Ministry of Transport and Communication of Ukraine
State Aviation Administration

SAA

TYPE CERTIFICATE DATA SHEET № TB 0017

MBB-BK117

Type Certificate Holder: **EUROCOPTER DEUTSCHLAND GmbH**
Industriestrasse 4, D-86607 Donauwörth, Germany

Models: **MBB-BK117 C-2**

Issue 1, 06 August 2009

This Data Sheet which is integral part of Type Certificate № TB 0017 prescribes the conditions and limitations under which the product(s) for which the Type Certificate was granted meet(s) the airworthiness requirements and environmental protection requirements, stated in Certification basis mentioned in this Data Sheet Chapter II of the Section 2.

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1.	**Data Sheet No**:	TB 0017
2.	**Type Certificate Holder**:	**EUROCOPTER DEUTSCHLAND GmbH** Industriestrasse 4, D-86607 Donauwörth, Germany
3.	**Authority of National Certification:**	**European Aviation Safety Agency (EASA)** Postfach 10 12 53 D-50452 Koeln, Germany **(Luftfahrt-Bundesamt (LBA)** Hermann-Blenk-Straße 26 D-38108 Braunschweig, Germany)

SECTION 2. MODELS

2.1. MBB-BK117 C-2 (see Note 1)

I. General:

1. Airworthiness Category:	Transport Category A & B Rotorcraft

II. Certification Basis:

1. Reference Application Date for EASA (LBA) Certification:	02 October 1997
2. EASA (LBA) Certification Date:	20 December 2000
3. EASA (LBA) Certification Basis:	
Airworthiness Requirements:	Airworthiness Standards for Transport Category Rotorcraft FAR 29, including amendments through 29-40 with some reversions, exemptions and Equivalent Safety Findings as defined in LBA CRI A-01 (see SAA CRI No G-0, para. 2.1).
Environmental (Noise)Standards:	German Noise Prevention Requirements for Aircraft (Lärmschutzforderungen für Luftfahrzeuge LSL) Chapter VIII dated January 01st, 1991 (equivalent to ICAO Annex 16, Volume I, Chapter 8).
4. Application Date for SAA Certification:	21 July 2008
5. SAA Certification Date:	06 August 2009
6. SAA Certification Basis:	
Airworthiness Requirements:	Airworthiness Standards for Transport Category Rotorcraft AP-29
Environmental (Noise)Standards:	ICAO Annex 16, Volume I, Chapter 8

III. Technical Characteristics and Operational Limitations

1. Description:

Main rotor: bearingless, 4 blades
Tail rotor: 2 blades
Fuselage: metal-composite structure with Skid-type landing gear
Power plant: Two independent freewheel turbines

2. Type Design Definition: MBB-BK117 C-2 Basic Master List Drawing No. 117-C2-99 (see SAA CRI No G-0, para. 2.2).

3. Maximum Certified Weight (kg): 3 585

4. Centre of Gravity Range:

Longitudinal C.G Limits:

maximum forward limit: 4337 mm aft of Datum at 2000 kg
4377 mm aft of Datum at 3585 kg

maximum rearward limit: 4667 mm aft of Datum at 1750 kg
4544 mm aft of Datum at 3585 kg

Lateral C.G Limits:

maximum deviation on right / left: 100 mm (up to 3000 kg)
80 mm (above 3000 kg)

5. Datum:

Longitudinal: 3950 mm forward of the levelling point in the aft door frame

Lateral: fuselage median plane

6. Minimum Flight Crew: one (1)

7. Maximum Passenger Seating Capacity: nine (9)

8. Airspeed limits: V_{NE} = 150 knots (see RFM for reduction in V_{NE} with altitude and other speed limitation)

9. Rotor Speed Limits:

Power on:

maximum: 104 %
minimum: 96 %

Power off:

maximum: 104 %
minimum: 80 % (up to 2000 kg)
85 % (above 2000 kg)

10. Maximum Bank Angle: in relation to the indicated airspeed (with and without passengers on board):

0 kt	≤ IAS ≤	30 kt:	± 30°
30 kt	≤ IAS ≤	(V_{NE}*- 30kt):	± 45°
(V_{NE}*- 30kt)	≤ IAS ≤	V_{NE}*:	± 30°

* the applicable V_{NE} values are mentioned in the V_{NE} Table of the Flight Manual (para 2.7)

11. Maximum sideslip angle in forward flight: ± 1 ball width

12. Maximum rate of descent: 600 ft/min (during hover or low speed flight up to 20 kt)

13. Maximum Operating Altitude: 5486 m [18,000 ft] (see Note 2).

14. Kinds of operation: Correspond to the Flight Manual BK 117 C-2, Supplements to Flight Manual as defined in the FMS 9.1 and FMS 9.2, and Appendix FMA 11-3 for Flight Manual (see Subsection IV and Note 3).

15. Other Limitations: Refer to the Flight Manual BK 117 C-2, Supplements to Flight Manual and Appendix FMA 11-3 for Flight Manual (see Subsection IV).

16. Engines: two (2) Turbomeca Arriel 1E2

16.1 Certification: SAA Type Certificate No. ТД0039

16.2 Installed Engine and Transmission Limits:

	Torque Limits %	Gas generator rpm min^{-1} [%]	Power turbine rpm %	Temperature TOT °C
All Engine Operation				
AEO-TOP (5 min)	2 x 88	52835 [101.9]	104	845
AEO-MCP	2 x 71	51955 [100.0]	104	845
One Engine Inoperative				
2½ min OEI-TOP	1 x 125	53509 [103.3]	104	885
OEI-MCP	1 x 91.5	52835 [101.9]	104	845

17. Auxiliary Power Unit (APU): N/A

18. Fuels: Eligible Fuels see FLIGHT MANUAL BK 117 C-2, Rev. 20, para. 2.13.1

18.1 Fuel Capacity:

total fuel: 879.1 litres

usable fuel: 867.5 litres

19. Oils: Eligible Oils see FLIGHT MANUAL MBB BK 117 C-2

19.1 Engine Oil Capacity: 4.33 litres

20. Cargo compartment loading: 600 kg/m^2

21. Equipment: In accordance with the Flight Manual BK 117 C-2, Supplements to Flight Manual as defined in the FMS 9.2, and Appendix FMA 11-3 for Flight Manual (see Subsection IV and Note 4).

22. All Weather Capabilities: ICAO Category I approach

23. Wheels and Tyres: Skid type landing gear

24. Life-limited parts:

The periods specified in the latest revision of Chapter 4 of the Master Servicing Manual MBB-BK117 C-2 must not be exceeded (see Subsection IV and Note 3).

IV. Operating and Maintenance Instructions:

1. Operating Instructions:

- Flight Manual BK117 C-2, Rev. 20, including the Supplements for Special Operations FMS 9.1 and for Optional Equipment FMS 9.2.;
- Flight Manual BK117 C-2 Appendix FMA 11-3;
- Master Minimum Equipment List (MMEL) BK117 C-2;

2. Maintenance Instructions:

- Master Servicing Manual (MSM) MBB-BK117 C-2;
- Structural Repair Manual (SRM) MBB-BK117 C-2;
- Aircraft Maintenance Manual (AMM) MBB-BK117 C-2;
- Corrosion & Erosion Control Guide (CECG)
- Illustrated Parts Catalogue (IPC) MBB-BK117 C-2;
- Wiring Diagram Manual (WDM) MBB-BK117 C-2;
- List of Service Bulletins currently in force;
- List of Service Information currently in force.

V. Notes

1. Designation:

EC145 is used as marketing designation for MBB-BK117 C-2 helicopters.

2. Altitude Limitations:

Maximum operating altitude without oxygen system installed and operative:

- with passengers on board: 10000 ft (3000 m)
- without passengers on board: 12000 ft (3600 m)

3. Kinds of operation:

VFR night operation in Ukraine is prohibited.

4. Equipment:

For the helicopters intended to be operated/registered in Ukraine, the following equipment should be installed mandatory in any helicopter's configuration:

- Airspeed Indicator;
- Barometric Altimeter;
- Vertical Speed Indicator;
- Pitch and Roll Indicators (main and standby);
- Slip Indicator;
- Clock indicating hours, minutes and seconds;
- Ambient Air Temperature Indicator;
- Radio Compass;
- Magnetic Direction Indicator;
- VHF radio;
- Radio Altimeter;
- ADF;
- Flight Data Recorder with capability to read and copy flight data of the last five flight hours of operation (for commercial operation).

Head of Aviation Products
Type Certification Department

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