

**EASA**

**TYPE-CERTIFICATE  
DATA SHEET**

**SZD-50-3 "Puchacz"**

Type Certificate Holder:

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

EASA TCDS No. A.312

For variants:      SZD-50-3 "Puchacz" (acc. to OSTIV'76)  
                         SZD-50-3 "Puchacz" (acc. to JAR-22)

Issue 01, 22 March 2007

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Issue	Date	Changes
Issue 01	22 March 2007	Transfer from Polish Type Certificates No. BG-126/1 and BG-182/1 to the EASA Type Design

## **Section A: SZD-50-3 "Puchacz" (acc. to OSTIV'76)**

### **A.I. General**

1. Data Sheet No.: EASA.A.312
2. a) Type: SZD-50-3 "Puchacz"  
b) Variant: (acc. to OSTIV'76)
3. Airworthiness Category: Sailplane, Utility
4. Type Certificate Holder: Allstar PZL Glider Sp. z o.o.  
ul. Cieszyńska 325  
43-300 Bielsko-Biała  
POLAND
5. Manufacturer: Przedsiębiorstwo Doświadczalno-Produkcyjne  
Szybownictwa „PZL - Bielsko”  
ul. Cieszyńska 325  
43-300 Bielsko-Biała  
POLAND
6. Polish CAA Certification Date July 19, 1979 (TC No. BG-126)
7. The EASA Type Certificate replaces Polish Type Certificate No. BG-126/1,  
which replaced the BG-126 on March 25, 2002, due to TC transfer from PDPSz “PZL-Bielsko”.

### **A.II. Certification Basis**

1. Certification Basis: Defined July 19, 1979
2. Airworthiness Requirements: OSTIV Airworthiness Requirements For Sailplanes,  
September 1976
3. Requirements elected to comply: None
4. Special Conditions: None
5. Exemptions: None
6. Equivalent Safety Findings: None

### **A.III. Technical Characteristics and Operational Limitations**

1. Type Design Definition: Drawing No. 503.00.10.00
2. Description: Two-seat (tandem configuration) trainer glider. Cantilever mid-wing monoplane with cruciform tail unit (fixed stabilizer with elevator, fin and rudder). All composite glass-epoxy structure. Bipartite tapered wing with slight sweep-forward. Plate airbrakes protruding from upper and lower surface. Fixed landing gear with nose wheel and auxiliary tail wheel (tail skid up to s/n B-1991). Main wheel with disk brake and shock absorber.
3. Equipment: Standard equipment:
  - airspeed indicator,
  - altimeter,
  - compass,
  - bank-and-turn indicator,
  - rate-of-climb indicator,
  - two towing hooks,
  - pilots safety belts (two sets).
4. Dimensions:

Span	16,67 m
Wing area	18,16 m <sup>2</sup>
Aspect Ratio	15,30
Length	8,38 m
Height	2,48 m
5. Launching Hook: two hooks SZD-III A-56  
or two hooks TOST (E72 or E85) and (G73 or G88)
6. Weak links: Ultimate Strength: 677 daN ( $\pm 10\%$ )
7. Air Speeds:

Manoeuvring Speed	$V_A$	150 km/h
Never Exceed Speed	$V_{NE}$	215 km/h
Maximum permitted speeds		
- in rough air	$V_{RA}$	160 km/h
- in aero-tow	$V_T$	150 km/h
- in winch launching	$V_W$	110 km/h
8. Operational Capability: VFR Day
9. Masses:

Max. Mass	570 kg
Max. Mass for aerobatic	540 kg
Empty Mass (up to s/n B-1344)	360 ÷ 380 kg
Empty Mass (from s/n B-1385)	360 ÷ 370 kg
10. Centre of Gravity Range: Empty glider with standard equipment:

Forward Limit	610 mm aft of datum point
Rearward Limit	635 mm aft of datum point

Centre of Gravity operational limits:

Forward Limit	92 mm aft of datum point (23,5% MAC)
Rearward Limit	333 mm aft of datum point (44,0% MAC)

MAC is 1178 mm; 0% MAC is 185,4 mm in front of the datum.  
Datum: Leading edge and wing-fuselage division plane intersection.  
Levelling means: Leading and trailing points of root chord (1580 mm) at the same level.

11. Seating Capacity: 2
12. Lifetime limitations: Refer to Maintenance Manual
13. Other limitations: Solo flight is permissible only on front seat.  
Winch launching only using the lower hook.  
Flights in icing conditions not recommended.  
Aerobatic is permissible only in still air, with 5-point seat belts.  
The snap roll only with two-person crew.  
Aerobatic controlled by the rear pilot only when the second instrument panel at rear seat is mounted.  
Manoeuvring load factor limits: +5,3/-2,65 at  $V_A$ , m = 570 kg  
+5,3/-3,35 at  $V_A$ , m = 540 kg  
+4,0/-1,5 at  $V_{NE}$
14. Deflection of control surfaces:
- |           |         |     |      |
|-----------|---------|-----|------|
| Aileron:  | - up    | 34° | ± 2° |
|           | - down  | 17° | ± 1° |
| Elevator: | - up    | 32° | - 2° |
|           | - down  | 24° | - 2° |
| Rudder:   | - left  | 41° | - 2° |
|           | - right | 41° | - 2° |

#### **A.IV. Operating and Service Instructions**

1. Flight Manuals:

- Polish: Szybowiec dwumiejscowy SZD-50-3 „Puchacz”,  
Instrukcja Użytkowania w Locie,  
wydanie II - wrzesień 1980  
valid for s/n up to B-1613 (non aerobatic)
- Polish: Szybowiec dwumiejscowy SZD-50-3 „Puchacz”,  
Instrukcja Użytkowania w Locie,  
wydanie 3 - grudzień 1985  
valid for s/n from B-1617  
and up to B-1613 if used for aerobatics
- English: Two-seater SZD-50-3 „Puchacz” Glider,  
Flight Manual,  
Issue 3 - December 1985
- German: Doppelsitziges Segelflugzeug SZD-50-3 „Puchacz”,  
Flughandbuch,  
Ausgabe IIb - April 1984  
LBA - anerkannt
- German: Doppelsitziges Segelflugzeug SZD-50-3 „Puchacz”,  
Flughandbuch,  
Ausgabe 3 - Dezember 1985

2. Maintenance Manuals:

- Polish: Szybowiec SZD-50-3 „Puchacz”,  
Instrukcja Obsługi Technicznej z Terminarzem Prac Okresowych,  
wydanie III - wrzesień 1980  
valid for s/n from B-954
- Polish: Szybowiec SZD-50-3 „Puchacz”,  
Instrukcja Obsługi Technicznej z Terminarzem Prac Okresowych,  
wydanie IV - maj 1981  
valid for s/n B-903 ÷ B-907
- English: SZD-50-3 „Puchacz” Glider,  
Technical Service Manual with the Schedule of Maintenance  
Works; Issue III, September 1980  
valid for s/n up to B-1613 (non aerobatic)
- English: SZD-50-3 „Puchacz” Glider,  
Technical Service Manual with the Schedule of Maintenance  
Works; Issue III, English Version, revised, May 1986  
valid for s/n from B-1617  
and up to B-1613 if used for aerobatics
- German: Segelflugzeug SZD-50-3 Puchacz  
Wartungshandbuch  
Ausgabe III, September 1980  
valid for s/n from B-954
- German: Segelflugzeug SZD-50-3 Puchacz  
Wartungshandbuch  
Ausgabe III, September 1980  
LBA - anerkannt  
valid for s/n from B-954

3. Repairs Manuals:

- Polish: Instrukcja Napraw Szybowca Laminatowego  
SZD-50-3 „Puchacz” wydanie I, 1979 r.
- English: Repair Manual of SZD-50-3 "Puchacz" glass-fibre glider  
Issue I - 1979
- German: Reparaturanweisung des GFK-segelflugzeuges  
SZD-50-3 "Puchacz"  
Ausgabe I - 1979

**A.V. Notes**

1. Serial Numbers:

B-903 ÷ B-907,	B-954 ÷ B-963,	B-965 ÷ B-984,
B-1075 ÷ B-1094,	B-1325 ÷ B-1344,	B-1385 ÷ B-1404,
B-1465 ÷ B-1484,	B-1534 ÷ B-1553,	B-1594 ÷ B-1613,
B-1617 ÷ B-1636,	B-1717 ÷ B-1736,	B-1862 ÷ B-1881,
B-1972 ÷ B-1991,	B-2022 ÷ B-2061,	B-2077 ÷ B-2089,
B-2091 ÷ B-2097,	B-2099 ÷ B-2102,	B-2104 ÷ B-2107,
B-2110,	B-2112,	B-2114,
B-2197,	B-2199,	B-2200,
B-2202,	B-2204,	B-2205,
B-2206,	503199327	

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.

## **Section B: SZD-50-3 "Puchacz" (acc. to JAR-22)**

### **B.I. General**

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2. a) Type: SZD-50-3 "Puchacz"  
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Szybownictwa „PZL - Bielsko”  
ul. Cieszyńska 325  
43-300 Bielsko-Biała  
POLAND  
  
Allstar PZL Glider Sp. z o.o.  
ul. Cieszyńska 325  
43-300 Bielsko-Biała  
POLAND
6. Polish CAA Certification Date September 4, 1992 (TC No. BG-182)
7. The EASA Type Certificate replaces Polish Type Certificate No. BG-182/1,  
which replaced the BG-182 on March 25, 2002, due to TC transfer from PDPSz "PZL-Bielsko".

### **B.II. Certification Basis**

1. Certification Basis: Defined September 4, 1992
2. Airworthiness Requirements: JAR-22, Change 4, issued May 7, 1987
3. Requirements elected to comply: None
4. Special Conditions: None
5. Exemptions: None
6. Equivalent Safety Findings: None

### **B.III. Technical Characteristics and Operational Limitations**

1. Type Design Definition: Drawing No. 503.00.10.00
2. Description: Two-seat (tandem configuration) trainer glider. Cantilever mid-wing monoplane with cruciform tail unit (fixed stabilizer with elevator, fin and rudder). All composite glass-epoxy structure. Bipartite tapered wing with slight sweep-forward. Plate airbrakes protruding from upper and lower surface. Fixed landing gear with nose wheel and auxiliary tail wheel. Main wheel with disk brake and shock absorber.
3. Equipment: Standard equipment:
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- in rough air	V <sub>RA</sub>	160 km/h
- in aero-tow	V <sub>T</sub>	150 km/h
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8. Operational Capability: VFR Day
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Levelling means: Leading and trailing points of root chord (1580 mm) at the same level.
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12. Lifetime limitations: Refer to Maintenance Manual



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|           | - down  | 24° | - 2° |
| Rudder:   | - left  | 41° | - 2° |
|           | - right | 41° | - 2° |

#### **B.IV. Operating and Service Instructions**

1. Flight Manuals:

Polish: Instrukcja Użytkowania w Locie Szybowca SZD-50-3 „Puchacz”,  
wydanie I/JAR-22, Maj 1994

English: Flight Manual for a sailplane SZD-50-3 "Puchacz",  
Issue I/JAR-22, May 1994

2. Maintenance Manuals:

Polish: Instrukcja Obsługi Technicznej Szybowca SZD-50-3 „Puchacz”  
wydanie I/JAR-22, Listopad 1994

English: Technical Service Manual of "Puchacz" SZD-50-3 Glider,  
Issue I/JAR-22, November 1994

#### **B.V. Notes**

1. Serial Numbers:

B-2090, B-2098, B-2103, B-2108, B-2109, B-2111, B-2113, B-2115, B-2116, B-2198,  
B-2201, B-2203, B-2207,  
503A04001, 503A05002, 503A05003 , 503A06004 , 503A06005 and following

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.