



TYPE-CERTIFICATE DATA SHEET

No. EASA.A.309

for

SZD-51 "Junior"

Type Certificate Holder

Allstar PZL Glider Sp. z o.o.

ul. Cieszyńska 325
43-300 Bielsko-Biała
POLAND

Models: SZD-51-1 "Junior"

Issue 02, 09/09/2016

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Section A: SZD-51-1 „Junior“

A.I. General

1. Data Sheet No.: EASA.A.309
2. a) Type: SZD-51 "Junior"
b) Model: SZD-51-1 "Junior"
c) Variant:
3. Airworthiness Category: Sailplane - Utility (U) Category
4. Manufacturer:
 1. Przedsiębiorstwo Doświadczalno-Produkcyjne Szybownictwa (PDPSz) „PZL - Bielsko”
 2. Allstar PZL Glider Sp. z o.o.
5. Polish CAA Certification Date: 20 December 1984
6. The EASA TC replaces Polish Type Certificate No. BG-143/1 (TCDS No. BG-143/1, issue 4, dated 08 March 2004).

A.II. Certification Basis

1. Reference Date for determining the applicable requirements: July 1983
2. Airworthiness Requirements: JAR-22, Amendment 3, issued on 31 January 1983
3. Special Conditions: None
4. Exemptions: None
5. Deviations: None
6. Equivalent Safety Findings: None
7. Environmental Protection: None

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing No. 511.00.10.00
2. Description: Single-seat sailplane designed for training and club flying. Cantilever high-wing monoplane with T-shaped tail unit arrangement. All composite construction (GFRP). Wings equipped with Schempp-Hirth airbrakes, extended on upper surface only. Fixed landing gear, with main wheel and tail wheel.
3. Equipment: Minimum equipment:
 - airspeed indicator,
 - altimeter,
 - 4-point pilot harness.Other equipment - refer to Manuals

4. Dimensions: Span: 15,00 m
Length: 6,69 m
Wing area: 12,51 m²
5. Launching Hooks: - Nose towing hook:
SZD-III A-56P or TOST E
- Winch hook:
SZD-III A-56P or TOST G
6. Weak Links: Ultimate strength for aero-towing: 677+10% daN
Nominal strength for winch launching: 677±10% daN
7. Load Factors: +5,3 / -2,65 (up to V_A)
+4,0 / -1,5 (up to V_{NE})
+3,5 (with airbrakes extended)
8. Air Speeds (IAS) : Never Exceed Speed V_{NE} 220 km/h
Manoeuvring Speed V_A 155 km/h
Rough Air Speed V_{RA} 155 km/h
Max Aero-tow Speed V_T 150 km/h
Max Winch-launch Speed V_W 130 km/h
9. Operational Capability: Approved for VFR-day conditions.
Cloud flying permitted in accordance with binding regulations.
10. Masses: Maximum mass: 380 kg
11. Centre of Gravity Range: Forward limit: 287 mm aft of the datum
(22,7% MAC)
Rearward limit: 482 mm aft of the datum
(44,9% MAC)
MAC is 880 mm;
0% MAC is situated at 86,5 mm aft of the datum.
12. Datum: Vertical plane going through leading points of wing root
aerofoil section.
13. Levelling Means: Leading and trailing edge at root ribs at the same level.
14. Control surface deflections: Aileron: - up 30° ±2°
- down 15° ±1°
Elevator: - up 40° ±2°
- down 20° ±1°
Rudder: - left 35° ±2°
- right 35° ±2°
15. Minimum Flight Crew: 1 pilot
16. Maximum Passenger Seating Capacity: No Passengers

17. Baggage/ Cargo Compartments: Refer to the Technical Service Manual
18. Lifetime Limitations: Refer to the Technical Service Manual
19. Other Limitations: The following is prohibited:
- night flying,
 - flight in icing conditions.

A.IV. Operating and Service Instructions

1. Flight Manuals:

- | | |
|---------|--|
| English | <ul style="list-style-type: none">● SZD-51-1 "Junior" Glider, Flight Manual, Issue I, December 1984.● Flight Manual of Glider SZD-51-1 "Junior", Issue I/JAR-22, January 1995.● Flight Manual of Glider SZD-51-1 "Junior", Issue II, May 2016. |
| Polish | <ul style="list-style-type: none">● <i>Instrukcja Użytkowania w Locie SZD-51-1, Wydanie I, grudzień 1984.</i>● <i>Instrukcja Użytkowania w Locie szybowca SZD-51-1 „Junior”, wydanie I/JAR-22, styczeń 1995.</i>● <i>Instrukcja Użytkowania w Locie szybowca SZD-51-1 „Junior”, Wydanie II - Maj 2016.</i> |
| German | <ul style="list-style-type: none">● <i>Segelflugzeug SZD-51-1 "Junior", Flughandbuch, Ausgabe I, Dezember 1984.</i>● <i>Segelflugzeug SZD-51-1 "Junior", Flughandbuch, Ausgabe I/LBA, April 1985.</i> |

2. Maintenance Manuals:

- | | |
|---------|---|
| English | <ul style="list-style-type: none">● Technical Description, Technical Service Manual, Schedule of Maintenance Works for SZD-51-1 "Junior" glider, Issue I, December 1984.● Technical Service Manual of Glider SZD-51-1 "Junior", Issue I/JAR-22, April 1995.● Technical Service Manual of Glider SZD-51-1 "Junior", Issue II, May 2016. |
| Polish | <ul style="list-style-type: none">● <i>Opis Techniczny, Instrukcja Obsługi Technicznej, Terminarz Prac Okresowych szybowca SZD-51-1 „Junior”, Wydanie I, grudzień 1984.</i>● <i>Instrukcja Obsługi Technicznej szybowca SZD-51-1 „Junior”, Wydanie I/JAR-22, kwiecień 1995.</i>● <i>Instrukcja Obsługi Technicznej szybowca SZD-51-1 „Junior”, Wydanie II - Maj 2016.</i> |
| German | <ul style="list-style-type: none">● <i>Wartungshandbuch und Terminkalender der Periodischen Arbeiten des Segelflugzeuges SZD-51-1 "Junior", Ausgabe I, Dezember 1984.</i> |

3. Repair Manuals:

- | | |
|---------|---|
| English | ● Repair Manual for SZD-51-1 "Junior" glass-fibre glider, Issue I - 1984 |
| Polish | ● <i>Instrukcja Napraw Szybowca Laminatowego SZD-51-1 „Junior”, wydanie I – 1984.</i> |

4. Operating Manuals for the Launching Hooks:

- Operating Manual for the TOST Release (for release types installed), latest approved revision.
- Operating manual for SZD-III tow release

A.V. Notes:

1. This TCDS, Section A applies to the following S/N:
X-132; B-1495 ÷ B-1616; B-1767 ÷ B-2193; W-927 ÷ W-964;
511199243; 511199244; and from 511A03001 up
2. All glider outside surfaces must be white painted. No registration number or any colour marks on the wings and stabilizer upper surfaces are allowed

Administrative section

Acronyms

GFRP	Glass Fibre Reinforced Plastic
MAC	Mean Aerodynamic Chord
S/N	Aircraft Serial Number
VFR	Visual Flight Rules

Type Certificate Holder Record

Allstar PZL Glider Sp. z o.o.
ul. Cieszyńska 325
43-300 Bielsko-Biała
POLAND

Change Record

Issue	Date	Changes
Issue 01	05 Sep 2016	Transfer from Polish Type Certificate No. BG-143/1 to the EASA Type Design
Issue 02	09 Sep 2016	Edditorial changes