TYPE-CERTIFICATE

DATA SHEET

No. EASA.R.508

for

EC 120

Type Certificate Holder

Airbus Helicopters

Marseille Provence

13725 Marignane CEDEX

France

For Models: EC 120 B

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TABLE OF CONTENTS

SECTION 1: MODEL #1 DESIGNATION.

I. General

1.	Type/ Model/ Variant	
	1.1 Type	EC 120
	1.2 Model	EC 120 B
	1.3 Variant	---
2.	Airworthiness Category	Small Rotorcraft, Category B
3.	Manufacturer	Airbus Helicopters Marseille Provence 13725 Marignane CEDEX, France
4.	Type Certification Application Date	to DGAC FR: 6 May 1994
5.	State of Design Authority	EASA
6.	Type Certificate Date by NAA	DGAC FR: 19 June 1997
7.	Type Certificate n°	EASA.R.508 (former DGAC FR: 189)
8.	Type Certificate Data Sheet n°	EASA.R.508 (former DGAC FR: 189)
9.	EASA Type Certification Date	28 September 2003, in accordance with CR (EU) 1702/2003, Article 2, 3., (a), (i), 2nd bullet, 1st indented bullet.

II. Certification Basis

1.	Reference Date for determining the applicable requirements	6 May 1994
2.	Airworthiness Requirements	JAR 27, Issue 1, dated 6 September 1993,
2.1		as defined in CRI A-01
2.2	For a/c equipped with Emergency Floatation System (EFS)	As above (2.1) with the following additional requirement of CS 27, Amdt. 10, dated 27 January 2023: 27.1587-(b)(3)
3.	Special Conditions	HIRF (CRI E-09)
4.	Exemptions	none
5.	Deviations	none
6.	Equivalent Safety Findings	- Main gear box oil filter bypass - Powerplant instrument marking
7.	Requirements elected to comply	none
8.	Environmental Protection Requirements	See TCDSN EASA.R.508
9.	Operational Suitability Data (OSD)	see SECTION 2 below

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	Basic EC 120 B definition: Report DMD C 000A0761 E01, Issue B
2.	Description	Single gas turbine engine; three-bladed 'Spheriflex' main rotor, eight-bladed 'Fenestron' tail rotor; helicopter with skid type landing gear; seat capacity up to four passengers and one pilot
3.	Equipment	As per compliance with JAR 27 requirements and referenced within approved RFM

4. Dimensions

4.1 Fuselage
Length: 9.60 m
Width hull/skids: 1.50 m/2.07 m
Height: 3.40 m

4.2 Main Rotor
Diameter: 10.00 m

4.3 Tail Rotor
Diameter: 0.75 m

5. Engine

5.1 Model
Safran Helicopter Engines (former: Turboméca)
1 x Model Arrius 2F

5.2 Type Certificate
DGAC France TC/TCDS n°: M22
EASA TC/TCDS n°: EASA.E.031

5.3 Limitations

5.3.1 Installed Engine Limitations

	Gas generator speed (N_G)(1) [%]	Exhaust gas temperature (T_4) [°C]
Max. TKOF (5 min)	101.0	870
Max. Continuous	99.5	830
Max. transient (5 sec)	103.6	900
Max. Continuous (starting)	- - -	800

Note: (1) 100%: 54 117 rpm

5.3.2 Transmission Torque Limits

Max. transient 110%
Max. TKOF 103%
Max. Continuous 97%
Engine torque 100% = 477.5 Nm
Note: 100% = 300 kW at 406 rpm

6. Fluids (Fuel/ Oil/ Additives)

6.1 Fuel
Refer to approved RFM

6.2 Oil
Refer to approved RFM

6.3 Additives
Refer to approved RFM

7. Fluid capacities

7.1 Fuel
Fuel tank capacity: 410.5 litres
Usable fuel: 406 litres

7.2 Oil
Engine: Min. 3.0 litres
Max. 4.9 litres
MGB: 4.0 litres
TGB: 0.2 litres

7.3 Coolant System Capacity
n/a

8. Air Speed Limitations
$V_{NE\ PWR\ ON}$: 150 KIAS at MSL
$V_{NE\ PWR\ OFF}$: 120 KIAS at MSL
Reduce by 3 kt per 1 000 ft
Refer to approved RFM for airspeed with doors open or removed.

9.	Rotor Speed Limitations	Power on: Normal range Maximum 415 rpm Minimum 390 rpm Power off: Maximum 447 rpm (aural warning ≧ 420 rpm) Minimum 340 rpm (aural warning ≤ 370 rpm)
10.	Maximum Operating Altitude and Temperature	
	10.1 Altitude	
	Enroute: 20 000 ft PA (6 096 m) Take-off and landing: 2 000 ft PA (610 m), or, 20 000 ft PA (6 096 m), when change A00075 and SB 32.001 have been embodied to the aircraft (use RFM issue 2 plus ITR 3C, or subsequent issue	
	10.2 Temperature	-30°C to ISA +35°C, not to exceed +50°C
11.	Operating Limitations	VFR day VFR night, operation permitted only when SB 34.001 has been embodied to the aircraft (use RFM issue 2 plus ITR 3E, or subsequent RFM issues) Non-icing conditions No flight in freezing rain No aerobatics
12.	Maximum Mass	1 715 kg, TKOF and LDG
13.	Centre of Gravity Range	Refer to approved RFM
14.	Datum	Longitudinal: the datum line (STA 0) is located at 4 000 mm forward of main rotor head Lateral: aircraft symmetry plane
15.	Levelling Means	Mechanical floor
16.	Minimum Flight Crew	1 pilot
17.	Maximum Passenger Seating Capacity	1 cockpit, 3 cabin
18.	Passenger Emergency Exit	2, one door on each side of the fuselage
19.	Maximum Baggage/ Cargo Loads	Baggage compartment: loading 300 kg/m² Cabin compartment: Cargo floor loading 300 kg/m²
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	n/a
22.	Life-limited Parts	See approved ALS chapter of the MSM

IV. Operating and Service Instructions

1.	Flight Manual	- Flight Manual EC 120 B, Issue 1, approved 19 June 1997); - Flight Manual EC 120 B, Issue 2, Normal Revision 0, date code 16-26, approved by EASA on 16 September 2019 or subsequent approved revisions.

2.	Maintenance Manual	- EC 120 B Aircraft Maintenance Manual - Chapter 04 (original issue approved by DGAC France, 19 June 1997) at issue 1 (approved by DGAC France, 30 March 1998) - EC 120 B Master Servicing Manual - Chapter 04, (original issue approved by DGAC France, 12 March 1999), or subsequent EASA-approved issues and revisions
3.	Structural Repair Manual	n/a
4.	Weight and Balance Manual	See Flight Manual EC 120 B, Section 6
5.	Illustrated Parts Catalogue	EC 120 B Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Eurocopter or Airbus Helicopters
7.	Required Equipment	As per compliance with JAR 27 requirements and included in the original Type Design Standard. The RFM must be on board.

v. Notes

1. Manufacturer's eligible serial numbers:

   s/n 1001 up to and including 1700

   Except: s/n 1004

2. Designations:
   'H120' is used as marketing designation for EC 120 B helicopters.
   The commercial designation 'COLIBRI' is also used

SECTION 2: OPERATIONAL SUITABILITY DATA (OSD)

The OSD elements listed below are approved by the European Aviation Safety Agency as per Commission Regulation (EU) 748/2012, as amended by Commission Regulation (EU) No 69/2014.

I. OSD Certification Basis

I.1 Reference Date for determining the applicable OSD requirements

17 February 2014 (entry into force of Commission Regulation (EU) No 69/2014)

I.2 MMEL - Certification Basis

JAR-MMEL/MEL, Amdt. 1, Section 1, Subpart A&B, dated 5 August 2005

I.3 Flight Crew Data - Certification Basis

JAA/FAA/TCCA Common Procedures Document for Conducting Operational Evaluation Boards, dated 10 June 2004;
see AH Document 120ABN0053 - Flight Crew Data for EC 120, and,
Explanatory Notes - Transition from Operational Evaluation Board (OEB) Reports to Operational Suitability Data (OSD) for Flight Crew Data, dated 27 March 2015

II. OSD Elements

II.1 MMEL

Master Minimum Equipment List EC 120 B, Normal Revision 0, Issue 2, Date-code 10-27, approved 14 February 2011, or later EASA-approved revisions

II.2 Flight Crew Data

AH Document 120ABN0053 - Flight Crew Data for EC 120, including:
Annex A: OSD Cover Sheet to Annex B – Division Mandatory Data – Non Mandatory Data
Annex B: Operational Evaluation Board Report – Final Report - dated: 16 May 2012

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

AH	Airbus Helicopters	MMEL	Master Minimum Equipment List
ALS	Airworthiness Limitations Section	MSM	Master Servicing Manual
Amdt.	Amendment	PA	Pressure Altitude
CR	(European) Commission Regulation	PWR	Power
HIRF	High Intensity Radiated Field	RFM	Rotorcraft Flight Manual
JAA	Joint Aviation Authorities	s/n	Serial Number
JAR	Joint Aviation Requirements	sec	Seconds
LDG	Landing	STA	Station
Max.	Maximum	TKOF	Take-Off
Min.	Minimum	VFR	Visual Flight Rules
min	Minute	V_{NE}	Never Exceed Speed

II. Type Certificate Holder Record

Type Certificate Holder	Period
Eurocopter Aéroport International Marseille – Provence 13725 Marignane CEDEX, France	1 January 1992 - 6 January 2014
Airbus Helicopters Marseille Provence 13725 Marignane CEDEX, France	since 6 January 2014

III. Change Record

Issue	Date	Changes	TC issue
Issue 1	15 Jun 2010	Initial EASA Issue, transfer of grandfathered DGAC France TCDS 189, issue 6, and JAA TCDS N°JAA/27/97/002, issue 6, dated October 2002 into EASA format	Initial EASA Issue 15 June 2010
Issue 2	7 Jan 2014	Change of TC holder name from Eurocopter to Airbus Helicopters	Re-issued 7 January 2014
Issue 3	14 Dec 2015	OSD added; editorial changes to EASA format; new model commercial designation EC 120 B / H120 added.	- - -
Issue 4	19 Sep 2019	IV.1.: RFM Issue 2 added; V.1.: range of s/n updated; editorial changes; standardisation of TCDS data	- - -
Issue 5	31 Oct 2024	II.2 inclusion of certification basis for aircraft equipped with Emergency Floatation System (EFS)	

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