

MULTI-MISSION PERFORMANCE

AW149





AW149

DELIVERING MULTI-ROLE VERSATILITY

AW149 is the latest-generation, multi-role platform, designed to meet the challenges of 21st Century military and homeland security operations; setting new standards for capability, speed, range and safety, delivering tactical superiority and maximum battlefield effect.

Designed to exceed the latest, most stringent military and civil certification requirements; the AW149 delivers capability across a broad spectrum of tasks, including:

- Troop transport
- CSAR
- Special Forces Operations
- CASEVAC/MEDEVAC
- Command and Control
- Re-supply / External load lift
- SAR / Humanitarian Assistance





EXCEPTIONAL CABIN VERSATILITY

The AW149 has a large (11.2 m³), easily-accessible, unobstructed main cabin, enabling rapid transport of heavily-laden troops to their drop-off point in support of high-tempo operations all mission equipment.

The cabin can be rapidly reconfigured into role-specific configurations, including CSAR, CASEVAC and troop transport. Options range from an 8-man section in full battle order with section support weapons plus two door gunners, to 18 soldiers in ferry configuration. The ample space can be utilised for a wide variety of tailored mission and role equipment including NATO standard stretchers.

Large sliding doors on both sides of the helicopter and low floor height facilitate ease and speed of egress and boarding, including rapid recovery of stretchers on the ground or in flight, using the hoist, whilst allowing simultaneous cover fire from window-mounted weapons (7.62 mm / 12.7 mm machine gun). Hard points enable fast roping and rappelling from both sides of the cabin.

A large 2.4 m³ cargo area, which is accessible from the main cabin provides capacity for mission equipment, such as stretchers and medical kit, keeping the troop cabin free of carry-on equipment.

SUPERIOR PERFORMANCE IN CHALLENGING CONDITIONS

The AW149 delivers best-in-class performance, including superior hover performance, 155 kt (287Km/h) cruise speed, maximum range greater than 650 nm (1,200 km) and endurance of up to 5 hours. With powerful CT7 engines, the AW149 assures superior performance and controllability in extreme hot and high environments or harsh conditions, allowing maximum payloads in all challenging operational theatres.

The helicopter's exceptional power margin provides, even in OEI conditions, the performance needed to achieve success, whatever the mission.

LEADING EDGE TECHNOLOGY

The AW149 features an ergonomic, low-workload, high situational awareness glass cockpit design, based on four large Active Matrix Liquid Crystal Displays (8" x 10") with integral input keys and a track ball (positioned

on the interseat console) for rapid function selection. Mission capabilities are further supported by a state-of-the-art integrated digital avionics system with powerful mission computers. The ARINC 429 and MIL-STD 1553B data busses enable easy integration of mission equipment for maximum operational effectiveness. The dual channel Full Authority Digital Engine Control (FADEC) and 4-axis digital AFCS further reduce pilot workload, minimise pilot fatigue and increase situational awareness – ensuring that crews maintain mission focus, throughout.

Advanced open avionics architecture, mission processing, tactical displays and data link ensure the AW149 is fully integrated into today's network-enabled operating environment.



AIRCRAFT SPECIFICATION AND OPTIONS



ROLE EQUIPMENT

- Overwater Kit (Flotation & Liferafts)
- Wire Strike Protection System
- Integrated Defensive Aids Suite
- Window / door Mounted Machine Guns
- External Weapons System
- External Lighting, including Formation Lights
- Ballistic Protection (Cockpit & Cabin)
- Mission Consoles

UTILITY EQUIPMENT

- Crashworthy Foldable Seats
- Casualty Evacuation (6 stretchers)
- Cargo Hook
- Electrical Rescue Hoist (single / dual)
- Rappelling / Fast Roping
- Internal Auxiliary Fuel Tanks
- Full Ice Protection System



AVIONIC EQUIPMENT

- Observation & Targeting System
- Tactical Radios
- Weather / Search Radar
- Obstacle Warning System
- ADEL T
- IFR Navigation Suite with Fully Coupled 4-Axis Digital AFCS
- Integrated HUMS & Maintenance Facilities

MULTI-ROLE CAPABILITY

- Rugged utility capability in support of special and conventional forces operations
- Easily adaptable for a range of roles from peace keeping to combat operations and support to homeland security
- Multi-role capability with rapid turnaround of mission-essential equipment
- Flexible cabin layout to meet customer requirements with easy access, stowage and fast egress and ingress on both sides of the aircraft
- Role-fit ballistic protection and armoured seats
- Inherent high levels of survivability and crashworthiness, with optional ballistic protection, self sealing tanks and defensive aids, internal and external weapons mix including:
 - 2x M-134G (internal)
 - 2x 12.7 mm machine guns (internal)
 - 2x 20 mm gun pods
 - 2x 12.7 mm gun pods
 - 2x 2.75" rocket launchers
 - 2x ATM launchers.



A TRUE MODERN UTILITY WORKHORSE

- Maximised for Day / Night and All Environment (DNAE) operation and from low level nap of the earth to flight in controlled air space (single pilot IFR capability)
- High useful internal and external load and high speed for increased mission effectiveness
- Power margin available to operate in difficult Out of Ground Effect or One Engine Inoperative (OEI) conditions
- High survivability design features including low noise signature, reduced infra-red signature and reduced radar cross-section
- Exceptional self-deployment range
- Optional de-icing / anti-icing enables flight into known icing conditions
- Deployable by strategic air and sea transportation with minimum disruption to operational tasking.

SAFETY AND SURVIVABILITY

Engineered to the highest safety and survivability standards, the AW149 incorporates the latest generation aviation technology optimum dependability and safety, ensuring mission objectives are met.

Safety technologies include:

- State-of-the-art integrated avionics, improving systems monitoring (HUMS) and operational capability
- Low detectability due to low radar cross section, IR and acoustic signatures in all phases of flight
- Damage tolerant, fail safe design
- Main Gearbox with 50-minute run dry capability (demonstrated)
- Complete redundancy of all vital systems
- High survivability, based on energy-absorbing landing gear and crashworthy crew seats, fuel tanks and airframe
- High main and tail-rotor ground clearance providing added safety for troops and crew during ingress and egress.



DIRECT OPERATING COSTS

The AW149 is designed and built to meet 21st Century operational requirements for ease of maintenance and support, with modern turbo shaft engines and latest-generation avionics provide excellent value.

The helicopter benefits from an on-condition maintenance policy - developed through significant operational customer experience and feedback and logistic analysis from millions of flying hours - scheduled (preventive) maintenance is minimised by design, which reduces operating costs and optimises aircraft availability.

A limited range of dynamic components are currently subject to overhaul at fixed intervals. Times Between Overhaul (TBO) for these components are subject to a continuous review and extension programmes through the life of the aircraft, which benefits all AW149 customers.

SERVICE PLANS

AgustaWestland has an established global infrastructure supporting its commercial, government and military customers.

The company strives to ensure that all elements of the support network work together in a cohesive, effective way to maximise operational capability and availability.

AgustaWestland support solutions are tailored in collaboration with customers, to meet their unique operational requirements and availability aspirations. A comprehensive range of support solutions is available including conventional spares purchase, extended warranty programmes and fully integrated support contracts for most platforms.

COMPREHENSIVE SERVICES AND TRAINING SOLUTIONS

AgustaWestland training programmes are tailored to meet the individual needs and operational requirements of the customer using established analytical processes. AgustaWestland operates primary training sites that cover the full range of products and customer training requirements. These currently include Training Academies in the UK, Italy and the USA.

A comprehensive range of training media is available to customers of the AW149 to meet their specific training needs. This will include the provision of simulators and training services that meet internationally recognised standards. Full Mission Simulators will include the simulation of military systems and sensors, features that produce run and manage complex synthetic scenarios. They can be employed throughout training to reduce the number of live flying hours and increase the value of those hours that are considered to be mandatory.





AW149 CHARACTERISTICS

Dimensions

Overall length ⁽¹⁾	17.60 m	57 ft 9 in
Overall height ⁽¹⁾	5.06 m	16 ft 7 in
Rotor diameter	14.60 m	47 ft 11 in

⁽¹⁾ Rotors turning

Propulsion

Powerplant	2 x General Electric CT7 – 2E1 Turboshfts with FADEC (2,000 shp class each) and 1 x APU (60kW)	
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Engine Rating

AEO Take off power	2 x 1,479 kW	2 x 1,983 shp
OEI 2.5 min contingency power	1,570 kW	2,104 shp

Weight (MTOW)

8 ton class

Capacity

Cockpit / Cabin	2 / 18 crashworthy	
Stretchers	Up to 6	
Baggage compartment	2.4 m ³	85 ft ³

Performance (ISA, S.L., MGW)

VNE (IAS)	313 km/h	169 kt
Cruise Speed	287 Km/h	155 kt
Rate of Climb	9.9 m/s	1,960 ft/min
HOGE	2,673 m	8,770 ft
Maximum Range ⁽²⁾	800 km	430 nm
Maximum Endurance ⁽²⁾	4 h	

⁽²⁾ No reserve, with std fuel tanks



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