TYPE-CERTIFICATE
DATA SHEET

No. EASA.A.567

for
APM40

Type Certificate Holder
Issoire Aviation

Aérodrome d’Issoire Le Broc
BP 1
63500 Issoire
FRANCE

For models: APM40
APM41
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SECTION A: APM40

A.I. General

1. Type/ Model/ Variant
   1.1 Type APM40
   1.2 Model APM40
   1.3 Variant Not applicable

2. Airworthiness Category Normal and Utility Categories

3. Manufacturer Issoire Aviation
   Aérodrome Issoire Le Broc
   63500 ISSOIRE
   FRANCE

4. EASA Type Certification Application Date
   1st February 2010

5. EASA Type Certification Date 23rd June 2011

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements
   February 1st, 2010

2. Airworthiness Requirements
   FAR Part23 Amendment 7 dated September 14th 1969
   CS VLA Amendement 1, CS-VLA 572, 613 (c), 615 (a)(3)

3. Special Conditions
   SC-C23.572-01, Issue 1 / Fatigue evaluation
   SC-D23.613-01, Issue 1 / Material strength properties and
design values
   SC-D23.613-02, Issue 1 / Special factors
   SC-D23.615-01, Issue 1 / Design properties
   SC-D23.615-02, Issue 1 / Special factors
   SC-D23.619-02, Issue 1 / Special factors
   SC-F23.1353-01, Issue 1 / Storage battery design and
   installation

4. Exemptions
   None

5. (Reserved) Deviations
   None

6. Equivalent Safety Findings
   Non
A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition
   APM40 Master Drawing List reference IA10400

2. Description
   Single-engine, composite (mainly carbon-epoxy), four-seater, low-wing airplane, conventional tail, fixed tricycle landing gear, FADEC engine

3. Equipment
   The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the aircraft for airworthiness certification. The applicable EASA approved Flight Manual is required for all operations. Included within the Flight Manual is the form of supplements which cover installation of optional systems and equipment that are necessary to safe operation of the aircraft.

4. Dimensions
   Refer to Airplane Flight Manual

5. Engine
   5.1. Model Continental IOF-240-B
   5.2 Type Certificate The engine has been EASA type certified on May 10\textsuperscript{th}, 2007 under TC EASA.IM.E.169
   5.3 Limitations Maximum take-off: 2800rpm (125HP) Maximum continuous: 2800rpm (125HP)

6. Load factors

<table>
<thead>
<tr>
<th>Flaps up</th>
<th>Normal Cat.</th>
<th>Utility Cat.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+3.8g</td>
<td>+4.4g</td>
</tr>
<tr>
<td></td>
<td>-1.9g</td>
<td>-2.2g</td>
</tr>
<tr>
<td>Flaps down</td>
<td>+2g</td>
<td>+2g</td>
</tr>
<tr>
<td></td>
<td>-0g</td>
<td>-0g</td>
</tr>
</tbody>
</table>

7. Propeller
   7.1 Model MT-Propeller MTV-7-D/175-51
7.2 Type Certificate  The EASA type certification standard includes that of LBA TC N° 32.130/84, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7.3 Number of blades 3
7.4 Diameter 1.75m
7.5 Sense of Rotation Clockwise

8. Fluids

8.1 Fuel AVGAS 100LL
8.2 Oil MHS-24 SAE 50 (Aero DM 15W50 for instance) and refer to TCM Spec MHS No. 24
8.3 Coolant Not applicable

9. Fluid capacities

9.1 Fuel Two structural wing tanks
   Total capacity: 118L
   Total usable capacity: 114L
9.2 Oil Maximum capacity: 6L
9.3 Coolant system capacity Not applicable

10. Air Speeds

<table>
<thead>
<tr>
<th></th>
<th>Normal Category</th>
<th>Utility Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>VNE (Never Exceed speed)</td>
<td>147 KIAS (273 km/h)</td>
<td>163 KIAS (302 km/h)</td>
</tr>
<tr>
<td>VNO (Maximum structural cruising speed)</td>
<td>132 KIAS (244 km/h)</td>
<td>132 KIAS (244 km/h)</td>
</tr>
<tr>
<td>VA (Manoeuvring speed)</td>
<td>132 KIAS (244 km/h)</td>
<td>132 KIAS (244 km/h)</td>
</tr>
<tr>
<td>VFE (Maximum Flap Extended)</td>
<td>97 KIAS (180 km/h)</td>
<td>97 KIAS (180 km/h)</td>
</tr>
</tbody>
</table>

11. Flight envelope

Maximum operating altitude 15000 feet

12. Approved Operations Capability

Day and Night VFR
Flight into expected or actual icing conditions is prohibited
Flight into expected or actual lightning conditions is prohibited

13. Maximum Masses

<table>
<thead>
<tr>
<th></th>
<th>Normal Cat.</th>
<th>Utility Cat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Takeoff</td>
<td>985 kg</td>
<td>816 kg</td>
</tr>
<tr>
<td>Maximum Landing</td>
<td>985 kg</td>
<td>816 kg</td>
</tr>
</tbody>
</table>
14. Centre of Gravity Range

**Normal Category**
(1) Forward Limit: 11.4% of cma aft of datum at 711 kg
(2) Intermediate limit: 26% of cma aft of datum at 985 kg
(3) Aft Limit: 31.5% of cma aft of datum at 985 kg

**Utility Category**
(1) Forward Limit: 11.4% of cma aft of datum at 711 kg
(2) Intermediate limit: 17% of cma aft of datum at 816 kg
(3) Aft Limit: 20% of cma aft of datum at 816 kg

Cma = 1.114 m
Straight line variation between points given.

15. Datum
Wing leading edge at 1.96m from aircraft centreline.

16. Control surface deflections

- Elevator:
  - Up: 25° ± 2°
  - Down: 15° ± 2°
- Rudder relative to fin:
  - Right: 30° ± 2°
  - Left: 30° ± 2°
- Ailerons relative to wing:
  - Up: 25° ± 2°
  - Down: 15° ± 2°
- Flaps relative to wing:
  - Up: 0/-4°
  - Take-off: 12.5° ± 2°
  - Landing: 25° ± 2°

17. Levelling Means
Fuselage edge at canopy rail junction at 9° pitch down attitude.

18. Minimum Flight Crew
1 (pilot)
19. Maximum Passenger Seating Capacity

**Normal Category:**
4 seats
Two at Station +0.204 m
Two at station +1.101 m
220 kg maximum in the two front seats.

**Utility Category:**
2 seats
Two at Station +0.204 or 0.263 m
220 kg maximum in the two front seats.

20. Baggage/ Cargo Compartments

Maximum baggage compartment 20 kg at +1.526 m
Baggage are not authorized on Utility Category

21. Wheels and Tyres

Refer to the Airplane Flight Manual MDV-APM40-2011-01 and MDV-APM40-2011-02

22. Serial Numbers Eligible

From s/n 003
A.IV. **Operating and Service Instructions**

1. Flight Manual  
   Supplément au manuel de vol MDV-APM40-2011-02 Edition 1 dated May 2011 or all further EASA approved version for use in Utility Category

   Manuel d’entretien MDE-03 Edition Originale dated June 2011 or all further EASA approved version.

   Not applicable, see Maintenance Manual Chapter i.

   Not applicable, see Maintenance Manual Chapter r.

5. Illustrated Parts Catalogue  
   Not applicable, see Maintenance Manual Chapter a.
A.V. **Notes**

1. The Utility Category operations are limited to any Normal Category operations plus (refer to CRI A10):
   - Spins limited to 3 turns;
   - Lazy eight, chandelles, and steep turns, or similar manoeuvres;
   - positive loop and roll (“school or barrel only”);
   - Cuban eight, half Cuban eight, reverse half Cuban eight, and Immelmann (Loop and roll).

   The Aircraft Manual Supplement MDV-APM40-2011-02 must be used and in the aeroplane when the APM40 is used in Utility Category.

   Use of the APM40 under Utility Category must be in the limitations specified in the Aircraft Manual Supplement MDV-APM40-2011-02.

2. FADEC Limitations: Flight is prohibited if any FADEC Health Status Annunciator (HSA) channel lamps (cylinder icons) or annunciators are illuminated.

3. Installation of additional flight-critical electronic equipment, such as an Electronic Flight Instrument System (EFIS), will require review by EASA to determine whether aircraft-level lightning and/or High Intensity Radiated Field (HIRF) testing is required.

4. The second battery is to be utilized as power source for FADEC only.
SECTION B: APM41

B.I. General

1. Type/ Model/ Variant
   1.1 Type   APM40
   1.2 Model  APM41
   1.3 Variant Not applicable

2. Airworthiness Category  Normal Category

3. Manufacturer  Issoire Aviation

4. EASA Type Certification Application Date  6\textsuperscript{th} February 2017

5. EASA Type Certification Date  18\textsuperscript{th} July 2019

B.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements  6\textsuperscript{th} February 2017

2. Airworthiness Requirements
   FAR Part 23 Amendment 7 to 50 (see B.V. note 1)
   CS VLA Amendment 1, CS-VLA 572, 613 (c), 615 (a)(3)
   CS-ACNS, initial edition, 17\textsuperscript{th} December 2013
   CS-36, Amendment 4

3. Special Conditions
   SC-C23.572-01, Issue 1 / Fatigue evaluation
   SC-D23.613-01, Issue 1 / Material strength properties and design values
   SC-D23.613-02, Issue 1 / Special factors
   SC-D23.615-01, Issue 1 / Design properties
   SC-D23.615-02, Issue 1 / Special factors
   SC-D23.619-02, Issue 1 / Special factors
   SC-F23.1311-01, Issue 1 / Back-up for Flight Instruments Requirement
   SC-F23.1353-01, Issue 1 / Storage battery design and installation

4. Exemptions
   None

5. (Reserved) Deviations
   None

6. Equivalent Safety Findings
   None
7. Environmental Protection

CS 36 Amdt. 4 (Chapter 10 of ICAO, Annex 16, Volume I, Seventh edition, Amendment 11-B)
B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition
   MDL-APM41-2019-01 (APM41 Master Data List)

2. Description
   Single-engine, composite (mainly carbon-epoxy), four-seater, low-wing airplane, conventional tail, fixed tricycle landing gear, FADEC engine.

3. Equipment
   The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the aircraft for airworthiness certification.
   The applicable EASA approved Flight Manual is required for all operations. Included within the Flight Manual is the form of supplements which cover installation of optional systems and equipment that are necessary to safe operation of the aircraft.

4. Dimensions
   Refer to Airplane Flight Manual

5. Engine
   5.1. Model Rotax 915 iSc3 A
   5.2 Type Certificate The engine has been EASA type certified on December 14th, 2017 under TC.EASA.E.121
   5.3 Limitations Maximum take-off (5min): 5800rpm (141HP)
       Maximum continuous: 5500rpm (135HP)

6. Load factors
   Flaps up: +3.8g / -1.9g
   Flaps down: +2g / 0g

7. Propeller
   7.1 Model MT-Propeller MTV-6-A/170-51
   7.2 Type Certificate TCDS EASA.P.094
   7.3 Number of blades 3
   7.4 Diameter 1.70m
   7.5 Sense of Rotation Clockwise

8. Fluids
   8.1 Fuel AVGAS 100LL / AVGAS UL91
   8.2 Oil AeroShell Sport Plus 4 (10W40)
   8.3 Coolant Yacco LR-35 Organic

9. Fluid capacities
   9.1 Fuel Two structural wing tanks
       Total capacity: 154L
       Total usable capacity: 146.5L
10. Air Speeds

**VNE** 163kts (302km/h)
**VNO** 132kts (244km/h)
**VA** 132kts (244km/h)
**VFE** 97kts (180km/h)

All these airspeeds are **indicated airspeeds**.

11. Flight envelope

Maximum operating altitude 15000 feet

12. Approved Operations Capability

Day and Night VFR
Flight into expected or actual icing conditions is prohibited
Flight into expected or actual lightning conditions is prohibited

13. Maximum Masses

Maximum mass at take-off and landing: 985kg

14. Centre of Gravity Range

**Lower limit:** 11.4% of CMA
**Upper limit:** 31.5% of CMA

CMA = 1.114m

15. Datum

Wing leading edge at 1.96m from aircraft centreline.

16. Control surface deflections

- **Elevator:**
  - Up: 25° ± 2°
  - Down: 15° ± 2°

- **Rudder relative to fin:**
  - Right: 30° ± 2°
  - Left: 30° ± 2°

- **Ailerons relative to wing:**
  - Up: 25° ± 2°
  - Down: 15° ± 2°

- **Flaps relative to wing:**
  - Take-off: 12.5° ± 2°
  - Landing: 25° ± 2°

17. Levelling Means

Fuselage edge at canopy rail junction at 9° pitch down attitude.
18. Minimum Flight Crew
   1 (pilot)

19. Maximum Passenger Seating Capacity
   4 seats
   Two at station +0.204 m
   Two at station +1.101 m
   220 kg maximum in the two front seats.

20. Baggage/ Cargo Compartments
    Maximum baggage compartment 20 kg at +1.526 m

21. Wheels and Tyres
    Refer to the Airplane Flight Manual MDV-APM41-2018-01

22. Serial Numbers Eligible
    From s/n 005
B.IV.  Operating and Service Instructions

1. Flight Manual
   Manuel de vol MDV-APM41-2018-01, Edition 0, Revision 0, dated July 2019
   or all further EASA approved version.

   or all further EASA approved version.

   N/A, see Maintenance Manual Chapter 51

   N/A, see Maintenance Manual Chapter 08

5. Illustrated Parts Catalogue
B.V.  

Notes

1. FAR Part 23 paragraphs in amendment higher than original Amdt 7:
   - Amdt 20: 23.1301
   - Amdt 43: 23.1322
   - Amdt 49: 23.1309, 23.1353
   - Amdt 50: 23.53, 23.69, 23.71

2. Elect to comply items:
   - CS 23.1308 Amdt. 4 (HIRF Protection)
SECTION ADMINISTRATIVE

IV. Acronyms & Abbreviations
None

V. Type Certificate Holder Record
Issoire Aviation – Aérodrome d’Issoire BP 1 – 63500 Issoire - FRANCE

VI. Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC Issue No. &amp; Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue 01</td>
<td>23rd June 2011</td>
<td>Initial Issue</td>
<td>Initial Issue, 23rd June 2011</td>
</tr>
<tr>
<td>Issue 02</td>
<td>18th July 2019</td>
<td>Adding the model APM41 and formal corrections at APM40.</td>
<td>Issue 1, 18th July 2019</td>
</tr>
</tbody>
</table>

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