

AW119<sup>Kx</sup>



AGUSTAWESTLAND AW119Kx

THF 01/2019





# AW119<sup>Kx</sup>

## Technical Helicopter Features

January 2019

*This document contains data related to aircraft description, specification and performance that are supplied for general information purposes only. The exact description, characteristics, and performance capabilities of any particular aircraft may vary and are wholly dependent on the final configuration requested by the Customer and on the specific aircraft usage, operation and maintenance. For performance data and operating limitations reference must be made to the approved Flight Manual and other appropriate documentation.*

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## 1 INTRODUCTION

The AW119Kx<sup>1</sup> is the new version of the 8 seats, light single turbine AW119MKII helicopter. It has been developed to provide the highest useful load, power level and performance of its class, as well as:

- Maximum operational capability for the operator
- Greatest range with full payload
- High versatility, from passenger transport to aerial work and EMS operations
- Low operating costs

### 1.1 MAIN CHARACTERISTICS

The main characteristics of the AW119Kx are the following:

- Functional cabin layout designed for high operational flexibility and for rapid and easy reconfiguration possibility (7 passengers and 1 pilot or 1/2 litters and 4/2 medical attendants in addition to 2 pilots)
- Large separate baggage compartment with up to 2.3 m of max length
- Second multipurpose baggage compartment accessible from the cabin to be used also as accommodation for two longitudinal stretchers or for additional fuel tanks
- Skid type landing gear
- Titanium main rotor hub with composite grips and blades and with elastomeric bearings
- New design main rotor blade
- Steel tail rotor hub with two composite blades, individually interchangeable
- Pratt & Whitney PT6B-37A turbo shaft engine
- New glass-cockpit Garmin G1000NXi™ integrating 3D Synthetic Vision Technology (SVT) functionality with Highway In The Sky (HITS) (aka "Pathways") depiction, Helicopter Terrain Awareness Warning System (HTAWS) with worldwide terrain and obstacle database, fully capable moving map
- Excellent flying qualities, high controllability and manoeuvrability
- Operative from -25°C up to +50°C<sup>2</sup>
- Great safety, "fail safe" design and redundancy of all main systems
- Reduced maintenance requirements due to the wide use of reliable and on condition components
- High availability through different inspection program options
- Maintenance programs at guaranteed cost available either for the airframe or the engine

1 AW119Kx is the marketing designation of the new AgustaWestland AW119MKII helicopter equipped with Garmin G1000NXi™ Glass Cockpit.

2 Temperature envelope certificated by FAA is from -35°C up to +50°C.

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## **2 LEADING FEATURES**

The AW119Kx is a lightweight, multipurpose helicopter with eight seats. The helicopter is equipped with four composite blades, fully articulated main rotor with elastomeric bearings and a teetering two blades tail rotor system. The fuselage and the empennage are of aluminium alloy for the primary structure and of fibre composite material for the secondary structure. The landing gear is of skid type.

### **2.1 CERTIFICATION (TYPE AND OPERATIONAL APPROVAL)**

The helicopter is designed and certified in compliance with:

- FAR PART 27 Amendment 1 to 8 included and from 11 to 29 where applicable
- JAR PART 27 Base Minus
- A109 Nr. 27-54-EU-17 Special Conditions for helicopter
- CS 27 Amendment /

### **2.2 APPLICATIONS**

The great flexibility of the cabin lay-out and the wide range of optional equipment available make the AW119Kx suitable for different applications such as:

- Passenger transport
- VIP and Corporate transport
- Aerial Work (firefighting, sling load carrying, news gathering, etc)
- Emergency Medical Service
- Law Enforcement
- Off-Shore
- Training

## 2.3 EXTERNAL DIMENSIONS

### FUSELAGE

Length	11.14 m	36 ft 07 in
Width (elevator)	2.82 m	9 ft 03 in
Height (tail fin)	3.60 m	11 ft 10 in
Fuselage ground clearance	0.63 m	2 ft 01 in

### ROTORS

Main rotor diameter	10.83 m	35 ft 06 in
Tail rotor diameter	1.94 m	6 ft 04 in

### LANDING GEAR

Track (at Max GW 2,850 kg)	2.22 m	7 ft 03 in
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### OVERALL DIMENSIONS

Length (rotors turning)	12.92 m	42 ft 05 in
Width (main rotor blade at 45°)	7.76 m	25 ft 05 in
Main rotor clearance (rotor turning, controls in neutral position)	2.83 m	9 ft 03 in
Tail rotor clearance (rotor turning)	1.15 m	3 ft 09 in

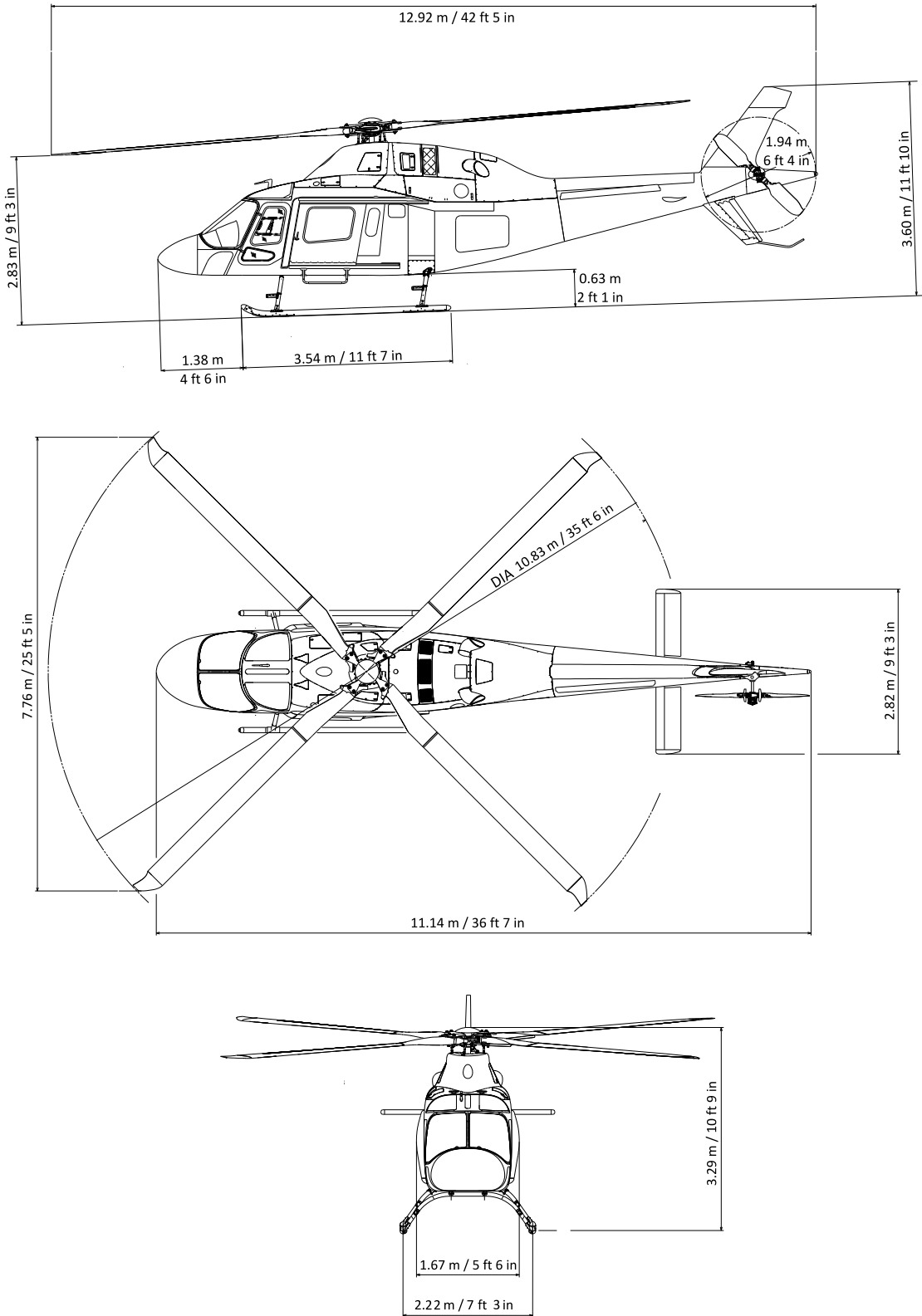


Figure 1 External dimensions

The data contained in this document is general in nature and may vary with conditions. Specification is subject to change without notice.

## 2.4 INTERNAL DIMENSIONS AND VOLUMES

### COCKPIT

Max length	1.38 m	4 ft 06 in
Max width	1.59 m	5 ft 02 in
Max height	1.36 m	4 ft 05 in
Volume	1.51 m <sup>3</sup>	53.33 ft <sup>3</sup>

### CABIN

Max length	2.10 m	6 ft 10 in
Max width	1.61 m	5 ft 03 in
Max height	1.28 m	4 ft 02 in
Volume	3.45 m <sup>3</sup>	121.84 ft <sup>3</sup>

### BAGGAGE COMPARTMENT

Max length (with optional baggage ext.)	2.30 m	7 ft 06 in
Max width	1.10 m	3 ft 07 in
Max height	0.71 m	2 ft 04 in
Volume <sup>3</sup>	0.95 m <sup>3</sup>	33.55 ft <sup>3</sup>

<sup>3</sup> Max load: 150 kg – 330 lb.



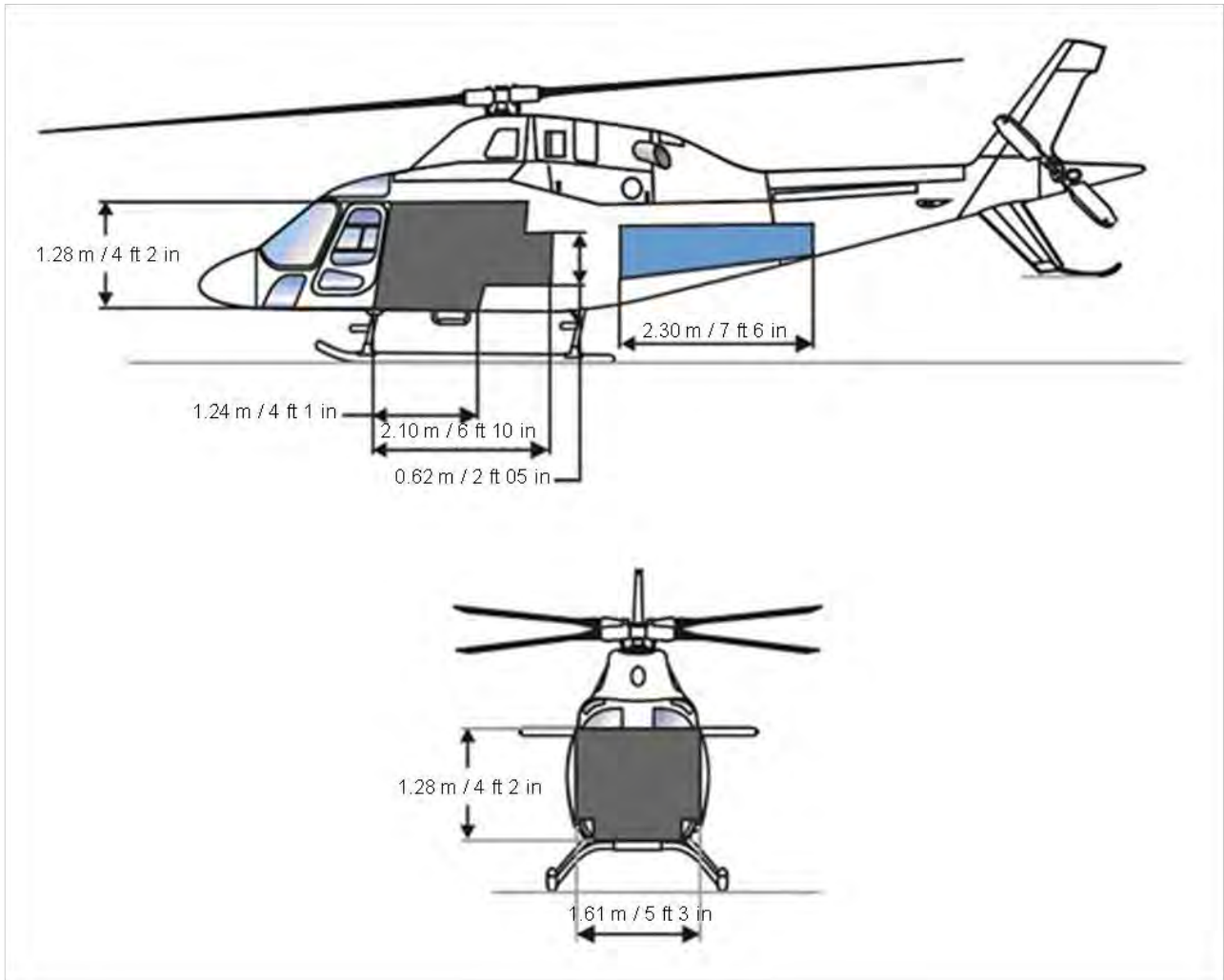


Figure 2 Internal dimensions

## 2.5 WEIGHTS

The Maximum Gross Weight, relating to internal loads is 2,850 kg (6,283 lb).

<b>Weights</b>	<b>kg</b>	<b>lb</b>
Max Gross Weight (internal loads)	2,850	6,283
Max Gross Weight (external loads)	3,150	6,945
Standard Helicopter Empty Weight	1,630	3,594

On request, the helicopter can be equipped with a single/dual cargo hook and/or a rescue hoist. The maximum sling load capabilities are shown in the table below.

<b>Lifting capacity</b>	<b>kg</b>	<b>lb</b>
Primary cargo hook	1,400	3,086
Secondary cargo hook	500	1,102
Rescue hoist	204	450

## 2.6 FUEL CAPACITY

The fuel system is of modular-type with different capacities. The basic system is made of 3 cells, while other two optional configurations are available with the addition of the fourth and the fifth fuel cell. Refuelling is performed by gravity through a single point positioned on the right of the fuselage.

<b>Total capacity<sup>4</sup></b>	<b>kg</b>	<b>lb</b>	<b>l</b>	<b>USgal</b>
3-cell fuel system	484	1,067	605	160
4-cell fuel system	568	1,252	711	188
5-cell fuel system	696	1,534	870	230

<sup>4</sup> Unusable fuel: 8 kg – 17.6 lb for all three tank configurations. Fuel density is assumed at 0.8 kg/l.

## 2.7 CENTER OF GRAVITY ENVELOPE

The AW119Kx helicopter is approved for flight within longitudinal and lateral centre of gravity range limits according to the following diagrams.

### LONGITUDINAL ENVELOPE

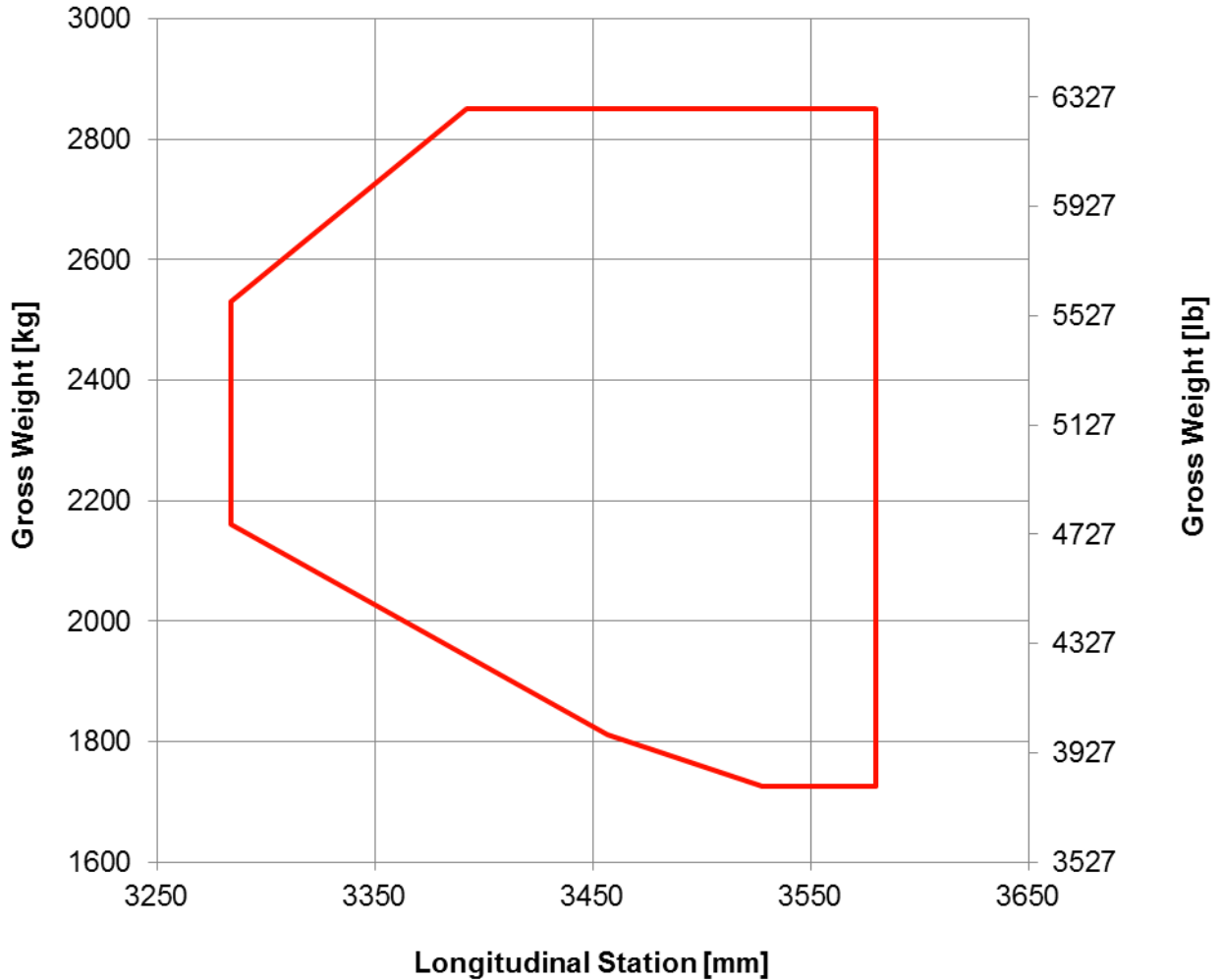


Figure 3 CG longitudinal<sup>5</sup> envelope

<sup>5</sup> Station 0.0 mm is situated 215 mm aft the radome tip.

**LATERAL ENVELOPE**

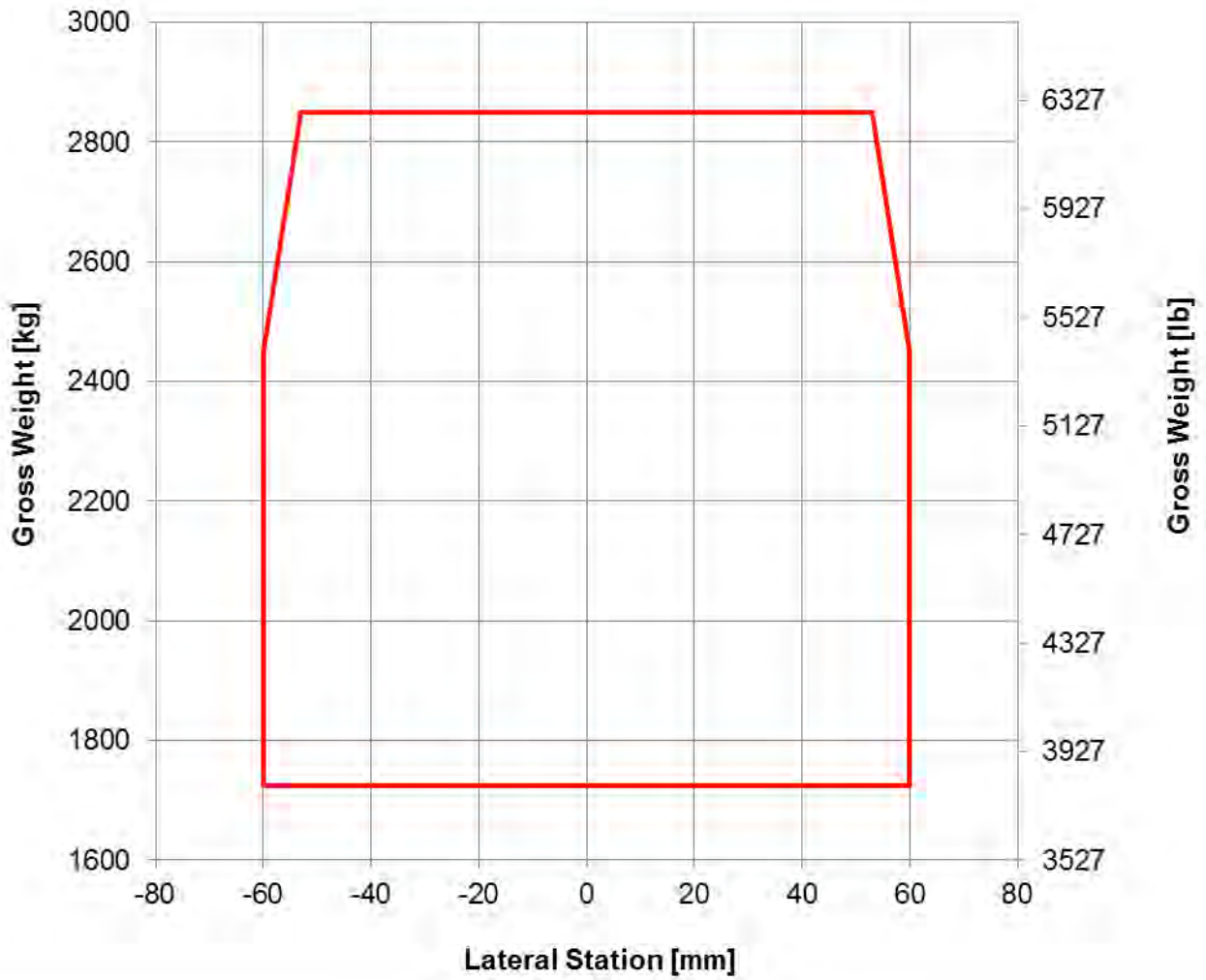


Figure 4 CG lateral envelope

## 2.8 POWERPLANT

Manufacturer and type: Pratt & Whitney PT6B-37A

Rating (Sea level, ISA)	Power	
	kW	shp
Take-off power (5 min)	747	1,002
Maximum continuous power	650	872

## 2.9 TRANSMISSION

Manufacturer: Leonardo Helicopters Division

Rating	Power	
	kW	shp
Take-off power (5 min)	684	917
Maximum continuous power	671	900

**2.10 OPERATIONAL ENVELOPE**

**2.10.1 Wind envelope**

The wind/ground speed azimuth envelope depicted below is applicable to all loading conditions for hover in and out of ground effect up to take-off power.

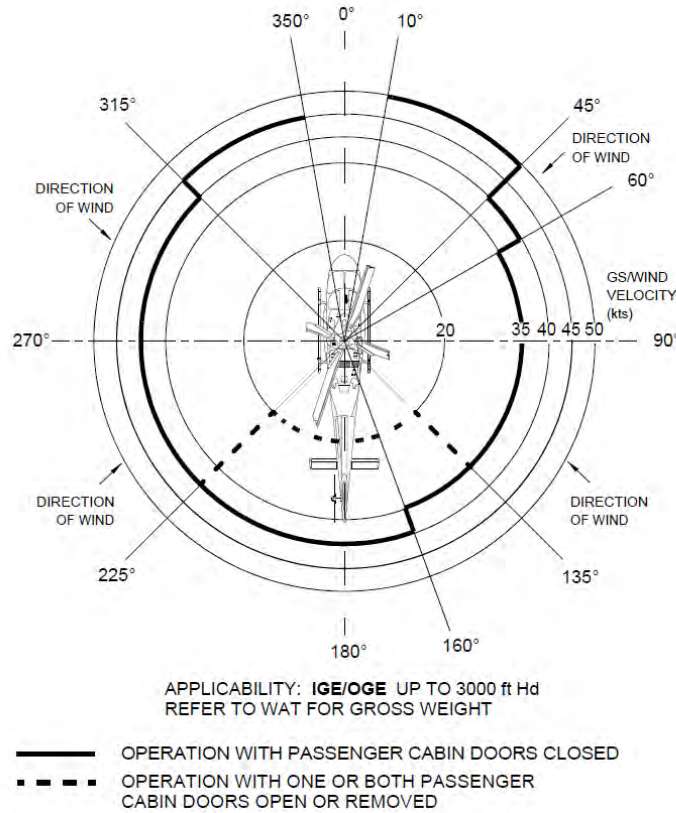


Figure 5 Wind/Ground Speed Azimuth Envelope

- Operation with passenger cabin doors closed
- - - Operation with one or both passenger doors open or removed

**2.10.2 Maximum operational flight speed – ISA sea level**

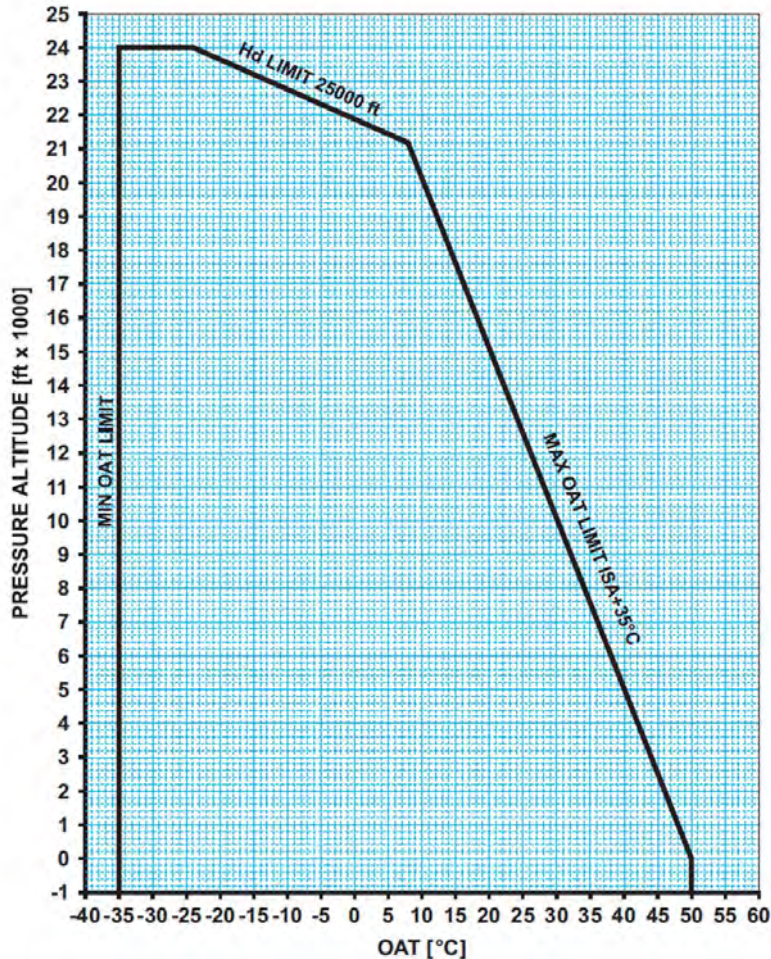
- Never exceed speed VNE up to 2,850 kg: 152 kt (IAS)
- Maximum sideward speed: 35/40 kt
- Maximum rearward speed: 40 kt



### 2.10.3 Temperature and altitude

The helicopter and its components are designed to operate in the air temperature and altitude range defined below.

- Temperature: from -25°C to +50°C<sup>6</sup>
- Maximum operating pressure altitude: 24,000 ft (7,315 m)<sup>7</sup>



### 2.10.4 Slope landing

Take-off and landing on terrain with slope is possible, within the weight envelope, up to the following limits:

- Nose-up operation 12°
- Nose-down operations 2°
- Side-up operations 10°
- Nose-down operations (unobstructed tail): 5°

6 FAA certified.

7 EASA certified including envelope extension down to -35°C.

## 2.11 ENVIRONMENTAL IMPACT

### 2.11.1 External noise level

The external noise level does not exceed the values specified by the ICAO International Standards and Recommended Practices, Environmental Protection, Annex 16, Vol. I – Aircraft Noise, Ch. 8. 4th Edition.

#### At 2,850 kg MGW with Pratt & Whitney PT6B-37A engine

Flight condition 2,850 kg / P&W PT6B-37A engine	AW119Kx	ICAO noise limits
	EPNdB <sup>8</sup>	EPNdB <sup>8</sup>
Take-off	90.8	91.6
Fly-over	88.2	89.6
Approach	91.0	94.6

### 2.11.2 Internal noise level

The internal noise level may vary according to the internal soundproofing configuration. Standard soundproofing type noise level is shown below.

Soundproofing type	Speech Interference Level
	SILdB
Standard	85.2

8 Effective Perceived Noise in Decibels.

## 2.12 PERFORMANCE SUMMARY TABLES

### 2.12.1 Sea level

Gross weight	Temperature	2,720 kg – 5,996 lb		2,850 kg – 6,283 lb	
		ISA	ISA+20°C	ISA	ISA+20°C
MAXIMUM CRUISE SPEED (TAS)	kt	132	120	131	119
	km/h	244	224	243	220
RECOMMENDED CRUISE SPEED <sup>9</sup> (TAS)	kt	126	120	127	119
	km/h	233	224	235	220
RATE OF CLIMB (TOP)	ft/min	1,900	1,500	1,800	1,400
	m/s	9.6	7.6	9.1	7.1
3-CELL MAX RANGE <sup>10</sup>	nm	311	313	307	310
476 kg usable fuel, no reserve	km	575	580	569	574
3-CELL MAX ENDURANCE	h:min	3:20	3:18	3:16	3:13
476 kg usable fuel, no reserve					
5-CELL MAX RANGE	nm	453	457	448	452
688 kg usable fuel, no reserve	km	839	846	830	837
5-CELL MAX ENDURANCE	h:min	4:56	4:52	4:49	4:45
688 kg usable fuel, no reserve					

9 The Recommended cruise speed represents, at given environmental condition and weight, the speed corresponding to the 99% of the best specific range (nm/kg).

10 The maximum range is evaluated at the Best range speed, which is the speed corresponding to the lowest specific fuel consumption (kg/nm) for given environmental condition and weight.

## 2.12.2 5000 ft

Gross weight		2,720 kg – 5,996 lb		2,850 kg – 6,283 lb	
Temperature		ISA	ISA+20°C	ISA	ISA+20°C
MAXIMUM CRUISE SPEED (TAS)	kt	131	120	130	117
	km/h	243	224	241	217
RECOMMENDED CRUISE SPEED <sup>11</sup> (TAS)	kt	128	120	128	117
	km/h	235	121	237	217
RATE OF CLIMB (TOP)	ft/min	1,640	1,290	1,500	1,150
	m/s	8.3	6.5	7.7	5.8
3-CELL MAX RANGE <sup>12</sup>	nm	357	361	353	357
476 kg usable fuel, no reserve	km	661	668	654	661
3-CELL MAX ENDURANCE	h:min	3:43	3:39	3:37	3:35
476 kg usable fuel, no reserve					
5-CELL MAX RANGE	nm	521	526	515	520
688 kg usable fuel, no reserve	km	965	975	954	964
5-CELL MAX ENDURANCE	h:min	5:30	5:25	5:20	5:17
688 kg usable fuel, no reserve					

11 The Recommended cruise speed represents, at given environmental condition and weight, the speed corresponding to the 99% of the best specific range (nm/kg).

12 The maximum range is evaluated at the Best range speed, which is the speed corresponding to the lowest specific fuel consumption (kg/nm) for given environmental condition and weight.

### 2.12.3 Altitude performance

Gross weight		2,720 kg		2,850 kg		3,150 kg	
		5,996 lb		6,283 lb		6,945 lb	
Temperature		ISA	ISA +20	ISA	ISA +20	ISA	ISA +20
		HIGE (TOP)	ft	12,400	9,000	11,000	7,350
m	3,780		2,743	3,352	2,240	n.a.	n.a.
HOGE (TOP)	ft	8,750	4,000	7,300	2,100	3,800	- <sup>13</sup>
	m	2,667	1,219	2,225	640	1,158	-
SERVICE CEILING (MCP) (100 ft/min ROC)	ft	18,000	14,600	16,400	13,000	11,000	7,000
	m	5,486	4,450	4,999	3,962	3,352	2,133

<sup>13</sup> Up to 2,980 kg at sea level.

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### **3 STANDARD CONFIGURATION AND MISSION COMPLETIONS**

This section provides information on the aircraft standard configuration, optional interior and equipment available for the AW119Kx and includes the following:

#### **3.1 AW119Kx STANDARD VFR AIRCRAFT CONFIGURATION**

##### **3.1.1 Airframe**

- Aluminium alloy and bonded panel fuselage
- Semi-monocoque aluminium alloy tail boom
- New reinforced skid type landing gear
- Two hinged jettisonable crew doors (LH & RH)
- Two sliding passenger doors (LH and RH), 1.10 m opening, with jettisonable windows
- Passenger short foot step (LH & RH)
- Acrylic windshield and side tinted windows
- Overhead cockpit tinted windows
- Lower cockpit transparent windows
- Removable fibreglass tail rotor gearbox fairing
- Quick removable tail rotor drive shaft cover
- Separate baggage compartment with hinged door
- Three jacking points
- Removable fairing and cowlings, for complete accessibility to the controls and drive components
- Quick opening hinged inspection doors, to allow visual check of engine oil levels and maintenance inspection points
- Grounding point

##### **3.1.2 Rotors and controls**

- Titanium main rotor hub, corrosion protected, fully articulated with four composite grips, four elastomeric bearings, four individually interchangeable composite material blades, swept tips, and dampers
- Steel tail rotor hub, corrosion protected, semi-rigid delta hinged type, with two composite blades, individually interchangeable
- Cyclic and collective controls powered by two hydraulic systems
- Hydraulically powered anti-torque system
- Adjustable friction devices on cyclic and collective system
- Force trim and artificial feel system
- Adjustable directional control pedals
- Flapping and droop restraint mechanism

### **3.1.3 Power plant & fuel system**

- Pratt & Whitney Canada PT6B-37A turbo-shaft engine
- Engine mounted fuel pump and filter assembly
- Engine mounted oil pump and filter assembly
- Engine mounted fuel control and governor
- Electronic Engine Control (EEC)
- Lubrication and cooling system
- Engine oil chip detector (1)
- Engine mounted fuel heater
- Fuel system control panel
- 3-cell fuel system (605 l – 160 USgal)
- Submerged fuel pumps (2 boost and 1 transfer pump)
- RH refuelling point

### **3.1.4 Transmission drive system and hydraulic system**

- 917 shp for take-off and 900 shp continuous operation main transmission
- Two-stage transmission
- Transmission mounted hydraulic pumps (2) with separate reservoir
- Internal dry sump transmission lubrication with pressure and scavenge pump and oil filter
- Transmission oil chip detectors (2)
- Single stage, bevel gear T/R 90° gear box including oil level sight glass and chip detector
- Transmission cooling and lubrication system
- Transmission shafts

### **3.1.5 Electrical systems**

- 28 V DC 28 Ah nickel-cadmium battery with temperature probe
- 200 A self-cooled starter generator
- Voltage regulator
- Battery relay
- Interconnecting bus relay
- External power relay
- Distribution buses (2)
- External power receptacle
- Position lights
- LED landing lights (2)
- Anti-collision lights (2)
- Cockpit utility lights (2)
- Instrument lights
- Radio master switch

### 3.1.6 Avionic package<sup>14</sup>

- Garmin G1000NXi™ Integrated Flight Deck system comprising:
  - Two GDU-1050H 10.4" display units providing a Primary Flight Display (PFD) and a Multifunction Display (MFD) and integrating:
    - Radio tuning controls
    - Flight Management System (FMS)
    - Synthetic Vision System
    - Helicopter Terrain Awareness and Warning System (HTAWS)
  - Two GEA-71BH Aircraft Interface Unit
  - GRS-7800 AHRS
  - GDC-72H Air Data Computer (ADC)
  - Two GIA-64H Integrated Avionics Units (IAU) comprising:
    - COM 1&2
    - NAV 1&2
    - GPS 1&2
    - Aural Alert Generator
    - ADF interface
    - DME tuning interface
  - GTX-345R Mode-S & ADS-B Out Transponder
  - Night Vision Imaging System (NVIS)/NVG compatibility
  - Airframe Hour meter
- Radar Altimeter GRA-55
- Digital Audio Control System (DACS) COBHAM with two cockpit panels
- Magnetic Compass indicator
- L3 Avionics System ESI-2000 Electronic Standby Indicator

### 3.1.7 Systems data (on PFD/MFD)

- Inter turbine gas temperature indicator (ITT°C) (on MFD)
- Power index (on PFD)
- Engine torque indicator (TQ%) (on MFD)
- Compressor speed indicator (N1%) (on MFD)
- Turbine speed indicator (N2%)
- Rotor speed indicator (NR%)
- Transmission oil pressure (PSI) and temperature (°C) indicator
- Engine oil pressure (PSI) and temperature (°C) indicator
- Fuel pressure (PSI) (on MFD) and fuel quantity (kg) indicator
- Two hydraulic pressure system indicators (PSI)
- Outside air temperature indicator (°C) (on PFD)
- DC voltmeter (VDC)
- DC ammeter (Amp)

14 Obstacle database coverage: Alaska, Austria, Belgium, Canada, Caribbean\*, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hawaii, Iceland, Ireland, Italy, Latvia, Lithuania, Mexico\*, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, United Kingdom, United States. Includes HOT Lines in the USA in compatible systems. Note: Countries marked by an (\*) have only partial coverage.

### **3.1.8 Central warning system (CWS)**

- Master warning lights
- Master caution lights
- Warning, caution and advisory messages on PFD display
- Aural alerts from IAU 1 & 2

### **3.1.9 Interior arrangement**

- Pilot and co-pilot seats, fore and aft adjustable, with lap belts and headrests
- Aluminium alloy honeycomb reinforced floor with anti-skid finishing
- Ventilation ram air inlets
- Anti-reflection instrument panel

### **3.1.10 Exterior finishing**

- Finishing in accordance with manufacturer specification
- Primer exterior painting

### **3.1.11 Standard equipment**

- Active Noise Reduction (ANR) headsets (pilot and co-pilot)
- Baggage compartment lights
- Crew open door actuators
- First aid kit
- Fuel drain electrical valves
- Portable fire extinguisher
- Quick disconnecting chip detectors
- Shoulder harness with inertial reels (pilot and co-pilot)
- Tail boom strake

### **3.1.12 Additional avionic equipment**

- AC power supply system (2 inverters)
- AFCS 3-axis duplex SP-711 Honeywell

### 3.1.13 Additional equipment

- Baggage compartment extension (1.9 m)<sup>15</sup>
- Dual controls
- Fuel cap with key-lock
- Reinforced windshields (pilot and co-pilot)
- Rotor brake
- Sliding windows on cockpit doors
- Windshield wipers (pilot and co-pilot) with wiper switch on cyclic grips

### 3.1.14 Interior

- Bleed air heater
- Primer finished cabin walls

### 3.1.15 Painting

- Utility Painting  
*Up to 4 colours from LHD selection*  
*Customized Painting Scheme*  
*Utility Finishing*  
*Registration Marks and Logos (decal or stencil)*

	kg	lb
<b>STANDARD CONFIGURATION WEIGHT<sup>16</sup></b>	<b>1,630</b>	<b>3,594</b>

### 3.1.16 Miscellaneous / ground equipment<sup>17</sup>

- Air intake / exhaust covers
- Ground tools kit (including tow bar, ground wheels, lifting tool)
- Pitot tube cover
- Rotorcraft Flight Manual (RFM) and technical publications
- Tie-down fitting (main rotor retention straps)

<sup>15</sup> It may be affected by avionic customization.

<sup>16</sup> Weight tolerance  $\pm 2\%$

<sup>17</sup> Weight not included in the Standard/Baseline Helicopter Empty Weight.

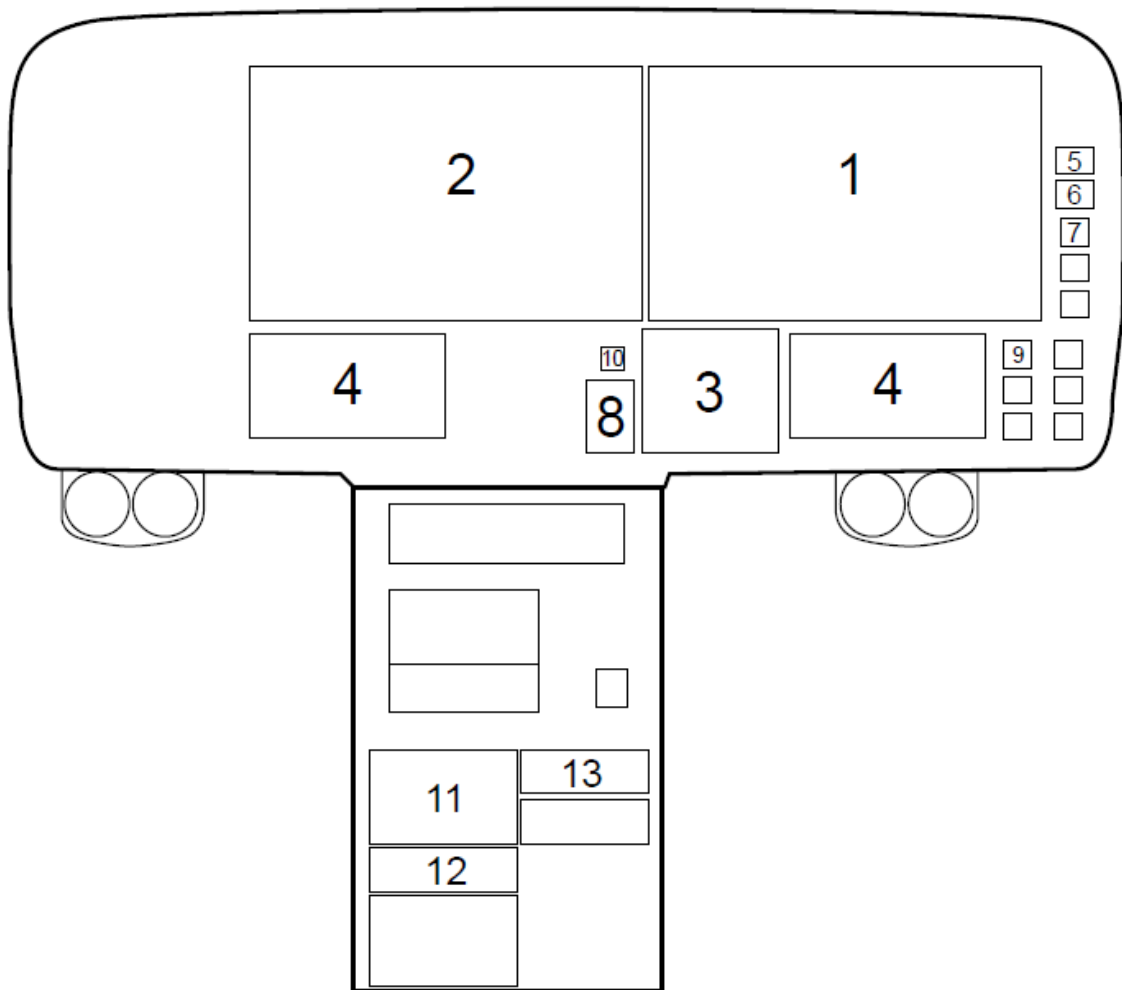
### 3.2 COCKPIT LAYOUT

The AW119Kx cockpit standard layout, which refers to the Standard VFR Configuration presented in the previous paragraphs, is shown hereinafter.

Final cockpit layout depends on the specific configuration selected by the customer.



Figure 6 Cockpit layout (for reference only)



**Ref / Description**

1. Primary Flight Display (PFD)	8. ELT switch
2. Multifunction Display (MFD)	9. PFD ON/OFF switch
3. L3 Avionics System ESI-2000 Electronic Standby Indicator	10. MFD ON/OFF switch
4. Audio control panel	11. Helipilot control panel
5. Master Caution Light	12. Fuel management control panel
6. Master Warning Light	13. Miscellaneous control panel
7. Radio master switch	

### 3.3 AW119Kx AVIONICS FUNCTIONAL DESCRIPTION

A significant change has been introduced in the AW119Kx avionic system.

A modern glass cockpit configured with Garmin's G1000NXi Integrated Flight Deck system enhances situational awareness. The avionic suite comprises a Synthetic Vision System with Highway In The Sky (HITS) (aka "Pathways") depiction, moving map and a Helicopter Terrain Awareness Warning System (HTAWS) with worldwide terrain and obstacle database<sup>18</sup>.

The AW119Kx VFR avionics system consists of the main subsystems and components listed below:

- Two GDU-1050H 10.4" display units providing a Primary Flight Display (PFD) and a Multifunction Display (MFD) and integrating Synthetic Vision System and Helicopter Terrain Awareness and Warning System (HTAWS).
  
- Two GIA-64H Integrated Avionics Units (IAU) comprising:
  - COM 1&2
  - NAV 1&2
  - GPS 1&2
  - Aural Alert Generator
  - ADF interface
  - DME tuning interface
  
- Radar Altimeter GRA-55
- GTX-345R Mode-S & ADS-B Out Transponder
- Night Vision Imaging System (NVIS)/NVG compatibility
- Airframe Hour meter
- Digital Audio Control System (DACS) COBHAM with two cockpit panels
- Magnetic Compass indicator
- L3 Avionics System ESI-2000 Electronic Standby Indicator

In addition to the aforementioned avionic system, for instance the following systems can be added and integrated as optional avionic equipment:

- ADF;
- DME;
- Marker beacon;
- TAS GTS 800 Garmin;
- GDL 69AH XM Weather Datalink Receiver Garmin (providing SiriusXM Weather information only for North America (USA, Canada)).

18 Obstacle database coverage: Alaska, Austria, Belgium, Canada, Caribbean\*, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hawaii, Iceland, Ireland, Italy, Latvia, Lithuania, Mexico\*, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, United Kingdom, United States. Includes HOT Lines in the USA in compatible systems. Note: Countries marked by an (\*) have only partial coverage.



### 3.3.1 GDU 1050 Display Units

The GDU 1050 unit provides primary display and control capabilities of the G1000NXi System. As shown below in Figure 7 it allows for tuning of communication and navigation frequencies, flight planning interfaces, barometric correction inputs, cursor control, map range selection and panning, and context-sensitive soft keys. The GDU 1050 has two SD cards slots to facilitate data transfer such as flight plan, database uploading such as aviation, terrain, obstacles, and IGRF (International Geomagnetic Reference Field) model download capabilities focus on the retrieval of system data for maintenance troubleshooting and various engineering data collection.

The GDU 1050 can operate as a PFD or MFD depending upon the wiring connection and can operate in reversionary mode.



Figure 7 G1000NXi Primary Flight Display (PFD) (for reference only)

As shown below in Figure 8, on the GDUs, COM 1 and COM 2 are controlled with conventional rotary selectors for frequency and volume/squelch and a frequency transfer button in the upper right-hand corner. Similar controls exist in the upper left-hand-corner for the VOR/ILS 1 and VOR/ILS 2 frequency and volume control. In the middle of the right side bezel is a knob for Baro-select. The joystick control, below the Baro knob, enables easy zooming and panning on the map. The lower right concentric knob facilitates control and entry of flight management navigation functions.



Figure 8 G1000NXi Multi-Function Display (MFD) (for reference only)

### 3.3.2 PFD Functions

When used as a PFD, the GDU displays airspeed, attitude, altitude, heading, and slip / skid indicators in a standard aircraft “T”. Figure 9 depicts the PFD in 360° HSI mode.

In the PFD, bank and pitch information is intuitive by virtue of a full-screen horizon that is visible behind translucent tapes and other translucent indications. The slip / skid indication, provided by the white slider bar below the bank-angle pointer, is co-located with bank indication for turn-coordination convenience.

The airspeed tape on the left highlights the current calibrated airspeed at the centre of the moving tape, along with standard colour coding for helicopter specific airspeed ranges / limits. The box immediately below the airspeed tape indicates Ground Speed (as applicable) when in flight.



Figure 9: PFD with 360° HSI depicts basic PFD functionality (for reference only)

On the right side of the pitch ladder, barometric-corrected altitude is displayed at the centre of the tape. The Baro-correction setting, which is controlled using the BARO knob, is displayed below the altitude tape. If an altitude has been preselected, it will appear directly above the altitude tape. An altitude select bug is shown on the left side of the altitude tape. An altitude alerting function also uses this pre-select value to provide visual and aural cues to the flight crew. In addition, an altitude minimums function exists for alerting the decision height or minimum descent altitude has been transitioned.

Vertical speed is displayed in a box that moves up/down along the static vertical speed tape (to the right of Baro-altitude).

Complementing the primary information on the PFD on a full-time basis are the following information types:

- COM 1 / 2 Communication frequencies (upper right), both active and standby.
- VOR/LOC 1 / 2 NAV frequencies (upper left), both active and standby.
- FLIGHT PLAN STATUS that includes active waypoint, distance to waypoint, desired track, and current track.
- CLOCK (lower right).
- OAT/SAT/RAT (whichever one is applicable; upper left).
- XPDR current status (lower right).

The Horizontal Situation Indicator (HSI) displays a rotating compass card in a heading-up orientation.

The HSI can be shown in two formats:

- a 360° compass rose
- a 210° HSI Map (Figure 10) which also includes a navigation map with overlay capabilities such as topographical, weather, traffic, and land information.

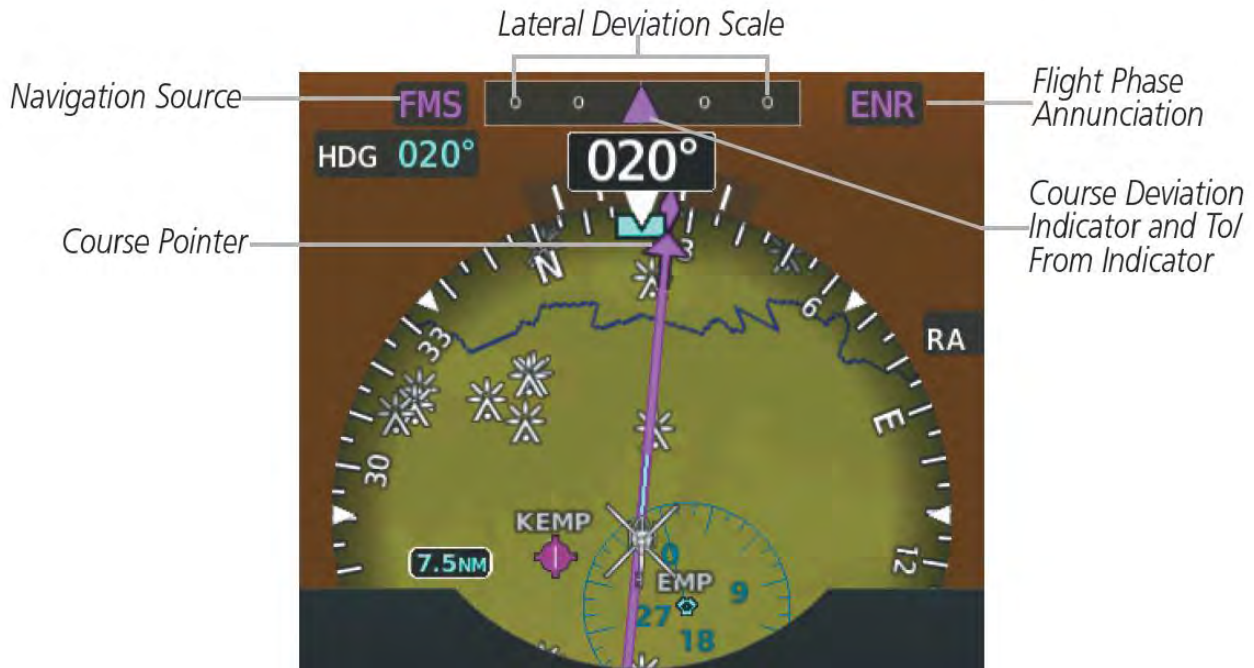


Figure 10: HSI Map Enabled (for reference only)

The Power Index integrates the three main engine parameters, Torque (TRQ), Inlet Turbine Temperature (ITT) and Gas Generator speed (N1), in a single instrument (Figure 12).

The displayed parameter is always TRQ (either mechanical or equivalent), giving a constant sensitiveness between the collective movement and the power change. A legend, adjacent to the PI indication, identifies which parameter (TRQ, ITT or N1) is going to limit the engine power.

The green band indicates the normal performance range. The amber band indicates caution range. If the indication is in the caution range, the arrow, PI, and the digital indication will display black with amber background.

The red band indicates the warning range. If the indication is in the warning range, the arrow, PI, and the digital indication will display white with red background.

### 3.3.3 Display Reversion Interface

In the event of a PFD or MFD display failure, the display(s) operating in Reversionary Mode are configured to present PFD symbology together with the Engine Indication System Display.



Figure 11: Reversion mode (for reference only)



### 3.3.4 Synthetic Vision Technology

The Synthetic Vision Technology (SVT) depicts a forward looking attitude display of the topography immediately in front of the aircraft.

The field of view is 32.5 degrees to the right and approximately 20 degrees to the left. SVT information is shown on the Primary Flight Display (PFD) or on the Multifunction Display (MFD) in Reversionary Mode.

The depicted imagery is derived from the aircraft attitude, heading, GPS three-dimensional position, and a 4.9 arc-second database of terrain, obstacles, and other relevant features.



Figure 12: Synthetic Vision Technology (for reference only)

The SVT terrain display shows land contours (colours are consistent with those of the topographical map display), large water features, towers, wind turbines and other obstacles over 200' AGL that are included in the obstacle database. Cultural features on the ground such as roads, highways, railroad tracks, cities, and state boundaries are not displayed even if those features are found on the MFD map.

### 3.3.5 Terrain Alerting

Terrain alerting on the synthetic terrain display is triggered by Forward-looking Terrain Avoidance (FLTA) alerts, and corresponds to the yellow terrain shading for a caution alert and the red shading for a warning alert on the Navigation Map and HTAWS Pages.

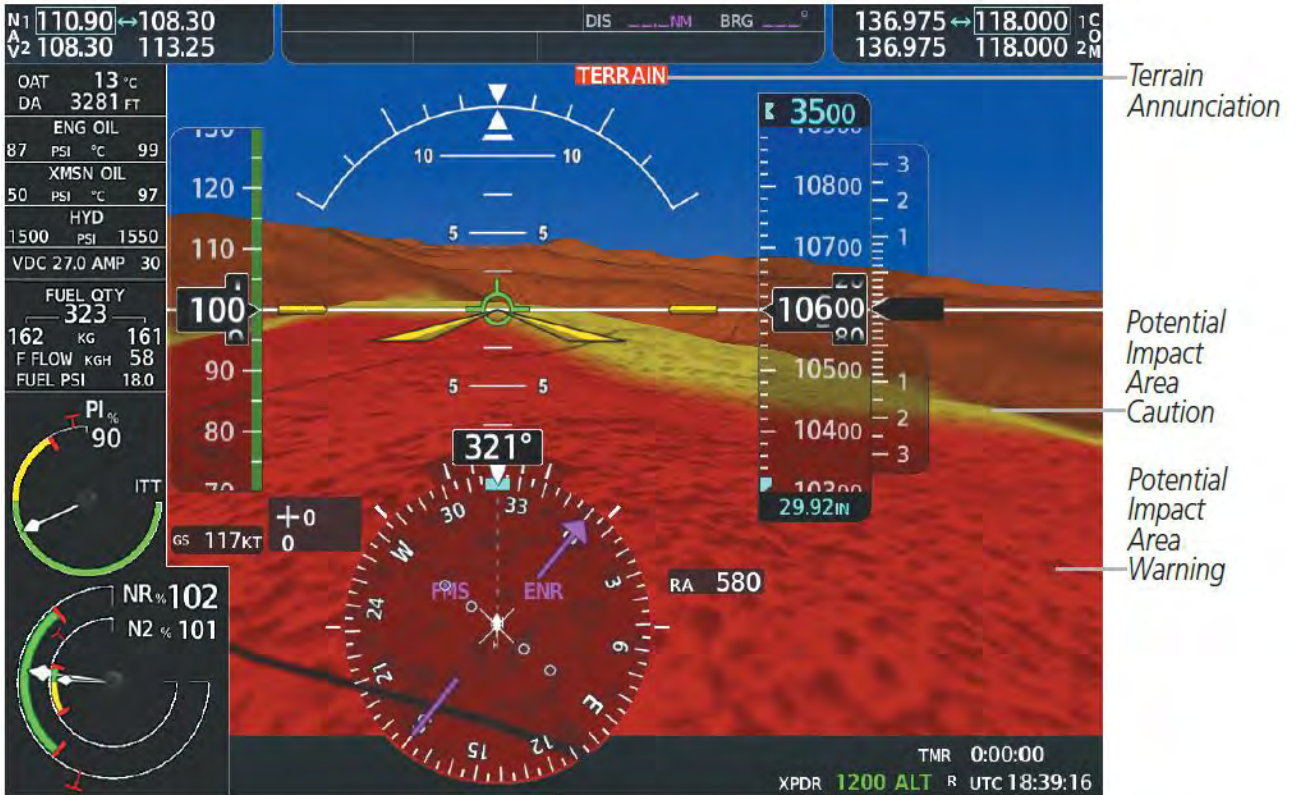


Figure 13: Terrain Alerting (for reference only)

Obstacles are represented on the synthetic terrain display by standard two-dimensional tower or wind turbine symbols found on map displays. Obstacle symbols appear in the perspective view with relative height above terrain and distance from the aircraft. Unlike the map displays, which colour obstacles relative to the aircraft's altitude, obstacles on the synthetic terrain display do not change colours to warn of potential conflict with the aircraft's flight path until the obstacle is associated with an actual FLTA alert. Obstacles greater than 1000 feet below the aircraft altitude are not shown. Obstacles are shown behind the airspeed and altitude displays.



Figure 14: SVT Obstacle Warning (for reference only)



### 3.3.6 Pathways

Pathways provide a three-dimensional perspective view of the selected route of flight shown as coloured rectangular boxes representing the horizontal and vertical flight path of the active flight plan.

The box size represents 700 feet wide by 200 feet tall during enroute, oceanic and terminal flight phases.

The colour of the rectangular boxes may be magenta, green, or white depending on the route of flight and navigation source selected. The active FMS or FMS overlay flight plan leg is represented by magenta boxes that correspond to the magenta CDI. A localizer course is represented by green boxes that correspond to a green CDI. An inactive leg of an active flight plan is represented by grey boxes corresponding to a white line drawn on the navigation map indicating an inactive leg.



Figure 15: Pathways (for reference only)



### 3.3.7 Flight Path Marker

The Flight Path Marker (FPM), also known as a Velocity Vector, is displayed on the PFD at groundspeeds above 30 knots. The FPM depicts the approximate projected path of the aircraft accounting for wind speed and direction relative to the three-dimensional terrain display.

The FPM appears when the Synthetic Terrain feature is enabled. The FPM represents the direction of the flight path as it relates to the terrain and obstacles on the display, while the aircraft symbol represents the aircraft heading.

The FPM works in conjunction with the pathways feature to assist the pilot in maintaining desired altitudes and direction when navigating a flight plan. When on course and altitude the FPM is aligned inside the pathway boxes as shown.

The FPM may also be used to identify a possible conflict with the aircraft flight path and distant terrain or obstacles. Displayed terrain or obstacles in the aircraft's flight path extending above the FPM could indicate a potential conflict, even before an alert is issued by the HTAWS system. However, decisions regarding terrain and/or obstacle avoidance should not be made using only the FPM.



Figure 16: Flight Path Marker (for reference only)

### 3.3.8 WireAware Power Line Obstacles

To enhance safety, SVT incorporates Garmin's WireAware wire obstacle technology.

WireAware database information mainly includes Hazardous Obstacle Transmission (HOT) power lines which are typically high voltage transmission lines depicted on the VFR Sectional charts.

These include power lines which may span rivers, valleys, canyons or be in close proximity to airports/heliports. For wire obstacles present in the obstacle database, the system shows these on the maps as well as the Synthetic Vision display.

The obstacle database does not contain all power lines. In fact, WireAware database coverage is mostly limited to HOT power lines, such as the especially tall transmission lines and their associated support structures. It does not typically have information for the more prevalent smaller utility poles or lines, such as those found in residential areas.

Furthermore, WireAware obstacle database coverage exists mainly in the United States; with limited coverage in portions of Canada and Mexico.



Figure 17: WireAware Power Line Obstacles (for reference only)

### 3.3.9 HTAWS

HTAWS (Helicopter Terrain Awareness and Warning System) is designed to increase situational awareness and aid in preventing Controlled Flight Into Terrain (CFIT) accidents. HTAWS provides visual annunciations and voice alerts when terrain and obstacles are within the given altitude threshold from the aircraft.

HTAWS satisfies TSO-C194 requirements for certification.

HTAWS requires the following to operate properly:

- A valid terrain and obstacle database
- A valid 3-D GPS position solution

HTAWS uses terrain and obstacle information supplied by government sources.

HTAWS uses information provided from the GPS receiver to provide a horizontal position and altitude, along with additional altitude input from radar altimeter. GPS altitude is derived from satellite measurements. GPS altitude is then converted to the height above Geodetic Sea Level (GSL), which is the height above Mean Sea Level (MSL) calculated geometrically. The system uses GSL altitude to determine HTAWS alerts.

GSL altitude accuracy is affected by satellite geometry, but is not subject to variations in pressure and temperature that normally affect pressure altitude sensors. GSL altitude does not require local altimeter settings to determine MSL altitude. It is a widely-used MSL altitude source. Therefore, GSL altitude provides a highly accurate and reliable MSL altitude source to calculate terrain and obstacle alerts.

The terrain and obstacle databases used by HTAWS are referenced to MSL. Using the GPS position and GSL altitude, HTAWS displays a 2-D picture of the surrounding terrain and obstacles relative to the position and altitude of the aircraft. Furthermore, the GPS position and GSL altitude are used to calculate and “predict” the aircraft’s flight path in relation to the surrounding terrain and obstacles. In this manner, HTAWS can provide advanced alerts of predicted dangerous terrain conditions.

Baro-corrected altitude (or indicated altitude) is derived by adjusting the altimeter setting for local atmospheric conditions. The most accurate baro-corrected altitude can be achieved by frequently updating the altimeter setting to the nearest reporting station along the flight path. However, because actual atmospheric conditions seldom match the standard conditions defined by the International Standard Atmosphere (ISA) model (where pressure, temperature, and lapse rates have fixed values), it is common for the baro-corrected altitude (as read from the altimeter) to differ from the GSL altitude.



HTAWS uses colours to depict terrain and obstacles relative to aircraft altitude. Colours are adjusted automatically as the aircraft altitude changes. The colours and symbols in Figure 18 and tables are used to represent terrain, obstacles and potential impact points.

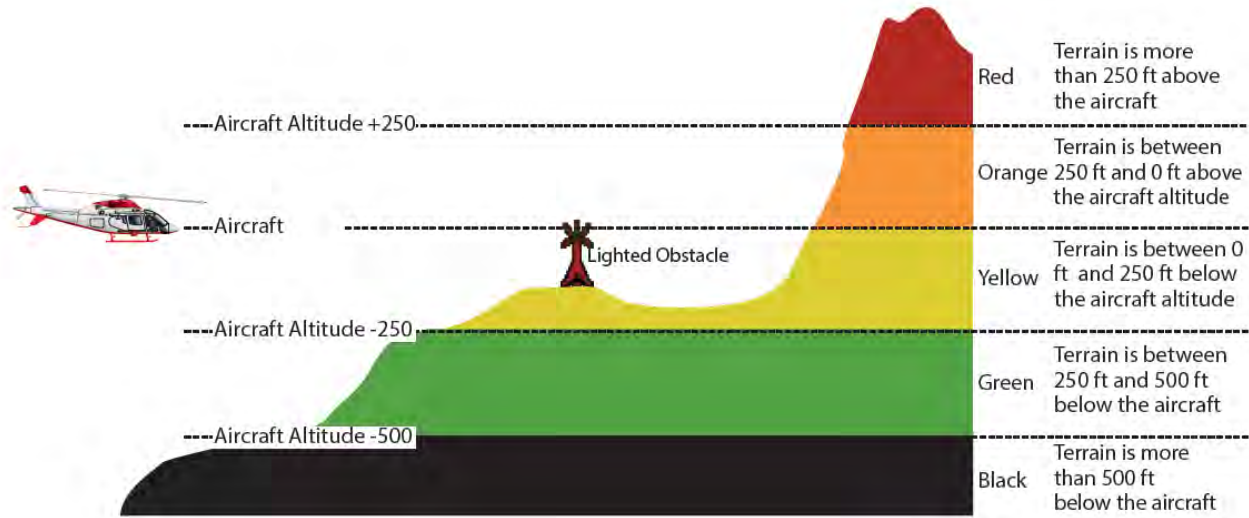


Figure 18: Terrain altitude/colour correlation for HTAWS (for reference only)

Unlighted Obstacle		Lighted Obstacle		Obstacle Location
< 1000' AGL	> 1000' AGL	< 1000' AGL	> 1000' AGL	
				Red obstacle is at or above current aircraft altitude
				Yellow obstacle is between 0' and 250' below current aircraft altitude
				Gray obstacle is 250' or more below current aircraft altitude

Figure 19: HTAWS obstacle colours and symbology (for reference only)

Wire Obstacle	Wire Obstacle Location
	Red wire obstacle is at or above the aircraft altitude
	Yellow wire obstacle is between the aircraft altitude to within 250 feet below the aircraft altitude
	White wire obstacle is more than 250 ft below the aircraft altitude

Figure 20: Relative wire obstacles and colours (for reference only)

The MAP - HTAWS Page is specialized to show terrain, obstacle, and potential impact point data in relation to the aircraft's current altitude, without clutter from the base map. It is the principal page for viewing HTAWS information. Aviation data (airports/heliports, VORs, and other NAVAIDs) can be displayed for reference. If an obstacle and the projected flight path of the aircraft intersect, the display automatically zooms in to the closest potential point of impact on the HTAWS Page.



Figure 21: HTAWS page (for reference only)



Figure 22: HTAWS page with obstacles (for reference only)

### 3.3.10 Vertical Situation Display (VSD) Terrain

The system offers a Vertical Situation Display (VSD), which includes a profile of terrain and obstacles in an inset window on the bottom of the Navigation Map Page. Although the VSD does not display Terrain-SVT or TAWS-B alerts and potential impact areas, the VSD does use many of the same colours and symbols as these systems to depict relative terrain and obstacles within the VSD.

When the VSD is enabled, terrain and obstacles in the VSD will be shown if the aircraft altitude is low enough or the VSD altitude range is high enough for the terrain to be in view.

The depicted terrain profile represents an approximate forward-looking contour of the terrain based upon the highest reported terrain elevations, measured at intervals defined by the terrain database resolution, within a predefined width along the aircraft track between the aircraft present position and the end of the map range. The predefined width is determined by the flight phase, as announced on the HSI, and is widest during enroute or oceanic phases.

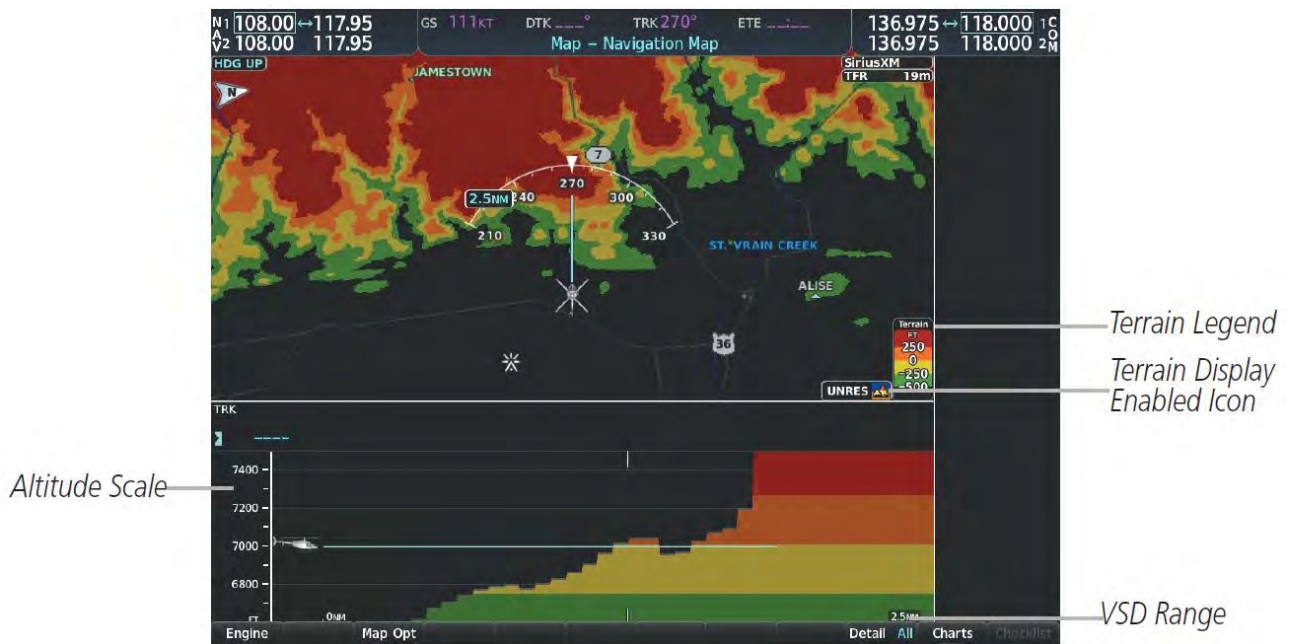


Figure 23: Relative terrain information on the VSD (for reference only)



### 3.3.11 Flight Management System (FMS): waypoints and flight planning

Waypoints are predetermined geographical positions (internal database) or pilot -entered positions, and are used for all phases of flight planning and navigation.

Waypoints can be selected by entering the ICAO identifier, entering the name of the facility, or by entering the city name.

The system can create and store up to 1,000 user -defined waypoints. User waypoints can be created from any map page by selecting a position on the map using the Joystick, or from the User Waypoint Information Page by referencing a bearing/distance from an existing waypoint, bearings from two existing waypoints, or latitude and longitude. Once a waypoint has been created, it can be renamed, deleted, or moved.



Figure 24: Waypoint information page (for reference only)

Flight planning on the system consists of building a flight plan by entering waypoints one at a time, adding waypoints along airways, and inserting departures, airways, arrivals, or approaches as needed. The system allows flight planning information to be entered from either the MFD or PFD. The flight plan is displayed on maps using different line widths, colours, and types, based on the type of leg and the segment of the flight plan currently being flown (departure, enroute, arrival, approach, or missed approach).

One flight plan can be activated at a time and becomes the active flight plan. The active flight plan is overwritten when another flight plan is activated. A standby flight plan can be created by copying the active flight plan or by manual entry. The standby flight plan can be activated. A flight plan can also be created and stored in the system memory.

Up to 99 flight plans with up to 100 waypoints each can be created and stored in memory.



Figure 25: Active flight plan page (for reference only)

Whenever an approach, departure, or arrival procedure is loaded into the active flight plan, a set of approach, departure, or arrival waypoints is inserted into the flight plan along with a header line describing the instrument procedure the pilot selected. The original enroute portion of the flight plan remains active (unless an instrument procedure is activated) when the procedure is loaded.

When the database is updated, the airways need to be reloaded also. Each airway segment is reloaded from the database given the entry waypoint, the airway identifier and the exit waypoint. This reloads the sequence of waypoints between the entry and exit waypoints (the sequence may change when the database is updated). The update of an airway can fail during this process. If that happens, the airway waypoints are changed to regular (non-airway) flight plan waypoints, and an alert is displayed.

Flight plans can be imported from an SD Card or exported to an SD Card from the Stored Flight Plan Page.

Waypoints can be added to any flight plan. Choose the flight plan, select the desired point of insertion, enter the waypoint, and it is added in front of the selected waypoint. Flight plans are limited to 100 waypoints (including waypoints within airways and procedures).

Airways can be added to any flight plan. An airway can only be added if there is an existing entry waypoint in the flight plan that is part of the desired airway and is not part of an arrival or approach procedure. The system anticipates the desired airway based on the selected waypoint and the flight plan.



### 3.3.12 Navigation Map

All navigation maps can display various shades of topography colours representing land elevation, similar to aviation sectional charts. Topographic data can be displayed or removed.

The Navigation Map can display a topographic scale (located in the lower right hand side of the map) showing a scale of the terrain elevation and minimum/maximum displayed elevations.

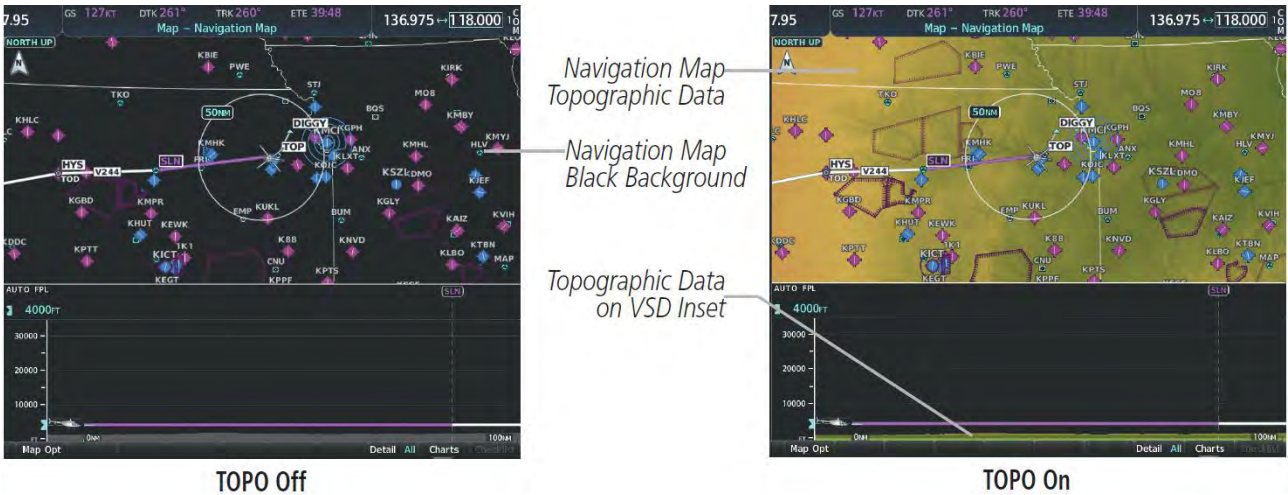


Figure 26: Navigation map – Topographic data (for reference only)

The map can display a fuel range ring which shows the remaining flight distance.

A dashed green circle indicates the selected range to reserve fuel.

A solid green circle indicates the total endurance range.

If only reserve fuel remains, the range is indicated by a solid amber circle.

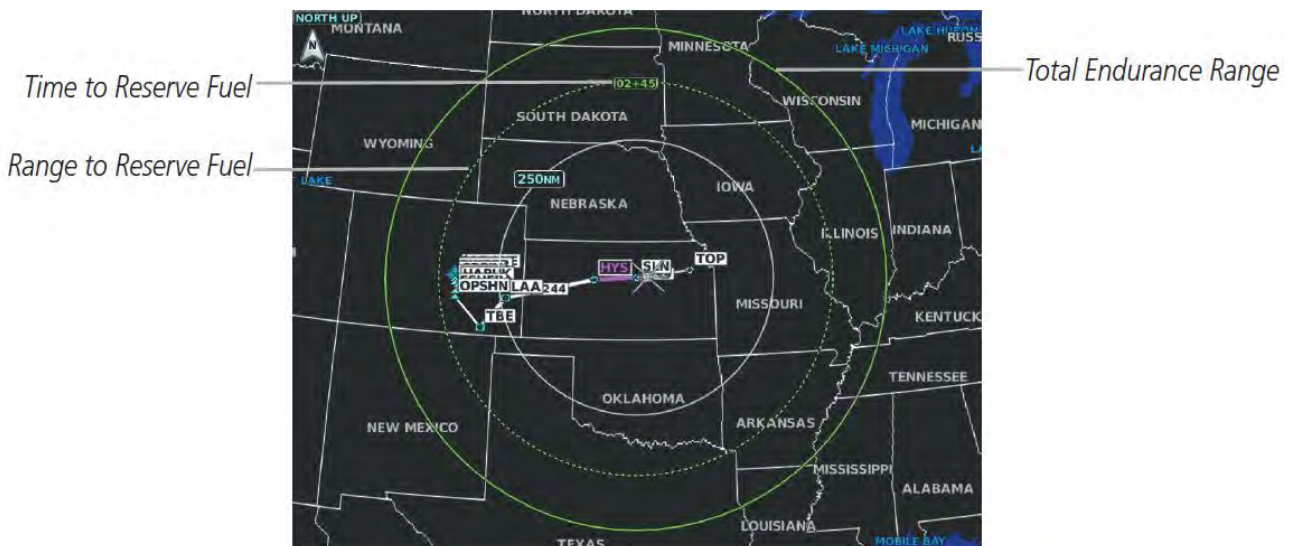


Figure 27: Navigation map – Fuel range ring (for reference only)

### **3.3.13 Digital Audio Control System (DACS) COBHAM with two cockpit panels**

The COBHAM Digital Audio Communication System (DACS) shall be installed as Intercommunication System (ICS).

The DACS shall monitor the received audio signals, select the signals to be transmitted and provide for interphone communications between the pilots and the passengers. It shall control the audio output of the communication and navigation receivers to the pilots' headphones, and the output of the passengers' microphones to the communication transmitters.

The ICS shall receive the audio inputs from the following components:

- VHF/AM radio (Q.ty 2),
- VOR/ILS receiver (Q.ty 2);
- ADF, if it is fitted;
- DME, if it is fitted;
- AWG;
- TAS, if it is fitted.

Up to 6 spare COM inputs are provided for some customer specific requirements.

The system shall have provisions for the installation of additional equipment such as stereo rack and external loudspeaker (PA). The system shall be composed by:

- Cockpit Audio Panel (Q.ty 2) ACP-53
- ICS mode controller to isolate or permit the interphone communications between the pilots, the passengers and the patient,
- Audio Management Unit (AMU),
- Receptacles for the connection of pilot's headset.
- Receptacles for connection of passenger's headsets.
- Receptacles for connection of ground crew headsets.

The primary component in the system is the AMU. Connected to it are transceivers and receivers in the aircraft, as well as all the Audio Panels. The AMU shall digitize and distribute all radio audio to the Audio Panels over separate serial data links. The microphone audio shall be digitized in the Audio Panels and then sent to the AMU over these same serial data links. The digitized microphone audio shall be re-routed back to the other Audio Panels or transceivers (if transmitting).

The system architecture will be setup in a star configuration (separate serial connections to each Audio Panel) to prevent the loss of the entire system because of a failure of one connection.

Each radio will be provided a receive audio input, a microphone output and a transmit key line. These radio connections can be configured using the digital ICS configuration management software to support transceivers, receivers, PA or unswitched audio sources in any combination up to the maximum of thirty.

The system shall be configurable using a PC connected to the AMU via a USB serial port and COBHAM supplied configuration management software. Configuration options will include the number of radios accessible by each user, customer defined names for each radio, ICS talk groups, soft button function assignments, etc.

The system will provide power-on Built-In-Test (BIT) as well as a user initiated Built In Test function, accessible from each Audio Panel. This function will offer fault analysis down to the LRU (Line Replaceable Unit) level. Continuous Built In Test at a lower level will also be implemented.

Multiple levels of safety shall be available in this system. Three modes of operation shall be available: normal, backup and emergency modes. Backup mode shall enable redundant power supplies/AMU/microphone & headphone amplifiers. Emergency mode directly connects the number one user of an Audio Panel to a specific transceiver, allowing operation of the transceiver under any condition.

The system shall include the provisions for Hi- and Lo-MIC impedance adaptations.



Figure 28 ACP-53 Cockpit Panel Layout (for reference only)



Figure 29 ACP-51 Cabin Panel Layout (for reference only)



Figure 30 AMU (for reference only)

### 3.3.14 L3 Avionics System ESI-2000 Electronic Standby Indicator

The ESI-2000 Electronic Standby Indicator (ESI) is a panel-mounted solid-state instrument connected to the MAG-3000 Magnetometer that provides dependable backup for attitude, altitude, airspeed and heading information in the event of complete loss of Garmin G1000NXi. An internal battery provides backup power for at least 1 hour.



Figure 31 EIS-2000 Electronic Standby Instrument Display (for reference only)

### 3.3.15 TAS GTS 800 Garmin

The Garmin GTS 800 Traffic Advisory System (TAS) enhances flight crew situational awareness by displaying traffic information for transponder-equipped aircraft. The system also provides visual and aural traffic alerts including voice announcements to assist in visually acquiring traffic.

The system is capable of tracking up to 45 intruding aircraft equipped with Mode A or C transponders, and up to 30 intruders equipped with Mode S transponders. A maximum of 30 aircraft with the highest threat potential can be displayed simultaneously.

When the traffic system is in Operating Mode, the unit interrogates the transponders of intruding aircraft while monitoring transponder replies. The system uses this information to derive the distance, relative bearing, and if reported, the altitude and vertical trend for each aircraft within its surveillance range. The traffic system then calculates a closure rate to each intruder based on the projected Closest Point of Approach (CPA). If the closure rate meets the threat criteria for a Traffic Advisory (TA), visual and aural alerting is provided.

The GTS 800 surveillance system monitors the airspace within  $\pm 10,000$  feet of own altitude. Under ideal conditions, the GTS 800 unit scans transponder traffic up to 22 nm in the forward direction.

### **3.4 MISSION COMPLETIONS**

Versatility of the AW119Kx is reflected by the number of roles in which it can be employed.

The following interior layout configurations are available as an additional selection to the Standard Configuration.

#### **UTILITY**

- Utility Convertible Interior

#### **PUBLIC SERVICES**

- Utility Convertible Interior

#### **TRAINING**

- Light Utility Interior

#### **VIP TRANSPORT**

- VIP Interior – 6 places
- VIP Interior – 5 places

#### **EMS (EMERGENCY MEDICAL SERVICE)**

- EMS Interior – Single/Dual Stretcher – Fixed Parts
- EMS Interior – Single Stretcher – Removable Parts

Each interior description is followed by a selection of applicable options which can be added to customize the helicopter.



### 3.4.1 UTILITY

CODE	DESCRIPTION
1X-A-040-3CM	Utility convertible interior



*Picture for reference only*

*This interior allows a quick conversion from passenger transport configuration to a medical evacuation configuration with two stretchers and includes*

- Soundproofing
- Painted liners
- Seats covered with leatherette or fabric
- 3 aft facing seats (central bench) with individually foldable back panels
- 3 fwd facing seats (aft bench) with individually foldable back panels
- Provision for locking system for stretcher on back panel seats, aft and central bench
- 3-point shoulder harness with inertial reels and black coloured safety belts for all passenger seats
- Reading lights, advisory lights
- Cabin loudspeakers
- Rubber mat

**Utility convertible Interior Applicable Options**

<b>CODE</b>	<b>DESCRIPTION</b>
1X-K-010-6CM	Cargo net in baggage compartment
1X-K-025-4CM	Curtains in cockpit (upper windows)
1X-K-011-7CM	Foldable stretcher (LH)
1X-K-012-7CM	Foldable stretcher (RH)
1X-K-017-4CM	Pilot multipurpose holder
1X-K-020-3CM	Set of 6 passenger seat cushions (seat, backrest and headrest) with leather covering <i>In lieu of leatherette or fabric covering.</i>
1X-K-021-4CM	Sheepskin cover for pilot and co-pilot seats
1X-K-247-6CM	High visibility passengers doors
1X-K-118-3CM	Sliding windows on cabin doors
1X-K-001-8CM	Customized Painting <i>Customized colours/customized painting scheme/Gradient</i>

**Utility Interior Recommended Package**

<b>CODE</b>	<b>DESCRIPTION</b>
1X-K-106-6PR	Cargo hook primary (1400 kg) provision

### 3.4.2 PUBLIC SERVICES

CODE	DESCRIPTION
1X-A-040-3CM	Utility convertible interior



*Picture for reference only*

- Soundproofing
- Painted liners
- Seats covered with leatherette or fabric
- 3 aft facing seats (central bench) with individually foldable back panels
- 3 fwd facing seats (aft bench) with individually foldable back panels
- Provision for locking system for stretcher on back panel seats, aft and central bench
- 3-point shoulder harness with inertial reels and black coloured safety belts for all passenger seats
- Reading lights, advisory lights
- Cabin loudspeakers
- Rubber mat



### Public Services Applicable Options

CODE	DESCRIPTION
1X-K-233-3CM	Floor rails
1X-K-190-7CM	Mission console in cabin with 17" HD display <i>In lieu of central bench.</i>
1X-K-191-7CM	HD Video Recorder Aero-Optical HD-HCAR-C <i>Integrated in the mission console.</i>
1X-K-283-5CM	Video/Mission Computer (ARS700C)
1X-K-281-5CM	Mission console in cabin with 12.1" touchscreen display <i>In lieu of central bench.</i>
1X-K-282-5CM	Operator seat for mission console in cabin with 12.1" touchscreen display
1X-K-265-6PR	FLIR Star SAFIRE SS380-HDc provision
1X-K-265-6RM	FLIR Star SAFIRE SS380-HDc removable part (includes Turret with quick disconnect, MWIR Camera, Daylight TV camera, Laser Rangefinder, Laser Pointer, AutoTracker, Moving map interface, Search Light interface, Geo-pointing w/ IMU/GPS, Hand Control Grip)
1X-K-266-6PR	Wescam MX-10 HD provision
1X-K-266-6RM	Wescam MX-10 HD removable part (includes Turret with quick disconnect, Daylight TV camera, Low Light camera, IR camera, Daylight Spotter, Laser Range Finder, Laser Illuminator Narrow, Moving map interface, Search Light interface, Geo-pointing w/ IMU/GPS, AutoTracker, Hand Control Grip)
1X-K-260-6PR	Fast rope provision (RH)
1X-K-260-6RM	Fast rope removable part (RH) <i>Rope is not included.</i>
1X-K-261-6PR	Fast rope provision (LH)
1X-K-261-6RM	Fast rope removable part (LH) <i>Rope is not included.</i>
1X-K-106-6PR	Cargo hook primary (1400 kg) provision
1X-K-106-6RM	Cargo hook primary (1400 kg) removable with rear view mirror
1X-K-266-5CM	Night Vision Imaging System (NVIS)/NVG compatibility
1X-K-011-7CM	Foldable stretcher (LH)
1X-K-001-8CM	Customized Painting <i>Customized colours/customized painting scheme/Gradient</i>

### Public Services Interior Recommended Package

CODE	DESCRIPTION
1X-K-100-6CM	188 USgal fuel system <i>In lieu of 160 USgal. Not compatible with dual stretcher installation.</i>
1X-K-179-6CM	Steps long boarding D119-675 (LH and RH) (DART)
1X-K-116-7CM	Rappelling hooks (2 LH + 2 RH) <i>Ropes are not included.</i>

- 1X-K-263-6PR Search Light Trakkabeam A800 provision
- 1X-K-263-6RM Search Light Trakkabeam A800 removable  
*Including FLIR slaving unit.*
- 1X-K-268-6RM Search Light Trakkabeam A800 removable including dedicated  
filters (embedded)  
*Including FLIR slaving unit.*
- 1X-K-066-5CM 3rd ICS station COBHAM ACP-51 in passengers cabin
- 1X-K-266-5CM Night Vision Imaging System (NVIS)/NVG compatibility
- 1X-K-117-6CM Retractable landing light (450 W)
- 1X-K-280-5CM 12.1" mission display in cockpit in front of co-pilot station
- 1X-K-264-6PR FLIR UltraForce 350 HD provision
- 1X-K-264-6RM FLIR UltraForce 350 HD removable part (includes Turret with  
quick disconnect, Daylight TV camera, IR camera, Hand Control  
Grip)
- 1X-K-256-6PR External Loudspeakers (600 W) provision
- 1X-K-256-6RM External Loudspeakers (600 W) removable part

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### 3.4.3 TRAINING

CODE	DESCRIPTION
1X-A-041-3CM	Light Utility interior



*Picture for reference only*

- Light liners
- Light seats covered with leatherette or fabric
- 3 fwd facing seats (aft bench) with individually foldable back panels
- 3-point shoulder harness with inertial reels and black coloured safety belts for all passenger seats

**Light Utility Interior Recommended Package**

<b>CODE</b>	<b>DESCRIPTION</b>
1X-K-203-7CM	Skid shoes (DART)
1X-K-233-3CM	Floor rails
1X-K-232-3CM	Additional sliding and rotating crashworthy seat <i>Requires the installation of floor rails. Replaces central bench installation.</i>
1X-K-065-5CM	Emergency Locator Transmitter
1X-K-063-5CM	DME KN-63 Bendix/King
1X-K-072-5CM	Cockpit Voice/Flight Data Recorder (CVR/FDR) Penny & Giles
1X-K-267-6CM	IR formation lights (NVG compatible)
1X-K-266-5CM	Night Vision Imaging System (NVIS)/NVG compatibility
1X-K-101-6CM	230 USgal fuel system
1X-K-117-6CM	Retractable landing light (450 W)
1X-K-169-7CM	High visibility crew doors (RH & LH)

### 3.4.4 VIP TRANSPORT

CODE	DESCRIPTION
1X-A-020-3CM	VIP Interior - 6 places



*Picture for reference only*

*The VIP interior allows the transport of up to 6 passengers in addition to two pilots and includes:*

- Soundproofing
- Leatherette covered liners
- Seats covered with leather
- 3 aft facing seats (central bench)
- 3 fwd facing seats (aft bench)
- 3-point shoulder harness with inertial reels and safety belts for all passenger seats
- Reading lights, advisory lights
- Cabin loudspeakers
- Headset Bose ANR type (Qty 6)
- Floor carpeting

### VIP Interior Applicable Options

CODE	DESCRIPTION
1X-K-014-3CM	Fabric covering for 6 passenger seats (in lieu of leather)
1X-K-010-6CM	Cargo net in baggage compartment
1X-K-023-3CM	Chest of three drawers under central aft facing bench
1X-K-025-4CM	Curtains in cockpit (upper windows)
1X-K-013-3CM	Leather covering for 6 passenger seats with armrest
1X-K-014-4CM	Leather covering for pilot and co-pilot seats
1X-K-234-3CM	Foldable armrest on both central bench and aft bench
1X-K-017-4CM	Pilot multipurpose holder
1X-K-018-3CM	Rear cabinet on aft bench (in place of central seat)
1X-K-021-4CM	Sheepskin cover for pilot and co-pilot seats
1X-K-022-3CM	Single drawer under central aft facing bench
1X-K-247-6CM	High visibility passengers doors
1X-K-118-3CM	Sliding windows on cabin doors

### VIP Interior Recommended Package

CODE	DESCRIPTION
1X-K-002-8CM	VVIP Painting <i>Up to 4 colours from LHD selection</i> <i>Customized Painting Scheme</i> <i>VVIP Finishing</i> <i>Registration Marks and Logos (decal or stencil)</i>
1X-K-101-6CM	230 USgal fuel system
1X-K-103-6CM	Baggage compartment extension (2.3 m)
1X-K-065-5CM	Emergency Locator Transmitter
1X-K-070-5CM	TAS GTS 800 Garmin
1X-K-151-3CM	Air conditioning

CODE	DESCRIPTION
1X-A-030-3CM	VIP Interior - 5 places



*Picture for reference only*

*The VIP interior allows the transport of up to 5 passengers in addition to two pilots and includes*

- Soundproofing
- Leatherette covered liners
- Seats covered with leather
- 3 aft facing seats (central bench) with foldable armrest
- 2 fwd facing seats (aft bench) with central cabinet
- 3-point shoulder harness with inertial reels and safety belts for all passenger seats
- Reading lights, advisory lights
- Cabin loudspeakers
- Headset Bose ANR type (Qty 5)
- Floor carpeting



### VIP Interior Applicable Options

CODE	DESCRIPTION
1X-K-010-6CM	Cargo net in baggage compartment
1X-K-025-4CM	Curtains in cockpit (upper windows)
1X-K-013-3CM	Leather covering for 5 passenger seats with armrest
1X-K-014-4CM	Leather covering for pilot and co-pilot seats
1X-K-017-4CM	Pilot multipurpose holder
1X-K-021-4CM	Sheepskin cover for pilot and co-pilot seats
1X-K-022-3CM	Single drawer under central aft facing bench
1X-K-247-6CM	High visibility passengers doors
1X-K-118-3CM	Sliding windows on cabin doors

### VIP Interior Recommended Package

CODE	DESCRIPTION
1X-K-002-8CM	VVIP Painting <i>Up to 4 colours from LHD selection</i> <i>Customized Painting Scheme</i> <i>VVIP Finishing</i> <i>Registration Marks and Logos (decal or stencil)</i>
1X-K-101-6CM	230 USgal fuel system
1X-K-103-6CM	Baggage compartment extension (2.3 m)
1X-K-065-5CM	Emergency Locator Transmitter
1X-K-070-5CM	TAS GTS 800 Garmin
1X-K-151-3CM	Air conditioning

**3.4.5 EMS (Emergency Medical Service)**



*Picture for reference only*

<b>CODE</b>	<b>DESCRIPTION</b>
<b>1X-A-060-3CM</b>	<b>EMS Interior – Single/Dual Stretcher – Fixed Parts</b>

- Bench panels with rear EMS provisions
- Stretchers platform provisions
- Interior cargo net provisions (Not installed when the optional 188 USgal fuel system is fitted; not compatible when the optional second stretcher is installed)
- Floor equipped with rails and EMS provisions
- EMS electrical supply (110V/60Hz)
- 3rd ICS station in passenger cabin
- Medical oxygen (gas) system provision (single bottle)
- Sliding windows on passenger cabin doors
- Co-pilot reversible seat (in lieu of standard seat)

**1X-A-061-3CM EMS Interior – Single Stretcher Installation - Removable Parts**

- Storage compartment
- Primary stretcher platform with front lock mechanism
- Primary stretcher (Qty 1)
- Interior cargo net (Not installed when the optional 188 USgal fuel system is fitted; not compatible when the optional second stretcher is installed)
- Seats and stretcher covered with leatherette
- Aft facing sliding/rotating seat
- Foldable fwd facing seats with headrests (Qty 2)
- 3-point shoulder harness with inertial reels and black coloured safety belts for passenger seats (Qty 2)
- Rubber mat

**EMS Interior Applicable Options**

**CODE**

**DESCRIPTION**

- |              |                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1X-K-025-4CM | Curtains in cockpit (upper windows)                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1X-K-052-7CM | Oxygen system plus bottle (2200 l) in baggage compartment                                                                                                                                                                                                                                                                                                                                                                                |
| 1X-P-051-3CM | Passengers conversion kit (removable parts) <ul style="list-style-type: none"> <li>- 3 aft facing seats with fabric covering</li> <li>- 1 additional fwd-facing seat</li> <li>- Set of cushions with leatherette covering for 3 aft facing seats (seats, backs and headrests)</li> <li>- 3 points shoulder harness with inertial reels and black coloured safety-belts for all above seats</li> <li>- Additional floor carpet</li> </ul> |
| 1X-P-050-7RM | Second stretcher installation (removable parts) <ul style="list-style-type: none"> <li>- Second stretcher platform provision with rear lock mechanism</li> <li>- Second stretcher platform with front lock mechanism</li> <li>- Second foldable stretcher (Qty 1)</li> </ul>                                                                                                                                                             |
| 1X-K-236-3CM | Head, side, aft liners with EMS provisions                                                                                                                                                                                                                                                                                                                                                                                               |
| 1X-K-237-3CM | Soundproofing                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1X-K-238-3CM | Quick release 2-pin co-pilot seat                                                                                                                                                                                                                                                                                                                                                                                                        |
| 1X-K-239-3CM | Cabin boarding/loading lights                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1X-K-240-3CM | Cabin lights with 10 min timer                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1X-K-241-3CM | 115 VAC/60 Hz shoreline                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 1X-K-242-3CM | EMS Medical cabinet upper central stowage straps                                                                                                                                                                                                                                                                                                                                                                                         |
| 1X-K-243-3CM | EMS Medical cabinet 115 VAC IV Warmer                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1X-K-244-3CM | EMS Medical cabinet drawer latch/lock                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1X-K-245-3CM | EMS Medical equipment rails                                                                                                                                                                                                                                                                                                                                                                                                              |
| 1X-K-246-3CM | EMS Medical cabinet LTV 1200 ventilator storage                                                                                                                                                                                                                                                                                                                                                                                          |
| 1X-K-196-7CM | Infusion pump mount                                                                                                                                                                                                                                                                                                                                                                                                                      |

1X-K-197-7CM	Air and suction systems
1X-K-198-7CM	Propaq MD mount
1X-K-199-7CM	Hamilton T1 ventilator mount
1X-K-200-7CM	Storage box on cockpit center slant console
1X-K-201-7CM	Portable oxygen bottle mount
1X-K-235-3CM	Dual USB charging port (cockpit rear center console)
1X-K-193-7CM	Pivot base system with stretcher (Spectrum Aeromed)
1X-K-194-7CM	Transverse stretcher installation
1X-K-195-7CM	Liquid Oxygen System (M7 Aerospace)
1X-K-205-7CM	120 VAC outlet in cabin + inverter
1X-K-269-5CM	NVG Cockpit/Cabin for EMS
1X-K-001-8CM	Customized Painting <i>Customized colours/customized painting scheme/Gradient</i>

### EMS Interior Recommended Package

CODE	DESCRIPTION
1X-K-100-6CM	188 USgal fuel system <i>In lieu of 160 USgal. Not compatible with dual stretcher installation and not compatible with interior cargo net.</i>
1X-K-065-5CM	Emergency Locator Transmitter
1X-K-070-5CM	TAS GTS 800 Garmin
1X-K-151-3CM	Air conditioning

### 3.5 OPTIONAL EQUIPMENT

The utility, avionic and special mission equipment listed below is available to satisfy specific role requirements.

The equipment availability depends on its development/certification status and on the helicopter delivery date. Incompatibilities between specific installations may apply. Please contact Leonardo Helicopters Division to ensure a consistent configuration build-up.

#### 3.5.1 Avionic Equipment

CODE	DESCRIPTION
1X-K-072-5CM	Cockpit Voice/Flight Data Recorder (CVR/FDR) Penny & Giles
1X-K-062-5CM	ADF KR-87 Receiver Bendix/King
1X-K-063-5CM	DME KN-63 Bendix/King
1X-K-065-5CM	Emergency Locator Transmitter
1X-K-060-5CM	Headset Bose ANR type
1X-K-066-5CM	3rd ICS station COBHAM ACP-51 in passengers cabin
1X-K-071-5CM	HF/SSB HF-1050 Bendix/King <sup>19</sup>
1X-K-064-5CM	Marker beacon KR-21 Bendix/King
1X-K-070-5CM	TAS GTS 800 Garmin
1X-K-270-5CM	Provisions for handheld Motorola XPR7550 Connect Plus
1X-K-273-5CM	Cell Phone Bluetooth adaptor
1X-K-276-5CM	Flexcomm RT-7000 Tactical Radio or equivalent with three internal modules: Main, Guard 1, Guard 2
1X-K-277-5CM	Direction Finder DF 935-11 Chelton
1X-K-278-5CM	P25 radio APX-6500 Motorola with one APX 07 control head in cockpit and one APX 07 control head in passengers cabin
1X-K-279-5CM	3G/4G omnidirectional antenna (powered) with TNC (male) connector in passengers cabin
1X-K-284-5CM	Central Maintenance Computer (CMC) data logging <i>Integrated in Garmin G1000NXi.</i>

<sup>19</sup> The equipment availability depends on its development/certification status and on the helicopter delivery date. Incompatibilities between specific installations may apply. The model may change depending on certification activities.

### 3.5.2 Utility Equipment

CODE	DESCRIPTION
1X-K-248-6PR	188 USgal fuel system provision <i>In lieu of 160 USgal. Not compatible with dual stretcher installation.</i>
1X-K-249-6PR	230 USgal fuel system provision <i>In lieu of 160 USgal. Not compatible with dual stretcher installation.</i>
1X-K-100-6CM	188 USgal fuel system <sup>20</sup> <i>In lieu of 160 USgal. Not compatible with dual stretcher installation.</i>
1X-K-101-6CM	230 USgal fuel system <sup>20</sup> <i>In lieu of 160 USgal. Not compatible with dual stretcher installation.</i>
1X-K-232-3CM	Additional sliding and rotating crashworthy seat <i>Requires the installation of floor rails. Replaces central bench installation.</i>
1X-K-102-6GE	All-weather covers
1X-K-103-6CM	Baggage compartment extension (2.3 m)
1X-K-104-6PR	Bambi Bucket provision <i>Requires cargo hook provision.</i>
1X-K-104-8RM	Bambi Bucket <sup>21</sup>
1X-K-106-6PR	Cargo hook primary (1400 kg) provision
1X-K-106-6RM	Cargo hook primary (1400 kg) removable with rear view mirror
1X-K-108-6PR	Dual cargo hook (1400 kg / 500 kg) provision
1X-K-108-6RM	Dual cargo hook (1400 kg / 500 kg) removable
1X-K-110-6PR	External hoist (204 kg) provision
1X-K-110-6RM	External hoist (204 kg) removable
1X-K-233-3CM	Floor rails
1X-K-113-6CM	Hourmeter (engine run-time)
1X-K-123-8RM	Life jacket with survivor locator light
1X-K-115-6CM	Pulsed chip detectors <i>Transmission and engine.</i>
1X-K-116-7CM	Rappelling hooks (2 LH + 2 RH) <i>Ropes are not included.</i>
1X-K-117-6CM	Retractable landing light (450 W)
1X-K-120-6CM	Strobe lights on horizontal stabilizer
1X-K-252-6CM	Hinged fuel cap <i>In lieu of standard type.</i>
1X-K-208-7CM	Operator safety hook in passenger compartment
1X-K-189-7CM	Vernier probe
1X-K-209-7CM	Russian kit
1X-K-257-6CM	Flight envelope extension to 24,000 ft / -35 °C
1X-K-250-3CM	Portable fire extinguisher in cabin

<sup>20</sup> The provision is included.

<sup>21</sup> Removable equipment shall be provided by SEI Industries LTD. Weight refers to model BB 2732 (1225 l capacity). Models with lower both capacities and weights are available.



### 3.5.3 Additional Equipment approved by STC

The following installations are Supplements to the Type Certificate of the AW119 and/or the AW119Ke. Application of the STC to the AW119Kx Type may require further certification activities. The STC shall be validated by the National Airworthiness Authority (NAA) of the country of destination.

CODE	DESCRIPTION
1X-K-121-6CM	Wire strike protection system
1X-K-266-5CM	Night Vision Imaging System (NVIS)/NVG compatibility
1X-K-268-5CM	Skyconnect Satellite Phone/Tracker III
1X-K-272-5CM	SKYCONNECT TRAKKER III with MMU II
1X-K-271-5CM	Cyclic mounted radio switch
1X-K-210-7CM	Grab handles in cabin LH
1X-K-211-7CM	Grab handles in cabin RH
1X-K-204-7CM	Sliding glare shield
1X-K-206-7CM	Two USB power in ports in cabin
1X-K-207-7CM	12 VDC outlet in cockpit and cabin
1X-K-274-5CM	Enhanced Vision System EVS-2300 Max-Viz
1X-K-275-5CM	Training mode switch to duplicate PFD data on MFD
1X-K-164-7CM	Adjustable cargo mirror
1X-K-151-3CM	Air conditioning (AirComm Corp.)
1X-K-153-7CM	Bearpaws (DART)
1X-K-122-6GE	Blade folding kit (Paravion)
1X-K-154-7CM	Bubble window (on the RH cockpit door)
1X-K-159-7CM	Emergency floats including fold-up step (Apical)
1X-K-160-7CM	Emergency floats with life rafts, survival gear and fold-up step (Apical)
1X-K-202-7PR	Emergency Floats provision (Apical)
1X-K-202-7RM	Emergency Floats removable (Apical)
1X-K-161-7CM	Engine inlet barrier filter (Aerospace Filtration System)
1X-K-162-6CM	External flood lights (2 fwd plus 1 aft)
1X-K-163-7CM	Fire fighting Belly Tank (Simplex)
1X-K-167-7CM	Heli-utility-basket (DART)
1X-K-169-7CM	High visibility crew doors (RH & LH)
1X-K-173-4CM	Pilot and co-pilot pedal extension
1X-K-174-6CM	Recognition lights fwd facing
1X-K-175-6CM	Searchlight Super Nightscanner
1X-K-176-6CM	Searchlight Spectrolab Nightsun XP
1X-K-177-6CM	Searchlight Spectrolab SX-5 Starburst
1X-K-186-6CM	Searchlight Spectrolab SX-5 with cargo hook heated rearview mirror
1X-K-178-6CM	Searchlight Spectrolab SX-16 Nightsun
1X-K-250-6PR	Searchlight Spectrolab SX-16 Nightsun provision
1X-K-250-6RM	Searchlight Spectrolab SX-16 Nightsun removable

- 1X-K-179-6CM Steps long boarding D119-675 (LH and RH) (DART)
- 1X-K-267-5CM GDL 69AH XM Weather Datalink Receiver Garmin<sup>22</sup>
- 1X-K-193-7CM Pivot base system with stretcher (Spectrum Aeromed)
- 1X-K-269-5CM NVG Cockpit/Cabin for EMS
- 1X-K-195-7CM Liquid Oxygen System (M7 Aerospace)
- 1X-K-203-7CM Skid shoes (DART)
- 1X-K-254-6CM Tail Rotor Flood Lights (DeVore)
- 1X-K-255-6CM Heli-Preheat (Tanis)
- 1X-K-253-6CM Helicopter with no Pilot and Crew Doors
- 1X-K-256-6PR External Loudspeakers (600 W) provision
- 1X-K-256-6RM External Loudspeakers (600 W) removable part
- 1X-K-258-6CM Draining holes in cabin floor
- 1X-K-260-6PR Fast rope provision (RH)
- 1X-K-260-6RM Fast rope removable part (RH)  
*Rope is not included.*
  
- 1X-K-261-6PR Fast rope provision (LH)
- 1X-K-261-6RM Fast rope removable part (LH)  
*Rope is not included.*
  
- 1X-K-262-6CM Cigarette lighter in cabin (12.5 V, 10 A)
- 1X-K-263-6PR Search Light Trakkabeam A800 provision
- 1X-K-263-6RM Search Light Trakkabeam A800 removable  
*Including FLIR slaving unit.*
  
- 1X-K-268-6RM Search Light Trakkabeam A800 removable including dedicated filters (embedded)  
*Including FLIR slaving unit.*
  
- 1X-K-264-6PR FLIR UltraForce 350 HD provision
- 1X-K-264-6RM FLIR UltraForce 350 HD removable part (includes Turret with quick disconnect, Daylight TV camera, IR camera, Hand Control Grip)
- 1X-K-265-6PR FLIR Star SAFIRE SS380-HDc provision
- 1X-K-265-6RM FLIR Star SAFIRE SS380-HDc removable part (includes Turret with quick disconnect, MWIR Camera, Daylight TV camera, Laser Rangefinder, Laser Pointer, AutoTracker, Moving map interface, Search Light interface, Geo-pointing w/ IMU/GPS, Hand Control Grip)
  
- 1X-K-266-6PR Wescam MX-10 HD provision
- 1X-K-266-6RM Wescam MX-10 HD removable part (includes Turret with quick disconnect, Daylight TV camera, Low Light camera, IR camera, Daylight Spotter, Laser Range Finder, Laser Illuminator Narrow, Moving map interface, Search Light interface, Geo-pointing w/ IMU/GPS, AutoTracker, Hand Control Grip)
  
- 1X-K-267-6CM IR formation lights (NVG compatible)

<sup>22</sup> It provides SiriusXM Weather information only for North America (USA, Canada). Services from SiriusXM are subscription-based under Customer's responsibility.

### 3.5.4 Additional Equipment (Only FAA) - Field approved installations (FAA Form 337)

The following optional equipment can only be installed at Philadelphia facility for USA. Validity of FAA field approvals (FAA Form 337) for other countries of destination must be verified.

CODE	DESCRIPTION
1X-K-214-6CM	External loudspeakers (250 W)
1X-K-251-6PR	External Loudspeakers (250 W) provision
1X-K-251-6RM	External Loudspeakers (250 W) removable
1X-K-231-3CM	Separation curtain cockpit/cabin
1X-K-233-6CM	Tactical platform installed on skid landing gear (LH or RH)
1X-K-068-5CM	VHF-FM NPX-138 NAT
1X-K-238-5CM	Wulfsberg Flexcomm II VHF/UHF - AM/FM Multiband

### 3.5.5 Further Available Equipment

1X-K-183-7CM	Digital video downlink ECS <i>The frequency and type of ground station (fixed/portable) shall be identified by the Customer at the contract date.</i>
1X-K-184-7CM	Digital video up/downlink ECS <i>The frequency and type of ground station (fixed/portable) shall be identified by the Customer at the contract date.</i>
1X-K-185-7CM	Digital video downlink HD ECS <i>The frequency and type of ground station (fixed/portable) shall be identified by the Customer at the contract date.</i>
1X-K-186-7CM	Digital video up/downlink HD ECS <i>The frequency and type of ground station (fixed/portable) shall be identified by the Customer at the contract date.</i>
1X-K-187-7CM	Digital video up/downlink HD ECS EVENLODE in S-band <i>The frequency (2 ÷ 4 GHz) and type of ground station (fixed/portable) shall be identified by the Customer at the contract date.</i>
1X-K-188-7CM	Digital video up/downlink (L-band) Evenlode III ECS <i>The frequency (1 ÷ 2 GHz) and type of ground station (fixed/portable) shall be identified by the Customer at the contract date.</i>

### 3.5.6 Painting

CODE	DESCRIPTION
1X-K-003-8CM	Main rotor blades high visibility painting

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## **4 PERFORMANCE DIAGRAMS**

This Section contains the new AW119Kx flight performance charts illustrating:

### **HOVERING**

**(Paragraph 4.1)**

- Hovering IGE (TOP)
- Hovering OGE (TOP)

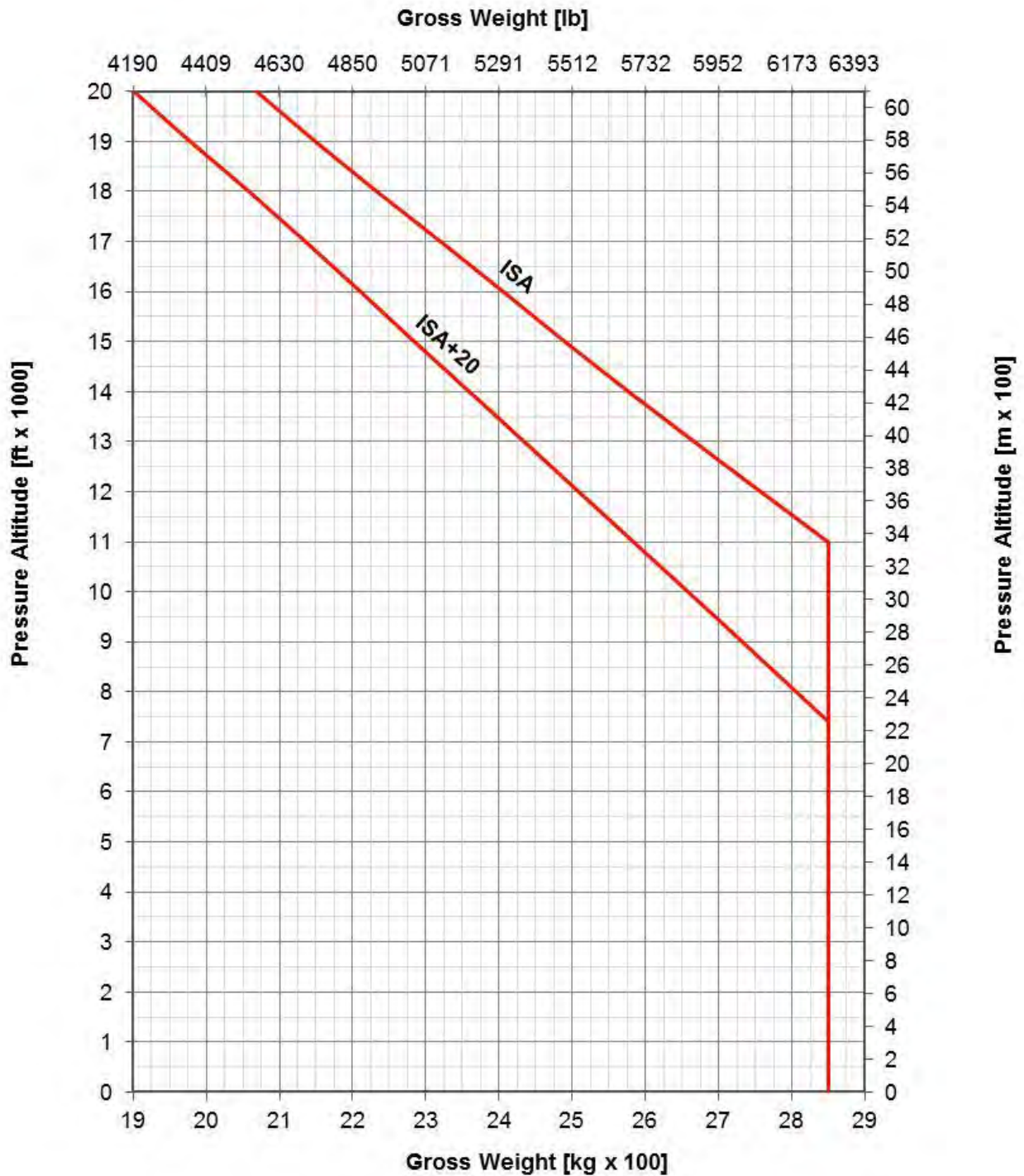
### **FUEL CONSUMPTION**

**(Paragraph 4.2)**

- Fuel consumption – Sea level (ISA)
- Fuel consumption – Sea level (ISA+20°C)
- Fuel consumption – 5,000 ft (ISA)
- Fuel consumption – 5,000 ft (ISA+20°C)

**4.1 HOVERING**

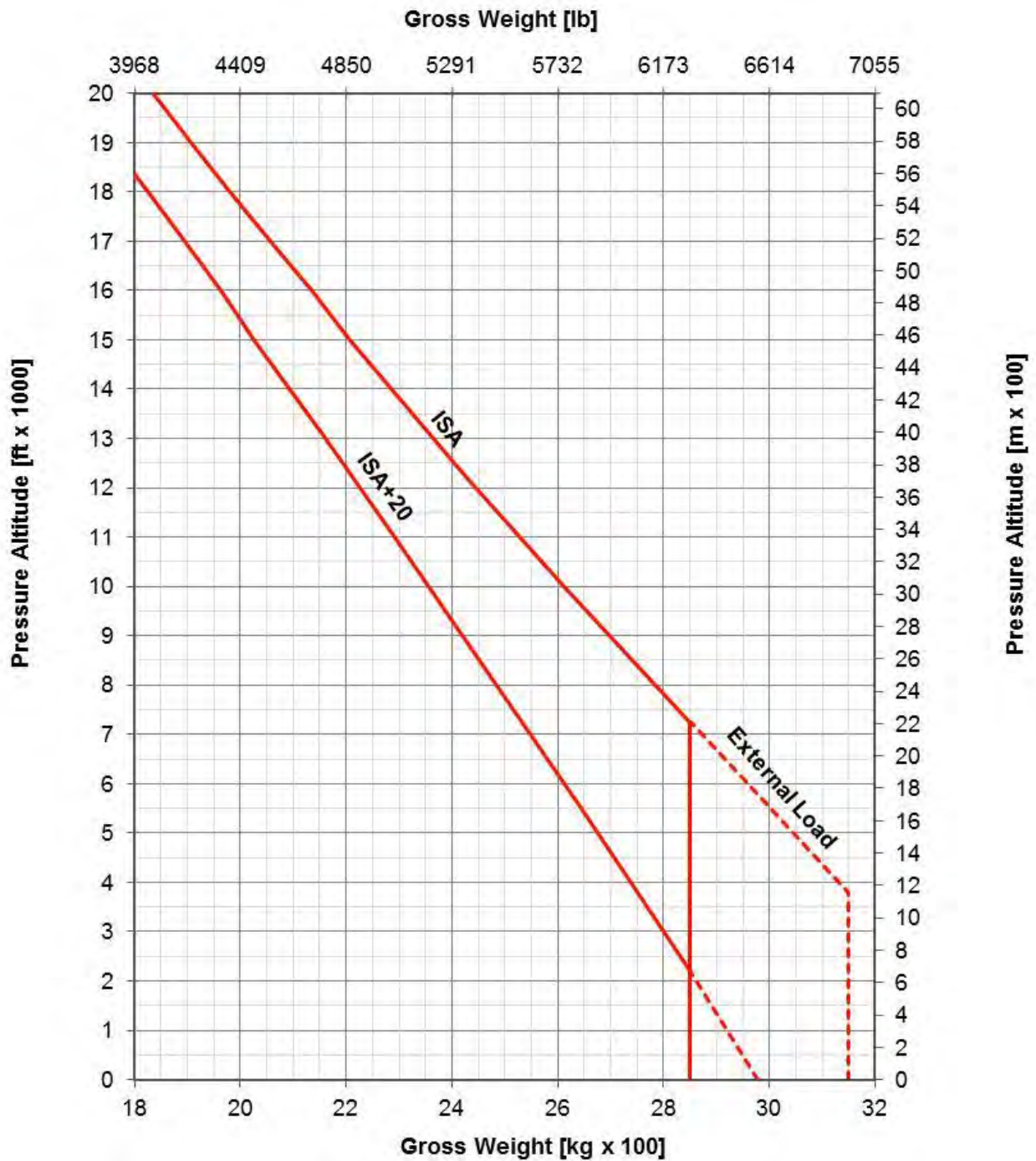
**4.1.1 Hovering IGE (TOP)**



The data contained in this document is general in nature and may vary with conditions. Specification is subject to change without notice.



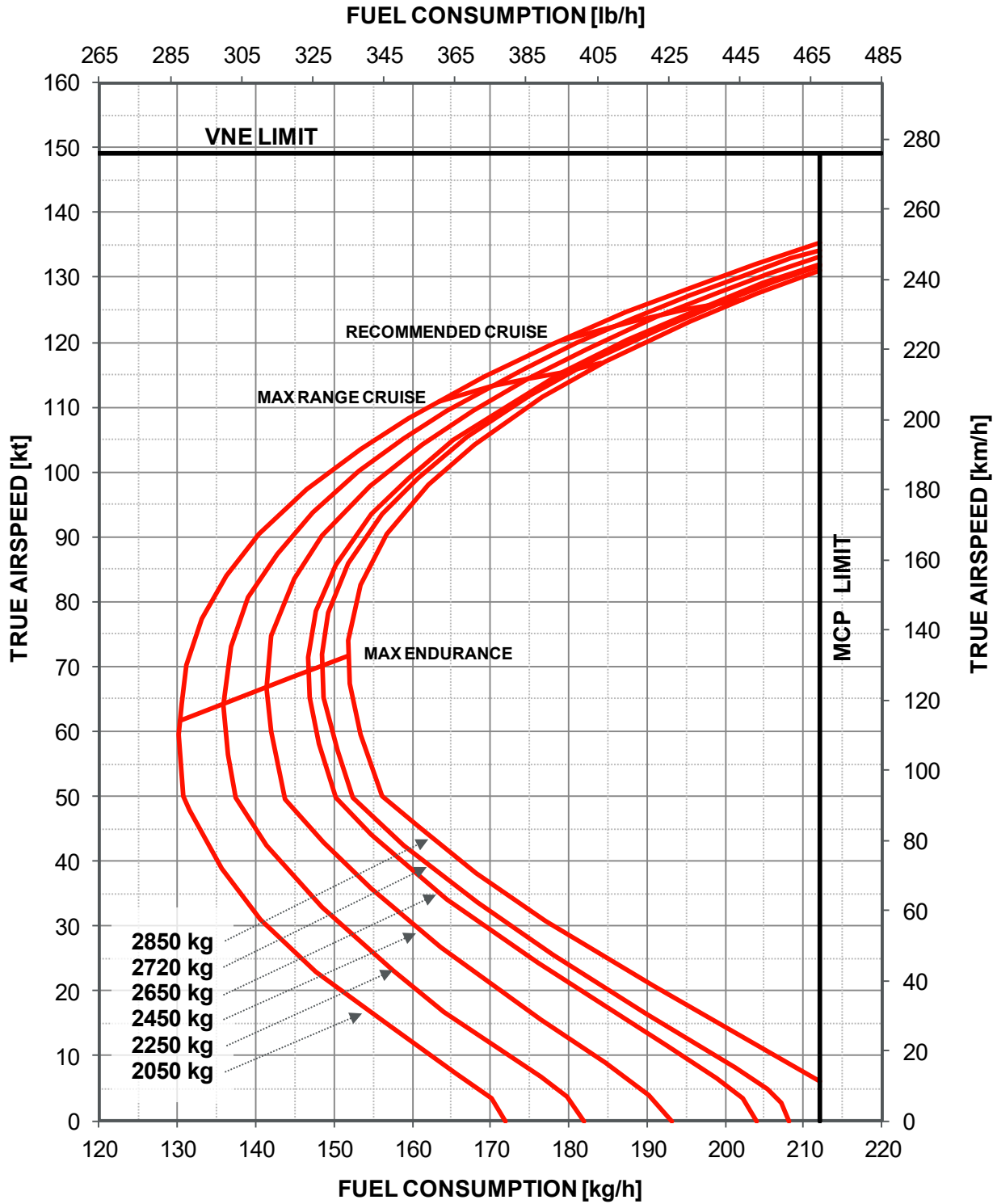
**4.1.2 Hovering OGE (TOP)**



The data contained in this document is general in nature and may vary with conditions. Specification is subject to change without notice.

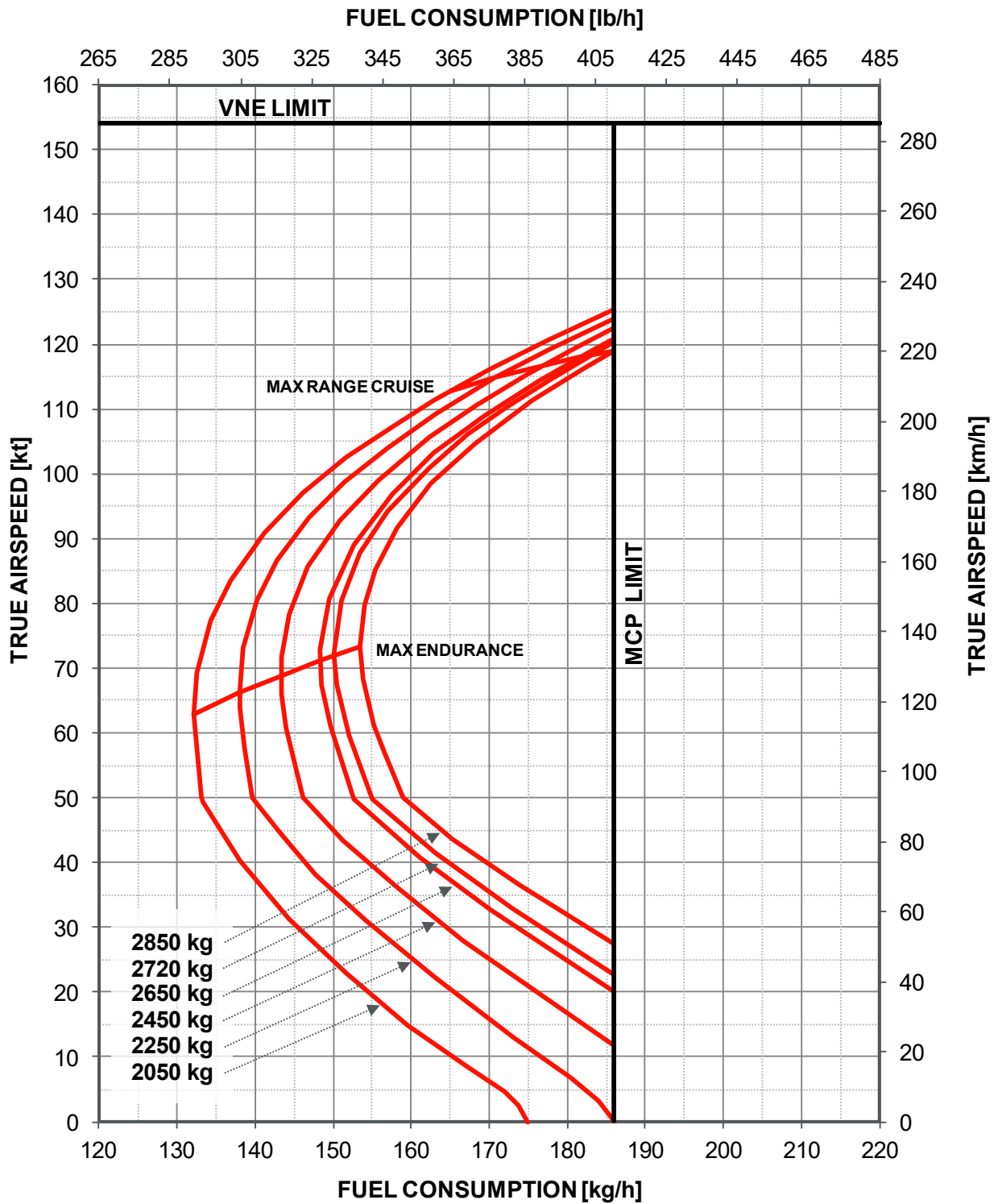
**4.2 FUEL CONSUMPTION**

**4.2.1 Fuel consumption - Sea level (ISA)**



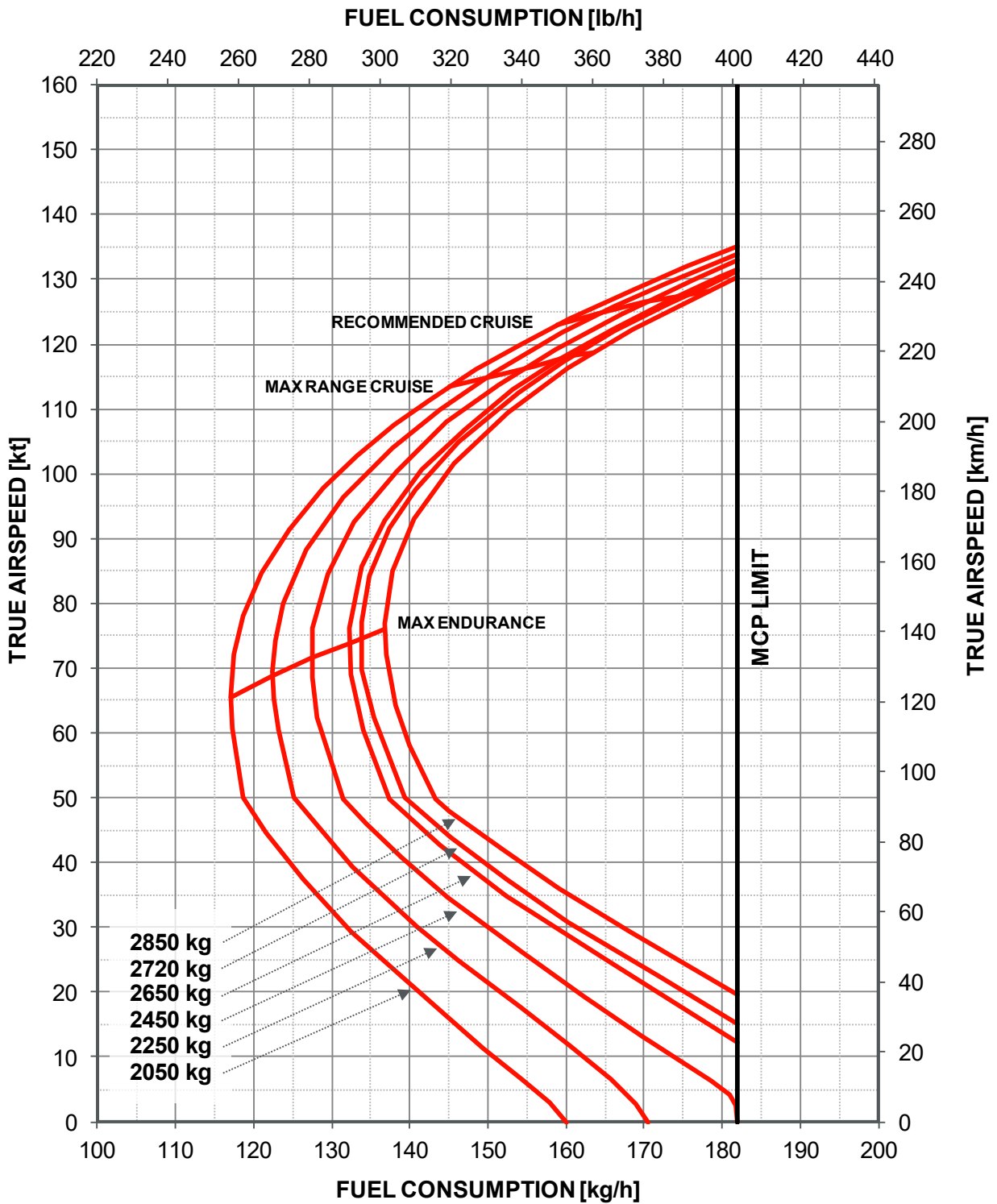
The data contained in this document is general in nature and may vary with conditions. Specification is subject to change without notice.

**4.2.2 Fuel consumption - Sea level (ISA+20°C)**



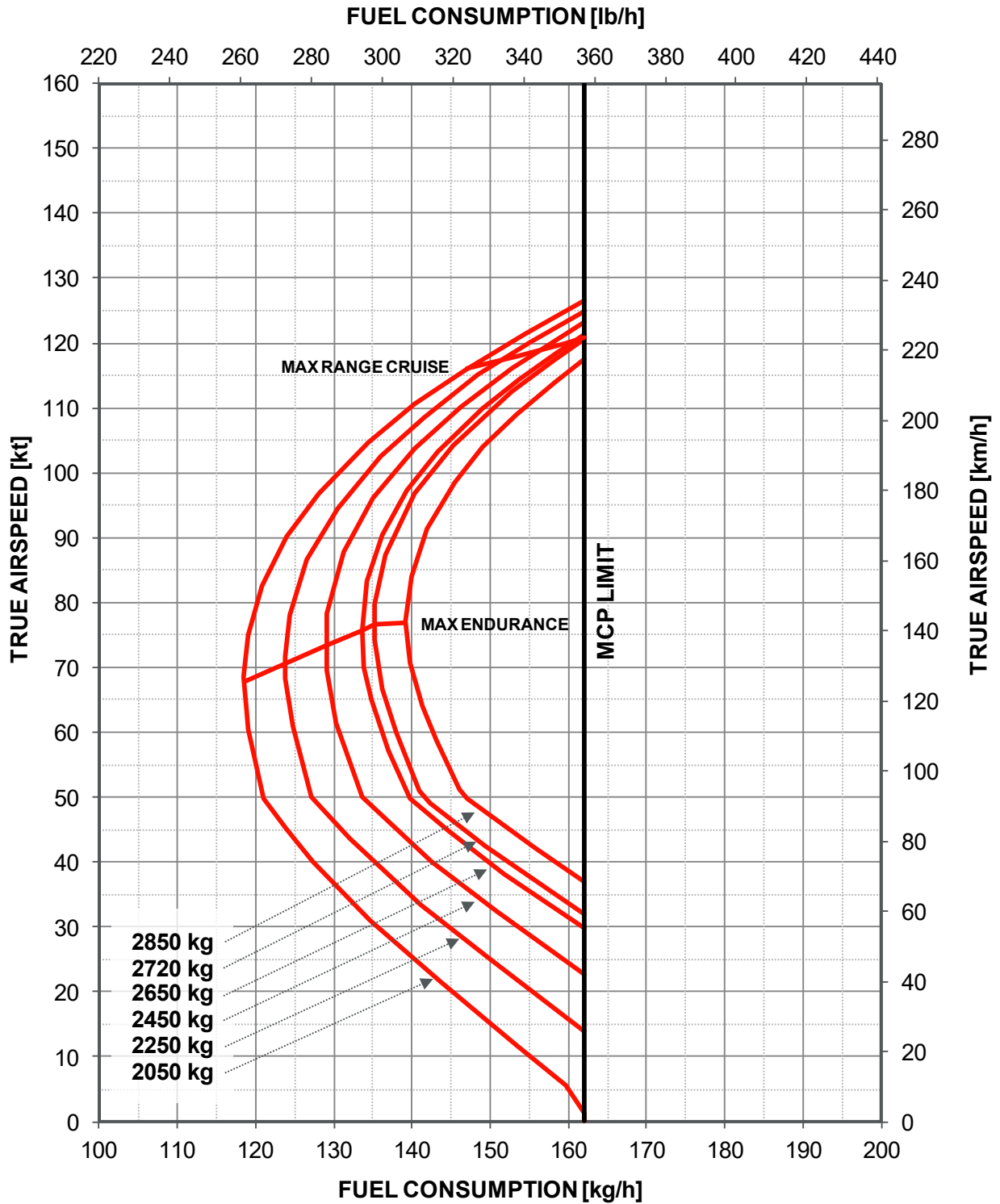
The data contained in this document is general in nature and may vary with conditions. Specification is subject to change without notice.

**4.2.3 Fuel consumption - 5000 ft (ISA)**



The data contained in this document is general in nature and may vary with conditions. Specification is subject to change without notice.

**4.2.4 Fuel consumption - 5000 ft (ISA+20°C)**



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