EUROCOPTER

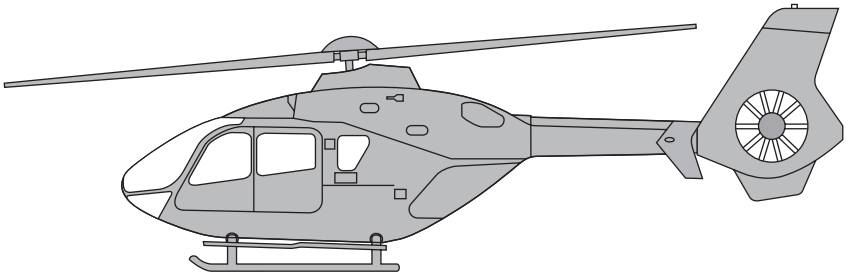
EC135

Technical Data

eurocopter
an EADS Company

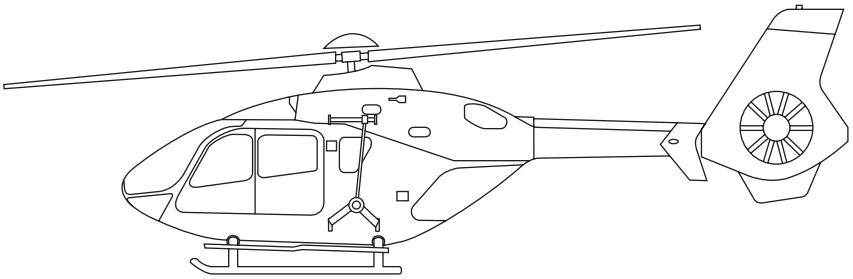
135 08.101.01 E

EC135
(Civil Version)



EC135

EC635
(Military version)



Utility/armed version

EC635

Contents

Manufacturer's notes – Attention!

Eurocopter's policy is one of on-going product enhancement which means that alterations in definition, weights, dimensions or performance may be made at any time without notice being included in those documents that have already been issued.

This document cannot thus be taken as an offer or serve as an appendix to a contract without a prior check as to its validity and prior written agreement of Eurocopter.

The operational or certification regulations, as defined by the local authorities, can make compulsory the installation of some of the equipment or recommended solutions, listed in this document. This list does not claim to cover the whole of the worldwide operational requirements nor the equipment not specifically related to the helicopter (for example: life jacket) or necessary for particular missions (for example: supplemental oxygen). The operator is responsible for ascertaining with his local authorities that the planned configuration of the helicopter complies with regulatory requirements for the area(s) of operations and the type(s) of mission(s) considered.

ITAR note:

Some items are controlled under the provisions of the US International Traffic in Arms Regulations and therefore require a US re-export licence. EUROCOPTER is committed to strict compliance with all applicable US Regulations and requires a corresponding commitment from the customer, too. EUROCOPTER cannot guarantee that a US ITAR licence will be granted. Nevertheless EUROCOPTER will perform all necessary procedures for obtaining such licence. Customer shall support the licence application procedure by providing the necessary documentation and information, particularly end-user certificates, undertakings, documents on the utilization of the commodities, etc. Customer shall adhere to the parameters and requirements of the re-export licence and US regulations. EUROCOPTER reserves the right to deliver the helicopter without the ITAR-controlled items should the US authorities deny or delay the (re-)export licence. The same is valid if the US authorities do not react at all or in cases of a return without action or if otherwise the absence of a required licence or provisions of US law inhibit a delivery in time.

1 Foreword

The EC135 is a light twin-engine, multi-purpose helicopter of the 2-3 ton class with up to 8 seats for pilot/s and passengers. Underlining its multi-role capabilities, it can even be operated single pilot IFR as an option. The helicopter combines Eurocopter's latest Technologies, like advanced cockpit design, modern avionics, Fenestron® anti-torque-device and all-composite bearingless main rotor system, giving the helicopter an outstanding maneuverability. Optimized main rotor blades with advanced tip geometry in combination with a Fenestron® with unequal blade spacing make the EC135 the quietest helicopter in its class, bringing it 6.5 dBA below the ultra-stringent ICAO limit. The built-in anti resonance isolation system (ARIS) filters rotor-induced vibrations and thus enhances flying comfort to a maximum. As a result, the vertical vibration level is far below 0.1g at hover with no increase with speed.

Due to its extreme simplicity, the rotor system contributes to highest safety standards and, at the same time, reduces maintenance to a minimum. The first scheduled maintenance is the intermediate inspection after 400 Flh. In addition, the rotor system together with high TBO gearbox and airframe components grant for high in-service-time of the helicopter.

Depending on the operator's preferences, the EC135 can be equipped with either Arrius 2B2 or Pratt & Whitney PW206B2 power plants - both are FADEC controlled. These powerful and reliable engines in combination with the lifting system provide outstanding performance and vital power reserves even in OEI scenarios.

For training purpose an OEI training mode is implemented to perform a realistic OEI training. This training mode is based on a twin engine training concept featuring a so called TRAINING and a TRAINING IDLE engine.

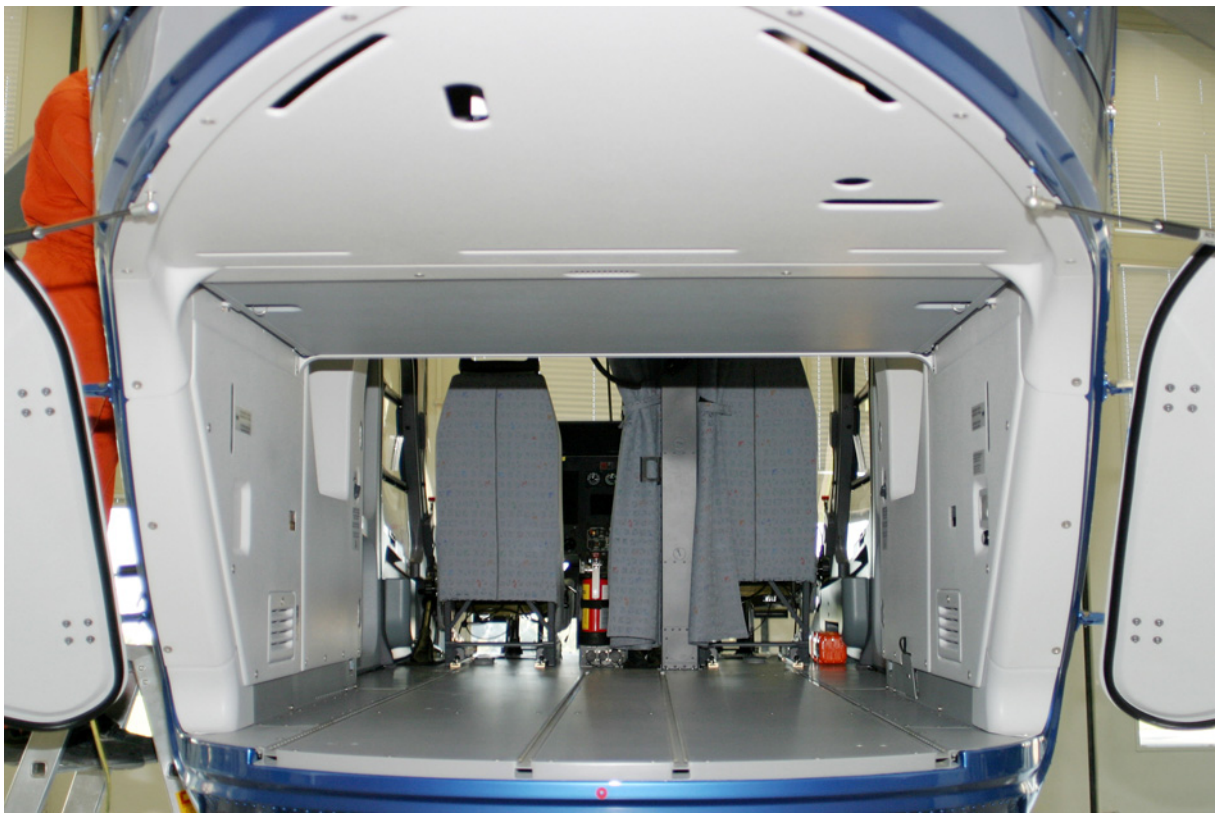
Twin-engine reliability is complemented by a tandem hydraulic and dual electrical system as well as a redundant lubrication and cooling system for the main transmission.

Further safety aspects of the EC135 are design elements like energy absorbing fuselage and seats, as well as the crash resistant fuel cells.

A wide range of quick interchangeable optional equipment is available for the EC135, e.g. emergency floats, hoist, SX16 search light, single or dual cargo hook and many more. Together with its most versatile cabin layout the EC135 is ready to operate in different missions, like police / surveillance, passenger / VIP transport, EMS, public service, to highlight on a few.

Compared to other helicopters in its class, the EC135 offers a large cabin, featuring:

- Excellent outside visibility for pilots and passengers
- Roomy cabin which accommodates long or bulky freight
- Unrivalled side loading (no door posts) and rear loading capability
- Unobstructed and flat floor all over the cabin area with integrated airline style rails



Alternatively to a conventional cockpit, the EC135 is available with “glass cockpit”, which comprises primary flight displays (PFD) and NAV displays (ND). All LCD screens are well arranged on the instrument panel, easy to read even if viewed from an angle and feature perfect readability in any light conditions. The unique color coding, warning and information concept helps the pilot/s to collect all relevant parameters while suppressing presentation of non-relevant information.

Common to the conventional and the glass cockpit is the Central Panel Display System (CPDS). Included in this CPDS there is Eurocopter’s unique first limit indicator (FLI) which dramatically simplifies engine and torque monitoring. Being relieved from the instrument scan without missing vital information, the pilot/s can dedicate more of his/their attention to the mission.

Conventional Instrumentation (analog instruments)

VFR- Single Pilot or Dual Pilot	Packages based on Avionics Solution 1
IFR- Dual Pilot	Packages based on Avionics Solution 3 or 4
IFR- Single Pilot	not available

Glass Cockpit Instrumentation (MEGHAS / FCDS)

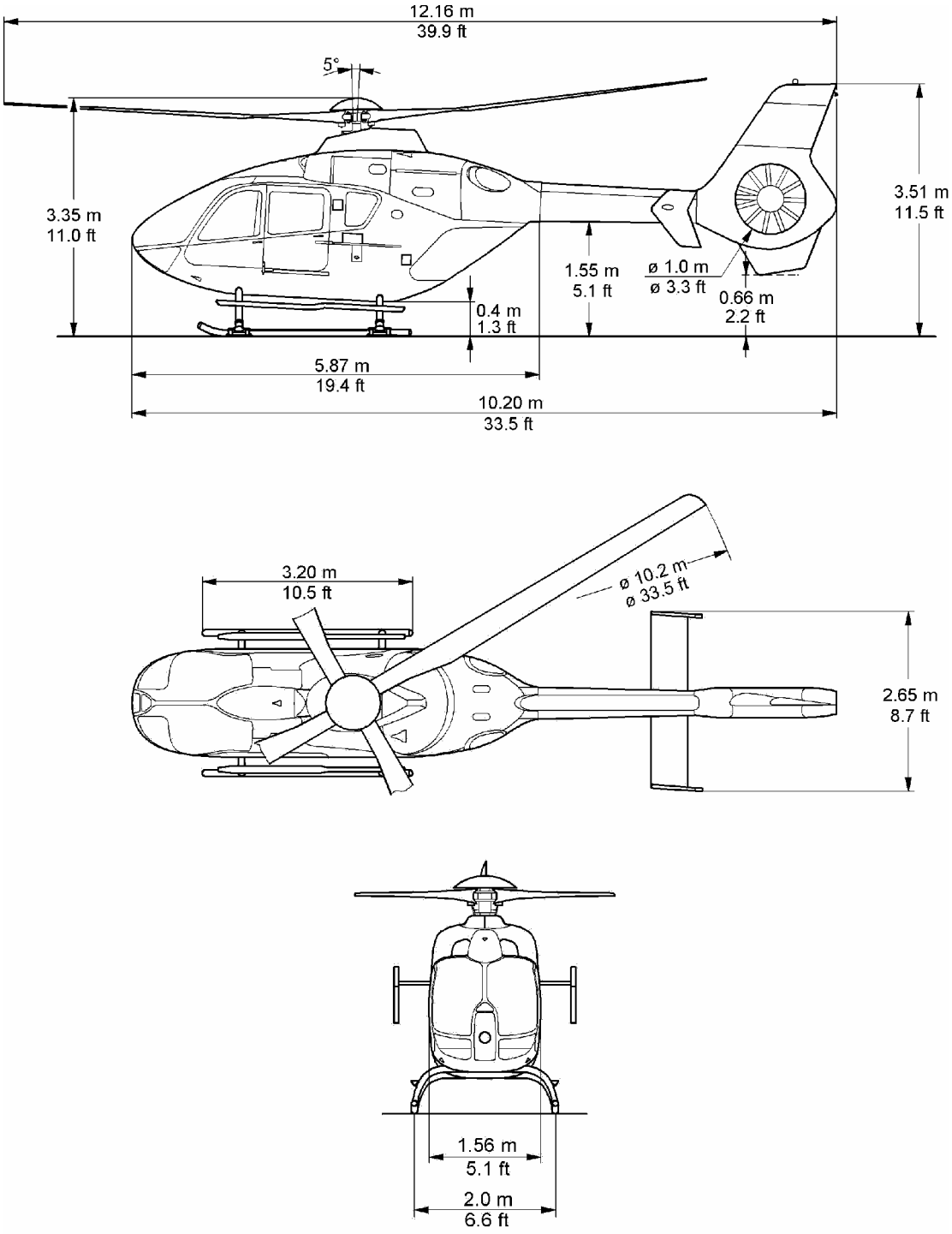
VFR- Single Pilot or Dual Pilot	covered by SP or DP-IFR solutions
IFR- Dual Pilot or Single/Dual Pilot	Packages based on Avionics Solution, 8 or 11
IFR- Single Pilot	Packages based on Avionics Solution 10 or 12

Latest news / highlights:

- Light twin HUMS
- External hoist capability LH and RH
- EUROCOPTER owned simulator for training

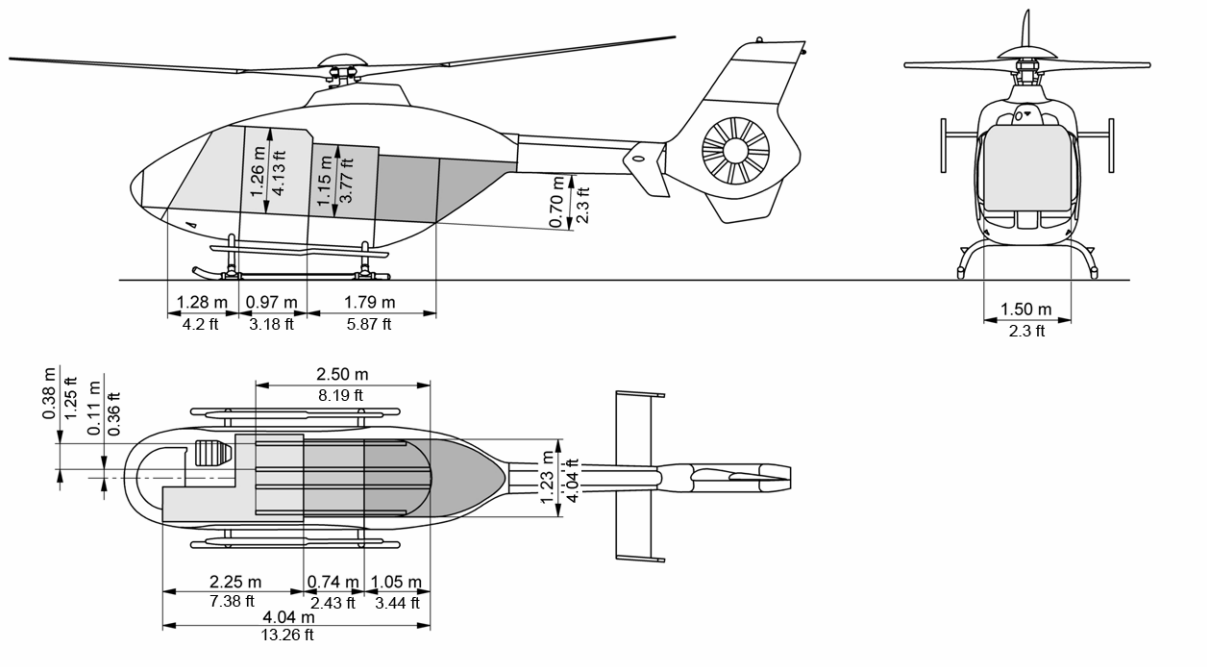
2 General characteristics

2.1 Exterior dimensions



** Rotor turning, controls in neutral position*

2.2 Interior dimensions



	Floor area		Volume	
Cabin & baggage compartment	4.35 m²	46.83 ft²	4.90 m³	173.04 ft³
Cockpit (pilot side)	1.15 m²	12.38 ft²	1.00 m³	35.31 ft³
Total (undivided)	5.50 m²	59.21 ft²	5.90 m³	208.35 ft³

2.3 Possible cabin arrangement (seats & equipment as option)

Passenger transport	■ 1 or 2 pilots + 7 or 6 passengers (“6 Passenger Transport” version) ■ 1 or 2 pilots + 6 or 5 passengers (“5 Passenger Transport” version) ■ 1 or 2 pilots + 6 or 5 passengers (“5 Corporate Passenger Transport” version) ■ 1 or 2 pilots + 5 or 4 passengers (“4 VIP Passenger Transport” version)
Casualty evacuation	■ 1 pilot + 1 litter + up to 4 seats for doctor and attendants ■ 1 pilot + 2 litters + up to 3 seats for doctor and attendant ■ 2 pilots + 1 litter + up to 3 seats for doctor and attendants ■ 2 pilots + 2 litters + up to 2 seats for doctor and attendant
Freight transport	■ 1 pilot + 4.9 m³ (173.04 ft³) in cabin and cargo compartment

2.4 Weight

Note : margin ± 1.5 %		kg	lb
■	**Empty weight, wet (in standard aircraft configuration)**	**1,455**	**3,208**
■	**Useful load (for standard aircraft configuration)**	**1,455**	**3,208**
■	**Pilot**	**80**	**176**
■	**Payload and / or fuel**	**1,375**	**3,031**
■	**Maximum take-off weight**	**2,910**	**6,415**

2.5 Fuel Capacities

Note: Tolerance of fuel figures: ± 2 %
Fuel density used is 0.8 kg/liter.

		Usable Fuel			Unusable Fuel	
		lb	kg	l	lb	kg
■	**Main Tank**	**1038.6**	**471.1**	**588.9**	7.5	3.4
■	**Supply Tank**	**196.8**	**89.3**	**111.6**	9.3	4.2
■	**Total**	**1235.4**	**560.4**	**700.5**	16.8	7.6

2.6 Engines

2 Pratt & Whitney turbine engines – PW206B2
or
2 Turbomeca turbine engines - ARRIUS 2B2

Engine ratings

Thermodynamic limits per engine at SL, ISA		kW	ch	shp
PW206B2				
■	**One Engine Inoperative (OEI), 30 sec power**	**609**	**828**	**816**
■	**One Engine Inoperative (OEI), 2.0 min power**	**580**	**789**	**777**
■	**One Engine Inoperative (OEI), MCP**	**528**	**718**	**708**
■	**Take-Off Power (TOP)**	**498**	**677**	**667**
■	**Maximum Continuous Power (MCP)**	**457**	**621**	**612**
ARRIUS 2B2				
■	**One Engine Inoperative (OEI), 30 sec power**	**609**	**828**	**816**
■	**One Engine Inoperative (OEI), 2.0 min power**	**580**	**789**	**777**
■	**One Engine Inoperative (OEI), MCP**	**528**	**718**	**708**
■	**Take-Off Power (TOP)**	**473**	**643**	**634**
■	**Maximum Continuous Power (MCP)**	**442**	**601**	**592**

2.7 Main transmission ratings

Single engine operation	kW	ch	shp
■ **30 sec OEI-power**	**1 x 526**	**1 x 715**	**1 x 705**
■ **2.0 min OEI-power**	**1 x 513**	**1 x 698**	**1 x 687**
■ **Maximum continuous OEI-power**	**1 x 368**	**1 x 501**	**1 x 493**
Twin engine operation			
■ **Take-Off Power (TOP)**	**2 x 320**	**2 x 435**	**2 x 429**
■ **Maximum Continuous Power (MCP)**	**2 x 283**	**2 x 385**	**2 x 380**

3 Baseline Aircraft Definition

GENERAL

- Energy absorbing fuselage
- Tail boom with fixed horizontal stabilizer and two end-plates
- Vertical fin with Fenestron®
- Upper deck with fittings for main gearbox, engines, hydraulic and cooling system
- Cowlings for main transmission and engines
- Skid-type landing gear with skid protectors, capable of taking ground-handling wheels
- Long boarding steps, LH and RH
- Maintenance built-in steps and grips
- Exterior painting (single color)

COCKPIT, CABIN AND CARGO COMPARTMENT

- One-level cockpit, cabin and cargo compartment floor with integrated rails
- Glazed canopy
- Two hinged cockpit doors with sliding window
- Map case in pilot's door
- Two wide passenger sliding doors
- Two rear hinged clam-shell doors
- Longitudinally adjustable energy absorbing pilot and copilot seats with head rest and 4-point safety belts with an inertia-reel locking system
- Cabin boarding grips (LH and RH)
- Interior paneling with integrated basic sound insulation
- Flight controls (pilot side)
- Instrument panel with extension on pilot's side and glare shield
- Ram-air and electrical ventilating system for cockpit and cabin
- Headset holder in the cockpit
- Headset holder in the cabin
- Portable fire extinguisher
- Stowage net for first aid kit at the LH rear clam-shell door
- Flash light (torch)
- 4 Mobile tie-down rings
- 5 headset plugs in the cabin

BASIC INSTRUMENTATION

- Central Panel Display System (CPDS), consisting of:
  - Caution Advisory Display (CAD) with indication of:
    - Caution and advisory information
    - Fuel quantity indication
  - Vehicle and Engine Management Display (VEMD) with indication of:
    - Torque
    - Engine parameters (N1-RPM (for P&W) or ΔN1-RPM (for TM), oil pressure, oil temperature, Turbine Outlet Temperature (TOT), engine/FADEC rep EEC failure and parameter code messages, self diagnoses)
    - FLI (First Limit Indicator) for TQ, TOT, N1 (for P&W) or ΔN1 (for TM) as analogue display
    - Main transmission parameters (oil pressure, oil temp.)
    - Dual ammeter (generator)
    - Ammeter (battery)
    - Dual voltmeter
    - Outside Air Temperature (OAT)
    - Automatic in flight power check
    - Parameters of optional equipment (e.g. internal long range fuel tank)
- Engine cycle counter (on flight report page)
- Clock (2")
- Magnetic compass
- Triple (rotor and engines) RPM-indicator (2")
- Standard instruments: (single pilot) [1)]
  - Encoding altimeter (3")
  - Airspeed indicator (3")
  - Vertical speed indicator (3")
- Warning unit:
  - Engine fire warning with fuel emergency shut-off
  - Warning lights
  - Aural warning
- Main switch panel:
  - DC power control
  - Digital engine control (FADEC)
- Pitot / static system with electrical heated pitot tube, pilot side
- Static pressure crossover system
- Air Data Computer

1) If glass cockpit instrumentation is chosen as optional equipment, these standard instruments are deleted and an altimeter (2") and an airspeed indicator (2") as back-up instruments are added.

POWER PLANT

- Two Pratt & Whitney PW206B2 turbine engines or Two Turbomeca ARRIUS 2B2 turbine engines

  These 2 engines are equipped with:
  - fire detectors
  - Full Authority Digital Engine Control (FADEC)
  - chip detectors with quick-disconnect plugs
  - overspeed protection system
- Twin-engine OEI-training mode
- Oil cooling and lubricating system with thermostatic valve
- Crash resistant fuel system with a flexible bladder-type fuel main tank and supply tank (split into two sections)
- Automatically controlled variable rotor speed system
- Lockable Fuel tank filler door,

TRANSMISSION SYSTEM

- Two stage main gearbox
- Chip detector with quick-disconnect plug (main gearbox)
- Redundant oil cooling and lubrication system
- Main gearbox attachment with Anti-Resonance Isolation System (ARIS)
- Free wheel assemblies in the engine input drives
- Tail rotor drive shaft
- Tail rotor gearbox with splash lubrication
- Chip detector with quick-disconnect plug (tail rotor gearbox)

ROTOR AND FLIGHT CONTROLS

- Bearingless Main Rotor system (BMR), consisting of:
  - One piece Rotor head/mast
  - Four fiber-reinforced composite main rotor blades with anti-erosion strips, control cuff, elastomeric lead-lag dampers and special blade tip painting
- Main rotor control with dual hydraulic boost system
- Electrical trim system (cyclic)
- Basic provisions for an easy integration of a track and balance system
- Fenestron-type tail rotor with ten metal blades (asymmetric blade spacing) and stator
- Tail rotor gearbox cover
- Tail rotor control system with flexball cable and single hydraulic booster
- Yaw-SAS (Stability Augmentation System)
- Mast moment indication system

ELECTRICAL INSTALLATION

Two starter/generators (2 x 160 A, 28 VDC)
- Nickel-Cadmium battery, (24 V, 17 Ah)
- External power connector (STANAG 3302)
- Power distribution system:
  - Two primary busbars
  - Two shedding busbars
  - Two essential busbars
  - Two high load busbars (80 A) - for optional equipment only
  - Two high power busbars (200 A)
- Battery bus
- One utility receptacle in LH side of cargo compartment (28VDC, 10A)
- Lighting:
  - Anti-collision warning light (red flashing)
  - Fixed, nose-mounted landing light (250 W)
  - Three position lights (red, green, white)
  - Adjustable instrument lighting
  - One utility light in the cockpit
  - 5 spot-lights in the cabin
  - One light in cargo compartment RH side

GROUND HANDLING KIT[1]

- Two ground-handling wheels
- Basic aircraft covers (short time)
- Main rotor blade tie-down lash bags
- Oil drain hoses
- Fuel tank drain device
- Keys for cockpit doors, cabin doors, baggage compartment doors and tank flap (one-key system)
- Battery key
- Lifting points

DOCUMENTATION (in English)

- One Flight Manual [2]
- One Pilots-Checklist, revision service for five years[1]
- One Logbook[1] (only paper, CD ROM on demand)
- One Historical Record[2] (only paper, CD ROM on demand)
- One CD-ROM[1 2] including AMM[3], SDS[3], WDM[3], IPC, MSM
- One additional Master Servicing Manual (MSM) [1 2] on paper
- One Service Bulletin Catalogue (SB) [1 2] per contract, on paper
- One List of Applicable Publications (LOAP) [1 2], on paper
- One Avionics Manual (for avionics installed by Eurocopter)[1 3] (on paper)
- Engine Documentation [1], furnished by supplier, including:
  - Maintenance Manual
  - Illustrated Parts Catalogue (IPC)
- Service Bulletins

[1] Weight not included in the standard helicopter empty weight
[2] Revision service included as long as the aircraft is operational
[3] Customized documentation

4 Basic configuration choice

Selection of a PINAO package

Please select your PINAO code according to your operational needs by using the following table:

Pilot	**P**	**Single**	**Dual**	**Single/Dual**
		1	2	3
VFR/IFR	**I**	**VFR**	**IFR**	
		0	1	
Day/night	**N**	**day**	**night**	
		0	1	
Cat. A	**A**	**no**	**yes**	
		0	1	
JAR-OPS 3 equipment *	**O**	**no**	**yes**	
		0	1	

** This offered equipment package is derived from JAR-OPS 3 Amendment 3. It does not cover oxygen equipment and equipment required for over water operations. As the national operating rule may differ from the JAR-OPS 3 Amendment 3, the operator has to contact its national authority to assure that the planned equipment configuration is acceptable for the intended kind of operation.*

➔

P	I	N	A	O

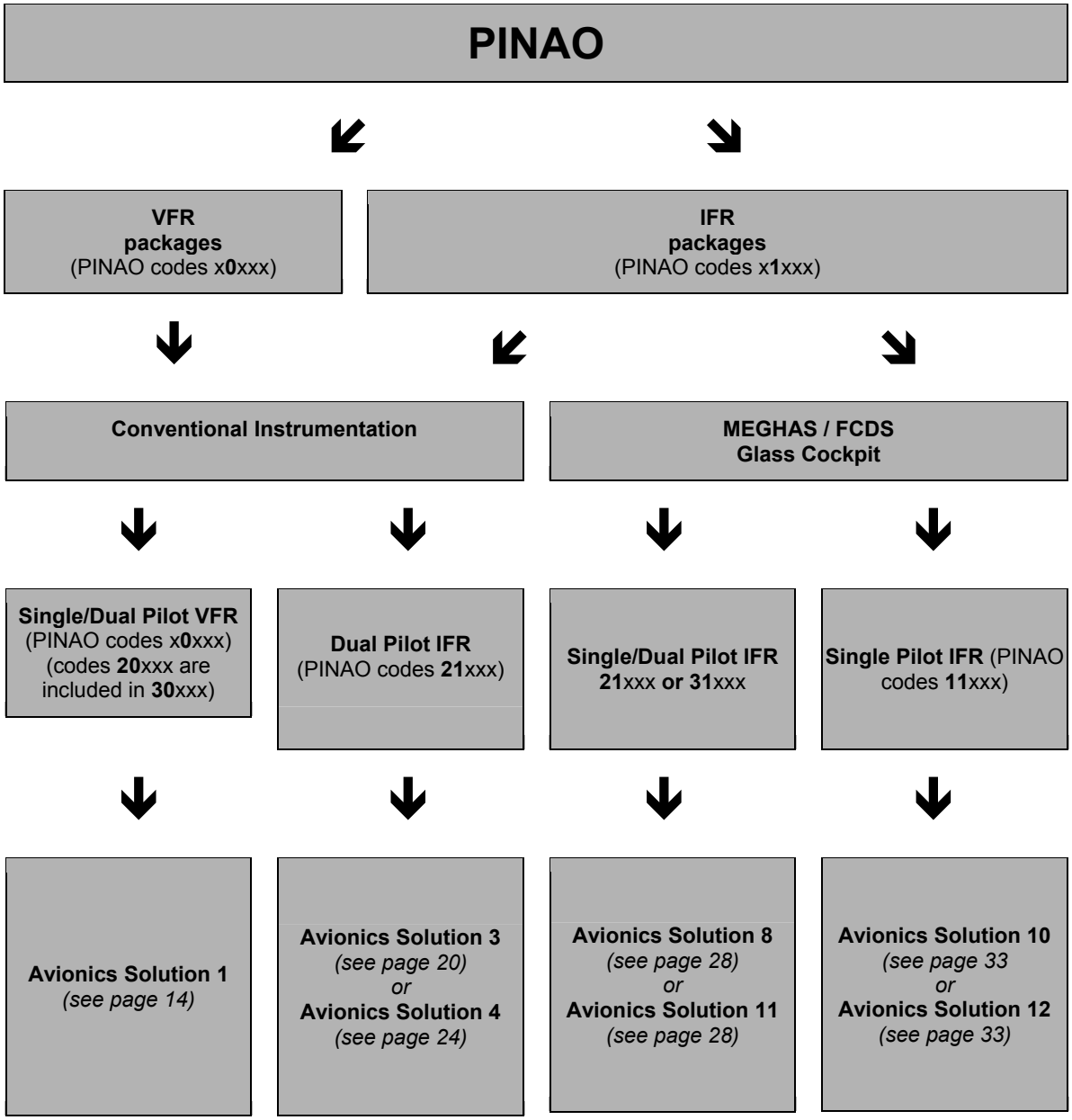
Use this code to find your required "**PINAO**" packages on the following pages.

- As a general guidance, use the diagram on the next page
- One PINAO code may lead to different PINAO packages

IMPORTANT NOTES:

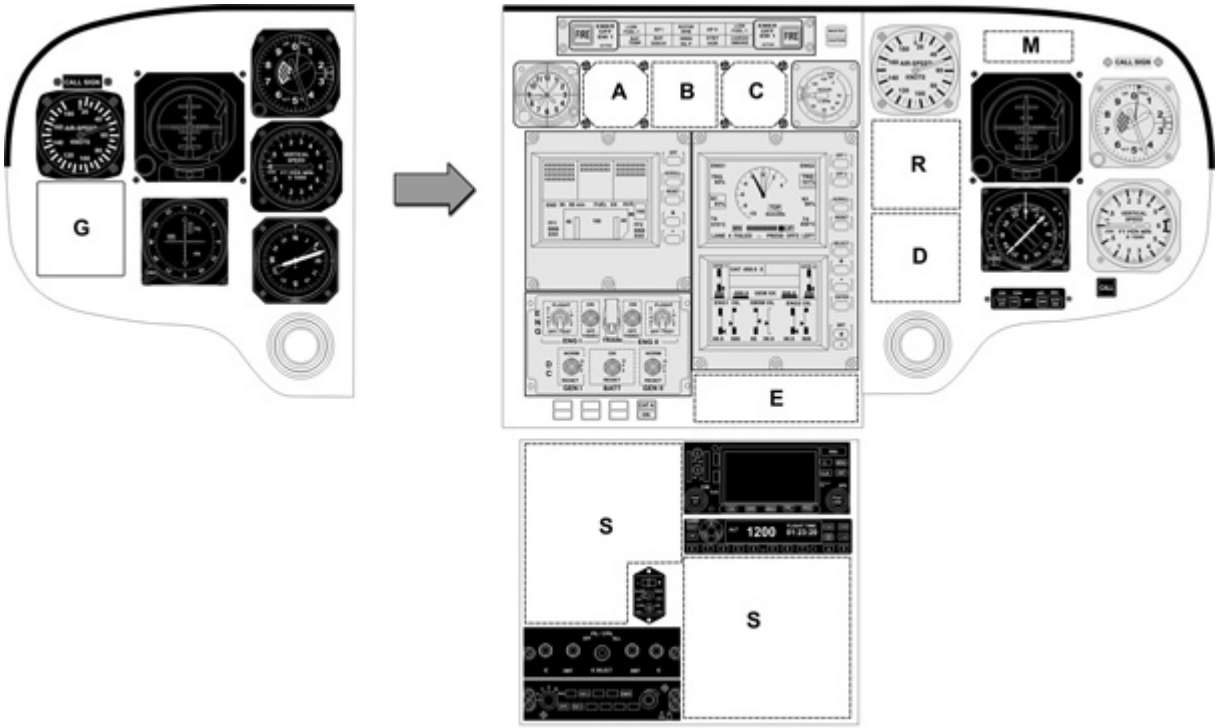
- For IFR, there is no difference between "day" and "night". Therefore only IFR "night" PINAO packages are listed.
- All possible PINAO codes are listed in the following pages.
- Weight margin in this chapter: ± 3 %
- For all intercom systems, the following impedances are standard: LOW IMPEDANCE ➔ Microphone: 5 Ω (dynamic) / Headset: 8 Ω (military - Eurocopter typical)
- Symbol ⚠ shown beside an item denotes some constraints (see table on page 55)

Use this diagram to find the appropriate Avionics Solution based on your individual PINAO selection.



4.1 VFR packages (based on Avionics Solution 1)

4.1.1 Instrument panel overview



Additional space:

A - for 2” back-up airspeed indicator (used in MEGHAS/FCDS “Glass cockpit” solutions)
B - for 2” standby horizon AI 804 DC
C - for 2” back-up altimeter (used in MEGHAS/FCDS “Glass cockpit” solutions)
D - e.g. for 3” RMI
E - e.g. for DME or ELT remote control
G - e.g. for 2nd gyro 205 1BL (Goodrich)
M - e.g. for marker lights
R - e.g. for 3” radar altimeter indicator (KNI 416)
S - e.g. for 2nd GPS/COM/NAV GNS430 or other equipment

4.1.2 Content of Avionics Solution 1 (basic for all VFR PINAO packages)

Document reference	***Commercial reference***	*Title*
08-00001-A	**L2300-001-04**	**Avionics Solution 1, consisting of:**
Intercom System		
08-16053-B	**L2341-192-01**	Audio/Comm. control system AS 3100-12 (Becker), pilot
08-16053-B	**L2341-293-01**	Intercom amplifier IC 3100-4 (Becker)
Transponder		
08-22026-B	**L2325-092-12**	Transponder (Mode S) GTX 330 (Garmin)
Radio Switch		
08-29003-B	**L2480-090-01**	Avionics/Radio master switches (Special Eurocopter)
GPS/NAV/COM		
08-43018-B	**L3442-092-00**	GPS / NAV / COM GNS 430, pilot (Garmin) with I-panel annunciation/switch unit MD 41 (MidContinent)
Conventional instruments		
08-51012-A	**L3425-092-02**	4" Artificial horizon GH14-391, pilot (Honeywell)
08-52013-A	**L3421-092-02**	Gyro Magnetic Heading System KCS 55 A (Honeywell) incl. KG-102A, KMT-112, KA-51B with HSI KI-525A, pilot
Miscellaneous		
08-99000-A	**L0000-150-01**	Avionics Solution 1 interconnection / wiring

4.1.3 Minimum required equipment

Minimum required equipment for Avionics Solution 1 – Single pilot					PINAO						
Document reference	***Commercial reference***	*Title*	***Weight*** *(margin ± 3 %)* ***kg***	***lb***	**10000**	**10001**[4]	**10010**	**10011**[4]	**10100**	**10110**	**10111**[4]
05-03007-C	**L2562-001-00**	First aid kit[5]	1.3	2.9		X		X			X
05-22008-C	**L2621-001-00**	Engine fire extinguishing system	3.6	7.9			X	X		X	X
05-33001-B	**L3113-001-00**	Slant panel	0.8	1.8	X	X	X	X	X	X	X
05-33002-B	**L3113-004-00**	Center console	2.2	4.9	X	X	X	X	X	X	X
05-41004-C	**L2104-100-00**	Bleed air heating system[6]	6.6	14.6	X	X	X	X	X	X	X
05-44002-B	**L2122-001-00**	Ventilation extruder without copilot I-panel extension	0.3	0.7	X	X	X	X	X	X	X
05-61010-B	**L2433-003-00**	Battery, type (Saft) ULM, 27 Ah, 24 V instead of standard battery	8.2	18.1		X	X	X		X	X
05-62010-C	**L2420-002-00**	AC System (350VA)	3.2	7.1	X	X	X	X	X	X	X
05-63003-B	**L2432-001-00**	Starter/generators (2 x 200 A, 28 V DC), instead of standard generators	3.6	7.9	X	X	X	X	X	X	X
06-45023-B	**L3343-003-00**	Landing & search light, 450 W	3.4	7.5					X	X	X
06-67044-B	**L2563-801-06**	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3		X		X			X
08-00001-A	**L2300-001-04**	**Avionics Solution 1**	39.7	87.5	X	X	X	X	X	X	X
08-21014-C	**L3441-090-04**	Radar altimeter KRA 405B (Honeywell)	3.5	7.7			X	X		X	X
08-21014-C	**L3441-092-03**	Radar altimeter indicator KNI 416 (Honeywell)	1.2	2.6			X	X		X	X
08-51013-B	**L3425-806-51**	2” std-by horizon AI 804 DC (Goodrich) with emergency battery	6.6	14.6			X	X		X	X

[4] For VFR flights on routes not navigated by reference to visual landmarks, a 2nd GPS/NAV/COM GNS430 (see possible add-ons) is required.

[5] First aid kit complies with german regulation rules 1. DV LuftBO paragraph 5(2). Type of operation, procedures or regulations may require a different/specific first aid kit.

[6] For helicopters dedicated for EMS select “Bleed air heating system: EMS version L2104-003-00” (05-41004-C) (7.0 kg / 15.4 lb.)

Minimum required equipment for Avionics Solution 1- Single/Dual pilot					PINAO						
Document reference	***Commercial reference***	*Title*	***Weight*** *(margin ± 3 %)*								
			kg	***lb***	**30000**	**30001**[7]	**30010**	**30011**[7]	**30100**	**30110**	**30111**[7]
05-03007-C	**L2562-001-00**	First aid kit[8]	1.3	2.9		X		X			X
05-22008-C	**L2621-001-00**	Engine fire extinguishing system	3.6	7.9			X	X		X	X
05-33001-B	**L3113-001-00**	Slant panel	0.8	1.8	X	X	X	X	X	X	X
05-33002-B	**L3113-004-00**	Center console	2.2	4.9	X	X	X	X	X	X	X
05-37016-C	**L6701-001-00**	Copilot flight controls	6.0	13.2	X	X	X	X	X	X	X
05-38010-B	**L3111-001-00**	10" copilot instrument panel with glare shield	2.9	6.4	X	X	X	X	X	X	X
05-41004-C	**L2104-100-00**	Bleed air heating system[9]	6.6	14.6	X	X	X	X	X	X	X
05-61010-B	**L2433-003-00**	Battery, type (Saft) ULM, 27 Ah, 24 V instead of standard battery	8.2	18.1	X	X	X	X	X	X	X
05-62010-C	**L2420-003-00**	Dual AC System (2 x 350VA)	6.6	14.6	X	X	X	X	X	X	X
05-63003-B	**L2432-001-00**	Starter/generators (2 x 200 A, 28 V DC), instead of standard generators	3.6	7.9	X	X	X	X	X	X	X
06-45023-B	**L3343-003-00**	Landing & search light, 450 W	3.4	7.5					X	X	X
06-67044-B	**L2563-801-06**	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3		X		X			X
08-00001-A	**L2300-001-04**	**Avionics Solution 1**	39.7	87.5	X	X	X	X	X	X	X
08-16053-B	**L2341-191-01**	Audio/Comm. control system AS 3100-12 (Becker), copilot	2.0	4.4	X	X	X	X	X	X	X
08-21014-C	**L3441-090-04**	Radar Altimeter KRA 405B (Honeywell)	3.5	7.7			X	X		X	X
08-21014-C	**L3441-092-03**	Radar altimeter indicator KNI 416 (Honeywell)	1.2	2.6			X	X		X	X
08-51012-A	**L3425-091-02**	4" artificial horizon GH14-391 (Honeywell), copilot	2.5	5.5	X	X	X	X	X	X	X
08-51013-B	**L3425-806-51**	2" std-by horizon AI 804 DC (Goodrich) with emergency battery	6.6	14.6			X	X		X	X
08-52010-A	**L3421-091-02**	2nd directional Gyro (3" unslaved indicator) 205 1BL on copilot side (Goodrich)	1.4	3.1				X			X
08-54001-C	**L3411-001-00**	Copilot pitot static system	1.5	3.3	X	X	X	X	X	X	X
08-60003-A	**L3412-002-00**	Copilot 3" instruments (airspeed indicator, altimeter, vertical speed indicator; United Instruments)	1.7	3.8	X	X	X	X	X	X	X
08-61010-B	**L3166-091-04**	RMI KI 229 (Honeywell), copilot	2.2	4.9	X	X	X	X	X	X	X
08-61011-A	**L3167-091-02**	CDI KI 204 (Honeywell), copilot	1.0	2.2	X	X	X	X	X	X	X

[7] For VFR flights on routes not navigated by reference to visual landmarks, a 2nd GPS/NAV/COM GNS430 (see possible add-ons) is required.

[8] First aid kit complies with german regulation rules 1. DV LuftBO paragraph 5(2). Type of operation, procedures or regulations may require a different/specific first aid kit.

[9] For helicopters dedicated for EMS select "Bleed air heating system: EMS version L2104-003-00" (05-41004-C) (7.0 kg / 15.4 lb.)

4.1.4 Possible add-ons

Possible add-ons for Avionics Solution 1 – Single Pilot					PINAO						
Document reference	***Commercial reference***	*Title*	***Weight*** *(margin ± 3 %)* ***kg***	***lb***	**10000**	**10001**	**10010**	**10011**	**10100**	**10110**	**10111**
06-67044-B	**L2563-801-06**	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3	X		X		X	X	
08-16053-B	**L2341-191-01**	Audio/Comm. control system AS 3100-12 (Becker), copilot	2.0	4.4	X	X	X	X	X	X	X
08-21014-C	**L3441-090-04** **L3441-092-03**	Radar altimeter KRA 405B (Honeywell) Radar altimeter indicator KNI 416 (Honeywell)	3.5 1.2	7.7 2.6	X	X			X		
08-25014-A	**L3455-092-03** **L3169-092-02**	Distance Measuring Equipment DME KN 63 Distance Measuring Equipment DME indicator KDI 572 (Honeywell)	2.0 0.8	4.4 1.8	X	X	X	X	X	X	X
08-26010-B	**L3431-092-02**	Marker Beacon receiver / lights KR 21 (Honeywell)	0.9	2.0	X	X	X	X	X	X	X
08-35007-B	**L2327-001-01**	Traffic Advisory System TAS 9900BX (Ryan)	9.5	20.9	X	X	X	X	X	X	X
08-35007-B	**L3442-881-00**	Traffic Advisory System TAS 9900BX interface with GNS430	0.2	0.4	X	X	X	X	X	X	X
08-51013-B	**L3425-806-51**	2” std-by horizon AI 804 DC (Goodrich) with emergency battery	6.6	14.6	X	X			X		
08-71002-C	**L2217-001-10**	VFR SAS (VFR pitch/roll Stability Augmentation System)	5.6	12.3	X	X	X	X	X	X	X

Possible add-ons for Avionics Solutions 1 – Dual pilot Single - Dual pilot					PINAO						
Document reference	***Commercial reference***	*Title*	***Weight*** *(margin ± 3 %)*								
			kg	***lb***	**30000**	**30001**	**30010**	**30011**	**30100**	**30110**	**30111**
06-67044-B	**L2563-801-06**	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3	X		X		X	X	
08-21014-C	**L3441-090-04** **L3441-092-03**	Radar altimeter KRA 405B (Honeywell) Radar altimeter indicator KNI 416 (Honeywell)	3.5 1.2	7.7 2.6	X	X			X		
08-25014-A	**L3455-092-03** **L3169-092-02**	Distance Measuring Equipment DME KN 63 Distance Measuring Equipment DME indicator KDI 572 (Honeywell)	2.0 0.8	4.4 1.8	X	X	X	X	X	X	X
08-26010-B	**L3431-092-02**	Marker Beacon receiver / lights KR 21 (Honeywell)	0.9	2.0	X	X	X	X	X	X	X
08-35007-B	**L2327-001-01**	Traffic Advisory System TAS 9900BX (Ryan)	9.5	20.9	X	X	X	X	X	X	X
08-35007-B	**L3442-881-00-**	Traffic Advisory System TAS 9900BX interface with GNS430	0.2	0.4	X	X	X	X	X	X	X
08-43018-B *08-61011-A*	**L3442-091-00** **L3167-091-01**	GPS/NAV/COM GNS 430 (Garmin), copilot, incl. annunciator/switch MD 41 (MidContinent) CDI KI206 instead of CDI KI 204 (Honeywell)	8.3 1.3	18.3 2.9	X	X	X	X	X	X	X
08-51013-B	**L3425-806-51**	2” std-by horizon AI 804 DC (Goodrich) with emergency battery	6.6	14.6	X	X			X		
08-71002-C	**L2217-001-10**	VFR SAS (VFR pitch/roll Stability Augmentation System)	5.6	12.3	X	X	X	X	X	X	X

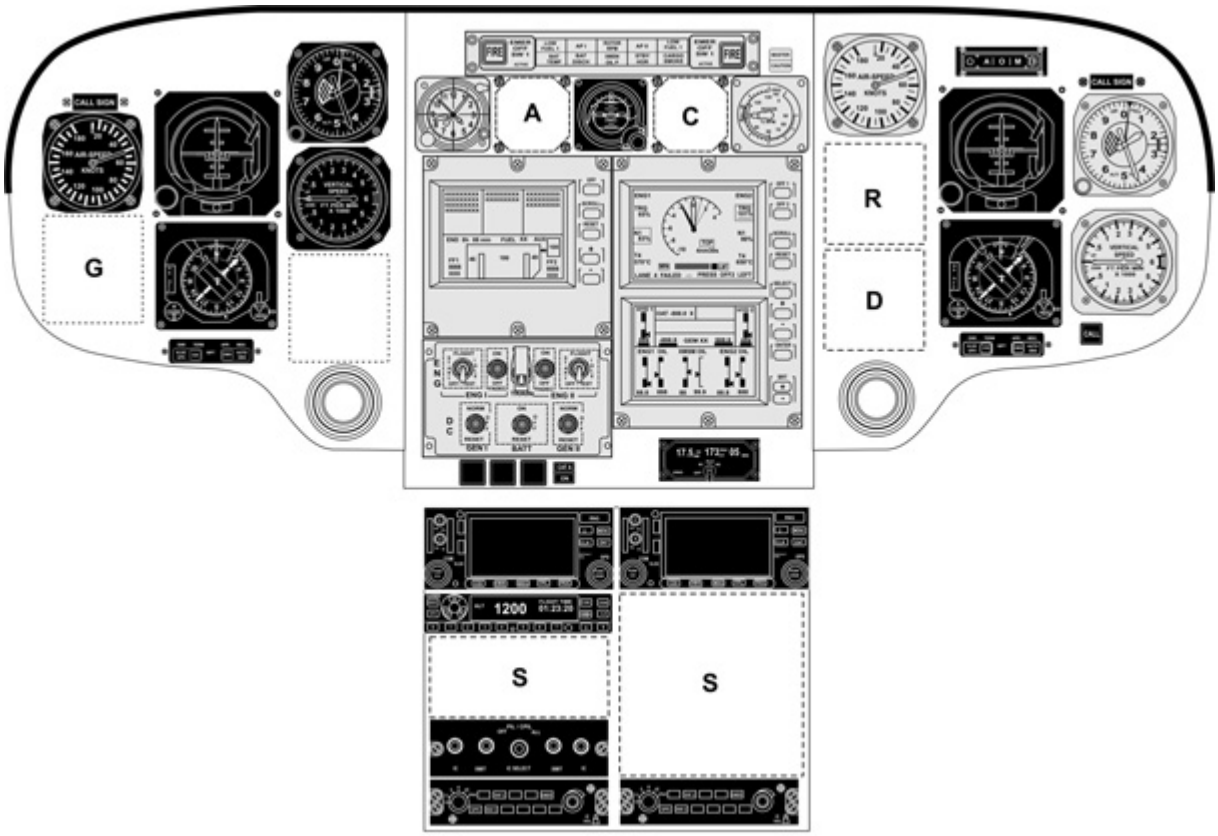
4.1.5 On request items

- Multifunction display KMD 850 (Honeywell) for weather radar or digital map
- Color weather radar RDR2000 (Honeywell) on KMD850 display
- Moving Map EURONAV IV - RN6 (Euro Avionics)

4.1.6 Further avionics add-ons see chapter 6 page 50

4.2 Dual pilot IFR packages, conventional instrumentation, basic (based on Avionics Solution 3)

4.2.1 Instrument panel overview



Additional space:

A - for 2” back-up airspeed indicator (used in MEGHAS/FCDS “Glass cockpit” solutions)
C - for 2” back-up altimeter (used in MEGHAS/FCDS “Glass cockpit” solutions)
D - e.g. for 3” RMI or 3” CDI
G - e.g. for 2nd gyro 205 1BL (Goodrich)
R - e.g. for 3” radar altimeter indicator (KNI 416)
S - e.g. for tactical or other optional equipment

4.2.2 Contents of Avionics Solution 3

Document reference	***Commercial reference***	*Title*
08-00002-A	**L2300-003-04**	**Avionics Solution 3, consisting of:**
Intercom System		
08-16053-B	**L2341-191-01**	Audio/Comm. control system AS 3100-12 (Becker), copilot
08-16053-B	**L2341-192-01**	Audio/Comm. control system AS 3100-12 (Becker), pilot
08-16053-B	**L2341-293-01**	Intercom amplifier IC 3100-4 (Becker)
Transponder		
08-22026-B	**L2325-092-12**	Transponder (Mode S) GTX 330 (Garmin)
DME		
08-25014-A	**L3169-092-02**	Distance Measuring Equipment DME indicator KDI 572 (Honeywell)
08-25014-A	**L3455-092-03**	Distance measuring equipment DME KN 63 (Honeywell)
VOR / ILS /MKR receivers		
08-26010-B	**L3431-092-02**	Marker beacon receiver / lights KR 21(Honeywell)
Radio Switch		
08-29003-B	**L2480-090-01**	Avionics/Radio master switches (Special Eurocopter)
GPS/NAV/COM		
08-43018-B	**L3442-091-00**	GPS/NAV/COM GNS 430 (Garmin), copilot, incl. annunciator/switch MD 41 (MidContinent)
08-43018-B	**L3442-092-00**	GPS / NAV / COM GNS 430 (Garmin), pilot incl. annunciator/switch MD 41 (MidContinent)
Conventional instruments		
08-51012-A	**L3425-091-02**	4" Artificial horizon GH14-391, copilot (Honeywell)
08-51012-A	**L3425-092-02**	4" Artificial horizon GH14-391, pilot (Honeywell)
08-51013-B	**L3425-806-51**	2” std-by horizon AI 804 DC (Goodrich) with emergency battery
08-52014-A	**L3421-092-01**	Gyro Magnetic Heading System C14D (Honeywell)
08-60003-A	**L3412-002-00**	Copilot 3" instruments (airspeed indicator, altimeter, vertical speed indicator (United Instruments)
08-61012-A	**L3165-091-01**	Horizontal Situation Indicator - KPI 552 (Honeywell), copilot
08-61012-A	**L3165-092-01**	Horizontal Situation Indicator - KPI 552 (Honeywell), pilot
Miscellaneous		
08-99000-A	**L0000-150-03**	Avionics Solution 3 interconnection / wiring

4.2.3 Minimum required equipment

Minimum required equipment for Avionics Solution 3					PINAO		
			Weight (margin ± 3 %)				
Document reference	***Commercial reference***	*Title*	***kg***	***lb***	**21100**	**21110**	**21111**
05-03007-C	**L2562-001-00**	First aid kit[10]	1.3	2.9			X
05-22008-C	**L2621-001-00**	Engine fire extinguishing system	3.6	7.9		X	X
05-33001-B	**L3113-001-00**	Slant panel	0.8	1.8	X	X	X
05-33002-B	**L3113-004-00**	Center console	2.2	4.9	X	X	X
05-37016-C	**L6701-001-00**	Copilot flight controls	6.0	13.2	X	X	X
05-38010-B	**L3111-001-00**	10“ copilot instrument panel with glare shield	2.9	6.4	X	X	X
05-39006-B	**L2514-003-01**	Map case in copilot door	0.5	1.1	X	X	X
05-39007-B	**L3111-001-10**	Map case on instrument panel glare shield	0.6	1.3	X	X	X
05-39008-B	**L3113-004-10**	Illuminated chart holder for pilot side	0.9	2.0			X
05-41004-C	**L2104-100-00**	Bleed air heating system[11]	6.6	14.6	X	X	X
05-61010-B	**L2433-006-00**	Battery, type "Saft", ULM, 40 Ah, 24 V instead of standard battery	16.8	37.0	X	X	X
05-62010-C	**L2420-003-00**	Dual AC System (2 x 350VA)	6.6	14.6	X	X	X
05-63003-B	**L2432-001-00**	Starter/generators (2 x 200 A, 28 VDC), instead of standard generator	3.6	7.9	X	X	X
06-45023-B	**L3343-003-00**	Landing & search light, 450 W	3.4	7.5	X	X	X
06-67044-B	**L2563-801-06**	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3			X
08-00002-A	**L2300-003-04**	**Avionics Solution 3**	78.1	172.2	X	X	X
08-21014-C	**L3441-090-04**	Radar altimeter KRA 405B (Honeywell)	3.5	7.7		X	X
08-21014-C	**L3441-092-03**	Radar altimeter indicator KNI 416 (Honeywell)	1.2	2.6		X	X
08-52010-A	**L3421-091-02**	2nd directional Gyro (3” unslaved indicator) 205 1BL on copilot side (Goodrich)	1.4	3.1	X	X	X
08-54001-C	**L3411-001-00**	Copilot pitot static system	1.5	3.3	X	X	X
08-71002-C	**L2217-001-50**	IFR SAS (IFR pitch/roll Stability Augmentation System)	12.2	26.9	X	X	X

[10] First aid kit complies with german regulation rules 1. DV LuftBO paragraph 5(2). Type of operation, procedures or regulations may require a different/specific first aid kit.

[11] For helicopters dedicated for EMS select “Bleed air heating system: EMS version L2104-003-00” (05-41004-C) (7.0 kg / 15.4 lb.)

4.2.4 Possible add-ons

Possible add-ons for Avionics Solution 3					PINAO		
Document reference	***Commercial reference***	*Title*	***Weight*** *(margin ± 3 %)* ***kg***	***lb***	**21100**	**21110**	**21111**
06-67044-B	**L2563-801-06**	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3	X	X	
08-21014-C	**L3441-090-04** **L3441-092-03**	Radar altimeter KRA 405B (Honeywell) Radar altimeter indicator KNI 416 (Honeywell)	3.5 1.2	7.7 2.6	X		
08-24015-B	**L3452-092-17** **L3452-092-08**	ADF system DFS-43A (Chelton / Wulfsberg) ADF control unit CD-432B (Chelton / Wulfsberg)	9.6 1.2	21.2 2.6	X	X	X
08-35007-B	**L2327-001-01**	Traffic Advisory System TAS 9900BX (Ryan)	9.5	20.9	X	X	X
08-35007-B	**L3442-881-00**	Traffic Advisory System TAS 9900BX interface with GNS430	0.2	0.4	X	X	X

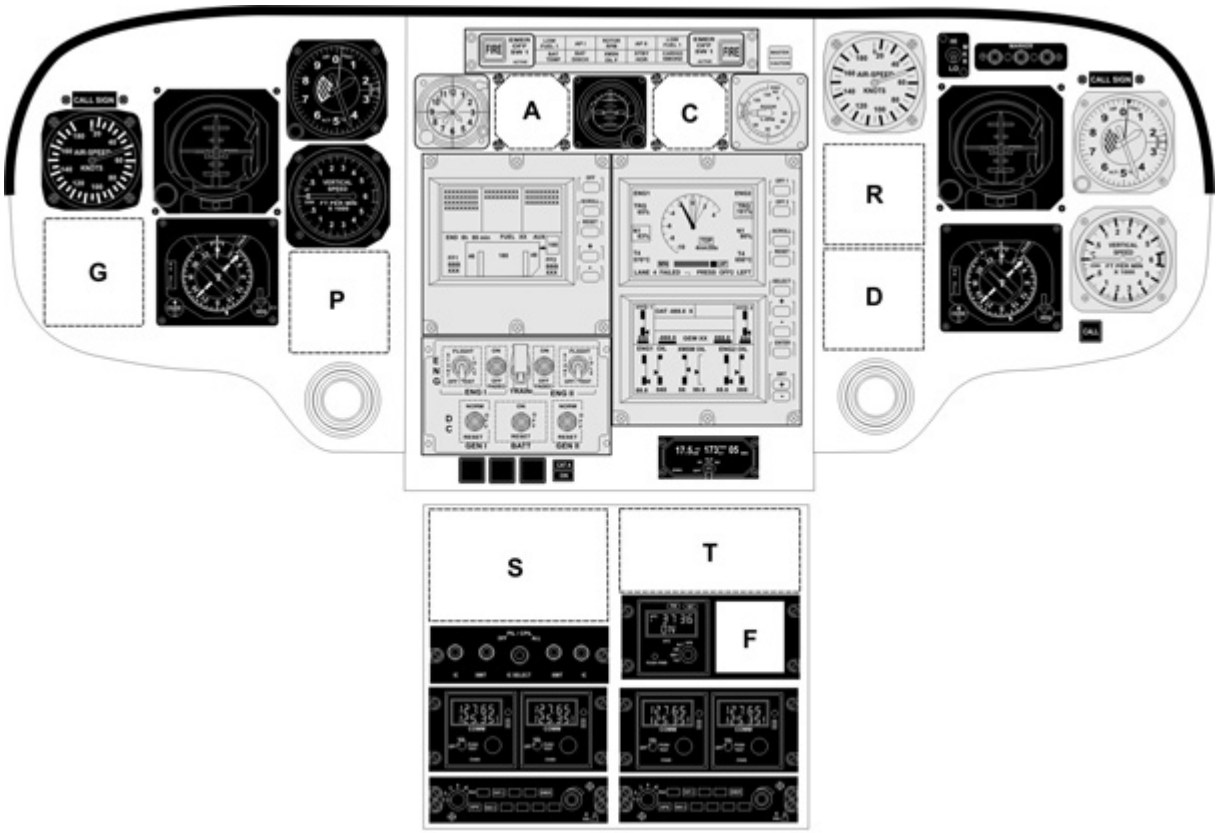
4.2.5 On request items

- Multifunction display KMD 850 (Honeywell)for weather radar or digital map
- Color weather radar RDR2000 (Honeywell) on KMD850 display
- Moving Map EURONAV IV - RN6 (Euro Avionics)

4.2.6 Further avionics add-ons see chapter 6 page 50

4.3 Dual pilot IFR packages, conventional instrumentation, enhanced (based on Avionics Solution 4)

4.3.1 Instrument panel overview



Additional space:

A - for 2” back-up airspeed indicator (used in MEGHAS/FCDS “Glass cockpit” solutions)
C - for 2” back-up altimeter (used in MEGHAS/FCDS “Glass cockpit” solutions)
D - e.g. for 3” RMI or 3” CDI
F - e.g. for ADF control unit (CD-432B)
G - e.g. for 2nd gyro 205 1BL (Goodrich)
P - e.g. for 3” CDI or 3” RMI
R - e.g. for 3” radar altimeter indicator (KNI 416)
S / T - e.g. for GPS receiver or other optional equipment

4.3.2 Contents of Avionics Solution 4

Document reference	***Commercial reference***	*Title*
08-00003-A	**L2300-004-04**	**Avionics Solution 4, consisting of:**
VHF AM		
08-11023-B	**L2313-091-03**	VHF AM/COM. system, copilot KTR 908/KFS 598 A (Honeywell)
08-11023-B	**L2313-092-03**	VHF AM/COM system, pilot KTR 908 / KFS 598A (Honeywell)
Intercom System		
08-16053-B	**L2341-191-01**	Audio/Comm. control system AS 3100-12 (Becker), copilot
08-16053-B	**L2341-192-01**	Audio/Comm. control system (pilot) AS 3100-12 (Becker) incl. Intercom Select Panel (ICS mode selector)
08-16053-B	**L2341-293-01**	Intercom amplifier IC 3100-4 (Becker)
Transponder		
08-22027-B	**L2325-092-06**	Transponder (Mode S) MST 67A (Honeywell)
08-22027-B	**L2325-092-15**	Transponder control unit PS 578A (Honeywell)
DME		
08-25014-A	**L3169-092-02**	Distance Measuring Equipment DME indicator KDI 572 (Honeywell)
08-25025-A	**L3455-092-01**	Distance measuring equipment KDM 706 A (Honeywell)
VOR / ILS /MKR receivers		
08-26025-B	**L3432-091-03**	VOR/ILS/MKR Navigation system, copilot KNR 634 A / KFS 564 A (Honeywell)
08-26025-B	**L3432-092-03**	VOR/ILS/MKR Navigation system, pilot KNR 634 A / KFS 564 A (Honeywell)
08-26028-A	**L3431-092-01**	Marker beacon lights KA 35 A (Honeywell)
Radio Switch		
08-29003-B	**L2480-090-01**	Avionics/Radio master switches (Special Eurocopter)
Conventional instruments		
08-51012-A	**L3425-091-02**	4" Artificial horizon GH14-391 (Honeywell), copilot
08-51012-A	**L3425-092-02**	4" artificial horizon GH14-391 (Honeywell), pilot
08-51013-B	**L3425-806-51**	2” std-by horizon AI 804 DC (Goodrich) with emergency battery
08-52014-A	**L3421-092-01**	Gyro Magnetic Heading System C14D (Honeywell)
08-60003-A	**L3412-002-00**	Copilot 3" instruments (airspeed indicator, altimeter, vertical speed indicator (United Instruments)
08-61012-A	**L3165-091-01**	Horizontal Situation Indicator (HSI) KPI 552, copilot (Honeywell)
08-61012-A	**L3165-092-01**	Horizontal Situation Indicator (HIS) KPI 552, pilot (Honeywell)
Miscellaneous		
08-99000-A	**L0000-150-04**	Avionics Solution 4 interconnection / wiring

4.3.3 Minimum required equipment

Minimum required equipment for Avionics Solution 4					PINAO		
Document reference	***Commercial reference***	*Title*	***Weight*** *(margin ± 3 %)* ***kg***	***lb***	**21100**	**21110**	**21111**
05-03007-C	**L2562-001-00**	First aid kit[12]	1.3	2.9			X
05-22008-C	**L2621-001-00**	Engine fire extinguishing system	3.6	7.9		X	X
05-33001-B	**L3113-001-00**	Slant panel	0.8	1.8	X	X	X
05-33002-B	**L3113-004-00**	Center console	2.2	4.9	X	X	X
05-34002-B	**L2576-001-00**	Avionics compartment	4.2	9.3	X	X	X
05-37016-C	**L6701-001-00**	Copilot flight controls	6.0	13.2	X	X	X
05-38010-B	**L3111-001-00**	10“ copilot instrument panel with glare shield	2.9	6.4	X	X	X
05-39006-B	**L2514-003-01**	Map case in copilot door	0.5	1.1	X	X	X
05-39007-B	**L3111-001-10**	Map case on instrument panel glare shield	0.6	1.3	X	X	X
05-39008-B	**L3113-004-10**	Illuminated chart holder for pilot side	0.9	2.0			X
05-41004-C	**L2104-100-00**	Bleed air heating system[13]	6.6	14.6	X	X	X
05-61010-B	**L2433-006-00**	Battery, type "Saft", ULM, 40 Ah, 24 V instead of standard battery	16.8	37.0	X	X	X
05-62010-C	**L2420-003-00**	Dual AC System (2 x 350VA)	6.6	14.6	X	X	X
05-63003-B	**L2432-001-00**	Starter/generators (2 x 200 A, 28 VDC), instead of standard generator	3.6	7.9	X	X	X
06-45023-B	**L3343-003-00**	Landing & search light, 450 W	3.4	7.5	X	X	X
06-67044-B	**L2563-801-06**	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3			X
08-00003-A	**L2300-004-04**	**Avionics Solution 4**	78.3	172.6	X	X	X
08-21014-C	**L3441-090-04**	Radar altimeter KRA 405B (Honeywell)	3.5	7.7		X	X
08-21014-C	**L3441-092-03**	Radar altimeter indicator KNI 416 (Honeywell)	1.2	2.6		X	X
08-52010-A	**L3421-091-02**	2nd directional Gyro (3” unslaved indicator) 205 1BL on copilot side (Goodrich)	1.4	3.1	X	X	X
08-54001-C	**L3411-001-00**	Copilot pitot static system	1.5	3.3	X	X	X
08-71002-C	**L2217-001-50**	IFR SAS (IFR pitch/roll Stability Augmentation System)	12.2	26.9	X	X	X

[12] First aid kit complies with german regulation rules 1. DV LuftBO paragraph 5(2). Type of operation, procedures or regulations may require a different/specific first aid kit.
[13] For helicopters dedicated for EMS select “Bleed air heating system: EMS version L2104-003-00” (05-41004-C) (7.0 kg / 15.4 lb.)

4.3.4 Possible add-ons

Possible add-ons for Avionics Solution 4					PINAO		
			Weight (margin ± 3 %)				
Document reference	Commercial reference	Title	kg	lb	21100	21110	21111
06-67044-B	**L2563-801-06**	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3	X	X	
08-21014-C	**L3441-090-04** **L3441-092-03**	Radar altimeter KRA 405B (Honeywell) Radar altimeter indicator KNI 416 (Honeywell)	3.5 1.2	7.7 2.6	X		
08-24015-B	**L3452-092-17** **L3452-092-08**	ADF system DFS-43A (Chelton / Wulfsberg) ADF control unit CD-432B (Chelton / Wulfsberg)	9.6 1.2	21.2 2.6	X	X	X
08-35007-B	**L2327-001-01**	Traffic Advisory System TAS 9900BX (Ryan)	9.5	20.9	X	X	X
08-35007-B	**L2327-001-11**	Traffic Advisory System TAS 9900 BX indicator 3” MHD (Ryan)	1.5	3.3	X	X	X
08-43017-B	**L3442-092-12**	GPS Nav. system 2101 I/O Approach Plus (Free Flight)	3.2	7.1	X	X	X
08-63009-A	**L3442-092-80**	GPS indication on HSI (KPI 552)	2.9	6.4	X	X	X

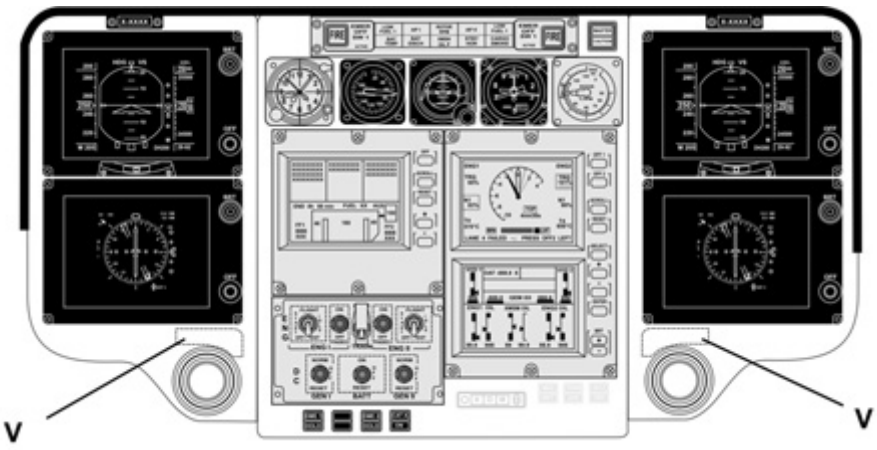
4.3.5 On request items

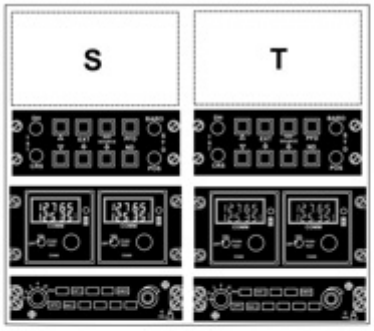
- Multifunction display KMD 850 (Honeywell) for weather radar or digital map
- Color weather radar RDR2000 (Honeywell) on KMD850 display
- Moving Map EURONAV IV - RN6 (Euro Avionics)

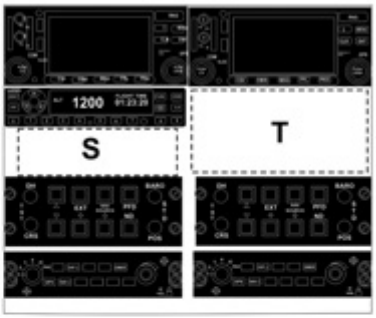
4.3.6 Further avionics add-ons see chapter 6 page 50

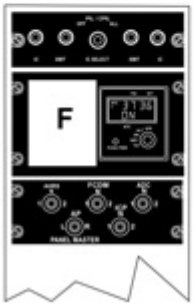
4.4 Dual Pilot or Single/Dual Pilot IFR Glass Cockpit, based on Avionics Solution 8 or 11

4.4.1 Instrument panel overview









Avionics Solution 8 **Avionics Solution 11**

Additional space:

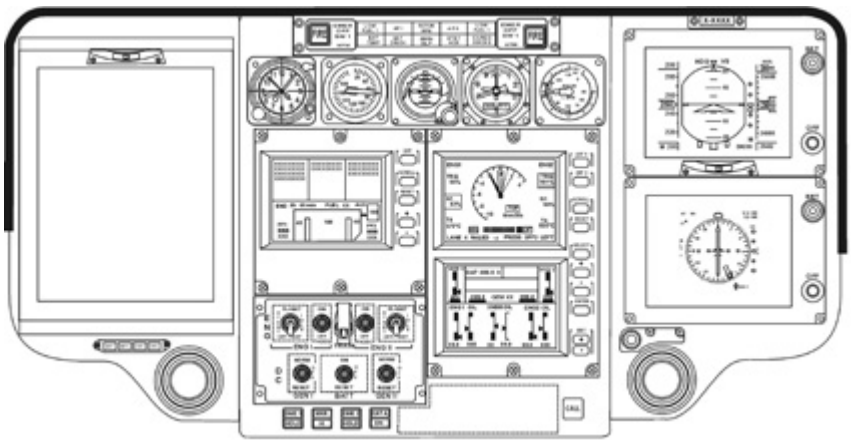
F - e.g. for ADF control unit (CD-432B)
S - e.g. or other optional equipment
T - e.g. for autopilot (DAFCS) control unit or other optional equipment
V - for Video Radar Unit

4.4.2 Contents of Avionics Solutions 8 and 11

Document reference	***Commercial reference***	*Title*
08-00005-A	**L2300-008-04**	**Avionics Solution 8, consisting of**
VHF AM		
08-11022-B	**L2313-091-08**	VHF AM/COM system, copilot VCS-40 A (Chelton / Wulfsberg)
08-11022-B	**L2313-091-13**	Control unit CD 402 B, copilot (Chelton / Wulfsberg)
08-11022-B	**L2313-092-07**	VHF AM/COM system, pilot VCS-40 A (Chelton / Wulfsberg)
08-11022-B	**L2313-092-13**	Control unit CD 402 B, pilot (Chelton / Wulfsberg)
Intercom System		
08-16053-B	**L2341-191-01**	Audio/Comm. control system AS 3100-12 (Becker), copilot
08-16053-B	**L2341-192-01**	Audio/Comm. control system (pilot) AS 3100-12 (Becker) incl. Intercom Select Panel (ICS mode selector)
08-16053-B	**L2341-293-01**	Intercom amplifier IC 3100-4 (Becker)
Transponder		
08-22027-B	**L2325-092-06**	Transponder (Mode S) MST 67A (Honeywell)
08-22027-B	**L2325-092-15**	Transponder control unit PS 578A (Honeywell)
DME		
08-25022-B	**L3455-090-02**	Distance measuring equipment DMS-44A (Chelton / Wulfsberg)
VOR/ILS/MKR receivers		
08-26024-B	**L3432-091-06**	VOR/ILS/MKR Navigation system, copilot VNS-41 A (Chelton / Wulfsberg)
08-26024-B	**L3432-091-09**	Control unit CD 412 B, copilot (Chelton / Wulfsberg)
08-26024-B	**L3432-092-07**	VOR/ILS/MKR Navigation system, pilot VNS-41 A (Chelton / Wulfsberg)
08-26024-B	**L3432-092-12**	Control unit CD 412 B, pilot (Chelton / Wulfsberg)
Radio switch		
08-29003-B	**L2480-090-01**	Avionics/Radio master switches (Special Eurocopter)
Conventional instruments		
08-51013-B	**L3425-806-51**	2” std-by horizon AI 804 DC (Goodrich) with emergency battery
Display system		
08-65003-B	**L3161-090-09**	MEGHAS - Flight Control Display System (FCDS) - Dual (4xSMD45)
Miscellaneous		
08-99000-A	**L0000-150-08**	Avionics Solution 8 interconnection / wiring

Document reference	***Commercial reference***	*Title*
08-00022-A	**L2300-011-02**	**Avionics Solution 11, consisting of:**
Intercom System		
08-16053-B	**L2341-191-01**	Audio/Comm. control system AS 3100-12 (Becker), copilot
08-16053-B	**L2341-192-01**	Audio/Comm. control system (pilot) AS 3100-12 (Becker) incl. Intercom Select Panel (ICS mode selector)
08-16053-B	**L2341-293-01**	Intercom amplifier IC 3100-4 (Becker)
Transponder		
08-22026-B	**L2325-092-12**	Transponder (Mode S) GTX330 (Garmin)
DME		
08-25022-B	**L3455-090-02**	Distance measuring equipment DMS-44A (Chelton / Wulfsberg)
VOR/ILS/MKR receivers		
08-26010-B	**L3431-092-02**	Marker beacon receiver/lights KR 21(Honeywell)
Radio switch		
08-29003-B	**L2480-090-01**	Avionics/Radio master switches (Special Eurocopter)
GPS/NAV/COM		
08-43018-B	**L3442-091-07**	GPS / NAV / COM GNS 430 (Garmin), copilot interfaced with FCDS (GPS stand-alone)
08-43018-B	**L3442-092-07**	GPS / NAV / COM GNS 430 (Garmin), pilot, interfaced with FCDS
Conventional instruments		
08-51013-B	**L3425-806-51**	2” std-by horizon AI 804 DC (Goodrich) with emergency battery
Display system		
08-65003-B	**L3161-090-09**	MEGHAS - Flight Control Display System (FCDS) - Dual (4xSMD45)
Miscellaneous		
08-99000-A	**L0000-150-11**	Avionics Solution 11 interconnection / wiring

ON REQUEST:
- NVG friendly version of Avionics Solutions 8 and 11
- SMD68 on copilot side in place of dual SMD45



4.4.3 Minimum required equipment

Minimum required equipment for Avionics Solution 8 and 11			Weight (margin ± 3 %)		PINAO					
Document reference	***Commercial reference***	*Title*	***kg***	***lb***	**21100**	**21110**	**21111**	**31100**	**31110**	**31111**
05-03007-C	**L2562-001-00**	First aid kit [14]	1.3	2.9			X			X
05-22008-C	**L2621-001-00**	Engine fire extinguishing system	3.6	7.9		X	X		X	X
05-33001-B	**L3113-001-00**	Slant panel	0.8	1.8	X	X	X	X	X	X
05-33002-B	**L3113-004-00**	Center console	2.2	4.9	X	X	X	X	X	X
05-34002-B	**L2576-001-00**	Avionics compartment	4.2	9.3	X	X	X	X	X	X
05-37016-C	**L6701-001-00**	Copilot flight controls	6.0	13.2	X	X	X	X	X	X
05-38010-B	**L3111-001-04**	7“ copilot instrument panel with glare shield	2.7	6.0	X	X	X	X	X	X
05-39006-B	**L2514-003-01**	Map case in copilot door	0.5	1.1	X	X	X	X	X	X
05-39007-B	**L3111-001-10**	Map case on instrument panel glare shield	0.6	1.3	X	X	X	X	X	X
05-39008-B	**L3113-004-10**	Illuminated chart holder for pilot side	0.9	2.0			X			X
05-41004-C	**L2104-100-00**	Bleed air heating system [15]	6.6	14.6	X	X	X	X	X	X
05-61010-B	**L2433-006-00**	Battery, type (Saft) ULM, 40 Ah, 24 V instead of standard battery	16.8	37.0	X	X	X	X	X	X
05-62010-C	**L2420-005-00**	AC System (50VA) [16]	1.9	4.2	X	X	X	X	X	X
05-63003-B	**L2432-001-00**	Starter/generators (2 x 200 A, 28 VDC), instead of standard generator	3.6	7.9	X	X	X	X	X	X
⚠ *06-12008-C*	**L3217-001-00**	Reinforced rear landing gear cross tube	1.0	2.2	X	X	X	X	X	X
06-45023-B	**L3343-003-00**	Landing & search light, 450 W	3.4	7.5	X	X	X	X	X	X
⚠ *06-67044-B*	**L2563-801-06**	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3			X			X
08-00005-A	**L2300-008-04**	**Avionics Solution 8**	84.2	185.6	X	X	X	X	X	X
		or								
08-00022-A	**L2300-011-02**	**Avionics Solution 11**	77.8	171.5						
08-21014-C	**L3441-090-04**	Radar Altimeter KRA 405B (Honeywell)	3.5	7.7		X	X	X	X	X
08-53002-B	**L2212-400-00**	MEGHAS Sensor kit	17.0	37.5	X	X	X	X	X	X
08-54001-C	**L3411-001-00**	Copilot pitot static system	1.5	3.3	X	X	X	X	X	X
08-71002-C	**L2217-001-50**	IFR SAS (IFR pitch/roll Stability Augmentation System)	12.2	26.9	X	X	X			
08-72001-B	**L2212-001-00**	Digital Automatic Flight Control System - DAFCS	27.0	59.6				X	X	X

[14] First aid kit complies with german regulation rules 1. DV LuftBO paragraph 5(2). Type of operation, procedures or regulations may require a different/specific first aid kit.
[15] For helicopters dedicated for EMS select “Bleed air heating system: EMS version L2104-003-00” (05-41004-C) (7.0 kg / 15.4 lb.)
[16] Alternatively the AC system L2420-002-00 (05-62010-C) (350VA; 3.2kg) can be selected

4.4.4 Possible add-ons

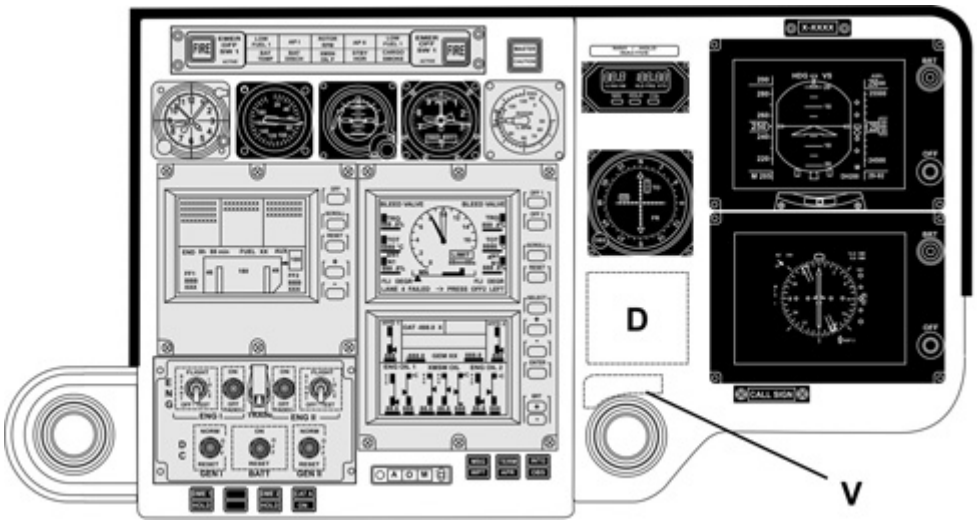
Possible add-ons for Avionics Solution 8 and 11					PINAO					
				Weight (margin ± 3 %)						
Document reference	Commercial reference	Title	kg	lb	21100	21110	21111	31100	31110	31111
06-67044-B	L2563-801-06	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3	X	X		X	X	
08-21014-C	L3441-090-04	Radar altimeter KRA 405B (Honeywell)	3.5	7.7	X					
08-24015-B	L3452-092-17 L3452-092-08	ADF system DFS-43A (Chelton / Wulfsberg) ADF control unit CD-432B (Chelton / Wulfsberg)	9.6 1.2	21.2 2.6	X	X	X	X	X	X
08-31019-B	L3443-090-02 L2571-001-00	Color weather radar RDR 2000 (Honeywell) Radar radome (for RDR2000)	6.6 2.0	14.6 4.4	X	X	X	X	X	X
08-31034-B	L3443-004-00 L2571-002-00	Search and rescue weather radar RDR 1600 (Telephonics) Radar radome (for RDR1600)	16.7 4.8	36.8 10.6	X	X	X	X	X	X
08-35007-B	L2327-001-01	Traffic Advisory System TAS 9900BX (Ryan)	9.5	20.9	X	X	X	X	X	X
08-35007-B	L2327-001-11	Traffic Advisory System TAS 9900 BX indicator 3" MHD (Ryan)[17]	1.5	3.3	X	X	X	X	X	X
08-35007-B	L3442-881-00	Traffic Advisory System TAS 9900BX interface with GNS430[18]	0.2	0.4	X	X	X	X	X	X
08-43017-B	L3442-092-12	GPS Nav. system 2101 I/O Approach Plus (Free Flight) [8]	3.2	7.1	X	X	X	X	X	X
08-46020-B	L3168-092-04	Digital moving Map EURONAV IV - RN6 (Euro Avionics), interfaced with FCDS, (basic version without maps) [19]	5.4	11.9	X	X	X	X	X	X
08-65004-B	L3443-010-00	Video Radar Unit (VRU)	5.0	11.0	X	X	X	X	X	X
08-72001-B	L2212-001-00	Digital Automatic Flight Control System - DAFCS	27.0	59.5	instead of IFR pitch/roll SAS					
08-81018-C	L2321-007-00	*M'ARMS*® Cockpit Voice and Flight Data Recorder (CVFDR), ground station not included (in combination with UMS: 18.3 kg / 40.3 lb)	15.7	34.6	DAFCS required	X	X	X		
08-83007-C	L3171-001-00	*M'ARMS*® Usage Monitoring System (UMS), ground station not included	7.2	15.9	DAFCS required	X	X	X		

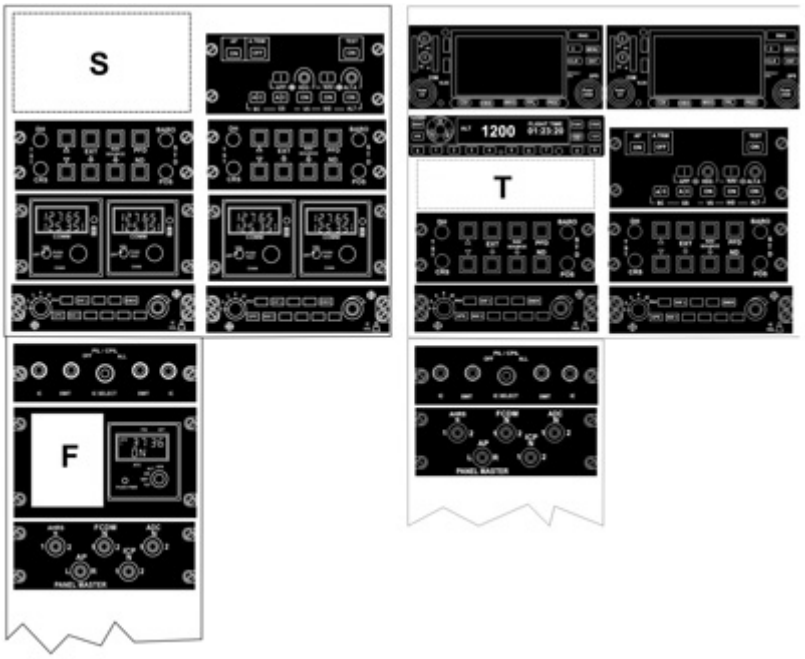
4.4.5 Further avionics add-ons see chapter 6 page 50

[17] Only possible for Avionics Solutions 8
[18] Only possible for Avionics Solutions 11
[19] Approval for VFR only

4.5 Single Pilot IFR Glass Cockpit, based on Avionics Solution 10 or 12

4.5.1 Instrument panel overview





Avionics Solution 10 **Avionics Solution 12**

Additional space:

D - e.g. for radar altimeter indicator, stormscope
F - e.g. for ADF control unit (CD-432B)
S / T - e.g. for GPS or other optional equipment
V - for Video Radar Unit

4.5.2 Contents of Avionics Solution 10 and 12

Document reference	***Commercial reference***	*Title*
08-00007-A	**L2300-010-04**	**Avionics Solution 10, consisting of:**
Radio Com		
08-11022-B	**L2313-091-08**	VHF AM/COM system, copilot VCS-40 A (Chelton / Wulfsberg)
08-11022-B	**L2313-091-13**	Control unit CD 402 B, copilot (Chelton / Wulfsberg)
08-11022-B	**L2313-092-07**	VHF AM/COM system, pilot VCS-40 A (Chelton / Wulfsberg)
08-11022-B	**L2313-092-13**	Control unit CD 402 B, pilot (Chelton / Wulfsberg)
Intercom System		
08-16053-B	**L2341-191-01**	Audio/Comm. control system AS 3100-12 (Becker), copilot
08-16053-B	**L2341-192-01**	Audio/Comm. control system (pilot) AS 3100-12 (Becker) incl. Intercom Select Panel (ICS mode selector)
08-16053-B	**L2341-293-01**	Intercom amplifier IC 3100-4 (Becker)
Transponder		
08-22027-B	**L2325-092-06**	Transponder (Mode S) MST 67A (Honeywell)
08-22027-B	**L2325-092-15**	Transponder control unit PS 578A (Honeywell)
DME		
08-25022-B	**L3455-090-02**	Distance measuring equipment DMS-44A (Chelton / Wulfsberg)
VOR/ILS/MKR receivers		
08-26024-B	**L3432-091-06**	VOR/ILS/MKR Navigation system, copilot VNS-41 A (Chelton / Wulfsberg)
08-26024-B	**L3432-091-09**	Control unit CD 412 B, copilot (Chelton / Wulfsberg)
08-26024-B	**L3432-092-07**	VOR/ILS/MKR Navigation system, pilot VNS-41 A (Chelton / Wulfsberg)
08-26024-B	**L3432-092-12**	Control unit CD 412 B, pilot (Chelton / Wulfsberg)
Radio switch		
08-29003-B	**L2480-090-01**	Avionics/Radio master switches (Special Eurocopter)
Conventional instruments		
08-51013-A	**L3425-806-51**	2” std-by horizon AI 804 DC (Goodrich) with emergency battery
Display system		
08-61011-A	**L0000-200-12**	Back-up indicator CDI KI 204 (Honeywell), Back-up indicator SD 442 B (Chelton / Wulfsberg)
08-65003-B	**L3161-092-03**	MEGHAS - Flight Control Display System (FCDS) - Single (2xSMD45)
Miscellaneous		
08-99000-A	**L0000-150-10**	Avionics Solution 10 interconnection / wiring

Document reference	***Commercial reference***	*Title*
08-00023-A	**L2300-012-02**	**Avionics Solution 12, consisting of:**
Intercom System		
08-16053-B	**L2341-191-01**	Audio/Comm. control system AS 3100-12 (Becker), copilot
08-16053-B	**L2341-192-01**	Audio/Comm. control system (pilot) AS 3100-12 (Becker) incl. Intercom Select Panel (ICS mode selector)
08-16053-B	**L2341-293-01**	Intercom amplifier IC 3100-4 (Becker)
Transponder		
08-22026-B	**L2325-092-12**	Transponder (Mode S) GTX330 (Garmin)
DME		
08-25022-B	**L3455-090-02**	Distance measuring equipment DMS-44A (Chelton / Wulfsberg)
VOR/ILS/MKR receivers		
08-26010-B	**L3431-092-02**	Marker beacon receiver/lights KR 21(Honeywell)
Radio switch		
08-29003-B	**L2480-090-01**	Avionics/Radio master switches (Special Eurocopter)
GPS/NAV/COM		
08-43018-B	**L3442-091-07**	GPS / NAV / COM GNS 430 (Garmin), copilot interfaced with FCDS (GPS stand-alone)
08-43018-B	**L3442-092-07**	GPS / NAV / COM GNS 430 (Garmin), pilot interfaced with FCDS
Conventional instruments		
08-51013-B	**L3425-806-51**	2” std-by horizon AI 804 DC (Goodrich) with emergency battery
Display system		
08-61011-A	**L0000-200-12**	Back-up indicator CDI KI 204 (Honeywell), Back-up indicator SD 442 B (Chelton / Wulfsberg)
08-65003-B	**L3161-092-03**	MEGHAS - Flight Control Display System (FCDS) - Single (2xSMD45)
Miscellaneous		
08-99000-A	**L0000-150-12**	Avionics Solution 12 interconnection / wiring

ON REQUEST:

- NVG friendly version of Avionics Solutions 10 and 12

4.5.3 Minimum required equipment

Minimum required equipment for Avionics Solution 10 and 12					PINAO		
Document reference	***Commercial reference***	*Title*	***Weight*** *(margin ± 3 %)* ***kg***	***lb***	**11100**	**11110**	**11111**
05-03007-C	**L2562-001-00**	First aid kit[20]	1.3	2.9			X
05-22008-C	**L2621-001-00**	Engine fire extinguishing system	3.6	7.9		X	X
05-33001-B	**L3113-001-00**	Slant panel	0.8	1.8	X	X	X
05-33002-B	**L3113-004-00**	Center console	2.2	4.9	X	X	X
05-34002-B	**L2576-001-00**	Avionics compartment	4.2	9.3	X	X	X
05-39007-B	**L3111-001-10**	Map case on instrument panel glare shield	0.6	1.3	X	X	X
05-39008-B	**L3113-004-10**	Illuminated chart holder for pilot side	0.9	2.0			X
05-41004-C	**L2104-100-00**	Bleed air heating system [21]	6.6	14.6	X	X	X
05-44002-B	**L2122-001-00**	Ventilation extruder w/o copilot I-panel extension	0.3	0.7	X	X	X
05-61010-B	**L2433-006-00**	Battery, type "Saft", ULM, 40 Ah, 24 V instead of standard battery	16.8	37.0	X	X	X
05-62010-C	**L2420-005-00**	AC System (50VA)[22]	1.9	4.2	X	X	X
05-63003-B	**L2432-001-00**	Starter/generators (2 x 200 A, 28 VDC), instead of standard generators	3.6	7.9	X	X	X
06-12008-C	**L3217-001-00**	Reinforced rear landing gear cross tube	1.0	2.2	X	X	X
06-45023-B	**L3343-003-00**	Landing & search light, 450 W	3.4	7.5	X	X	X
06-67044-B	**L2563-801-06**	ELT C406-N HM (Artex) incl. NAV. Opt	3.3	7.3			X
08-00022-A	**L2300-010-04**	**Avionics Solution 10**	81.6	180.0	X	X	X
		or					
08-00023-A	**L2300-012-02**	**Avionics Solution 12**	75.2	165.8			
08-21014-C	**L3441-090-04**	Radar altimeter KRA 405B (Honeywell)	3.5	7.7	X	X	X
08-53002-B	**L2212-400-00**	MEGHASSensor kit	17.0	37.5	X	X	X
08-54001-C	**L3411-001-00**	Copilot pitot static system	1.5	3.3	X	X	X
08-72001-B	**L2212-001-00**	Digital Automatic Flight Control System - DAFCS	27.0	59.6	X	X	X

[20] First aid kit complies with german regulation rules 1. DV LuftBO paragraph 5(2). Type of operation, procedures or regulations may require a different/specific first aid kit.
[21] For helicopters dedicated for EMS select “Bleed air heating system: EMS version L2104-003-00” (05-41004-C) (7.0 kg / 15.4 lb.)
[22] Alternatively the AC system L2420-002-00 (05-62010-C) (350VA; 3.2kg) can be selected

4.5.4 Possible add-ons

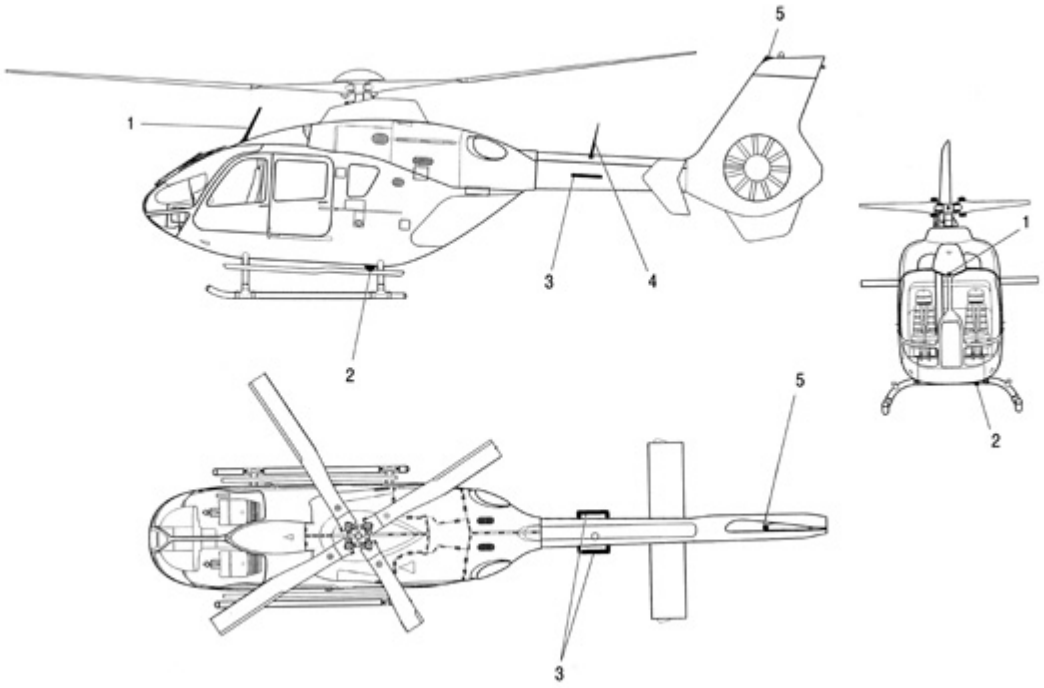
Possible add-ons for Avionics Solutions 10 and 12					PINAO		
			Weight (margin ± 3 %)				
Document reference	Commercial reference	Title	kg	lb	11110	11110	11111
06-67044-B	L2563-801-06	ELT C406-N HM (Artex) incl. NAV. opt.	3.3	7.3	X	X	
08-24015-B	L3452-092-17 L3452-092-08	ADF system DFS-43A (Chelton / Wulfsberg) ADF control unit CD-432B (Chelton / Wulfsberg)	9.6 1.2	21.2 2.6	X	X	X
08-31019-B	L3443-090-02 L2571-001-00	Color weather radar RDR 2000 (Honeywell) Radar radome for RDR2000	6.6 2.0	14.6 4.4	X	X	X
08-31034-B	L3443-004-00 L2571-002-00	Search and rescue weather radar RDR 1600 (Telephonics) Radar radome for RDR 1600	16.7 4.8	36.8 10.6	X	X	X
08-35007-B	L2327-001-01	Traffic Advisory System TAS 9900BX (Ryan)	9.5	20.9	X	X	X
08-35007-B	L2327-001-11	Traffic Advisory System TAS 9900 BX indicator 3" MHD (Ryan)[23]	1.5	3.3	X	X	X
08-35007-B	L3442-881-00	Traffic Advisory System TAS 9900BX interface with GNS430[24]	0.2	0.4	X	X	X
08-43017-B	L3442-092-12	GPS Nav. system 2101 I/O Approach Plus (Free Flight)[23]	3.2	7.1	X	X	X
08-46020-B	L3168-092-04	Digital moving Map EURONAV IV - RN6 (Euro Avionics), interfaced with FCDS, (basic version without maps)[25]	5.4	11.9	X	X	X
08-65004-B	L3443-010-00	Video Radar Unit (VRU)	5.0	11.0	X	X	X
08-81018-C	L2321-007-00	*M'ARMS*® Cockpit Voice and Flight Data Recorder (CVFDR), ground station not included (in combination with UMS: 18.3 kg / 40.3 lb)	15.7	34.6	X	X	X
08-83007-C	L3171-001-00	*M'ARMS M'ARMS*® Usage Monitoring System (UMS), ground station not included	7.2	15.9	X	X	X

4.5.5 Further avionics add-ons see chapter 6 page 50

[23] Only possible with Solution 10
[24] Only possible with Solution 12
[25] Approval for VFR only

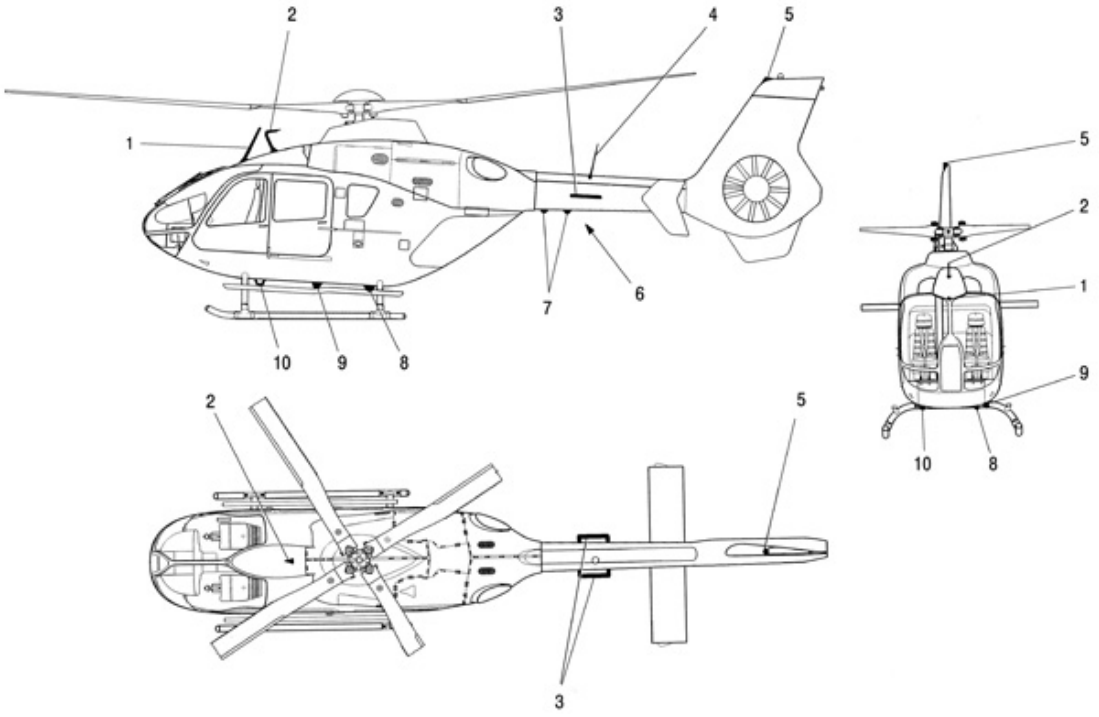
4.6 Antenna layouts

4.6.1 Typical VFR antenna layout



1 – ELT antenna
2 – ATC antenna
3 – VOR antennas
4 – VHF 1 antenna
5 – GPS antenna

4.6.2 Typical IFR antenna layout



1 – ELT antenna
2 – VHF2 antenna
3 – VOR antennas
4 – VHF1 antenna
5 – GPS antenna
(6 – ADF antenna (if required))
7 – Radar altimeter antenna
8 – ATC antenna
9 – Marker antenna
10 – DME antenna

5 Cabin arrangement

5.1 Passenger transport

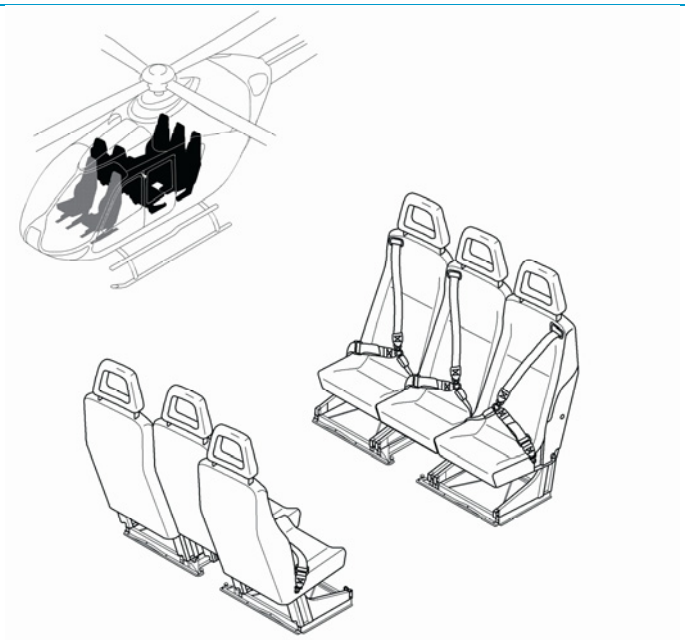
5.1.1 Five (5) Passenger configuration

Document reference	Commercial reference	Title	Weight (margin ± 3 %) kg	lb
07-80024-A	**L2521-001-00**	5 seat passenger/ transport configuration consisting of:	**65.4**	**144.2**
		3 forward passenger seats, facing backwards		
		2 rear passenger seats, facing forwards		
		1 Covers for sliding door fairing LH/RH		
		1 Map case in sliding doors LH/RH		
		1 Variable tie-down net		
		2 Retractable coat hooks in rear cabin		

5.1.2 Six (6) Passenger configuration (high density seats)

This installation is characterized by:

Document reference	Commercial reference	Title	Weight (margin ± 3 %) kg	Weight (margin ± 3 %) lb
07-27001-B	**L2522-001-00**	3 forward passenger seats, facing backwards	**37.4**	**82.5**
In combination with either				
07-27004-B	**L2522-004-10**	Utility seats for 3 rear passengers, model Eurocopter, fixed provisions	**1.2**	**2.6**
07-27004-B	**L2522-004-20**	Utility seats for 3 rear passengers, model Eurocopter, detachable parts	**33.2**	**73.2**
		or		
07-27005-B	**AEL-30130-007-1**	Utility seats for 3 rear passengers, model Aerolite, detachable parts	**37.0**	**81.6**
07-27005-B	**AEL-30130-007-2**	Utility seats for 3 rear passengers, model Aerolite, fixed provisions	**0.0**	**0.0**



Model Eurocopter

Model Aerolite

5.1.3 Corporate / VIP passenger transport ⚠

5.1.3.1 Five (5) corporate passenger transport

Document reference	Commercial reference	Title	Weight (margin ± 3 %) kg	lb
07-80022-A	**L2521-002-00**	5 seat Corporate/VIP configuration consisting of:	**115.7**	**255.0**
		1 VIP-pilot seat (instead of std. pilot seat)		
		1 VIP-copilot seat (instead of std. copilot seat)		
		4 VIP passenger seats (2 front and 2 rear)		
		1 VIP passenger seat (front, middle)		
		1 Rear cabinet with armrest		
⚠		1 VIP carpet for cockpit, cabin and cargo compartment[26]		
		1 Armrest in rear window niche LH / RH		
		1 Special painted interior		
		1 Covers for sliding door fairing LH/RH		
		1 Map case in sliding doors LH/RH		
		1 Variable tie-down net		
		2 Retractable coat hooks in rear cabin		
		1 Cabin / cargo compartment separation wall		
		1 Enhanced sound proofing kit		

[26] If additional internal long range fuel tank is selected, a VIP carpet will only be installed in the cockpit and passenger cabin

5.1.3.2 Four (4) VIP passenger transport

Document reference	Commercial reference	Title	Weight (margin ± 3 %) kg	lb
07-80023-A	L2521-003-00	4 seat Corporate/VIP configuration consisting of:	115.9	255.5
		1 VIP-pilot seat (instead of std. pilot seat)		
		1 VIP-copilot seat (instead of std. copilot seat)		
		4 VIP passenger seats (2 front and 2 rear)		
		1 Front cabinet, flat		
		1 Rear cabinet with armrest		
⚠		1 VIP carpet for cockpit, cabin and cargo compartment[27]		
		1 Armrest in rear window niche LH / RH		
		1 Special painted interior		
		1 Covers for sliding door fairing LH/RH		
		1 Map case in sliding doors LH/RH		
		1 Variable tie-down net		
		2 Retractable coat hooks in rear cabin		
		1 Cabin / cargo compartment separation wall		
		1 Enhanced sound proofing kit		

[27] If additional internal long range fuel tank is selected, a VIP carpet will only be installed in the cockpit and passenger cabin

5.1.3.3 Customer specific Corporate / VIP solutions

Customer specific solutions can be defined by using the following table.

■ Note: Only one item per line can be selected.

COCKPIT	VIP pilot seat *07-81015*-A L2525-101-11 (1.1 kg / 2.4 lb.)	VIP pilot seat height adjustable *07-81015-A* L2525-101-71 (4.8 kg / 10.6 lb.)	
	VIP copilot seat *07-81015-A* L2525-101-21 (1.1 kg / 2.4 lb.)	VIP copilot seat height adjustable *07-81015-A* L2525-101-76 (4.8 kg / 10.6 lb.)	
PASSENGER CABIN	4 VIP passenger seats (2 front and 2 rear) *07-81013-A* L2525-102-00 (56.1 kg / 123.7 lb.)		
	1 VIP passenger seat (front, middle) *07-81013-A* L2525-202-20 (14.2 kg / 31.3 lb.)	Front cabinet, flat *07-85002- A* L2526-212-601 (14.5 kg / 32.0 lb.)	Front cabinet, middle *07-85002-A* L2526-112-63 (22.5 kg / 49.6 lb.)
		Table for front cabinet *07-85002-A* L2526-112-61 (3.0 kg / 6.6 lb.)	
		Cooling box for front cabinet *07-85002-A* L2526-112-62 (2.5 kg / 5.5 lb.)	
	Rear cabinet with Armrest (Wood) *07-85003-A* L2526-112-710 (10.0 kg / 22.2 lb.)	Rear cabinet, flat *07-85004-A* L2526-312-701 (8.6 kg / 19.0 lb.)	Rear cabinet, high *07-85004-A* L2526-112-75 (14.0 kg / 30.9 lb.)
	Armrests in rear window niche, LH/RH *07-82010-A* L2525-102-62 (0.8 kg / 1.8 lb.)		

GENERAL	Special painted interior *07-86001-B* L2525-100-35 (0.1 kg / 0.2 lb.)	
	VIP carpet for cockpit, cabin and cargo compartment *07-83003-A* L2525-104-00 (16.6 kg / 36.6 lb.)	
	Retractable coat hooks (2ea) in rear cabin *07-90006-B* L2514-011-00 (0.1 kg / 0.2 lb.)	
	Map case in sliding doors LH/RH *07-60014-B* L2514-013-00 (1.4 kg / 3.0 lb.)	
	Variable tie-down net *07-60015-B* L2514-014-00 (3.3 kg / 7.3 lb.)	
	Covers for sliding door fairing LH/RH *07-50036-B* L2514-012-00 (0.1 kg / 0.2 lb.)	
	Control covers painted in harmony with carpet *07-90008-A* L2525-101-65 (-2.3 kg / -5.1 lb.)	
GROUND SUPPORT EQUIPMENT	Fabric protection cover for 1 VIP pilot or copilot seat *07-90007-A* L2525-111-50 (GSE)	
	Fabric protection cover for 1 VIP pax seat *07-90007-A* L2525-112-91 (GSE)	
	Plastic protection cover for cockpit carpet *07-90007-A* L2525-111-60 (GSE)	
	Plastic protection cover for cabin carpet *07-90007-A* L2525-112-92 (GSE)	
HIGHLY RECOMMENDED ITEMS	Air conditioning system *05-42019-B* L2105-001-00 (54.3 kg / 119.7 lb.)	Air conditioning system for tropical environment *05-42020-B* L2105-001-10 (57.9 kg / 127.6 lb.) + Special ducting system and additional air outlets for the front VIP - passenger-seats *05-42020-B* L2525-112-46 (0.5 kg / 1.1 lb.)

6 Optional equipment

6.1 Further available equipment

	Document reference	Commercial reference	Title	Weight (margin ± 3 %) kg	lb
			General Equipment		
⚠	*05-02016-C*	**L1111-002-00**	Two-color exterior painting instead of single color painting	**1.5**	**3.3**
⚠	*05-02016-C*	**L1111-004-00**	Multicolor exterior painting instead of single color painting	**2.0**	**4.4**
⚠	*05-03007-C*	**L2562-001-00**	First aid kit [28]	**1.5**	**3.3**
⚠	*05-03008-B*	**L2562-001-10**	First aid kit for DGAC certification	**2.8**	**6.2**
	05-12001-B	**L5232-001-00**	Multifunction handle on the main gear box cowling (LH and RH)	**0.6**	**1.3**
	05-12002-B	**L2551-003-00**	Additional 4 tie-down fittings for airline attachment rails	**0.6**	**1.3**
	05-21015-B	**L8541-001-10**	Wire strike protection system, fixed provisions	**3.3**	**7.3**
⚠	*05-21015-B*	**L8541-001-20**	Wire strike protection system, detachable parts	**8.2**	**18.1**
	05-22007-B	**L7924-001-00**	Fuzz burners for engines	**1.2**	**2.6**
	05-22008-C	**L2621-001-00**	Engine fire extinguishing system	**3.6**	**7.9**
	05-22014-A	**L5371-001-00**	Engine outlet heat protection	**1.2**	**2.7**
	05-23006-B	**L7165-002-00**	Engine compressor wash kit	**3.2**	**7.1**
	05-24017-B	**L6211-014-00**	Sand erosion protection kit for rotor blades	**0.9**	**2.0**
⚠	*05-25016-D*	**L7161-001-10**	Sand filter system, fixed provisions	**11.3**	**24.9**
	05-25016-D	**L7161-001-20**	Sand filter system, detachable parts	**26.2**	**57.8**
	05-26012-B	**L1241-001-00**	Anti-corrosion protection	**1.1**	**2.4**
⚠	*05-31025-B*	**L5211-002-00**	Sliding window in sliding doors	**1.9**	**4.2**
	05-31026-C	**L2514-002-00**	Tinted sun shades for cockpit windshield roof section	**1.9**	**4.2**
	05-31026-C	**L5621-001-00**	Tinted window for cockpit doors	**0.0**	**0.0**
⚠	*05-31026-C*	**L5632-001-00**	Tinted windows for passenger cabin, incl. sliding windows for sliding doors	**0.6**	**1.3**
	05-31027-B	**L5633-001-10**	Window in clam-shell door, LH	**0.8**	**1.8**
⚠	*05-31027-B*	**L5633-001-20**	Window in clam-shell door, RH	**0.8**	**1.8**
	05-31028-C	**L2524-030-10**	IFR – training screen, fixed provisions	**0.1**	**0.2**
	05-31028-C	**L2524-030-20**	IFR – training screen, detachable parts	**1.6**	**3.5**
	05-31045-A	**L5211-001-11**	Lockable sliding window in copilots' door	**0.1**	**0.2**
	05-31045-A	**L5211-001-12**	Lockable sliding window in pilots' door	**0.1**	**0.2**
	05-32007-B	**L3042-001-00**	Windshield wiper system	**5.0**	**11.0**
⚠	*05-34003-B*	**L2576-002-00**	Dampers for avionics compartment	**1.8**	**4.0**

[28] First aid kit complies with german regulation rules 1. DV LuftBO paragraph 5(2). Type of operation, procedures or regulations may require a different/specific first aid kit.

General Equipment (contd.)

	Document reference	Commercial reference	Title	Weight (margin ± 3 %) kg	lb
	05-37016-C	**L6701-001-00**	Copilot flight controls	**6.2**	**13.7**
⚠	05-37017-B	**L6721-001-00**	Covers for copilot flight controls [29]	**-2.5**	**-5.5**
	05-39006-B	**L2514-003-01**	Map case in copilot door	**0.5**	**1.1**
	05-39007-B	**L3111-001-10**	Map cases on instrument panel glare shield	**0.6**	**1.3**
	05-39008-B	**L3113-004-10**	Illuminated chart holder for pilot side	**1.0**	**2.2**
⚠	05-39008-B	**L3113-004-20**	Illuminated chart holder for copilot side	**0.9**	**2.0**
⚠	05-42019-B	**L2105-001-00**	Air conditioning system	**54.3**	**119.7**
⚠	05-42020-B	**L2105-001-10**	Air conditioning system for tropical environment	**57.9**	**127.6**
⚠	05-61010-B	**L2433-006-00**	Battery, type "Saft", ULM, 40 Ah, 24 V instead of standard battery	**16.8**	**37.0**
	05-71001-C	**L6351-002-00**	Rotor brake system	**5.3**	**11.7**
⚠	05-81032-C	**L2818-100-10**	Internal long range fuel tank system, fixed provisions	**2.6**	**5.7**
⚠	05-81032-C	**L2818-100-20**	Internal long range fuel tank system, detachable parts	**36.1**	**79.6**
	05-81033-B	**L2812-001-00**	Self sealing fuel supply tanks	**4.5**	**9.9**
	05-85008-C	**L2843-001-00**	Fuel management system (Fuel flow meters)	**1.2**	**2.6**
	05-92009-B	**L6611-001-10**	Main rotor blade folding: basic kit	**1.3**	**2.9**
⚠	05-92009-B	**L6611-001-20**	Main rotor blade folding: fixed provisions for ground handling kit	**0.8**	**1.8**
	05-92009-B	**L6611-001-30**	Main rotor blade folding: ground handling kit	**GSE**	**GSE**
	05-93007-B	**L8544-002-00**	Lashing points (wind speeds up to 100 kts) (weight GSE: 24.9 kg)	**0.7**	**1.5**
	05-93008-B	**L8544-001-00**	Lashing points (wind speeds up to 40 kts)	**2.4**	**5.3**
	05-95001-C	**L1321-001-00**	Cover kit for helicopter	**GSE**	**GSE**
	05-97001-C	**L6201-001-30**	Accelerometers for Track and Balance system	**0.0**	**0.0**
	05-97002-C	**L6201-002-10**	Optical tracker (Chadwick Helmuth), fixed provisions	**0.1**	**0.2**
	05-97002-C	**L6201-002-20**	Optical tracker (Chadwick Helmuth), detachable parts	**0.7**	**1.5**

Specific Mission Equipment

	Document reference	Commercial reference	Title	Weight (margin ± 3 %) kg	lb
	06-11021-B	**L3274-001-10**	Settling protectors, fixed provisions	**1.9**	**4.2**
⚠	06-11021-B	**L3274-001-20**	Settling protectors, detachable parts	**7.9**	**17.4**
	06-11022-C	**L3272-001-10**	Snow skids, fixed provisions	**0.9**	**2.0**
⚠	06-11022-C	**L3272-001-20**	Snow skids, detachable parts	**21.9**	**48.3**
⚠	06-12007-B	**L3273-001-00**	Lengthened skids	**8.3**	**18.3**
⚠	06-12009-B	**L3216-001-10**	High landing gear (instead of standard landing gear)	**26.0**	**57.3**

[29] Stick, Pitch and Pedals have to be removed - thus negative delta weight

Specific Mission Equipment (contd.)

Document reference	Commercial reference	Title	Weight (margin ± 3 %) kg	lb
06-21017-C	L8512-001-10	External hoist LH, fixed provisions [30]	8.6	19.0
06-21017-C	L8512-001-12	External hoist RH, fixed provisions[30]	8.6	19.0
06-21017-C	L8512-001-20	External hoist 50m, detachable parts[30], (incl. 1 week winch operator training)	59.2	130.5
06-21017-C	L8512-001-21	External hoist 90m, detachable parts[30], (incl. 1 week winch operator training)	62.7	138.2
06-26011-C	L8511-002-10	Cargo hook mirrors RH, fixed provisions	0.8	1.8
06-26011-C	L8511-002-20	Cargo hook mirrors RH, detachable parts	3.9	8.6
06-26011-C	L8511-006-10	Cargo hook mirrors LH & RH, fixed provisions	1.0	2.2
06-26011-C	L8511-006-20	Cargo hook mirrors LH & RH, detachable parts	7.7	17.0
06-27019-D	L8511-001-10	Cargo hook system, fixed provisions	3.7	8.2
06-27019-D	L8511-001-30	Cargo hook system, detachable parts	16.5	36.4
06-27022-B	L8511-005-10	Dual cargo hook system, fixed provisions	4.3	9.5
06-27022-B	L8511-005-20	Dual cargo hook system, detachable parts	21.5	47.4
06-45023-B	L3343-003-00	Landing & search light, 450 W	3.1	6.8
06-46001-B	L3344-001-00	Strobe lights, white	1.4	3.1
06-61015-B	L3215-001-10	Emergency floats, fixed provisions	7.8	17.2
06-61015-B	L3215-001-21	Emergency floats, detachable parts	64.6	142.4
06-65002-B	L2566-001-00	Emergency hammer	0.2	0.4
06-65004-B	L2625-003-00	2nd portable fire extinguisher	2.8	6.2
06-66008-C	L3353-005-00	Emergency lights	2.9	6.4
06-66009-B	L3322-001-00	Boarding step illumination	0.2	0.4
06-66010-B	L3353-006-20	Illuminated signs "NO SMOKING/FASTEN SEAT BELT"	0.8	1.8
06-69005-B	L2341-006-61	Voice alert generator 611-014 (NAT)	0.4	0.9
06-81009-B	L8503-001-10	Fire extinguishing bucket attachment (Bambi Bucket), fixed provisions	0.8	1.8

[30] Communication via copilot audio / comm. control unit

Interior Layout

Document reference	Commercial reference	Title	Weight (margin ± 3 %) kg	lb
07-15016-B	**L2512-003-10**	Height adjustable pilot seat instead of standard pilot seat	**1.8**	**4.0**
07-15016-B	**L2512-003-20**	Height adjustable copilot seat instead of standard copilot seat	**1.8**	**4.0**
07-30012-B	**L2581-001-00**	Enhanced sound proofing kit	**4.8**	**10.6**
07-30013-B	**L2524-002-00**	Separation curtain for cockpit / cabin	**2.1**	**4.6**
07-30014-B	**L2524-021-00**	Separation curtain for cabin / cargo compartment	**2.5**	**5.5**
07-30015-B	**L2524-001-00**	Separation wall for cabin / cargo compartment	**4.4**	**9.7**
07-30018-A	**L5213-003-00**	Curtains for cabin windows (grey)	**1.6**	**3.5**
07-40005-B	**L2513-200-00**	Washable floor covering for cockpit	**3.9**	**8.6**
07-40005-B	**L2513-210-00**	Washable floor covering for cargo compartment	**3.0**	**6.4**
07-40005-B	**L2513-220-00**	Washable floor covering for cockpit, cabin and cargo compartment	**11.5**	**25.3**
07-40006-A	**L2513-300-00**	Carpet for cockpit and cabin	**6.6**	**14.6**
07-40006-A	**L2513-310-00**	Carpet for cockpit, cabin and cargo compartment	**8.9**	**19.5**
07-40017-A	**L8552-001-00**	Sealed cabin floor	**0.3**	**0.7**
07-50025-C	**L5211-004-00**	Securing device for complete opening of cockpit doors	**0.8**	**1.8**
07-50026-B	**L5231-001-00**	One-hand latching system for clam-shell doors	**1.0**	**2.2**
07-50027-B	**L5231-002-00**	Extended opening fasteners for clam-shell doors	**0.3**	**0.9**
07-50028-A	**L5213-001-11**	Sliding door fastener, intermediate and max. position, LH	**1.0**	**2.2**
07-50028-A	**L5213-001-12**	Sliding door fastener, max. position, LH	**0.4**	**0.9**
07-50028-A	**L5213-001-21**	Sliding door fastener, intermediate and max. position, RH	**1.0**	**2.2**
07-50028-A	**L5213-001-22**	Sliding door fastener, max. position, RH	**0.4**	**0.9**
07-50030-A	**L8534-005-10**	Abrasion protection at sliding door, LH	**0.1**	**0.2**
07-50030-A	**L8534-005-20**	Abrasion protection at sliding door, RH	**0.1**	**0.2**
07-50034-B	**L5212-001-00**	Jettisonable cockpit doors	**1.2**	**2.6**
07-50035-B	**L8504-813-00**	Spoiler position for cockpit doors	**1.1**	**2.4**
07-50039-B	**L5211-010-00**	Door catch system for cockpit doors	**0.1**	**0.2**
07-50039-B	**L5211-011-00**	Door catch system for sliding doors	**0.2**	**0.4**
07-74043-A	**BUL-30420-001-1**	Stretcher FERNO Foldable for ECD-Floor, fixed provisions – Bucher	**0.1**	**0.2**
07-74043-A	**BUL-30420-001-2**	Stretcher FERNO Foldable for ECD-Floor, detachable parts – Bucher	**16.5**	**36.4**
07-74042-B	**AEL-30120-007-1**	Carbon stretcher dual use, fixed provisions – Aerolite	**1.0**	**2.2**
07-74042-B	**AEL-30120-007-2**	Carbon stretcher dual use, detachable parts – Aerolite	**11.0**	**24.3**
07-74045-A	**AAT-30120-006-2**	Rescue Stretcher foldable and LOCKER SYSTEM LH or RH, FWD and AFT – AAT	**19.1**	**42.1**
07-83006-A	**L2513-004-40**	Quick detachable VIP carpet for passenger cabin	**3.0**	**6.6**

Avionics

Document reference	Commercial reference	Title	Weight (margin ± 3 %) kg	lb
08-15028-B	**L2319-002-41**	Fixed provisions for GSM phone (antenna, 28V DC, interfacing to ICS)	**0.5**	**1.1**
08-15507-B	**L2315-092-00**	IRIDIUM satellite phone AEROPHONE (Aerodata) incl. cockpit dial panel	**4.7**	**10.4**
08-16053-B	**L2341-193-01**	Audio/Comm. control system AS 3100-12 (Becker), PAX, in cabin ceiling (LH)	**3.6**	**7.9**
08-17032-A	**L2331-003-00**	Cabin loudspeaker	**1.7**	**3.7**
08-18018-B	**L2315-001-10**	Headset H 10-76 (David Clark), Low Impedance Spiral Wire	**0.6**	**1.3**
08-18018-B	**L2315-001-14**	Headset H10-76 ANR/ENC (David Clark), Low Impedance Spiral Wire	**0.8**	**1.8**
08-18049-A	**L2341-007-66**	Adapter cable for ANR headset	**0.2**	**0.5**
08-16063-A	**L2341-007-54**	Fixed provisions for ANR	**0.5**	**1.1**
08-18048-A	**L2315-001-71**	Bose ANR Headset	**0.4**	**0.9**
08-18049-A	**L2341-007-66**	Adapter cable for ANR headset	**0.2**	**0.5**
08-16063-A	**L2341-007-54**	Fixed provisions for ANR	**0.5**	**1.1**
08-53004-B	**L3424-000-00**	AHRS Free Steering Mode	**0.5**	**1.1**

NVG Equipment

Different solutions can be offered on request
Some avionics solutions can be NVG modified
NVG compatible cabin and cargo compartment lighting
NVG friendly external lighting kit, comprising position and anti-collision lights
Landing & search light 400/200 W, NVG compatible

Tactical radios

Fixed provisions can be offered on request

Broadcast, Thermal Imaging and Video Surveillance Equipment

Different Thermal Imaging and Video Surveillance Equipment systems and operator consoles on request

6.2 Police/Parapublic

Different equipment can be offered on request:

- SP / DP IFR with FMS / NMS
- SMD68 on copilots' side (6" x 8" display)
- NVG compatible cockpit
- NVG friendly external lighting
- Thermal Imaging and Video Surveillance Equipment with Operator Console and Digital Video Downlink
- SX16 with IFCO, Laserpointer and slaving unit
- Loudspeaker System
- Weather radar
- Tactical radios
- Rappelling devices for 2+2 persons
- Fastroping
- IRIDIUM satellite phone
- Direction finder

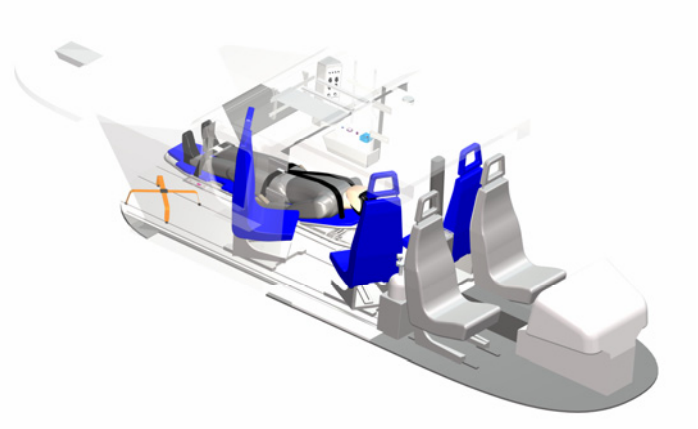
6.3 Offshore

Different equipment can be offered on request:

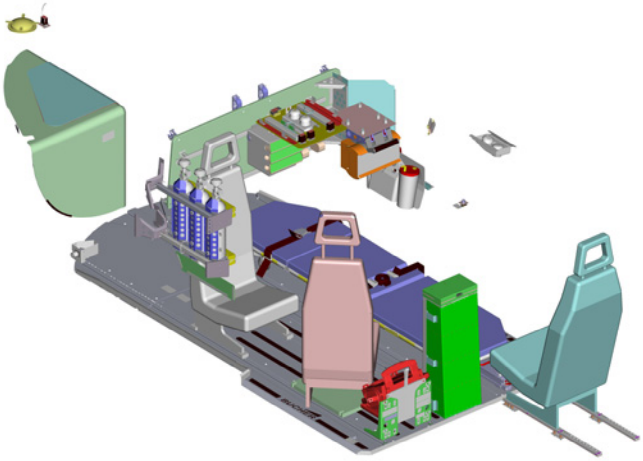
- Automatic Deployable ELT
- Emergency floats
- Radar altimeter with Voice Alert Generator
- Cockpit door jettison
- Emergency EXIT lighting
- AHRS Free Steering Mode
- HEELS
- Underwater Locator Beacon
- Search and weather radar
- Traffic Advisory System TAS 9900BX
- Cabin loudspeaker / Passenger address system
- Light twin HUMS
- Dynamic Monitoring System (DMS)
- Corrosion prevention treatment for offshore operation
- Rear window with push-out (escape window)
- Life rafts

6.4 EMS

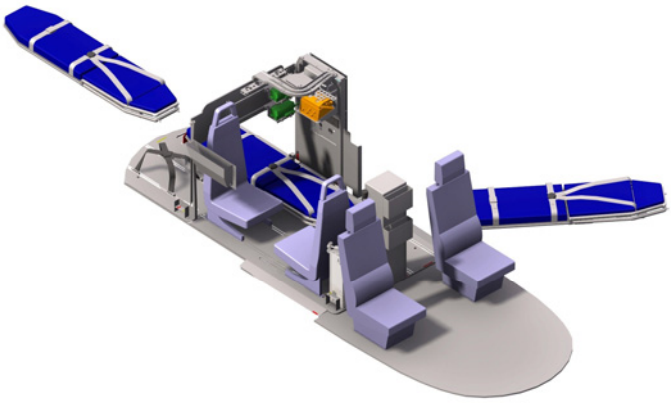
A wide range of equipment can be offered on request from three different manufacturers for medevac, primary and secondary EMS missions as well as for multirole missions.



aerolite



BUCHER



air ambulance Technology

Available EMS equipment:

- Stretchers and loading devices
- Incubator transportation systems
- Cabinets
- Medical crew seats
- Special floors
- Retainers for medical apparatuses
- Attachment points for equipment
- Additional stowage options in cabin and cargo compartment
- Oxygen systems
- Suction systems
- Special electrical systems
- Special lighting systems
- EMS Ground Power Unit connector

For efficient and effective operational usage, the EMS equipment needs to be adapted to the specific mission requirements of the customer. Therefore, the definition of the EMS equipment is arranged in a two step approach.

Step 1: Definition of basic mission equipment e.g. stretchers, seats, floors, etc.

The answers to the following questions will be used to prepare an initial EMS configuration based on the customer's mission, operational area, equipment layout, preferred EMS manufacturer and flight crew.

Mission:
☐ Primary EMS missions e.g. traffic accidents
☐ Secondary EMS missions e.g. hospital transfer flights
☐ Multirole missions e.g. primary mission: passenger transport / secondary mission: backup as EMS helicopter
☐ Other missions e.g. police, civil protection, VIP

Operational area:
☐ City
☐ Countryside
☐ Mountain
☐ Sea

Equipment layout:
☐ Basic
☐ Advanced
☐ High Sophisticated

Preferred EMS manufacturer:
☐ Air Ambulance Technology
☐ Bucher Leichtbau AG
☐ Aerolite AG
☐ No preferred manufacturer

Flight crew:
Number of pilot's __
Number of medical crew / passenger's __
Number of patient's __

Step 2: Definition of special mission equipment e.g. retainers for medical devices, special electrical systems, oxygen systems, etc.

In addition to the basic mission equipment, further special mission equipment is required to assure a full EMS mission. As the requirements of every customer are different, the clarification of the details should be done in a separate dialogue with the EMS specialists of Eurocopter.

7 Table of constraints

Each item or list of items shown beside the symbol ⚠ are concerned by this chapter, please read it exactly in order to find all constraints.

7.1 General Checklist for Incompatibilities

- Detachable parts require the related fixed provisions.
- All recommended configurations in Chapter 5 exclude each other. Mixed Configurations are possible but have to be individually checked.
- Quick detachable VIP carpet for passenger cabin can only be combined with 5 Passenger Transport layout and washable floor covering.
- Only one option (out of several possibilities listed in chapter 7) can be selected for each following specific category
  - external painting
  - first aid kit
  - air conditioning system
  - battery
  - external hoist
  - cargo hook system
  - sliding door fastener (for each side of the helicopter)
  - separation between cabin and cargo compartment
  - floor covering
  - weather radar
  - moving map
- External Hoist has priority over (NSU – respective systems will be deactivated):
  - air conditioning systems
  - sandfilter

Commercial reference	Title	MSG	Commercial reference	Title
L8541-001-20	Wire Strike Protection System, (WSPS) detachable parts	The protective capability is significantly degraded in combination with	L8511-002-20	Cargo hook mirrors, detachable parts
			L2571-001-00	Radar radome
			L3216-001-10	High landing gear
				Thermal Imaging and Video Surveillance Equipment / SX16 installation

7.2 Legend and constraints chart

XCL Impossibility of simultaneous fitment of the fixed parts of 2 items of equipment

NSF Total or partial incompatibility of simultaneous fitment of the removable parts of two items of equipment

REQ Requires the fitting of

Commercial Reference	Installation	Nature of the Constraint	Commercial Reference	Installation
-	Pure single pilot cockpits (w/o copilot extension)	XCL	L3113-004-20	Illuminated chart holder for copilot side
L2212-001-00	DAFCS	REQ	L3441-090-04	Radar altimeter KRA 405B
L2513-310-00	Carpet for cockpit, cabin and cargo compartment floor	XCL	L2818-100-20	Internal long range fuel tank system, detachable parts
L2514-011-00	Retractable coat hooks	REQ	L2576-001-00	Avionics compartment
L2522-004-10	Utility seats for 3 rear passengers,	XCL	L2524-001-00	Separation wall for cabin / cargo compartment
L2522-004-10	Utility seats for 3 rear passengers,	XCL	L2524-021-00	Separation curtain for cabin / cargo compartment
L2522-004-20	Utility seats for 3 rear passengers,	XCL	L2524-001-00	Separation wall for cabin / cargo compartment
L2522-004-20	Utility seats for 3 rear passengers,	XCL	L2524-021-00	Separation curtain for cabin / cargo compartment
L2327-001-01	Traffic Advisory System TAS 9900BX (Ryan)	REQ	L3442-881-00 OR L2327-001-11	Traffic Advisory System TAS 9900BX interface with GNS430 Traffic Advisory System TAS 9900 BX indicator 3” MHD (Ryan)
L2524-002-00	Separation curtain for cockpit / cabin	REQ	L2625-003-00	2nd portable fire extinguisher
L2524-002-00	Separation curtain for cockpit / cabin	REQ	L3353-006-20	Illuminated signs
L2524-001-00	Separation wall for cabin / cargo compartment	REQ	L2576-001-00	Avionics compartment
L2524-021-00	Separation curtain for cabin / cargo compartment	REQ	L2576-001-00	Avionics compartment
L2525-101-65	Control covers painted	REQ	L6701-001-00	Copilot flight controls
L2525-104-00	VIP carpet for cockpit, cabin & cargo	XCL	L2818-100-00	Internal long range fuel tank system
L2526-112-63	Front cabinet, middle	REQ	L2625-003-00	2nd portable fire extinguisher
L2563-801-06	ELT C406-N HM (Artex) w. NAV opt	REQ		A GPS receiver
L2576-002-00	Dampers for avionics compartment	REQ	L2576-001-00	Avionics compartment
L3168-092-04	Moving map EURONAV IV	REQ		A GPS receiver
L3168-092-04	Moving map EURONAV IV	REQ	L3443-010-00	VRU
L3215-001-11	Emergency floats, fixed provisions	XCL	L3216-001-10	High landing gear
L3215-001-21	Emergency floats, detachable parts	XCL	L3273-001-00	Lengthened skids
L3215-001-21	Emergency floats, detachable parts	NSF	L8511-005-20	Double cargo hook system, det. parts
L3216-001-10	High landing gear	XCL	L3217-001-00	Reinforced. rear landing gear cross tube
L3216-001-10	High landing gear	XCL	L3273-001-00	Lengthened skids
L3272-001-20	Snow skids, detachable parts	NSF	L3274-001-20	Settling protectors, detachable parts

Commercial Reference	Installation	Nature of the Constraint	Commercial Reference	Installation
L3274-001-20	Settling protectors, detachable parts	NSF	**L3272-001-20**	Snow skids, detachable parts
L3353-005-00	Emergency lights	XCL	**L3322-001-00**	Boarding step illumination
L3443-004-00	Weather radar RDR 1600	REQ	**L3443-010-00**	VRU
L3443-090-02	Weather radar RDR 2000	REQ	**L3443-010-00**	VRU
L5211-002-00	Sliding window in sliding doors	XCL	**L5632-001-00**	Tinted windows for passenger cabin
L5211-004-00	Securing device for complete opening of cockpit doors	REQ	**L3411-001-00**	Copilot pitot static system
L6201-001-30	Accelerometers	XCL	**L6201-004-00**	VMS II (Track & Balance system)[31]
L6611-001-20	Main rotor blade folding: fixed provisions for ground handling kit	REQ	**L6611-001-10**	Main rotor blade folding: basic kit
L8503-001-10	Fire extinguisher bucket attachment	REQ	**L8511-001-10**	Cargo hook system, fixed provisions
L8503-001-10	Fire extinguisher bucket attachment	REQ	**L8511-005-10**	Dual cargo hook system, fixed provisions
L8511-005-20	Double cargo hook system, det. parts	NSF	**L3215-001-21**	Emergency floats, detachable parts
L8511-006-10	Cargo hook mirrors RH & LH, fixed provisions	XCL	**L8511-002-10**	Cargo hook mirrors RH, fixed provisions
L8511-006-20	Cargo hook mirrors RH & LH, detachable parts	XCL	**L8511-002-20**	Cargo hook mirrors RH, detachable parts
AEL-30130-007-1	Utility seats for 3 rear passengers, model Aerolite, fixed provision	NSF	**L2524-001-00**	Separation wall for cabin / cargo compartment
AEL-30130-007-2	Utility seats for 3 rear passengers, model Aerolite, detachable parts	NSF	**L2524-021-00**	Separation curtain for cabin / cargo compartment

[31] Accelerometers are already included in VMS II

8 Main performance

The following performance values and figures refer to an EC135, equipped with average production engines.

Unless otherwise specified, the values and figures refer to a clean helicopter at Sea Level (SL), in International Standard Atmosphere (ISA) and zero wind condition.

Performance on 2 engines (AEO) Pratt & Whitney PW206B2

Gross Weight	**kg** **lb**	**2,720** **6,000**	**2,835** **6,250**	**2,910** **6,415**
■ Maximum speed (V_{NE})	**km/h** **kts**	278 150	259 140	259 140
■ Maximum cruising speed (V_H)	**km/h** **kts**	257 139	256 138	254 137
■ Fuel consumption at fast cruise speed	**kg/h** **lb/h**	234.5 517	234.5 517	234.5 517
■ Economical cruising speed	**km/h** **kts**	226 122	228 123	230 124
■ Fuel consumption at economical cruising speed	**kg/h** **lb/h**	200.5 442	204.5 451	208.5 460
■ Fuel consumption at 65 KIAS	**kg/h** **lb/h**	158.5 349.5	162 357	164.5 363
■ Rate of climb, TOP, SL, ISA	**m/s** **ft/min**	8.9 1,750	8.1 1,600	7.6 1,500
■ Hover ceiling IGE (4 ft AGL), TOP, no wind or headwind, ISA	**m** **ft**	4,140 13,600	3,655[32] 12,000[32]	3,045[33] 10,000[33]
■ Hover ceiling IGE (4 ft AGL), TOP, no wind or headwind, ISA + 20°C	**m** **ft**	3,095 10,150	2,695 8,850	2,435 8,000
■ Hover ceiling OGE, TOP, ISA	**m** **ft**	3,430 11,050	2,685 8,800	2,010 6,600
■ Hover ceiling OGE, TOP, ISA + 20°C	**m** **ft**	2,210 7,250	1,785 5,850	1,480 4,850
■ Service ceiling, MCP, (climb reserve 200 ft/min), ISA	**m** **ft**	5,155 16,900	3,655[32] 12,000[32]	3,045[33] 10,000[33]
■ Maximum range (without fuel reserve at economical cruise speed)				
■ standard fuel tank configuration (560 kg)	**km** **nm**	645 348	640 345	635 342
■ long range fuel tank configuration (730 kg)	**km** **nm**	850 459	840 454	835 451
■ Maximum endurance (without fuel reserve at 65 KIAS ■ standard fuel tank configuration (560 kg) ■ long range fuel tank configuration (730 kg)	**h:min** **h:min**	3:43 4:55	3:38 4:49	3:35 4:45

[32] 12,000 ft pressure altitude certification limit
[33] 10,000 ft pressure altitude certification limit

Performance on 1 engine (OEI) Pratt & Whitney PW206B2

Gross Weight	kg lb	2,720 6,000	2,835 6,250	2,910 6,415
■ Service ceiling with 100 ft/min climb reserve, MCP OEI-power, ISA	m ft	3,275 10,750	2,925 9,600	2,715 8,900
■ Service ceiling with 100 ft/min climb reserve, MCP OEI-power, ISA + 20°C	m ft	2,375 7,800	1,965 6,450	1,710 5,600
■ Rate of climb, MCP OEI-power, SL	m/s ft/min	1.9 375	1.4 275	1.1 215
■ Max. temperature for CAT A, take-off from clear heliport at SL	°C	+ 50	+ 46	+ 43
■ Max. gross weight hover IGE (4ft AGL), SL, ISA, no wind, 2 min OEI power	kg lb	2,870 6,325		
■ Max. gross weight hover IGE (4ft AGL), SL, ISA + 20°C, no wind, 2 min OEI power	kg lb	2,675 5,885		
■ Max. gross weight hover OGE, SL, ISA, no wind, 30 sec OEI power	kg lb	2,665 5,875		
■ Max. gross weight hover OGE, SL, ISA + 20°C, no wind, 30 sec OEI power	kg lb	2,585 5,687		
■ Max. gross weight CAT A, VTOL, SL, ISA	kg lb	2,910 6,415		
■ Max. gross weight CAT A, VTOL, SL, ISA + 20°C	kg lb	2,845 6,270		

Performance on 2 engines (AEO) Turbomeca Arrius 2B2

Gross Weight	**kg** **lb**	**2,720** **6,000**	**2,835** **6,250**	**2,910** **6,415**
■ Maximum speed (V_{NE})	**km/h** **kts**	278 150	259 140	259 140
■ Maximum cruising speed (V_H)	**km/h** **kts**	257 139	256 138	254 137
■ Fuel consumption at fast cruise speed	**kg/h** **lb/h**	234.5 517	234.5 517	234.5 517
■ Economical cruising speed	**km/h** **kts**	237 128	239 129	240 130
■ Fuel consumption at economical cruising speed	**kg/h** **lb/h**	215 474	219 483	221 487
■ Fuel consumption at 65 KIAS	**kg/h** **lb/h**	167.5 369	170.5 376	173 381
■ Rate of climb, TOP, SL, ISA	**m/s** **ft/min**	8.9 1,750	8.1 1,600	7.6 1,500
■ Hover ceiling IGE (4 ft AGL), TOP, no wind or headwind, ISA	**m** **ft**	4,325 14,200	3,655[32] 12,000[32]	3,045[33] 10,000[33]
■ Hover ceiling IGE (4 ft AGL), TOP, no wind or headwind, ISA + 20°C	**m** **ft**	3,080 10,100	2,670 8,750	2,395 7,850
■ Hover ceiling OGE, TOP, ISA	**m** **ft**	3,430 11,050	2,685 8,800	2,010 6,600
■ Hover ceiling OGE, TOP, ISA + 20°C	**m** **ft**	2,175 7,150	1,740 5,700	1,450 4,750
■ Service ceiling, MCP, (climb reserve 200 ft/min), ISA	**m** **ft**	5,155 16,900	3,655[32] 12,000[32]	3,045[33] 10,000[33]
■ Maximum range (without fuel reserve at economical cruise speed)				
■ standard fuel tank configuration (560 kg)	**km** **nm**	630 340	625 337	620 334
■ long range fuel tank configuration (730 kg)	**km** **nm**	825 446	820 443	815 440
■ Maximum endurance (without fuel reserve at 65 KIAS ■ standard fuel tank configuration (560 kg) ■ long range fuel tank configuration (730 kg)	**h:min** **h:min**	3:29 4:36	3:26 4:32	3:23 4:28

Performance on 1 engine (OEI) Turbomeca Arrius 2B2

Gross Weight	**kg** **lb**	**2,720** **6,000**	**2,835** **6,250**	**2,910** **6,415**
■ Service ceiling with 100 ft/min climb reserve, MCP OEI-power, ISA	**m** **ft**	3,520 11,550	3,185 10,450	2,955 9,700
■ Service ceiling with 100 ft/min climb reserve, MCP OEI-power, ISA + 20°C	**m** **ft**	2,500 8,200	2,070 6,800	1,795 5,900
■ Rate of climb, MCP OEI-power, SL	**m/s** **ft/min**	1.9 375	1.4 275	1.1 215
■ Max. temperature for CAT A, take-off from clear heliport at SL	**°C**	+ 50	+ 47	+ 43.5
■ Max. gross weight hover IGE (4ft AGL), SL, ISA, no wind, 2 min OEI power	**kg** **lb**	2,870 6,325		
■ Max. gross weight hover IGE (4ft AGL), SL, ISA + 20°C, no wind, 2 min OEI power	**kg** **lb**	2,690 5,930		
■ Max. gross weight hover OGE, SL, ISA, no wind, 30 sec OEI power	**kg** **lb**	2,665 5,875		
■ Max. gross weight hover OGE, SL, ISA + 20°C, no wind, 30 sec OEI power	**kg** **lb**	2,615 5,765		
■ Max. gross weight CAT A, VTOL, SL, ISA	**kg** **lb**	2,910 6,415		
■ Max. gross weight CAT A, VTOL, SL, ISA + 20°C	**kg** **lb**	2,860 6,305		

OPERATING LIMITATIONS (valid for both versions, EC135 P2i and EC135 T2i)

The helicopter can be operated within the following altitude and temperature limitations (according to the Flight Manual):

Gross Weight	**2,720 kg** **6,000 lb.**	**2,835 kg** **6,250 lb.**	**2,910 kg** **6,415 lb.**
■ Maximum operating altitude	6,095 m PA 20,000 ft PA	3,655 m PA 12,000 ft PA	3,045 m PA 10,000 ft PA
■ Maximum operating altitude for hover in ground effect, takeoff and landing	4,570 m DA 15,000 ft DA	3,655 m PA 12,000 ft PA	3,045 m PA 10,000 ft PA
■ Minimum temperature	-35°C (-31°F)		
■ Maximum temperature	ISA + 39°C (max. + 50°C / + 122°F)		

Abbreviations

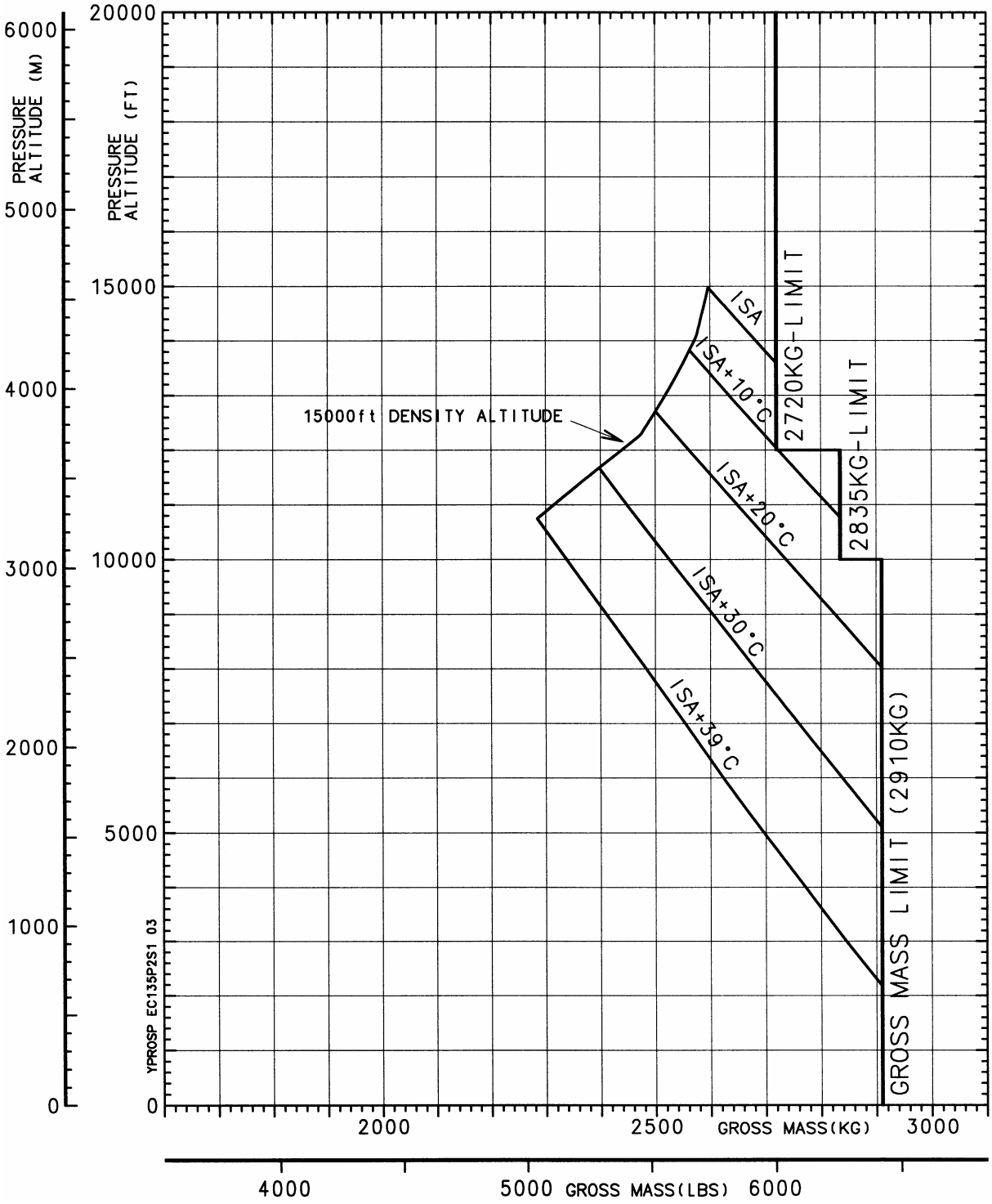
AGL	Above Ground Level
DA	Density Altitude
IGE	In Ground Effect
ISA	International Standard Atmosphere
MCP	Maximum Continuous Power
OEI	One Engine Inoperative
OGE	Out Of Ground Effect
PA	Pressure Altitude
SL	Sea Level
TOP	Take-Off Power
VNE	Never-Exceed Speed
VTOL	Vertical Take-Off and Landing

Hover In Ground Effect (HIGE, TOP, no wind)

with two PW206B2 engines

ISA
ISA+10/20/30°C
ISA+39°C

TAKEOFF-POWER
MGT=869°C TQ=78%
BLEED AIR OFF
SKID HEIGHT 4 FT

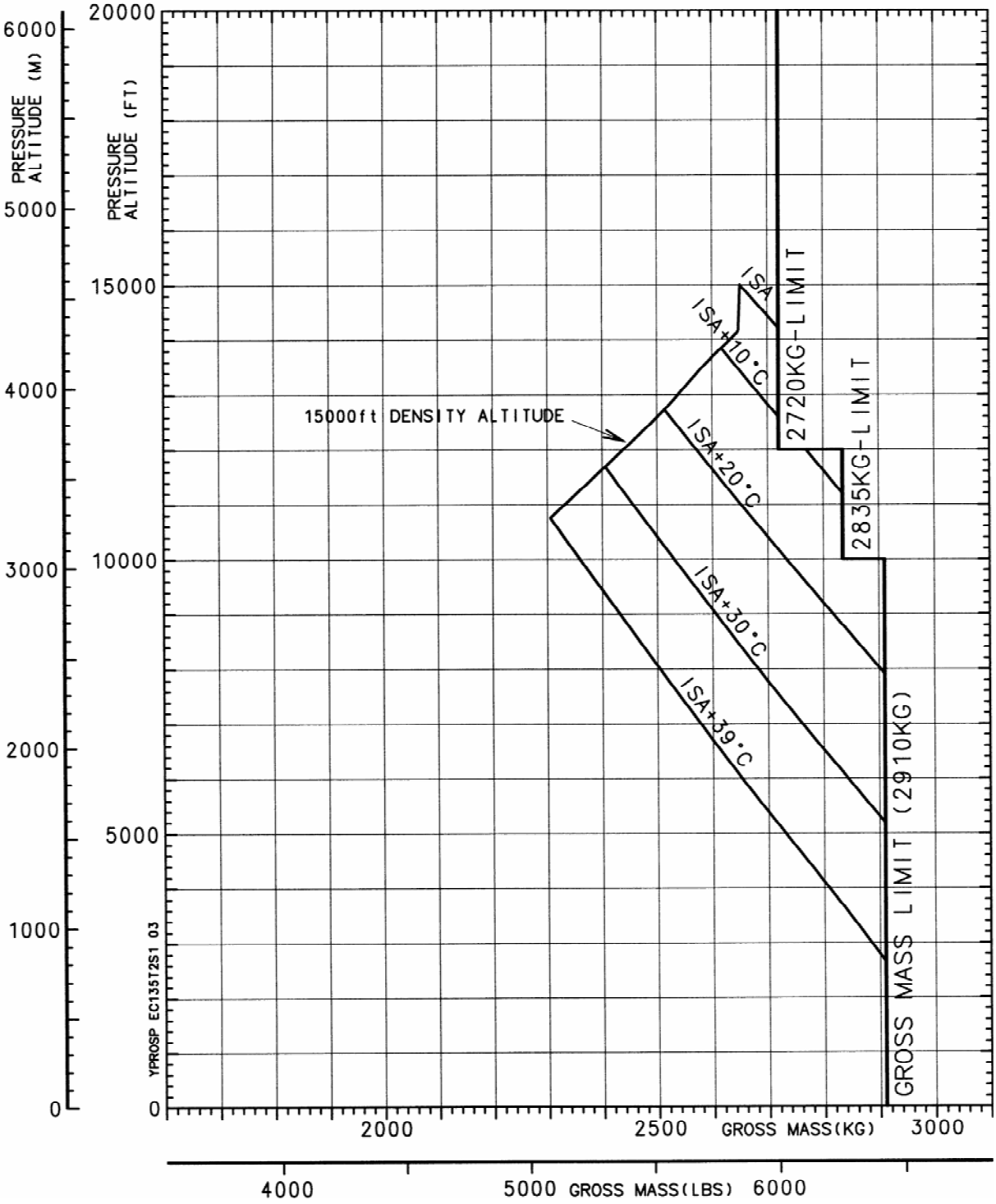


Hover In Ground Effect (HIGE, TOP, no wind)

with two ARRIUS 2B2 engines

ISA
ISA+10/20/30°C
ISA+39°C

TAKEOFF-POWER
ΔN1= 0.0% TQ=78%
BLEED AIR OFF
SKID HEIGHT 4 FT

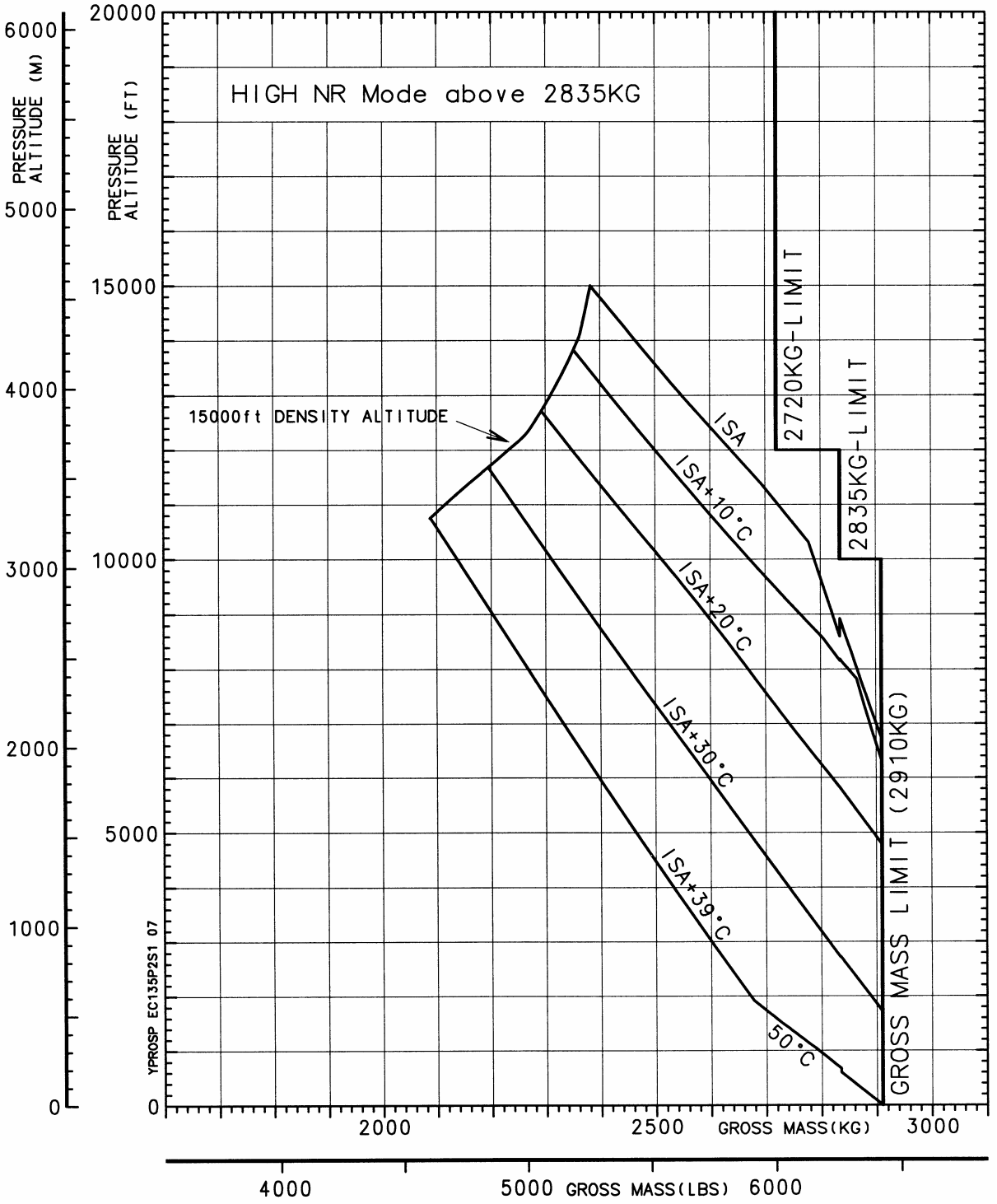


Hover Out Of Ground Effect (HOGE, TOP)

with two PW206B2 engines

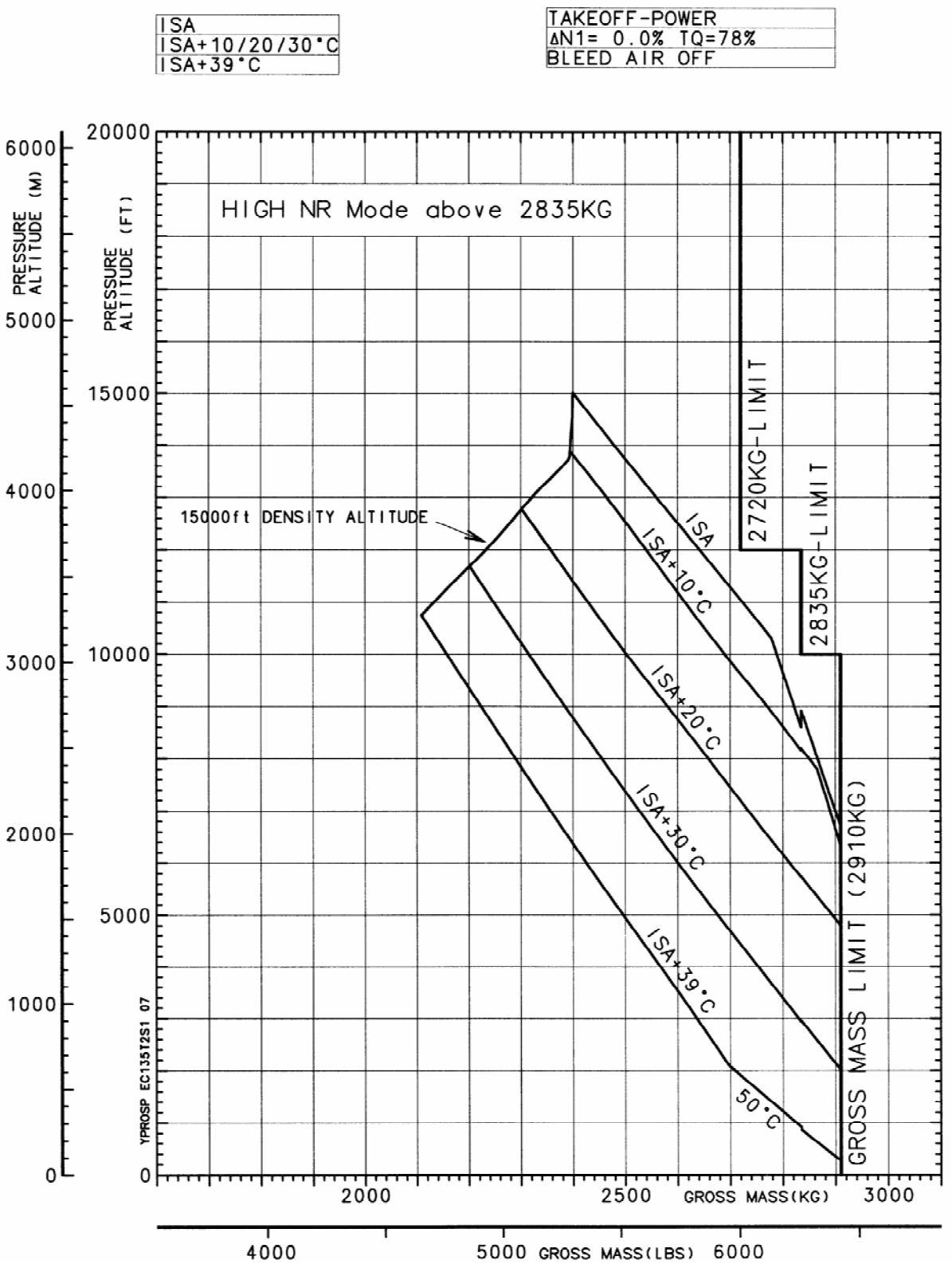
ISA
ISA+10/20/30°C
ISA+39°C

TAKEOFF-POWER
MGT=869°C TQ=78%
BLEED AIR OFF



Hover Out Of Ground Effect (HOGE, TOP)

with two ARRIUS 2B2 engines

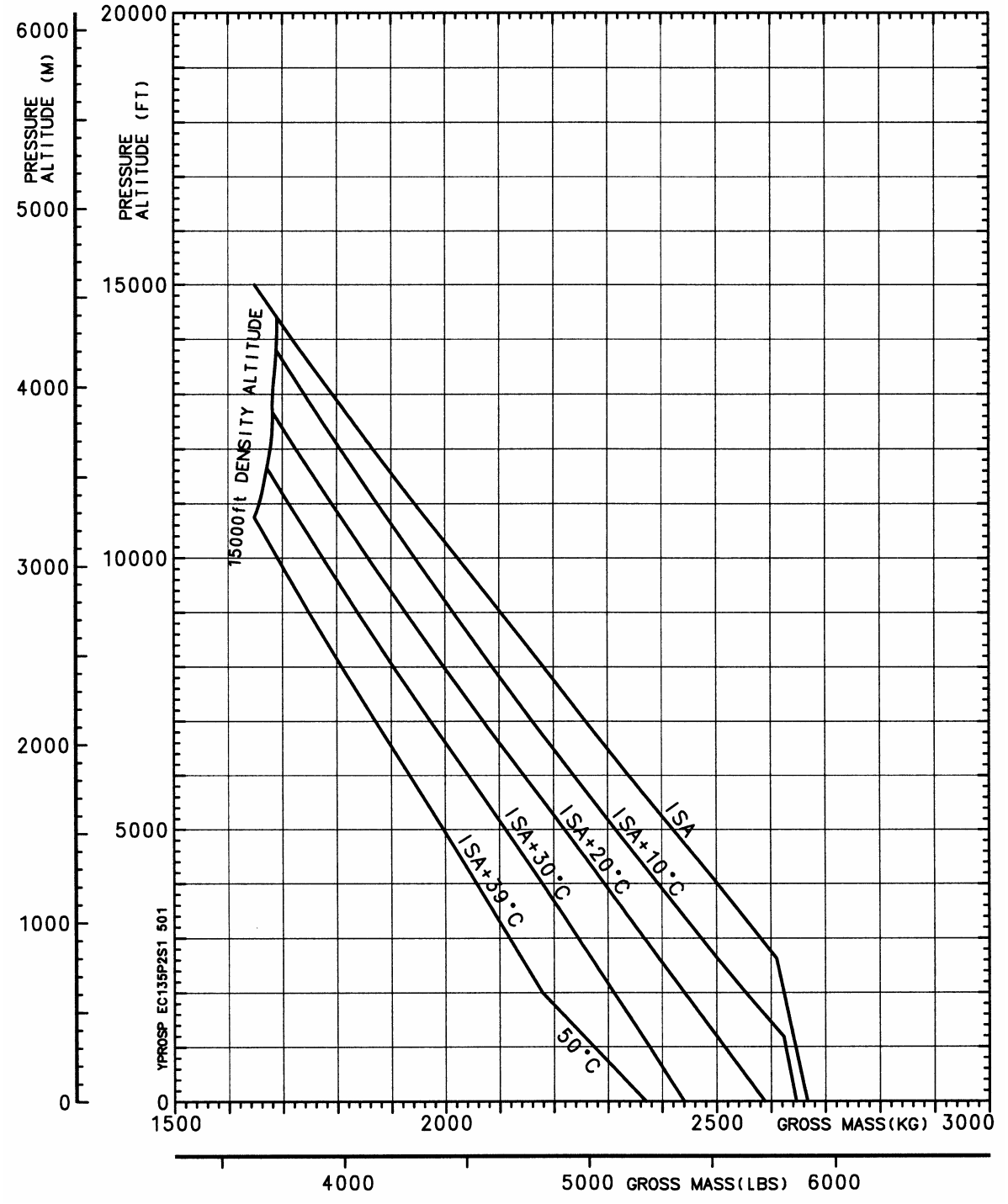


Hover Out Of Ground Effect (HOGE, 30 sec OEI-power)

with one PW206B2 engine

ISA
ISA+10/20/30°C
ISA+39°C

OEI 30 SEC-POWER
MGT=990°C TQ=128%
BLEED AIR OFF

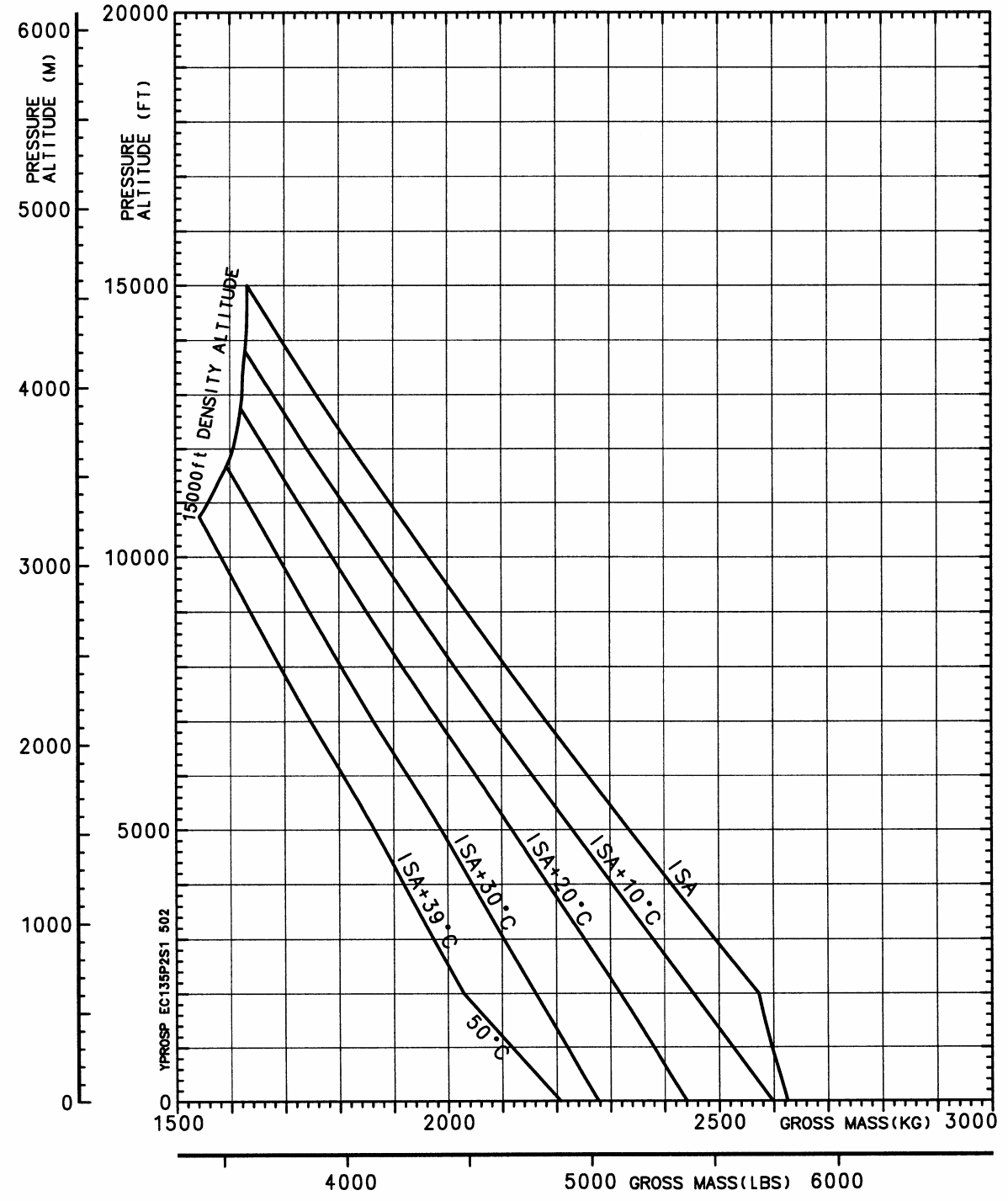


Hover Out Of Ground Effect (HOGE, 2.0 min OEI-power)

with one PW206B2 engine

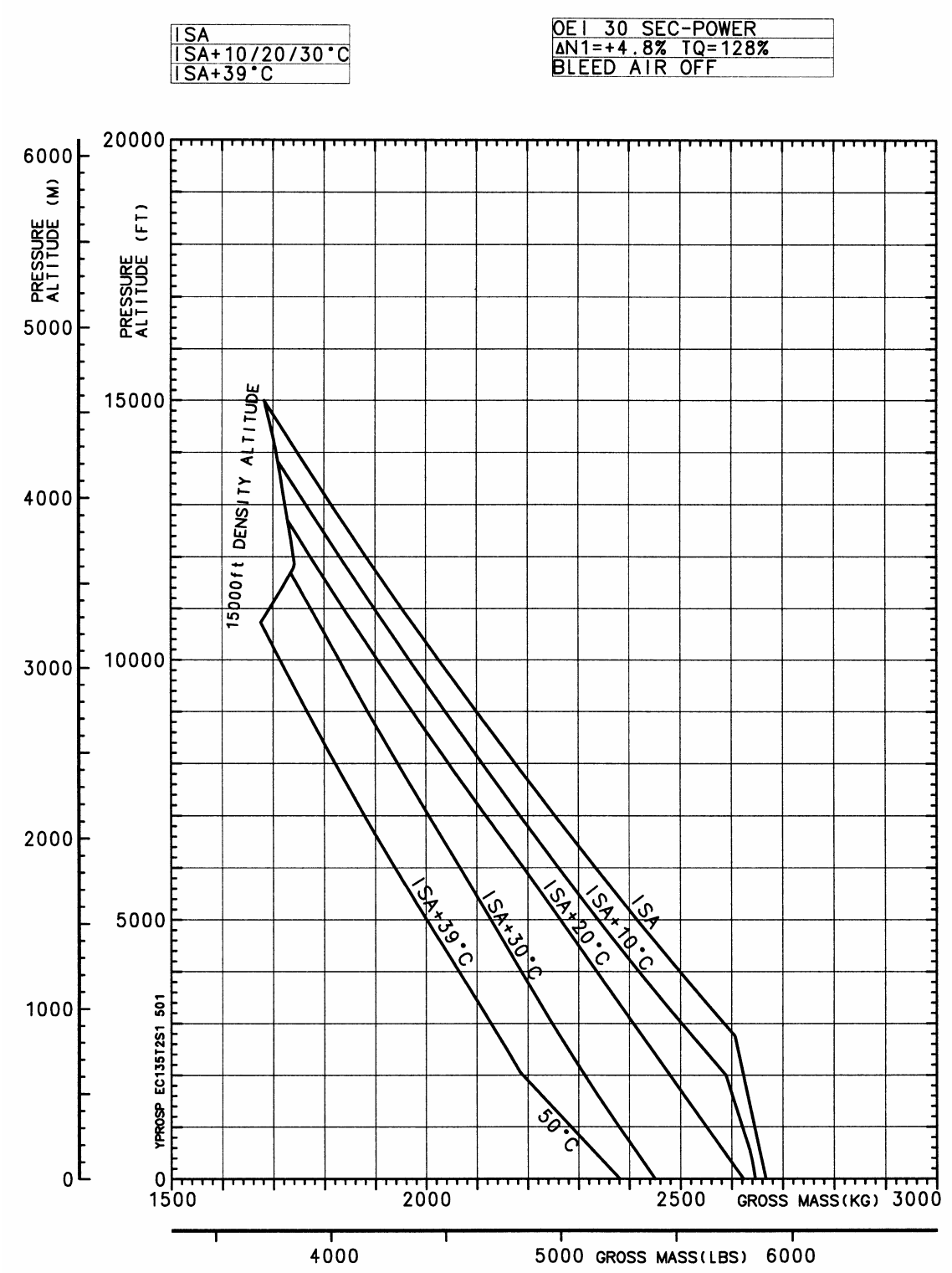
ISA
ISA+10/20/30°C
ISA+39°C

OEI 2.0 MIN-POWER
MGT=950°C TQ=125%
BLEED AIR OFF



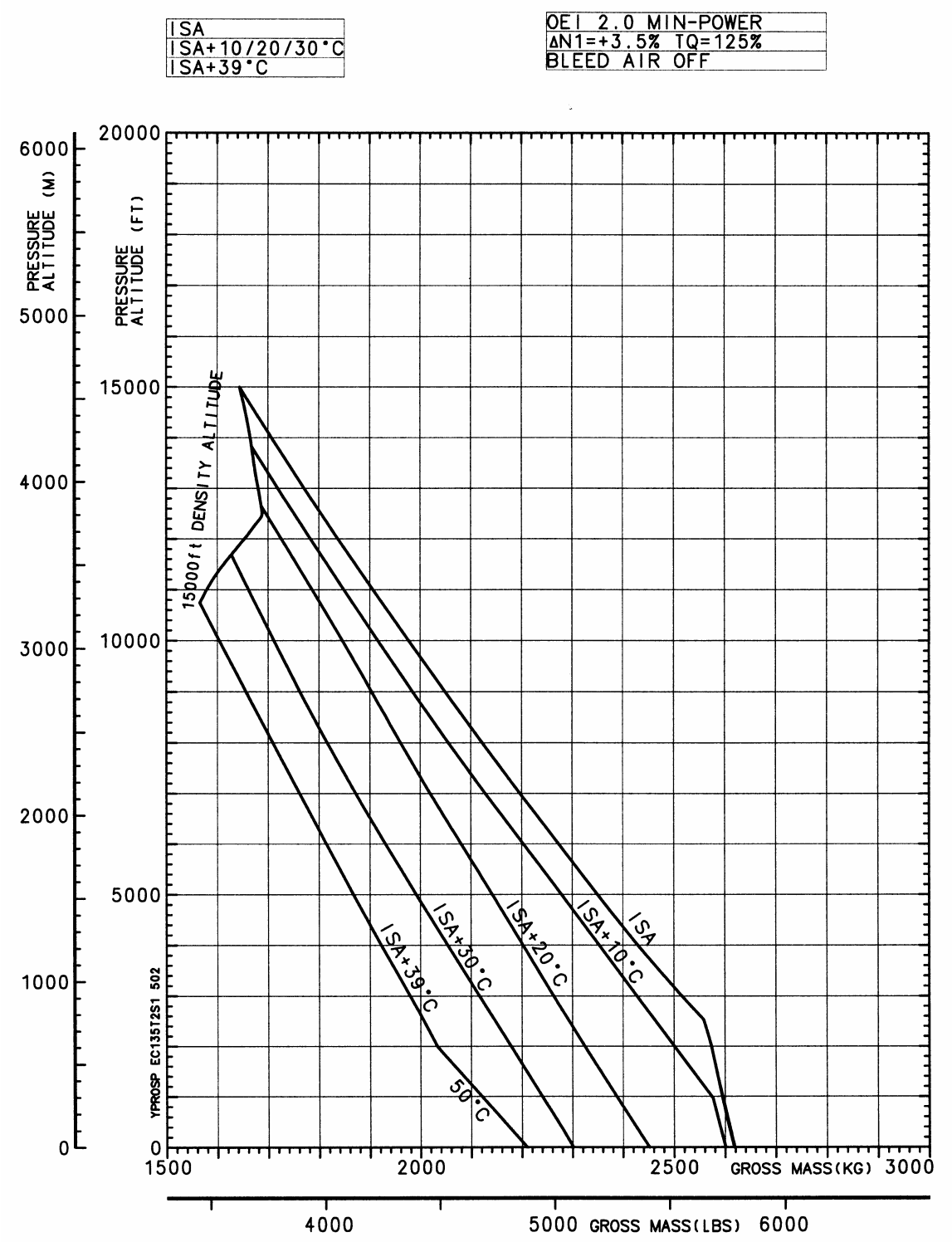
Hover Out Of Ground Effect (HOGE, 30 sec OEI-power)

with one ARRIUS 2B2 engine



Hover Out Of Ground Effect (HOGE, 2.0 min OEI-power)

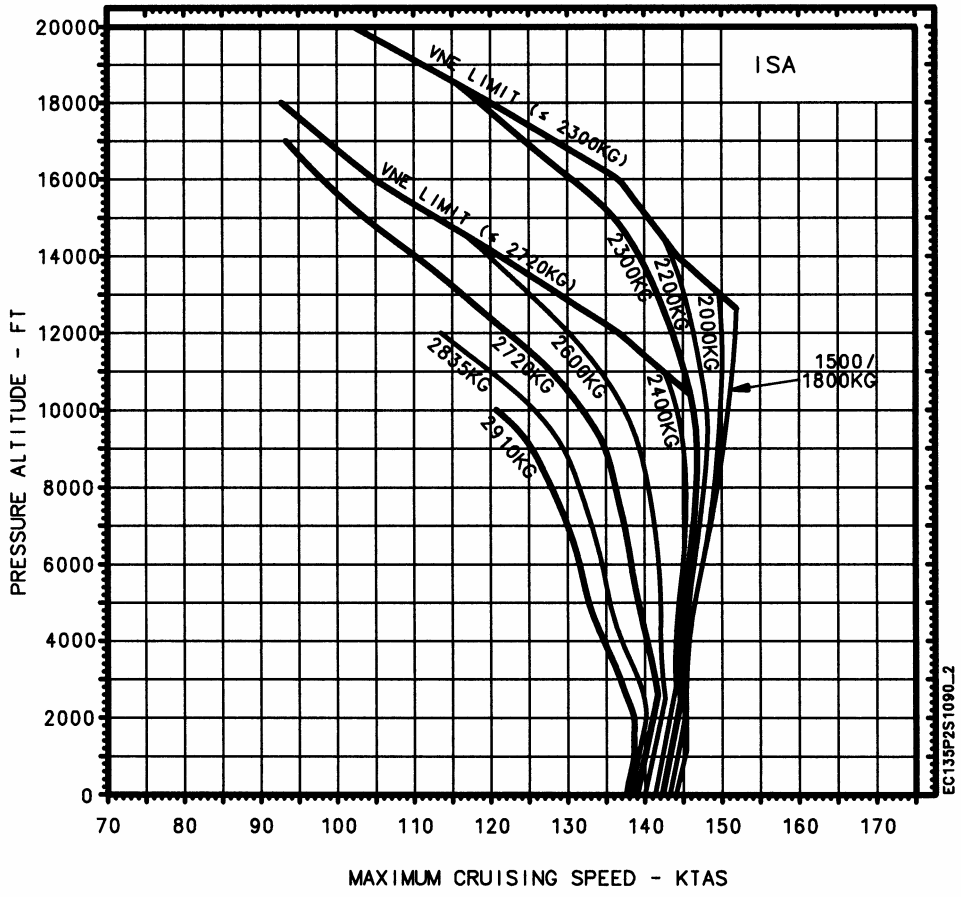
with one ARRIUS 2B2 engine



Maximum Cruising Speed

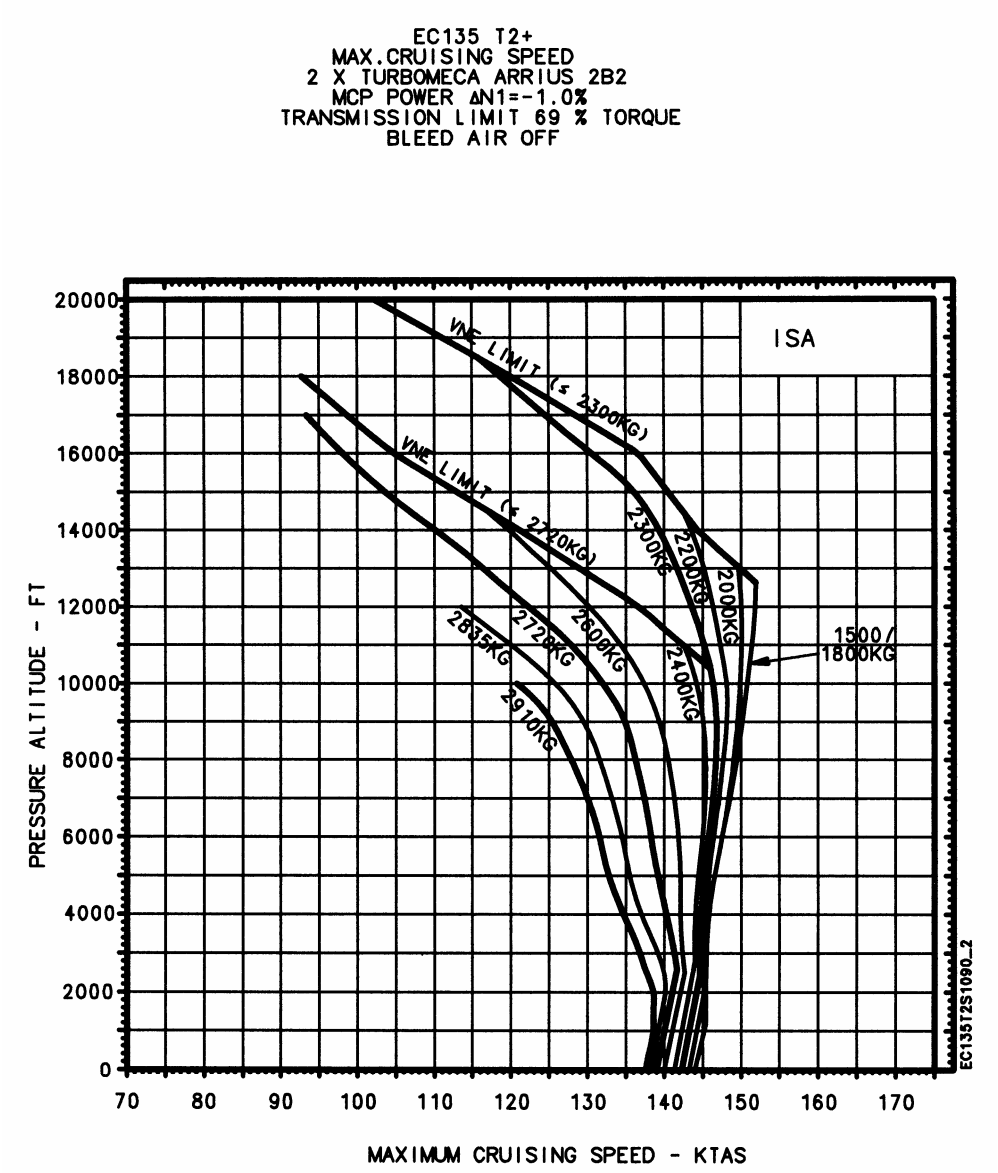
with two PW206B2 engines

EC135 P2+
MAX.CRUISING SPEED
2 X PRATT&WHITNEY PW206B2
MCP POWER MGT= 835°C
TRANSMISSION LIMIT 69 % TORQUE
BLEED AIR OFF



Maximum Cruising Speed

with two ARRIUS 2B2 engines

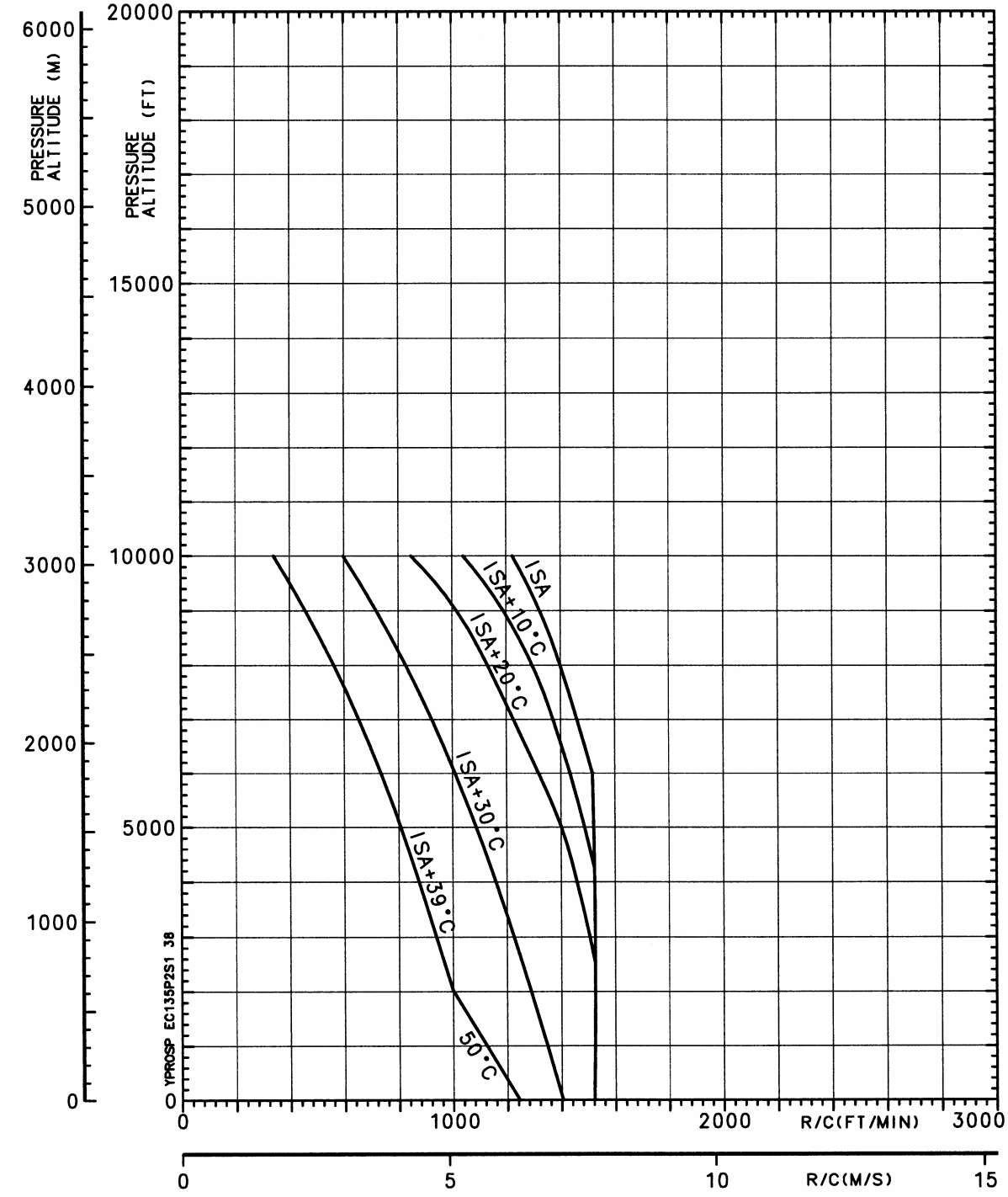


Maximum Rate Of Climb, TOP

with two PW206B2 engines,

ISA
ISA+10/20/30°C
ISA+39°C

AEO TOP-POWER VY=65KT
MGT=869°C TQ=78%
BLEED AIR OFF
GROSS MASS 2910KG

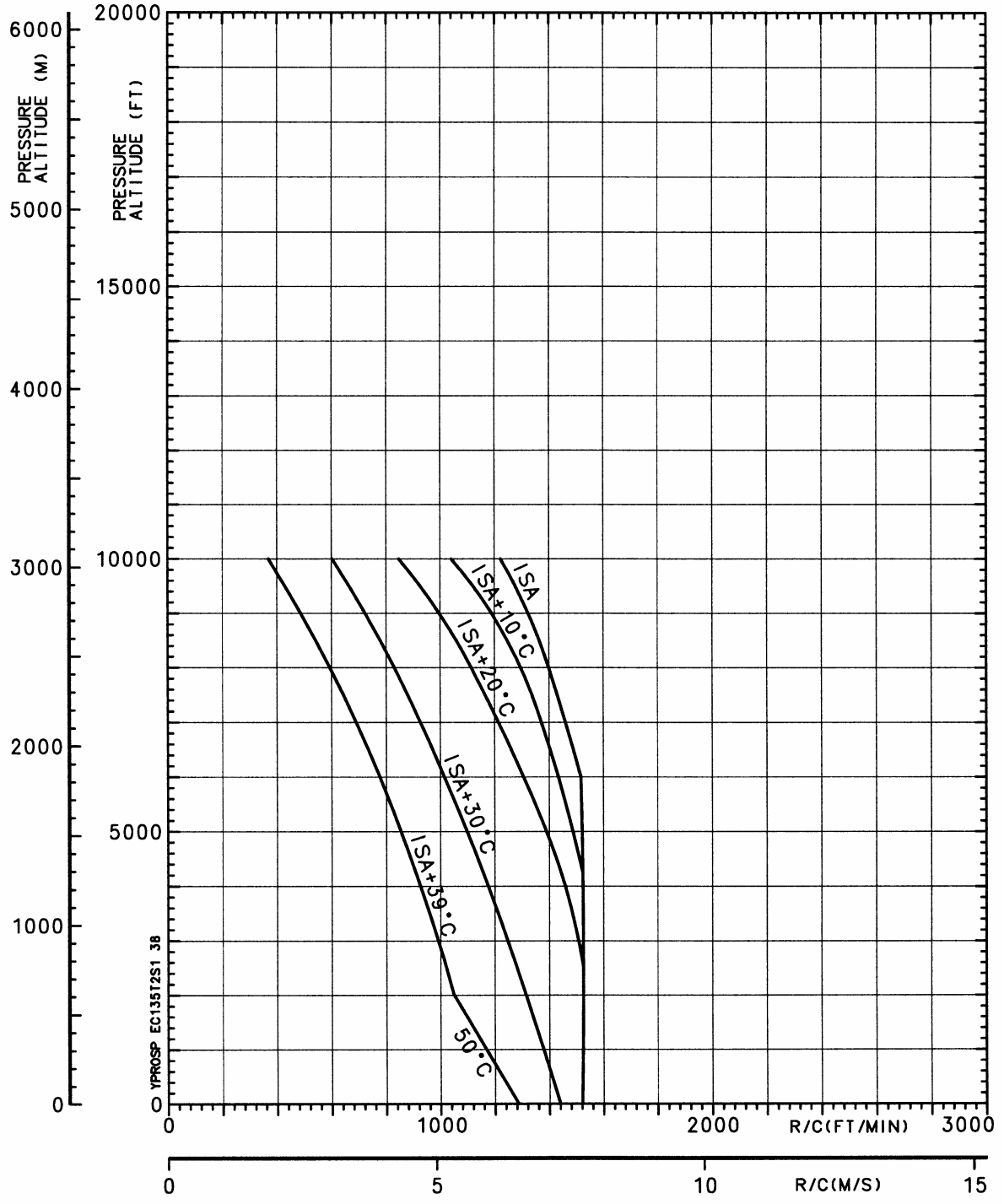


Maximum Rate Of Climb, TOP

with two ARRIUS 2B2 engines,

ISA
ISA+10/20/30°C
ISA+39°C

AEO TOP-POWER VY=65KT
ΔN1= 0.0% TQ=78%
BLEED AIR OFF
GROSS MASS 2910KG

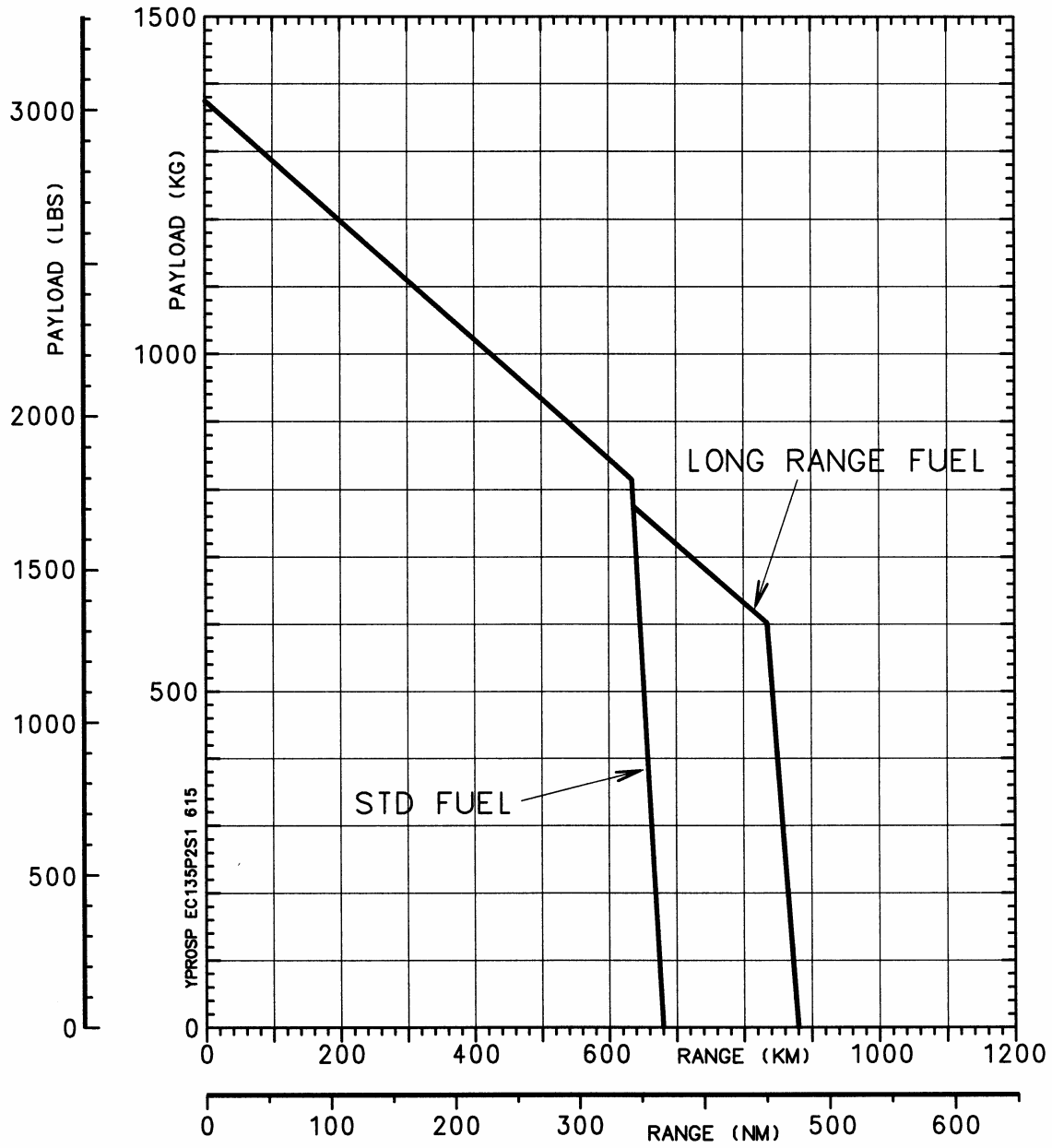


Payload / Range

with two PW206B2 engines

TOW 2910KG
NO RESERVE
SL / ISA

EMPTY WEIGHT 1455KG/1498KG
USABLE STD FUEL 560KG
LONG RANGE FUEL TANK 170KG
PILOT 80KG



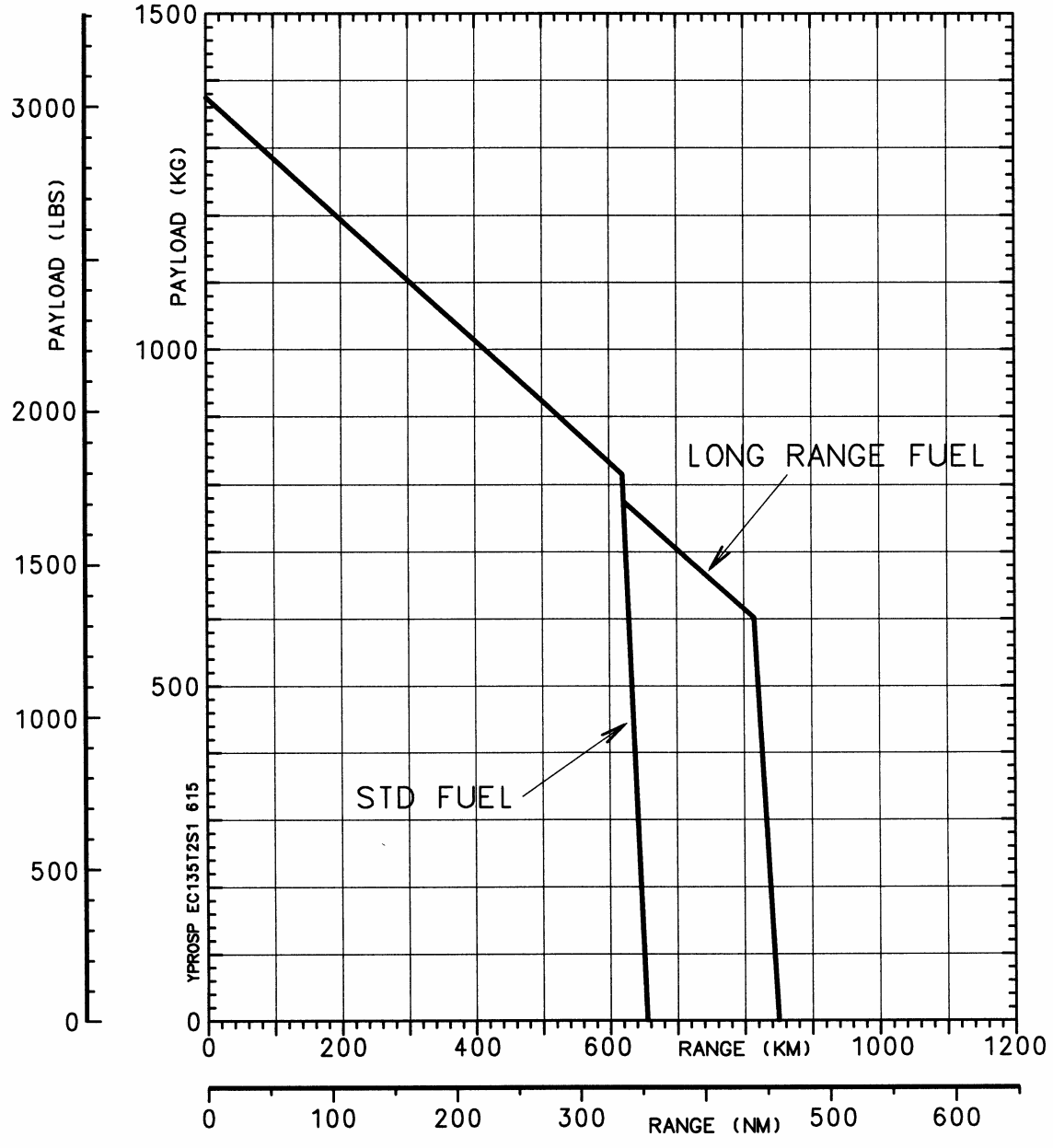
PAYLOAD RANGE DIAGRAM (STD FUEL 560KG)

Payload / Range

with two ARRIUS 2B2 engines

TOW 2910KG
NO RESERVE
SL / ISA

EMPTY WEIGHT 1455KG/1498KG
USABLE STD FUEL 560KG
LONG RANGE FUEL TANK 170KG
PILOT 80KG



PAYLOAD RANGE DIAGRAM (STD FUEL 560KG)

9 Support information

9.1 Assets

Proven reliability and availability based on experience

Eurocopter's helicopter production programs have developed a strong reputation world-wide for being fully committed to providing customers with operational, capable aircraft that achieve high availability combined with cost-effective support systems. To achieve this record of performance, Eurocopter has stressed the importance of working together with its customers to ensure constant feedback on their demonstrated in-service Reliability, Availability and Maintainability/Testability (RAM) data. The main objective is to reach the most optimized operational cost ensuring the highest flight safety.

Eurocopter has built and delivered EC135 helicopters for almost 10 years. More than 600 helicopters are in service world wide. The total flight hours accumulated at the end of the year 2007 are more than 1,040,000 Fh.

9.2 Inspection Program

Airframe Inspection Program

The Maintenance Program specifies the intervals between maintenance operations that are recommended by Eurocopter, irrespective of whether they are mandatory or not.

The program can:
–either be used as is,
–or be adapted by each operator to suit his own specific organization, provided he complies with the maximum intervals.

For the performance of the scheduled and unscheduled maintenance, Eurocopter has classified the maintenance tasks by the following three maintenance levels :

Organizational Level (O)
This level comprises of tasks such as the daily servicing, pre-flight checks, visual inspections for condition, replacement of modular components and simple repairs. This work can be performed by trained helicopter mechanics with standard tools only (no special tools necessary).

Intermediate Level (I)
This level comprises of tasks such as smaller repairs ON/OFF helicopter, periodical inspections and replacement of modular components as well as modifications. This work can be performed by trained and experienced mechanics and may require the usage of special tools and/or test equipment.

Depot Level (D)
This level comprises of tasks such as repairs OFF helicopter, overhaul of major components and heavy airframe repair. This work can be performed by OEM, authorized Repair Centers or Eurocopter and requires the usage of special overhaul and repair tools, as well as test benches (if required) according to repair manuals or instructions.
The maintenance tasks defined as O-and I-Level are described in the Aircraft Maintenance Manual (AMM) and can be conducted by operator's mechanics after successful completion of the relevant training courses.

The following table provides an overview of all Scheduled Airframe Inspections. Scheduled inspections with shorter time intervals are fully incorporated into those with longer time intervals, this means, that for example the Periodical Inspection contains the 12-Month Inspection.

Scheduled Airframe Inspection	Maintenance Level	Estimated Mean Man Hours
Pre-flight Check	O - Level	0.5 hours
12-month inspection (max. exceedance by 3 months)	O - Level	25 hours
Intermediate inspection every 400 hours (max. exceedance by 40 hours)	O - Level	45 hours
Periodical inspection every 800 hours or 3 years (max. exceedance by 80 hours or 3 months)	I - Level	79 hours
Supplementary Inspections according to operating time (max. exceedance by 10%)	I - Level	n/a
Conditional Inspections after specific operational incidents (max. exceedance by 10%)	I – Level	n/a

All those “Estimated Mean Man Hours” mentioned here above refer only to the scheduled inspection in accordance with the Master Servicing Manual (MSM) for the standard helicopter without optional equipment. The announced Man Hours are without ground run and test flight, work preparation and documentation work as well as reworking and servicing.

Scheduled Engine Maintenance for PW206B2

Periodic inspections

	Maintenance level	Estimated Mean Man Hour
12 months	O Level	1 hour
800 Hours	O Level	6 hours

Scheduled Engine Maintenance for ARRIUS 2B2

Periodic inspections

	Maintenance level	Estimated Mean Man Hour
400 Hours	Level 1	1,5 hours
800 Hours	Level 1	4,0 hours

9.3 Main components
Time Between Overhaul (TBO) / Service Life Limit (SLL)

Main Components	TBO as per MSM Rev. 8	SLL as per MSM Rev. 8
Fuel system: Motor Pump Cartridge	5,000 Fh	
Ventilation / heating system: Blower drive motor (depending on carbon brushes wear)	800 Fh	
Starter/Generator 200 A	2,000 Fh	
Portable fire extinguisher	10 years TSN 10 years TSO	
Main rotor blade damper		8,000 Fh or 6 years
Swash plate: Rings (control ring and bearing ring)		8,300 Fh
Mixing Lever Gear unit: bolt		8,700 Fh
Mixing Lever Gear unit: forked lever		9,000 Fh
Main Transmission	4,000 Fh	
Main Transmission: pinions		8,000 Fh
Tail Rotor Gearbox	3,600 Fh	
Tail Rotor Gearbox: bevel drive pinion		8,000 Fh
Tail rotor blade		8,000 Fh
Engine	3,500 Fh	

Note: list includes only components under 10,000 Fh. The figures can be changed.

Time Between Overhauls (TBO) :
The component in question must be removed at each interval that corresponds to the value indicated, in order to undergo the operations in a specialized workshop that will enable it to be put back into service for the next interval. A TBO is granted with a 10 % operational margin, limited at +300 hours. All subcomponents may have a Service Life limit, rated above the TBO limit.

Service Life Limited (SLL) :
The service life limit is an airworthiness limit. The component in question must be removed from service when it reaches the limit indicated.

9.4 Eurocopter Maintenance Support Programs

EUROCOPTER offers its clients a comprehensive array of repair and overhaul services to ensure availability and costs control. This array of services ranges from basic OEM repair and overhaul services up to comprehensive Parts By the Hour (PBH) maintenance programs.

The different services are each tailored for one different user profiles and demands, such as customers:

- with a high number of flight hours,
- with a low number of flight hours,
- looking for immediate component availability,
- that wish budget control,
- …

To respond to the different customers' demands *EUROCOPTER* offers the following flexible and modular services:

- Classical Support
- Standard exchange
- Repair with guaranteed Turn Around Times (TAT)
- Guaranteed Direct Maintenance Costs (DMC)
- Unscheduled Maintenance Insurance Plan
- Parts by the Hour service

On request, Eurocopter is able to propose extensive services adapted to specific mission and customer expectations, as stock and maintenance management.

9.4.1 Classical Support

The classical support consists of a comprehensive Initial Provisioning package to sustain aircraft operation. This package includes Spare Parts, Tools, Test Equipment, etc..

The required level of operational availability determines the quantity and therefore the investment required. With this support package the Customer bears the responsibility to monitor their repair; manage obsolescence and to procure the right mix and quantity of components and spare parts.

9.4.2 Maintenance, Repair and Overhaul

Eurocopter offers a complete range of industry-leading inspection, repair and overhaul capabilities for the full range of Eurocopter helicopters, with guaranteed turn-around times and cost-effeciency.

Approved by the most stringent airworthiness authorities in the world, our industrial facilities ensure the highest quality for the maintenance, repair and upgrading works. Eurocopter Maintenance Repair and Overhaul covers the four major following areas:

- Blades
- Equipment
- Dynamic component
- Maintenance & upgrades.

9.4.3 Standard Exchange

The Standard Exchange consists in replacing a defective part with a serviceable and interchangeable part within 48 hours subject to availability. This service is available for equipment, blades and dynamic components.

9.4.4 Guaranteed DMC (Repair by the Hour)

The Guaranteed DMC services offers guaranteed repair and overhaul TATs as well as guaranteed prices. This addition to the classical repair and overhaul enables the customer to best size its inventory. Price for this service is calculated per flight hour, thus enabling the customer to spread and predict both his scheduled as unscheduled maintenance expenses. The guaranteed DMC service is available for dynamic components, blades and basic equipment.

9.4.5 Unscheduled Maintenance Insurance Plan (UMIP)

With the UMIP, *EUROCOPTER* gives the customer the option to secure unscheduled maintenance costs while remaining responsible for the scheduled events (overhaul, life limited part replacement). Price for this service is calculated per flight hour.

The UMIP service includes component unscheduled repairs and guaranteed parts replacement within 24H through Standard Exchange based on a dedicated inventory. This service is available for dynamic components, blades and basic equipment

9.4.6 Parts By the Hour (PBH)

The Parts by the Hour (PBH) service is a comprehensive program that offers and balances at the same time guaranteed maintenance costs, reduced inventory and minimized helicopter downtime. This service is intended for Customers looking for total cost control and high level of aircraft readiness. Price for this service is calculated per flight hour.

The PBH sevice includes component unscheduled repairs component overhauls as well as Life Limited part replacement. Parts replacement is guaranteed within 24H trough Standard Exchange based on a dedicated inventory. This service is available for dynamic components, blades and equipment.

9.5 Engine Maintenance program

9.5.1 Pratt&Whitney

With over 4,500 P&WC engines on a “pay-by-the-hour” concept, the industry has demonstrated its confidence on the advantages of the following services:

Eagle Service Plan ®
Fleet Management Plan ®
e-Business Customer Portal

9.5.1.1 PW206B2 Mean Time Between Overhaul (MTBO)

The PW206B2 engine can be overhauled as two (2) individual modules:

(a) Perform overhaul of the turbomachinery module every 3500 hours.
(b) Perform overhaul of the reduction gearbox module every 3500 hours.

No Hot-section inspection (HSI) is scheduled and, if necessary, component replacement will be on an on-condition basis.

The maintenance plan for the PW200 engine incorporates the following features:

The minimisation of scheduled maintenance in accordance with MSG-III style analysis.
Helicopter Engine Condition and Trend Monitoring (HECTM®) used to determine the economical threshold to perform refurbishment.
Repair development will continue during service of the PW200 engine with the objective of expanding on repair schemes currently contained in both the Maintenance Manual and Overhaul Manual. This will keep engine maintenance costs, aircraft downtime, spare engine inventories and total operating costs to a minimum.

Accessories Time Between Overhaul

Engine accessories are monitored, as defined by the Illustrated Parts Catalog, with a removal threshold that is based on the operator’s experience, with the following exception: TBO recommendation for the Fuel Management Module (FMM) is engine TBO plus 500 hours.

Periodic Inspection – Tolerances

Unless otherwise stated, the tolerance for periodic or scheduled inspections are as follows:

- Hourly Intervals tolerance: Ten percent (10%), or up to a maximum of 100 hours operating time, whichever is less.
- Calendar Intervals tolerance: Ten percent (10%), or up to a maximum of 30 days calendar time, whichever is less.

NOTE: The tolerance is established for maintenance scheduling convenience only and must be approved by the governing civil aviation authority. Subsequent intervals will be adjusted to re-establish the original schedule. When an inspection is done more than 10% early, subsequent inspections will be advanced as required so as to not exceed the maximum tolerance. Concurrence and final approval of the inspection interval tolerance by the governing civil aviation authority is the responsibility of the owner/operator.

9.5.1.2 Service Life Limited (SLL) Components

Three components on the PW206B2 are cycle limited:

Impeller: .....15,000 Cycles
Compressor Turbine Disk: .....10,000 Cycles
Power Turbine Disk: .....15,000 Cycles

The compressor Turbine Disk is commercially supported to 15.000 cycles.

9.5.2 Turbomeca

Always looking to maximize your efficiency and reduce your costs, Turbomeca, the engine manufacturer has developed an improved service offering.

Whatever the mission, wherever it may be, for business or pleasure, Turbomeca offers a range of services tailored to your needs.

Standard Exchange: reduces lead times an operational losses by allowing you to exchange the engine or module up for repairs or maintenance at a preferred rate.

AOG: when you need the speed, efficiency, dedicated resources and clear plan of action, an AOG team and dedicated communication channels are implemented the resolve the situation in the most efficient an timely fashion.

Help Line: a multi-skilled team is at you disposal 24/7 to answer questions and quickly implement effective solutions for all your emergency situations.

Warranty: 3 years / 2500 h whichever comes first.

Tailored Support By the Hour ® “SBH” contracts: packages are customized and charged monthly according to the number of hours you fly, with no minimums. From basic engine support to fully comprehensive care, SBH ® offers flexibility an ease of use for the coverage you need when you need ist (OH for engines/modules/accessories, Life Limited Parts, standard exchange or rental system, modular or complete engine maintenance, FOD, ASH, on-site technical assistance, etc.)

Turbomeca Internet Web Site – TOOLS: fully interactive web site developed an programmed specifically for your support needs.

Evironment: clean burning with no visible smoke or exhaust soot; the Arrius smoke number is one of the lowest in the industry.

9.5.2.1 Time Between Major Overhauls

The initial TBO value of the ARRIUS 2B2 applicable to the engine / modules / accessories are :

Complete engine 3,500 hours
Module 01 (accessory & reduction gearbox) 3,500 hours
Module 02 (Gas generator) 3,500 hours
Fuel Control Unit 3,500 hours or 10 years (first occurs)

All Gas Generator parts can be replaced in the field through 20 Deep Maintenance procedures.

9.5.2.2 Life-Limited Parts (LLP)

Certain components of the engine, failure of which is classified as an Hazardous effect according to Engine Regulation, have service Life Limits expressed in cycles (reference flight cycle). They are known as critical Life-Limited Parts (LLP).

The limited service life to which this term refers is the number of cycles that a critical life-limited part can run before having to be withdrawn from service.
Cycles are calculated automatically by the Engine Electronic Control Unit. Average experienced rate is about 0,5 cycles / flight hour.

The Life-Limited Parts on the ARRIUS 2B2 are :

Centrifugal impeller 20,000 cycles
HP turbinbe disc 13,000 cycles
Power turbine disc 14,000 cycles

9.6 Training

With more than 50 years of experience, the Eurocopter training centers provide the most comprehensive, coherent and highest standard helicopter training in the world for pilots and technicians, whether civilian or military.

Qualification training, allowing operators to comply with regulatory requirements, and services training, more mission oriented and tailored to the customers' operational needs, are addressed.

All training courses are established according to the relevant civil aviation authorities' requirements. The centers are approved by the relevant airworthiness authorities (EASA, FAA, DGAC, LBA, CAA…). We are certified ISO 9001: V2000 and regularly audited by independent organisation such as Véritas, AFAQ…

Eurocopter training centers provide a wide range of courses and services, from basic training up to preparation for the most sophisticated civil and military missions.

As part of the full range of services on offer, Eurocopter also plays an active role in helicopter pilot development through its Ab Initio programs.

Centers are equipped with multimedia classrooms. This includes computers overhead projectors and state-of-the-art means such as Computer Aided Instruction (CAI), Computer Based Training (CBT). Some centers also have self-learning laboratories.

Eurocopter has set up a network of 14 training centers. For detailed information refer to Eurocopter specific publication.

Starting mid 2008 training can be performed on EUROCOPTER owned simulators FTD (Flight Training Devices) of hightest level according to EASA and JAA standards – based in Europe and North America.

9.7 Technical publications

Eurocopter provides all the technical publications necessary for safely operating and maintaining its aircraft cost effectively.

The printed version of the Aircraft Maintenance Manual (AMM), the System Discription Section (SDS) and the Wiring Diagram Manual (WDM) are tailored to the configuration of your helicopter(s).

Eurocopter technical publications are available on an interactive electronic medium or in hard copies.

The INDOC CD-ROM includes the Aircraft Maintenance Manual (AMM), System Description Section (SDS), Master Servicing Manual (MSM), Illustrated Parts Catalogue (IPC) and the Wiring Diagram Manual (WDM), the Corrosion and Erosion Control Guide (CECG) and the Structural Repair Manual (SRM).

The component maintenance manual (CMM) is available on CD-ROM or hard copy, depending on the Vendor.

Along with the INDOC CD-ROM, Eurocopter provides a hard copy of the Airworthiness and Technical Publication (Flight Manual, Pilots Check List, Master Servicing Manual …) as well as the Service Bulletin Catalogue.

The CD ROM is available in English, French or German; it includes the latest information and is updated regulary.

9.8 T.I.P.I. (Technical Information Publication on Internet)

9.8.1 Description

T.I.P.I. website is entirely dedicated to provide a real-time issuing service for the following publications:

- Service Bulletin, Service Letter, Service Information, Technical Information Letter
- List of Applicable Publications (LOAP)
- List of Master Minimum Equipment List (MMEL)
- Service Life Limited Parts

9.8.2 Main features

- Each time a publication is issued, the customer is automatically informed by an e-mail.
- A small summary, already included in the e-mail, helps the customer to understand quickly the subject.
- Small icons allow the customer to identify immediately the type of information received.
- The download of the publication in pdf format is possible after logging on the T.I.P.I. website.
- A keywords search tool is provided (aircraft family, type of publication, date of edition...).
  Address: www. Eurocopter.com/techpub
  The publications are available in English, French or German depending on the case.

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