



**II - Model LS 3-a, approved March 13, 1980**

## Airspeed limits (I.A.S.)

Never Exceed (Vne)			
0 - 9,800 ft. alt.	270 km/h	168 mph	146 kts
9,800 - 19,700 ft. alt.	219 km/h	136 mph	118 kts
19,700 - 32,800 ft. alt.	173 km/h	107 mph	93 kts
In rough air (Vb)	190 km/h	118 mph	103 kts
Maneuvering (Va)	190 km/h	118 mph	103 kts
Flaps Down from 20° to 10°	160 km/h	99 mph	86 kts
Flaps Down from 10° to 0°	190 km/h	118 mph	103 kts
Flaps Down from 0° to -7°	270 km/h	168 mph	146 kts
Aero-tow (Vt)	190 km/h	118 mph	103 kts
Winch tow (Vw)	130 km/h	81 mph	70 kts
Dive brakes	270 km/h	168 mph	146 kts
Landing gear (Vl)	270 km/h	168 mph	146 kts

## Control surface movements

Elevator	Up	350 ± 5 mm (13.78 ± 0.2 in.)
	Down	245 ± 5 mm (9.65 ± 0.2 in.)
		Radius 148 mm (5.83 ± 0.2 in.), distance of reference point on fin 300 mm (11.81 in.)
Rudder		To both sides 6.89 ± 0.39 in. Radius 12.20 in.
Aileron at flap position + 10°	Up	16° ± 3°
	Down	-13° ± 3°
Flaps	Up	17° ± 3°
	Down	-5° ± 3°
		Further details regarding permissible deflections of ailerons and flaps are given in the Maintenance Manual LS 3-a.
Dive Brake	Up	160 ± 10 mm (6.30 ± 0.39 in) at inner lever.

**III. DATA PERTINENT TO ALL MODELS:**

C.G. range	250 mm (+9.85 in) to 400 mm (+15.75 in) aft of datum.
Empty weight C.G.	See Service Manual
Datum	Leading edge of wing at root
Leveling means	Under side of fuselage boom placed horizontal.
Maximum weight	472 Kg (1040 lb) including water ballast.
No. of seats	1, adjustable seat back, with seat location at station 590 mm (+23.23 in.) forward of datum.
Water Ballast	2 wing water bags, each 75 liters (75 kg) (166 lb.) at station 250 mm (+9.85 in.) aft of datum.

**III. DATA PERTINENT TO ALL MODELS:** (Cont'd)

Fixed Ballast	Fixture for 3 ballast weights of 2.45 kg. each (5.5 lb.) at station 1690 mm (+66.5 in.) forward of datum, compensating 5 kg. (11.3 lb.) each at seat position.
Baggage	Maximum 11 lb. at station 200 mm (+7.87 in.) aft of datum.
Rated Load for Winch and Aero Tow	Maximum 600 kg (1325 lb.)
Serial Numbers Eligible	See Import Requirements
Certification Basis	<p>FAR 21.23 and FAR 21.29 effective February 1, 1965.  Airworthiness Requirements for sailplanes and powered sailplanes (LFSM). dated October 1975.  Type Certificate No. G37EU, issued January 6, 1978.  Date of Application for Type Certificate: April 15, 1977.</p> <p>The German Airworthiness Authority, the Luftfahrt-Bundesamt (LBA), originally type certificated this glider under its Type Certificate Number 317. The FAA validated this product under U.S. Type Certificate Number G37EU. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Germany. The EASA TCDS number is EASA.A.095.</p>
Validation Basis	Type Certificate No. G37EU was issued in accordance to FAR 21.29(a)(1) in validation of Luftfahrt-Bundesamt (LBA) certification of compliance to the Federal Republic of Germany Sailplanes and Powered Sailplanes Airworthiness Requirements (LFSM) dated October 1975.
Import Requirements	<p>The FAA can issue a U.S. airworthiness certificate based on a German Airworthiness Authority Export Certificate of Airworthiness (Export C of A) signed by a representative of the Luftfahrt-Bundesamt (LBA) on behalf of the European Community. The Export C of A should contain the following statement: "The aircraft covered by this certificate has been examined, tested, and found to conform to the type design approved under U.S. Type Certificate No. G37EU and to be in a condition for safe operation."</p> <p>Model LS 3 serial nos 3002 through 3319 are eligible for a U.S. Standard Airworthiness Certificate when all actions or modifications have been accomplished in accordance with LBA-approved Rolladen Schneider Technical Bulletin 3011.</p> <p>Model LS 3-a serial numbers 3259, 3274, 3280,3281, 3287, 3305, 3314, 3315, 3324 to 3328, 3332, 2249 to 3355, 3357, 3359, 3373 to 3378, 3398, 3399, 3401, 3422, 3423 are eligible for a U.S. Standard Airworthiness Certificate when all actions or modifications have been accomplished in accordance with LBA approved Rolladen-Schneider Technical Bulletin.</p>
Equipment	<p>The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the glider for certification. As listed in Service/Maintenance Manual the following equipment must be installed.</p> <ol style="list-style-type: none"> <li>1. Non-cloud flying <ul style="list-style-type: none"> <li>- Airspeed indicator</li> <li>- Altimeter</li> <li>- Magnetic compass</li> </ul> </li> <li>2. Cloud flying <ul style="list-style-type: none"> <li>- Turn and slip</li> <li>- Variometer</li> </ul> </li> <li>3. LS 3/LS 3-a Flight and Service/Maintenance Manual approved by the Luftfahrt-Bundesamt (LBA) West-Germany.</li> </ol>

**III. DATA PERTINENT TO ALL MODELS:** (Cont'd)

## Service Information

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the German Airworthiness Authority (LBA).

- Service bulletins
- Structural repair manuals
- Vendor manuals
- Aircraft flight manuals
- Overhaul and maintenance manuals

The FAA accepts such documents and considers them FAA-approved for type design data unless one of the following conditions exist:

- The documents change the limitations, performance, or procedures of the FAA approved manuals.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate case-by-case approval to EASA on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

## 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 certification.

NOTE 2. A. The following placard must be installed in full view of the pilot:

1. Airspeed Limits (I.A.S.)
 

Never Exceed (Vne)	270 km/h	168 mph	146 kts
In rough air (Vb)	190 km/h	118 mph	103 kts
Maneuvering (Va)	190 km/h	118 mph	103 kts
Flaps down (LS 3) (Vfe)	190 km/h	118 mph	103 kts
20° - 10° (LS 3-a) (Vfe)	160 km/h	99 mph	86 kts
10° - 0°	190 km/h	118 mph	103 kts
Aero-tow (Vt)	190 km/h	118 mph	103 kts
Winch tow (Vw)	130 km/h	81 mph	70 kts
Dive brakes	270 km/h	168 mph	146 kts
Landing gear (Vl)	270 km/h	168 mph	146 kts
Airspeed Ind. (Vne)			
Vne up to 9,800 ft		168 mph	146 kts
19,700 ft (LS 3)		141 mph	123 kts
32,800 ft		112 mph	97 kts
Vne up to 9,800 ft		168 mph	146 kts
19,700 ft (LS 3-a)		136 mph	118 kts
32,800 ft		107 mph	93 kts
2. Maximum weight 472 kg (1040 lb.) including water ballast.
3. LS 3/LS 3-a Checklist:  
This sailplane must be operated in compliance with operating limitations as stated in the form of markings, placards and Flight Manual.
 

LS 3	LS 3-a
a. Lock main pins	a. Lock main pins
b. Lock horizontal tail	b. Lock horizontal tail
c. Connect chute static line	c. Connect ailerons

- |                      |               |  |
|----------------------|---------------|--|
| d. Lock dive brakes  |               | d. Test controls                       |
| e. Flap positioning: | Winch tow and | e. Fasten seat belt harness            |
|                      | Aero tow      | f. Connect chute static line           |
|                      | around 0°     | g. lock dive brakes                    |
| f. Test controls     |               | h. Flap positioning during takeoff: 0° |
| g. Lock canopy       |               | i. Lock canopy                         |
| h. Check release     |               | j. Check release                       |

4. No aerobatic maneuvers approved.

5. Minimum cockpit load...kg (without fixed ballast) (See Flight Manual page 1.6 and 1.7)

B. Other markings and placards.

1. Cockpit signs (See Service/Maintenance Manual).

NOTE 3. All external portions of the glider exposed to sunlight must be painted white except of wingtips, nose of fuselage and rudder.

NOTE 4. Maintenance, Inspection and Repairs must be accomplished with Rolladen-Schneider Flugzeugbau GmbH LS 3/LS 3-a Flight and Service/Maintenance Manual as applicable.

NOTE 5. Major repairs must be accomplished at FAA certificated repair stations rated for composite aircraft structure work or by a certified mechanic, in accordance with DG Flugzeugbau GmbH (or Rolladen-Schneider Flugzeugbau GmbH) repair methods approved by the FAA or by other methods approved by the FAA.

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