

**GENERAL INSPECTORATE OF CIVIL AVIATION
CIVIL AIRCRAFT INSPECTION BOARD**

**BG-214
B1-PW-5
Issue 1
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TECHNICAL DATA SHEET

For Type Certificate No BG-214

This Technical Data Sheet is a part of Type Certificate No BG-214. It contains primary technical data and operating limitations of the glider.

1. Owner of Type Certificate

Aircraft Composite Structures Development and Production Ltd.
Nowowiejska 24, 00-665 Warsaw, Poland

2. Glider type

B1-PW-5

3. Designer

Aircraft Composite Structures Development and Production Ltd.
Nowowiejska 24, 00-665 Warsaw, Poland

4. Producer

PZL-Bielsko 1 Ltd.
43-436 Gorki Wielkie 101, Poland

5. Certification basis

Joint Airworthiness Requirements JAR-22 Change 5, 28 October 1995
Amendments:
Utility category

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6. General description

B1-PW-5 is a single-seat glider in the U (utility) category. The whole structure is made of glass-epoxy. Cantilever mid-wing with standard tailplane arrangement. Landing gear consists of main wheel 4.00-4 with shock absorber and drum brake, nose wheel 260/85 and tailskid with small wheel. Air brake extends from the upper wing surface only.

7. Dimensions

span	13.440 m
length	6.220 m
height	1.950 m
wing area	10.160 m ²
tailplane area	1.200 m ²
fin and rudder area	0.820 m ²
mean aerodynamic chord (MAC)	0.798 m
root chord (RC)	1.000 m
distance between RC leading edge and MAC leading edge (backward)	0.075 m

8. Standard equipment

airspeed indicator (0-250 km/h),
altimeter (0-10000 m),
magnetic compass,
total energy variometer,
take-off hooks: front hook E-85
C.G. hook G88 Europa,
pilot's harness: hip and back,
transceiver,
battery.

9. Additional equipment

turn and bank indicator,
electric variometer,
GPS,
flight computer.

10. Weights

gross take-off weight	300 kg
minimum wings weight	76 kg
maximum cockpit load (pilot + parachute + ballast)	110 kg
minimum cockpit load (pilot + parachute + ballast)	55 kg
maximum luggage compartment load	5 kg
maximum weight of instrument panel	5 kg

11. Centre of Gravity location

a) Allowable glider C.G. locations if flight

	distance aft of datum point [mm]	C.G. location in respect to MAC [% of MAC]
front limit	235	20
rear limit	410	42

b) Glider C.G. location determination method:

- the datum point is the wing leading edge in the plane of wing-to-fuselage connection,
- the weighing should be performed with the wing leading and trailing edges levelled.

12. Airspeed limitations (EAS)

never exceed airspeed V_{NE}	220 km/h
manoeuvring airspeed V_A	147 km/h
rough air airspeed V_{RA}	147 km/h
maximum aerotow airspeed V_T	147 km/h
maximum winch-launching airspeed V_W	120 km/h

13. Tested wind side component during take-off and landing

6 m/s

14. Limits of manoeuvring load factors

at manoeuvring airspeed V_A	+5.30	-2.65
at never exceed airspeed V_{NE}	+4.00	-1.50

15. Approved aerobatics manoeuvres

loop, stall turn, spin, spiral, chandelle (climbing), chandelle (dive out).

16. Safety links

For aerotow or ground launch take-offs use of safety links is obligatory. The safety link strength should not exceed 700 daN.

17. Restrictions

It is prohibited to perform:

- night flights,
- flights in known icing conditions,
- aerobatic manoeuvres in rough air,
- aerotows using the C.G. hook,
- winch launches using the front hook.

For pilots whose weight (body + parachute) is below 60 kg, the front limit position of the back rest is obligatory.

18. Control surfaces deflections

elevator:	up	28±2	[deg]
	down	19±1	[deg]
rudder:	left	35±2	[deg]
	right	35±2	[deg]
aileron:	up	26±2	[deg]
	down	13±1	[deg]
	neutral position	0±0.5	[deg]
air brakes:	slot width between the wing upper surface and air brake plate	25±2	[mm]

19. Landing gear

	tyre type	tyre pressure [MPa]
nose wheel	Tost Aero 260385 6PR	0.20
main wheel	Tost Aero 4.00-4 6PR	0.35

20. Manuals

Flight Manual for B1-PW-5,
Maintenance Manual for B1-PW-5.

21. Miscellaneous requirements

- the glider external surfaces should have white polyurethane or acrylic coating,
- on the upper surfaces of wings, tailplane and fuselage no colour markings are allowed (except producer's marks),
- on the control surfaces no markings are allowed (except producer's marks).

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