

CIVIL AVIATION AUTHORITY OF THE CZECH REPUBLIC

89-02
Revision No. 7
Aircraft Industries, a.s..
L 23 SUPER-BLANÍK
05.09.2005

TYPE CERTIFICATE DATA SHEET No. 89-02

This data sheet which is a part of Type Certificate No. 89-02 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Czech Republic.

Model	Application Date	Certification Date
L 23 SUPER-BLANÍK	Year 1989	28.08.1989

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Model L 23 SUPER-BLANÍK

I. General

1. Data Sheet No.: 89-02
2. Model: L 23 SUPER-BLANÍK
3. Airworthiness category: Utility
4. Type Certificate Holder: Aircraft Industries, a.s.
Kunovice 1177
686 04 Kunovice
Czech Republic
5. Manufacturer: From S/N 897501 to S/N 907625
LET, k.p.
686 04 Kunovice 1177
From S/N 907626 to S/N 018809
LET, a.s.
686 04 Kunovice 1177
Since S/N 018810
LETECKÉ ZÁVODY a.s.
686 04 Kunovice 1177
6. Application Date: Year 1989
7. Certificate Date: 28.08.2001

II. Certification Basis

1. Certification Basis: Joint Aviation Requirements JAR 22, change 4 , May 7th 1987
2. Special Conditions: None
3. Exemptions: JAR 22.621. For fork casting the lower coefficient 1.25 is used in spite of the fact that only 1 pc was stress tested, instead of required 3 pcs.
4. Equivalent Safety Findings: The lower coefficient is used based on the non-linear stress analysis of the fork by the FEM in NASTRAN, X-ray examination of each fork casting and long-term operation experiences with fork casting of L 13, L 23, L 33 and L 13 AC gliders.

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Master Drawing No.: A 710 100 N
2. Description:

The L 23 SUPER-BLANÍK glider is a two-seater, self-supporting upper-winger one with the self-supporting tails surfaces of the T form. It is of the all-metal construction, and only the rudder, elevator and ailerons are cloth coated.

The fuselage of oval cross section is the carrier of all systems and the glider parts. The wing of trapezoidal plan consists of the left and right half. The wing is provided with ailerons and air brakes. From S/N 938101 incl. the wing extensions can be used.

The tail surfaces are of the trapezoidal form. The fin is an integral part of the fuselage, the rudder is without any balancing tab. The stabilizer is attached on the fin, the elevator is divided and each half is provided with the balancing tab.

The control of rudders, balancing tabs and even of the air brakes is mechanical from both pilot's places. The main landing gear with the wheel brakes is retractable from both pilot's places. The rear landing gear has the possibility of swinging by 360° or fixed.

The cockpit is equipped with two seats adapted for the shoulder parachute and with tightening belts. The cockpit is upholstered and has its own venting. The canopy is single.
3. Equipment:

For each cockpit panel
air-speed indicator
altimeter
variometer
magnetic compass
4. Dimensions:

Span: 16.20 m or 18.20 m
Length: 8,50 m
Height: 1,90 m
Wing Area: 19.15 sq.m. or 20.00 sq.m
Aspect Ratio: 13.7 or 16.6
5. Tow hook:

Types and location of tow hooks:
Nose tow hook Draw. No. A 740 210 N or
Nose tow hook " E85", LBA approved - No.:60.230/1

Sides tow hooks Draw. No. LN-0399 L (left) and LN-0400 P (right)

Safety C.G. tow hook " Europa G 88", LBA approved - No.:60.230/2.

6. Air Speeds:
- | | |
|---|----------|
| IAS airspeeds to and including S/N 938030: | |
| Never exceed speed v_{NE} | 250 km/h |
| Rough air speed v_{RA} | 160 km/h |
| Manoeuvring speed v_A | 150 km/h |
| Maximum winch-launching v_W | 120 km/h |
| Maximum aerotowing speed v_T | 150 km/h |
| Maximum landing gear operating speed v_{LO} | 230 km/h |
| IAS airspeeds from and including S/N 938101: | |
| Never exceed speed v_{NE} | 230 km/h |
| Rough air speed v_{RA} | 150 km/h |
| Manoeuvring speed v_A | 150 km/h |
| Maximum winch-launching v_W | 120 km/h |
| Maximum aerotowing speed v_T | 150 km/h |
| Maximum landing gear operating speed v_{LO} | 230 km/h |
7. Load factors:
- | | |
|--------------------------------|-------------|
| To and including S/N 938030: | |
| -2.65 to 5.3 | to 150 km/h |
| -1.5 to 4.0 | to 250 km/h |
| From and including S/N 938101: | |
| -2.65 to 5.3 | to 150 km/h |
| -1.5 to 4.0 | to 230 km/h |
8. Weights:
- To and including S/N 029004:
Maximum weight is 510 kg.
Empty weight of sailplane with standard equipment without extensions is 310 kg \pm 2 %.
Empty weight of sailplane with standard equipment with extensions is 315 kg \pm 2 %.
- From and including S/N 029005:
Maximum weight is 530 kg.
Empty weight of sailplane with standard equipment without extensions is 310 kg \pm 2 %.
Empty weight of sailplane with standard equipment with extensions is 315 kg \pm 2 %.
- Minimum pilot weight (including the parachute) at solo flight is 55 kg.
In case of pilot weight more than 55 kg but less than 70 kg (including the parachute) it is necessary to use a seat with ballast 15 kg.
9. Centre of Gravity Range: 23 to 40 % of MAC
10. Datum: The datum is located 2376.5 mm behind the fuselage nose (the beginning of wing rib No. 1).

11. Mean Aerodynamic Chord (MAC): Mean aerodynamic chord dimension is 1253 mm.
The beginning of MAC is 176.5 mm forward the datum.
12. Leveling Means: Set the sailplane by means of leveling points
- Longitudinal direction - leveling points No. 3 and 4
on the left fuselage side
- Lateral direction - leveling point No. 9 on the left wing
- Leveling points coordinates in the sailplane system
of coordinates [mm] (beginning of the system of coordinates
fuselage nose, x-axis - back, y-axis - up, z-axis - to the left):
Leveling point 3 [4238; -90; 265.919]
Leveling point 4 [65.22; -90; 142.475]
Leveling point 9 [2295.087; 281.054; 4597.0]
13. Weak links: Ultimate strength for winch launching and aerotow max. 6,5 kN
14. Minimum Flight Crew: 1
15. Number of seats 2
16. Control surface deflections:
- | | | |
|-------------------|----------------|----------------------------|
| Elevator: | up | $32^{\circ} \pm 2^{\circ}$ |
| | down | $25^{\circ} \pm 2^{\circ}$ |
| Rudder: | right and left | $30^{\circ} \pm 1^{\circ}$ |
| Aileron: | up | $34^{\circ} \pm 2^{\circ}$ |
| | down | $13^{\circ} \pm 2^{\circ}$ |
| Elevator trim tab | up | $15^{\circ} \pm 1^{\circ}$ |
| | down | $35^{\circ} \pm 1^{\circ}$ |
| Air brakes | up | $65^{\circ} \pm 3^{\circ}$ |
| | down | $75^{\circ} \pm 3^{\circ}$ |
17. Wheels and Tyres:: The main landing gear wheel type is HP 4741 Z
with tire 135 x 350.
18. Other Limitations: Approved for VFR flights only.

IV. Operating and Service Instructions

1. L 23 Flight Manual

- In Czech language:
to and including 80-th series Do-L23.1011.1
from 81-st series Do-L23.1012.1
from 84-th series Do-L23.1013.1
from and including S/N 029005 Do-L23.1014.1
- In English language (for the USA)
to and including 80-th series Do-L23.1011.5
from 81-st series Do-L23.1012.5
from S/N 029005 Do-L23.1014.5
- In English language (for Canada)
from and including 80-th series Do-L23.1011.3
from 81-st series Do-L23.1012.3
- In German language
Do-L23.1011.4
- In Russian language:
Do-L23.1011.2

2. L 23 Maintenance Manual

- In Czech language: Do-L23.1031.1
- In English language: Do-L23.1031.3
- In German language: Do-L23.1031.4
- In Russian language: Do-L23.1031.2

3. Illustrated Parts Catalogue

- In English language: Do-L23-2021.3

V. Notes

1. EASA TC No. EASA.A.044 has been issued for model L – 23 SUPER-BLANÍK sailplane on August 12, 2005