

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

G33EU Revision 3 GROB-WERKE G102 ASTIR CS G102 CLUB ASTIR III G102 CLUB ASTIR IIIb G102 STANDARD ASTIR III September 4, 1984
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**TYPE CERTIFICATE DATA SHEET NO. G33EU**

This data sheet which is a part of Type Certificate No.G33EU 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.                   GROB-WERKE GMBH & CO KG  
   Unternehmensbereich Grob TFE  
   Postfach 150  
   D-8948 Mindelheim  
   West Germany

**I. Model G102 ASTIR CS, approved August 4, 1976.**

Airspeed Limits (I.A.S.)	Never exceed (VNE)	250 km/hr	155 mph	135 kts
	In rough air (VB)	250 km/hr	155 mph	135 kts
	Maneuvering (VA)	170 km/hr	105 mph	92 kts
	On aerotow (VT)	170 km/hr	105 mph	92 kts
	On winch tow (VW)	120 km/hr	74 mph	64 kts
	Airbrakes	250 km/hr	155 mph	135 kts
	Gear extended	250 km/hr	155 mph	135 kts

C.G. Range                                   Serial Numbers 1001 thru 1437  
   9.8 in. to 16.7 in. (250 mm to 425 mm) aft of datum  
   Serial Numbers 1438 and subsequent  
   12.2 in to 18.9 in. (310 mm to 480 mm) aft of datum  
   (See NOTE 1.)

Empty Weight c.g.                         See Flight Manual.

Datum   Forward of wing leading edge at wing root.

Leveling Means                             Slope of top surface of fuselage between stations 170 in. and 205 in. 1000 to 40 tail up.  
   See Flight and Service Manuals.

Maximum Weight                         450 kg (990 lb.) including water ballast.

No. of Seats                                 One. 475 mm (18.7 in.) in front of datum.

Ballast Fixed                               See Flight Manual.

Water Ballast                               Two water ballast tanks, station 226 mm (8.9 in.) each 50 liters (50 kg) (112 lb.)

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**I. Model G102 ASTIR CS, approved August 4, 1976** (cont'd)

Control Surface Movements	Aileron:	Up	93 ± 10 mm (3.66 ± 0.39 in.)	Measurement radius 215 mm
		Down	48 ± 5 mm (1.89 ± 0.20 in.)	(8.46 in.) on the inboard of aileron.
	Stabilizer:	Up	60 ± 6 mm (2.36 ± 0.23 in.)	Measurement radius 170 mm
		Down	54 ± 6 mm (2.13 ± 0.23 in.)	(6.69 in.) in the middle of stabilizer.
	Rudder:	Left	180 ± 10 mm (7.09 ± 0.39 in.)	Measurement radius 310 mm
	Right	180 ± 10 mm (7.09 ± 0.39 in.)	(12.20 in.) on bottom of rudder.	
	All measured from hinge line. (See Flight Manual).			
Rated Load on Winch and Aero Tow	500 kg (110 lb.)			

**II. Models G102 CLUB ASTIR III, CLUB ASTIR IIIb, and STANDARD ASTIR III, approved 13 January 1983.**

The Models G102 CLUB ASTIR III, CLUB ASTIR IIIb, and STANDARD ASTIR III are same as the Model G102 ASTIR CS, with:

- New cockpit;
- New undercarriage; and
- Optional water ballast.

Airspeed Limits (I.A.S.)	Never exceed (VNE)	250 km/hr	155 mph	135 kts
	In rough air (VB)	250 km/hr	155 mph	135 kts
	Maneuvering (VA)	170 km/hr	105 mph	92 kts
	On aerotow (VT)	170 km/hr	105 mph	92 kts
	On winch tow (VW)	120 km/hr	74 mph	64 kts
	Airbrakes	250 km/hr	155 mph	135 kts

For the Model G102 STANDARD ASTIR III:

Gear extended	250 km/hr	155 mph	135 kts
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C.G. Range	12.2 in. to 18.9 in. (310 mm to 480 mm) aft of datum.			
Empty Weight c.g.	See Flight Manual.			
Datum	Forward of wing leading edge at wing root.			
Leveling Means	Slope of top surface of fuselage between stations 170 in. and 205 in. 600 to 26 tail up. See Flight and Service Manuals.			
Maximum Weight	For the Models G102 CLUB ASTIR III and CLUB ASTIR IIIb: 380 kg (836 lb.) For the Model G102 STANDARD ASTIR III: 450 kg (990 lb.)			
No. of Seats	One. 552 mm (21.7 in.) in front of datum.			
Ballast Fixed	See Flight Manual.			
Water Ballast	For the Model G102 STANDARD ASTIR III: Two water ballast tanks, station 276 mm (10.9 in.) each 45 liters (45 kg) (99 lb.)			
Control Surface Movements	Aileron:	Up	75 ± 8 mm (2.95 ± 0.31 in.)	Measurement radius 168 mm
		Down	44 ± 6 mm (1.73 ± 0.24 in.)	(6.61 in.) on the inboard of aileron.
	Stabilizer:	Up	68 ± 6 mm (2.68 ± 0.24 in.)	Measurement radius 166 mm
		Down	59 ± 6 mm (2.32 ± 0.24 in.)	(6.54 in.) in the middle of stabilizer.
	Rudder:	Left	192 +5 -10 mm (7.56 + 0.2 -0.39 in.)	Measurement radius 370 mm (14.57 in.)
		Right	192 +5 -10 mm (7.56 + 0.2 -0.39 in.)	on bottom of rudder.
	All measured from hinge line. (See Flight Manual).			

**II. Models G102 CLUB ASTIR III, CLUB ASTIR IIIb, and STANDARD ASTIR III, approved 13 January 1983.** (cont'd)

Rated Load on Winch and Aero Tow. 500 kg (1100 lb.)

**DATA PERTINENT TO ALL MODELS**

Serial Nos. Eligible	See Import Requirements.
Certification Basis	FAR 21.23 and FAR 21.29 effective February 1, 1965. <u>For the Model G102 ASTIR CS:</u> Federal Republic of Germany Glider Airworthiness Requirements (LFS) dated February 1966. Type Certificate No. G33EU issued August 4, 1976. Date of Application for Type Certificate December 17, 1975. <u>For the Models G102 CLUB ASTIR III, CLUB ASTIR IIIb, and STANDARD ASTIR III:</u> Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR-22), dated April 1980. Type Certificate G33EU amended 13 January 1983. Date of Application for amendment of the Type Certificate: 23 June 1981.
Import Requirements	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 Luftfahrt-Bundesamt, containing the following statement: a) <u>For the Model G102 ASTIR CS</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. G33EU and is in condition for safe operation." b) <u>For the Models G102 CLUB ASTIR III, CLUB ASTIR IIIb, and STANDARD ASTIR III</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. G33EU and is in condition for "safe operation." In addition, glider serial numbers 5521 S, 5529 S through 5534 S, 5547 Cb, 5548 Cb, 5556 S through 5560 S, 5570 C, 5576 S, and 5595 S are eligible for a U.S. Standard Airworthiness Certificate when modified in accordance with LBA-approved GROB-WERKE Technical Information TM 306-19 and when the other import requirements of this TCDS are satisfied.
Required Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the glider for certification. <u>For the Model G102 ASTIR CS:</u> 1. In addition, the following equipment must be installed for VFR-Day: (a) Airspeed indicator (b) Altimeter (c) Magnetic compass 2. G102 ASTIR CS Flight Manual (containing Flight and Service Manual) approved by the Luftfahrt-Bundesamt (LBA). <u>For the Models G102 CLUB ASTIR III, CLUB ASTIR IIIb, and STANDARD ASTIR III:</u> As listed in Flight Manual, Section II.3, the following equipment must be installed. 1. VFR-Day: (a) Airspeed indicator (marked per Flight Manual, Section II.4) (b) Altimeter (c) Magnetic compass 2. Flight Manual approved by the Luftfahrt-Bundesamt (LBA) West Germany, dated 6 December 1982 or later approved revision.

## Service Information

GROB-WERKE Technical Information (Service Bulletins), published in the English language, for the U.S. approved Models G102 ASTIR CS, CLUB ASTIR III, CLUB ASTIR IIIb, and STANDARD ASTIR III, that carry a statement "LBA-approved" may be interpreted as "FAA-approved".

Available service documents for the Model G102 ASTIR CS:

- a. Maintenance Information dated August 1975.
- b. Repair Instructions dated August 1975.

Available service documents for the Models G102 CLUB ASTIR III, CLUB ASTIR IIIb, and STANDARD ASTIR III:

- a. Instructions for Continued Airworthiness dated October 1982.
- b. Repair Instructions dated October 1982.

- NOTE 1: Weight: Current weight and balance report including list of equipment in certificated empty weight, and loading instructions when necessary must be provided at the time of original certification. Model G102 ASTIR CS sailplanes modified by LBA-approved modification AM 102-6, which introduced a 1.24° sweepback of the wing leading edge commencing with serial number 1438, must observe the revised center of gravity range limits herein and in G102 ASTIR CS Flight Manual dated 3/1/77 or later approved revision.
- NOTE 2: All placards and markings listed in Section II of the LBA-approved Grob Flight Manual must be installed in the location defined.
- NOTE 3: For the Models G102 CLUB ASTIR III, CLUB ASTIR IIIb, STANDARD ASTIR III: Section IV of the GROB-WERKE G102 CLUB ASTIR III, CLUB ASTIR IIIb, STANDARD ASTIR III Instructions for Continued Airworthiness is FAA-approved and it specifies mandatory replacement times, structural inspection intervals, and related structural inspection procedures. These airworthiness limitations may not be changed without FAA approval.
- NOTE 4: All external portions of the glider exposed to sunlight must be painted white except of wing tips, nose of fuselage and rudder.
- NOTE 5: Information essential for the proper operation, maintenance, inspection, and repair of the glider is contained in the GROB-WERKE Flight Manual, Maintenance Information or Instructions for Continued Airworthiness, and Repair Instructions applicable to the model concerned.
- NOTE 6: Major airframe repairs must be accomplished at FAA certificated repair stations rated for composite construction of small aircraft, using GROB-WERKE repair methods or using other methods acceptable to the Administrator.
- NOTE 7: The approved flight and navigation instruments, for VFR-Day operations, for the Models G102 CLUB ASTIR III, CLUB ASTIR IIIb, and STANDARD ASTIR III are listed in the GROB-WERKE G102 ASTIR III Master Equipment List dated 15 November 1981.

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