TYPE-CERTIFICATE

DATA SHEET

NO. EASA.A.306

for
APM20 AND APM30 SERIES

Type Certificate Holder
ISSOIRE AVIATION

Aérodrome d'Issoire
BP 1
63500 ISSOIRE
FRANCE

For models: APM20 and APM30
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SECTION A: APM20 LIONCEAU

A.I. General

1. Type/ Model/ Variant
   1.1 Type APM20
   1.2 Model APM20
   1.3 Variant - - -

2. Airworthiness Category Normal Category

3. Manufacturer
   ISSOIRE AVIATION
   Aérodrome d’Issoire
   BP1
   63500 ISSOIRE
   FRANCE

4. EASA Type Certification Application Date December 25\textsuperscript{th}, 1995

5. State of Design Authority FRANCE

6. State of Design Authority Type Certificate Date May 17\textsuperscript{th}, 1999

7. EASA Type Certification Date June 1\textsuperscript{st}, 2007

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements December 25\textsuperscript{th}, 1995

2. Airworthiness Requirements JAR-VLA 26\textsuperscript{th} April 1990 Change 1 with VLA 91/1 and VLA 92-1 amendments

3. Special Conditions None

4. Exemptions None

5. (Reserved) Deviations None

6. Equivalent Safety Findings CRI-B3: Spinning (JAR VLA §221)

7. Environmental Protection CS 36 (ICAO Annex 16, volume I, Chapter 10 (refer to Section 3 Note 1)
A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition

2. Description

RC530
Single-engine, composite (mainly carbon-Epoxy), two-place, low-wing airplane, conventional tail, fixed tricycle landing gear.

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 information in the form of supplements which cover installation of optional systems and equipment that are necessary for safe operation of the aircraft.

Refer to Airplane Flight Manual

4. Dimensions

5. Engine

5.1. Model
Rotax 912 A2 and Rotax 912 A2-01
EASA.E.121

5.2 Type Certificate

5.3 Limitations
Maximum take-off 5800 rpm (80 HP) during 5 minutes
Maximum continuous 5500 rpm (78 HP)

6. Load factors

Flaps up +3.8
-1.9
Flaps down +2
-0

7. Propeller

7.1 Model
EVRA type 164/152/116
EASA.P.110

7.2 Type Certificate

7.3 Number of blades
2

7.4 Diameter
1.64 m

7.5 Sense of Rotation
Clockwise

8. Fluids

8.1 Fuel
Unleaded automobile fuel (DIN 51603,0,NORM 1101) or AVGAS 100LL
8.2 Oil
API SF ou SG type (S.A.E. 10W40 for instance)

8.3 Coolant
« EVANS NGP+ » or equivalent (Refer to Airplane Maintenance Manual and Airworthiness Directive F-2005-205)

9. Fluid capacities
9.1 Fuel
One structural tank
Total capacity 68 litres
Total usable capacity 65 litres

9.2 Oil
Maximum 3.0 litres

9.3 Coolant system capacity
Maximum 3.5 litres

10. Air Speeds
\[ V_{NE} (Never \ Exceed \ speed) \]
\[ V_{NO} (Maximum \ structural \ cruising \ speed) \]
\[ V_{A} (Manoeuvring \ speed) \]
\[ V_{FE} (Maximum \ Flap \ Extended) \]
135 KIAS (250 km/h)
108 KIAS (200 km/h)
108 KIAS (200 km/h)
81 KIAS (150 km/h)

11. Flight Envelope
+3.8 / -1.9

12. Approved Operations Capability
Day VFR

13. Maximum Masses
Maximum Takeoff: 634 kg
Maximum Landing: 634 kg

If modification FM25-09 is installed:
Maximum Takeoff: 655 kg
Maximum Landing: 655 kg

14. Centre of Gravity Range
Forward Limit: 20% of cma aft of datum at 634 kg (at 655 kg if mod FM25-09 is installed)
Aft Limit: 26.3% of cma aft of datum at 634 kg (at 655 kg if mod FM25-09 is installed)
MAC = 1.105 m
Straight line variation between points given.

15. Datum
Wing leading edge at 1.96 m for aircraft centerline.

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

18. Minimum Flight Crew

19. Maximum Passenger Seating Capacity

20. Baggage/ Cargo Compartments

21. Wheels and Tyres

22. (Reserved)
A.IV. **Operating and service instructions**

1. Flight Manual
   - MDV 01 Edition n°1 Révision 5 du 13/05/2015

   - MDE 01 Edition D d’Avril 2010

   - See MDE 01 last edition

   - See MDE 01 last edition

5. Illustrated Parts Catalogue
   - See MDE 01 last edition
SECTION B: MODEL B DESIGNATION

B.I. General

1. Type/ Model/ Variant
   1.1 Type
   1.2 Model
   1.3 Variant
   APM30
   APM30
   - - -

2. Airworthiness Category
   Normal Category

3. Manufacturer
   ISSOIRE AVIATION
   Aérodom d’Issoire
   BP1
   63500 ISSOIRE
   FRANCE

4. EASA Type Certification Application Date
   April 8th, 2005

5. State of Design Authority
   FRANCE

6. State of Design Authority Type Certificate Date
   N/A

7. EASA Type Certification Date
   June 1st, 2007

B.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements
   April 8th, 2005

2. Airworthiness Requirements
   CS-VLA Original revision

3. Special Conditions
   CRI-A2 Third seat
   CRI-A3 Night VFR

4. Exemptions
   None

5. (Reserved) Deviations
   None

6. Equivalent Safety Findings
   CRI-D1 Emergency exits

7. Environmental Protection
   CS 36 (ICAO Annex 16, volume I, Chapter 10 (refer to Section 3 Note 1)
B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition

IA10300

Single-engine, composite (mainly carbon-Epoxy), two-place, low-wing airplane, conventional tail, fixed tricycle landing gear.

2. Description

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 information in the form of supplements which cover installation of optional systems and equipment that are necessary for safe operation of the aircraft.

Refer to Airplane Flight Manual

4. Dimensions

5. Engine

5.1. Model

Rotax 912 S2 and Rotax 912 S2-01

5.2 Type Certificate

EASA.E.121

5.3 Limitations

Maximum take-off 5800 rpm (100 HP) during 5 minutes

Maximum continuous 5500 rpm (93 HP)

6. Load factors

Flaps up +3.8

-1.9

Flaps down +2

-0

7. Propeller

7.1 Model

EVRA type 182/171/1005

7.2 Type Certificate

EASA.P.110

7.3 Number of blades

2

7.4 Diameter

1.82 m

7.5 Sense of Rotation

Clockwise

In case modification FM56-15 is installed:

7.1 Model

MT 181 R 173-2M

7.2 Type Certificate

EASA.P.006

7.3 Number of blades

2
7.4 Diameter 1.81 m
7.5 Sense of Rotation Clockwise

8. Fluids

8.1 Fuel Unleaded automobile fuel (DIN 51603,0,NORM 1101) or AVGAS 100LL
8.2 Oil API SF ou SG type (S.A.E. 10W40 for instance)
8.3 Coolant « BASF Glysantin Antikorrosion » or equivalent (Refer to Airplane Flight Manual)

9. Fluid capacities

9.1 Fuel One structural tank
Total capacity 72 litres
Total usable capacity 69 litres

9.2 Oil Maximum 3.0 litres

9.3 Coolant system capacity Maximum 3.5 litres

10. Air Speeds

\[ V_{NE} \] (Never Exceed speed) 143 KIAS (265 km/h)
\[ V_{NO} \] (Maximum structural cruising speed) 113 KIAS (210 km/h)
\[ V_{A} \] (Manoeuvring speed) 113 KIAS (210 km/h)
\[ V_{FE} \] (Maximum Flap Extended) 95 KIAS (176 km/h)

11. Flight Envelope +3.8/-1.9

12. Approved Operations Capability Day & Night VFR

13. Maximum Masses

Maximum Takeoff: 708 kg
Maximum Landing: 708 kg

If modification FM25-09 is installed:
Maximum Takeoff: 736 kg
Maximum Landing: 736 kg

If modification FM56-15 is installed, combined with MT 181 R 173-2M propeller:
Maximum Takeoff: 750 kg
Maximum Landing: 736 kg

14. Centre of Gravity Range

(1) Forward Limit: 15% of cma aft of datum at 502 kg
(2) Intermediate limit: 16.7% of cma aft of datum at 667 kg
(3) Intermediate limit: 18.8% of cma aft of datum at 708 kg
(4) Aft Limit: 26.5% of cma aft of datum at 708 kg
If modification FM 25-09 is installed (increase of MTOW)

(1) Forward Limit: 15% of cma aft of datum at 502 kg
(2) Intermediate limit: 16.7% of cma aft of datum at 667 kg
(3) Intermediate limit: 20% of cma aft of datum at 736 kg
(4) Aft Limit: 26.5% of cma aft of datum at 736 kg

If modification FM 56-15 is installed (increase of MTOW and CG range)

(1) Forward Limit: 15% of cma aft of datum at 502 kg
(2) Intermediate limit: 16.7% of cma aft of datum at 667 kg
(3) Intermediate limit: 20% of cma aft of datum at 736 kg when using EVRA propeller
20.5% of cma of datum at 750kg when using MT 181 R 173 - 2M propeller
(4) Aft Limit: 30% of cma aft of datum at 736 kg when using EVRA propeller
30% of cma of datum at 750kg when using MT 181 R 173 - 2M propeller

CMA = 1.105 m
Straight line variation between points given.

15. Datum
Wing leading edge at 1.96 m for aircraft centerline.

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 6°25 pitch down attitude.

18. Minimum Flight Crew
One (pilot)

19. Maximum Passenger Seating Capacity
Two at Station +0.22 to 0.28 m
One at station +1.018 to 1.033m

20. Baggage/ Cargo Compartments
Maximum baggage compartment 20 kg at +1.020 m.

21. Wheels and Tyres
330x130
If modification DM 60-16 is installed:
5.00-5

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

1. Flight Manual
   - MDV 02 Edition n°3 Revision 4 from December 2016
   - MDE 02 Edition D d’Avril 2010
   - See MDE 02 last edition
   - See MDE 02 last edition
5. Illustrated Parts Catalogue
   - See MDE 02 last edition
N.V.  Notes
SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>C.G.</td>
<td>Centre of Gravity</td>
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<tr>
<td>CRI</td>
<td>Certification Review Item</td>
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<tr>
<td>HIRF</td>
<td>High Intensity Radiated Field</td>
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<tr>
<td>hp</td>
<td>Horse Power</td>
</tr>
<tr>
<td>MSL</td>
<td>Mean Sea Level</td>
</tr>
<tr>
<td>AFM</td>
<td>Airplane Flight Manual</td>
</tr>
<tr>
<td>s/n</td>
<td>Serial Number</td>
</tr>
<tr>
<td>SC</td>
<td>Special Condition</td>
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<tr>
<td>VFR</td>
<td>Visual Flight Rules</td>
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II. Type Certificate Holder Record

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<th>Type Certificate Holder</th>
<th>Period</th>
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<tr>
<td>Aérodrome d'Issoire</td>
<td>since May 17th, 1999</td>
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<tr>
<td>BP 1</td>
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<td>63500 ISSOIRE FRANCE</td>
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III. Change Record

<table>
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<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
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<tbody>
<tr>
<td>Issue 01</td>
<td>June 1st, 2007</td>
<td>Initial Issue</td>
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<tr>
<td>Issue 02</td>
<td>October 22nd, 2009</td>
<td>This issue corrects APM20 coolant and baggage/cargo compartment arm.</td>
</tr>
<tr>
<td>Issue 03</td>
<td>December 23rd, 2011</td>
<td>This issue incorporates the modification FM25-09 which increases the Maximum Takeoff Weight of the APM20 and APM30 models.</td>
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