TYPE-CERTIFICATE

DATA SHEET

EASA.A.185

P2006T

Type Certificate Holder

Costruzioni Aeronautiche TECNAM S.p.A.

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ITALIA

Issue 12: 10 October 2022

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CONTENT

SECTION A: P2006T

A.I. General

1. Type/ Model/ Variant	
1.1 Type	P2006T
1.2 Model	P2006T
2. Airworthiness Category	CS-23 Normal Category
3. Manufacturers	See Note 5
4. EASA Type Certification Application Date	12 December 2005
5. State of Design Authority	N/A
6. State of Design Authority Type Certificate Date	N/A
7. EASA Type Certification Date	05 June 2009

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements	12 December 2006
2. Airworthiness Requirements	EASA CS-23 amdt. 0 dated 14 Nov 2003.
3. Special Conditions	HIRF protection (project reference CRI F-01), see Appendix A Human Factors - Integrated Avionic System (project reference CRI B-52), see Appendix A and Note 2 Lithium battery installation (project reference CRI F 58); see Appendix A and Note 3
4. Exemptions	None
5. (Reserved) Deviations	None
6. Equivalent Safety Findings	CS23.807(e) Ditching Emergency Exits (CRI D-01); CS23.783(b), Main door (CRI D-02); CS23.865, Fire protection of flight controls, engine mounts and other flight structure (CRI D-03); CS23.1061(b), CS23.1063, Liquid Cooling Coolant tank (CRI E-01).
7. Environmental Protection	Refer to TCDSN EASA.A.185

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: C.A. Tecnam Aircraft P2006T report ''Type design definition'' 2006/004 4th ed. and later revision

2. Description: Twin engine, four-seated cantilever high wing airplane, aluminium construction, retractable tricycle landing gear.

3. Equipment: Equipment list, AFM, Doc. 2006/044, Section 6

4. Dimensions:

Span	11.4 m	(37.4 ft)
Length	8.7 m	(28.5 ft)
Height	2.85 m	(9.35 ft)
Wing Area	14.76 m²	(158.9 sqft)

5. Engine

5.1. Model: No.2 BRP-Rotax GmbH 912 S3

5.2 Type Certificate: EASA TCDS n° E.121
dated 1 April 2008

5.3 Limitations:

Max rotational speed	(5 min)	5800 r.p.m.
Max continuous rotational speed		5500 r.p.m

(Engine shaft rpm)
Powerplant limits, AFM, Doc. 2006/044, Section 2,

6. Load factors

6.1Basic

	Flap UP	Flap DOWN
Positive	+3.8 g	+2.0 g
Negative	-1.78 g	0.0 g

7. Propeller

7.1 Model: No.2 MT Propeller MTV-21-A-C-F/CF178-05

7.2 Type Certificate: Type Certificate No. LBA 32.130/086

7.3 Number of blades: 2

7.4 Diameter: 1780 mm

7.5 Sense of Rotation: Clockwise (pilot's view)

8. Fluids

8.1 Fuel: MOGAS (Min. RON 95/AKI 91)

- EN 228 Super/Super Plus
- ASTM D4814
- MOGAS MG 95 (IS 2796:2008) ; See Note 4

AVGAS 100LL (ASTM D910)
(see Rotax Operator's Manual OM-912)

8.2 Oil: Lubricant specifications and grade are detailed into the "Rotax Operator's Manual OM-912" and in its related documents.

8.3 Coolant: Water / Cooler Protection
For more details, see AFM, 2006/044, Section 2

9. Fluid capacities

9.1 Fuel	Total:	200 litres	(52.8 US Gallon)
	Usable:	194.4 litres	(51.4 US Gallon)
9.2 Oil	Maximum:	3.0 litres	(3.2 qts)
	Minimum:	2.5 litres	(2.6 qts)

10. Air speeds

Design Maneuvering Speed V_A:	119 KIAS (117 KCAS)
Flap Extended Speed V_{FE}:	93 KIAS (92 KCAS) *LND* 119 KIAS (117 KCAS) *TO*
Minimum Control Speed V_{MC}:	62 KIAS (62 KCAS)
Maximum Landing Gear Operation speed V_{LO}:	93 KIAS (92 KCAS)
Maximum Landing Gear Extended Speed V_{LE}:	93 KIAS (92 KCAS)
Maximum Structural Cruising Speed V_{NO}:	135 KIAS (134 KCAS)
Never Exceed Speed V_{NE}:	167 KIAS (168 KCAS)

The following values apply when EASA Major Change Approval n.10037759 “Increment of the maximum take-off weight (1230 Kg)” as per C.A. Tecnam MOD2006/015 is installed (Other Air Speeds remain unchanged):

Design Maneuvering Speed V_A:	122 KIAS (119KCAS)
Flap Extended Speed V_{FE}:	93 KIAS (93 KCAS) *LND* 122 KIAS (119 KCAS) *TO*
Maximum Structural Cruising Speed V_{NO}:	138 KIAS (136 KCAS)
Never Exceed Speed V_{NE}:	171 KIAS (172 KCAS)

The following values apply when EASA Major Change Approval n. 10041602 “V_{LE} and V_{LO} increment” as per C.A. Tecnam MOD2006/033 is installed (Other Air Speeds remain unchanged):

Maximum Landing Gear Operation Speed V_{LO}:	122 KIAS (119 KCAS)
Maximum Landing Gear Extended Speed V_{LE}:	122 KIAS (119 KCAS)

11. Maximum Operating Altitude: 14,000 ft

12. Approved Operations Capability: Day/Night-VFR, IFR
Flight into expected or actual icing conditions is prohibited, see Note 1

13. Maximum Masses

Take-off	1180 kg	(2600 lb)
Zero Fuel	1145 kg	(2524 lb)
Landing	1180 kg	(2600 lb)

	The following values apply when EASA Major Change Approval n. 10037759 “Increment of the maximum take-off weight (1230 Kg)” as per C.A. Tecnam MOD2006/015 is installed:		
	Take-off	1230 kg	(2712 lb)
	Zero Fuel	1195 kg	(2635 lb)
	Landing	1230 kg	(2712 lb)
14. Centre of Gravity Range	Forward limit	0.221 m	(16.5 % MAC) behind Datum
	Rear limit:	0.415 m	(31.0 % MAC) behind Datum
15. Datum	Wing leading edge (MAC = 1.339m)		
16. Control surface deflections	Stabilator: 15°±2° to pitch up / 4°±2° to pitch down Stabilator Trim Tab: 19 ±2° downward / 2°±2° upward Aileron: 20°±2° upward / 17°±2° downward Rudder: 26°±2° left / 26°±2° right Flaps: 0° Fully Retracted /40°±2° Fully Extended		
17. Levelling Means	Seat support trusses (see AFM, 2006/044, Sect.6 for the procedure)		
18. Minimum Flight Crew	1 (Pilot)		
19. Maximum Passenger Seating Capacity	3		
20. Baggage/ Cargo Compartments	Max. allowable Load		80 kg
	Location		1.215m aft the datum
21. Wheels and Tyres	Nose Wheel Tyre Size		5.00-5
	Main Wheel Tyre Size		6.00-6
22. Serial Numbers Eligible:	See Note 5		

A.IV. Operating and Service Instructions

1. Flight Manual	Doc. No 2006/044 “Aircraft Flight Manual” last issue.
2. Maintenance Manual	Doc. No 2006/045 “Aircraft Maintenance Manual” last issue
3. Illustrated Parts Catalogue	Doc. No 2006/046 “Airplane Illustrated Parts Catalogue” last issue
4. Instruments and aggregates:	Doc. No 2006/045 “Aircraft Maintenance Manual” last issue

A.V. Operational Suitability Data (OSD)

The Operational Suitability Data elements listed below are approved by the European Aviation Safety Agency under the EASA Type Certificate EASA.A.185 as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. Master Minimum Equipment List (MMEL)
   The MMEL is defined in the P2006T GEN.MMEL, Report n°2006/384, Revision 0 or later approved revisions.

A.VI. Notes

1. Airplane has been certified to operate VFR Day, VFR Night and IFR Night. Basic aircraft equipment configuration allows VFR Day operation. Additional equipment configuration are available at customer choice (see “Aircraft Flight Manual” Sect.6 for further information).

2. When major change, “Tecnam MOD2006/002” (Easa approval 10029633), is installed for Optional Equipment Garmin G950, the corresponding major modification to CRI A-01 must be considered together with special condition detailed in CRI B-52 “Human factor in Integrated Avionic Systems”.

3. When major change, “Tecnam MOD2006/212” (Easa approval 10058288), is installed for Optional Equipment "MD302 Alternative Stand-By Instrument", the corresponding major modification to CRI A-01 must be considered together with special condition detailed in CRI F-58 “Lithium battery installation’’.

4. When major change, Tecnam MOD 2006/284 (EASA approval 10061637), is installed

5. Serial Nos. Eligible:
   - S/N 001 and subsequent, manufactured by Costruzioni Aeronautiche TECNAM S.p.A. under certificate EASA production certificate IT.21G.0032
   - S/N CP-001 and subsequent, manufactured by LUSY Co. LTD under the Chinese Production Certificate PC0034A-DB, are not eligible for registration in the EU, Norway, Iceland, Switzerland and Lichtenstein.
   - Spare parts with a Chinese Authorized Release Certificate are not eligible for installation in aircraft registered in the EU, Norway, Iceland, Switzerland and Lichtenstein.

6. When engines with designation extended with suffix “-01” (e.g. Rotax 912 S2-01) are installed (as per MOD2006/227, EASA approval 10054149), the engine temperature measurement methods have been amended from CHT (cylinder head temperature) and CT (coolant temperature) to only CT (coolant temperature).

SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations

AFM – Aircraft Flight Manual
AMM – Aircraft Maintenance Manual
CRI – Certification Review Item
CS – Certification Specification
EASA – European Aviation Safety Agency
ICAO – International Civil Aviation Organization
IPC – Illustrated Part Catalogue
KCAS – Knots Calibrated Air Speed
KOEL – Kind of Operations Equipment List
MAC – Mean Aerodynamic Chord
MTOW – Maximum Take-Off Weight
VFR – Visual Flight Rules

II. Type Certificate Holder Record

TC Holder	Period
Costruzioni Aeronautiche TECNAM S.r.l. Via Tasso, 478 80127 Napoli, ITALIA	From 5th June 2009 until 04th September 2019
Costruzioni Aeronautiche TECNAM S.p.A. Via Salvo D'Acquisto, 62 80042 Boscotrecase (NA), ITALIA	Effective

III. Change Record

Issue	Date	Changes	TC Issue No. & Date
Issue 01	5 June 2009	Initial issue	05 June 2009
Issue 02	30 March 2012	Update to include changes MOD2006/002" (Easa approval 10029633) and MOD2006/015" (Easa approval 10037759)	
Issue 03	20 December 2012	Update to include changes MOD2006/033" (Easa approval 10041602)	
Issue 04	08 November 2013	Amend fuel specification	
Issue 05	22 December 2016	Introduction of OSD MMEL	
Issue 06	09 June 2017	Update to include changes MOD2006/212" (Easa approval 10058288) and MOD 2006/284 (EASA approval 10061637)	
Issue 07	26 April 2018	add new manufacturer, s/n eligible, latest edition of TDD and company registration change	
Issue 08	09 July 2018	Correction of Chinese manufacturer's name	

Issue 09	05 September 2019	Company address update and improved description of Note 5.	
Issue 10	20 December 2019	Updated Engine designation (field 5 in A.III); added note 6 in A.V ; removed “variant” and added “model” in A.I.	
Issue 11	11 November 2020	Corrected references in certification basis and removed typos (filed 3 and 7 in A.II); Added Appendix A.	
Issue 12	10 October 2022	Fixed typos in minimum oil capacity value	

Appendix A

Special Condition	HIRF protection (Project reference CRI F-01)
The Policy Paper INT/POL/23/1 Issue dated 01.06.03 is considered a special condition for the P2006T HIRF protection.	

Special Condition	Human Factors in Integrated Avionics Systems (Project reference CRI B-52

a) The design of the integrated flight deck interface must adequately address the foreseeable performance, capability and limitations of the pilot.
b) More specifically, the team must be satisfied with the following aspects of the flight deck interface design:

i. Ease of operation including automation;
ii. Effects of pilot errors in managing the aircraft systems, including the potential for error, the possible severity of the consequences, and the provision for recognition and recovery from error;
iii. Workload during normal and abnormal operation; and
iv. Adequacy of feedback, including clear and unambiguous:
- presentation of information;
- representation of system condition by display of system status;
- indication of failure cases, including aircraft status;
- indication when pilot input is not accepted or followed by the system;
- indication of prolonged or severe compensatory action by a system when such action could adversely affect aircraft safety.
- Indication of reversionary modes and back-up status

Special Condition SC-F23.1353-02	Lithium Battery Installation (Project reference CRI F-58)

In lieu of the requirements of CS 23.1353(f), (g)(1) through (g)(3) the following applies:

(a) Lithium batteries and battery installations must be designed and installed as follows:
(1) Safe cell temperatures and pressures must be maintained during any probable charging or discharging condition, or during any failure of the charging or battery monitoring system not shown to be extremely remote. The Li battery installation must be designed to preclude explosion in the event of those failures.
(2) Li batteries must be designed to preclude the occurrence of self-sustaining, uncontrolled increases in temperature or pressure.
(3) No explosive or toxic gasses emitted by any Li battery in normal operation or as the result of any failure of the battery charging or monitoring system, or battery installation not shown to be extremely remote, may accumulate in hazardous quantities within the aeroplane.
(4) Li battery installations must meet the requirements of CS 23.863(a) through (d).
(5) No corrosive fluids or gasses that may escape from any Li battery may damage surrounding aeroplane structures or adjacent essential equipment.

(6) Each Li battery installation must have provisions to prevent any hazardous effect on structure or essential systems that may be caused by the maximum amount of heat the battery can generate during a short circuit of the battery or of its individual cells.

(7) Li battery installations must have a system to control the charging rate of the battery automatically so as to prevent battery overheating or overcharging, and,

(i) A battery temperature sensing and over-temperature warning system with a means for automatically disconnecting the battery from its charging source in the event of an over-temperature condition or,

(ii) A battery failure sensing and warning system with a means for automatically disconnecting the battery from its charging source in the event of battery failure.

(8) Any Li battery installation whose function is required for safe operation of the aeroplane, must incorporate a monitoring and warning feature that will provide an indication to the appropriate flight crewmembers, whenever the capacity and SOC of the batteries have fallen below levels considered acceptable for dispatch of the aeroplane.

(9) The Instructions for Continued Airworthiness must contain maintenance procedures for Lithium-ion batteries in spares storage to prevent the replacement of batteries whose function is required for safe operation of the aeroplane, with batteries that have experienced degraded charge retention ability or other damage due to prolonged storage at low SOC.

(b) Compliance with the requirements of this Special Condition must be shown by test or, with the concurrence of EASA, by analysis.

-END-