



## 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 m<sup>2</sup>
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<sub>A</sub>)  
+4,0 / -1,5 (up to V<sub>NE</sub>)  
+3,5 (with airbrakes extended)
8. Air Speeds (IAS) : Never Exceed Speed V<sub>NE</sub> 220 km/h  
Manoeuvring Speed V<sub>A</sub> 155 km/h  
Rough Air Speed V<sub>RA</sub> 155 km/h  
Max Aero-tow Speed V<sub>T</sub> 150 km/h  
Max Winch-launch Speed V<sub>W</sub> 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"><li>● SZD-51-1 "Junior" Glider, Flight Manual, Issue I, December 1984.</li><li>● Flight Manual of Glider SZD-51-1 "Junior", Issue I/JAR-22, January 1995.</li><li>● Flight Manual of Glider SZD-51-1 "Junior", Issue II, May 2016.</li></ul>   |
| Polish  | <ul style="list-style-type: none"><li>● <i>Instrukcja Użytkowania w Locie SZD-51-1, Wydanie I, grudzień 1984.</i></li><li>● <i>Instrukcja Użytkowania w Locie szybowca SZD-51-1 „Junior”, wydanie I/JAR-22, styczeń 1995.</i></li><li>● <i>Instrukcja Użytkowania w Locie szybowca SZD-51-1 „Junior”, Wydanie II - Maj 2016.</i></li></ul> |
| German  | <ul style="list-style-type: none"><li>● <i>Segelflugzeug SZD-51-1 "Junior", Flughandbuch, Ausgabe I, Dezember 1984.</i></li><li>● <i>Segelflugzeug SZD-51-1 "Junior", Flughandbuch, Ausgabe I/LBA, April 1985.</i></li></ul>   |

##### 2. Maintenance Manuals:

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

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**

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ul. Cieszyńska 325  
43-300 Bielsko-Biała  
POLAND

### **Change Record**

<b>Issue</b>	<b>Date</b>	<b>Changes</b>
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