

Type Certificate Data Sheet

No. 49

This data sheet, which is part of Type Certificate No. 49, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Japan Civil Aeronautics Law and Regulations.

Type Certificate Holder: AIRBUS HELICOPTERS
Aéroport International Marseille Provence
13725 MARIGNANE Cedex, France

Type Certificate Holder Record Before January 7, 2014:
EUROCOPTER
Aéroport International Marseille Provence
13725 MARIGNANE Cedex
Before June 1, 1997:
EUROCOPTER FRANCE
Aéroport International Marseille Provence
13725 MARIGNANE Cedex
Before January 1, 1992:
AEROSPATIALE
37, Boulevard de Montmorency
75781 PARIS Cedex 16

1. AS 350 B2 VERSION FEATURES

Engine: Safran ARRIEL 1 D1 turbo shaft engine (former: Turbomeca)
(JCAB Type Approval No.636).

Fuel: Refer to Flight Manual.

Engine oil: Refer to Flight Manual.

Installed engine limitations:

Power rating	Limit torque on shaft [Nm]	Minimum guaranteed power*	B2 without VEMD Generator speed (NG)** (Δ Ng)	B2 with VEMD Generator speed (NG)** (Δ Ng)	T4 temperature [°C]
Maximum transient (5sec.)			107.5% (+6)	103.1% (+1)	

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Maximum at takeoff (5mn)	830	478Kw***	Without P2 air bleed (0) With P2 air bleed (-0.6)	Automatic P2 derating by VEMD	845°C
Maximum continuous	830	449Kw	98% (-3.5)	98% (-4)	795°C

* ISA, ground level

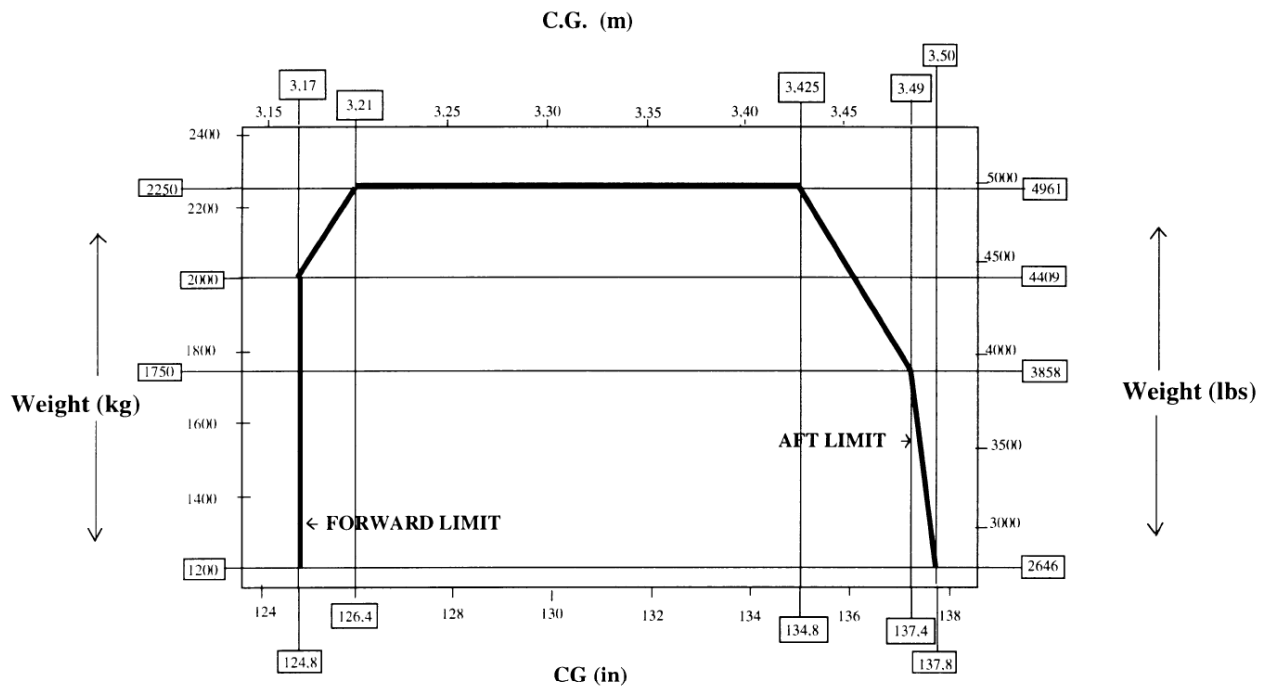
** 100% = 51800rpm

*** The mechanical power has been limited to this value taking the fuel flow limit into account.

Maximum weight: 2250kg

C. G. limits:

-Longitudinal



-Lateral

LH limit : 180mm

RH limit : 140mm

Maximum operating altitude:

-Flight altitude 20000 ft PA(6096 m)

Rotor limitations:

Power-on

-maximum 394 rpm

-minimum 385rpm

Power-off

-maximum 430 rpm (audio warning above 410 rpm)

-minimum 320 rpm (audio warning below 360 rpm)

Maximum forward speed:**Power-on VNE**

VNE power-on:

- 155 KIAS (287 km/h) for HP =0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1000 m)
- in cold weather, for $-30^{\circ}\text{C} > \text{OAT}$, subtract 10 kt (19 km/h) from the above VNE.

VNE power-off:

- 125 KIAS (231 km/h) for HP=0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h per 1 000 m)
- in cold weather, subtract the following values from the above VNE:
- 10 kt (19 km/h), for $-20^{\circ}\text{C} > \text{OAT} > -30^{\circ}\text{C}$
- 20 kt (37 km/h), for $-30^{\circ}\text{C} > \text{OAT}$, without VNE being less than 65 KIAS (120 km/h).

Version B2 serial numbers:

For AS 350 B2: s/n 2100, and subsequent.

For AS 350 B2 with VEMD major modification: s/n 4129, and subsequent.

2. AS 350 B3 VERSION FEATURES

Engine: SAFRAN ARRIEL 2B and 2B1 (former: Turbomeca)
(JCAB Type Approval No.637)
SAFRAN ARRIEL 2D (former: Turbomeca)
(JCAB Type Approval No.637-2)

Fuel: Refer to Flight Manual**Engine oil:** Refer to Flight Manual**Installed engine limitations:**

- on AS 350 B3 ARRIEL 2B (before modifications AMS 072803 and 072808):

Power rating	Limit torque on shaft [Nm]	Minimum guaranteed power* [kW]	Generator speed (NG)** (Δ Ng) [%]	T4 temperature [°C]
Maximum transient (5sec.)			102.3 (+1)	
Maximum at takeoff (5mn)	853	535	101.1 (0)	915
Maximum continuous	716	450	94.8 (-4) } $V_i > 70\text{kt}$ 97.1 (-4) } $V_i < 70\text{kt}$	849

- on AS 350 B3 ARRIEL 2B (after modifications AMS 072803 and 072808) and on AS 350 B3 ARRIEL 2B1:

Power rating	Limit torque on shaft [Nm]	Minimum guaranteed power* [kW]	Generator speed (NG)** (Δ Ng) [%]	T4 temperature [°C]
Maximum transient (5sec.)			102.3 (+1)	
Maximum at takeoff (5mn)	853	535	101.1 (0)	915
Maximum Continuous	791	497	97.1 (-4)	849

* ISA, ground level at rotor speed 386rpm MR speed

** 100% = 52110rpm – without neither electrical , nor P2 bleed, ISA ground level.

- on AS 350 B3 ARRIEL 2D ****:

Power rating	Limit torque on shaft [Nm]	Minimum guaranteed power* [kW]	Generator speed NG *** (Δ Ng) [%]	T4 temperature [°C]
Maximum transient (20sec.)			101.9 (+ 1)	
Maximum at takeoff (5mn)	853	535	100.9 (0)	949
Maximum at takeoff (30 min) (HIP)*****	853	535	(100,9) (0)	949
Maximum Continuous	791	497	(98,0) (-4)	905

* ISA, ground level at rotor speed 386 rpm

** 100 % = 52 110 rpm.

*** As the actual Ng limitations depend on ambient conditions, the operational limitations are the Δ Ng values. Ng values correspond to the maximum Ng reached in the whole flight domain.

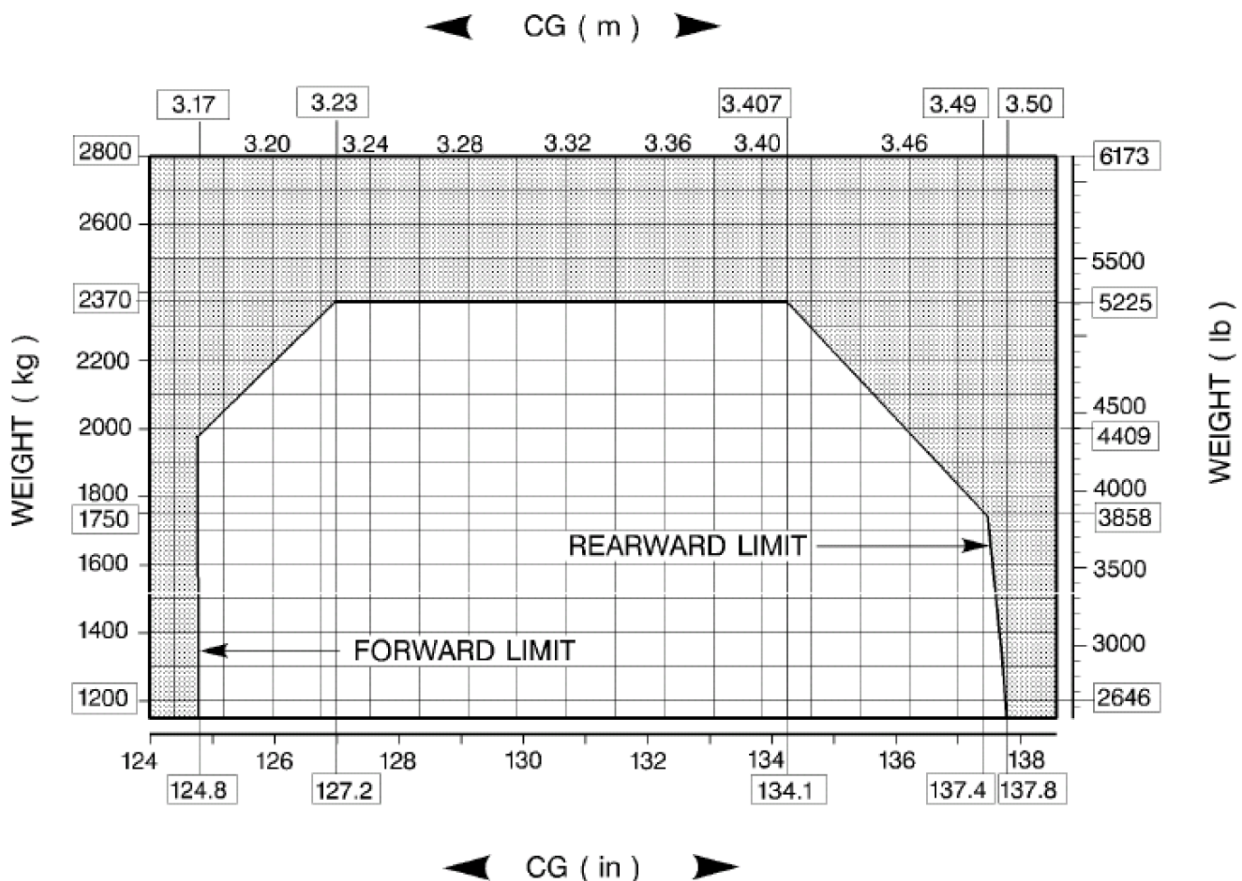
**** Note: The engine is not physically derated but its performance is limited when installed in the AS350B3. Specific limitations have been implemented in the VEMD, allowing the pilot to control the installed Arriel2D at the same power limitations as when an Arriel2B1 is installed, for each aircraft rating (MCP, MTOP and MTP).

***** Use of HIP (Hover Increased Power, TOP 30 min) is only allowed when enhanced thermal protection is fitted on the AS350B3 tail boom (modification OP-4309)

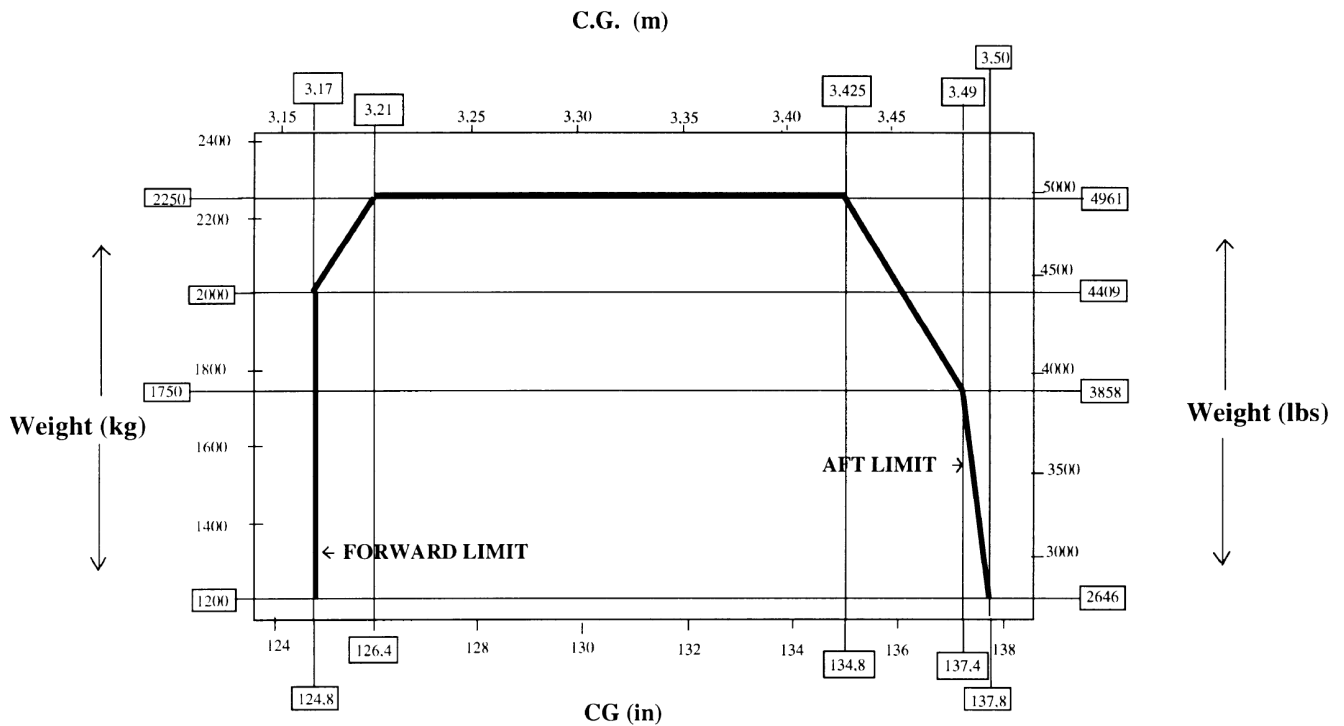
Maximum weight: 2250kg
2370 kg for a/c incorporating mod. OP-3369.

C. G. limits:

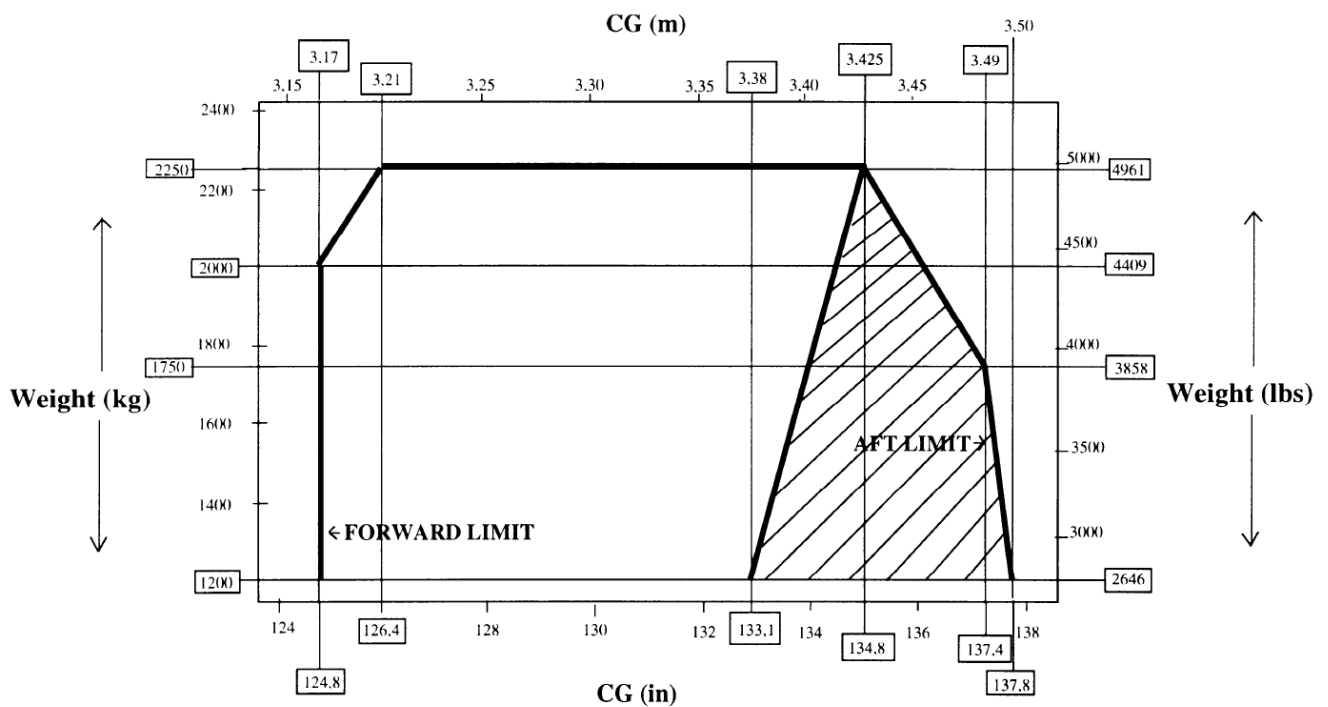
-Longitudinal: AS350 B3 ARRIEL 2B1 a/c incorporating mod. OP-3369:



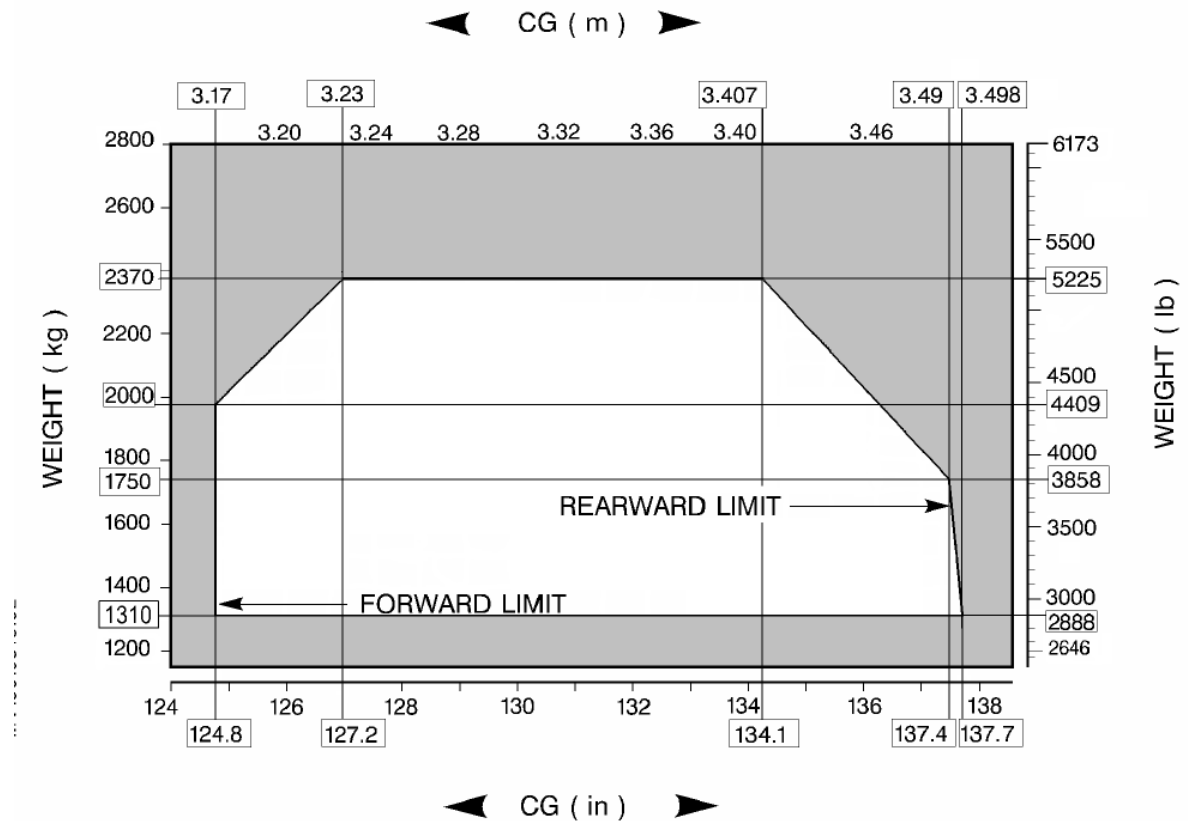
-Longitudinal: AS350 B3 ARRIEL 2B (before modifications AMS 072803 and 072808) and for AS 350 B3 ARRIEL 2B1:



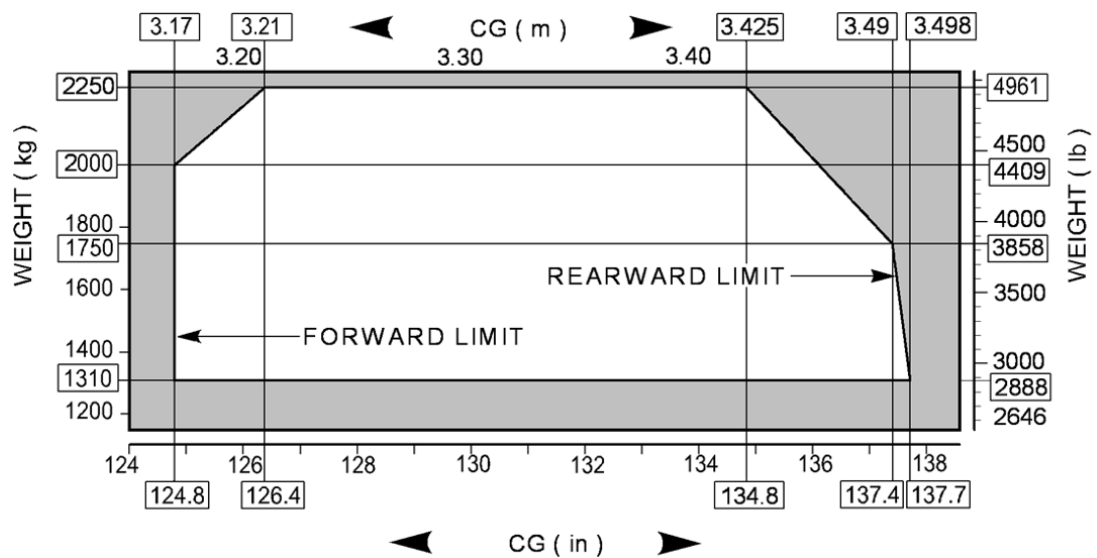
-Longitudinal: AS350 B3 ARRIEL 2B (after modifications AMS 072803 and 072808):



-Longitudinal: AS350 B3 ARRIEL 2D a/c incorporating mod. OP-3369:



-Longitudinal: AS350 B3 ARRIEL 2D:



-Lateral:

- LH limit : 180 mm up to 2250 kg and
80 mm from 2250 up to 2370 kg for aircraft incorporating mod. OP-3369
- RH limit : 140 mm up to 2250 kg and
80 mm from 2250 up to 2370 kg for aircraft incorporating mod. OP-3369

Maximum operating altitude:

-Flight altitude = 23000ft PA(7100 m),see Note 6

Rotor limitations:

- Power-on flight:
- For AS 350 B3 ARRIEL 2B: 390 $\begin{smallmatrix} +4 \\ -5 \end{smallmatrix}$ rpm
 - For AS 350 B3 ARRIEL 2B1: 375 to 405 rpm
 - For AS 350 B3 ARRIEL 2D: 375 to 405 rpm

In autorotation:

- maximum 430 rpm (audio warning sounds at 410 rpm)
- minimum 320 rpm (audio warning sounds at 360 rpm)

Airspeed limits:

For AS 350 B3 ARRIEL 2B (before modifications AMS 072803 and 072808) and for AS 350 B3 ARRIEL 2B1:

- VNE Power-on:
 - 155 KIAS (287 km/h) for PA=0
 - at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m)
 - in cold weather, for $-30^{\circ}\text{C} > \text{OAT}$, subtract 10 kt (19 km/h) from the above VNE.
- VNE Power-off:
 - 125 KIAS (231 km/h) for PA =0
 - at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m), without VNE being less than 65 KIAS (120 km/h)
 - in cold weather, subtract 20 kt (37 km/h) from the above VNE for $\text{OAT} < -20^{\circ}\text{C}$, without VNE being less than 65 KIAS (120 km/h).

For AS 350 B3 ARRIEL 2B (after modifications AMS 072803 and 072808):

- VNE Power-on:
 - 155 KIAS (287 km/h) for PA=0
 - at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m)
 - in cold weather, for $-30^{\circ}\text{C} > \text{OAT}$, subtract 10 kt (19 km/h) from the above VNE.
 - In the cross-hatched area in the C of G graph, VNE is limited to 133 KIAS (246 km/h) or the VNE defined above (the lowest value).
- VNE Power-off:
 - 125 KIAS (231 km/h) for PA =0
 - at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m), without VNE being less than 65KIAS (120 km/h)
 - in cold weather, subtract 20 kt (37 km/h) from the above VNE for $\text{OAT} < -20^{\circ}\text{C}$, without VNE being less than 65 KIAS (120 km/h).

For AS 350 B3 ARRIEL 2D:

- VNE Power-on:
 - 155 KIAS (287 km/h) for PA=0
 - at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000)
 - in cold weather, for $-30^{\circ}\text{C} > \text{OAT}$, subtract 10 kt (19 km/h) from the above VNE.
- VNE Power-off:
 - 125 KIAS (231 km/h) for PA =0
 - at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m), without VNE being less than 65 KIAS (120 km/h)
 - in cold weather, subtract 20 kt (37 km/h) from the above VNE for $\text{OAT} < -20^{\circ}\text{C}$, without VNE being less than 65 KIAS (120 km/h).

Version B3 serial numbers:

- AS 350 B3 aircraft S/N 2968, S/N3063 and up.
- AS 350 B3 aircraft S/N 4201 and up for a/c incorporating mod. OP-3369 (2370 kg weight extension)
- AS 350 B3 aircraft S/N 4767 and up for a/c incorporating mod. OP-4305 (with or without mod. OP-3369)

3. COMMON CHARACTERISTICS TO ALL AS 350 VERSIONS:

MGB and TGB oil: Refer to Flight Manual

C. G. Reference:

Longitudinal:	3.4m forward of the MRH centerline
Lateral:	aircraft symmetry plane

Leveling reference:

Transmission deck

Minimum Flight Crew:

1 pilot in R.H. seat

Maximum Passenger Seating Capacity: 5

When the aircraft is fitted with the forward two-place seat optional equipment, the maximum number of passengers is increased to six (pilot not included). This optional is to be used in accordance with the corresponding Flight Manual supplement.

Baggage:

Maximum load in R.H. side hold:	100kg
Maximum load in L.H. side hold:	120kg
Maximum load in rear hold:	80kg
Maximum load on cabin floor:	forward section 150kg rear section 310kg

Fuel capacity:

For AS350 B2:

Total:	540 litres
Usable fuel:	538.7 litres post AMS 07.0289
Unusable fuel:	1.3 litres post AMS 07.0289

For AS350 B3:

Total:	540 litres
Usable fuel:	538.7 litres post AMS 07.0289 538 litres post AMS OP.4605, or 07.20034
Unusable fuel:	1.3 litres post AMS 07.0289 2 litres post AMS OP.4605, or 07.20034

Oil capacity (max. oil sight level):

Engine:	5.2 litres
MGB:	6.5 litres (circuit included)
TGB:	0.33 litres

Rotor setting:

Refer to aircraft Maintenance Manual

Certification basis:**a. Airworthiness requirements:**

-Japanese Civil Aeronautics Regulations Annex 1

Part IV of the TAIKUSEI-SHINSA-YORYO (JCAB Airworthiness Standards) dated October 15, 1977 (limited to parts equivalent to the Federal Aviation Regulations Part 27 including Amendments 27-1 through 27-10)

-For AS 350 B3 aircraft incorporating mod. OP-3369 (2370 kg weight extension) and/or mod. OP-4305 (Arriel 2D engine installation), as above with the following requirements of Part IV of the TAIKUSEI-SHINSA-YORYO (JCAB Airworthiness Standards) dated October 15, 1977 (limited to parts equivalent to the Federal Aviation Regulations Part 27 including Amendments 27-1 through 27-40) to replace the same numbered paragraphs of above requirements:

1-1-1, 2-1-1, 2-1-2, 2-1-3, 2-1-6, 2-2-1, 2-2-2, 2-2-3, 2-2-5, 2-2-6, 2-2-7, 2-2-8, 2-3-1, 2-3-2, 2-3-6, 2-3-7, 2-3-8, 2-4-4, 3-1-1, 3-1-2, 3-1-3, 3-1-4, 3-1-5, 3-2-1, 3-2-2, 3-2-3, 3-2-4, 3-2-5, 3-4-1, 3-4-2, 3-4-11, 3-4-12, 3-5-1, 3-6-1, 3-6-2, 3-7-2, 3-8-1, 4-1-1A, 4-2-3, 4-2-4, 4-3-9, 4-4-1, 4-4-2, 4-4-3, 4-4-8, 4-5-1, 4-5-2, 4-6-9-2, 4-6-9-4, 5-2-4-3, 5-6-1, 5-6-2, 5-6-3, 6-1-1, 7-1, 7-2-4, 7-2-8, 7-4-1, 7-4-2, 7-4-3, 7-4-4, 7-4-5

-Airworthiness Requirement for a/c incorporating mod. OP-4605 (installation of a fuel system improving crashworthiness)

As above with requirement § 561(c) of CS27 Amdt. 3 of 11/12/2012 (ED Decision 2012/021/R) replacing same numbered paragraph of FAR 27 for the following elements of the fuel tank lower structure, affected by this modification: cradles, longitudinal beams, X-stops and rods (refer to CRI C-03).

-Airworthiness Requirement for a/c incorporating mod. 07.20034 (installation of a fuel system crash resistance compatible with swing installation)

As above amended by the following additional or alternative airworthiness requirements CS-27 Amdt. 3, dated 11 December 2012: 27.863, 27.901 (b)(5), 27.952 27.963 (e)(f)(g)(h), 27.967, 27.973, 27.975 (b) for the fuel system and airframe structure/fuel system interfaces.

-For AS 350 B2 and B3 aircrafts equipped with Emergency Floatation System (EFS) (removable parts P/N / MPN: [223244-0 / 704A42690057])

As above amended by the following additional requirement of CS 27, Amdt. 10, dated 27 January 2023: 27.1587-b3.

b. Special Conditions: (See Note J8)

-For AS 350 B2:

Complementary and special conditions defined in letters 6518 dated August 17, 1976, 6437 dated July 28, 1977 and 53639 dated June 25, 1985 (see letter 53151/SFACT/TC dated February 9, 1989)

For a/c equipped with VEMD major modification, as above plus:

- special conditions on protection against the effects of High Intensity Radiated Fields (HIRF) and Lightning
 - equivalent safety findings for powerplant instrument markings
- See AS350B2 (VEMD) CRI n. A-1 issue 3 dated 17/11/06 for details

-For AS 350 B3:

for a/c incorporating mod. OP-3369 (2 370 kg weight extension)

Complementary and special conditions defined in DGAC Letter No.971726 dated 3 April 1997

for a/c incorporating mod. OP-4305 (Arriel 2D engine installation) and/or OP-4605 (installation of a fuel system improving crashworthiness) and/or mod. 07.20034 (installation of a fuel system crash resistance compatible with swing installation)

DGAC Letter No.971726 dated 3 April 1997 and modified as per CRI A-01(X1):

- Part 21.A.21 (d) taking precedence over "Complementary Condition" CC 27.903 (a) in Appendix 1 to DGAC letter 971726,
- Power plant control (CRI E-02(X1)) replacing Special Condition B.1. in Appendix 2 to DGAC letter 971726,
- Structure protection against lightning (CRI D-01 (X1)) replacing Special Condition D.1. in Appendix 2 to DGAC letter 971726,
- Protection from effects of HIRF (CRI F-01(X1)) replacing Special Condition E1 in Appendix 3 to DGAC letter 971726,
- Immunity from effects of lightning as defined in CRI F-02(X1) replacing Special Condition E2 per Appendix 3 to DGAC letter 971726,
- Rotor drive system endurance test for HIP CRI E-01(X1)
- Rechargeable Lithium battery installations (CRI F-24),
- Lightweight Data Recorder installation (CRI F-25).

c. Equivalent Safety Findings

Powerplant Instrument Markings CRI G-01(X1) for a/c incorporating mod. OP-4305 (Arriel 2D engine installation)

d. Environmental requirements:

- Civil Aeronautics Regulations Annex 2 Chapter 5 (equivalent to ICAO Annex 16 Volume 1 Chapter 8) for Noise Requirements.
- For AS 350 B3 aircraft incorporating mod. OP-3369 (2370 kg weight extension), Civil Aeronautics Regulations Annex 2 Chapter 7 (equivalent to ICAO Annex 16 Volume 1 Chapter 11) for Noise Requirements.
- For AS 350 B3 aircraft incorporating mod. OP-4305 (Arriel2D engine installation), Civil Aeronautics Regulations Annex 2 Chapter 7 (equivalent to ICAO Annex 16 Volume 1 Chapter 11) for Noise Requirements.
- Civil Aeronautics Regulations Annex 3 (equivalent to ICAO Annex 16 Volume 1) for Fuel Venting Requirements.

Equipment required:

The basic required equipment specified in the applicable airworthiness regulations (see certification basis) must be installed on the aircraft at certification time and at every time after certification.

The Flight Manual must be in the aircraft.

Documents relating to operation:

a) Helicopter

-FLIGHT MANUAL (see note 4)

AS 350 B2 approved on April 26, 1989

AS 350 B2 (VEMD) Flight Manual, approved by EASA on November 22, 2006, or later approved revisions

AS 350 B3 ARRIEL 2B Flight Manual, approved by DGAC-F on December 24, 1997 plus rapid revision RR 1A (after modifications AMS 072803 and 072808), or later (DGAC-F and subsequently EASA) approved revisions

AS 350 B3 ARRIEL 2B1 Flight Manual, approved by DGAC-F on July 16, 2004 or later (DGAC-F and subsequently EASA) approved revision

AS 350 B3e Flight Manual, (for a/c incorporating mod. OP-4305 - Arriel2D engine installation – and additional

modifications to the tail rotor control system – see Note 5), approved by EASA on June 17, 2011, or later approved revisions

- AS 350 SERVICE MANUAL (see notes 3 and 4)
- AS 350 OVERHAUL MANUAL
- AS 350 REPAIR MANUAL
- AS 350 ILLUSTRATED PARTS CATALOGUE
- AS 350 SERVICE BULLETINS

b) Engine

ARRIEL 1D1 engine: refer to Data Sheet No.636

ARRIEL 2B, 2B1 and 2D engine: refer to Data Sheet No.637

4. NOTES APPLICABLE TO ALL AS 350 VERSIONS

NOTE1 : 1- The following placard must be fitted in a way that the pilot can see it clearly.
“

THE MARKINGS AND PLACARDS INSTALLED ON THIS HELICOPTER CONTAIN OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THE ROTORCRAFT. OTHER OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS ROTORCRAFT ARE CONTAINED IN THE ROTORCRAFT FLIGHT MANUAL. THE "AIRWORTHINESS LIMITATIONS" SECTION OF THE ROTORCRAFT MAINTENANCE MANUAL MUST BE COMPLIED WITH”.

2- Refer to the Flight Manual as regards the other placards.

NOTE2 : The AS 350 Maintenance Manuals Chapter 5 “Master Servicing Recommendations” have been deemed acceptable by the DGAC to carry out satisfactory maintenance operations on the AS 350 helicopter; part 5.99 “Airworthiness Limitations” contains limitations which are to be mandatory observed.

NOTE3 : Compatibility between optional items of equipment is described:
-from an installation aspect : in the “Master Servicing Recommendations”.
-from an operational aspect : in “Supplements” chapter of the Flight Manual.

NOTE4 : Commercial designations:
-ECUREUIL corresponds to AS 350 B2 and B3

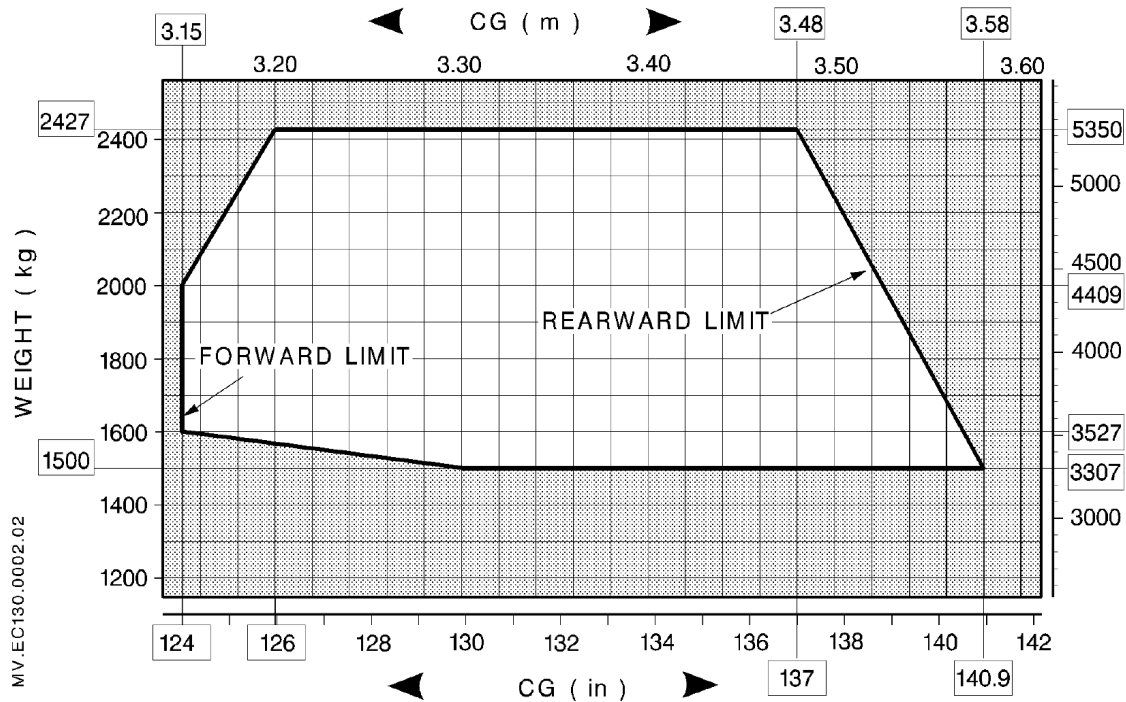
NOTE5: Commercial designation related to particular modifications:
The AS350B3 model a/c, which type design incorporates the following modifications:
o OP-4305 (Arriel2D engine installation), and additionally
o 07-5601 (Tail rotor control mechanism modification)
o 07-5600 (Tail rotor blade reinforcement)
o 07-8551 (Tail Gear Box control lever modification)
has a commercial designation <AS350B3e>

NOTE6: For helicopters fitted with:
- Arriel 2B engine and Pre-Mod 072810; or,
- Arriel 2B1 or Arriel 2D engine, and Post-Mod 073368 and Pre-Mod AL-4236;
en route altitude is 20 000 ft (6 096m).

Power-on	
-maximum	405 rpm
-minimum	375rpm
Power-off	
-maximum	430 rpm (audio warning above 410 rpm)
-minimum	320 rpm (audio warning below 360 rpm)

C.G. range:

Longitudinal



Lateral: from 100mm (left) to 100mm (right)

Maximum mass: 2427kg**Minimum crew:** 1 pilot in left seat**Maximum passenger:** 6 (2 at front and 4 at rear)
7 (3 at front and 4 at rear) after modification OP-3673**Passenger emergency exit:** 2 (two), one on each side of the fuselage**Maximum Baggage/Cargo loads:** Loading 300 kg/m² except 145 kg/m² for rear cargo compartment.

Baggage compartment load limitations:

R.H. cargo compartment:	130 kg
L.H. cargo compartment:	155 kg
Rear cargo compartment:	80 kg
Forward cabin floor:	405 kg
Rear cabin floor:	495 kg

Maximum operating pressure altitude: 23000ft**Operational limits:**

- Day VFR
- Night VFR if modification 07-3664 is installed
- Flights under icing, freezing rain or snowing conditions and aerobatic maneuvers are prohibited

C.G. reference:

- Longitudinal: the datum plane (STA 0) is located at 3 400 mm forward of MRH centre line.
- Lateral: aircraft symmetry plane

Leveling means: mechanical floor

Certification basis:

- a-1. Japanese Civil Aeronautics Regulations Annex 1
Part IV of the TAIKUSEI-SHINSA-YORYO (JCAB Airworthiness Standards) dated February 28, 2001 (limited to parts equivalent to the Federal Aviation Regulations Part 27 including Amendments 27-1 through 27-32)
- a-2. For aircrafts equipped with Emergency Floatation System (EFS) (removable parts P/N / MPN: [217228-1 / 704A42690053] or [217227-1 // 704A42690054])
As above (a-1) with the following additional requirement of CS 27, Amdt. 10, dated 27 January 2023: 27.1587-b3.
- b. Special Conditions: (See Note J8)
High intensity Radiated Field
(Interim Policy INT/POL/27&29/1 issue 2 dated June 1, 1997)
- c. Equivalent Safety
Main gearbox oil filter bypass (CRI No. E4 dated December 12, 2000)
Powerplant instrument marking (CRI No. F3 dated June 9, 2000)
- d. Exemption
Fuel system (CRI No. E1 dated September 21, 2000)
OP-3640 is compliant with JAR 27.785 and FAR 27.562, Amdt. 32 (CRD 350ABN0071 issue c), unless further modifications have been performed.
- e. Civil Aeronautics Regulations Annex 2 Chapter 5 (equivalent to ICAO Annex 16 Volume 1 Chapter 8 for Noise Requirements).
- f. Civil Aeronautics Regulations Annex 3 (equivalent to ICAO Annex 16 Volume 1 for Fuel Venting Requirements).

Serial number: EC 130 B4 aircraft S/N 3358 and up.

Required equipment:

As per compliance with JAR 27 requirements and included in the original Type Design Standard or indicated on the section 2 – Limitations of the Flight Manual.

Required documents:

-for French Type Certification issuance:

- Flight Manual (in English):
Original issue approved by DGAC-F on November 29, 2000 or subsequent issues.
- Airworthiness Limitations (in English):
Master Servicing Manual – chapter 04 original issue approved by DGAC-F on December 6, 2000 or subsequent issues.

6. EC 130 T2 VERSION FEATURES

Type Design Definition: Doc.350A047422
Type Design Definition For JAPAN Doc. 350A0N0001 Issue:A and subsequent revisions

Dimensions:

Fuselage:	length:	10.68m
	width:	2.03m
	height:	3.61m
Main rotor:	Diameter:	10.69m, 3 blades
Tail rotor:	Diameter:	1.00m, 10 blades

Engine: 1 turbine engine ARRIEL 2D manufactured by Safran Helicopter Engines (JCAB Type Approval No.637-2).

Fuel: Refer to Flight Manual for approved fuels and additives
Fuel capacity total: 540 litres
usable: 538 litres

Oil: Refer to Flight Manual for approved engine and gearbox oils

Installed Engine Limitations and Transmission Torque Limits:

Ratings	Limit TQ on shaft [Nm]	Gas generator *** NG ** (Δ Ng) [%]	Min. guaranteed PWR * [kW]	Temperature T45 [°C]
Max transient(20sec)	- - -	102.8 (+1)	- - -	- - -
Max TOP(5min) ****	951	101.7(0)	597.5	949
Max. TOP (30 min) HIP ****	951	101.7(0)	597.5	949
MCP	773	97.7(-4)	485.7	905

Note: - * ISA, ground level at 386 rpm MR speed.

- **100% = 52 110 rpm.

- ***As the actual Ng limitations depend on ambient conditions, the operational limitations are the Δ Ng values. Ng values correspond to the maximum Ng reached in the whole flight domain.

- ****Use of 'TOP (30 min)' power is limited to 30 min. continuous use. Cumulated use per flight of 'TOP (5 min)' and 'TOP (30 min)' powers is limited to 60 min.

Transmission torque limits:

Max transient (5sec): 104%
Max Take off: 100%
Max Continuous: 81.3%
100% TQ corresponds to 598 kW at 386 rpm MR speed.

Airspeed limits:

VNE power on: - 155 KIAS at MSL less 3 kt/1 000 ft
- 136 KIAS at MSL less 3 kt/2 000 ft below 12 750 ft PA
for reduced VNE area (refer to RFM)
VNE power-off:
125 KIAS at MSL less 3 kt/1 000 ft

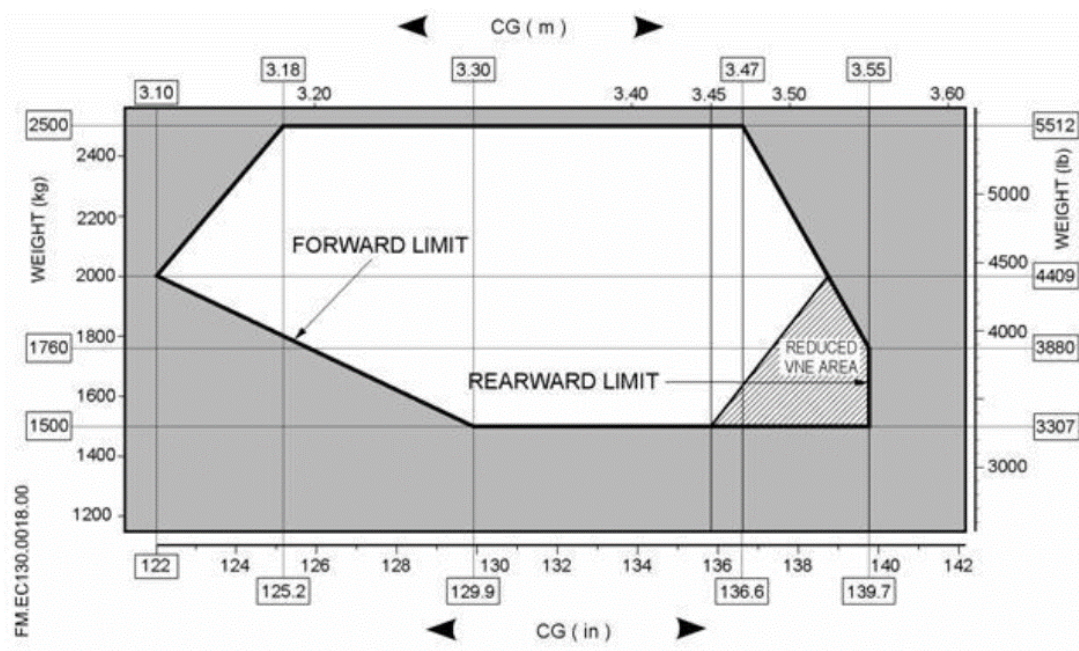
Rotor speed limits:

Power on: Maximum 405 rpm
Minimum 375 rpm

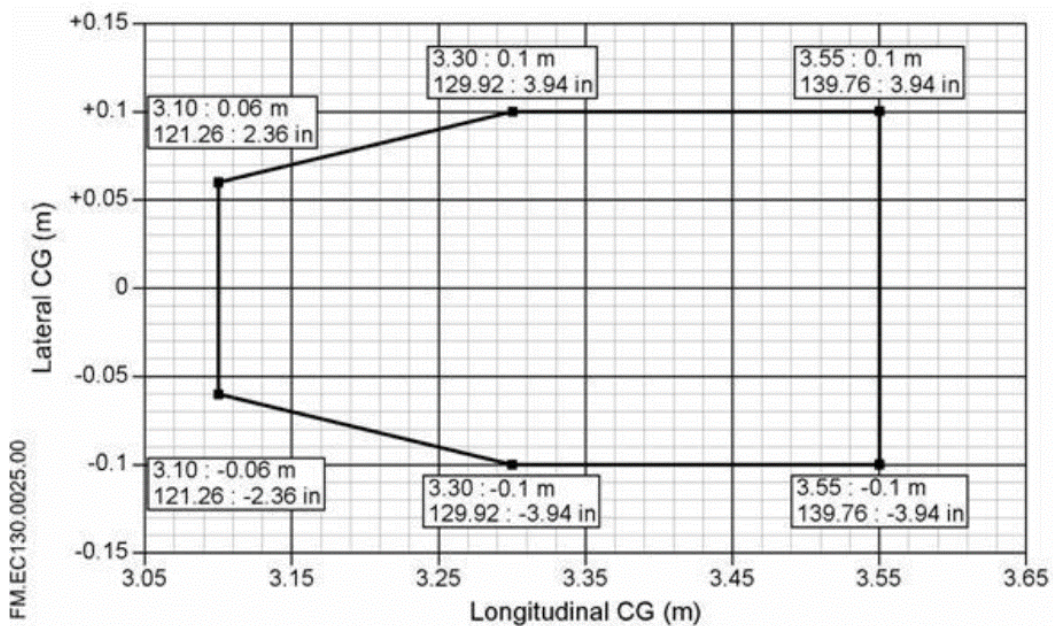
Power off: Maximum 430 rpm (audio warning above 410 rpm)
 Minimum 320 rpm (audio warning below 360 rpm)

C.G. range:

Longitudinal



Lateral



Maximum Mass: 2500kg

Minimum crew: 1 pilot in left seat

Maximum passenger: 6 (2 in the front and 4 in the rear)

Passenger emergency exit: 2 (two), one on each side of the fuselage

Maximum Baggage/Cargo loads:

Loading 300 kg/m², except 145 kg/m² for rear cargo compartment.

Max. load in:

R.H. cargo compartment:	130 kg
L.H. cargo compartment:	155 kg
Rear cargo compartment:	80 kg
Forward cabin floor:	405 kg
Rear cabin floor:	495 kg

Maximum operating pressure altitude: 23000ft

Operational limits:

- Day VFR
 - Night VFR, when additional equipment required by operational regulations is installed and serviceable
 - Aerobatic manoeuvres are prohibited
 - Flights under icing, freezing rain or snowing conditions and aerobatic maneuvers are prohibited
 - Flight in falling snow are prohibited except if sand filter is installed (see RFMS SUP.14)
- For more information refer to Flight Manual

C.G. reference:

- Longitudinal: the datum plane (STA 0) is located at 3 400 mm forward of MRH centre line.
- Lateral: aircraft symmetry plane

Leveling means: mechanical floor

Certification basis:

- a-1. Japanese Civil Aeronautics Regulations Annex 1

JAR 27 first issue dated 6 September 1993 and orange paper amendment 27/98/1 effective 16 February 1998

This is equivalent to Part IV of TAIKUSEI-SHINSA-YORYO, KU-KEN-381, dated 20 October 1966 including its amendment to KOKU-KU-KI-192, dated 15 April 1992 (equivalent to FAR part 27 including amendment 27-1 through 27-19) and FAR part 27 amendment 27-20 through 27-32.

- a-2. For aircraft incorporating MOD.074581(new tail boom: structure and flight controls)

As above (a-1) with the following requirements of CS 27 Amendment 3 of 11 December 2012 as replacement of the same numbered paragraphs of JAR 27 1st issue, dated 6 September 1993 and Orange Paper Amendment 27/98/1, effective 16 February 1998:

- for the rear engine compartment: §305, §307, §351 (rear engine cowling), §471, §473-a, §501, §603, §609, §610, §613, §1529;
- for the tailboom: §305, §307, §471, §473 (a), §501, §571(metallic cone junctions), §573 (composite spacer), §603, §609, §610, §613, §1529 with addition of §351, §1041, §1043, §1045, §1194 for the specific rear transmission fairing including thermal shield area;
- for the fenestron structure: §305, §307, §411, §471, §473 (a), §501, §571, §573 (Fenestron one-shot structure), §603, §609, §610, §613, §725-a, §1529;
- for the cooling aspects of rear transmission: §1041, §1043, §1045.

- a-3. For aircraft equipped with Emergency Floatation System (EFS) (removable parts P/N / MPN: [217228-1 / 704A42690053] or [217227-1 // 704A42690054])

As above (a-2) with the following additional requirement of CS 27, Amdt. 10, dated 27 January 2023: 27.1587-b3.

- b. Special Conditions (See Note J8)
 - High intensity radiated field (CRI F-01(X2))
 - Rotor drive system endurance test for HIP rating (CRI E-02(X2))
 - Rechargeable Lithium battery installations (CRI F-24),
 - Lightweight Data Recorder installation (CRI F-25).
- c. Equivalent Safety
 - Main gearbox oil filter bypass (EC130B4 CRI E4, CRI A-01(X2))
 - Powerplant instrument markings (CRI G-01(X2))
- d. Exemption
None
- e. JCAB Additional Special Requirements;
 - Requirements for markings and placards as shown in JCAB Circular No.1-008. (NOTE J6)
 - Requirement for Rotorcraft Flight Manual written in Japanese language as shown in JCAB Circular No.1-001. (NOTE J5)
 - Requirements for White strobe light system as shown in JCAB Circular No.1-026. (NOTE J7)
- f. Environmental Requirements;
 - Japanese Civil Aeronautics Regulations Annex 2 Chapter 5 dated 17 November 2011 (equivalent to ICAO Annex 16, Volume I, Part II, Chapter 11) for Noise Requirements.
 - Japanese Civil Aeronautics Regulations Annex 3 Chapter 1 dated 17 November 2011 (equivalent to ICAO Annex 16, Volume II, Part II, Chapter 2) for Fuel Venting Requirements.

Serial number: EC 130 T2 aircraft S/N 7355, and subsequent.

Required equipment:

As per compliance with EC130T2 certification basis and included in the original Type Design Standard or indicated on the section 2 – Limitations of the Flight Manual.

Required documents:

- Flight Manual:
EASA-approved on 25 May 2012, or subsequent issues.
- Airworthiness Limitations (in English):
EASA-approved on 25 June 2012, or subsequent issues.

7. CS26 COMPLIANCE INFORMATION

The CS 26 compliance information for AS350 and EC130 is provided in document “350N043005E_TN - LIGHT HELICOPTERS COMPLIANCE TO CS 26 FOR AS350 AS355 EC130 MODELS”, available upon request to Airbus Helicopters. (The above information is for reference only, as Japanese operators are not required to show compliance with CS26.)

8. NOTES APPLICABLE TO ALL VERSIONS

NOTE J1. Dates of application for EASA and JCAB Type Certificate are as follows.

Model	EASA R008(former DGAC FR157)	JCAB No. 49
AS350B2	October 6, 1988	June 6, 2003
AS350B3	October 14, 1996	June 6, 2003
EC130B4	March 23, 1998	June 6, 2003
EC130T2	October 14, 2010	June 13, 2016

NOTE J2. This Type Certificate Data Sheet (TCDS) is based on EASA TCDS R 008 Issue 19.

NOTE J3. Import Eligibility

To be considered eligible for operation in the Japan, each rotorcraft manufactured under this Type certificate must be accompanied by a Certificate of Airworthiness for Export or certifying statement endorsed by the exporting foreign civil authority which states the following example (in the English language);

“The rotorcraft covered by this certificate has been examined, tested and found to conform to the type design approved under JCAB Type Certificate No.49-1 and is found to be in a condition for safe operation.”

NOTE J4. SAFRAN ARRIEL 1D1 engine has JCAB Type Approval No.636.
SAFRAN ARRIEL 2B and 2B1 engine have JCAB Type Approval No.637.
SAFRAN ARRIEL 2D engine have JCAB Type Approval No.637-2.

NOTE J5. JCAB-approved Rotorcraft Flight Manual shall be written in Japanese language or English language as shown in JCAB Circular No.1-001.

NOTE J6. Specified placards and markings shall be written in Japanese and JCAB approved Japanese placards and markings are described in AIRBUS HELICOPTERS Document No.350A0N0001

NOTE J7. Installation of white strobe light requires JCAB-approved Flight Manual Supplement.

NOTE J8. Non-proprietary data contained in selected Special Conditions that are part of the Certification Basis are published in the ‘Explanatory Note No: TCDS EASA.R.008’. The document is not exhaustive and will be gradually updated.

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