

BGA glider data sheet - Duo Discus XLT

Data source: Flight manual Rev 2 Nov 2011 and Maintenance manual

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 water ballast	750	1654
Max weight (take off & landing) without water ballast	720	1588
Max wing water	198	435
Max fin water	11	24
Max weight of non-lifting components (everything except wings)	500	1103
Max seat load (front & rear seats)	110	242

mm

Forward C of G limit (aft of datum)	45	
Aft C of G limit (aft of datum)	250	
Front pilot position (forward)	1440	
Rear pilot position (forward)	280	

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	

Weighing Longitudinal datum: Wing root LE. Horizontal datum: Top of rear fuselage 100:4,5 tail down.

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 8mm aft of datum. Tail wheel is 5330mm aft of datum, tail skid is 5365mm aft of datum.

Maximum speeds

	Knots	Kph		Knots	Kph	VNE at altitude	Knots	Kph
VNE	142	262	Engine extended ignition "on"	67	125	3000M - 9821 feet	137	253
Rough air	97	180	Engine extended ignition "off"	86	160	4000M - 13,124 feet	130	241
Manoeuvre	97	180	Max speed for extending or retracting engine	59	110	5000M - 16,405 feet	123	228
Aerotow* (Fin pitot)	97*	180*	Min speed for extending or retracting engine	49	90	6000M - 19,686 feet	116	215
Winch / auto tow	81	150	Max cylinder head temp - 275°C			7000M - 22,967 feet	110	204
U/C operation	97	180				8000M - 26,248 feet	104	192
						9000M - 29,529 feet	97	180
						10000M - 32,810 feet	92	170

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: 950 Kg (Brown) Type certificate numbers LBA 890 EASA.A.074

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

Category, utility, (restricted-aerobatics, inside loops, spins etc) without water ballast & with engine retracted or removed. Note, unlike previous Duo models the XLT is "utility" because with its larger airbrakes and higher VNE the brakes limit the speed to below VNE in a 45 degree dive.

Cloud flying is permitted without wing water at a max AUW of 630 Kg (1389 lb).

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 FMVVS 116, DOT 3 or DOT 4

This sheet compiled by: Tim Macfadyen

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