

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

G12EU
Revision 5

Glasflugel
H 301 "Libelle"
H 301B "Libelle"
Standard "Libelle"
Standard Libelle-201B
Club Libelle 205
8 September 1975

TYPE CERTIFICATE DATA SHEET NO.G12EU

This data sheet which is a part of Type Certificate No. G12EU prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

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I. Model H 301 "Libelle", approved 31 May 1967 - Model H 301B "Libelle", approved 26 November 1968
- (Model H 301B similar to Model H 301, except for revised control surface travels).

Airspeed Limits. Glide or dive 108 knots (124 m.p.h.)
Max. speed in rough air 95 knots (109 m.p.h.)
Flaps extended 76 knots (87 m.p.h.)
Airplane tow 76 knots (87 m.p.h.)
Auto-winch tow 65 knots (74 m.p.h.)
Dive brake 108 knots (124 m.p.h.)

C.G. Range. (+ 8.48 inches) to (+ 13.9 inches)

Datum. Wing leading edge, position at 16.7 inches from centerline of fuselage.

Leveling Means. Wing chord of root-rib horizontal

Maximum Weight. 660 lb.

No. of Seats. 1

Baggage. None

<u>Control Surface Movements.</u>	<u>Model H 301</u>	<u>Model H 301B</u>
Elevator	Up 18°	Up 18°
	Down 18°	Down 18°
Aileron	Up 18°	Up 21°
	Down 8°	Down 11°
Rudder	Right 22°	Right 25°
	Left 22°	Left 25°
Flaps	Up 8°	Up 7°
	Down 11.5°	Down 10°

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II. Model "Standard Libelle", approved 30 December 1968.

(Similar to Model H 301 except for elimination of flaps. Both fixed and retractable landing gear configurations are approved).

Model "Standard Libelle-201B", approved 5 February 1973.

(Similar to "Standard Libelle", except for increased maximum weight with optional installation of wing water ballast system. Also increased speed limitations.) (See NOTES 6 and 7).

<u>Airspeed Limits.</u>	<u>Standard Libelle</u>	<u>Standard Libelle 201B</u>
Glide or dive	119 knots (137 m.p.h.)	135 knots (155 m.p.h.)
Max. speed in rough air	119 knots (137 m.p.h.)	135 knots (155 m.p.h.)
Maneuvering speed	-- --	81 knots (93 m.p.h.)
Airplane tow	81 knots (93 m.p.h.)	81 knots (93 m.p.h.)
Auto-winch tow	65 knots (74 m.p.h.)	65 knots (74 m.p.h.)
Dive brake	119 knots (137 m.p.h.)	135 knots (155 m.p.h.)

C.G. Range. (+9.6 inches) to (+13.7 inches)

Datum Wing leading edge, position at 16.7 inches from centerline of fuselage.

Leveling Means. Slope of rear top surface of fuselage: 100 to 7 tail down.

Maximum Weights.

Standard Libelle:
Max. take-off weight 640 lb.

Standard Libelle 201B:
Max. take-off weight without water ballast 695 lb.
Max. take-off weight with water ballast* 770 lb.

(* Total weight of glider must not exceed 695 lb. before water ballast is added.
Glider without water ballast tanks installed therefore have a maximum take-off weight limit at 695 lb.)

No. of Seats. 1 (- 14 inches)

Baggage. None

Control Surface Movements.

Elevator	Up	18° ± 1°
	Down	18° ± 1°
Aileron	Up	20° ± 1°
	Down	11° ± 1°
Rudder	Right	25° ± 1°
	Left	25° ± 1°

Weak Link for Towing. 1100 lb. (Airplane/Auto/Winch).

III. Model Club Libelle 205, approved 8 September 1975

<u>Airspeed Limits (I.A.S.)</u>		
VNE (Never Exceed)		108 knots (124 m.p.h.)
VA (Maneuvering)		81 knots (93 m.p.h.)
Airplane Tow		73 knots (84 m.p.h.)
Auto-winch Tow		65 knots (75 m.p.h.)
Dive Brakes		108 knots (124 m.p.h.)

C.G. Range. (+ 10.10 in.) to (+ 15.0 in.) at all weights.

Empty Weight C.G. Range. See Flight-and Service Manual.

Datum. Wing leading edge measured 16.73 in. outboard of fuselage center line.

III. Model Club Libelle 205 (cont'd)

<u>Leveling Means.</u>	Slope of rear top surface of fuselage: 100 to 5.2 tail down.		
<u>Maximum Weight.</u>	770 lb. (350 kg).		
<u>Number of Seats.</u>	1 (at -17.65 in., most aft position for pilot weight of 143 lb, at -14.65 in., most aft position for pilot weight of 243 lb.)		
<u>Baggage.</u>	None.		
<u>Control Surface Movements.</u>	Elevator	Up	17.5° ±1.5°
		Down	17.5° ±1.5°
	Aileron	Up	22° ±2°
		Down	10° ±2°
	Rudder	Right	25° ±2°
		Left	25° ±2°
	Dive Brake	Open	60° ±0°
			-5°
<u>Weak Link for Towing.</u>	1100 lb. (Airplane/Auto/Winch Tow).		

DATA PERTINENT TO ALL MODELS.

<u>Serial Nos. Eligible.</u>	The Federal Republic of Germany Certificate of Airworthiness for Export endorsed as noted below under "Import Requirements" must be submitted for each individual glider for which application for certification is made.
<u>Certification Basis.</u>	FAR 21.23 effective 1 February 1965. For Models H 301 and H 301B: Federal Republic of Germany Glider Airworthiness requirements, dated August 1939. For Model Standard Libelle, Standard Libelle, Standard Libelle 201B, and Club Libelle 205: Federal Republic of Germany Airworthiness Requirements for Sailplanes, dated February 1966. These requirements were found to provide a level of safety equivalent to FAR 21.123 effective 1 February 1965, to enable certification under the provisions of FAR 21.29(a)(ii). Type Certificate G12EU issued 31 May 1967. Date of Application for Type Certificate: 4 November 1964.
<u>Import Requirements.</u>	A U.S. Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export signed by a representative of the LuftfahrtBundesamt, containing the following statement: <ul style="list-style-type: none"> a) <u>For Models H 301 and H 301B:</u> "The glider covered by this certificate has been examined and found to comply fully with the Federal Republic of Germany glider airworthiness requirements dated August 1939, and conforms to Type Certificate No. G12EU." b) <u>For Model Standard Libelle:</u> "The glider covered by this certificate has been examined and found to comply with the Federal Republic of Germany glider airworthiness requirements for Sailplanes, dated February 1966, and conforms to Type Certificate No. G12EU". c) <u>For Model Standard Libelle 201B, Work No. 322 and subsequent:</u> "The glider covered by this certificate has been examined, tested, and found to conform to the type design approved under FAA Type Certificate No. G12EU and is in a condition for safe operation".

- d) For Model Club Libelle 205: "The glider covered by this certificate has been examined, tested, and found to conform to the type design approved under Type Certificate G12EU and is in a condition for safe operation".

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the glider for certification. In addition the following equipment must be installed on the Model Standard Libelle 201B or Club Libelle 205.

- a) Instruments (non-cloud flying):
(1) Airspeed Indicator marked as follows:

Standard Libelle 201B

Red Radial	135 knots	(155 m.p.h.)
Yellow Arc	81 to 135 knots	(93 to 155 m.p.h.)
Green Arc	43 to 81 knots	(50 to 93 m.p.h.)

Club Libelle 205

Red Radial	108 knots	(124 m.p.h.)
Yellow Arc	81 to 108 knots	(93 to 124 m.p.h.)
Green Arc	43 to 81 knots	(50 to 93 m.p.h.)

- (2) Altimeter
(3) Magnetic Compass

- b) Additional Instruments for cloud flying:
(1) Turn and Bank Indicator
(2) Variometer

- c) Additional Equipment for Club Libelle 205
Parachute, or a cushion with a thickness of 4 in. in compressed state.

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 information must be provided on placards installed in full view of the pilot:

- a) For Models H 301 and H 301B:
(1) "When flying in rough air do not exceed 95 knots (109 m.p.h.)".
(2) "No acrobatic maneuvers including spins approved".
- b) For Model Standard Libelle:
"No acrobatic maneuvers including spins approved".
- c) For Model Standard Libelle 201B:
(1) "This glider must be operated in compliance with the operating limitations
(2) "Cloud flying: Permitted only when the following instruments are installed:
(i) Airspeed Indicator
(ii) Altimeter
(iii) Magnetic Compass
(iv) Turn and Bank
(v) Variometer".
(3) "No acrobatic maneuvers, including spins, approved".
(4) "Night flying is prohibited".
(5) "Maneuvering speed 81 knots (93 m.p.h.)
Airplane tow speed 81 knots (93 m.p.h.)
Auto-winch tow speed 65 knots (74 m.p.h.)
Stall speed - dive brakes extended 46 knots (53 m.p.h.)".

- NOTE 6. A Model Standard Libelle glider may be converted to a Model Standard Libelle 201B glider by installing the placards listed under NOTE 2(c). The nameplate and glider records must be altered to redesignate the glider a Model "Standard Libelle 201B". The Model Standard Libelle 201B, Flight- and Service Manual became applicable. Model Standard Libelle 201B placards, and Flight- and Service Manual are available from Glasflugel. An optional water ballast system may be installed per NOTE 7.
- NOTE 7. The Glasflugel optional water ballast system may be installed in Model Standard Libelle 201B gliders when the installation is accomplished in accordance with Glasflugel Drawing Nos. 201-60-11 and 201-60-12. The maximum weight limitaiion placard must also be changed to read as specified yb NOTE 2(c)(7).

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