

Fluid capacitiesFuel

	Total A/C capacity litres [kg (lb) (*)]	Unusable litres [kg (lb) (*)]
Two main fuel tanks (LH and RH)	1303 [1042 (2297.2)]	24 [19 (41.9)]
Two main fuel tanks (LH and RH) plus Forward Tanks	1541 [1233 (2718.3)]	28 [22 (48.5)]
Two main fuel tanks (LH and RH) plus Auxiliary Central Tank	1825 [1460 (3216.5)]	30 [24 (52.9)]
Two main fuel tanks (LH and RH) plus Forward Tanks plus Auxiliary Central Tank	2063 [1650 (3637.6)]	34 [27 (59.5)]

(*) Considering a medium density between different fuels of 0.8kg/l

Oil

	Quantity litres [kg (lb)]
ENGINE (each)	min 3.6 [3.59 (7.91)] - max 5.5 [5.49 (12.10)]
MAIN GEARBOX (min/max)	min 21.5 [21.46 (47.31)] - max 27 [26.95 (59.41)] (24.5 + 2.5 for oil cooler, oil ducts and filter)
INTERMEDIATE GEARBOX	1.22 [1.217 (2.683)]
TAIL GEARBOX	1.87 [1.866 (4.114)]
HYDRAULIC (per each Power Control Module)	3.20 [2.72 (6.00)]

Coolant system capacity 2.9kg

Installed Engine Limits

	Max. Torque Lb-ft	Max ITT °C (°F)	Max Gas Generator Speed % (RPM)
<u>OEI</u>			
30 sec.	575	1078 (1972.4)	105.0 (46935)
2 min.	575	1078 (1972.4)	105.0 (46935)
Continuous	515	968 (1774.4)	102.7 (45907)
<u>AEO</u>			
Take Off (5 min.)	515	968 (1774.4)	102.7 (45907)
Maximum Continuous	490	942 (1727.6)	102.7 (45907)

Transmission Limits

	Max torque % (Lb-ft)	Power (SHP) @ 102% NR
<u>OEI</u>		
30 sec.	1 x 164% (1 x 502.66)	2050.07
2 min.	1 x 155% (1 x 475.08)	1937.59
Continuous	1 x 135% (1 x 413.78)	1687.58
<u>AEO</u>		
30 min. (below 90 KIAS)	2 x 116% (2 x 355.54)	1450.05
30 min. (above 90 KIAS)	2 x 112% (2 x 343.28)	1400.05
Maximum Continuous	2 x 100% (2 x 306.5)	1250.04

Rotor Limits

POWER ON AEO		
CONDITION	(RPM)	(%)
Minimum Continuous	284.75	100.0
Maximum Continuous	296.14	104.0
POWER ON OEI		
CONDITION	(RPM)	(%)
Minimum Cautionary	256.28	90.0
Minimum Continuous	284.75	100.0
Maximum Continuous	296.14	104.0
POWER OFF		
CONDITION	(RPM)	(%)
Minimum Continuous	270.51	95.0
Maximum Continuous	313.23	110.0

Air Speed Limits

V_{NE} Power On AEO = 169 KIAS

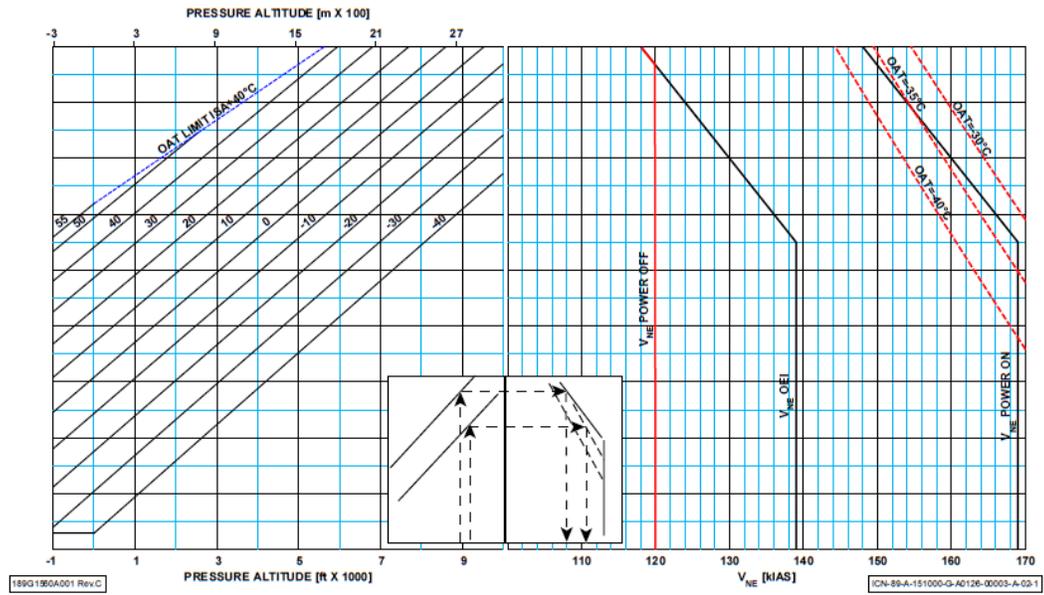
V_{NE} Power On OEI = 139 KIAS

V_{NE} Power Off = 120 KIAS

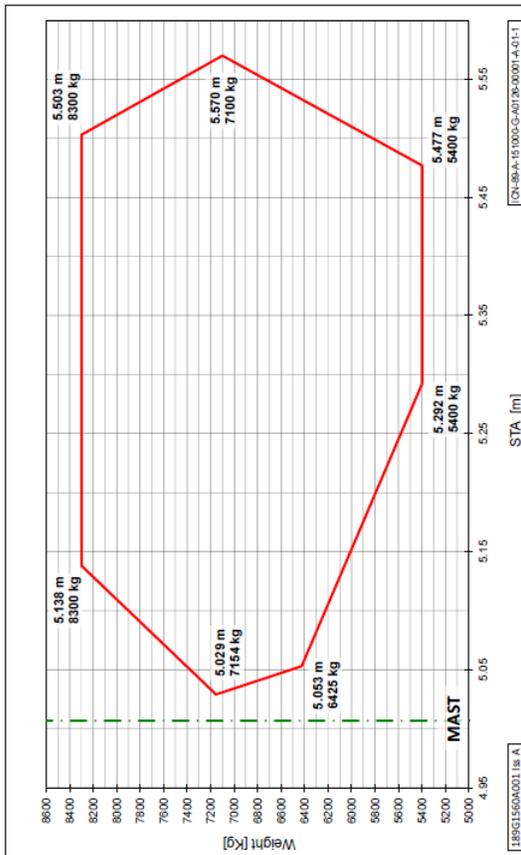
V_{LE}/V_{LO} (gear extended/gear operating) = 150 KIAS/150 KIAS

See approved Rotorcraft Flight Manual for variations with altitude, OAT and weight.

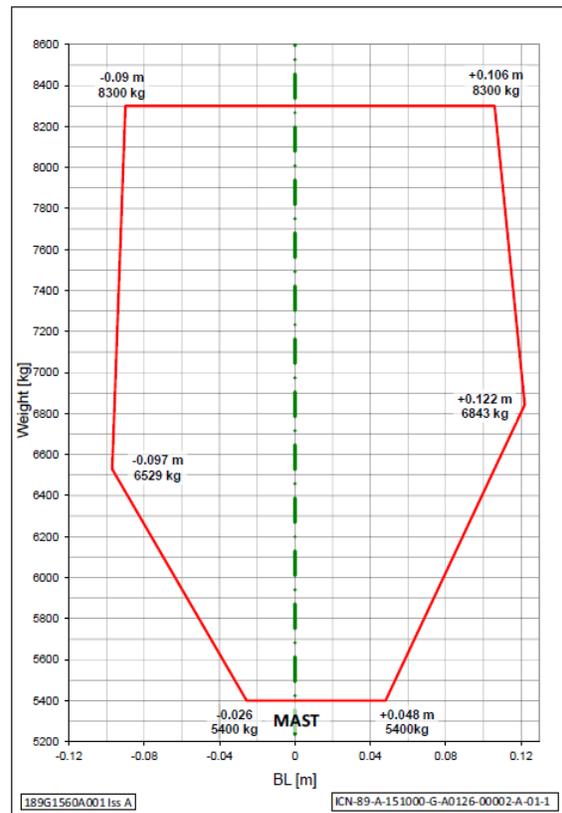
AIRSPED LIMITATION



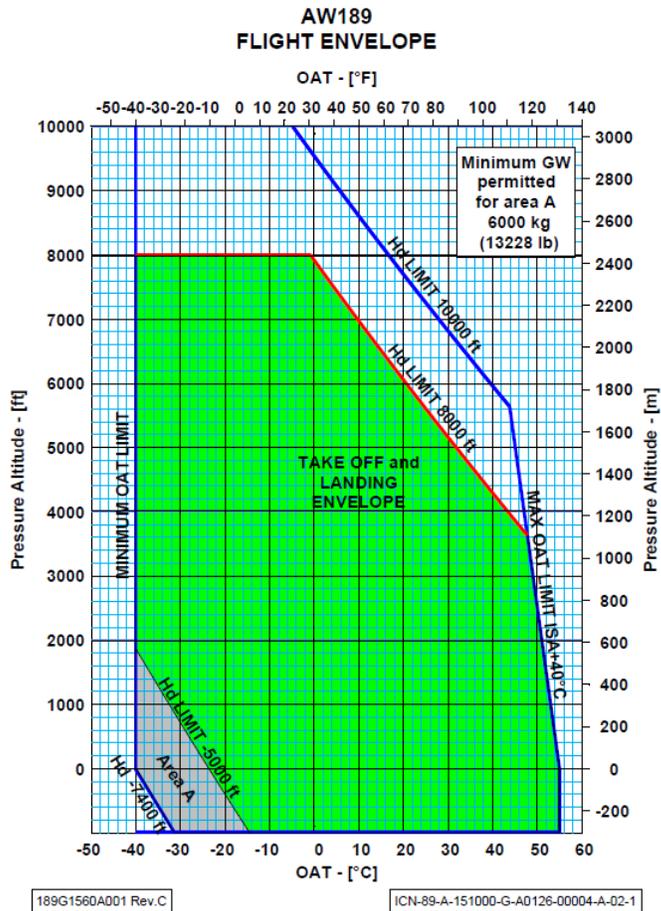
Center of Gravity (C.G.) Range



Weight And Longitudinal Cg Envelope



Weight And Lateral Cg Envelope

Flight EnvelopeMaximum Operating Altitude and TemperatureAltitude

Maximum operating altitude 10000 ft (pressure/density altitude whichever occurs first)

Maximum Take-off and Landing altitude 8000 ft (pressure/density altitude whichever occurs first)

Temperature

-40°C to +55°C (ISA+40°C)

-15°C to +55°C (ISA+40°C) for Cat. A operations

For variation of Temperature limitations with altitude, see the Rotorcraft Flight Manual and applicable supplement

<u>Datum</u>	Longitudinal Datum (STA 0) is located at 2830 mm forward to the front jack point Lateral Datum (BL 0) is located at +/- 275 mm inboard of LH/RH front jack points
<u>Levelling Means</u>	Plumb line from ceiling reference point to index plate on floor of passenger cabin
<u>Maximum weights</u>	- Taxi and Towing 8350 kg - Take-off and Landing 8300 kg
<u>Minimum Crew</u>	One (1) for VFR; Two (2) for IFR. (See also "Equipment" and NOTE 5.) For Cat. A operations, two (2) pilots are required if take-off and landing is to be carried out from the left seat. For NVG operations, two (2) pilots or one (1) pilot and one (1) crew member are required. Both pilot and crew member must be equipped with NVGs (see NOTE 10).
<u>Number of Seats</u>	21 (2 crew – 19 passengers maximum)
<u>Maximum Baggage</u>	300 kg (660 lb) located in the Baggage compartment Baggage compartment max pressure load 550 kg/m ² (110 lb/sq. ft) Baggage compartment max load height 600 mm (2 ft)
<u>Rotor Blades and Control Movements</u>	For rigging information, refer to the AW189 Maintenance Manual.
<u>Import Requirements</u>	To be considered eligible for operation in the United States, each aircraft manufactured under this Type Certificate must be accompanied by a Certificate of Airworthiness for Export or certifying statement endorsed by the exporting foreign civil airworthiness authority which states the following (in the English language): "The rotorcraft covered by this certificate has been examined, tested and found to conform to the type design approved under FAA Type Certificate No. R00004RD and to be in condition for safe operation." The only aircraft eligible for import into the United States are those aircraft with the configuration defined in AW Report No. 189G0000P005, "AW189 - FAA Type Design Definition", dated 26 February 2015 or latest issue.
<u>Certification Basis</u>	<ol style="list-style-type: none"> 1) 14 CFR Part 21.29 2) 14 CFR Part 29 Amendment 29-1 through 29-52, dated 30 March 2010. 3) 14 CFR Part 36 Appendix H, Amendment 36-1 through the amendment in effect at the time of conducting the noise tests. 4) <u>Special Conditions</u>: <ul style="list-style-type: none"> • 30 Minute All Engines Operating (AEO) Power Rating: 14 CFR 29.1049, 29.1305, 29.1521 5) <u>Equivalent Level of Safety Findings (ELOS) findings issued against</u>: <ul style="list-style-type: none"> • 14 CFR § 29.807(c) Passenger emergency exits (documented in ELOS Memo TC4265RD-R-C-01). • 14 CFR § 29.813(c) Passenger access to each emergency exit (documented in ELOS Memo TC4265RD-R-C-02). • 14 CFR § 29.807 (d)(2) & (d)(3) Ditching emergency exits for passengers (documented in ELOS Memo TC4265RD-R-C-04).

- 14 CFR § 29.815 Main aisle width (documented in ELOS Memo TC4265RD-R-C-05).
- 14 CFR § 29.1545(b) Airspeed indicator (documented in ELOS Memo TC4265RD-R-F-01).
- 14CFR §29.1305 and §29.1549 Power Index (documented in ELOS Memo TC4265RD-R-F-03)
- 14 CFR §29.1305 and §29.1309 30-second One Engine Inoperative (OEI) timer (documented in ELOS Memo TC4265RD-R-F-05)

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the helicopter for certification.

The installation of the followings is mandatory for Ditching Operations (see Supplement 6 of the RFM):

- Life rafts (life rafts P/N 8G2560F00511 have been approved for use. The use of other life raft installations must be in accordance with CS/FAR 29 and must be approved)
- Survival type Emergency Locator Transmitter
- Life preservers (the following life preservers installations have been approved: 8G2560F00611, 8G2560F00711, 8G2560F00811. Different life preserver installations must be in accordance with CS/FAR 29 and must be approved).

The installation of the followings is mandatory for Night Vision Goggles Operations (see Supplement 14 of the RFM):

- Aviator's Night Vision Goggles as specified in 189G3360A001 "AW189 NVG Compatibility Reference Handbook"
- Helmet with NVG mount suitable for NVG Model being used
- Cockpit/Cabin physical separation device as defined in 189G3360A001 "AW189 NVG Compatibility Reference Handbook".

Refer to Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment.

Service information

AW Service bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is EASA approved, are accepted by the FAA and are considered FAA approved. These approvals pertain to the approved type design only.

Flight Manual

EASA approved on behalf of FAA Rotorcraft Flight Manual, 189G0290X002, Issue 1, Revision 3 or later approved revision (See NOTE 5).

Maintenance Manual

Maintenance Planning Information 89-B-AMPI-00-P
Maintenance Publication 89-A-AMP-00-X.

NOTES

NOTE 1 A current weight and balance report, including a list of equipment included in the certificated empty weight, must be provided for each helicopter at the time of original airworthiness certification in accordance with 14 CFR 29.25, 29.27, and 29.29.

NOTE 2 All placards required by either FAA Approved Rotorcraft Flight Manual, the applicable operating rules, or the Certification Basis must be installed in the helicopter.

NOTE 3 Information essential to the proper maintenance of the helicopter is contained in the Manufacturer's Maintenance Manual provided with each helicopter. Life limited components and associated retirement times are presented in Chapter 4 and must be replaced accordingly.

NOTE 4 The model AW189 rotorcraft employs electronic engine controls, commonly named Full authority Digital Engine Controls (FADEC), that are recognized to be more susceptible to Electromagnetic Interference (EMI) than rotorcraft that have non-electronic controls. (EMI may be the result of radiated or conducted interference.) For this reason modifications that add or change systems that have the potential for EMI, must either be qualified to a standard acceptable to the FAA or tested at the time of installation for interference with the FADEC. This type of testing must employ the particular FADEC diagnostic techniques and external diagnostic techniques. The test procedure must be FAA approved.

NOTE 5 The FAA Rotorcraft Flight Manual (RFM) is identical to the EASA approved RFM; any exceptions unique for FAA are presented on yellow pages marked "EASA approved on behalf of FAA". They must be included in the FAA manual to reflect the differences noted below:

1. Section 1, LIMITATIONS, MINIMUM FLIGHT CREW:
Requires two pilots for IFR

2. Section 4, Performance Data, NOISE CHARACTERISTICS:

Model: AW189 General Electric GE CT7-2E1 Gross Weight 8300 kg			
Configuration	Level Flyover EPNL (EPNdB)	Take Off EPNL (EPNdB)	Approach EPNL (EPNdB)
Clean aircraft No external kits installed	102% NR	102% NR	102% NR
	95.2	91.3	99.1

NOTE 6 The AW Model AW189 incorporates an integrated avionics system using software-based line replaceable units (LRU) which share a digital signal transmission bus. The software configuration of the AW189, as delivered from production, is critical to the proper operation of the avionics and cockpit instrumentation system. Modification to the LRU software supplied with the AW189, replacement of an LRU with a different LRU, addition of new LRU, or alteration of an LRU interface could adversely affect the airworthiness of the certified software. No changes to the integrated avionics system should be made without coordination with the FAA Aircraft Certification Office (ACO) having jurisdiction over the modifier.

NOTE 7 The hydraulic fluids must conform to MIL-PRF-83282 or MIL-PRF-5606 which is an alternate for low Temperature operation - see LIMITATIONS Section of the approved Rotorcraft Flight Manual.

NOTE 8 Any changes to the type design of this helicopter by means of a amended type certificate (TC), supplemental type certificate (STC), or amended STC, requiring instructions for continued airworthiness (ICA's) must be submitted thru the project aircraft certification office (ACO) for review and acceptance by the Fort Worth -Aircraft Evaluation Group (FTW-AEG) Flight Standards District Office (FSDO) prior to the aircraft delivery, or upon issuance of the first standard airworthiness certificate for the affected aircraft, whichever occurs later as prescribed by Title 14 CFR 21.50. Type design changes by means of a field approval that require ICA's must have those ICA's reviewed by the field approving FSDO.

NOTE 9 The AW189 name identifies two production batches manufactured in conformity with the same Type Design. Applicable serial numbers:

- S/N 49007: and subsequent, manufactured by AgustaWestland S.p.a. in Italy.
- S/N 91001: and subsequent, manufactured by AgustaWestland Ltd in UK.

NOTE 10 Night Vision Goggle operations may be granted by the local civil aviation authority if the rotorcraft is operated according to the limitations and procedures of RFM 189G0290X002 Supplement 14. The rotorcraft configuration involving internal and external light emitting and reflecting equipment approved for use with NVGs is described in Report 189G3360A001 "AW189 NVG Compatibility Reference Handbook". Subsequent modifications and deviations to the NVG helicopter configuration shall be managed in accordance with AgustaWestland document 189G3360E001 "AW189 Helicopter NVG Policy"

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