

EASA

**TYPE-CERTIFICATE
DATA SHEET**

SZD-56 "Diana"

Type Certificate Holder:

Biuro Projektowe „B” Bogumił Beres
ul. Goleszowska 4/136
43-308 Bielsko-Biała
POLAND

EASA TCDS No. A.451

For variants: SZD-56-1 "Diana"

Issue 01, 28 March 2007

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0.II. List of Effective Pages

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0.III. Change Record

Issue	Date	Changes
Issue 01	28 March 2007	Transfer from Polish Type Certificate No. BG-203/1 to the EASA Type Design

Section A: SZD-56-1 "Diana"

A.I. General

1. Data Sheet No.: EASA.A.451
2. a) Type: SZD-56 "Diana"
b) Variant: SZD-56-1 "Diana"
3. Airworthiness Category: Sailplane, Utility
4. Type Certificate Holder: Biuro Projektowe „B” Bogumił Bereś
ul. Golezowska 4/136
43-308 Bielsko-Biała
POLAND
5. Manufacturer:
up to 1998:
Przedsiębiorstwo Doświadczalno-Produkcyjne
Szybownictwa „PZL - Bielsko”
ul. Cieszyńska 325
43-300 Bielsko-Biała
POLAND

from 2001:
Biuro Projektowe „B” Bogumił Bereś
ul. Golezowska 4/136
43-308 Bielsko-Biała
POLAND
6. Polish CAA Certification Date June 23, 1997 (TC No. BG-203)
7. The EASA Type Certificate replaces Polish Type Certificate No. BG-203/1,
which replaced the BG-203 on February 05, 2001, due to TC transfer from PDPSz "PZL-Bielsko".

A.II. Certification Basis

1. Certification Basis: Defined January 1995
2. Airworthiness Requirements: JAR-22, Change 4, issued May 7, 1987
with Amendments up to No 22/94/1 of November 10, 1994
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: List of drawings for sailplane SZD-56-1 "Diana"
2. Description: Single-seat high-performance sailplane of 15-meter flapped class. Cantilever mid-wing monoplane with T-shaped tail unit. All composite carbon-aramid-epoxy structure. Bipartite monocoque wing of multi-tapered contour and constant aerofoil section NN-27-13. Wings mounted on fixed fuselage spar. Plate airbrakes protruding only from upper surface. Flaperons over the whole wing span. Water ballast tanks in wings and fin. Retractable main landing gear and fixed tail wheel. Main wheel with drum brake and shock absorber.
3. Equipment: Standard equipment:
 - airspeed indicator,
 - altimeter,
 - compass,
 - rate-of-climb indicator,
 - towing hook,
 - pilots safety belts (4-point)
 - first aid kit.
4. Dimensions:

Span	15,00 m
Wing area	8,16 m ²
Aspect Ratio	27,57
Length	6,88 m
Height	1,35 m
5. Launching Hook: SZD-III P or TOST E85
6. Weak links: Ultimate Strength: 677 daN ($\pm 10\%$)
7. Air Speeds (IAS):

Never Exceed Speed	V_{NE}	270 km/h
Manoeuvring Speed	V_A	195 km/h
Maximum permitted speeds		
- flaps position from -4° to 0°	V_{FE}	270 km/h
- flaps position over 0° up to $+14^\circ$	V_{FE}	175 km/h
- in rough air	V_{RA}	195 km/h
- in aero-tow	V_T	140 km/h
8. Operational Capability: VFR Day
9. Masses:

Max. Mass with water ballast	410 kg
Max. Mass without water ballast	297 kg
Empty Mass	182 kg
10. Centre of Gravity Range: Empty glider with standard equipment:
Forward and Rearward Limits depend on empty glider mass and are shown in Flight Manual - point 2.5.
Centre of Gravity operational limits:

Forward Limit	105 mm aft of datum point (19,0% MAC)
Rearward Limit	257 mm aft of datum point (45,0% MAC)

MAC is 570,6 mm; 0% MAC is on the same coordinates along longitudinal axis as the datum.
Datum: Leading edge and wing-fuselage division plane intersection.
Levelling means: Leading and trailing points of root chord (670 mm) at the same level.
11. Seating Capacity: 1

12. Lifetime limitations: Refer to Maintenance Manual
13. Other limitations: The following is prohibited:
- night flying,
 - cloud flying,
 - flights in icing conditions,
 - aerobatics,
 - flights with water ballast at outside temperature below 0°C,
 - winch launching.
- Manoeuvring load factor limits: +5,3/-2,65 at V_A
+4,0/-1,5 at V_{NE}
14. Deflection of control surfaces:
- | | | | |
|-----------|---------|-----|------|
| Aileron: | - up | 22° | ± 1° |
| | - down | 12° | ± 1° |
| Elevator: | - up | 34° | ± 1° |
| | - down | 18° | ± 1° |
| Rudder: | - left | 30° | ± 1° |
| | - right | 33° | ± 1° |
| Flaps: | - up | 4° | ± 1° |
| | - down | 14° | ± 1° |

A.IV. Operating and Service Instructions

1. Flight Manuals:

Polish: Instrukcja Użytkowania w Locie
Szybowca SZD-56-1 „Diana”,
wydanie II - wrzesień 2001

English: Flight Manual of Sailplane SZD-56-1 „Diana”,
Issue II - September 2001

2. Maintenance Manuals:

Polish: Instrukcja Obsługi Technicznej
Szybowca SZD-56-1 „Diana”,
wydanie I - maj 1997

English: Technical Service Manual of Sailplane SZD-56-1 „Diana”,
Issue I - May 1997

A.V. Notes

1. Serial Numbers:

X-147, X-152,
561197001, 561101002, 561101003

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.