

BGA glider data sheet - Duo Discus Turbo

Data source: Flight & maintenance manuals

Date of issue: May 2000 / 2002

Manufacturer: Schempp Hirth, Flugzeugbau GmbH, Postfach 1443, D-73222 Kirchheim/Teck, Germany
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Weighing Data:

	Kg	Pounds
Max weight (take off & landing) with or without water	700	1543
Max wing water	198	435
Max fin water	11	24
Max weight of non lifting components (everything except wings)	490	1080
Max seat load (front & rear seats)	110	242

mm Inches

Forward C of G limit (aft of datum)	45	1.77
Aft C of G limit (aft of datum)	250	9.84
Front pilot position (forward)	1400	55.12
Rear pilot position (forward)	290	11.42

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	71 ± 5	36 ± 5	176	± 3
Elevator	52 ± 4	52 ± 4	170	± 3
Rudder	Left & Right 190 ± 20		410	

Controls weights	Moments & Weights Kg	Moments cm Kg
Rudder	4.8 to 5.9	-10 to -7
Elevator half (without fitting)	0.8 to 1.0	3.65 to 4.50
Inner aileron	4.3 to 5.9	8 to 10
Outer aileron	0.54 to 0.7	1.6 to 2.0
Exceeding these weights by 15% is allowable because of additional mass balance. Moments must be as above.		

Weighing Longitudinal datum: Wing root LE. Horizontal datum: Top of rear fuselage 1000:45 tail down.

The standard nose weights each reduce min front cockpit load by 5 kg. One litre may be put in the tail tank for each 34 litres in the wing tanks. Tail tank is 5320mm aft of datum. Main wheel is 65mm aft of datum. Tail wheel is 5330mm aft of datum, tail skid is 5365mm aft of datum.

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	97	180
Manoeuvre	97	180
Aerotow* (Fin pitot)	97*	180*
Winch / auto tow	81	150
U/C down	97	180

	Knots	Kph
Engine extended ignition "on"	67	125
Engine extended ignition "off"	86	160
Max speed for extending engine	59	110
Min speed for extending engine	49	90
Max cylinder head temp - 275°C		

VNE at altitude	Knots	Kph
6600 - 10 000 feet	130	241
10 - 13 000 feet	124	229
13 - 16 000 feet	117	217
16 - 20 000 feet	111	205
20 - 23 000 feet	105	194
23 - 26 000 feet	99	183
26 - 30 000 feet	93	172
30 - 33 000 feet	87	162
33 - 39 000 feet	76	141

Notes :- *Max aerotow speed is 81 knots (150 Kph) with a nose pitot. TN 396-5 (Mod 396-10) introduces a fin pitot.

Max winch weak link: 910 Kg (Brown) German (LBA) Type certificate number 396

Tyre pressures: Nose & tail wheels 3 bar, 43 psi. Main wheel 4 bar, 57 psi.

Non aerobatic, intentional spinning prohibited. Cloud flying is not permitted.

Fuel - unleaded automobile min RON 95 or 100LL. Fuel oil mixture 30:1. Oil - Castrol Super TT two stroke oil.

Fuel capacity, centre fuselage tank 16.2 litres (16 useable).

Brake fluid SAE - J 1703 or US specification FMVSS 116, DOT 3 resp. DOT 4

This sheet compiled by: Tim Macfadyen

Date: 6 December 2002

Latest update 14 April 2015 intentional spinning prohibited, previously allowed in error.