TYPE-CERTIFICATE
DATA SHEET

NO. EASA.A.507

for
XA42

Type Certificate Holder
LIFTIFY UG (Haftungsbeschränkt)
FELSENBERGSTR. 25
39110 MAGDEBURG
Germany

For models: XA42, XA41
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SECTION A: XA42

A.I. General

1. Type/ Model/ Variant
   1.1 Type XA42
   1.2 Model XA42
   1.3 Variant

2. Airworthiness Category Utility, Aerobatic

3. Manufacturer
   XtremeAir GmbH
   Harzstrasse 2, Am Flughafen Cochstedt
   39444 Hecklingen – Germany

4. EASA Type Certification Application Date 30 July 2007

5. EASA Type Certification Date 21 March 2011

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements 31 March 2008

2. Airworthiness Requirements CS-23 Amdt. 1
   CS-GEN-MMEL, Initial issue

3. Special Conditions
   SC-E23.863-01, Smoke system
   SC-F23.1309-02, Protection from Effect of HIRF
   SC-F23.1309-03, Protection from the Effect of Lightning Strike - Indirect Effects

4. Exemptions none

5. (Reserved) Deviations none

6. Equivalent Safety Findings
   CRI B-101, Stall Warning
   CRI B-102, Aerodynamic Stability
   CRI D-102, Position and shape of engine controls

7. Environmental Protection
   ICAO Annex 16, Volume I, Chapter 10 (Utility Category)
A.III. **Technical Characteristics and Operational Limitations**

1. **Type Design Definition**
   - MDL-XA42-0240-001

2. **Description**
   - The XA42 is an unlimited aerobatic, two-seater airplane in fibre composite construction. It has a low-wing design and a conventional tail with a fixed tail wheel. The single engine propulsion system uses a constant speed propeller. A six-cylinder, four stroke piston engine acts directly on the propeller.
   - The XA42 is designed as aerobatic and touring aircraft for VFR-day operation.

3. **Equipment**
   - see AFM XA42-0040-002(-)

4. **Dimensions**
   - Wing span: 7,50 m / 24,61 ft
   - Total length: 6,67 m / 21,88 ft
   - Maximum height: 2,54 m / 8,33 ft
   - Wing area: 11,25 m² / 121,10 ft²

5. **Engine**
   - **5.1. Model**
     - Lycoming AEIO-580-B1A
   - **5.2 Type Certificate**
     - EASA.IM.E.027
   - **5.3 Limitations**
     - Take-off & continuous power: 235 kW / 315 HP
     - Max. rotational speed: Aerobatic: 2,700 rpm
     - Utility: 2,670 rpm

6. **Load factors**
   - see “Maximum Masses”

7. **Propeller**
   - **7.1.1 Model 1:**
     - MT Propeller MTV-9-B-C/C203-20d
   - **7.1.2 Type Certificate:**
     - LBA 32.130/65
   - **7.1.3 Number of blades:**
     - 3
   - **7.1.4 Diameter:**
     - 2030 mm - 50 mm

   - **7.2.1 Model 2:**
     - MT Propeller MTV-14-B-C/C190-130
   - **7.2.2 Type Certificate:**
     - EASA.P.017
   - **7.2.3 Number of blades:**
     - 4
   - **7.2.4 Diameter:**
     - 1900 mm - 50 mm

8. **Fluids**
   - **8.1 Fuel**
     - see AFM
   - **8.2 Oil**
     - see AFM
   - **8.3 Smoke Oil**
     - Straight paraffin oil, viscosity 30-50 cts at 20°C (68°F), initial boiling point > 330°C (626°F). For example: Fauth FC05, Texaco Canopus 13 or equivalent
8.4 Coolant none

9. Fluid capacities

9.1 Fuel: Total: 277 l
Usable: 266 l
Usable for aerobatics: 57 l

9.2 Oil: Maximum sump capacity: 15,15 l / 16 US qt
Minimum sump capacity: 8,52 l / 9 US qt

9.3 Coolant system capacity Not applicable

9.4 Smoke Oil Capacity 28 l / 7.4 US gal

10. Air Speeds
Never exceed speed: \( V_{NE} \) 225 kts
Maximum structural cruising speed: \( V_{NO} \) 185 kts
Maneuvering speed: \( V_A \) 174 kts

11. Maximum Operating Altitude 4572 m / 15,000 ft

12. Approved Operations Capability VFR-day, Flights in known or expected icing conditions are prohibited

13. Maximum Masses
Maximum empty weight: 670 kg / 1477 lbs

Maximum take-off and landing weight
- Utility: 999 kg / 2200 lbs
- Acro I and II: 999 kg / 2200 lbs
- Acro III: 850 kg / 1874 lbs

<table>
<thead>
<tr>
<th>Category</th>
<th>MTOW</th>
<th>max. load factors</th>
<th>max. wing fuel</th>
<th>Maneuvers</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTILITY</td>
<td>999 kg 2200 lbs.</td>
<td>+ 4.4 g - 2.0 g</td>
<td>full</td>
<td>acrobatic maneuvers, including spins, are prohibited except Stalls, Chandelles, Lazy eights, Steep turns and similar maneuvers in which the angle of bank is not more than 90°</td>
</tr>
<tr>
<td>ACRO II</td>
<td>999 kg 2200 lbs.</td>
<td>+8 g -8 g</td>
<td>2 x 20 L 2 x 5.3 gal.</td>
<td>unlimited, see AFM-XA42-0040-002-C(1) para. 2.9.2</td>
</tr>
<tr>
<td>ACRO III</td>
<td>850 kg 1874 lbs.</td>
<td>+10 g -10 g</td>
<td>empty</td>
<td></td>
</tr>
</tbody>
</table>

14. Centre of Gravity Range
Forward: 550 mm behind datum (25 % MAC)
Rear: 700 mm behind datum (33 % MAC)

15. Datum
Forward face of firewall

16. Control surface deflections
- Aileron: ± 30°
- Elevator: ± 27°
- Trim tap: ± 3°
- Rudder: ± 30°
17. Levelling Means
Horizontal frame of cockpit canopy cut out

18. Minimum Flight Crew
1 Pilot (rear seat)

19. Maximum Passenger Seating Capacity
1 (front seat)

20. Baggage/ Cargo Compartments
Max. 10 kg behind pilot’s seat
(no aerobatic manoeuvres allowed with baggage)

21. Wheels and Tyres
Main wheel 5.00-5 10ply
Tail wheel: 105/45-65 solid rubber

22. (Reserved)
A.IV. Operating and Service Instructions

1. Flight Manual
   1d. Flight Manual Supplement AFM-XA42-0040-002-S10.02 if equipped with Propeller No. 2 (refer to A.III.7.2.1).


5. Operational Suitability Data

   Master Minimum Equipment List XA42-MMEL-A(), Initial issue, or any later EASA approved issue
A.IV. **Notes**

1. Eligible serial numbers: from 106 to 153
2. The composite structure is qualified up to 72 °C (161.6 °F).
3. The structure is designed for full and abrupt aileron control inputs up to $V_{NE}$. 
SECTION B: XA41

B.I. General

1. Type/ Model/ Variant
   1.1 Type XA42
   1.2 Model XA41

2. Airworthiness Category Utility, Aerobatic

3. Manufacturer XtremeAir GmbH
   Harzstrasse 2, Am Flughafen Cochstedt
   39444 Hecklingen – Germany

4. EASA Type Certification Application Date 4 October 2007

5. EASA Type Certification Date 01 February 2012

B.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements 15 February 2009

2. Airworthiness Requirements CS-23 Amrd. 1
   CS-GEN-MMEL, Initial issue

3. Special Conditions SC-E23.863-01, Smoke system
   SC-F23.1309-02, Protection from Effect of HIRF
   SC-F23.1309-03, Protection from the Effect of Lightning Strike – Indirect Effects

4. Exemptions none

5. (Reserved) Deviations none

6. Equivalent Safety Findings CRI B-101, Stall Warning
   CRI B-102, Aerodynamic Stability
   CRI D-102, Position and shape of engine controls

7. Environmental Protection ICAO Annex 16, Volume I, Chapter 10 (Utility Category)
B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition
   AM-2012-003

2. Description
   The XA41 is a single-seat unlimited aerobatic airplane of carbon fibre composite construction. It has a low-wing design and a conventional tail with a fixed tail wheel landing gear. The propulsion system consists of a six-cylinder, four stroke piston engine acting directly on a constant speed propeller.

   The XA41 is designed as aerobatic and touring aircraft for VFR-day operation.

3. Equipment
   see AFM XA41-0040-002-{}

4. Dimensions

<table>
<thead>
<tr>
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<th>Value</th>
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<tbody>
<tr>
<td>Wing span</td>
<td>7,50 m / 24,61 ft</td>
</tr>
<tr>
<td>Total length</td>
<td>6,42 m / 21,06 ft</td>
</tr>
<tr>
<td>Maximum height</td>
<td>2,54 m / 8,33 ft</td>
</tr>
<tr>
<td>Wing area</td>
<td>11,25 m² / 121,10 ft²</td>
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5. Engine
   5.1. Model
   Lycoming AEIO-580-B1A

   5.2 Type Certificate
   EASA.IM.E.027

   5.3 Limitations
   Take-off & continuous power: 235 kW / 315 HP
   Max. rotational speed:
   - Aerobatic: 2.700 rpm
   - Utility: 2.670 rpm

6. Load factors
   see “Maximum Masses”

7. Propeller
   7.1.1 Model 1:
   MT Propeller MTV-9-B-C/C203-20d

   7.1.2 Type Certificate:
   LBA 32.130/65

   7.1.3 Number of blades:
   3

   7.1.4 Diameter:
   2030 mm - 50 mm

   7.2.1 Model 2:
   MT Propeller MTV-14-B-C/C190-130

   7.2.2 Type Certificate:
   EASA.P.017

   7.2.3 Number of blades:
   4

   7.2.4 Diameter:
   1900 mm - 50 mm

8. Fluids
   8.1 Fuel
   see AFM

   8.2 Oil
   see AFM

   8.3 Smoke Oil
   Straight paraffin oil, viscosity 30-50 cts at 20°C (68°F), initial boiling point > 330°C (626°F). For example: Fauth FC05, Texaco Canopus 13 or equivalent

   8.4 Coolant
   none
9. Fluid capacities

9.1 Fuel:
- Total: 277 l
- Usable: 266 l
- Usable for aerobatics: 57 l

9.2 Oil:
- Maximum sump capacity: 15.15 l / 16 US qt
- Minimum sump capacity: 8.52 l / 9 US qt

9.3 Coolant system capacity: Not applicable

9.4 Smoke Oil Capacity: 28 l / 7.4 US gal

10. Air Speeds

- Never exceed speed: $V_{NE}$ 225 kts
- Maximum structural cruising speed: $V_{NO}$ 185 kts
- Maneuvering speed: $V_A$ 174 kts

11. Maximum Operating Altitude: 4572 m / 15,000 ft

12. Approved Operations Capability: VFR-day. Flights in known or expected icing conditions are prohibited

13. Maximum Masses

- Maximum empty weight: 670 kg / 1477 lbs
- Maximum take-off and landing weight:
  - Utility: 999 kg / 2200 lbs
  - Acro: 850 kg / 1874 lbs

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<tr>
<td>ACRO</td>
<td>850 kg 1874 lbs.</td>
<td>+10 g -10 g</td>
<td>empty</td>
<td>unlimited, see AFM-XA41-0040-002-A() para. 2.9.2</td>
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14. Centre of Gravity Range

- Forward: 550 mm behind datum (25 % MAC)
- Rear: 700 mm behind datum (33 % MAC)

15. Datum

- Forward face of firewall

16. Control surface deflections

- Aileron: ± 30°
- Elevator: ± 27°
- Trim tap: ± 3°
- Rudder: ± 30°

17. Levelling Means

- Horizontal frame of cockpit canopy cut out

18. Minimum Flight Crew

- 1 Pilot (rear seat)

19. Maximum Passenger Seating Capacity

- n/a
20. Baggage/ Cargo Compartments

Max. 10 kg behind pilot’s seat
(no aerobatic manoeuvres allowed with baggage)

21. Wheels and Tyres

Main wheel 5.00-5 10ply
Tail wheel: 105/45-65 solid rubber

22. (Reserved)
B.IV. **Operating and Service Instructions**

1. Flight Manual
   1b. Flight Manual Supplement AFM-XA41-0040-002-S10.01 if equipped with Propeller No. 2 (refer to B.III.7.2.1).


5. Operational Suitability Data
   Master Minimum Equipment List XA42-MMEL-A(), Initial issue, or any later EASA approved issue
B.V. **Notes**

1. Eligible serial numbers: from 05 to 07.
2. The composite structure is qualified up to 72 °C (161.6 °F).
3. The structure is designed for full and abrupt aileron control inputs up to $V_{NE}$. 
SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations

AFM  Airplane Flight Manual
Amdt. Amendment
AMM  Airplane Maintenance Manual
CRI  Certification Review Item
CS-23 Certification Specification for Small Aircraft (Part 23)
EASA European Union Aviation Safety Agency
LBA  Luftfahrt-Bundesamt
OSD  Operational Suitability Data
SC  Special Condition
TC  Type Certificate
TCDS Type Certificate Data Sheet

II. Type Certificate Holder Record

Date          Type Certificate Holder

21-March-2011  XtremeAir GmbH
26-Oct-2021   Liftify UG (Haftungsbeschränkt)

III. Change Record

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<td>18 March 2011</td>
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<td>21 March 2011</td>
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<td>2</td>
<td>01 February 2012</td>
<td>Certification Basis updated (CRI D-102), New model added</td>
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<td>18 October 2012</td>
<td>Sections A.III.13, A.IV</td>
<td>-</td>
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<td>04 January 2013</td>
<td>Sections A.III.7, A.IV, B.III.7, B.IV</td>
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<td>5</td>
<td>27 February 2013</td>
<td>Sections A.III.5/B.III.5: TO &amp; continuous power (kW) corrected</td>
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<td>6</td>
<td>08 December 2015</td>
<td>S/N corrected in A.VI and B.VI; OSD data added</td>
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<td>7</td>
<td>26 October 2021</td>
<td>TC and TCDS reissuance to reflect TC transfer to Liftify UG; AMM revision update; S/N eligibility specified.</td>
<td>26 October 2021</td>
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-END-