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Leonardo-Finmeccanica: AW169

With the AgustaWestland AW169, Leonardo-Finmeccanica has responded to market demand for a new generation versatile light-intermediate twin-engine helicopter and has achieved its aim of greatly reducing the time to market, whilst meeting the most stringent operational and safety requirements set by the certification authorities and by the market. The AW169 was certified in July 2015 in accordance with EASA CS-29 / FAR Part 29 latest Amendments. FAA certification is expected to follow in 2016. The AW169 4.6 tonne helicopter is the first all new aircraft in its weight category to enter the market in more than 30 years, setting new certification and safety standards. The first units are being delivered from the Vergiate final assembly line in Italy. A second AW169 final assembly line is being established at AgustaWestland's Philadelphia plant in the USA.

Agreements for more than 150 AW169 helicopters have been achieved with customers around the world to date including firm orders, framework contracts and options, for a wide range of applications including executive/corporate transport, air ambulance, law enforcement, offshore transport and utility roles. Designed with inherent dual-use capabilities, the AW169 is also ideally suited for the wide scope of parapublic and government applications. The AW169 helicopter is part of the family of new generation helicopters that also includes the AW139 and AW189. These helicopters all possess the same high-performance flight characteristics and safety features whilst sharing the same common cockpit concept and design philosophy. This unique approach facilitates synergies for operators of fleets across the 4 to 9 tonne categories in areas such as training, flight operations, maintenance and support.

The type incorporates several new technology features in the rotor system, engines, avionics, transmission and electric power generation and distribution systems. The AW169 can comfortably accommodate up to ten passengers in its large, unobstructed cabin, fitted with a range of customised equipment and entertainment systems. For emergency medical service purposes, the AW169 can accommodate up to two stretchers, both longitudinally and transversally, plus medical attendants. The aircraft is powered by a pair of Pratt & Whitney PW210A turboshafts which also have an auxiliary power unit (APU) mode, ensuring the continued operation of the environmental control system, radios and medical equipment when the rotors are stopped. The AW169's avionic suite introduces state-of-the-art technology including a fully digital NVG compatible cockpit with three 8" x 10" large area (AMLCD) displays and touch screen technology with enhanced 3D graphics capability for maximum situational awareness. A 4-axis digital automatic flight control system (DAFCS) with dual Flight Management System (FMS) minimises crew workload, allowing single/dual pilot VFR/IFR operations. The avionics suite also complies with satellite-based navigation, communication and surveillance requirements and has the capability to perform satellite-based IFR LPV (localizer performance with vertical guidance) approaches to maximize round-the-clock utilisation of the helicopter. Safety enhancing avionics such as Terrain Awareness Warning Systems, airborne collision avoidance systems can be added to the standard avionic configuration. The AW169 features advanced variable speed main rotor which improves efficiency and reduces the external noise footprint. It is also the first helicopter in its category entering the market with an electric retractable landing gear which reduces complexity and maintenance requirements. A Full Icing Protection System (FIPS) will be available making the AW169 the first light helicopter with this unique all weather flight capability. Furthermore, several advanced aerodynamic solutions have been incorporated into the AW169 airframe under the European Clean Sky Green Rotorcraft GRC2 Drag Reduction programme. The AW169 is designed with inherent ease of maintenance, for reliable, intensive utilisation in the most demanding conditions with high time between overhauls (TBO) and minimal life-limited parts. Time between successive inspections has been optimised to maximise aircraft availability and reduce maintenance man hours per flight hour, adopting MSG-3 approach for the maintenance process. Maintenance programmes can be tailored to meet operators' specific requirements, making the AW169 an ideal platform for operators wanting to maximize aircraft utilisation. A Flight Training Device (FTD) and a maintenance training simulator are already operational at AgustaWestland's Sesto Calende Training Academy in Italy, while a Level D Full Flight Simulator will be available in mid 2016.