



TCDS No.:
Issue: 03

Lightwing AC4

06 August 2015



TYPE-CERTIFICATE DATA SHEET

EASA.A.588

for
LIGHTWING AC4

Type Certificate Holder

Light Wing AG

Riedenmatt 11
6370 Stans
Switzerland

For models: Lightwing AC4





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SECTION A: LIGHTWING AC4

A.I. General

1. Type/ Model/ Variant

Type: Lightwing AC4
Model: Lightwing AC4

2. Airworthiness Category:

Restricted

3. Manufacturer:

Lightwing AG
Riedenmatt 1
6370 Stans
SWITZERLAND

4. EASA Certification

Application Date: 23 December 2011

A.II. EASA Certification Basis

1. Reference Date for determining

the applicable requirements: 23 December 2011

2. Airworthiness Requirements: Certification Specification for Light Sport Aeroplanes (CS-LSA), initial issue

3. Special Conditions: SC-LSA.2012-01 Requirements to the fuel system in LSA equipped with fuel injected engines

4. Exemptions: None

5. Deviations: None

6. Equivalent Safety Findings: None

7. Environmental Protection

Requirements: Chapter 10 of ICAO Annex 16, Volume I. For details see TCDSN EASA.A.588





A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Master document list ADxC-48-001-MDL 14-05-14

2. Description: The Lightwing AC4 features:

- Conventional high strutted wing configuration;
- Conventional strutted tail;
- Single piston tractor engine;
- Fixed pitch propeller;
- 2 seats, side by side;
- Fixed tricycle landing gear with steerable nose wheel and streamlined wheel covers.

3. Equipment: Minimum equipment list according to flight manual (ADxC-48-001-AFM, latest approved revision)

4. Dimensions:

Total length:	6.97	m
Maximum height:	2.67	m
Maximum fuselage width:	1.25	m
Wing span:	9.45	m
Wing area:	12.70	m ²

5. Engine:

Model:	Rotax 912 iS
Type Certificate:	Certified as part of the aircraft
Limitations:	None

6. Load factors:

+4g, -2g	(clean)
+2g, 0g	(flapped)

7. Propeller

Model:	Neuform, CR-75-(IP)-47-101.6
Manufacturer:	Neuform Composites GmbH
Type Certificate:	Certified as part of the airplane
Number of blades:	3, ground adjustable
Diameter:	1.75 m
Sense of Rotation:	Right (in flight direction)
Weight:	6.4 kg





8. Fluids

Fuel:	MOGAS EN 228 Super / EN 228 Super plus
<i>Alternative:</i>	AVGAS 100 LL = ASTM D910-76 = MIL-G5772
Oil:	API classification "SG" or higher
Coolant:	Conventional (see Rotax SI-91 i-001)

9. Fluid capacities

Fuel:	90 L (usable)
Oil:	3 L
Coolant system:	1.5 L (approximately)

10. Air Speeds (IAS):

V_{S0}	Stall speed flap DWN	76 km/h	(41 kts)
V_{S1}	Stall speed clean	82 km/h	(44 kts)
V_F	Flap speed	165 km/h	(89 kts)
V_A	Manoeuvring speed	176 km/h	(95 kts)
V_C	Cruise speed	176 km/h	(95 kts)
V_{NE}	Never exceed speed	210 km/h	(113 kts)

11. Flight Envelope

Maximum altitude 12.000 ft

12. Approved Operations

Capability: Day-VFR

13. Maximum Masses:

Maximum permissible empty mass	405 kg
Maximum take-off mass	600 kg

14. Centre of Gravity Range:

Forward CG (max. 495kg)	2885 mm (12% MAC)
Forward CG (@600kg)	2940 mm (16% MAC)
Aft CG limit	3008 mm (21% MAC)

15. Datum (origin):

X (aft positive)	1000mm in front of propeller flange
Y (right positive)	on centre line
Z (up positive).	2000mm below propeller flange

16. Control surface deflections:

Aileron	21.2° up, 23.6° down (+/- 2°)
Flap	0°, 10°, 24° down (+/- 2°)
Elevator	30° up, 30° down (+/- 2°)
Rudder	25° left/right (+/- 2°)





17. Levelling Means Design level attitude is defined by a 4° nose-down inclination of the fuselage centre beam
18. Minimum Flight Crew: One (1) pilot (left seat)
19. Maximum Passenger Seating Capacity: One (1) passenger
20. Baggage/ Cargo Compartments: Maximum 25kg baggage
Placed behind the seats, above the fuel tank
21. Wheels and Tyres: Main wheel JAD01
Main wheel tyre PAC02 15x6.00-6" 6ply
Nose wheel JBA02
Nose wheel tyre PAD01 4.00-6ply





A.IV. Operating and Service Instructions

- | | |
|--------------------------------|---|
| 1. Flight Manual | ADxC-48-001-AFM, 1 st edition or later approved revision |
| 2. Maintenance Manual | ADxC-48-001-AMM, 1 st edition or later approved revision |
| 3. Structural Repair Manual | N.A. |
| 4. Weight and Balance Manual | ADxC-48-001-AFM, 1 st edition or later approved revision |
| 5. Illustrated Parts Catalogue | N.A. |

A.V. Notes

None





ADMINISTRATIVE SECTION

I. Acronyms & Abbreviations

AFM	Airplane Flight Manual
AMM	Airplane Maintenance Manual
CG	Centre of Gravity
CS-LSA	Certification specification for Light Sport Aeroplanes
DWN	down
IAS	Indicated Airspeed
ICAO	International Civil Aviation Organization
kg	kilograms
km/h	kilometres per hour
MAC	Mean Aerodynamic Chord
RON/ROZ	Research Octane Number/ Research Oktanzahl
SC	Special Condition
VFR	Visual Flight Rules

II. Type Certificate Holder Record

Aircraft Design & Certification Ltd.
Reichensteinstrasse 48
69151 Neckargemünd
Germany

Light Wing AG
Riedenmatt 11
6370 Stans
Switzerland

III. Change Record

Issue	Date	Changes
Issue 01	17 June 2014	Initial Issue
Issue 02	24 June 2014	Correction
Issue 03	06 August 2015	Transfer of TC holder

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