/Aft)
- Hover Trim, Controller, Sea Tray
- Medical Treatment Module
- External Sensors
- Wireless Intercom

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
- SATCOM and Mobile Phone
- TETRA Radios
- Mission Recorder

Utility Equipment:

- Full Ice Protection System
- Cargo Hook (3,000 kg or 4,500 kg)
- Air-to-Air Refuelling (AAR)
- Hover-In-Flight Refuelling (HIFR)
- Search & Flood Lighting
- Overwater Kit (Flotation & Liferrafts)
- Internal Auxiliary Fuel

SUPERIOR MISSION PERFORMANCE

LONG RANGE SAR

With a typical range of 750 nm (over 1,300 km) in standard configuration the AW101 is the most capable SAR 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 (AAR) and Hover-In-Flight Refuelling (HIFR) 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 SAR 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.



FLEXIBLE AVIONIC ARCHITECTURE

The latest technological evolutions are fully integrated throughout the avionics and mission suite to deliver exceptional Situational Awareness and Battlefield capabilities. The NVG glass cockpit with integrated Synthetic Vision, Terrain Awareness and Traffic Awareness and Digital Map capabilities, combine with High Definition Electro-Optics and the latest self protection suite to ensure mission success.

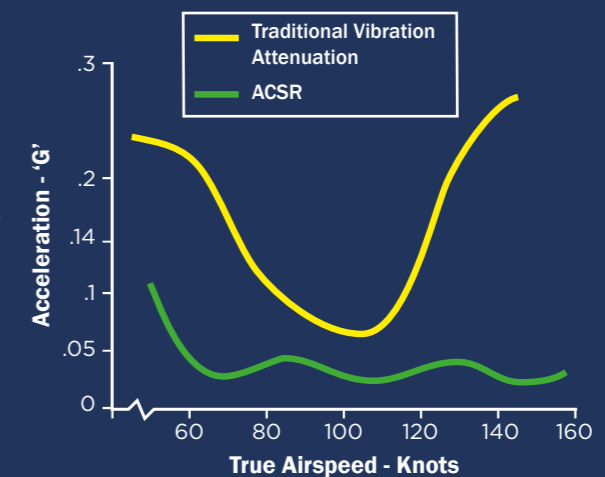
TOTAL COMFORT & PERFORMANCE

The AW101's design harnesses technologies at the forefront of industry to deliver the lowest levels of vibration and noise. The advanced profile composite main rotor design has a comparatively low rotor speed which reduces noise and vibration without compromising performance.



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, maximises patient survivability and lengthens component life.





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

Length Overall	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

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
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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



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