DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

G52EU
DG Flugzeugbau GmbH
DG-400
Revision 2
February 06, 2012

TYPE CERTIFICATE DATA SHEET NO. G52EU

This Data Sheet, which is part of Type Certificate No. G52EU 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	DG Flugzeugbau GmbH Otto-Lilienthal-Weg 2 D 76646 Bruchsal Germany
Type Certificate Holder Record:	Glaser-Dirks Flugzeugbau GmbH transferred TC G52EU to DG Flugzeugbau GmbH on July 30, 1996

I. Model DG-400, Self-Launching (Powered) Glider, Utility Category, approved December 3, 1986

Engine	Rotax 505
Fuel	Two stroke mixture Premium fuel minimum ROZ 96 octane of Aviation gasoline 100 LL with Super-2-stroke oil Mixing ration 1:50
Engine Limits	Take off power: 31.7 KW (43 HP) at 6200 r.p.m. Max. Continuous power: 29.5 KW (40 HP) at 6100 r.p.m.
Propeller and Propeller Limits	Hoffman HO 11 F - 128 B 84 Diameter range maximum 50.98 in. (1295 mm) minimum 50.93 in. (1280 mm) (No further reductions permitted)

Airspeed Limits (IAS)

V_{NE} (never exceeded)	168 mph	270 km/h	146 knots
V_B (in rough air)	118 mph	190 km/h	103 knots
V_A (maneuvering)	118 mph	190 km/h	103 knots
Retraction and extension of the power plant	68 mph	110 km/h	59 knots
V_{NE} (Power plant extended)	118 mph	190 km/h	103 knots
V_F (Wing flaps extended)			
(+4°, +8)	118 mph	190 km/h	103 knots
(L1)	93 mph	150 km/h	81 knots
V_{LO} (Landing gear operating)	118 mph	190 km/h	103 knots
V_T (Aero-tow)	118 mph	190 km/h	103 knots
V_W (Winch launch)	81 mph	130 km/h	70 knots

C. G. Range	9.84 in. to 15.35 in. (250 mm to 390 mm) aft of datum.
Empty Weight C.G.	See Flight Manual. (Record of Weight and Balance)
Datum	Wing leading edge at wing root
Leveling Means	Aft fuselage midline horizontal
Maximum Weight	1014 lb (460 kg) 17 m wing span 1058 lb (480 kg) 15 m wing span
No. of Seats	One, 22 in. (560 mm) in front of datum
Maximum Baggage	33 lb (15 kg) 7 in. (180 mm) aft of datum
Fuel Capacity	Total 13 1/4 U.S. gal. (50 1) Fuselage tank 5 1/4 U.S. gal. (20 l) 11 in. (230 mm) aft of datum each wing tank 4 U.S. gal (15 liter) 11 in. (230 mm) aft of datum
Water Capacity	Each wing 11.8 U.S. gal (45 liter) 11 in. (230 mm) aft of datum

Control Surface Movements

Aileron at flap setting 0 degrees:

Up 1.65 ± .12 in. (42 ± 3 mm)
Down .827 ± .12 in. (21 ± 3 mm)
Measurement radius 4.84 in. (123 mm) from hinge line

Elevator:

Up 2.24 ± .04 in. (57 ± 1 mm)
Down 1.89 ± .04 in. (48 ± 1 mm)
Measurement radius 5.9 in. (150 mm) from hinge line

Rudder:

8.46 ± .2 in. (215 ± 5 mm) to the right and left.
Measurement radius 16.3 in. (414 mm) from hinge line

Wing Flaps:

Flap setting - 10°
Up .984 ± .12 in (25 ± 3 mm)

Flap setting 0°
0 in. (0 mm)

Flap setting + 12°
Down 1.18 ± .12 in. (30 ± 3 mm)
Measurement radius 5.71 in. (145 mm) from hinge line

Serial Nos. Eligible	See Import Requirements

Certification Basis

1) FAR 21.23, 21.29 and 21.50 effective February 1, 1965 including Amendment 21-1 through 21-53.

2) Joint Airworthiness requirements for Sailplanes and Powered Sailplanes (JAR-22) dated April 1, 1980 including Amendment 1, dated May 18, 1981.

3) Preliminary guideline for the stress analysis of glasfiber and carbonfiber reinforced plastic structures for sailplanes and powered sailplanes issued January 1981.

4) Type Certificate No. G52EU issued December 3, 1986.

5) Date of application for Type Certificate November 25, 1982.

6) The German Airworthiness Authority, the Luftfahrt-Bundesamt (LBA), originally type certificated this glider under its Type Certificate Number 826. The FAA validated this product under U.S. Type Certificate Number G52EU. 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.239.

Import Requirements

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. G52EU and is in a condition for safe operation."

Model DG-400 serial numbers 4-3, 4-32, 4-36 to 4-39, 4-50, 4-51, 4-68, 4-78, 4-91, 4-98, 4-99, 4-108, 4-111 to 4-113, 4-116, 4-117, 4-119, 4-120, 4-127, 4-128, 4-133, 4-134, 4-139, 4-142 to 4-144, 4-146 to 4-151, 4-160, 4-176 are eligible for a U.S. Standard Airworthiness Certificate when modified in accordance with LBA-approved Service Bulletin TN 826-1 (issue 4), dated Nov. 14, 1986, and if all other import requirements of this TCDS are satisfied.

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 DG-400 Flight Manual, LBA-approved dated November 1986, is required.

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 data together with list of equipment included in the certificated empty weight, and loading instructions, when necessary, must be provided for each powered glider at the time of original certification. The certificated empty weight and corresponding center of gravity locations must include the following:

unusable fuel of .08 U.S. gal (.3 liter)

NOTE 2 The placards listed in items 1.3 and 2.3 of the LBA approved DG-400 Flight Manual must be displayed.

NOTE 3 Section 0. Airworthiness Limitations of the DG-400. Instructions for continued airworthiness, dated September 1986 is FAA-approved. It specifies mandatory replacement times, and structural repair procedures. These airworthiness limitations may not be changed without FAA approval.

NOTE 4 All external portions of the powered glider exposed to sunlight must be painted white except the surfaces for the registration Nos. and anti-collision paint as specified by the manufacturer.

NOTE 5 Major structural 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 Glaser-Dirks) repair methods approved by FAA.

NOTE 6 Information essential for the proper operation, maintenance and inspection of the glider is contained in the Model DG-400 Flight Manual and Maintenance Manual.

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