

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

G24EU
Revision 8
L-13 Blanik
L-13 AC Blanik
January 11, 2006

TYPE CERTIFICATE DATA SHEET NO. G24EU

This data sheet, which is a part of type certificate No. G24EU prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Aircraft Industries a.s.
686 04 Kunovice 1177
Czech Republic

Type Certificate Holder Record: LETECKÉ ZÁVODY a.s. transferred TC G24EU to Aircraft Industries a.s. on September 26, 2005
LET Aeronautical Works transferred TC G24 EU to LETECKÉ ZÁVODY a.s. on October 15, 2002.

I - Model L-13 "Blanik" (Acrobatic Category) approved 10 November 1971

| | | | |
|---------------------------|----------------------|-----------|--------------|
| Airspeed limits (I.A.S.). | Vne (Never exceed) | 136 knots | (156 m.p.h.) |
| | Va (Maneuvering) | 76 knots | (87 m.p.h.) |
| | Vfe (Flaps Extended) | 60 knots | (69 m.p.h.) |
| | Airplane Tow | 76 knots | (87 m.p.h.) |
| | Auto-Winch Tow | 65 knots | (75 m.p.h.) |
| | Dive Brakes Extended | 136 knots | (156 m.p.h.) |

C.G. range +96.8 in. (+2458 mm) to +104.2 in. (+2647 mm) at all weights.

Empty weight C.G. range None

Datum Most forward point on fuselage nose.

Leveling means Between points marked on side of fuselage.

Maximum weight Acrobatic Category (1 occupant): 880 lb.
Limited Acrobatic Category (2 occupants): 1100 lb.
Cloud Flying (2 occupants): 1100 lb.

No. of seats 2 (one at +43.7 in. (+1110 mm) and one at +87.8 in. (+2229 mm)).

Maximum baggage 61 lb. +113.4 in. (+2880 mm).

| | | | |
|---------------------------|----------|-----------------|--|
| Control surface movements | Elevator | Up: 32° ± 1° | |
| | | Down: 25° ± 1° | |
| | Rudder | Right: 30° ± 1° | |
| | | Left: 30° ± 1° | |
| | Aileron | Up: 34° ± 1° | |
| | | Down: 13° ± 1° | |

Serial Nos. eligible 173205, 173213, 173310, 173334, 173337, 173341, 173345, 173404, 173460, 173629, 173630, 173901, 173920, 173921, 173922, 173924, 173928, 173930, 174130, 174215, 174216, 174422, 174423, 174525, 174526, 174533, 174534, 174707, 174708, 174712, 174713, 174714, 174715, 174805, 174806, 174811, 174812, 174930, 175001, 175002, 175008, 175009 through 175230; 025301 and subsequent up to and including 027361. (See Note 4).

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|----------|---|---|---|---|---|---|---|
| Page No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Rev. No. | 8 | 4 | 4 | 6 | 6 | 6 | 6 |

Import Requirements

1. For glider serial numbers 175008 and before, a U.S. Standard Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export signed by the State Aviation Inspection (SAI) authority of Czechoslovakia after the following have been accomplished:
 - a. The glider must be modified in accordance with the list of modifications set forth by LET Information Bulletin No. L13/032, dated 16 December 1971 for conformity with the type design approved under Type Certificate G24EU, except paragraph 1.5 tow hook guard, P/N SK-L13.320-01, need not be installed and/or may be removed; and paragraph 1.6, pot pitot head (P/N L1301) need not be installed provided the original pitot head is installed and appropriate calibration pages are incorporated into the Flight Manual. (See NOTE 5).
In addition -
 - (i) Glider Serial Nos. 174800 and before must be modified in accordance with LET Service Bulletin No. L13/031, dated 22 December 1970 to improve the security of the wing attachment pins.
 - (ii) Gliders, Serial Nos. 173404 and before must have the control rod eye-ends replaced in accordance with LET Service Bulletin L13/025 dated 23 January 1967.
 - b. All modifications accomplished subsequent to original production (other than those associated with Item (a)) must be FAA-approved.
 - c. The glider must be found to be in a condition for safe operation.
2. For gliders Serial Nos. 175009 through 175230 and 025301 through 027361, a U.S. Standard Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export signed by a representative of the State Aviation Inspection (SAI) authority of Czechoslovakia, containing the following statement: "The glider covered by this certificate has been examined and found to conform to the type design approved under Type Certificate No. G24EU and is in a condition for safe operation.

Certification Basis

FAR 21.29 and FAR 21.23, effective 1 February 1965.

British Civil Airworthiness Requirements, Section E, Issue 2, dated 16 May 1960 (Czechoslovakian Certification Basis) were found to provide a level of safety equivalent to provisions of FAR 21.23 to enable certification under the provisions of FAR 21.29.

Type Certificate No. G24EU issued 10 November 1971.

Date of Application for Type Certificate, 31 May 1971.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the glider for standard airworthiness certification. In addition the following equipment must be installed:

1. Instruments:
 - (a) Airspeed indicator marked as follows:

| | |
|-------------|---|
| Red Radial: | 136 knots (156 m.p.h.) |
| Green arc: | 136 knots – 33 knots (156 m.p.h. – 38 m.p.h.) |
| White arc: | 60 knots – 31 knots (69 m.p.h. – 36 m.p.h.) |
 - (b) Altimeter
 - (c) Magnetic Compass
2. "Pilot's Notes for the L-13 sailplane" (Flight Manual).

NOTES:

- NOTE 1. Current weight and balance report including list of equipment in certificated empty weight, and loading instructions when necessary, must be provided for each glider at the time of original airworthiness certification.
- NOTE 2. The following placards must be installed in full view of the pilot:
- (a) "THIS GLIDER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND MANUALS."
- (b) "Cloud flying: Permitted only when the following instruments are installed:
- Airspeed indicator
 - Altimeter
 - Turn and Bank
 - Variometer
 - Compass
- (c) "Acrobatic maneuvers including spins must be accomplished in accordance with the "Pilot's Notes" for the L-13 sailplanes."
- (d) "Night flying is prohibited."
- (e) "Never exceed speed
- | | |
|----------------------|-------------------------|
| 136 knots | (156 m.p.h.) |
| Maneuvering speed | 76 knots (87 m.p.h.) |
| Flaps extended speed | 60 knots (69 m.p.h.) |
| Airplanes tow speed | 76 knots (87 m.p.h.) |
| Auto-winch tow speed | 65 knots (75 m.p.h.) |
| Dive brakes extended | 136 knots" (156 m.p.h.) |
- (f) "Maximum weight:
- | | |
|-------------------------------------|----------|
| Cloud flying category (2 occupants) | 1100 lb. |
| Limited acrobatics (2 occupants) | 1100 lb. |
| Acrobatic category (1 occupant) | 880 lb. |
- C.G. Limits: 96.8 in. to 103.8 in. aft of datum - all weights."
- NOTE 3. Information essential for the proper maintenance, inspection, and repair of the glider is contained in the LET Document: "Technical Manual of the L-13 Sailplane."
- NOTE 4. Six digit serial numbers beginning with "17" precede serial numbers beginning with "02".
- NOTE 5. All serial numbers subsequent to 175008 (See NOTE 4) may utilize exception noted in import requirements for S/B L13/032. See Let N.P. Operating Bulletin No. L13/038 on Pilots Notes.

II - Model L-13 AC "Blanik" (Aerobatic Category) approved August 25, 1999 and amended January 14, 2005Airspeed Limits (I.A.S.) V_{NE} Speed Limit versus Altitude

With and without (w/o) wing tip extensions

| Altitude | [knots] | Altitude | [km/h] |
|-------------|---------|------------|--------|
| 0 - 8200 ft | 124 | 0 - 2500 m | 230 |
| 10,000 ft | 120 | 3000 m | 223 |
| 13,000 ft | 113 | 4000 m | 209 |
| 16,500 ft | 105 | 5000 m | 195 |
| 20,000 ft | 98 | 6000 m | 182 |
| 23,000 ft | 92 | 7000 m | 170 |
| 26,000 ft | 85 | 8000 m | 158 |
| 30,000 ft | 79 | 9000 m | 147 |

| | [knots] | [km/h] |
|--|---------|--------|
| V_A (Maneuvering Speed) | | |
| w/o wing tip extensions | 86 | 160 |
| with wing tip extensions | 81 | 150 |
| V_{RA} (Rough Air Speed) | | |
| w/o wing tip extensions | 86 | 160 |
| with wing tip extensions | 81 | 150 |
| V_W (Winch Launch) | | |
| w/o wing tip extensions | 65 | 120 |
| with wing tip extensions | 65 | 120 |
| V_T (Aero Tow Speed) | | |
| w/o wing tip extensions | 81 | 150 |
| with wing tip extensions | 81 | 150 |
| V_{LO} (Max. Landing Gear Operating Speed) | | |
| w/o wing tip extensions | 124 | 230 |
| with wing tip extensions | 124 | 230 |

Datum

Wing leading edge at root rib

C.G. rangeForward limit: 5.63 in (143 mm) aft of datumAft limit: 13.27 in (337 mm) aft of datumEmpty weight C.G. range measured from datum:

w/o wing tip extensions: 27.32 ± 0.51 in (694 ± 13 mm) aft of datum

With wing tip extensions: 25.67 ± 0.51 in (652 ± 13 mm) aft of datum

Leveling means:

Fuselage leveling points are noted in the Maintenance Manual

Maximum Take-off Weight:

w/o wing tip extensions: 1100 lbs (500 kg)

With wing tip extensions: 1125 lbs (510 kg)

No. of Seats

2

Maximum Baggage:

22 lb (10 kg)

| | | | |
|---|-----------|----------------------------|----------------------------|
| <u>Control surface movements</u> | Elevator: | Up | $32^{\circ} \pm 2^{\circ}$ |
| | | Down | $27^{\circ} \pm 1^{\circ}$ |
| | Rudder: | Right | $29^{\circ} \pm 1^{\circ}$ |
| | | Left | $29^{\circ} \pm 1^{\circ}$ |
| Aileron: | Up | $34^{\circ} \pm 2^{\circ}$ | |
| | Down | $13^{\circ} \pm 2^{\circ}$ | |
| Balance Tab (if installed, left aileron only) | Up | $20^{\circ} \pm 1^{\circ}$ | |
| | Down | $20^{\circ} \pm 1^{\circ}$ | |

Serial Nos. Eligible

For the L-13 AC:

S/N 988601, 988603, 008605, 008606, 028902 through 028905, and 029101.

For the L-13 AC with aileron balance tab and option for wing extension:

S/N 018901, 049102 and subsequent.

Import Requirements

A U.S. Standard Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export, endorsed by a representative of the Czech Republic Civil Aviation Authority (CAA) containing the following statement:

“The glider covered by this certificate has been examined, tested, and found to conform to the type design approved under FAA Type Certificate No. G24EU and is in condition for safe operation.”

FAA Type Certificate G24EU was issued pursuant to FAR 21.29 upon validation of the Czech Republic Civil Aviation Authority’s certification of compliance with the certification basis, and in accordance with the standard airworthiness certificate provisions of FAR 21.183(c).

Certification Basis

FAR 21.29, Amdt 21-68 effective September 10, 1990

British Civil Airworthiness Requirements, Section E, Issue 2, dated June 6, 1966

FAA Type Certificate No. G24EU Rev. 5, issued August 25, 1999

JAR 22, Change 5, Appendix H: Flight Manual Requirements

Date of application for type certification: March 11, 1998.

Date of application for amended type certification to include options for wing tip extensions and aileron balance tab: June 30, 2003

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the glider for standard airworthiness certification.

Basic equipment and instruments:

Day VFR:

- a) (2) Airspeed indicators with markings per Flight Manual
- b) (2) Altimeters
- c) (2) Accelerometers
- d) (1) Registration accelerometer (AMU-1B recording unit, required **only** for L-13 AC series with aileron balance tab, S/N 018901, 049102 and subsequent)
- e) (2) Five-point safety harnesses (symmetrical)
- f) (2) Parachutes (aerobatic flights only) or Back Cushions (thickness approx. 3.9 inches (10 cm) when compressed).

Cloud flying (day):

- g) (2) Magnetic Compass
- h) (2) Vertical Speed Indicator
- i) (2) Turn and Bank Indicator
- j) Two-way radio communication system

Tow Releases:

1. Nose tow release mechanism model A 740210 N
2. Nose tow release mechanism model "E 85", LBA Data Sheet No. 60.230/1 (optional)
3. Safety tow release mechanism model "Europa G 88" (optional), LBA Data Sheet No. 60.230/2
4. Side winch launch release mechanism models (optional): LN-0399 (left), LN-0400 P (right)

Service Information

Service Bulletins, structural repair manuals, vendor manuals, glider flight manuals, and overhaul and maintenance manuals that contain a statement that the documents are approved by the exporting airworthiness authority, the CAA of the Czech Republic, are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only.

Service bulletins classified as "Mandatory" by the CAA of the Czech Republic are identified to that effect but are only mandatory in the U.S. when subject to an Airworthiness Directive issued by the FAA.

Available Documents for the L-13 AC Blanik:

1. CAA Czech Republic approved Flight Manual for sailplane model L-13 AC Blanik, dated May 21, 2001.
2. CAA Czech Republic approved Maintenance Manual for the L-13 AC Blanik, original dated June 30, 1998 accompanied by all latest updates.
3. Operating instruction for the TOST nose tow release mechanism model "E85", dated March 1989 and LBA approved.
4. Operating instructions for the TOST safety tow release mechanism model "Europa G 88", dated February 1989 and LBA approved.

NOTES:

NOTE 1

A current weight and balance report including a list of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each glider at the time of original airworthiness certification.

NOTES Cont'd

NOTE 2 The following placards must be installed in full view of the pilot:

- (a) "THIS GLIDER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND MANUALS."
- (b) "Night flying is prohibited."
- (c) For the aerobatic configuration:

Aerobatic: the following maneuvers and associated entry speeds are permitted:

| Sailplane w/o Wing Tip Extensions | | |
|-------------------------------------|-------------------------------|-------------------------------|
| Max. Gross Weight: | 1100 lb | |
| Empty Weight (standard) | 672 lb | |
| Solo Flights From Front Seat Only | | |
| Approved Maneuvers and Entry Speeds | | |
| | Solo Operation | Dual Operation |
| Loop | 92 knots (170 km/hr) | 97 knots (180 km/hr) |
| ½ Loop & ½ Roll | 103-113 knots (190-210 km/hr) | 103-113 knots (190-210 km/hr) |
| ½ Roll & ½ Loop | 70 knots (140 km/hr) | 81 knots (150 km/hr) |
| Lazy Eight | 97 knots (180 km/hr) | 97 knots (180 km/hr) |
| Chandelle (climb) | 97-103 knots (180-190 km/hr) | 97-103 knots (180-190 km/hr) |
| Inverted Flight | 70-76 knots (130-140 km/hr) | 76-81 knots (140-150 km/hr) |
| Slow Roll | 92 knots (170 km/hr) | 97 knots (180 km/hr) |
| Spin | 35 knots (65 km/hr) | 35 knots (65 km/hr) |
| Flick Roll | 70 knots (130 km/hr) | 70 knots (130 km/hr) |
| Flick ½ Roll & ½ Loop | 65 knots (120 km/hr) | 65 knots (120 km/hr) |
| Inverted Spin | 49-51 knots (90-95 km/hr) | 49-51 knots (90-95 km/hr) |
| Steep Turn | 92 knots (170 km/hr) | 97 knots (180 km/hr) |
| Stall Turn | 97 knots (180 km/hr) | 103 knots (190 km/hr) |

NOTE 3 Information essential for the proper maintenance, inspection, and repair of the glider is contained in the LET Maintenance Manual for the L-13 AC Blanik, dated November 1998.

NOTE 4 Major structural repairs must be accomplished at FAA certificated repair stations in accordance with LETECKÉ ZÁVODY repair methods that are approved by the FAA.

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