

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

G16CE Revision 1 SCHEIBE SF 25 C February 26, 2016
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TYPE CERTIFICATE DATA SHEET No. G16CE

This Data Sheet, which is part of Type Certificate No. G16CE 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: SCHEIBE-AIRCRAFT-GMBH
 Sudetenstraße 57/2, Flugplatz Heubach
 D-73540 Heubach
 Germany

Type Certificate Holder Record: SCHEIBE-Flugzeugbau GmbH transferred TC G16CE to SCHEIBE-AIRCRAFT-GMBH on August 30, 2006.

I. Model SF 25 C, Motor Glider, Utility Category, approved December 11, 2002

Description: The SF 25 C is a two-seat (side-by-side), motor glider constructed from metal and wood. It has a low wing, a conventional tail configuration, a fixed central main wheel, and spoilers on the upper wing surface.

<u>Engine:</u>	LIMBACH L2000 EA [TM 653-38 only with 653-57] S/N 44160 and up	ROTAX 912 A(2) or A(3) [TM 653-55] S/N 44160 and up	ROTAX 912 S(2) or S(3) or S(4) [TM 653-72 only together with TM 653-44], S/N 44332, 44334 and up
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<u>Fuel:</u>	Aviation Gasoline 100 LL or Cargas SUPER PLUS unleaded Minimum RON 98	Aviation Gasoline 100 LL or Cargas unleaded Minimum ROZ 90	Aviation Gasoline 100 LL or Cargas SUPER unleaded Minimum ROZ 95
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<u>Engine Limits:</u>	Maximum Take-off Power: 3450 rpm (59 kW or 80 HP) for only maximum 5 minutes.	Maximum Take-off Power: 5800 rpm (59 kW or 81 HP) for only maximum 5 minutes	Maximum Take-off Power: 5800 rpm (74 kW or 100 HP) for only maximum 5 minutes
	Maximum continuous power: 2700 rpm	Maximum continuous power: 4800 rpm (46 kW opr 63 HP)	Maximum continuous power: 4800 rpm (53 kW or 72 HP)

<u>Propeller:</u>	MT150L90-1A or HO11A-150B90L	only for 912 A(2): MT165R130-2A or HO11AHM-165 130 or MTV1A-175-05; Electric constant speed, feathering Or only for 912 A(3): MTV21A-C-F/(CF)175-05; Hydraulic constant speed, feathering fine pitch factory setting 12° ± 0,2° [TM 653-69/3]	only for 912 S(2) or S(4): MT170R135-2A or MT175R130-2A or MTV1A-175-05; Electric constant speed, feathering Or only for 912 S(3): MTV21A-C-F/(CF)175-05; Hydraulic constant speed, feathering fine pitch factory setting 14° ± 0,2° [TM 653-72]
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Airspeed Limitations(IAS):

V _{NE}	Maximum airspeed in calm air – never exceed	190 km/h	102 kts	116 mph
V _{RA}	Maximum airspeed in rough air	150 km/h	81 kts	94 mph
	[only with ROTAX 912 S() engine, TM 653-72]	160 km/h	86 kts	100 mph
V _A	Maneuvering speed	160 km/h	86 kts	100 mph

C.G. Range: 84.37 – 91.89 in (2143 – 2334 mm) aft of datum

Datum: 78.74 in (2.0 m) in front of leading edge of rib # 0; 20.47 in (0.52 m) from center line

Leveling: Wing cord horizontal at rib # 6, 86.61 in (2.2 m) from the center line

Maximum

Weight: 1344 lbs (610 kg) [Mod. 60]
1433 lbs (650 kg) [TM 653-44]

Maximum Weight of Non-Lifting Parts:

992 lbs (450 kg) [Mod. 60]
1080 lbs (490 kg) [TM 653-44]

Minimum Cockpit

Crew: One pilot [minimum weight 130 lbs (60 kg)]

No. of Seats: Two at 74.3 in (1.88 m) aft of datum

Maximum Baggage: 22 lbs (10 kg) at 96.45 in (2.45 m) aft of datum

Fuel Capacity: 21 US gal (80 l) at 114.56 in (2.91 m) aft of datum [TM 653-45]
or
14.5 US gal (55 l) at 112.2 in (2.85 m) aft of datum [TM 653-7/75]

Oil Capacity: Minimum 0.6 US gal (2.3 l) [ROTAX 912 A/S]
Minimum 0.4 US gal (1.5 l) [LIMBACH L 2000 EA]

Control SurfaceMovements:Aileron

Up 4.92 ± 0.39 in (125 ± 10 mm)
Down 1.57 ± 0.2 in (40 ± 5 mm)
Measurement radius 10.43 in (265 mm) on inboard edge of aileron

Stabilizer

Up 4.33 ± 0.39 in (110 ± 10 mm)
Down 6.3 ± 0.39 in (160 ± 10 mm)
Measurement radius 12.2 in (310 mm) in the middle of stabilizer at the rudder

Rudder

Both sides 15.75 ± 0.79 in (400 ± 20 mm)
Measurement radius 29.92 in (760 mm) on bottom of rudder

Both sides 14.96 ± 0.75 in (380 ± 19 mm) [see Notes 15 and 18, TM 653-71/3]
Measurement radius 29.1 in (740 mm) on bottom of rudder

Elevator Trim

Up 0.79 ± 0.2 in (20 ± 5 mm)
Down 1.18 ± 0.2 in (30 ± 5 mm)
Measurement radius 3.93 in (100 mm) on inboard edge

Serial Nos. Eligible: S/N 44160 and up. See Import Requirements.

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 German Airworthiness Authority, the Luftfahrt-Bundesamt (LBA), on behalf of the European Community, containing the following statement: "The aircraft covered by this certificate has been examined, tested and found to conform to the type design approved under FAA Type Certificate G16CE and is in condition for safe operation."

- Certification Basis:
1. Title 14 of the Code of Federal Regulations (14CFR) Part 21, Effective February 1, 1965, Amendments 21-1 through most current amendment.
 2. Applied Airworthiness Requirements:
 - LBA Announcement No. 10.05, "Vorlaufige Richtlinien für die Prüfung und Zulassung von Motorseglern," dated January 8, 1959, with changes, dated April 14, 1967, to this announcement.
 - Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 4, Issued January 29, 1988.
 - JAR 22, Change 5, Issued October 28, 1995.
 Supplementary Airworthiness Requirements:
 - LBA Announcement No. 10.05.1, "Zusammenstellung der Forderungen bezüglich des Betriebsverhaltens von Motorseglern," dated February 23, 1971.
 - LBA Note II-11-603.4/5/86, dated May 9, 1986, "Electric Constant Speed Propeller with Feathering."
 - Additional requirements to JAR 22 for aerotowing gliders with motorgliders, dated November 28, 1997.
 3. Exemptions pursuant to 14CFR11, Effective November 10, 1962, Amendments 11-1 through 11-36, Section 11.25 and 11.27.
 - Exemption No. 4988 to 14CFR45, Effective April 20, 1964, Amendments 45-1 through 45-16, Section 45.11(a) and (d) (External Identification Plate).
 4. Special Conditions issued pursuant to Section 21.16.
 5. Equivalent Level of Safety findings pursuant to Section 21.21(b)(1).
 6. FAA Act of 1958 Section 611(b).

The German Airworthiness Authority (LBA) originally type certificated this glider under its type certificate No. 653. Effective August 30, 2006, the European Aviation Safety Agency (EASA) began oversight of this model on behalf of the LBA. The EASA Type Certificate No. is EASA.A.098.

Equipment: The required Equipment for all approved operations are listed in the current LBA approved SF 25 C Flight Manual.

Service Information: Each of the documents listed below may state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before August 30, 2006 – by the German Airworthiness Authority (LBA).

- Service bulletins (Technische Mitteilungen)
- 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.

Service Information
(cont'd):

Available documents for Model SF 25 C with engine ROTAX 912 A or S:

- Flight Manual, LBA-approved March 1997, last Revision
- Instructions for continued Airworthiness dated March 1997, last Revision
- Appendix Aerotowing dated November 15, 1999, last Revision (Change 2, May 30, 2001)
- The placards listed in Section 1.15 -SF 25 C Flight Manual must be displayed.

Available documents for Model SF 25 C with engine LIMBACH L 2000 EA:

- [Flight Manual for SF 25 C with Maximum Take off Weight 1345 lbs (610 kg)]
- Flight Manual, LBA-approved June 1990, last Revision
 - Instructions for continued Airworthiness dated June 1990, last Revision
 - The placards listed in Section 1.14 -SF 25 C Flight Manual must be displayed.

Available documents for Model SF 25 C with engine LIMBACH L 2000 EA:

- [Flight Manual for SF 25 C with Maximum Take off Weight 1433 lbs (650 kg)]
- Flight Manual, LBA-approved May 1990, last Revision
 - Instructions for continued Airworthiness dated May 1990, last Revision
 - The placards listed in Section 1.14 -SF 25 C Flight Manual must be displayed.

NOTES:

- NOTE 1 Motorglider of this type are certificated only for VFR-Day flights.
- NOTE 2 Propeller HO*.... are equal to HO11A....
- NOTE 3 Increasing of maximum take-off mass to 1433 lbs (650 kg) and the maximum mass of the nonlifting parts to 1080 lbs (490 kg) in accordance with TM 653-44, dated Oct. 20, 1983 of SCHEIBE Flugzeugbau GmbH is LBA-approved. The modification as a major alteration is possible at S/N 44160 and up (new wings are necessary), new for S/N 44332, 44334 and up. Certification basis: Airworthiness requirements for sailplanes, edition Feb. 1966 including structure and Airworthiness requirements for sailplanes and motorglider, edition Oct. 1975 without structure.
- NOTE 4 Installation of silencer on the exhaust port in accordance with TM 653- 4/76, dated Sept. 17, 1976 of SCHEIBE-Flugzeugbau GmbH together with modifications 64 and 65 are LBA-approved. Maximum continuous power of the engine is 36 kW (49 HP) at 2800 rpm. Certification basis: NFL II-47/75 together with Airworthiness requirements for sailplanes and motorglider, without structure.
- NOTE 5 Installation of a greater fuel tank with 21.14 US gal (80 l) in accordance with TM 653-45, dated Oct. 20, 1983, is LBA-approved.. This modification is only possible in accordance with TM 653-44 (see Note 3). Certification basis: JAR 22, edition Dec. 15, 1982.
- NOTE 6 Optional folding wings for Motorglider SF 25 C in accordance with TM 653-43, dated Oct. 13, 1982 of SCHEIBE-Flugzeugbau GmbH are LBA-approved. Certification basis: Airworthiness requirements for sailplanes and motorglider, edition Oct. 1975.
- NOTE 7 Increasing maximum take-off mass up to 1345 lbs (610 kg) and increasing maximum mass of the non-lifting parts up to 992 lbs (450 kg) for S/N 44160 and up in accordance with modification 60, April 1, 1976, is LBA-approved. Certification basis: Airworthiness requirements for glider and motorglider, edition Oct. 1975.
- NOTE 8 Installation of a sprung main landing gear in accordance with TM 653-2/75, dated March 3, 1975, for S/N 44115 and up is LBA-approved. Certification basis: LBA-announcement 10.05, dated January 8, 1959, with changes, dated April 14, 1967, to this announcement.
- NOTE 9 For new motorglider with S/N 44138 and up optional installation of a fuel tank with an increased fuel capacity of 14.53 US gal (55 l) in accordance with TM 653-7/75, dated Sept. 16, 1975, is LBA-approved. From S/N 44119 and up installation of a two wheel main landing gear in accordance with TM 653-6/75, dated Sept. 30, 1975 is LBA-approved. Certification basis: LBA-announcement 10.05, dated January 8, 1959, with changes, dated April 14, 1967, to this announcement.
- NOTE 10 Installation of a Nose landing gear in accordance with TM 653-52, dated April 12, 1989 is LBA approved for S/N 44332, 44334 and up (see NOTE 3). This TM is only to make at manufacturing or at a major alteration. Certification basis: JAR 22, Change 4, dated January 29, 1988.

- NOTE 11 Optional installation of MT-Propeller MT150L90-1A or Propeller Hoffmann HO11A-150B90L together with engines LIMBACH L 2000 EA oder EA1 in accordance with TM 653-57, dated February 18, 1990 is LBA-approved. Certification basis: JAR 22 Change 4, dated January 29, 1988.
- NOTE 12 Installation of engine ROTAX 912 A() together with Propeller MT165R130-2A or HO11AHM-165 130 in accordance with TM 653-55/ed. 3, dated July 01,1993 is LBA-approved. Modification is possible only together at manufacturing or together with a major alteration. Additional to the minimum equipment a CHT-indication is to install. Certification basis: JAR 22 Change 4, dated January 29, 1988.
- NOTE 13 Installation of a C.G. launching hook for winch towing is approved for max. take off weights up to 1433 lbs (650 kg) in accordance to the TM 653-63, dated August28,1995. This modification is only possible for central single sprung main landing gear with wheel 6.00x6 and with framework construction according to drawing 653E-11-S6.1. Certification basis: LBA announcement 10.05 and additional JAR 22, edition November 10, 1994 incl. Amendment. 22/94/1.
- NOTE 14 Installation of Propeller MTV1A/175-05 or MTV21A-C-F/(CF)175-05 together with engine ROTAX 912 A(2) or A(3) according to TM 653-69/3 dated August 25,1995, LBA-approved. If propeller MTV21A-C-F/(CF)175-05 is used, fine pitch factory setting $12^{\circ} \pm 0,2^{\circ}$ must be set (see propeller log book). Certification basis: JAR 22, Change 5 and LBA Note II-11-603.4/5/86, dated May 9, 1986, "Electric Constant Speed Propeller with Feathering."
- NOTE 15 Installation of engine ROTAX 912 S together with propeller MT170R135-2A, MT175R130-2A, MTV1A/175-05 or MTV21A-C-F/(CF)175-05 only for maximum take off mass of 1433 lbs (650 kg) is LBA-approved in accordance to TM 653-72, dated March 01.1999. If propeller MTV21A-C-F/(CF)175-05 is used, fine pitch factory setting $14^{\circ} \pm 0,2^{\circ}$ must be set (see propeller log book). Certification basis: LBA announcement 10.05 and 10.05.1 together with JAR 22, Change 5, dated October 28,1995 and LBA Note II-11-603.4/5/86, dated May 9, 1986, "Electric Constant Speed Propeller with Feathering" and additional LBA-Note I 334-MS92
- NOTE 16 Change of engine names according to LIMBACH SB 17, dated July 17, 1992, LBA-approved.
- NOTE 17 Installation of Aerotow device for aerotowing glider according to TM 653-71/3 dated January 12, 2000 is LBA-approved. Certification basis: JAR 22, Change 5, dated October 28, 1995 with Amd. (D) J (additional requirements for aerotowing)
- NOTE 18 Current weight and balance report including list of equipment in certificated empty weight and loading instructions, when necessary, must be provided for each motorglider at the time of original certification. The certificated empty weight and corresponding center of gravity locations must include the engine oil at 5.07 lbs.

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