



European Aviation Safety Agency

EASA

**TYPE-CERTIFICATE
DATA SHEET**

EASA.A.115

EM-11 ORKA

Type Certificate Holder:

ZAKŁADY LOTNICZE Margański&Mysłowski Sp. z o.o.
Strażacka 60
43-300 Bielsko-Biała
Poland

For models: **EM-11C ORKA**

CONTENT

SECTION A: EM-11C ORKA

- A.I. General
- A.II. Certification Basis
- A.III. Technical Characteristics and Operational Limitations
- A.IV. Operating and Service Instructions
- A.V. Notes

ADMINISTRATIVE SECTION

- I. Acronyms
- II. Type Certificate Holder Record
- III. Change Record

SECTION A: EM-11C ORKA

A.I. General

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| 1. Data Sheet No.: | EASA.A.115 |
| 2. a) Type: | EM-11 ORKA |
| b) Model: | EM-11C ORKA |
| c) Variant: | |
| 3. Airworthiness Category: | Normal |
| 4. Type Certificate Holder: | ZAKŁADY LOTNICZE Margański&Mysłowski
Sp. z o.o.
ul. Strażacka 60, 43-300 Bielsko-Biała, Poland |
| 5. Manufacturer: | ZAKŁADY LOTNICZE Margański&Mysłowski
Sp. z o.o.
ul. Strażacka 60, 43-300 Bielsko-Biała, Poland |
| 6. Certification Application Date: | Original Application 17 February 2005
Extension Application 31 March 2008 |
| 7. (Reserved) National Certifying Authority | |
| 8. (Reserved) National Authority Type Certificate Date: | |

A.II. EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | 30 March 2005 |
| 2. Certification Basis: | As defined in CRI-A-1, latest issue |
| 3. Airworthiness Requirements: | EASA CS-23,
(Decision No 2003/14/RM of the Executive Director of the Agency of 14 November 2003) |
| 4. Special Conditions: | None |
| 5. Exemptions: | None |

6. Deviations: None
7. Equivalent Safety Findings: None
8. Requirements elected to comply: None
9. Environmental Standards: ICAO, Annex 16, Volume 1, Fourth Edition, July 2005;
EASA CS-36, Decision No. 2023/4/RM of the Executive Director of the Agency dated 17 October 2003.
CRI-N-01, latest issue
10. (Reserved) Additional National Requirements:

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Master Drawing List, Doc. No. D2-KS-01.F, latest issue
2. Description: Twin engine, four-seated, cantilever high wing airplane, composite construction, retractable tricycle landing gear, T-tail.
3. Equipment: Equipment List, Doc. No. D2-OE-01.E, latest issue
4. Dimensions:

Span	13,5 m	44,3 ft
Length	8,705 m	28,6 ft
Height	2,585 m	8,5 ft
Wing area	16,5 m ²	177,2 sqft
5. Engine:
 - 5.1.1 Model:

Textron Lycoming LIO-320-B1A	Textron Lycoming IO-320-B1A
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 - 5.1.2 Type Certificate: See EASA Piston Engines Non-EUR, Issue 003, 29/06/2010 refer to FAA Engine TCDS 1E12

5.1.3 Limitations: Max take-off rotational speed 2700 r.p.m.
Max continuous rotational speed 2700 r.p.m.
For power plants limits refer to AFM

6. Load factors:

Flaps 0° +3,8 / -1,52
Flaps 20° +2,0 / 0.0
Flaps 30° +2,0 / 0.0

7. Propeller:

7.1 Model: MTV-12-C-C-F/CFRD183-119d MTV-12-C-C-F/CFLD183-119d

7.2 Type Certificate: EASA Propeller TCDS No P.013,

7.3 Number of blades: Three

7.4 Diameter: Maximum Diameter 1830 mm (72,05 in)
Minimum Diameter 1780 mm (70,08 in)

7.5 Sense of Rotation: Clockwise Counter-Clockwise

8. Fluids:

8.1 Fuel: AVGAS 100LL

8.2 Oil: Oils conforming to spec. MIL-L-22851 / SAEJ1899
For more detail refer to AFM Doc. No. D2-OL-11.A-PL,
Section 1, latest issue.

8.3 Coolant: None

9. Fluid capacities:

9.1 Fuel: Total: 2x200 liters (2x52,8 U.S. Gallons)
Usable: 2x176 liters (2x46,5 U.S. Gallons)

9.2 Oil: Maximum: 2x7,6 liters (2x8 U.S. Quarts)
Minimum: 2x1,9 liters (2x2 U.S. Quarts)

9.3 Coolant system capacity: None

10. Air Speeds:

Design manoeuvring speed V_A 130 KEAS

Maximum flap extended speed V_{FE}	115 KEAS
Maximum landing gear operating speed V_{LO}	105 KEAS
Maximum landing gear extended speed V_{LE}	105 KEAS
Minimum control speed V_{MC}	70 KEAS
Never exceed speed V_{NE}	194 KEAS
Maximum structural cruising speed V_{NO}	156 KEAS

11. Maximum Operating Altitude: 3048 m (10000 ft) without time limits
from 3048 m to 3962 m (from 10000 to 13000 ft) maximum 30 minutes without oxygen use.

12. Allweather Operations Capability: Day/Night VFR.
Flight into expected icing conditions not allowed.

13. Maximum Weights:

Take-off	1820 kg	(4012 lb)
Landing	1820 kg	(4012 lb)
Zero fuel	1780 kg	(3924 lb)

14. Centre of Gravity Range:

Forward limit: 3,631 m (142,96 in) equivalent to 23,5% of MAC, aft of DATUM at 1820 kg (4012 lb)
3,637 m (143,18 in) equivalent to 23,9% of MAC, aft of DATUM at 1710 kg (3773 lb)
3,689 m (145,25 in) equivalent to 28,0% of MAC, aft of DATUM at 1490 kg (3285 lb)
3,773 m (148,55 in) equivalent to 34,4% of MAC, aft of DATUM at 1380 kg (3042 lb)

Vary linearly with mass in between

Rear limit: 3,781 m (148,86 in) equivalent to 35,0% of MAC, aft of DATUM at 1820 kg (4012 lb)
3,807 m (149,89 in) equivalent to 37,0% of MAC, aft of DATUM at 1600 kg (3527 lb)
3,807 m (149,89 in) equivalent to 37,0% of MAC, aft of DATUM at 1380 kg (3042 lb)

Vary linearly with mass in between

15. Datum: 3,200 m (10,5 ft) in front of leading edge at 0,700 m (27,6 in) station

16. Reserved

17. Levelling Means: Wing chord at aileron outboard station

18. Minimum Flight Crew: 1

19. Maximum Passenger Seating Capacity: 3

20. Baggage/Cargo Compartments: Max. allowable load 70 kg (154 lb)
Location 4,10 m (13,45 ft) aft of DATUM.

21. Wheels and Tyres: Nose wheel tyre size 5.00-5
Main wheel tyre size 6.00-6

22. (Reserved):

A.IV. Operating and Service Instructions

Flight Manual:	Doc. No. D2-OL-11.A-PL dated 30 December 2009, latest issue
Maintenance Manual (incl. Airworthiness Limitations):	Doc. No. D2-OM-11.A-PL dated 30 May 2009, latest issue
Service Information and Service Bulletins	-

A.V. Notes:

ADMINISTRATIVE SECTION

I. Acronyms

N/A

II. Type Certificate Holder Record

ZAKŁADY LOTNICZE Margański&Mysłowski Sp. z o.o.
ul. Strażacka 60, 43-300 Bielsko-Biała, Poland

III. Change Record

Issue	Date	Changes	TC Issue No. & Date
Issue 01	8 April 2011	Initial issue	8 April 2011