SAA

TYPE CERTIFICATE DATA SHEET № TB 0016

EC 135

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

Models: EC 135 T2+

Issue 2, 10 August 2011

This Data Sheet which is integral part of Type Certificate № TB 0016 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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EC135 T2+

I. General

1. Data Sheet No: TB0016

2. Type / Variant or Model:
   (a) Type: EC135
   (b) Variant or Model: EC135 T2+ (Note: EC135 T2i is also used as marketing designation)

3. Airworthiness Category: Rotorcraft of normal category

4. Type Certificate Holder: Eurocopter Deutschland GmbH, Industriestrasse 4, D-86607 Donauwörth, Germany

5. Manufacturer:
   1. Eurocopter Deutschland GmbH, Industriestrasse 4, D-86607 Donauwörth, Germany
   2. Eurocopter ESPANA S.A., Poligono de los Llanos, Carretera de las Penas (CM3203), Km 5.3, 02006 Albacete, ESPANA

6. EASA Application Date: 08 February 2005

7. EASA Type Certification Date: 21 February 2006

8. SAA Application Date: 21 July 2008

9. SAA Type Certification Date: 06 August 2009

II. Certification Basis

1. EASA Certification Date: 21 February 2006

2. SAA Certification Date: 06 August 2009

3. SAA Type Certificate Data Sheet No: TB0016

4. EASA Certification Basis: As defined in CRI A-01

5. Airworthiness Requirements:
   JAR 27 first issue – 06 September 1993,
   JAR 27 Appendix C for Category A Operation, and
   JAR 27 Appendix B for operation under IFR
   CS 27.1(a) in connection with CS 27.2(b)(2)(i) elect to comply acc. to CRI A-6
   AR-27 - airworthiness requirements for normal category rotorcrafts

6. Special Conditions:
   SC1 to SC4 as defined in the CRI No. C-2, E-04, F-7 and F-8

7. Equivalent Safety Findings:
   - JAR 27 Appendix B Para IV (c), defined in connection with Para IV (b)(5) (Dual Pilot IFR - Static
Longitudinal Stability) in accordance with CRI No. A-4
- JAR 27.1549(b) Power plant Instrument Markings in accordance with CRI A-5
- CS 27.865(c) Primary Quick Release System for double cargo hook on cyclic stick with CRI D-4

8. Environmental Standards including Noise: (see EASA Type Certificate Data Sheet for Noise: TCDSN.R.009)

III. Technical Characteristics and Operational Limitations

1. Type Design Definition:
- EC135 Basic Master List Drawing No. L.000M0007051
- Drawings of EC135 P2 (CPDS) + L.000M0021051 and following modifications

2. Description:
Main rotor: bearingless, 4 blades
Tail rotor: Fenestron, 10 blades
Fuselage: metal-composite structure with Skid-type landing gear
Power plant: Two independent freewheel turbines

3. Equipment:
Basic equipment must be installed and operational prior to registration of the helicopter.

4. Dimensions:
Fuselage: Length 5.87 m
Width 1.56 m
Height 3.35 m
Main Rotor: 4 blades, diameter 10.2 m
Tail Rotor: 10 blades, diameter 1.0 m

5. Engines:
Manufacturer: Turbomeca
Type: Arrius 2B2
Number of engines: Two
SAA engine TCDS No: ТД0040

5.1 Installed Engine and Transmission Torque Limits:

<table>
<thead>
<tr>
<th></th>
<th>Torque Limits %</th>
<th>Gas generator rpm min-1 [%]</th>
<th>Power turbine rpm %</th>
<th>Temperature TOT °C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Engine Operation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AEO-TOP (5 min)</td>
<td>2 x 78</td>
<td>54117 [100]</td>
<td>104</td>
<td>897</td>
</tr>
<tr>
<td>AEO-MCP</td>
<td>2 x 69</td>
<td>53576 [99]</td>
<td>104</td>
<td>879</td>
</tr>
<tr>
<td><strong>One Engine Inoperative</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 seconds OEL-TOP</td>
<td>1 x 128</td>
<td>56823 [105.0]</td>
<td>104</td>
<td>1024</td>
</tr>
<tr>
<td>2 min OEL-TOP</td>
<td>1 x 125</td>
<td>56011 [103.5]</td>
<td>104</td>
<td>994</td>
</tr>
<tr>
<td>OEL-MCP</td>
<td>1 x 89,5</td>
<td>54821 [101.3]</td>
<td>104</td>
<td>942</td>
</tr>
</tbody>
</table>

6. Fluids (Fuel/Oil/Additives):

6.1 Fuel (see EASA approved RFM)
6.2 Oil

(see EASA approved RFM)

7. Fluid capacities:

7.1 Fuel: with standard fuel tank
(up to S/N 249)

with self sealing fuel tank
(up to S/N 249)

with modified fuel tank
(from S/N 250 or S/B
EC135-28-007)

with self sealing fuel tank
(from S/N 250)

total fuel: 680 l maximum
useable fuel: 670.5 l

total fuel: 673.4 l maximum
useable fuel: 664 l

total fuel: 710.0 l maximum
useable fuel: 700.5 l

total fuel: 701.0 l maximum
useable fuel: 691.6 l

7.2 Engine Oil:

4.5 l

8. Airspeed limits:

VNE = 155 knots
(see EASA approved RFM for reduction in VNE with altitude and other speed limitations)

9. Rotor Speed Limits:

Power on: maximum 104 %
minimum 97 %

Power off: maximum 106 %
minimum 80 % (up to 1900 kg)
minimum 85 % (above 1900 kg)

Transient: (see EASA approved RFM)

10. Maximum Operating Altitude and Temp.:

6096 m [20,000 ft] (see EASA approved RFM for variation according to MTOW)

11. Operating Limitations:

11.1 General:

VFR, IFR, Category A Operation, No flight in icing condition

11.2 Additional limitations for take-off and landing:

(see EASA approved RFM)

12. Maximum Certified Mass:

2910 kg

13. Centre of Gravity Range:

Longitudinal C.G Limits,
maximum forward limit 4180,0 mm aft of DP at 1840 kg
4227,3 mm aft of DP at 2910 kg

maximum rearward limit:4570,0 mm aft of DP at 1500 kg
4369,0 mm aft of DP at 2910 kg
**Lateral C.G Limits,**
maximum deviation on right / left: .......... 100 mm

14. **Datum Plane:**
Longitudinal: 2160 mm forward of the leveling point in the front door frame
Lateral: fuselage median plane

15. **Leveling Means:**
(see Leveling Procedure document No. L082M0801X01)

16. **Minimum Flight Crew:**
one

17. **Maximum Passenger Seating Capacity:**
six (or seven if the kit described in FMS 9.2-31 is installed and operated)

18. **Passenger Emergency Exit:**
two (one on each side of the passengers cabin)

19. **Maximum Baggage/Cargo Loads:**
1130 kg with maximum loading 600 kg/m2

20. **Rotor blade and control movement:**
(see EC135 Aircraft Maintenance Manual)

21. **Auxiliary Power Unit (APU):**
N/A

22. **Life-limited parts:**
(Refer to EASA approved Chapter 4 of the EC135 Master Servicing Manual)

23. **Wheels and Tires:**
Skid type landing gear

**IV. Operating and Service Instructions**

1. **Rotorcraft Flight Manual, Document No:**
EC135 T2+, firstly EASA approved on 21.02.2006, in the latest revision, including the supplements for Special Operations FMS 9.1 and for Optional Equipment FMS 9.2.

2. **Maintenance Manual, Document No:**
a. EC135 Master Servicing Manual, latest revision
b. EC135 Aircraft Maintenance Manual, latest revision
c. EC135 Illustrated Parts Catalogue, latest revision
d. Wiring Diagram Manual, latest revision
e. Engine documents as per LBA Engine TCDS No. E.7004

3. **Service Letters and Service Bulletins:**
Alert Service Information, Service Information, Alert Service Bulletin, Service Bulletin

4. **Required Equipment:**
special equipment and kits necessary for intended kind of operations as defined in the approved Flight Manual Supplements FMS 9.2 are permissible.
V. Notes

1. Eligible serial numbers:
   0506 and upwards
   Upgraded EC135 T2 model according to Service Bulletin EC135-71-033

2. Applicability
   The serial numbers of rotorcraft delivered firstly for civil registration are listed in the ECD document No: ECD-TN-ETYAC-001/2006.

Head of Aeronautical Products
Type Certification Department

S. Haidenko