European Aviation Safety Agency

EASA

TYPE-CERTIFICATE DATA SHEET

EASA.A.369

CAP20

TYPE CERTIFICATE HOLDER

AERODIF
8 Route de Troyes
21121 DAROIS
FRANCE

For models: CAP20
CAP20LS200
CAP21
CAP230
CAP231
CAP231EX
CAP232

Issue 04: 13 March 2014

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ADMINISTRATIVE SECTION

SECTION A: CAP20

A.I. General

1. Data Sheet No.:	EASA A.369
2. a) Type:	CAP20 series
b) Model:	CAP20
c) Variant:	N/A
3. Airworthiness Category:	Utility and Aerobatic category
4. Type Certificate Holder:	AERODIF
5. Manufacturer:	N/A
6. Certification Application Date:	20/06/1973
7. (Reserved)	
8. The EASA Type Certificate replaces DGAC-France Type Certificate N°69	

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:	11th may 1971
2. Airworthiness Requirements:	FAR23 amendments 1 to 12
3…Special Conditions:	• additional requirements : §3.397 and §6.655 from AIR 2052A regulation • installation of a continuous accelerometer and a warning light
4. Exemptions:	exemption to FAR 23.207 : no stall warning installation
5. Deviations:	
6. Equivalent Safety Findings:	
7. Requirements elected to comply:	
8. Environmental Standards:	
9. (Reserved) Additional National Requirements:	
10. (Reserved)	

A.III. Technical Characteristics and Operational Limitations

1.	Type Design Definition:	Document n° UBENOLI01 latest revision	
2.	Description:	Single-engine, single-seat, low-wing airplane, wood construction, fixed conventional 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 certification	
4.	Dimensions:	Span	7.57 m
		Length	7.21 m
		Height	1.82 m
		Wing Area	10.47 m²
5.	Engine:		
	5.1.1 Model:	LYCOMING AIO-360-B1B	
	5.1.2 Type Certificate:	USA 1E10	
	5.1.3 Limitations:	For power-plant limits refer to AFM latest revision	
6.	Load factors:	UTILITY CAT	
		Positive n	+4.4
		Negative n	-1.8
		AEROBATIC CAT	
		Positive n	+8
		Negative n	-6
7.	Propeller:		
	7.1 Model:	HARTZELL Hub: HC-C2YK-1B Blades: 7666A	HARTZELL Hub: HC-C2YK-4F Blades: C-7666A
	7.2 Type Certificate:	EASA.IM.P.130	EASA.IM.P.130
	7.3 Number of blades:	2	2
	7.4 Diameter:	189 cm	189 cm
	7.5 Sense of Rotation:	clockwise	clockwise
	7.6 Governor	Woodward 210693	Woodward 8907001
8.	Fluids:		
	8.1 Fuel:	Aviation gas Grade 100/130 or 100LL	
	8.2 Oil:	Above 15°C : SAE 50 Between 0°C and +30°C : SAE 40 Between –20°C and +20°C : SAE 30 Below –15°C : SAE 20	
	8.3 Coolant:	N/A	

9. Fluid capacities:

9.1 Fuel: Total: 86 liters. One tank in the fuselage made with 2 cells of 43 liters each.
Usable : 75 liters
Lever arm : 1.475 m

9.2 Oil: 10 liters. One tank in the fuselage
minimum : 5 liters
maxi CAT A : 8 liters

9.3 Coolant system capacity:

10. Air Speeds:

Speeds in km/h	CAT U	CAT A
Never Exceed Speed V_{NE}	370	370
Maximum normal operation Speed V_{NO}	340	340
Cruising speed V_C	340	340
Manoeuvring speed V_A	197	266
maximum computed speed V_D	418	418
Stalling speed V_S	107	102

11. Maximum Operating Altitude: /

12. Allweather Operations Capability: /

13. Maximum Weights:

UTILITY CAT

for operations	830 kg
For take-off	830 kg
For landing	800 kg

AEROBATIC CAT

for maneuvers	760 kg
For take-off	760 kg
For landing	760 kg

14. Centre of Gravity Range:

UTILITY CAT

Front limit	0.285 (19%)
Aft limit	0.390 (26%)

AEROBATIC CAT

Front limit	0.285 (19%)
Aft limit	0.375 (25%)

15. Datum: Leading edge of the reference chord
Length of the reference chord : 1.500 m
Position of this reference chord : 1.33 m from symmetry plane of the airplane

16. Control surface deflections:

Elevator	
Up	21°±2°
Down	24°±2°
Ailerons	
Up	25°±2°
Down	15°±2°
Rudder	
Left	25°±2°
Right	28°±2°
elevator tab	
manual	
Tab up	20°±2°
tab down	20°±2°
Rudder tab	
Right	18°±2°
Left	28°±2°

17. Levelling Means: Spirit Level: marks are made on the fuselage to define the horizontal reference

18. Minimum Flight Crew: 1 pilot
Lever arm : 0.586 m

19. Maximum Passenger Seating Capacity: No passengers. Single seat airplane

20. Baggage/Cargo Compartments: Maximum mass : 10 kg
Lever arm : 1.475 m
Allowed only in CAT U

21. Wheels and Tyres:

model	C.A.A.R.P. ERAM C.A.A.R.P. AERO LOUVOIS A.M.C. SAB T 10.A	
width	2.06 m	
Main Wheel Tire Size	380 x 150	
Tire pressure (bars)	2 bars	
Auxiliary gear	150x50	
Shock absorber pressure	C.A.A.R.P. ERAM C.A.A.R.P. ERAM A.M.C. SAB T 10.A	19 bars 10 bars 8 bars

22. (Reserved):

A.IV. Operating and Service Instructions

1. Flight Manual:

Reference	Edition	revision
UEXNO05	latest	
Previous	1 of 1975	2 of sept 1988

2. Maintenance Manual:

Reference	Edition	revision
UEXNO06	latest	
Previous	1973	none

3. Spare Parts Catalogue

Reference	Edition	revision
UEXNO33	latest	
Previous	1975	none

A.V. Notes

SECTION B: CAP20L/S200

B.I. General

1. Data Sheet No.:	EASA A.369
2. a) Type:	CAP20 series
b) Model:	CAP20L/S200
c) Variant:	N/A
3. Airworthiness Category:	Utility and Aerobatic category
4. Type Certificate Holder:	AERODIF
5. Manufacturer:	N/A
6. Certification Application Date:	07/12/1977

7. (Reserved)
8. The EASA Type Certificate replaces DGAC-France Type Certificate N°69

B.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:	11th may 1971
2. Airworthiness Requirements:	FAR23 amendments 1 to 12
3…Special Conditions:	additional requirements : §3.397 and §6.655 from AIR 2052A regulation
4. Exemptions:	• exemption to FAR 23.207 : no stall warning installation • exemption to §23.173 (no back load on the pitch control and deflection very slight at low speeds during clim at full power with rear balance) • exemption to §23.177 (during nose down sideslip, the lower of the two wing does not go up by itself)
5. Deviations:	
6. Equivalent Safety Findings:	
7. Requirements elected to comply:	
8. Environmental Standards:	
9. (Reserved) Additional National Requirements:	
10. (Reserved)	

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	Document n° UBENOLI02 latest revision
2. Description:	Single-engine, single-seat, low-wing airplane, wood construction, fixed conventional 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 certification

4. Dimensions:

Span	7.57 m
Length	6.46 m
Height	1.80 m
Wing Area	10.47 m²

5. Engine:

5.1.1 Model: LYCOMING AEIO-360-A1B

5.1.2 Type Certificate: USA 1E10

5.1.3 Limitations: For power-plant limits refer to AFM latest revision

6. Load factors:

UTILITY CAT

Positive n	+4.4
Negative n	-1.8

AEROBATIC CAT

Positive n	+8
Negative n	-6

7. Propeller:

7.1 Model: HARTZELL
Hub: HC-C2YK-4BF
Blades: FC7666A-2

7.2 Type Certificate: EASA.IM.P.130

7.3 Number of blades: 2

7.4 Diameter: 189 cm

7.5 Sense of Rotation: clockwise

7.6 Governor: Woodward 210693

8. Fluids:

8.1 Fuel: Aviation gas
Grade 100/130 or 100LL

8.2 Oil: Above 15°C : SAE 50
Between 0°C and +30°C : SAE 40
Between –20°C and +20°C : SAE 30
Below –15°C : SAE 20

8.3 Coolant: N/A

9. Fluid capacities:

9.1 Fuel: Total : 55 liters including 4 liters unusable
Lever arm : -0.017 m

9.2 Oil: 7.5 liters.
minimum for aerobatic operation: 3.8 liters
minimum for level flight operation: 1.9 liters

9.3 Coolant system capacity:

10. Air Speeds:

Speeds in km/h	CAT U	CAT A
Never Exceed Speed V_{NE}	372	372
Maximum normal operation Speed V_{NO}	295	295
Cruising speed V_C	295	295
Manoeuvring speed V_A	206	266
maximum computed speed V_D	418	418
Stalling speed V_S	90	85

11. Maximum Operating Altitude: /

12. Allweather Operations Capability: /

13. Maximum Weights:

UTILITY CAT

for operations	750 kg
For take-off	750 kg
For landing	750 kg

AEROBATIC CAT

for operations	650 kg
For take-off	650 kg
For landing	650 kg

14. Centre of Gravity Range:

UTILITY CAT

Front limit	0.315 (21%)
Aft limit	0.390 (26%)

AEROBATIC CAT

Front limit	0.315 (21%)
Aft limit	0.390 (26%)

15. Datum:

Leading edge of the reference chord

Length of the reference chord : 1.500 m

Leading edge of the airfoil reference located in the rectangular part of the wing

16. Control surface deflections:

Elevator

Up	20°±2°
Down	25°±2°

Ailerons

Up	22°±2°
Down	18°±2°

Rudder

	Left	25°±2°
	Right	25°±2°
	elevator tab	
	manual	
	Tab up	15°±2°
	tab down	15°±2°

17. Levelling Means: Spirit Level: marks are made on the fuselage to define the horizontal reference

18. Minimum Flight Crew: 1 pilot
Lever arm : 0.95 m

19. Maximum Passenger Seating Capacity: No passengers. Single seat airplane

20. Baggage/Cargo Compartments: Maximum mass : 50 kg
Lever arm : 1.60 m
Allowed only in CAT U

21. Wheels and Tyres:

model	A.M.C. SAB T 10.A
width	2.06 m
Main Wheel Tire Size	380 x 150
Tire pressure (bars)	2 bars
Auxiliary gear	155x50
Shock absorber pressure	8 bars

22. (Reserved):

B.IV. Operating and Service Instructions

1. Flight Manual:

Reference	Edition	revision
UEXNO07	latest	
Previous	1978	none

2. Maintenance Manual:

Reference	Edition	revision
UEXNO08	latest	
Previous	1979	none

B.V. Notes:

SECTION C: CAP21

C.I. General

1. Data Sheet No.:	**EASA A.369**
2. a) Type:	CAP20 series
b) Model:	**CAP21**
c) Variant:	N/A
3. Airworthiness Category:	Normal and Aerobatic category
4. Type Certificate Holder:	AERODIF
5. Manufacturer:	N/A
6. Certification Application Date:	04/05/1983
7. (Reserved)	
8. The EASA Type Certificate replaces DGAC-France Type Certificate N°69	

C.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:	11th may 1971
2. Airworthiness Requirements:	FAR23 amendments 1 to 12
3…Special Conditions:	• additional requirement : §23.1581 of FAR23 amendment 23 • additional requirements : §3.397 from AIR 2052A regulation • installation of a continuous accelerometer
4. Exemptions:	• exemption to FAR 23.207 : no stall warning installation • exemption to §23.177a.2 • exemption to §23.173 (no back load on the pitch control and deflection very slight at low speeds during clim at full power with rear balance)
5. Deviations:	
6. Equivalent Safety Findings:	
7. Requirements elected to comply:	
8. Environmental Standards:	
9. (Reserved) Additional National Requirements:	
10. (Reserved)	

C.III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	Document n° UBENOLI03 latest revision	
2. Description:	Single-engine, single-seat, low-wing airplane, wood construction, fixed conventional 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 certification	
4. Dimensions:	Span	8.08 (+0.70 with tanks) m
	Length	6.46 m
	Height	1.80 m
	Wing Area	9.4 m²
5. Engine:		
5.1.1 Model:	LYCOMING AEIO-360-A1B (200HP) or IO-360-A1B equipped for inverted flight	
5.1.2 Type Certificate:	USA 1E10	
5.1.3 Limitations:	For power-plant limits refer to AFM latest revision	
6. Load factors:	NORMAL CAT	
	Positive n	+3.8
	Negative n	-1.52
	AEROBATIC CAT	
	Positive n	+8
	Negative n	-6
7. Propeller:		
7.1 Model:	HARTZELL Hub: HC-C2YK-4BF Blades: FC-7666 A2	
7.2 Type Certificate:	EASA.IM.P.130	
7.3 Number of blades:	2	
7.4 Diameter:	189 cm	
7.5 Sense of Rotation:	clockwise	
7.6 Governor	Woodward 210693	
8. Fluids:		
8.1 Fuel:	Aviation gas Grade 100/130 or 100LL	
8.2 Oil:	Above 16°C : SAE 50 Between -1°C and +32°C : SAE 40 Between –18°C and +21°C : SAE 30 Below –23°C : SAE 20	
8.3 Coolant:	N/A	

9. Fluid capacities:

9.1 Fuel:

One tank in the fuselage of 41L including 1 liter unusable
Lever arm : 0.06 m

Two tanks at wing tips of 40 L each. Only in CAT N

9.2 Oil:

7.5 liters.
minimum for aerobatic operation: 3.8 liters
minimum for level flight operation: 1.9 liters

9.3 Coolant system capacity:

10. Air Speeds:

Speeds in km/h	CAT N	CAT A
Never Exceed Speed V_{NE}	303	372
Maximum normal operation Speed V_{NO}	238	300
Cruising speed V_C	238	300
Manoeuvring speed V_A	206	270
maximum computed speed V_D	333	418
Stalling speed V_S	90	85

11. Maximum Operating Altitude:

/

12. Allweather Operations Capability:

/

13. Maximum Weights:

NORMAL CAT

for operations	700 kg
For take-off	700 kg
For landing	700 kg

AEROBATIC CAT

for operations	620 kg
For take-off	620 kg
For landing	620 kg

14. Centre of Gravity Range:

NORMAL CAT

Front limit	0.252 (18%)
Aft limit	0.385 (27.5%)

AEROBATIC CAT

Front limit	0.252 (18%)
Aft limit	0.406 (29%)

15. Datum:

Leading edge of the reference chord
Length of the reference chord : 1.4 m
Position of this reference chord : 0.40 m from symmetry

plane of the airplane

16. Control surface deflections:

Elevator

Up	20°±2°
Down	23°±2°

Ailerons

Up	24°±2°
Down	20°±2°

Rudder

Left	$30°^{+0°}_{-2°}$
Right	$30°^{+0°}_{-2°}$

elevator tab

manual

Tab up	25°±2°
tab down	15°±2°

17. Levelling Means: Spirit Level: marks are made on the fuselage to define the horizontal reference

18. Minimum Flight Crew: 1 pilot
Lever arm : 0.881 m

19. Maximum Passenger Seating Capacity: No passengers. Single seat airplane

20. Baggage/Cargo Compartments: Maximum mass : 30 kg
Lever arm : 1.60 m
Allowed only in CAT N

21. Wheels and Tyres:

model	A.M.C. Glass fiber Leaf spring
width	2.40 m
Main Wheel Tire Size	5.00 x 5
Tire pressure (bars)	2 bars
Auxiliary gear	6.00x2
Shock absorber pressure	NA

22. (Reserved):

C.IV. Operating and Service Instructions

1. Flight Manual:

Reference	Edition	revision
UEXNO09	latest	
Previous	1983	2 of November 2000

2. Maintenance Manual:

Reference	Edition	revision
UEXNO10	latest	
Previous	1982	none

C.V. Notes:

SECTION D: CAP230

D.I. General

1. Data Sheet No.:	EASA A.369
2. a) Type:	CAP20 series
b) Model:	CAP230
c) Variant:	N/A
3. Airworthiness Category:	Normal and Aerobatic category
4. Type Certificate Holder:	AERODIF
5. Manufacturer:	N/A
6. Certification Application Date:	02/10/1989
7. (Reserved)	
8. The EASA Type Certificate replaces DGAC-France Type Certificate N°69	

D.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:	11th may 1971
2. Airworthiness Requirements:	FAR23 amendments 1 to 12
3…Special Conditions:	• additional requirement : §23.1581 of FAR23 amendment 23 • additional requirements : §3.397 from AIR 2052A regulation • installation of a continuous accelerometer
4. Exemptions:	• exemption to FAR 23.207 : no stall warning installation • exemption to §23.177a.2 • exemption to §23.173 • exemption to §23.1193d (this is acceptable for an aerobatic airplane, dedicated to very high level competitions, in which the downward visibility requires windows in the floor) • exemption to §23.735b (airplane designed for high level aerobatic championship, it needs powerful engine)
5. Deviations:	
6. Equivalent Safety Findings:	
7. Requirements elected to comply:	
8. Environmental Standards:	
9. (Reserved) Additional National Requirements:	
10. (Reserved)	

D.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Document n° YBENOLI01 latest revision
2. Description: Single-engine, single-seat, low-wing airplane, wood construction, fixed conventional 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 certification
4. Dimensions:
   - Span 8.08 m
   - Length 6.75 m
   - Height 1.80 m
   - Wing Area 9.66 m²
5. Engine:
   - 5.1.1 Model: LYCOMING AEIO-540-L1B5D
   - 5.1.2 Type Certificate: USA 1E4
   - 5.1.3 Limitations: For power-plant limits refer to AFM latest revision
6. Load factors:

   NORMAL CAT
   - Positive n +3.8
   - Negative n -1.52

   AEROBATIC CAT
   - Positive n +10
   - Negative n -10
7. Propeller:
   - 7.1 Model: HARTZELL
     Hub: HC-C2YR-4CF
     Blades: FC-8475-6
   - 7.2 Type Certificate: EASA.IM.P.130
   - 7.3 Number of blades: 2
   - 7.4 Diameter: 189 cm
   - 7.5 Sense of Rotation: clockwise
   - 7.6 Governor: Woodward 210688
8. Fluids:
   - 8.1 Fuel: Aviation gas
     Grade 100/130 or 100LL
   - 8.2 Oil: TOTAL AERO DM 15W50
   - 8.3 Coolant: N/A
9. Fluid capacities:
   - 9.1 Fuel: One tank in the fuselage of 65 L usable.
     Lever arm : 0.16 m

9.2 Oil: 15.1 liters.
minimum for level flight operation: 7.6 liters

9.3 Coolant system capacity:

10. Air Speeds:

Speeds in km/h	CAT N	CAT A
Never Exceed Speed V_{NE}	320	400
Maximum normal operation Speed V_{NO}	255	300
Cruising speed V_C	255	300
Manoeuvring speed V_A	193	300
maximum computed speed V_D	352	445
Stalling speed V_S	100	95

11. Maximum Operating Altitude: /

12. Allweather Operations Capability: /

13. Maximum Weights:

NORMAL CAT

for operations	820 kg
For take-off	820 kg
For landing	820 kg

AEROBATIC CAT

for operations	730 kg
For take-off	730 kg
For landing	730 kg

14. Centre of Gravity Range:

NORMAL CAT

Front limit	0.33 (23%)
Aft limit	0.432 (30%)

AEROBATIC CAT

Front limit	0.33 (23%)
Aft limit	0.432 (30%)

15. Datum: Leading edge of the airfoil reference located in the rectangular part of the wing
Length of the reference chord : 1.500 m

16. Control surface deflections:

Elevator

Up	20°±2°
Down	23°±2°

Ailerons

Up	26°±2°
Down	24°±2°

	Rudder	
	Left	$30°^{+0°}_{-2°}$
	Right	$30°^{+0°}_{-2°}$
	elevator tab	
	manual	
	Tab up	25°±2°
	tab down	15°±2°

17. Levelling Means: Spirit Level: marks are made on the fuselage to define the horizontal reference

18. Minimum Flight Crew: 1 pilot
Lever arm : 1.125 m

19. Maximum Passenger Seating Capacity: No passengers. Single seat airplane

20. Baggage/Cargo Compartments: Maximum mass : 20 kg
Lever arm : 1.80 m
Allowed only in CAT N

21. Wheels and Tyres:

model	A.M.C. Glass fiber Leaf spring
width	2.40 m
Main Wheel Tire Size	5.00 x 5
Tire pressure (bars)	2 bars
Auxiliary gear	6.00x2
Shock absorber pressure	NA

22. (Reserved):

D.IV. Operating and Service Instructions

3. Flight Manual:
Does not exist any more
4. Maintenance Manual:
Does not exist any more

D.V. Notes:

All CAP230 have been retrofited to become a CAP231.
There is no remaining CAP230

SECTION E: CAP231

E.I. General

1. Data Sheet No.:	EASA A.369
2. a) Type:	CAP20 series
b) Model:	CAP231
c) Variant:	N/A
3. Airworthiness Category:	Normal and Aerobatic category
4. Type Certificate Holder:	AERODIF
5. Manufacturer:	N/A
6. Certification Application Date:	25/07/1990
7. (Reserved)	
8. The EASA Type Certificate replaces DGAC-France Type Certificate N°69	

E.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:	11th may 1971
2. Airworthiness Requirements:	FAR23 amendments 1 to 12
3…Special Conditions:	• additional requirement : §23.1581 of FAR23 amendment 23 • additional requirements : §3.397 from AIR 2052A regulation • installation of a continuous accelerometer
4. Exemptions:	• exemption to FAR 23.207 : no stall warning installation • exemption to §23.177a.2 • exemption to §23.173 • exemption to §23.1193d (this is acceptable for an aerobatic airplane, dedicated to very high level competitions, in which the downward visibility requires windows in the floor) • exemption to §23.735b (airplane designed for high level aerobatic championship, it needs powerful engine)
5. Deviations:	
6. Equivalent Safety Findings:	
7. Requirements elected to comply:	
8. Environmental Standards:	
9. (Reserved) Additional National Requirements:	
10. (Reserved)	

E.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Document n° YBENOLI02 latest revision
2. Description: Single-engine, single-seat, low-wing airplane, wood construction, fixed conventional 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 certification
4. Dimensions:

Span	8.08 m
Length	6.75 m
Height	1.80 m
Wing Area	9.86 m²

5. Engine:
   - 5.1.1 Model: LYCOMING AEIO-540-L1B5D
   - 5.1.2 Type Certificate: USA 1E4
   - 5.1.3 Limitations: For power-plant limits refer to AFM latest revision
6. Load factors:

NORMAL CAT

Positive n	+3.8
Negative n	-1.5

AEROBATIC CAT

Positive n	+9
Negative n	-9

7. Propeller:

7.1 Model:	HARTZELL Hub: HC-C2YR-4CF Blades: FC-8475-6	MT-Propeller Hub: MTV-9-BC Blades: C200-15	MT-Propeller Hub: MTV-14-B-C Blades: C190-17
7.2 Type Certificate:	EASA.IM.P.130	Germany 32.130/65	EASA.P.017
7.3 Number of blades:	2	3	4
7.4 Diameter:	189 cm	200 cm	190 cm

   - 7.5 Sense of Rotation: clockwise
   - 7.6 Governor: Woodward C210988 for each model of propeller
8. Fluids:
   - 8.1 Fuel: Aviation gas
Grade 100/130 or 100LL
   - 8.2 Oil: TOTAL AERO DM 15W50
   - 8.3 Coolant: N/A
9. Fluid capacities:
   - 9.1 Fuel: One tank in the fuselage of 67 L including 2L unusable.
Lever arm : 0.105 m

9.2 Oil: 15.1 liters.
minimum for level flight operation: 7.6 liters
minimum for aerobatics operation: 8 liters

9.3 Coolant system capacity:

10. Air Speeds:

Speeds in km/h	CAT N	CAT A
Never Exceed Speed V_{NE}	320	400
Maximum normal operation Speed V_{NO}	255	295
Cruising speed V_C	255	300
Manoeuvring speed V_A	193	300
maximum computed speed V_D	352	445
Stalling speed V_S	100	98
Maximum speed for flick rolls	NA	240

11. Maximum Operating Altitude: /

12. Allweather Operations Capability: /

13. Maximum Weights:

NORMAL CAT

for operations	820 kg
For take-off	820 kg
For landing	820 kg

AEROBATIC CAT

for operations	780 kg
For take-off	780 kg
For landing	780 kg

14. Centre of Gravity Range:

NORMAL CAT

Front limit	0.276 (22.6%)
Aft limit	0.377 (30.9%)

AEROBATIC CAT

Front limit	0.276 (22.6%)
Aft limit	0.377 (30.9%)

15. Datum: Leading edge of the reference chord
Length of the reference chord : 1.220 m
Position of this reference chord : 1.97 m from symmetry plane of the airplane

16. Control surface deflections:

Elevator

Up	20°±2°

	Down	23°±2°
Ailerons		
	Up	26°±2°
	Down	24°±2°
Rudder		
	Left	$30°^{+0°}_{-2°}$
	Right	$30°^{+0°}_{-2°}$
elevator tab		
manual		
	Tab up	25°±2°
	tab down	15°±2°
automatic		
	tab up	9°
	tab down	9°

17. Levelling Means: Spirit Level: marks are made on the fuselage to define the horizontal reference

18. Minimum Flight Crew: 1 pilot
Lever arm : 1.070 m

19. Maximum Passenger Seating Capacity: No passengers. Single seat airplane

20. Baggage/Cargo Compartments:
Maximum mass : 35 kg
Lever arm : 1.745 m
Allowed only in CAT N

21. Wheels and Tyres:

model	A.M.C. Glass fiber Leaf spring
width	2.10 m
Main Wheel Tire Size	5.00 x 5
Tire pressure (bars)	2.5 bars
Auxiliary gear	6.00x2
Shock absorber pressure	NA

22. (Reserved):

E.IV. Operating and Service Instructions

1. Flight Manual:

Reference	Edition	revision	language
YEXNO11	latest		French
YEXNO12	latest		English
Previous	1990	3 of September 1998	French
Previous	1990	3 of September 1998	English

2. Maintenance Manual:

Reference	Edition	revision	language
YEXNO13	latest		French
YEXNO14	latest		English
Previous	1990	1 of may 2001	French
Previous	1990	1 of may 2001	English

3. Maintenance Schedule

Reference	Edition	revision	language
YEXNO15	latest		French
YEXNO16	latest		English
Previous	2001	1 of July 2001	French
Previous	2001	1 of July 2001	English

4. Parts Catalogue

Reference	Edition	revision	language
YEXNO34	latest		French
Previous	1992	none	French

E.V. Notes:

SECTION F: CAP231EX

F.I. General

1. Data Sheet No.:	EASA A.369
2. a) Type:	CAP20 series
b) Model:	CAP231EX
c) Variant:	N/A
3. Airworthiness Category:	Normal and Aerobatic category
4. Type Certificate Holder:	AERODIF
5. Manufacturer:	N/A
6. Certification Application Date:	04/02/1993
7. (Reserved)	
8. The EASA Type Certificate replaces DGAC-France Type Certificate N°69	

F.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:	11th may 1971
2. Airworthiness Requirements:	FAR23 amendments 1 to 12
3…Special Conditions:	• additional requirement : §23.1581 of FAR23 amendment 23 • additional requirements : §3.397 from AIR 2052A regulation • installation of a continuous accelerometer • special condition for the wing made with composite material
4. Exemptions:	• exemption to FAR 23.207 : no stall warning installation • exemption to §23.177a.2 • exemption to §23.173 • exemption to §23.1193d (this is acceptable for an aerobatic airplane, dedicated to very high level competitions, in which the downward visibility requires windows in the floor)
5. Deviations:	
6. Equivalent Safety Findings:	
7. Requirements elected to comply:	
8. Environmental Standards:	
9. (Reserved) Additional National Requirements:	
10. (Reserved)	

F.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Document n° LBENOLI01 latest revision
2. Description: Single-engine, single-seat, low-wing airplane, wood and composite construction, fixed conventional 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 certification
4. Dimensions:

Span	7.40 m
Length	6.75 m
Height	1.80 m
Wing Area	10.2 m²

5. Engine:
   - 5.1.1 Model: LYCOMING AEIO-540-L1B5D
   - 5.1.2 Type Certificate: USA 1E4
   - 5.1.3 Limitations: For power-plant limits refer to AFM latest revision
6. Load factors:

NORMAL CAT

Positive n	+3.8
Negative n	-1.6

AEROBATIC CAT

Positive n	+10
Negative n	-10

7. Propeller:

7.1 Model:	HARTZELL Hub: HC-C2YR-4CF Blades: FC-8475-6	MT-Propeller Hub: MTV-9-BC Blades: C200-15	MT-Propeller Hub: MTV-14-B-C Blades: C190-17
7.2 Type Certificate:	EASA.IM.P.130	Germany 32.130/65	EASA.P.017
7.3 Number of blades:	2	3	4
7.4 Diameter:	189 cm	200 cm	190 cm

   - 7.5 Sense of Rotation: clockwise
   - 7.6 Governor: Woodward C210988 for each model of propeller
8. Fluids:
   - 8.1 Fuel: Aviation gas
     Grade 100/130 or 100LL
   - 8.2 Oil: half-synthetic or synthetic oil after the 50 first hours
   - 8.3 Coolant: N/A
9. Fluid capacities:
   - 9.1 Fuel:
     - One tank in the fuselage of 67.5 liters (Usable 65 liters)
       Lever arm : 0.335 m
     - Two auxiliary tanks of 55 liters each (usable 50 liters

each). Only in CAT N
Lever arm : 0.055 m

9.2 Oil: 15.1 liters.
minimum for level flight operation: 7.6 liters

9.3 Coolant system capacity:

10. Air Speeds:

Speeds in km/h	CAT N	CAT A
Never Exceed Speed V_{NE}	340	405
Maximum normal operation Speed V_{NO}	300	315
Cruising speed V_C	315	315
Manoeuvring speed V_A	207	315
maximum computed speed V_D	378	450
Stalling speed V_S	106	100
Maximum speed for flick rolls	NA	240

11. Maximum Operating Altitude: /

12. Allweather Operations Capability: /

13. Maximum Weights:

NORMAL CAT

for operations	820 kg
For take-off	820 kg
For landing	820 kg

AEROBATIC CAT

for operations	730 kg
For take-off	730 kg
For landing	730 kg

14. Centre of Gravity Range:

NORMAL CAT

Front limit	24%
Aft limit	31%

AEROBATIC CAT

Front limit	24%
Aft limit	31%

15. Datum: Leading edge of the reference chord
Length of the reference chord : 1.377 m
Position of this reference chord : 1.853 m from symmetry plane of the airplane

16. Control surface deflections:

Elevator

Up	20°±2°

	Down	23°±2°
Ailerons		
	Up	30°±2°
	Down	30°±2°
Rudder		
	Left	$30°^{+0°}_{-2°}$
	Right	$30°^{+0°}_{-2°}$
elevator tab		
manual		
	Tab up	10°±1°
	tab down	10°±1°
automatic		
	tab up	11°±1°
	tab down	7°±1°

17. Levelling Means: Spirit Level: marks are made on the fuselage to define the horizontal reference

18. Minimum Flight Crew: 1 pilot
Lever arm : 1.205 m

19. Maximum Passenger Seating Capacity: No passengers. Single seat airplane

20. Baggage/Cargo Compartments:
Maximum mass : 35 kg
Lever arm : 1.505 m
Allowed only in CAT N

21. Wheels and Tyres:

model	A.M.C. Glass fiber Leaf spring
width	1.78 m
Main Wheel Tire Size	5.00 x 5
Tire pressure (bars)	2.8 bars
Auxiliary gear	6.00x2
Shock absorber pressure	NA

22. (Reserved):

F.IV. Operating and Service Instructions

1. Flight Manual:

Reference	Edition	revision	language
LEXNO17	latest		French
LEXNO18	latest		English
Previous	1993	3 of February 1996	French
Previous	1993	3 of February 1996	English

2. Maintenance Schedule

Reference	Edition	revision	language
LEXNO19	latest		French
LEXNO20	latest		English
1001006	2001	1 of June 2001	French
1001006GB	2001	1 of June 2001	English

F.V. Notes

SECTION G: CAP232

G.I. General

1. Data Sheet No.:	EASA A.369
2. a) Type:	CAP20 series
b) Model:	CAP232
c) Variant:	N/A
3. Airworthiness Category:	Normal and Aerobatic category
4. Type Certificate Holder:	AERODIF
5. Manufacturer:	AERODIF
6. Certification Application Date:	20/03/1998
7. (Reserved)	
8. The EASA Type Certificate replaces DGAC-France Type Certificate N°69	

G.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:	11th may 1971
2. Airworthiness Requirements:	FAR23 amendments 1 to 12
3…Special Conditions:	• additional requirement : §23.1581 of FAR23 amendment 23 • additional requirements : §3.397 from AIR 2052A regulation • installation of a continuous accelerometer • amendment 1 to 45 of FAR23 for the wing made of composite material
4. Exemptions:	• exemption to FAR 23.207 : no stall warning installation • exemption to §23.177a.2 • exemption to §23.173 • exemption to §23.1193d (this is acceptable for an aerobatic airplane, dedicated to very high level competitions, in which the downward visibility requires windows in the floor)
5. Deviations:	
6. Equivalent Safety Findings:	
7. Requirements elected to comply:	
8. Environmental Standards:	
9. (Reserved) Additional National Requirements:	
10. (Reserved)	

G.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Document n° LBENOLI02 latest revision
2. Description: Single-engine, single-seat, low-wing airplane, wood and composite construction, fixed conventional 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 certification
4. Dimensions:

Span	7.40 m
Length	6.75 m
Height	1.80 m
Wing Area	10.2 m²

5. Engine:
   - 5.1.1 Model: LYCOMING AEIO-540-L1B5D
     Or LYCOMING AEIO-540-L1B5
     Or LYCOMING AEIO-540-L1D5
   - 5.1.2 Type Certificate: USA 1E4
   - 5.1.3 Limitations: For power-plant limits refer to AFM latest revision
6. Load factors:

NORMAL CAT

Positive n	+3.8
Negative n	-1.6

AEROBATIC CAT

Positive n	+9.2
Negative n	-9.2

7. Propeller:

7.1 Model:	HARTZELL Hub: HC-C2YR-4CF Blades: FC-8475-6	MT-Propeller Hub: MTV-9-BC Blades: C200-15	MT-Propeller Hub: MTV-14-B-C Blades: C190-17
7.2 Type Certificate:	EASA.IM.P.130	Germany 32.130/65	EASA.P.017
7.3 Number of blades:	2	3	4
7.4 Diameter:	189 cm	200 cm	190 cm

   - 7.5 Sense of Rotation: clockwise
   - 7.6 Governor: Woodward C210988 for each model of propeller
8. Fluids:
   - 8.1 Fuel: Aviation gas
     Grade 100/130 or 100LL
   - 8.2 Oil: mineral oil 80 during the 50 first hours and half-synthetic or synthetic oil after the 50 first hours
   - 8.3 Coolant: N/A
9. Fluid capacities:

9.1 Fuel:

- One tank in the fuselage of 65 liters (Usable 62.5 liters)
  Lever arm : 0.300 m
- Two auxiliary tanks of 57 liters each (52 liters usable for each). Allowed Only in CAT N
  Lever arm : 0.055 m

9.2 Oil: 15.1 liters.
minimum for level flight operation: 7.6 liters

9.3 Coolant system capacity:

10. Air Speeds:

Speeds in km/h	CAT N	CAT A
Never Exceed Speed V_{NE}	340	405
Maximum normal operation Speed V_{NO}	300	315
Cruising speed V_C	315	330
Manoeuvring speed V_A	207	330
maximum computed speed V_D	378	450
Stalling speed V_S	110	109
Maximum speed for flick rolls	NA	257

11. Maximum Operating Altitude: /

12. Allweather Operations Capability: /

13. Maximum Weights:

NORMAL CAT

for operations	820 kg
For take-off	820 kg
For landing	820 kg

AEROBATIC CAT

for operations	780 kg
For take-off	780 kg
For landing	780 kg

14. Centre of Gravity Range:

NORMAL CAT

Front limit	24%
Aft limit	31%

AEROBATIC CAT

Front limit	24%
Aft limit	31%

15. Datum: Leading edge of the reference chord
Length of the reference chord : 1.342 m
Position of this reference chord : 1.934 m from symmetry plane of the airplane

16. Control surface deflections:

Elevator	
Up	20°±2°
Down	23°±2°
Ailerons	
Up	30°±2°
Down	30°±2°
Rudder	
Left	$30°^{+0°}_{-2°}$
Right	$30°^{+0°}_{-2°}$
elevator tab	
manual	
Tab up	10°±1°
tab down	10°±1°
automatic	
tab up	11°±1°
tab down	7°±1°

17. Levelling Means: Spirit Level: marks are made on the fuselage to define the horizontal reference

18. Minimum Flight Crew: 1 pilot
Lever arm : 1.167 m

19. Maximum Passenger Seating Capacity: No passengers. Single seat airplane

20. Baggage/Cargo Compartments:
Maximum mass : 35 kg
Lever arm : 1.505 m
Allowed only in CAT N

21. Wheels and Tyres:

model	A.M.C. Glass fiber Leaf spring
width	1.78 m
Main Wheel Tire Size	5.00 x 5
Tire pressure (bars)	2.8 bars
Auxiliary gear	6.00x2
Shock absorber pressure	NA

22. (Reserved):

G.IV. Operating and Service Instructions

1. Flight Manual:

Reference	Edition	revision	language
LEXNO35	latest		French
LEXNO36	latest		English
Previous	2000	5 of September 2002	French
Previous	1997	2 of October 2002	English

2. Maintenance Schedule

Reference	Edition	revision	language
LEXNO37	latest		French
LEXNO38	latest		English
1001006	2001	1 of June 2001	French
1001006GB	2001	1 of June 2001	English

3. Parts Catalogue

Reference	Edition	revision	language
LEXNO39	latest		French
Previous	1999	6 of April 2007	English

G.V. Notes

ADMINISTRATIVE SECTION

I. Acronyms

AMC stands for "***A****vions* ***M****udry and* ***C****ie"*

II. Type Certificate Holder Record

Avions Mudry and Cie
Akrotech Europe
CAP Aviation
Apex Aircraft
Dyn'Aviation
AUPA DYN'AERO
AERODIF

III. Change Record

Issue	**Date**	**Changes**
Issue 01	14 June 2010	Initial issue to replace DGAC TCDS No 69
Issue 02	18 Nov 2010	Corrections to line above; original DGAC TCDS is TCDS N°138 issue 10 December 2002. Correction to TC issue date which should have been the EASA TC, not the original DGAC TC.
Issue 03	06 Dec 2012	Change of TC holder from Dyn'Aviation to AUPA DYN'AERO
Issue 04	13 March 2014	Change of TC holder from AUPA DYN'AERO to AERODIF and minor editorial changes