EASA

TYPE-CERTIFICATE
DATA SHEET

EASA.A.038

SWIFT S-1

Type Certificate Holder:
ZAKŁADY LOTNICZE Margański & Mysłowski S.A.
ul. Strażacka 60
43-300 Bielsko-Biała
POLAND

Models: SWIFT S-1

Issue 02, 23/05/2016
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Section A: SWIFT S-1

A.I. General

1. Data Sheet No.: EASA.A.038

2. a) Type: SWIFT S-1

   b) Model:

   c) Variant:

3. Airworthiness Category: Sailplane - Aerobatic (A) Category

4. Manufacturer: Zakład Remontów i Produkcji Sprzętu Lotniczego Edward Margański
   ul. Cieszyńska 321
   43-300 Bielsko-Biała
   POLAND

5. Polish CAA Certification Date: 12 August 1992


A.II. Certification Basis

1. Reference Date for determining the applicable requirements: May 1990

2. Airworthiness Requirements: JAR-22, Change 4, issued on 7 May 1987

3. Special Conditions: None

4. Exemptions:
   - Stall warning outside the required limit 1.05-1.10 \( V_{S1} \) (JAR 22.207).
   - Fuselage structure verified up to 77% of emergency landing ultimate loads (JAR 22.561).

5. Deviations: None

6. Equivalent Safety Findings: None

7. Requirements elected to comply: None

8. Environmental Standards: None
A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: List of drawings, 5 November 1992

2. Description: Single-seat, mid-wing glider with conventional tailplane arrangement. All composite construction (GFRP). Wing equipped with Schempp-Hirth airbrake, extended on upper surface only, and Friese-type aileron. Horizontal tailplane split in stabiliser and elevator, and vertical - in fin and rudder. Retractable main landing gear, with wheel brake.

3. Equipment: Minimum equipment:
   - airspeed indicator,
   - altimeter,
   - accelerometer,
   - stall warning device,
   - 5-point pilot harness,
   - parachute or back cushion (8 cm thick).

4. Dimensions:
   - Span: 12.68 m
   - Length: 6.91 m
   - Height: 1.74 m (flight attitude)
   - Wing area: 11.73 m²

5. Tow release:
   - nose towing hook
     TOST E85 or SZD-III
   - CG towing hook (option)
     TOST Europa G 88

6. Weak links: Ultimate strength:
   - for winch launch: 745 daN
   - for aero-tow: 745 daN

7. Load factors: +10.0 / -7.5 over the whole airspeed range

8. Air Speeds (IAS):
   - Never Exceed Speed: \( V_{NE} = 287 \) km/h
   - Manoeuvring Speed: \( V_A = 236 \) km/h
   - Rough Air Speed: \( V_{RA} = 236 \) km/h
   - Max Aero-tow Speed: \( V_T = 151 \) km/h
   - Max Winch-launch Speed: \( V_W = 140 \) km/h


10. Masses:
    - Maximum mass: 410 kg
    - Maximum mass of non-lifting parts: 260 kg
11. Centre of Gravity Range: Empty glider with standard equipment:
   Forward limit: 620 mm aft of the datum
   Rearward limit: 640 mm aft of the datum
Centre of Gravity operational limits:
   Forward limit: 257 mm aft of the datum (26,0% MAC)
   Rearward limit: 414 mm aft of the datum (41,9% MAC)
MAC is 984 mm;
0% MAC is situated at 1,3 mm aft of the datum.

12. Datum: Wing leading edge at root rib.

13. Levelling Means: Leading and trailing edge at root rib at the same level.

14. Seating Capacity: 1 pilot

15. Lifetime limitations: Refer to the Technical Service Manual

16. Other limitations: The following is prohibited:
   - night flying,
   - flight in icing conditions.

17. Control surface deflections:
   Aileron:  
   - up 22° ±1°
   - down 17° ±1°
   Elevator:  
   - up 25° +1° / -1.5°
   - down 25° +1° / -1.5°
   Rudder:  
   - left 30° +1° / -2°
   - right 30° +1° / -2°

A.IV. Operating and Service Instructions

1. Flight Manuals:
   German ● Flughandbuch SWIFT S-1, Ausg. III, Juli 2003, LBA-anerkannt.

2. Maintenance Manuals:
   German ● Wartungshandbuch SWIFT S-1, Ausg. III, April 2003.

3. Instructions for equipment installed (in every case - the latest approved version):
   ● TOST, Operating manual for E85 tow release.
   ● SZD, Operating manual for SZD III tow release.
   ● TOST, Installation and operating manual for TOST aircraft wheels.
A.V. Notes:

1. Serial Numbers:
   P-05, P-06, P-08 and from S/N 101 to S/N 125

2. Upper surface of wings, horizontal tail plane and fuselage, exposed to sun radiation, must be painted white. No colour markings allowed on these surfaces.

Administrative section

I. Acronyms

   MAC  Mean Aerodynamic Chord
   S/N  Aircraft Serial Number
   VFR  Visual Flight Rules

II. Type Certificate Holder Record

   ZAKŁADY LOTNICZE Margański & Mysłowski S.A.
   ul. Strażacka 60
   43-300 Bielsko-Biała
   POLAND

III. Change Record

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