



TYPE-CERTIFICATE DATA SHEET

NO. EASA.A.306

for
APM 20 AND APM30 SERIES
Type Certificate Holder
ISSOIRE AVIATION

Aérodrome d'Issoire
BP 1
63500 ISSOIRE
FRANCE

For models: APM 20 and APM 30



Intentionally left blank



SECTION A: MODEL A DESIGNATION	5
A.I. General	5
1. Type/ Model/ Variant	5
2. Airworthiness Category	5
3. Manufacturer	5
4. EASA Type Certification Application Date	5
5. State of Design Authority.....	5
6. State of Design Authority Type Certificate Date.....	5
7. EASA Type Certification Date.....	5
A.II. EASA Certification Basis	5
1. Reference Date for determining the applicable requirements	5
2. Airworthiness Requirements	5
3. Special Conditions.....	5
4. Exemptions	5
5. (Reserved) Deviations	5
6. Equivalent Safety Findings	5
7. Environmental Protection.....	5
A.III. Technical Characteristics and Operational Limitations.....	6
1. Type Design Definition.....	6
2. Description.....	6
3. Equipment.....	6
4. Dimensions	6
5. Engine	6
6. Load factors	6
7. Propeller	6
8. Fluids.....	7
9. Fluid capacities.....	7
10. Air Speeds	7
11. Flight Envelope	7
12. Approved Operations Capability.....	7
13. Maximum Masses.....	7
14. Centre of Gravity Range.....	7
15. Datum	7
16. Control surface deflections.....	8
17. Levelling Means	8
18. Minimum Flight Crew	8
19. Maximum Passenger Seating Capacity	8
20. Baggage/ Cargo Compartments.....	8
21. Wheels and Tyres.....	8
22. (Reserved).....	8
1. Flight Manual	9
2. Maintenance Manual.....	9
3. Structural Repair Manual.....	9
4. Weight and Balance Manual.....	9
5. Illustrated Parts Catalogue	9
A.V. Notes	10
SECTION B: MODEL N DESIGNATION	11
B.I. General	11
1. Type/ Model/ Variant	11
2. Airworthiness Category	11



3. Manufacturer	11
4. EASA Certification Application Date	11
5. State of Design Authority.....	11
6. State of Design Authority Type Certificate Date.....	11
7. EASA Type Certification Date.....	11
B.II. EASA Certification Basis	11
1. Reference Date for determining the applicable requirements	11
2. Airworthiness Requirements	11
3. Special Conditions.....	11
4. Exemptions	11
5. (Reserved) Deviations	11
6. Equivalent Safety Findings	11
7. Environmental Protection.....	11
B.III. Technical Characteristics and Operational Limitations.....	12
1. Type Design Definition.....	12
2. Description.....	12
3. Equipment.....	12
4. Dimensions	12
5. Engine	12
6. Load factors	12
7. Propeller	12
8. Fluids.....	13
9. Fluid capacities.....	13
10. Air Speeds	13
11. Flight Envelope	13
12. Approved Operations Capability.....	13
13. Maximum Masses.....	13
14. Centre of Gravity Range.....	13
15. Datum	14
16. Control surface deflections.....	14
17. Levelling Means	14
18. Minimum Flight Crew	14
19. Maximum Passenger Seating Capacity	14
20. Baggage/ Cargo Compartments.....	14
21. Wheels and Tyres.....	14
22. (Reserved).....	14
B.IV. Operating and Service Instructions	15
1. Flight Manual	15
2. Maintenance Manual.....	15
3. Structural Repair Manual.....	15
4. Weight and Balance Manual.....	15
5. Illustrated Parts Catalogue	15
SECTION ADMINISTRATIVE	17
I. Acronyms & Abbreviations	17
II. Type Certificate Holder Record	17
III. Change Record	17



SECTION A: APM20 LIONCEAU

[insert additional sections as applicable]

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 th , 1995
5. State of Design Authority	FRANCE
6. State of Design Authority Type Certificate Date	May 17 th , 1999
7. EASA Type Certification Date	June 1 st , 2007

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements	December 25 th , 1995
2. Airworthiness Requirements	JAR-VLA 26 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	RC530
2. Description	Single-engine, composite (mainly carbon-Epoxy), two-place, low-wing airplane, conventional tail, fixed tricycle landing gear.
3. Equipment	<p>The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the aircraft for airworthiness certification.</p> <p>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.</p>
4. Dimensions	Refer to Airplane Flight Manual
5. Engine	
5.1. Model	Rotax 912 A2 and Rotax 912 A2-O1
5.2 Type Certificate	EASA.E.121
5.3 Limitations	Maximum take-off 5800 rpm (80 HP) during 5 minutes
6. Load factors	Flaps up +3.8 -1.9 Flaps down +2 -0
7. Propeller	
7.1 Model	EVRA type 164/152/116
7.2 Type Certificate	EASA.P.110
7.3 Number of blades	2
7.4 Diameter	1.64 m
7.5 Sense of Rotation	Clockwise
In case modification FM71-19 is installed :	
7.1 Model	MT 160 R 152-2M
7.2 Type Certificate	EASA.P.006
7.3 Number of blades	2
7.4 Diameter	1.60 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
	Two structural tanks in each wing (if modification FM68-19 is installed)	
		Total capacity 92 litres
		Total usable capacity 91.8 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)	135 KIAS (250 km/h)
V_{NO}	(Maximum structural cruising speed)	108 KIAS (200 km/h)
V_A	(Manoeuvring speed)	108 KIAS (200 km/h)
V_{FE}	(Maximum Flap Extended)	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)
15. Datum		Wing leading edge at 1.96 m for aircraft centreline



16. Control surface deflections	Elevator:	Up	$25^{\circ} \pm 2^{\circ}$
		Down	$15^{\circ} \pm 2^{\circ}$
	Rudder relative to fin:	Right	$30^{\circ} \pm 2^{\circ}$
		Left	$30^{\circ} \pm 2^{\circ}$
	Ailerons relative to wing:	Up	$25^{\circ} \pm 2^{\circ}$
		Down	$15^{\circ} \pm 2^{\circ}$
	Flaps relative to wing:	Up	$0/-4^{\circ}$
		Take-off	$12.5^{\circ} \pm 2^{\circ}$
		Landing	$25^{\circ} \pm 2^{\circ}$

17. Levelling Means

Fuselage edge at canopy rail junction at $6^{\circ}25'$ pitch down attitude.

18. Minimum Flight Crew

One (pilot)

19. Maximum Passenger Seating Capacity

Two at Station +0.22 to 0.28 m

20. Baggage/ Cargo Compartments

Maximum baggage compartment 20 kg at +1.020 m

330x130

21. Wheels and Tyres

if modification DM 60-16 is installed :
5.00-5

22. (Reserved)



A.IV. Operating and Service Instructions

1. Flight Manual	MDV 01 Edition n°1 Révision 5 du 13/05/2015
2. Maintenance Manual	MM-APM2030-2021-01 Original edition January 2021
3. Structural Repair Manual	MM-APM2030-2021-01 last edition
4. Weight and Balance Manual	MM-APM2030-2021-01 last edition
5. Illustrated Parts Catalogue	IPC-APM2030-2021-01 last edition



A.V. Notes



SECTION B: APM30 LION

B.I. General

1. Type/ Model/ Variant	
1.1 Type	APM30
1.2 Model	APM30
1.3 Variant	- - -
2. Airworthiness Category	Normal Category
3. Manufacturer	ISSOIRE AVIATION Aérodrome d'Issoire BP1 63500 ISSOIRE FRANCE
4. EASA Certification Application Date	April 8 th , 2005
5. State of Design Authority	FRANCE
6. State of Design Authority Type Certificate Date	N/A
7. EASA Type Certification Date	June 1 st , 2007

B.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements	April 8 th , 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	IA0300
2. Description	Single-engine, composite (mainly carbon-Epoxy), two-place, low-wing airplane, conventional tail, fixed tricycle landing gear.
3. Equipment	<p>The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the aircraft for airworthiness certification.</p> <p>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.</p>
4. Dimensions	Refer to Airplane Flight Manual
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 68 litres
		Total usable capacity 65 litres
	Two structural tanks in each wing (if modification FM68-19 is installed)	
		Total capacity 92 litres
		Total usable capacity 91.8 litres
9.2 Oil		Maximum 3.0 litres
9.3 Coolant system capacity		Maximum 3.5 litres
10. Air Speeds		
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 $25^{\circ} \pm 2^{\circ}$
Down $15^{\circ} \pm 2^{\circ}$
 - Rudder relative to fin: Right $30^{\circ} \pm 2^{\circ}$
Left $30^{\circ} \pm 2^{\circ}$
 - Ailerons relative to wing: Up $25^{\circ} \pm 2^{\circ}$
Down $15^{\circ} \pm 2^{\circ}$
 - Flaps relative to wing: Up $0/-4^{\circ}$
Take-off $12.5^{\circ} \pm 2^{\circ}$
Landing $25^{\circ} \pm 2^{\circ}$
- 17. Levelling Means Fuselage edge at canopy rail junction at $6^{\circ}25'$ 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 1.033 m
- 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)



N.IV. Operating and Service Instructions

1. Flight Manual

MDV 02 Edition n°3 Revision 4 from
December 2016

2. Maintenance Manual

MM-APM2030-2021-01 Original
edition of January 2021

3. Structural Repair Manual

MM-APM2030-2021-01 last edition

4. Weight and Balance Manual

MM-APM2030-2021-01 last edition

5. Illustrated Parts Catalogue

IPC-APM2030-2021-01 last edition



N.V. Notes



SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations

C.G.	Centre of Gravity
CRI	Certification Review Item
HIRF	High Intensity Radiated Field
hp	Horse Power
MSL	Mean Sea Level
AFM	Airplane Flight Manual
s/n	Serial Number
SC	Special Condition
VFR	Visual Flight Rules

II. Type Certificate Holder Record

Type Certificate Holder	Period
Aérodrome d'Issoire BP 1 63500 ISSOIRE FRANCE	since May 17th, 1999

III. Change Record

Issue	Date	Changes	TC Issue No. & Date
Issue 01	June 1 st , 2007	Initial Issue	June 1 st , 2007
Issue 02	October 22 nd , 2009	This issue corrects APM20 coolant and baggage/cargo compartment arm.	
Issue 03	December 23 rd , 2011	This issue incorporates the modification FM25-09 which increases the Maximum Takeoff Weight of the APM20 and APM30 models.	
Issue 04	September 26 th , 2019	Change of model document TE.CERT.00048-001. Addition of modification DM 60-16 for 5.00-5 wheels, addition of modification 56-15 concerning MT Propeller MT 181 R 173-2M and MTOW increase.	
<u>Issue 05</u>	<u>February 1st, 2023</u>	<u>Addition of fuel tanks in wings, updates on Operating and Service Instructions.</u>	<u>Issue 05</u>

-END-

