



Reporte de Aceptación de Certificado Tipo



Type Certificate Acceptance Report

EUROPEAN AVIATION SAFETY AGENCY

TYPE CERTIFICATE EASA.R.010

Issue: 05

**“AIRBUS HELICOPTERS DEUTSCHLAND
GmbH” Model MBB-BK117 D-2**



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RESUMEN (SUMMARY)

La aceptación de Tipo Colombiana ha sido otorgada para el modelo MBB-BK117 D-2 de la compañía "AIRBUS HELICOPTERS DEUTSCHLAND GmbH", basado en el Certificado Tipo EASA.R.010 de la "Agencia Europea de Seguridad Aérea - EASA".

Colombian Civil Aviation Authority grants the Type Certificate Acceptance for the model MBB-BK117 D-2 of the "AIRBUS HELICOPTERS DEUTSCHLAND GmbH", based on the "European Aviation Safety Agency" Type Certificate EASA.R.010.

1. INTRODUCCIÓN (INTRODUCTION)

Este reporte detalla los aspectos para la aceptación del Certificado Tipo EASA.R.010 de la "Agencia Europea de Seguridad Aérea", de acuerdo con los RAC Parte 9ª literal **§9.1 (d) y 9.2.3.**

This report details the basis on which the "European Aviation Safety Agency" Type Certificate EASA.R.010 was accepted, in accordance with the RAC's, part 9.1 (d) and 9.2.3.

Específicamente este reporte está dirigido a:
Specifically the report aims to:

(a) Determinar los estándares de diseño del código de aeronavegabilidad asociados al certificado tipo extranjero para la aceptación de este modelo de este Tipo de Helicóptero en Colombia.	<i>(a) State Design standards of the airworthiness code related to the foreign Type Certificate for the acceptance of this Helicopter model in Colombia.</i>
(b) Identificar cualquier condición especial, nivel equivalente de seguridad o excepción aplicable al modelo cubierto por el Certificado Tipo.	<i>(b) Identify any special condition, Safety Equivalent Level, or applicable exception to a model covered by the Type Certificate.</i>
(c) Establecer cualquier requerimiento adicional que deba ser cumplido.	<i>(c) Determine any additional requirement that must be complied.</i>

2. DETALLES DE CERTIFICACIÓN DE TIPO OACI (ICAO TYPE CERTIFICATE DETAILS)

El modelo MBB-BK117 D-2 de la compañía "AIRBUS HELICOPTERS DEUTSCHLAND GmbH", cumple con los estándares de aeronavegabilidad definidos en los anexos 8 y 16 de OACI, respecto a los requisitos de diseño, requisitos de aeronavegabilidad continuada y de ruido. El fabricante establece que no existe ninguna diferencia que deba ser evaluada.



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The “AIRBUS HELICOPTERS DEUTSCHLAND GmbH” model MBB-BK117 D-2, is in compliance with the ICAO annexes 8 and 16 about rules necessary for the design, continued airworthiness conditions and noise compliance. The manufacturer establishes that there is no difference that should be evaluated.

3. DETALLES DE ACEPTACIÓN DE TIPO (TYPE ACCEPTANCE DETAILS)

La aplicación para la aceptación del Certificado Tipo del Helicóptero modelo MBB-BK117 D-2 fue recibida del fabricante el día 21 de Mayo de 2014 y fue aprobada el día 11 de Agosto de 2014, basada en el Certificado Tipo EASA.R.010 de la “Agencia Europea de Seguridad Aérea”.

The application for Colombian type certificate acceptance of the model MBB-BK117 D-2 was received from the manufacturer, on May 21, 2014. The Type Certificate Acceptance was approved on August 11, 2014, based on validation of the “European Aviation Safety Agency” Type Certificate EASA.R.010.

4. REQUERIMIENTOS DE LOS RAC PARTE 9ª (COLOMBIAN REGULATIONS RAC PART 9th DATA REQUIREMENTS)

Los requerimientos establecidos en la parte Novena de los RAC han sido cumplidos y se sustentan en la hoja de datos del Certificado Tipo EASA.R.010 Issue 05 de la “Agencia Europea de Seguridad Aérea” y con los siguientes documentos:

The Type Data requirements of RAC Part 9 have been satisfied according to the “European Aviation Safety Agency” Type Certificate Data Sheet EASA.R.010 Issue 05 and the following documents:

(1) Certificados Tipos (*Type certificates*):

- Rotorcraft: “European Aviation Safety Agency” Type Certificate EASA.R.010
- Engine: “European Aviation Safety Agency” Type Certificate EASA.E.001

(2) Resumen de los ítems de Certificación (*Summary certification items*)

Model	Document	Issue Date
MBB-BK117 D-2	Compliance Record Document CRD No. BK117/2009/1702	14 April 2014
	Type Design Definition TDD D0000M170200	4 April 2014

Bases de Certificación (*Certification Basis*):

1. Reference Date for determining the applicable requirements 01 February 2010



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2. Airworthiness Requirements

CS-29, Amendment 2 for the requirements listed below:

CS 29.1 CS 29.81 CS 29.351 CS 29.1359
CS 29.25 CS 29.85 CS 29.602 CS 29.1457
CS 29.59 CS 29.143 CS 29.923 CS 29.1459
CS 29.62 CS 29.173 CS 29.1323 CS 29.1587
CS 29.67 CS 29.175 CS 29.1329 CS 29 Appendix B.V
CS 29.77 CS 29.177 CS 29.1351 CS 29 Appendix B.VII

- FAR 29 Amendment 47:
FAR 29.865 (External Loads)
- FAR 29 Amendment 16:
FAR 29.863 (for unaffected parts of BK117 C-1)
FAR 29.917 (for unaffected parts of BK117 C-1)
FAR 29.1309 (b), (d), (e) (for unaffected parts of BK117 C-1)
- FAR 29 effective Feb. 1, 1965 plus Amendments 29-1 through 29-40,
for all other requirements that are not listed in CS/FAR 29 requirements above

3. Special Conditions

- 30 min Extended Power Rating. (CRI E-05)
- Lithium Battery Installations (CRI F-09)
- High-intensity Radiated Fields (HIRF) Protection: JAA INT/POL/27&29/1, Issue 3
(CRI F-01)

4. Exemptions

- N/A

5. (Reserved) Deviations

- FAR 29.631 for Cockpit Windows (for unaffected parts of BK117 C-2) CRI-D-02
- FAR 29.1027 for Main Gear Box (for unaffected parts of BK117 A-1)

6. Equivalent Safety Findings

- FAR 29.807 (a)(4), (for emergency exit) (CRI D-01 and CRI D-07)
- FAR 29.1305, FAR 29.1321(e), FAR 29.1351(b)(6) , FAR 29.1435(a)(3), (for Part
Time Display of vehicle parameters) (CRI D-05)
- FAR 29.1545(b)(4), 29.1549(b), (for Airspeed & Powerplant indication green
marking) (CRI F-29)

7. Environmental Protection Requirements

See EASA Type Certificate Data Sheet for Noise: TCDSN.R.010

(3) Documentación técnica del fabricante (*Maintenance Manuals, Operating Manuals
and Service Instructions*)



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Model	Document	Issue Date
MBB-BK117 D-2	Rotorcraft Flight Manual BK117 D-2	2014.04.16
	Aircraft Maintenance Manual MBB BK117 D-2	2014.05.16
	Wiring Diagram Manual MBB BK117 D-2	2014.05.16
	System Description MBB BK117 D-2	2014.05.16
	MBB BK117 D-2 ILLUSTRATED PARTS CATALOG Revision 000	2014.05.14
	MASTER MINIMUM EQUIPMENT LIST AIRBUS HELICOPTERS DEUTSCHLAND GMBH BK117 D-2 (EC145 T2) - SERIES REVISION: 0	2014.05.28
	Installation and Operating Manual ARRIEL 2E version B Ref X292R001.2	2013.12

5. REQUERIMIENTOS ADICIONALES DE LOS RAC PARTE 4^a (ADDITIONAL COLOMBIAN REQUIREMENTS RAC PART 4TH)

A continuación se listan los requerimientos de aeronavegabilidad adicionales para la emisión de un certificado de aeronavegabilidad estándar, definidos en los capítulos II, VI, IX de la Parte Cuarta, "Requisitos Generales de Aeronavegabilidad" y en 9.2.3 de las Parte Novena de los RAC.

Additional requirements for the issuance of a Standard Airworthiness Certificate for an aircraft that is going to operate in Colombia, in accordance with RAC's (Colombian Regulations), Part Fourth- Chapters II, VI and Chapter IX and in # 9.2.3 Part Ninth, are as follows:

Norma (Rule)	Descripción del requerimiento (Description of the Requirement)
4.2.2.3.	AERONAVES CIVILES MOTORIZADAS CON CERTIFICADO DE AERONAVEGABILIDAD ESTÁNDAR DE LA REPÚBLICA DE COLOMBIA (REQUISITOS DE INSTRUMENTOS Y EQUIPO) <i>CIVILIAN ENGINE POWERED AIRCRAFT WITH COLOMBIAN STANDARD</i>



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	<i>AIRWORTHINESS CERTIFICATE (INSTRUMENT AND EQUIPMENT REQUIREMENTS)</i>
4.2.2.4.	TRANSMISOR LOCALIZADOR DE EMERGENCIA (ELT) Uno (fijo), transmisor de dos frecuencias (121.5 y 406.0 MHz). TSO – C126 <i>EMERGENCY LOCATOR TRANSMITER (ELT)</i> <i>One (fixed) 2 frequencies transmitter (121.5 and 406.0 MHz). TSO – C126</i>
4.2.2.5	LUCE DE AERONAVES <i>AIRCRAFT'S LIGHTS</i>
4.2.2.7	INSTRUMENTOS Y EQUIPOS INOPERATIVOS <i>INOPERATIVE EQUIPMENTS AND INSTRUMENTS</i>
4.2.2.8	USO DE TRANSPONDER ATC <i>ATC TRANSPONDER RIGHT USE</i>
4.2.2.10	SISTEMA DE ALERTA DE ALTITUD – Un sistema <i>ALTITUDE ALERT SYSTEM – One system</i>
4.2.2.14	SEÑALAMIENTO DE LAS ZONAS DE PENETRACION DEL FUSELAJE
4.6.3.4.	COMANDOS DOBLES REQUERIDOS <i>TWIN COMMAD REQUIREMENT</i>
4.6.3.6	REGISTRADORES DE VOZ DE CABINA – CVR <i>COCKPIT VOICE RECORDERS CVR</i>
4.6.3.7. 4.9.3.4.	REGISTRADORES DE DATOS DE VUELO - (FDR) <i>FLIGHT DATA RECORDERS FDR</i>
4.6.3.10.	SISTEMA DE ADVERTENCIA Y ALERTA DEL TERRENO (TAWS) <i>TERRAIN AWARENES AND WARNING SYSTEM</i>
4.6.3.11.	REQUERIMIENTOS DE EQUIPO: AERONAVES QUE LLEVAN PASAJEROS BAJO REGLAS DE VUELO POR INSTRUMENTOS IFR Y VUELOS NOCTURNOS <i>EQUIPMENT REQUIREMENT FOR PASSENGER AIRCRAFTS UNDER IFR OR NIGHT FLIGHTS</i>
4.6.3.12	EQUIPOS DE RADIO Y NAVEGACIÓN EN OPERACIONES DE CONFORMIDAD CON LAS REGLAS DE VUELO POR INSTRUMENTOS (IFR) O EN OPERACIONES EXTENSAS SOBRE EL AGUA. <i>RADIO AND NAVIGATION EQUIPMENT FOR IFR OPERATIONS OR EXTENDED OVER WATER OPERATIONS</i>
4.6.3.13.	SISTEMA DE ALERTA DE TRÁFICO Y ADVERTENCIA DE COLISIÓN (ACAS) <i>AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS)</i>
4.6.3.15. 4.9.3.6	REQUERIMIENTOS DEL EQUIPO DE RADAR METEOROLÓGICO DE A BORDO <i>WEATHER RADAR EQUIPMENT REQUERIMENTS – ONE SYSTEM</i>
4.6.3.20.	INDICADOR DE NUMERO MACH <i>MACH INDICATOR</i>
4.9.3.3.	PROVISIONES DE OXIGENO <i>OXYGEN PROVISIONS</i>
9.2.3 literal d) 4	PLACAS: IDIOMA ESPAÑOL O ESPAÑOL E INGLES <i>PLACARDS: SPANISH OR ENGLISH AND SPANISH</i>



APENDICE 1 - LISTA DE CHEQUEO DEL HELICOPTERO
(APPENDIX 1 – HELICOPTER CHECK LIST)

CERTIFICADO TIPO (Type Certificate):	“European Aviation Safety Agency” Type Certificate EASA.R.010
FABRICANTE (Manufacturer):	AIRBUS HELICOPTERS DEUTSCHLAND GmbH Contact Person: Dandan Suriaganda – International Certification Manager Dandan.suriaganda@airbus.com
AERONAVE (Aircraft):	
PLANTA MOTRIZ (Engine):	Two Turbomeca Arriel 2E Turbo shaft engines
OPERADOR NACIONAL (National Operator):	DESCONOCIDO
FUNCIONARIO(S) (Team):	JAIRO SORA TORRES JOSE ORLANDO DAZA
REGULACIONES R.A.C. (R.A.C. Regulation):	Paragraph 9.1. d). Paragraph 9.2.3.

DOCUMENTACION (DOCUMENTS)	CUMPLIMIENTO (DOCUMENTOS REVISADOS)
1. DATOS GENERALES DEL CERTIFICADO TIPO (Type Certificate Data Sheet):	“European Aviation Safety Agency” Type Certificate Data Sheet EASA.R.010 Issue 05
2. Lista de Chequeo de Conformidad Código Aeronavegabilidad (Compliance Check List airworthiness code):	Compliance Record Document CRD No. BK117/2009/1702
3. Lista Maestra de Planos (Master Drawing List or Type Build Standard (TBS)):	Type Design Definition TDD D0000M170200
4. NIVELES EQUIVALENTES DE SEGURIDAD (Equivalent Level Of Safety –ELOS)	- FAR 29.807 (a)(4), (for emergency exit) (CRI D-01 and CRI D-07) - FAR 29.1305, FAR 29.1321(e), FAR 29.1351(b)(6) , FAR 29.1435(a)(3), (for Part Time Display of vehicle parameters) (CRI D-05) - FAR 29.1545(b)(4), 29.1549(b), (for Airspeed & Powerplant indication green marking) (CRI F-29)



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5. CONDICIONES ESPECIALES (Special Conditions)	- 30 min Extended Power Rating.(CRI E-05) - Lithium Battery Installations (CRI F-09) - High-intensity Radiated Fields (HIRF) Protection: JAA INT/POL/27&29/1, Issue 3 (CRI F-01)
6. EXCEPCIONES (Exceptions)	Exemptions were not issued.
7. DESVIACIONES (Deviations)	- FAR 29.631 for Cockpit Windows (for unaffected parts of BK117 C-2): CRI-D-02 - FAR 29.1027 for Main Gear Box (for unaffected parts of BK117 A-1): Document AAA-BK117-2009-E-1702
8. Plano en tres vistas del conjunto (impreso o copia) (views assembly drawing (Printed or blueprint)):	See APPENDIX 2 - ATTACHMENTS
9. MANUAL DE MANTENIMIENTO (Maintenance Manual):	Aircraft Maintenance Manual MBB BK117 D-2. Issue Date 2014.04.16
10. MANUAL DE VUELO DEL HELICOPTERO (Rotorcraft Flight Manual):	Rotorcraft Flight Manual BK117 D-2. Issue Date 2014.04.16
11. BOLETINES DE SERVICIO, (Service Bulletins):	As today non Service Bulletins has been issued
12. DIRECTIVAS DE AERONAVEGABILIDAD (Airworthiness Directives):	As today non Airworthiness Directives has been issued
13. CERTIFICACION DE RUIDO (Noise Compliance):	See APPENDIX 2 - ATTACHMENTS



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<p>14. BASES DE CERTIFICACIÓN (<i>Certification Basis</i>) :</p>	<p>1. Reference Date for determining the applicable requirements 01 February 2010</p> <p>2. Airworthiness Requirements</p> <p>CS-29, Amendment 2 for the requirements listed below: CS 29.1 CS 29.81 CS 29.351 CS 29.1359 CS 29.25 CS 29.85 CS 29.602 CS 29.1457 CS 29.59 CS 29.143 CS 29.923 CS 29.1459 CS 29.62 CS 29.173 CS 29.1323 CS 29.1587 CS 29.67 CS 29.175 CS 29.1329 CS 29 Appendix B.V CS 29.77 CS 29.177 CS 29.1351 CS 29 Appendix B.VII</p> <p>- FAR 29 Amendment 47: FAR 29.865 (External Loads)</p> <p>-FAR 29 Amendment 16: FAR 29.863 (for unaffected parts of BK117 C-1) FAR 29.917 (for unaffected parts of BK117 C-1) FAR 29.1309 (b), (d), (e) (for unaffected parts of BK117 C-1)</p> <p>-FAR 29 effective Feb. 1, 1965 plus Amendments 29-1 through 29-40, for all other requirements that are not listed in CS/FAR 29 requirements above</p> <p>3.Special Conditions</p> <p>- 30 min Extended Power Rating.(CRI E-05) - Lithium Battery Installations (CRI F-09) - High-intensity Radiated Fields (HIRF) Protection: JAA INT/POL/27&29/1, Issue 3 (CRI F-01)</p> <p>4. Exemptions (N/A)</p> <p>5. (Reserved) Deviations</p> <p>- FAR 29.631 for Cockpit Windows (for unaffected parts of BK117 C-2) - FAR 29.1027 for Main Gear Box (for unaffected parts of BK117 A-1)</p> <p>6.Equivalent Safety Findings</p> <p>- FAR 29.807 (a)(4), (for emergency exit) (CRI D-01 and CRI D-07) - FAR 29.1305, FAR 29.1321(e), FAR 29.1351(b)(6) , FAR 29.1435(a)(3), (for Part Time Display of vehicle parameters) (CRI D-05) - FAR 29.1545(b)(4), 29.1549(b), (for Airspeed & Powerplant indication green marking) (CRI F-29)</p> <p>7. Environmental Protection Requirements</p> <p style="text-align: center;">See EASA Type Certificate Data Sheet for Noise: TCDSN.R.010</p>
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APENDICE 2 - ADJUNTOS (*APPENDIX 2 - ATTACHMENTS*)

Los siguientes documentos son adjuntos de este informe:

The following documents are attached to this report:

- Copia del Certificado Tipo "European Aviation Safety Agency" Type Certificate EASA.R.010
(*Copy of European Aviation Safety Agency" Type Certificate EASA.R.010*).
- Copia del Certificado Tipo de Ruido emitido por EASA
(*Copy of European Aviation Safety Agency" Type Certificate Data Sheet for Noise EASA.R.010*).
- Otros: Vista planos en 3 dimensiones.
(*Other): Helicopter Drawing Three Views.*

Firmas (*Signatures*)

.....
Jairo Sora Torres
Inspector de Seguridad Aérea
Air Safety Inspector
(*UAEAC - Technical Group Engineer*)

.....
Edgar L. Cadena Cañón
Jefe de Grupo Técnico – UAEAC
(*UAEAC- Technical Group Chief*)



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European Aviation Safety Agency

TYPE CERTIFICATE

EASA.R.010

This Type Certificate is issued by EASA, acting in accordance with Regulation (EC) No. 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation and in accordance with Commission Regulation (EC) No. 748/2012 to

AIRBUS HELICOPTERS DEUTSCHLAND GmbH

INDUSTRIESTRASSE 4
86609 DONAUWOERTH
GERMANY

and certifies that the product type design listed below complies with the applicable Type Certification Basis and environmental protection requirements when operated within the conditions and limitations specified on the associated:

Type Certificate Data Sheet number: EASA.R.010

Type Design - Model:

MBB-BK117 A-1
MBB-BK117 A-3
MBB-BK117 A-4
MBB-BK117 B-1
MBB-BK117 B-2
MBB-BK117 C-1
MBB-BK117 C-2
MBB-BK117 D-2

Date of Issue:

09 December 1982
15 March 1985
29 July 1986
10 December 1987
17 January 1992
02 October 1992
20 December 2000
16 April 2014

For the European Aviation Safety Agency,

Date of issue: 16 April 2014


Massimo MAZZOLETTI
Certification Manager
Rotorcraft, Balloons, Airships

TYPE CERTIFICATE - 10025835 - AIRBUS HELICOPTERS DEUTSCHLAND GmbH
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Issue: 3

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European Aviation Safety Agency

EASA

**TYPE-CERTIFICATE
DATA SHEET FOR NOISE**

No. EASA.R.010

for

MBB-BK 117

**Type Certificate Holder:
Airbus Helicopters Deutschland GmbH**

Industriestrasse 4
D-86609 Donauwörth
Germany

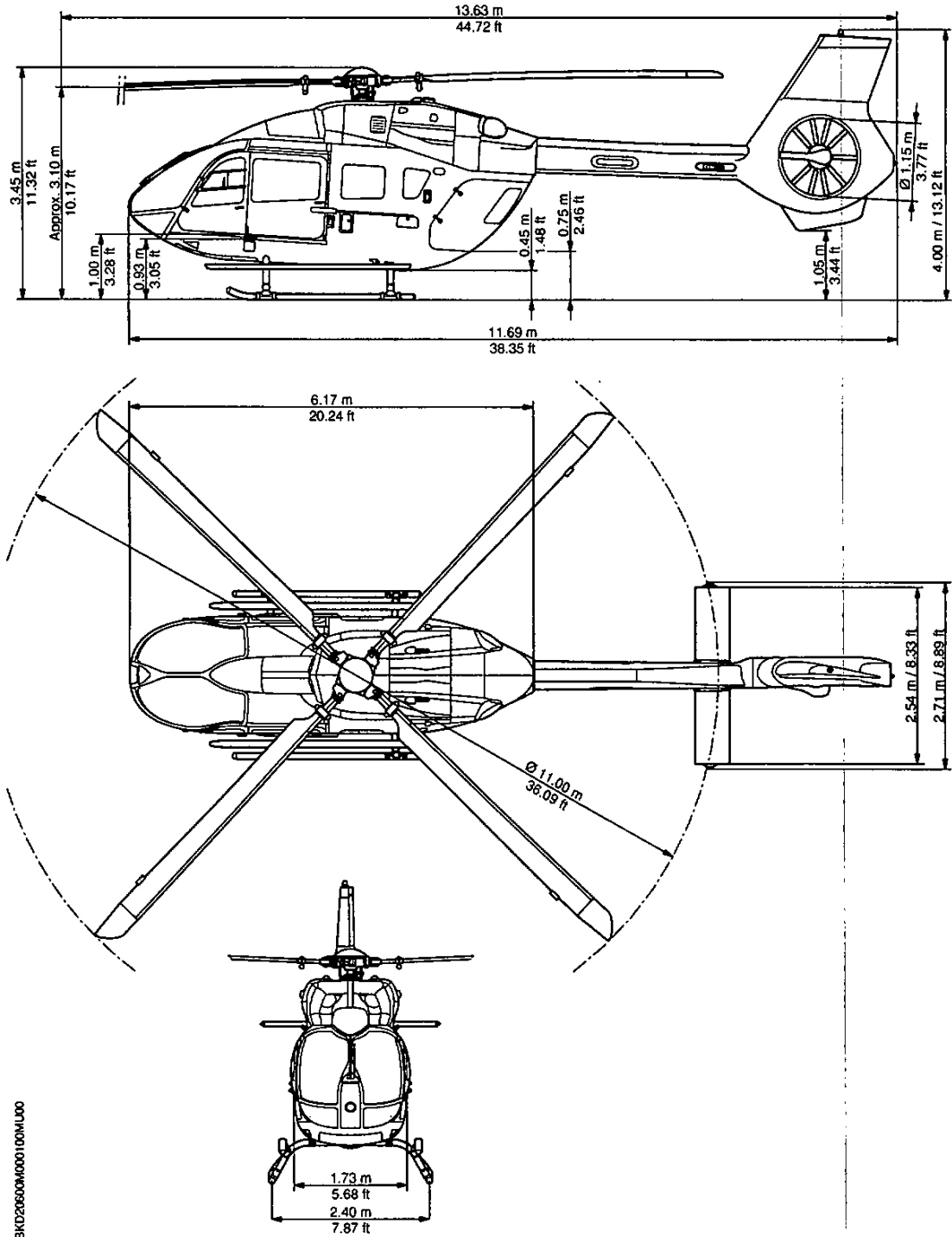
For models: BK117A1
BK117A3
BK117A4
BK117B1
BK117B2
BK117C1
BK117C2
BK117D2

TE.TC.00029-001

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