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BGA glider data sheet - AC-4c

This glider is a developed version of the ME7 with a retracting undercarriage

Data source: Owners' Manual

Date of issue: 13/6/2000

Manufacturer: Avia Stroitel Ltd

UK Agent: Russia Sailplanes Ltd

Web site: www.russiasailplanes.co.uk

Phone: 01432 851886

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	265	584
BGA concession non-aerobatic max weight (dry) [+3%]	273	602
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max in baggage compartment	15	33
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	13	0.51
Aft C of G limit (aft of datum)	156	6.14
Pilot position (forward)	380	14.96

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	17°	17°		
Elevator	23°	23°		
Rudder	Left & Right 30°			

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:90 tail down

The three nose weights weigh 3.6 kg (8 lb) each and are 1400 mm forward of datum.

Maximum speeds

	Knots	Kph		Knots	Kph	Altitude feet	VNE knots	VNE kph	Vra knots	Vra kph
VNE**	**119	**220	Winch / auto tow	60	111	5000	110**	205	81	148
Rough air	87	160	Airbrakes open	97	180	10 000	104**	188	75	137
Manoeuvre	84	156	U/C operation	87	161	15 000	94**	175	68	126
Aerotow	87	160	Aerobatics	**97	**180	20 000	87**	160	64	116
						25 000	80	148	57	106

**VNE is presently limited to 87 Knots and aerobatics and cloud flying are presently prohibited by BGA Mod 035/02/2003 on some examples.

Max winch weak link: 500 Kg (White)

Tyre pressure: Main and rear 29 psi (2 Bar).

Semi aerobatic at up to 97 knots, cloud flying permitted.

Span 12.6 meters

This sheet compiled by: Tim Macfadyen

Date 15 May 2003

BGA glider data sheet - AC-5t - Not a BGA certified type

This glider has a self sustaining SOLO 210cc (15 HP) engine

Data source: Manufacturer's data

Date of issue:

Manufacturer: Avia Stroitel Ltd

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	300	662
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)	127	5.00
Aft C of G limit (aft of datum)	267	10.51
Tall pilot position (forward)*	380	15.0
Short pilot position (forward)*	440	17.3

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

*It is strongly recommended that the glider is weighed with the pilot in due to the large effect that the pilot size and weight has on the C of G position of this small and light glider.

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:90 tail down

The 2 nose weights weigh 3.6 kg (8 lb) each and are 1200 mm forward of datum.

Maximum speeds

	Knots	Kph
VNE**	**119	220
Rough air	87	161
Manoeuvre	87	161
Aerotow	87	161

	Knots	Kph
Winch / auto tow	60	111
Airbrakes open	97	180
U/C operation	87	161
Engine operation	45 - 55	83 - 102

Altitude feet	VNE knots
6500 - 9800	112**
9800 - 13100	106**
13100 - 16400	100**
16400 - 19600	95**

**VNE is presently limited to 87 Knots by BGA Mod 035/02/2003

Max winch weak link: 500 Kg (White)

Tyre pressure: Main 29 psi (2 Bar), rear 22 psi (1.5 bar)

Aerobatics and cloud flying are prohibited

Span 12.6 meters

Fuel tank capacity 10 litres, mixture 50:1 Unleaded fuel, min 91 octane, synthetic 2 stroke oil

Max RPM 5500 for 5 minutes, 5000 continuous. Max cylinder head temp 500°F

This sheet compiled by: Tim Macfadyen Date: 7 Feb 2003

BGA glider data sheet - Astir CS

Data source: Manufacturer's Handbook

Date of issue: Aug 1975

Manufacturer: Grob

Web site:

Phone:

Fax:

UK Agent:

Web site:

Phone:

Fax:

[Link to mandatory mods:](#)

Weighing Data:

	Kg	Pounds
Max weight (dry)	380	838
BGA concession non-aerobatic max weight (dry) [+3%]	391	863
Max weight with water	450	992
Max landing weight	380	838
Max weight of non lifting components (everything except wings)	240	529
BGA concession non-aerobatic max weight of non lifting components [+5%]	252	556
Max pilot weight (seat load)	110	242

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	93 ±10	48 ±5	215	
Elevator	60 ±6	54 ±6	170	
Rudder	Left 180 ±10	Right 180 ±10	310	

Control surface moments & weights

	Moment cm Kg	Weight Kg
Elevator	12.0 ±10%	2.7±10%
Rudder	13.65±10%	3.2±10%
Ailerons	16.0 ±12%	4.1±12%

C of G limits (aft of datum)

	mm	Inch
Forward C of G to serial No 1437	250	9.84
Forward C of G serial No 1438 & on	310	12.20
Aft C of G limit up to serial No 1437	425	16.70
Aft C of G limit serial No 1438 & on	480	18.90
Pilot position (forward of datum)	475	18.70

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000:40 tail down

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	135	250
Manoeuvre	92	170
Aerotow	92	170

	Knots	Kph
Winch / auto tow	65	120
Airbrakes open	135	250
U/C down	135	250

Max winch weak link: 550 Kg (BGA figure blue, 600Kg)

Tyre pressure: 36 PSI 2.5 bar (tail wheel 22-26 psi)

~~Non/semi/full~~ aerobatic and cloud flying permitted (without water).

Notes: -

1 Kg of nose weight is equivalent to 2.28 Kg of pilot weight.

Tailplane front mounting ball. Locking plate must go at least 3 mm further up with TP removed than with TP fitted. Oversize balls are available 20-21,2 mm diameter in 0,2 stages.

This sheet compiled by: Tim Macfadyen

Date: 22 January 2002

BGA glider data sheet - Astir CS77 & Jeans

Data source: Manufacturer's Handbook

Date of issue:

Manufacturer: Grob

Web site:

Phone:

Fax:

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	380	838
BGA concession non-aerobatic max weight (dry) [+3%]	391	863
Max weight with water (CS 77) No water in the Jeans Astir	450	992
Max landing weight	380	838
Max weight of non lifting components (everything except wings)	240	529
BGA concession non-aerobatic max weight of non lifting components [+5%]	252	556
Max pilot weight (seat load)	110	242

C of G limits

mm Inches

Forward C of G limit (aft of datum)	310	12.2
Aft C of G limit (aft of datum)	480	18.9
Pilot position (forward of datum)	475	18.7

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	93 ±10	48 ±5	215	
Elevator	60 ±6	54 ±6	170	
Rudder	Left 190 ±10	Right 190 ±10	374	

Control surface weights & moments

CS77 No 1601-1698 Jeans No 2001 - 2092	Moment cm Kg	Weight Kg
Elevator	12.0 ±10%	2.7±10%
Rudder	16.5±10%	4.5±10%
Ailerons	16.0 ±12%	4.1±12%
CS77 No 1699 on Jeans No 2093 on	Moment cm Kg	Weight Kg
Elevator	12.0 ±10%	2.7±10%
Rudder	0 - 5	Max 6
Ailerons	0 - 1	Max 6

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000:40 tail down

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	135	250
Manoeuvre	92	170
Aerotow	92	170

	Knots	Kph
Winch / auto tow	65	120
Airbrakes open	135	250
U/C down	135	250

Max winch weak link: 500 Kg (BGA figure blue, 600Kg)

Tyre pressure: 36 PSI 2.5 bar (tail wheel 22-26 psi)

~~Non~~/semi/fully aerobatic and cloud flying permitted (without water).

Notes: -

This sheet compiled by: Tim Macfadyen

Date: 25 February 2002

BGA glider data sheet - Club Astir II & Std Astir II

Data source: Manufacturer's Handbook

Date of issue: Feb 1980

Manufacturer: Grob

Web site:

Phone:

Fax:

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	380	838
BGA concession non-aerobatic max weight (dry) [+3%]	391	863
Max weight with water	450	992
Max landing weight		
Max weight of non lifting components (everything except wings)	240	529
BGA concession non-aerobatic max weight of non lifting components [+5%]	252	556
Max pilot weight (seat load)	110	242

C of G limits

mm Inches

Forward C of G limit (aft of datum)	310	12.2
Aft C of G limit (aft of datum)	460	18.11
Pilot position (forward of datum)	633	24.92

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000:43.3 tail down

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	75 ±8	38 ±4	150	
Elevator	66 ±6	59 ±6	166	
Rudder	Left & Right 170+5 -10		320	

Control surface moments & weights

	Moment cm Kg	Weight Kg
Elevator	13,0 +3,5% -4,2%	3,0±12%
Rudder	0 - 6	4,5±10%
Ailerons	0 ± 1	6,1±10%

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	135	250	Winch / auto tow	65	120
Rough air	135	250	Airbrakes open	135	250
Manoeuvre	92	170	U/C down	135	250
Aerotow	92	170			

VNE at altitude - feet	Knots	Kph
6500-10000	128	237
10000-13000	121	225
13000-16500	115	213
19000 +	109	202

Max winch weak link: 550 Kg (BGA figure blue, 600Kg)

Tyre pressure: Club Astir II, 36 PSI 2.5 bar. Std Astir II, 50 PSI 3.5 bar (tail wheel 22-26 psi)

~~Non~~/semi/fully aerobatic and cloud flying permitted (without water).

Notes: -

BGA glider data sheet - Club Astir III, IIIb & Std Astir III

Data source: Manufacturer's Handbook

Date of issue: Jan 1981/1983

Manufacturer: Grob Web site: <http://www.grob-aerospace.de/get.php4?language=en&category=support>

UK Agent: Soaring Oxford Email: soaring.oxford@virgin.net Phone: 01636 525318 Fax: 01636 525287

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	380	838
BGA concession non-aerobatic max weight (dry) [+3%]	391	863
Max weight with water (CS 77) No water in the Jeans Astir	450	992
Max landing weight		
Max weight of non lifting components (everything except wings)	250	551
BGA concession non-aerobatic max weight of non lifting components [+5%]	262	579
Max pilot weight (seat load)	110	242

C of G limits

mm Inches

Forward C of G limit (aft of datum)	310	12.2
Aft C of G limit (aft of datum)	480	18.90
Pilot position (forward of datum)	552	21.73

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	67/83	38/50	168	
Elevator	60/72	53/65	166	
Rudder	Left & Right 182/197		370	

Control surface weights & moments

	Moment cm Kg	Weight Kg
Elevator	12,1 ±10%	2,6±12%
Rudder	8,0 + 4% - 15%	5,6 + 8% - 10%
Ailerons serial numbers 5501 to 5529	8,0 + 8% - 15%	4,8 ± 15%
Ailerons serial numbers 5530 onwards	10,6 + 4% - 15%	4,0 ± 15%

Longitudinal datum: Wing root LE (not the fairing). Horizontal datum: Rear fuselage top 1000:43.3 tail down

Maximum speeds

	Knots	Kph		Knots	Kph	VNE at altitude - feet	Knots	Kph
VNE	135*	250*	Winch / auto tow	65	120	6500-10000	128*	237*
Rough air	135*	250*	Airbrakes open	135*	250*	10000-13000	121*	225*
Manoeuvre	92*	170*	U/C down	135*	250*	13000-16500	115*	213*
Aerotow	92*	170*				19000 +	109*	202*

*** All speeds are reduced to 89 Knots (165 Kph) unless MSB 306-36/3 has been carried out. This adds extra mass balance to control surfaces.**

Max winch weak link: 550 Kg (BGA figure blue, 600Kg)

Tyre pressure: 36 PSI 2.5 bar. All wheels.

Semi aerobatic, cloud flying permitted without water.

Notes: -

The Club III has a nose wheel, fixed main wheel & tail wheel. The Club IIIb has a fixed main wheel & tail wheel. The Standard III has a retracting main wheel and water ballast. The Club versions do not have water ballast.

The standard 8,6 Kg ballast weight on the left of the stick reduces minimum pilot weight by 15 Kg.

This sheet compiled by: Tim Macfadyen

Last update 28 May 2005

BGA glider data sheet - Speed Astir II & Speed Astir II B

Data source: Manufacturer's Handbook

Date of issue: Oct 1979

Manufacturer: Grob

Web site:

Phone:

Fax:

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	400	882
BGA concession non-aerobatic max weight (dry) [+3%]	412	908
Max weight with water (CS 77) No water in the Jeans Astir		
Max weight with water	515	1135
Max weight of non lifting components (everything except wings)	260	573
BGA concession non-aerobatic max weight of non lifting components [+5%]	273	602
Max pilot weight (seat load)	110	242

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons Flap 0°	55 ±6	27 ±3	150	
Elevator	66 ±6	59 ±6	166	
Flaps	26±3 set at -7°	37±4 set at +10°	200	
Rudder	Left & Right 170+5 -10		320	

Control surface moments & weights

	Moment cm Kg	Weight Kg
Elevator	7,6 ± 5%	3,8 ± 12%
Rudder	9,0 ± 12%	3,0 ± 12%
Ailerons	3,3 + 8% - 12%	6,1 ± 12%
Flaps	32 ± 12%	4,2 ± 12%

C of G limits (aft of datum)		mm	Inches
Up to serial 4038	Forward C of G limit	320	12.60
	Aft C of G limit	490	19.29
From serial 4039 on	Forward C of G limit	265	10.43
	Aft C of G limit	435	17.13
Pilot position (forward) Speed Astir II		578	22,8
Pilot position (forward) Speed Astir II B		620	24,4

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000:43.3 tail down

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	146	270	Winch / auto tow	65	120
Rough air	108	200	Airbrakes open		
Manoeuvre	102	190	U/C down		
Aerotow	92	170	Positive flap	102	190

VNE at altitude - feet	Knots	Kph
6500-10000	137	256
10000-13000	130	243
13000-16500	124	230
19000 +	117	218

Max winch weak link: 500 Kg (BGA figure blue, 600Kg)

Tyre pressure: 50 PSI 3.5 Bar (tail wheel 22-26 psi)

~~Non~~/semi/fully aerobatic and cloud flying permitted (without water).

Notes: -

This sheet compiled by: Tim Macfadyen

Date: 25 February 2002

BGA glider data sheet - Twin Astir & Twin Astir Trainer

Data source: Manufacturer's flight manual

Date of issue: May 1978

Manufacturer: Burkhart Grob GmbH

UK Agent: Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	650	1435
BGA concession non-aerobatic max weight (dry) [+3%]	669	1478
Max weight of non lifting components (everything except wings)	470	1036
BGA concession non-aerobatic max weight of non lifting components [+5%]	493	1088
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	260	10.24
Aft C of G limit (aft of datum)	460	18.11
Front pilot position (forward)	1150	45.28
Rear pilot position (aft of datum)	40	1.57

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons	90 ± 10	45 ± 8	208
Elevator	91 ± 6	71 ± 5	222
Rudder	Left & Right 233 ± 10		450
Airbrakes	Fully extended 170 ± 10		Measure at outboard end
Controls Moments & weights [all ± 12%]		Moments cm Kg	Weights Kg
Elevator		25,8	5,2
Rudder to serial 3072		24,9	6,5
Rudder serial 3073 on		0 - 10	8,0
Aileron to serial 3072		23,0	5,7
Aileron serial 3073 on		0 - 6	8,0

Elevators without mass balance, weighing 3,1 - 4, 4 Kg, are acceptable with moments of 19 - 29 cm Kg.

Longitudinal datum: Wing root LE at rib

Horizontal datum: Top of rear fuselage 1000: 40 tail down.

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	108	200
Manoeuvre	92	170

	Knots	Kph
Aerotow	92	170
Winch / auto tow	65	120
Airbrakes open	135	250

VNE at altitude	Knots	Kph
0-6500 feet	135	250
6500-10 000	128	237
10 000-13 000	121	225
13 000-16 500	115	213
16 500-19 000'	109	202

Max winch weak link: 850 Kg (Brown)

Tyre pressure: Main 2.5 - 2,8 atm 36 – 40 psi , rear 36 psi

Semi aerobatic, cloud flying permitted

Notes: -

The "Trainer" is a version of the Twin Astir with a fixed undercarriage, no water and a disk wheel brake.

This sheet compiled by: Tim Macfadyen

Date: 10 September 2002

BGA glider data sheet - ASH 25

Data source Schleicher Manual

Date of issue: 1987

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight with water	750	1654
Max weight dry	680	1499
BGA concession non-aerobatic max weight (dry) [+3%]	700	1545
Max weight of non lifting components (everything except wings)	390	860
BGA concession non-aerobatic max weight of non lifting components [+5%]	409	903
Max pilot weight (seat load)		
Max luggage compartment load	15	33
	mm	Inches
Forward C of G limit (aft of datum)	190	7.48
Aft C of G limit (aft of datum)	390	15.35
Front pilot position (forward)	1322	52.05
Rear pilot position (forward)	339	13.35

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				total
Elevator	±	±		0 total
Rudder	Left ±	Right ±		total
Flaps				total

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top level

Maximum speeds

	Knots	Kph
VNE	151	280
Rough air	100	185
Manoeuvre	100	185
Winch / auto tow	70	130

	Knots	Kph
Aerotow	100	185
U/C down	100	185
Flap pos 2 & 3	124	230
Flap pos 4 & 5	86	160
Landing flaps	76	140

Height feet	Height meters	VNE knots	VNE Kph
10 000 - 16 400	3 - 5 000	135	250
16 400 - 23 000	5 - 7 000	121	225
23 000 - 29 500	7 - 9 000	108	200
29 500 - 36 000	9 - 11 000	94	175
36 000 - 43 000	11 - 13 000	81	150

Max winch weak link: 900 daN (Brown). Tyre pressure: Main 51 psi (3,6 bar). Tail 37 psi (2,6 bar).

Semi aerobatic (without water). Cloud flying is permitted. Water must be dumped before landing.

Each 1 Kg nose weight reduces min cockpit weight by 1.3 Kg (2.8 lb).

The Hydraulic brake fluid is Aeroshell Fluid 4 or Esso Univis J-13. These fluids are mineral based and are very corrosive.

Span 25.6 meters

This sheet compiled by Tim Macfadyen

Date 19 Aug 2004

BGA glider data sheet - ASH 26

Data source: FAA Web

Date of issue: 1995

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight with water	525	1158
Max weight dry		
BGA concession non-aerobatic max weight (dry) [+3%]		
Max weight of non lifting components (everything except wings)	344	758.5
BGA concession non-aerobatic max weight of non lifting components [+5%]	361	796
Water capacity	150	331
Max pilot weight (seat load)		
Max luggage compartment load	15	33
	mm	Inches
Forward C of G limit (aft of datum)	290	11.40
Aft C of G limit (aft of datum)	400	16.20
Pilot position (forward)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons (Flaps 0°)	13 - 19	1 - 7	44.5	
Elevator	23 - 29	23 - 32	75	
Rudder	Left & right 145 - 155		280	

Flaps settings	Flap travel (Ailerons neutral)	Distance - hinge to measuring point	Max free play
-1.5°	1 - 5 up	116.5	
0°	0		
+38°	84 - 94 down		

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000 : 31 tail down

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	99	184
Manoeuvre	99	184
Winch / auto tow	70	130

	Knots	Kph
Aerotow	86	160
U/C down	99	184
Flap pos 2 & 3		
Flaps +23°	86	160
Flaps +38°	76	140

Height feet	Height meters	VNE knots	VNE Kph
10 000 - 16 500	3 - 5 000	124	230
16 400 - 23 000	5 - 7 000	113	210
23 000 - 29 500	7 - 9 000	100	185
29 500 - 36 000	9 - 11 000	89	165
36 000 - 42 500	11 - 13 000	76	140

Max winch weak link: 825 daN (Red). Tyre pressure: Main psi (bar). Tail psi (bar).

Semi aerobatic (without water). Cloud flying is permitted. Water must be dumped before landing.

Each 1 Kg nose weight reduces min cockpit weight by Kg (lb).

The Hydraulic brake fluid is Aeroshell Fluid 4 or Esso Univis J-13. These fluids are mineral based and are very corrosive.

Span 18 meters

This sheet compiled by Tim Macfadyen Date 19 Aug 2004

BGA glider data sheet - ASK 13

Data source: Manufacturers' handbook

Date of issue: undated

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

URL : http://www.as-segelflugzeuge.de/englisch/e_main.htm

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight	480	1060
BGA concession non-aerobatic max weight	529	1166
Max weight of non lifting components (everything except wings)	322	710
BGA concession non-aerobatic max weight of non lifting components	371	816
Max pilot weight (seat load)	110	242

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	135 ±10	65 ±10	260	
Elevator	160 ±15	160 ±15	470	
Trim				
Rudder	Left 400 ±20	Right 400 ±20	800	

mm Inches

Forward C of G limit (aft of datum)	70	2.76
Aft C of G limit (aft of datum)	247	9.7
Front pilot position (forward of datum)	1067	42
Rear pilot position (forward of datum)	0	0

Longitudinal datum: Wing rib 3 LE .

Horizontal datum: Rear fuselage top 1000:55 tail down (underside of rib 3 horizontal)

Maximum speeds (Indicated airspeeds with standard pitot/static system)

	Knots	Kph
VNE	108	200
Rough air	81	150
Manoeuvre	81	150
Aerotow	81	150

	Knots	Kph
Airbrakes open	108	200
Winch / auto tow	58	107
Winch / auto tow BGA figure (weak link reduced to 850kg)	65	120

Max winch weak link: 1070 Kg (Tost black). 850 Kg (Tost brown) with the BGA max speed of 65 knots

Tyre pressure: 36 psi (2,5 Bar)

Semi aerobatic, cloud flying permitted

This sheet compiled by: Tim Macfadyen

Last update 4 July 2005

BGA glider data sheet - ASK 18

Data source Flight Manual

Date of issue: 1975

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight (dry)	335	738
BGA concession non-aerobatic max weight (dry) [+3%]	345	760
Max weight of non lifting components (everything except wings)	210	463
BGA concession non-aerobatic max weight of non lifting components [+5%]	220	486
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	230	9.05
Aft C of G limit (aft of datum)	379	14.9
Pilot position (forward of datum)	485	19.1

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	110 ±10	45 ±10	230	
Elevator	110 ±10	110 ±10	330	
Trim				
Airbrakes				
Rudder	Left 355 ±20	Right 355 ±20	675	

Longitudinal datum: Wing root LE (rib 3).

Horizontal datum: Wing rib 3 underside horizontal

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	75	140
Manoeuvre	75	140

	Knots	Kph
Aerotow	75	140
Winch / auto tow	59	110
Airbrakes open		

Max winch weak link: 600 Kg (Blue)

Tyre pressure: 35 PSI (2,5 Bar)

Semi aerobatic. Cloud flying permitted.

Notes: -

This sheet compiled by: Tim Macfadyen

Date 1 November 2001

BGA glider data sheet - ASK 21

Data source Manufacturer's manuals

Date of issue: 1980

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight	600	1320
BGA concession non-aerobatic max weight (+3%)	618	1363
Max weight of non lifting components (everything except wings)	410	904
BGA concession non-aerobatic max weight of non lifting components [+5%]	430	949
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	234	9.21
Aft C of G limit (aft of datum)	469	18.46
Front pilot position (forward)	1185	46.65
Rear pilot position (forward)	80	3.15

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play total
Ailerons	110 ± 10	45 ± 5	240	3.01
Elevator	90 ± 5	65 ± 5	230	2.84
Rudder	Left & Right 180 ± 20		375	3.88
Airbrakes 25 - 35mm gap between airbrake and wing when fully open.				
Controls weights	Moments &		Moment cm Kg	Weights Kg
Ailerons			17,4-22,9	2,85-3,75
Elevator			13,9-18,4	3,15-4,10
Rudder			17,1-22,3	1,75-2,59

Weighing Longitudinal datum: Wing root LE. Horizontal datum: Top of rear fuselage 1000: 52 tail down.

Each lead disk in the nose weighs 1 kg but reduces min front cockpit load by 1,25 Kg (2.76lb).

Maximum speeds

	Knots	Kph
VNE	151	280
Rough air	108	200
Manoeuvre	97	180
Aerotow	97	180
Winch / auto tow	81	150

VNE at altitude meters	Kph
0 - 2000	280
2000 - 3000	267
3000 - 4000	255
4000 - 5000	239
5000 - 6000	226

VNE at altitude feet	Knots
0-5000	151
5000-10 000	144
10 000-15 000	132
15 000-20 000	121

Notes: -

Span 17 meters

Max winch weak link: 1000 Kg (black)

Tyre pressures Nose wheel 2.0 bar, 28 psi. Main wheel 2.7 bar, 38 psi. Tail wheel 2.5 bar, 36 psi

Fully aerobatic, cloud flying permitted

The Hydraulic brake fluid is Aeroshell Fluid 4 or Esso Unavis J-13. These fluids are mineral based and are very corrosive.

This sheet compiled by: Tim Macfadyen

Date: 19 Aug 2004

BGA glider data sheet – ASK 23

Data source Manufacturer's manuals

Date of issue: 1986

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight	360	794
BGA concession non-aerobatic max weight [+3%]	371	818
Max weight of non lifting components (everything except wings)	235	518
BGA concession non-aerobatic max weight of non lifting components [+5%]	247	544
Max pilot weight (seat load)		
	mm	Inches

Forward C of G limit (aft of datum)	285	11.2
Aft C of G limit (aft of datum)	455	17.9
Front pilot position (forward)	456	17.95

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing root LE (not fairing)

Horizontal datum: Rear fuselage top tail down 1000:40

Maximum speeds

	Knots	Kph	VNE at altitude meters	VNE at altitude feet	Knots	Kph
VNE	116	215	3 000 – 4 000	10 000 – 13 000	110	204
Rough air	78	145	4 000 – 5 000	13 000 – 16 000	104	193
Manoeuvre	78	145	5 000 – 6 000	16 000 – 20 000	98	183
Aerotow	78	145	6 000 – 8 000	20 000 – 26 000	88	163
Winch / auto tow	67	125	8 000 – 10 000	26 000 – 33 000	78	145
Airbrakes open	116	215				

Max winch weak link: 680 daN (Blue)

Tyre pressure: Front 28 psi (2 bar), main 43 psi (3 bar), rear 36 psi (2,5 bar)

Semi aerobatic, cloud flying permitted.

Notes: -

15 meter span

Each 1 kg trim disk in the nose reduces minimum cockpit weight by 1.74 Kg (3.84 lb).

This sheet compiled by: Date: 10 July 2002

BGA glider data sheet - ASW 12

Data source FAA data sheets

Date of issue: 1967

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight with water	430	947
Max weight dry (& max landing)	430	947
BGA concession non-aerobatic max weight (dry) [+3%]		
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		
Max luggage compartment load	5	11
	mm	Inches
Forward C of G limit (aft of datum)	292	11.5
Aft C of G limit (aft of datum)	381	15.0
Pilot position (forward)		

Control deflections in degrees

	Up	Down	Max free play
Ailerons Flaps in POS 3	19.5° - 25.5°	15° - 21°	
Elevator	11.5° - 14.5°	11.5° - 14.5°	
Rudder	Left & right	22.5° - 27.5°	
Flaps POS 1 POS 3 POS 7	8° - 10° up 0° - 2° up 19° - 21° down		

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000 : 40 rear down

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	108	200
Manoeuvre		
Winch / auto tow	59	110

	Knots	Kph
Aerotow	81	150
Flap POS 4, 5 & 6	97	180
Flap pos. 7	75	140
Drag shute deployed	108	200

Height feet	Height meters	VNE knots	VNE Kph
10 000 - 16 400	3 - 5 000		
16 400 - 23 000	5 - 7 000		
23 000 - 29 500	7 - 9 000		
29 500 - 36 000	9 - 11 000		
36 000 - 43 000	11 - 13 000		

Max winch weak link: 1000 daN (Black). BGA recommended - Red

Tyre pressure: Main psi (bar). Tail psi (bar).

Non aerobatic. Cloud flying is prohibited. No airbrakes are fitted to the ASW 12

This sheet compiled by Tim Macfadyen

Date 22 July 2003

BGA glider data sheet ASW 15A (See separate sheet for ASW 15B)

Data source: Flight & Operational Manual

Date of issue: 1970

Manufacturer: Schleicher

Phone: 0049 6658 890

Fax: 0049 6658 8940

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

URL : http://www.as-segelflugzeuge.de/englisch/e_main.htm

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (dry)	318	700
BGA concession non-aerobatic max weight (dry) [+3%]	327	721
Max weight with water		
Max landing weight		
Max weight of non lifting components (everything except wings)	198	437
BGA concession non-aerobatic max weight of non lifting components [+5%]	208	459
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	220	8.66
Aft C of G limit (aft of datum)	380	14.96
Pilot position (forward of datum)		

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	85 ±10	50 ±5	200	
Elevator	60 ±10	55 ±5	340	
Trim				
Rudder	Left 210 ±20	Right 210 ±20	490	
Airbrakes				

The cockpit airbrake lever must be in the same position ±5mm with each airbrake connected separately (& locked). Min 5 mm surplus forward travel of the cockpit lever.

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000:50 tail down

Maximum speeds

	Knots	Kph
VNE	119	220
Rough air	81	150
Manoeuvre	81	150

	Knots	Kph
Aerotow	81	150
Winch / auto tow	59	110

Max winch weak link: 500kg (Tost white) BGA concession 600 Kg (Tost blue)

Tyre pressure: 37-40 psi 2.6-2.8 Bar

Semi aerobatic and cloud flying permitted without water ballast

Notes: -

Excess play at the wing-root to fuselage junction can cause major tailplane oscillations at high speed.

This sheet compiled by: Tim Macfadyen

Last update: 24 August 2005

BGA glider data sheet ASW 15B (See separate sheet for ASW 15)

Data source: Flight & Operational Manual

Date of issue: 1972

Manufacturer: Schleicher

Phone: 0049 6658 890

Fax: 0049 6658 8940

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

URL : http://www.as-segelflugzeuge.de/englisch/e_main.htm

Weighing Data:

	Kg	Pounds
Max weight (dry) (Landing weight)		
BGA concession non-aerobatic max weight (dry) [+3%]		
Max weight with water	408	900
Max weight of non lifting components (everything except wings)	220	485
BGA concession non-aerobatic max weight of non lifting components [+5%]	231	509
Max pilot weight (seat load)	115	253

mm inches

Forward C of G limit (aft of datum)	210	8.27
Aft C of G limit (aft of datum)	380	14.96
Pilot position (forward of datum)	440	17.32

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	85 ±10	50 ±5	200	
Elevator	60 ±10	55 ±5	340	
Trim				
Rudder	Left 254 ±25	Right 254 ±25	490	
Airbrakes				

The cockpit airbrake lever must be in the same position ±5mm with each airbrake connected separately (& locked). Min 5 mm surplus forward travel of the cockpit lever.

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000:50 tail down

Maximum speeds

	Knots	Kph
VNE	119	220
Rough air	92	170
Manoeuvre	92	170

	Knots	Kph
Aerotow	92	170
Winch / auto tow	65	120

Max winch weak link: 500kg (Tost white). BGA concession 600 Kg (Tost blue).

Tyre pressure: 37-40 psi 2.6-2.8 Bar

Semi aerobatic and cloud flying permitted without water ballast.

Notes: -

Excess play at the wing-root to fuselage junction can cause major tailplane oscillations at high speed.

This sheet compiled by: Tim Macfadyen

Last update: 17 April 2006

BGA glider data sheet - ASW 17

Data source BGA & FAA data sheets

Date of issue: 1974

Manufacturer: Schleicher

Phone: 0049 6658 890

Fax: 0049 6658 8940

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight with water	609	1342
Max weight dry (& max landing)	570	1257
BGA concession non-aerobatic max weight (dry) [+3%]	587	1295
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		
Max luggage compartment load	11	24
	Mm	Inches
Forward C of G limit (aft of datum)	340	13.39
Aft C of G limit (aft of datum)	460	18.11
Pilot position (forward)	673	26.5

Control deflections in degrees

	Up	Down	Max free play
Ailerons	9.5° - 13.5°	7.5° - 11.5°	
Flaps in position 3			
Elevator	11° - 14°	15° - 19°	
Rudder	Left & right 27° - 33°		
Flaps			
Position 1	10° - 12° up 8° - 10° down		
Position 4			

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top sloping rear down 1000: 37

Maximum speeds

	Knots	Kph
VNE (flaps 1)	135	250
Rough air	92	170
Manoeuvre	92	170
Winch / auto tow	65	120

	Knots	Kph
Aerotow	92	170
Airbrakes out	135	250
Flap pos. 2 & 3	92	170
Flap pos. 4	81	150

Height feet	Height meters	VNE knots	VNE Kph
10 000 - 16 400	3 - 5 000		
16 400 - 23 000	5 - 7 000		
23 000 - 29 500	7 - 9 000		
29 500 - 36 000	9 - 11 000		
36 000 - 43 000	11 - 13 000		

Max winch weak link: 600 daN (Blue).

Tyre pressure: Main psi (bar). Tail psi (bar).

Semi aerobatic (without water). Cloud flying is permitted. Water must be dumped before landing.

Span 20 meters

This sheet compiled by Tim Macfadyen

Date 23 July 2003

BGA glider data sheet - ASW 19 & 19B

Data source: Manufacturer's Handbook

Date of issue:

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight (dry)		
BGA concession non-aerobatic max weight (dry) [+3%]		
Max weight with water	454	1001
Max landing weight		
Max weight of non lifting components (everything except wings)	230	507
BGA concession non-aerobatic max weight of non lifting components [+5%]	242	532
Max pilot weight (seat load)	115	253
	mm	Inches

Forward C of G limit (aft of datum)	240	9.45
Aft C of G limit (aft of datum)	384	15.1
Pilot position (forward) short pilot	625	24.6
Pilot position (forward) tall pilot	550	21.65

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	60 ±10	40 ±5	160	3,5
Elevator	60 ±10	50 ±10	160	3
Rudder	Left 160 ±15	Right 160 ±15	310	5
Airbrakes	With the brakes locked, the cockpit lever must rest in the same position ±5mm with each brake connected and the other disconnected.			

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000:45 tail down

Up to 7 Kg of nose weights may be fitted. 1 Kg of nose weight is equivalent to 2.5 Kg of cockpit weight.

Maximum speeds

	Knots	Kph	Height feet	VNE Knots
VNE	137	255	0 - 10 000	137
Rough air	92	170	10 000 - 16 400	120
Manoeuvre	92	170	16 400 - 23 000	110
Aerotow	92	170	23 000 - 29 500	95
Winch / auto tow	67	125	29 500 - 36 000	85
			36 000 - 42 600	75

Controls weights & balance

	Weight Kg	Balance cm Kg
Rudder without horn	3,0 - 3,4	8,0 - 11,0
Rudder with horn	3,3 - 3,7	9,0 - 12,0
Elevator	2,1 - 2,9	6,0 - 9,0
Ailerons	3,0 - 3,6	8,75 - 10,75

Max winch weak link: 500 Kg ASW 19, 600 Kg ASW 19b (strengthened hook mounting)

Tyre pressure: 38 PSI

~~Non~~/semi/~~fully~~-aerobatic Cloud flying permitted without water ballast

This sheet compiled by: Tim Macfadyen

Date: 12 Sept 2001

BGA glider data sheet - ASW 20 & 20F

Data source Schleicher Manual

Date of issue: 1979

Manufacturer: Schleicher & Centrair

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight dry & landing weight	380	838
BGA concession non-aerobatic max weight (dry) [+3%]	391	863
Max weight with water	454	1000
Max weight of non lifting components (everything except wings)	235	518
BGA concession non-aerobatic max weight of non lifting components [+5%]	247	544
Max pilot weight (seat load)	115	253
	mm	Inches
Forward C of G limit (aft of datum)	240	9,45
Aft C of G limit (aft of datum)	360	14,17
Light pilot position (forward)	625	24.6
Heavy pilot position (forward)	550	21.65

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	See separate sheet.		79	1,75 total
Elevator	60±15	50 ±5	145	3 total
Rudder	Left 160 ±15	Right 160 ±15	310	4,5 total
Flaps	See separate sheet.		148	2,75 total
	Weight Kg		Balance cm kg	
Rudder	2,8 - 3,6		8,6 - 11,0	
Elevator	2,1 - 2,7		6,6 - 8,4	
Ailerons	2,2 - 2,6		2,8 - 3,5	
Flaps	5,1 - 6,5		12,3 - 15,7	

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000: 45 tail down

Maximum speeds

	Knots	Kph
VNE	143	265
Rough air ASW 20	97	180
Rough air ASW 20F	96	178
Manoeuvre	94	175
Aerotow	94	175

	Knots	Kph
Winch / auto tow	65	120
U/C down	94	175
Flaps positions 2 & 3	108	200
Flaps position 4	86	160
Landing flaps	65	120

Height feet	VNE knots	VNE Kph
10 000 - 16 400	121	225
16 400 - 23 000	108	200
23 000 - 29 500	97	180
29 500 - 36 000	83	155
36 000 - 42 600	73	135

Max winch weak link: 600 Kg (blue)

Tyre pressure: 36 - 49 psi

Semi aerobatic in 15 meter form without water. Cloud flying is permitted

Notes: -

Each 1 Kg nose weight reduces min cockpit weight by 2.5 Kg

This sheet compiled by Tim Macfadyen

Date 28 January 2002

ASW 20, L, F & FL, Flap settings

Control deflections in mm

Flap lever position	Stick position	Right Wing		Left Wing	
		Aileron	Flap	Aileron	Flap
1 (-11°)	Right	-29±3	-44±5	-3±3	-14±5
	Neutral	-15±1,5	-28,5±2,5	-15±1,5	-28,5±2,5
	Left	-3±3	-14±5	-29±3	-44±5
2 (-6°)	Right	-29±3	-33,5±5	+11±3	+1,5±5
	Neutral	-8±1,5	-15,5±2,5	-8±1,5	-15,5±2,5
	Left	+11±3	+1,5±5	-29±3	-33,5±5
3 (0°)	Right	-22±3	-18±5	+19±3	+16,5±5
	Neutral	0±1,5	0±2,5	0±1,5	0±2,5
	Left	+19±3	+16,5±5	-22±3	-18±5
4 (+9°)	Right	-11±3	+5±5	+27±3	+38,5±5
	Neutral	+10±1,5	+23±2,5	+10±1,5	+23±2,5
	Left	+27±3	+38,5±5	-11±3	+5±5
5 (+55°)	Right	-29±3	+125±5	+5,5±3	+148±5
	Neutral	-11±1,5	+137±2,5	-11±1,5	+137±2,5
	Left	+5,5±3	+148±5	-29±3	+125±5

ASW 20 B & C Flap settings

Control deflections in mm

Flap lever position	Stick position	Right Wing		Left Wing	
		Aileron	Flap	Aileron	Flap
1 (-12°)	Right	-30±3	-39±5	-3,5±3	-23±5
	Neutral	-16,5±1,5	-31±2,5	-16,5±1,5	-31±2,5
	Left	-3,5±3	-23±5	-30±3	-39±5
2 (-6°)	Right	-29±3	-27±5	+11±3	-3±5
	Neutral	-8±1,5	-15,5±2,5	-8±1,5	-15,5±2,5
	Left	+11±3	-3±5	-29±3	-27±5
3 (0°)	Right	-22±3	-12±5	+19±3	+12±5
	Neutral	0±1,5	0±2,5	0±1,5	0±2,5
	Left	+19±3	+12±5	-22±3	-12±5
4 (+9°)	Right	-11±3	+11±5	+27±3	+35±5
	Neutral	+10±1,5	+23±2,5	+10±1,5	+23±2,5
	Left	+27±3	+35±5	-11±3	+11±5
5 (+38°)	Right	-29±4,5	+87±7,5	+5,5±3	+106±7,5
	Neutral	-11±1,5	+96,5±5	-11±1,5	+96,5±5
	Left	+5,5±4,5	+106±7,5	-29±3	+87±7,5

BGA glider data sheet - ASW 20L & 20FL

Data source Schleicher Manual

Date of issue: 1979

Manufacturer: Schleicher & Centrair

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight (dry)	380	838
BGA concession non-aerobatic max weight (dry) [+3%]	391	863
Max water	Nil	Nil
Max pilot weight (seat load)	115	254
Max weight of non lifting components (everything except wings)	235	518
BGA concession non-aerobatic max weight of non lifting components [+5%]	247	544
Max weight in baggage compartment	15	33
	mm	Inches
Forward C of G limit (aft of datum)	240	9,45
Aft C of G limit (aft of datum)	360	14,17
Light pilot position (forward)	625	24.6
Heavy pilot position (forward)	550	21.65

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	See separate sheet		79	1,75 total
Elevator	60±15	50±15	145	3 total
Rudder	Left 160±15	Right 160±15	310	4,5 total
Flaps	See separate sheet		148	2,75 total
	Weight Kg		Balance cm kg	
Rudder	2,8 - 3,6		8,6 - 11,0	
Elevator	2,1 - 2,7		6,6 - 8,4	
Ailerons	2,2 - 2,6		2,8 - 3,5	
Aileron extensions	0,23 - 0,29		0,54 - 0,66	
Flaps	5,1 - 6,5		12,3 - 15,7	

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000: 45 tail down

Each 1 Kg nose weight reduces min cockpit weight by 2.5 Kg

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	89	165
Manoeuvre	86	160
Aerotow	86	160

	Knots	Kph
Winch / auto tow	65	120
U/C down	86	160
Flaps positions 2 & 3	108	200
Flaps position 4	86	160
Landing flaps	65	120

Height feet amsl	VNE kts	VNE Kph
0 - 10 000	135	250
16 400	120	225
23 000	110	200
29 500	95	180
36 000	85	155
42 600	75	135

Max winch weak link: 600 Kg (blue)

Tyre pressure: Main wheel 2,5 - 3 Bar (36 - 49 psi), tail wheel 2,3 - 2,6 bar (33 - 38 psi)

Semi aerobatic in 15 meter span, non-aerobatic with 16.6 meter tips. Cloud flying is permitted

This sheet compiled by Tim Macfadyen

Date 6 May 2003

BGA glider data sheet - ASW 20 B & BL

Data source Schleicher Manual

Date of issue: 7/4/1983

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight with water ASW 20 B ASW 20 BL	525 430	1158 948
Max weight of non lifting components (everything except wings)	245	540
BGA concession non-aerobatic max weight of non lifting components [+5%]	257	567
Max pilot weight (seat load)	115	254
	mm	Inches
Forward C of G limit (aft of datum)	240	9,45
Aft C of G limit (aft of datum)	360	14,17
Light pilot position (forward)	625	24.6
Heavy pilot position (forward)	550	21.65

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	See separate sheet		79	1,75 total
Elevator	64± 10	53 ±5	154	3 total
Rudder	Left 160 ±15	Right 160 ±15	310	4,5 total
Flaps	See separate sheet		148	2,75 total
	Weight Kg		Balance cm kg	
Rudder	2,25 - 2,65		6,57 - 9,13	
Elevator (half)	0,70 - 0,90		1,70 - 2,20	
Elevator actuator	0,21 - 0,27		1,00 - 1,20	
Aileron	1,76 - 2,1		1,88 - 2,53	
Flap	3,64 - 4,46		7,07 - 9,23	
Aileron extensions	0,23 - 0,29		0,56 - 0,66	

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000: 45 tail down

Maximum speeds

	Knots	Kph
VNE B		
VNE BL	138	255
Rough air B	97	180
Rough air BL	92	170
Manoeuvre	92	170

	Knots	Kph
Aerotow	92	170
Winch / auto tow	70	130
U/C down	92	170
Flaps positions 2 & 3		
Flaps position 4		
Landing flaps		

Max winch weak link: 600 Kg (Blue)

Tyre pressure: 2,3 - 2,6 Bar Main and tail wheel

Semi aerobatic in 15 meter form without water. Cloud flying is permitted

The 1 kg trim disks in the nose each reduce the min cockpit load by 2,5 Kg (5 ½ lb)

The Hydraulic brake fluid is Aeroshell Fluid 4 or Esso Univis J-13. These fluids are mineral based and are very corrosive.

This sheet compiled by Tim Macfadyen

Date 19 August 2004

BGA glider data sheet - ASW 20 C & CL

Data source Schleicher Manual

Date of issue: 7/4/1983

Manufacturer: Schleicher & Centrair

Web site:

Phone:

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UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight with water ASW 20 C Max water	454 110	1001 242
Max weight ASW 20 CL Max water	380 50	838 110
Max weight ASW 20 CL BGA non aerobatic concession	391	863
Max weight of non lifting components (everything except wings)	235	518
BGA concession non-aerobatic max weight of non lifting components [+5%]	247	544
Max pilot weight (seat load)	115	254
	mm	Inches
Forward C of G limit (aft of datum)	240	9,45
Aft C of G limit (aft of datum)	360	14,17
Light pilot position (forward)	625	24.6
Heavy pilot position (forward)	550	21.65

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	See separate sheet		79	1,75 total
Elevator	64± 10	53 ±5	154	3 total
Rudder	Left 160 ±15	Right 160 ±15	310	4,5 total
Flaps	See separate sheet		148	2,75 total
		Weight Kg	Balance cm kg	
Rudder		2,25 - 2,65	6,57 - 9,13	
Elevator (half)		0,70 - 0,90	1,70 - 2,20	
Elevator actuator		0,21 - 0,27	1,00 - 1,20	
Aileron		1,76 - 2,1	1,88 - 2,53	
Flap		3,64 - 4,46	7,07 - 9,23	
Aileron extensions		0,23 - 0,29	0,56 - 0,66	

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000: 45 tail down

Maximum speeds

	Kts C	Kph C	Kts CL	Kph CL
VNE	143	265	135	250
Rough air	97	180	89	165
Manoeuvre	94	175	86	160
U/C down	94	175	86	160
Aerotow	94	175	86	160

	Kts	Kph
Winch / auto tow	65	120
Flaps pos 2 & 3	108	200
Flaps position 4	86	160
Landing flaps	65	120

Height feet	VNE kts C	VNE Kph C	VNE kts CL	VNE Kph CL
10 000 +	129	240	121	225
16 400 +	116	215	108	200
23 000 +	105	195	97	180
29 500 +	92	170	83	155
36 000 to 42 600	78	145	73	135

Max winch weak link: 660 Kg (Blue)

Tyre pressure: 2,3 - 2,6 Bar Main and tail wheel

Semi aerobatic in 15 meter form without water. Cloud flying is permitted

The 1 kg trim disks in the nose each reduce the min cockpit load by 2,5 Kg (5 ½ lb)

The Hydraulic brake fluid is Aeroshell Fluid 4 or Esso Univas J-13. These fluids are mineral based and are very corrosive.

This sheet compiled by Tim Macfadyen

Date 19 August 2004

BGA glider data sheet - ASW 22

Data source Schleicher flight manual Date of issue: Feb 1983

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight with water 22 meters	750	1654
Max weight with water 24 meters	650	1433
Max in upper baggage compartment	15	33
Max in lower baggage compartment	5	11
Max weight of non lifting components (everything except wings)	265	584
BGA concession non-aerobatic max weight of non lifting components [+5%]	278	614
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)	270	10.60
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward of datum)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder	Left	Right		
Flaps				
	Weight Kg		Balance cm kg	
Rudder				
Elevator (half)				
Elevator actuator				
Aileron				
Flap				
Aileron extensions				

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top horizontal.

Completely fill the outboard wing tanks (120 litres) before putting any water in the inboard tanks.

Maximum speeds

	Knots	Kph
VNE	151	280
Rough air	97	180
Manoeuvre	97	180
Aerotow	97	180
Winch / auto tow	75	140

	Knots	Kph
U/C down	97	180
Flaps position 2 & 3	119	220
Flaps position 4 & 5	86	160
Landing flaps	70	130

Maximum speeds at altitude

Meters	Feet	Knots	Kph
3 - 5 000	10-16 000	135	250
5 - 7 000	16 - 23 000	121	225
7 - 9 000	23 - 30 000	108	200
9 - 11 000	30 - 36 000	94	175
11 - 13 000	36 - 43 000	81	150

Max winch weak link: 900 Kg (Brown)

Tyre pressures: Unbraked main wheel 1,8 bar (26 psi). Braked main wheel 2,3 bar (33 psi)

Tail wheel 2,5 bar (36 psi).

Semi aerobatic without water ballast, 22 meter only. No spinning with flaps in "landing". Cloud flying is permitted without water ballast.

The 1 kg trim disks in the nose each reduce the min cockpit load by 2,5 Kg (5 ½ lb)

This sheet compiled by Tim Macfadyen

Date 25 September 2002

BGA glider data sheet - ASW 24 & 24B

Data source Flight & Maintenance manuals

Date of issue: 1989 (Revised 1992)

Manufacturer: Schleicher

Web site: www.alexander-schleicher.de

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods: www.alexander-schleicher.de

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight with water	500	1102
Max weight dry	365	805
BGA concession non-aerobatic max weight (dry) [+3%]	378	829
Max weight of non lifting components (everything except wings)	245*	540*
BGA concession non-aerobatic max weight of non lifting components [+5%]	257*	567*
Max pilot weight (seat load)	115	253
ASW 24 upper luggage compartment	15	33
ASW 24 lower luggage compartment	10	22
ASW 24B luggage compartment	15	33
	Mm	Inches
Forward C of G limit (aft of datum)	240	9.45
Aft C of G limit (aft of datum)	370	14.57
Pilot position (forward)	540	21.26

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	32.5 ± 4	24.5 ± 4	90	3.5 total
Aileron Zero setting 2.5 ± 2 mm down				
Elevator	26 ± 2.5	26 ± 2.5	75	2.0 total
Rudder	Left & Right 150 ± 10		280	2.0 total
Control surface mass & mass balance limits				
	Kg		Kg cm	
Ailerons	2.70 – 3.50		0.82 – 1.46	
Elevator (each)	0.64 – 0.79		1.40 – 1.80	
Elevatot actuator	0.34 – 0.42		1.40 – 2.00	
Rudder	3.20 - 4.50		0 - 2.70	

* The Max weight of non-lifting components is 230 kg (507 lb) and the BGA concession is not applicable if TN 2 has not been carried out.

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000 : 49 rear down (2550 – 3550 mm aft of datum)

Maximum speeds

	Knots	Kph
VNE	151	280
Rough air	111	205
Manoeuvre	111	205
Winch / auto tow	75	140

	Knots	Kph
Aerotow	97	180
U/C down	111	205
Airbrakes out	151	280
Yellow Δ on ASI	51.5	95

Height feet	Height meters	VNE knots	VNE Kph
10 000 - 16 400	3 - 5 000	135	250
16 400 - 23 000	5 - 7 000	121	225
23 000 - 29 500	7 - 9 000	108	200
29 500 - 36 000	9 - 11 000	94	175
36 000 - 43 000	11 - 13 000	81	150

Max winch weak link: 660 daN (Blue).

Tyre pressure: Main 36 psi (2.5 bar). Tail 36 psi (2.5 bar).

Semi aerobatic (without water). Non aerobatic with winglets. Cloud flying is permitted without water.

Each 1 Kg nose weight reduces min cockpit weight by Kg (lb).

The Hydraulic brake fluid is Aeroshell 4, or SAE J 1703 mineral fluid. It is very corrosive.

Span 15 meters

This sheet compiled by Tim Macfadyen / David Reilly

Date 14 April 2004

BGA glider data sheet - ASW 27A & B

Span: -15 meters

Data source Schleicher Manual

Date of issue: 1997

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight with water	500	1102
Max weight dry	395	871
BGA concession non-aerobatic max weight (dry) [+3%]	407	897
Max weight of non lifting components (everything except wings)	280	617
BGA concession non-aerobatic max weight of non lifting components [+5%]	294	648
Max pilot weight (seat load)	115	254
Max luggage compartment load	15	33
	mm	Inches
Forward C of G limit (aft of datum)	210	8.27
Aft C of G limit (aft of datum)	320	12.60
Pilot position (fwd) - 55 kg pilot	575	22.64
Pilot position (fwd) - 115 kg pilot	550	21.65

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	See table on next page.		70	1,5 total
Elevator	20±2	20 ± 2	72	2,0 total
Rudder	Left & Right 150 ± 10		280	3,5 total normally zero
Flaps	See table on next page.		109	2,0 total
	Mass kg		Moment kg cm	
Rudder	3.4 - 4.2		1.94 - 2.34	
Elevators including actuator	1.6 - 1.9		3.16 - 3.87	
Aileron	1.55 - 1.90		1.78 - 2.19	
Flap	2.6 - 3.2		3.36 - 4.18	

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000:54 tail down

Each 1 Kg nose weight reduces min cockpit weight by 2.5 Kg (5.5 lb). Weights are 1730mm (68.1") fwd.

The trim ballast (battery) in the fin weighs 2.8 kg (6.2 lb) & is 4132mm (162.7") aft of datum.

Fin water is 4280mm (168.5") aft of datum

Maximum speeds

	Knots	Kph
VNE Flaps positions 1 & 2	154	285
Manoeuvre	116	215
Winch / auto tow	70	130
Rough air	116	215

	Knots	Kph
Aerotow	92	170
U/C down	100	185
Flap pos 3A & 3B	108	200
Flap pos A	116	215
Flap pos 4 & 5	97	180
Landing flaps	81	150

Height feet	Height meters	VNE knots	VNE Kph
10 000	3 000	151	280
16 500	5 000	133	247
23 000	7 000	119	221
29 500	9 000	106	197
36 000	11 000	93	172
40 000	12 000	85	159

Max winch weak link: 660 daN (Blue). Tyre pressure: Main 36 psi (2,5 bar). Tail 38 psi (2,6 bar).

Semi aerobatic (without water, flaps "A"). Cloud flying is permitted. Water must be dumped before landing.

The Hydraulic brake fluid is Aeroshell Fluid 4 or Esso Unisvis J-13. These fluids are mineral based and are very corrosive.

Min brake disc thickness 4.24 mm (0.167 ") min brake lining thickness 2.54 mm (0.10").

The brake cap top is to be approximately 150mm above wing top surface when wheel brake starts to operate.

This sheet compiled by Tim Macfadyen Date 19 Aug 2004

ASW 27 Flap settings

Control deflections in mm

Flap lever position	Stick position	Right Wing				Left Wing			
		Aileron		Flap		Aileron		Flap	
1 (-2.5°)	Right	-23.5	±4	-39	±3	-20	±3	5	±2
	Neutral	-5.5	+1.5	-29.5	+2	-29.5	+2	-5.5	+1.5
	Left	5	±2	-20	±3	-39	±3	-23.5	±4
2 (-0°)	Right	-21	±4	-34	±3	-15	±3	9	±2
	Neutral	-1.5	±1	-24	±1.5	-24	±1.5	-1.5	±1
	Left	9	±2	-15	±3	-34	±3	-21	±4
A (+10°)	Right	-10.5	±4	-14	±3	5	±3	24	±2
	Neutral	12	±1	-4	±1.5	-4	±1.5	12	±1
	Left	24	±2	5	±3	-14	±3	-10.5	±4
3 (+12°)	Right	8.5	±4	-10	±3	9	±3	27	±2
	Neutral	14.5	±1	0	±1.5	0	±1.5	14.5	±1
	Left	27	±2	9	±3v	-10	±3v	-8.5	±4
4 Flap+19.5° Ailerons +16.5	Right	-3	±4	4	±3	23	±3	32	±2
	Neutral	20	±1	14	±1.5	14	±1.5	20	±1
	Left	32	±2	23	±3v	4	±3v	-3	±4
5 Flap+24° Ailerons +18	Right	-1	±4	10.5	±3	30	±3	34	±2
	Neutral	22	±1	21	±1.5	21	±1.5	22	±1
	Left	34	±2	30	±3	10.5	±3	-1	±4
L Flap+47° Ailerons +6	Right	-15	±6	53.5	±5	73	±5	16.5	±4
	Neutral	5	±2	64	±3	64	±3	5	±2
	Left	16.5	±4	73	±5	53.5	±5	-15	±6

Distance from hinge to measuring point. Aileron 70mm, flap 109mm.

BGA glider data sheet - ASW 28

Data source: BGA & FAA data

Date of issue: 2001

Manufacturer: Fa. A Schleicher GmbH & Co, Segelflugzeugbau, 36161 Poppenhausen, Germany

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight with water	525	1157
Max weight (dry)	380	838
BGA concession non-aerobatic max weight (dry) [+3%]	391	863
Max weight of non lifting components (everything except wings)	260	573
BGA concession non-aerobatic max weight of non lifting components [+5%]	273	602
Max pilot weight (seat load)		
Baggage compartment	12	26.5

mm Inches

Forward C of G limit (aft of datum)	222	8.74
Aft C of G limit (aft of datum)	345	13.58
Pilot position (forward)		

Control deflections in degrees

	Up	Down	Controls mass & moments
Ailerons	20° - 25°	12° - 15°	
Elevator	18° - 22°	18° - 22°	
Rudder	left and right 29° - 33°		

Controls max free play (controls central)

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage sloping rear down 49: 1000

Put a maximum of 1 Kg of water in the fin tank for every Kg in the wings.

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	108	200
Winch / auto tow	75	140

	Knots	Kph
Manoeuvre	108	200
Wheel operating	108	200
Aerotow	92	170
Airbrakes open	146	270

VNE at altitude

Height in feet	Meters	Knots	Kph
20 000 - 26 000	6 - 8 000	127	236
26 000-33 000	8 - 10 000	113	209

Max winch weak link: 660 daN (Blue)

Tyre pressure: Main psi (bar), rear psi (bar)

Semi aerobatic without water. Cloud flying permitted, without water.

The Hydraulic brake fluid is Aeroshell Fluid 4 or Esso Univis J-13. Theses fluids are mineral based and are very corrosive.

Span 15 meters.

LBA Type certificate No 423

This sheet compiled by: Tim Macfadyen Date: 8 Jan 2005

BGA glider data sheet - ASW 28-18 & ASW 28-18E

See separate sheet for ASW28

Data source: EASA data

Date of issue: 6 12 2004

Manufacturer: Fa. A Schleicher GmbH & Co, Segelflugzeugbau, 36161 Poppenhausen, Germany

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight with water 15m	525	1157
Max weight with water 18m	575	1268
Max wt aerobatics & cloud 15m	409	902
Max wt aerobatics & cloud 18m	419	923
Max weight of non lifting components (everything except wings)	285	628
BGA concession non-aerobatic max weight of non lifting components [+5%]	299	660
Max pilot weight (seat load)		
Baggage compartment	12	26.5

mm Inches

Forward C of G limit (aft of datum) 15m	227	8.94
Forward C of G limit (aft of datum) 18m	233	9.17
Aft C of G limit (aft of datum)	406	13.58

Control deflections in degrees

	Up	Down	Controls mass & moments
Ailerons	20° - 25°	12° - 15°	
Elevator	18° - 22°	18° - 22°	
Rudder	left and right 29° - 33°		

Controls max free play (controls central)

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage sloping rear down 49: 1000

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	108	200
Winch / auto tow	75	140

	Knots	Kph
Manoeuvre	108	200
Wheel operating	108	200
Aerotow	92	170
Airbrakes open	146	270

VNE at altitude

Height in feet	Meters	Knots	Kph
20 000 - 26 000	6 - 8 000	127	236
26 000-33 000	8 - 10 000	113	209

Max winch weak link: - 825 daN (red)

Tyre pressure: Main psi (bar), rear psi (bar)

Semi aerobatic without water. Cloud flying permitted, without water.

LBA Type certificate No 423

Span optional 15 or 18 meters

A self sustaining engine is an option ("E" version).

This sheet compiled by: Tim Macfadyen

Date: 8 Jan 2004

BGA glider data sheet - Bergfalke II/55

Data source: BGA & FAA data

Date of issue:

Manufacturer: Scheibe Flügzeughbau, August-Pfaltz, and Str.23, 8060 Dachau bei München, Germany

UK Agent: Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	440	970
Max weight of non lifting components (everything except wings)		
Max pilot weight (seat load)		
	Mm	Inches
Forward C of G limit (aft of datum)	77	3.03
Aft C of G limit (aft of datum)	279	10.98
Front pilot position (forward)	1021	40.2
Rear pilot position (aft of datum)	100	3.94

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point
Ailerons	27.5°	8.5°	
Elevator	22.5°	22.5°	
Rudder	Left & right 30°		
Trim			

Longitudinal datum: Wing root LE

Horizontal datum: Tangent on wing rib 1 horizontal

Maximum speeds

	Knots	Kph
VNE	86	160
Rough air	65	120
Manoeuvre		

	Knots	Kph
Aerotow	65	120
Winch / auto tow	50	93
Airbrakes open	86	160

Max winch weak link 850 kg (Brown)

Tyre pressure: Main psi (Bar), rear psi (bar).

Non aerobatic - Cloud flying prohibited

Span 16 meters

This sheet compiled by: Date: Tim Macfadyen 10 July 2003

BGA glider data sheet - Bergfalke III

Data source: BGA & FAA data

Date of issue:

Manufacturer: Scheibe Flügzeughbau, August-Pfaltz, Str.23, 8060 Dachau bei München, Germany

UK Agent: Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	465	1025
BGA concession non-aerobatic max weight (dry) [+3%]	479	1077
Max weight of non lifting components (everything except wings)		
Max pilot weight (seat load)		

Mm Inches

Forward C of G limit (aft of datum)	76.2	3.0
Aft C of G limit (aft of datum)	279	11.0
Front pilot position (forward)	1021	40.2
Rear pilot position (aft of datum)	100	3.9

Control deflections

	Up	Down	Distance - hinge to measuring point
Ailerons	26.5°	8.5°	
Elevator	22.5°	22.5°	
Rudder	Left & right 28°		
Trim			

Longitudinal datum: Wing root LE

Horizontal datum: Tangent on wing rib 6 (Approximately 1650 mm from the inner side of the root rib).

Maximum speeds

	Knots	Kph
VNE	98	182
Rough air	75	140
Manoeuvre		

	Knots	Kph
Aerotow	66	122
Winch / auto tow	52	96
Airbrakes open	98	182

Max winch weak link - 1000 kg (Black)

Tyre pressure: Main psi (Bar), rear psi (bar).

Semi aerobatic - Cloud flying permitted

Span 16 meters

This sheet compiled by: Date: Tim Macfadyen 10 July 2003

BGA glider data sheet - Bergfalke 4

Data source: Flight Manual

Date of issue: 1970

Manufacturer: Scheibe Flugzeugbau, August-Pfaltz, Str.23, 8060 Dachau bei München

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	505	1112
BGA concession non-aerobatic max weight (dry) [+3%]	520	1145
Max weight of non lifting components (everything except wings)	350	772
BGA concession non-aerobatic max weight of non lifting components [+5%]	368	810
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	173	6.8
Aft C of G limit (aft of datum)	388	15.3
Front pilot position (forward)	1000	39.4
Rear pilot position (aft of datum)	100	3.9

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	110 ±10	60 ±5	310	
Elevator	185 ±10	185 ±10	470	
Trim	20±5	40±5	110	
Rudder	Left 400 ±30	Right 400 ±30	820	

Longitudinal datum: Wing root LE at rib 2 (which is approximately 500 mm from the fuselage side).

Horizontal datum: With a level under wing rib 2 touching the D box, 55 mm gap between level & TE

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	92	170
Manoeuvre		

	Knots	Kph
Aerotow	75	140
Winch / auto tow	59	110
Airbrakes open	108	200

Max winch weak link: 750 Kg (Red)

Tyre pressure: Main 30 psi (2 Bar), rear 36 psi (2.5 bar)

~~Non~~/semi/fully aerobatic, cloud flying permitted.

Notes: -

The (Wortman) wing section is sensitive. Stalling speed in rain increases 10 - 15 Kph and the tips stall.

Annual check - The release cable cuts through its guide tube above the front pilot's feet.

Annual check - Undo the rudder cables at the rear pedals, pull the cables out and inspect them.

This sheet compiled by: Tim Macfadyen Date: 17 Sept 2001

BGA glider data sheet - BG 135 (Gypsy) & YS 55 (Consort)

Data source:

Date of issue:

Manufacturer: Birmingham Guild (Prototype BG 135), Yorkshire Sailplanes (YS 55 Consort)

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	297	655
BGA concession non-aerobatic max weight (dry) [+3%]	306	675
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	175	6.9
Aft C of G limit (aft of datum)	279	11.0
Pilot position (forward)	430 - 508	17 - 20

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	116	215
Rough air	75	139
Manoeuvre		

	Knots	Kph
Aerotow	75	139
Winch / auto tow	65	120
Airbrakes open		

Max winch weak link: 600 kg (Blue)

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic

The BG 135 & YS 55 Consort are V tailed, 13.5 meters span. The SD 15T is a 15 meter T tail development, see separate data sheet.

This sheet compiled by: Tim Macfadyen

Date: 27 November 2002

BGA glider data sheet - Bijave (WA 30)

Data source: The world's Sailplanes Vol 2

Date of issue: 1963

Manufacturer: Wasma

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max all up weight	500	1102
BGA concession non-aerobatic max weight (dry) [+3%]		
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)		
Rear pilot position (aft of datum)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	25	12°		
Elevator	16°	12°		
Trim				
Rudder	28° left & right			

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	81	150
Manoeuvre		

	Knots	Kph
Aerotow	70	130
Winch / auto tow	54	100
Airbrakes open	108	200

Max winch weak link:

Tyre pressure: Main psi (Bar), rear psi (bar)

Non aerobatic but spinning permitted Cloud flying permitted

Notes: -

BGA glider data sheet - Blanik (L-13)

Data source: Manufacturers' manual

Date of issue:

Manufacturer: OLET The Czech Republic

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (semi aerobatic)	500	1102
Max weight (fully aerobatic)	400	882
BGA concession non-aerobatic max weight +3%	515	1135
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	2456	96.7
Aft C of G limit (aft of datum)	2649	104.3
Front pilot position (aft of datum)	1110	43.7
Rear pilot position (aft of datum)	2230	87.8

Control deflections in degrees

	Up	Down	Max total free play with control locked
Ailerons	34°±1°	13°±1°	
Elevator	32°	25°±1°	2mm at stick top
Trim	12°±1°	35°±1°	
Rudder	30°±1° left & right		3mm at pedals
Flaps	8°±1° down		2mm at flap lever

Longitudinal datum: Fuselage nose

Horizontal datum: Line on fuselage side between datum points.

Maximum speeds

	Knots	Kph
VNE	129	240
Rough air	78	145
Manoeuvre		
U/c Down	129	240

	Knots	Kph
Aerotow	76	140
Flaps down	54	100
Winch / auto tow (flaps down)	54	100
Winch / auto tow (flaps up)	65	120

Max winch weak link: Blue (600 Kg)

Tyre pressure: 37 psi (2.5 bar)

Semi aerobatic @ 500 Kg AUW. Fully aerobatic @ 400 Kg AUW. Cloud flying permitted.

Notes: -

The air pressure in the U/C unit is 33 ± 1 Kg/cm² (470 psi ± 14)

Span 16.2 meters

This sheet compiled by: Tim Macfadyen

Date: 9 May 2003

BGA glider data sheet - Blanik (Super) L-23

Data source: BGA data sheet

Date of issue:

Manufacturer: Letecke Zavody, 68604 Kunovice, Czech Republic (Previously OLET. The Czech Republic)

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (Serial Nos to 29003)	510	1124
BGA concession non-aerobatic max weight (dry) [+3%]	525	1158
Max weight (Serial Nos 29004 on)	530	1168
BGA concession non-aerobatic max weight (dry) [+3%]	545	1203
Maximum baggage	10	22
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	112	4.4
Aft C of G limit (aft of datum)	325	12.8
Front pilot position (aft of datum)	1234	48.6
Rear pilot position (aft of datum)	170	6.7

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	34±2	13±2		
Elevator	32±2	25±1		
Trim				
Rudder	30±1 Left & right			

Longitudinal datum: Wing LE at root

Horizontal datum: Rear fuselage top 1000:51 rear down (points marked on fuselage side).

Maximum speeds

	Knots	Kph
Rough air	81	150
Manoeuvre	81	150
Aerotow	81	150
Winch / auto tow	65	120

VNE at altitude (feet)

	Serial Nos up to 938100		Serial Nos from 938101 onwards	
Height feet	Knots	Kph	Knots	Kph
0 - 13 780	135	250	124	230
13 780 - 20 000	124	230	114	211
20 000 - 25 000	116	215	105	195
25 000 - 30 000	108	200	97	180
30 000 - 35 000	100	185	89	165

Max winch weak link: 662 kg (Blue)

Tyre pressure: Main psi (Bar)

Semi aerobatic @ 510 Kg AUW. Fully aerobatic @ 420 Kg AUW. Cloud flying permitted.

Span 16.2 meters? Wing extensions are an optional modification from Serial No 938101 onwards.

This sheet compiled by: Tim Macfadyen Date: 3 July 2003

BGA glider data sheet - Bocian 1D & 1E (SZD 9 bis)

Data source: The world's Sailplanes Vol 1 & BGA data

Date of issue: 1962

Manufacturer: PZL Poland

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	539	1188
BGA concession non-aerobatic max weight (dry) [+3%]	555	1224
Max pilot weight (seat load)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	30°	10°		
Elevator	30°	22°		
Trim				
Rudder	Left & right 30°			

Bocian 1 D	mm	Inches
Forward C of G limit (aft of datum)	218	8.6
Aft C of G limit (aft of datum)	373	14.7
Front pilot position (forward)	858	33.8
Rear pilot position (aft of datum)	80	3.15

Bocian 1 E	mm	Inches
Forward C of G limit (aft of datum)	200	7.9
Aft C of G limit (aft of datum)	394	15.5
Front pilot position (forward)	1016	40
Rear pilot position (aft of datum)	114	4.5

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	108	200
Airbrakes open	97	180
Rough air	80	148
Aerotow	75	140

	Knots	Kph
Winch / auto tow Bocian 1D	54	100
Winch / auto tow Bocian 1E	62	115

Max winch weak link: 1000 Kg (Black)

Tyre pressure: psi (Bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 18.1 Meters

This sheet compiled by: Tim Macfadyen Date: 10 Feb 2004

BGA glider data sheet - Calif A 21S Caproni

Data source BGA data sheet

Date of issue:

Manufacturer: Caproni Italy

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

Control deflections in degrees

	Kg	Pounds
Max weight	644	1420
BGA concession non-aerobatic max weight (dry) [+3%]	663	1463
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		
Max luggage compartment load		
	mm	inches
Forward C of G limit (aft of datum)	2212	87.1
Aft C of G limit (aft of datum)	2497	98.3
Pilots position (aft of datum)	1435	56.5

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Flaps Landing	8°	8° 89°		
Rudder	Left & right			

Longitudinal datum: 2 meters (78.7 inches) forward of the wing root LE (not the fairing).

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	136	252
Rough air	86	160
Manoeuvre		
Winch / auto tow	N/A	N/A

	Knots	Kph
Aerotow	86	160
U/C down		
Flaps extended	86	160

Height feet	Height meters	VNE knots	VNE Kph
10 000 - 16 400	3 - 5 000		
16 400 - 23 000	5 - 7 000		
23 000 - 29 500	7 - 9 000		
29 500 - 36 000	9 - 11 000		
36 000 - 43 000	11 - 13 000		

Winch launching and auto-towing not permitted

Tyre pressure: Main psi (bar). Tail psi (bar).

Semi aerobatic Cloud flying is permitted.

Span 22 meters

This sheet compiled by Tim Macfadyen

Date 28 November 2002

BGA glider data sheet - Cirrus (Open) & VTC Cirrus

Data source: Flight Manual

Date of issue:

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax: 0148 872482

Weighing Data:

	Kg	Pounds
Max weight with water	460	1014
Max weight dry	400	882
BGA concession non-aerobatic max weight (dry) [+3%]	412	908
Max water	100	220
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)	250	551
BGA concession non-aerobatic max weight of non lifting components [+5%]	262	579

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	85 -100	31 -46	204	±4 mm
Elevator	86 -106	45 -60	163	±3 mm
Rudder	Left 190-220	Right 280-350	507	
Max free play between the two elevators 3mm measured at inboard trailing edge.				

	mm	Inches
Forward C of G limit (aft of datum)	225	8.8
Aft C of G limit (aft of datum)	400	15.7
Pilot position (forward of datum)	500	19.7

Control surfaces	Max weights Kg	Max hinge moments KgCm
Rudder with tail shute	7.2	38
Rudder with shute & additional mass balance	8.7	38
One elevator without mass balance	0.9	4.5
One elevator + approx. 200 grams of mass balance	1.3	2.2-2.9
One elevator + approx. 300 grams of mass balance	1.55	2.2-2.9

Longitudinal datum: Wing root LE root rib.

Horizontal datum: Rear fuselage top 1000:38 tail down

Maximum speeds

	Knots	Kph
VNE	119	220
Rough air	119	220
Manoeuvre		

	Knots	Kph
Airbrakes open	108	200
Aerotow	75	140
Winch / auto tow	59	110

Max winch weak link: 850 Kg (Tost brown)

Tyre pressure: 50 psi main, 36 psi tail wheel

Semi aerobatic, cloud flying permitted. Water to be dumped before landing.

German type certificate (LBA) number 265

Span 17.74 meters

This sheet compiled by Tim Macfadyen

Last update 12 April 2005

BGA glider data sheet - Standard Cirrus & VTC Cirrus G81

Data source: Flight Manual

Date of issue: Nov 1969

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

Manufacturer: VTC (Yugoslavia) Cirrus G81

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

	Kg	Pounds
Max weight (dry)	330	728
BGA concession non-aerobatic max weight (dry) [+3%]	340	750
Max weight with water	390	860
Max landing weight	330	728
Max weight of non lifting components (everything except wings)	220	485
BGA concession non-aerobatic max weight of non lifting components [+5%]	231	509
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	250	9.8
Aft C of G limit (aft of datum)	400	15.7
Pilot position (forward of datum)	440	17.3

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	66 +10 -5	33 ±5	147	3
Elevator	65 ±10	45 +10 -5	287	8 at centre
Rudder	Left 135 +20 -5	Right 190 +20 -10	350	

Max for & aft play of wing tip 30 mm total. Fit washers at root 13,95 mm ID 0, 3 - 0,5mm thick.

Max elevator free play for & aft at tip 4mm.

Max elevator free play vertically at tip 3mm.

Change brass TP mounting bushes in fin as necessary.

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:51 tail down

Maximum speeds

	Knots	Kph
VNE	119	220
Rough air	119	220
Rough air G81	90	167
Aerotow	81	150

	Knots	Kph
Winch / auto tow	65	120
Airbrakes open	119	220
Manoeuvre	81	150

Max winch weak link: 500 Kg (BGA figure 600 Kg, Blue)

Tyre pressure: 36 psi, 2,5 bar

Semi aerobatic, cloud flying permitted

Notes: -

Use under-wing statics for the ASI. Use nose statics for varios.

This sheet compiled by: Tim Macfadyen

Date: 1 July 2002

BGA glider data sheet – Cobra 15 - SZD 36A

Data source: Manufacturers' Handbooks

Date of issue: 1972

Manufacturer: PZL (Poland)

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	385	849
BGA concession non-aerobatic max weight (dry) [+3%]	396	874
Max weight of non lifting components (everything except wings)	247	545
BGA concession non-aerobatic max weight of non lifting components [+5%]	259	572
Max pilot weight (seat load)	128	282

	mm	Inches
Forward C of G limit (aft of datum)	194	7.64
Aft C of G limit (aft of datum)	338	13.31
Front pilot position (forward)	620	24.4

Longitudinal datum: Wing root LE

Horizontal datum: Rigging points on fuselage level

Control deflections

	Up	Down	Max control total free play
Ailerons	34°±2°	16°±1°	2 ^{mm} at TE root
Elevator (all moving TP)	14°±1°	7°±1°	2 ^{mm} at front of mass balance
Geared tab*	9°±1°	12°±1°	1 ^{mm} at TE
Airbrakes	145 ± 10 ^{mm}	175 ± 10 ^{mm}	1,5 ^{mm} fore & aft
Rudder	35° Left & right		2 ^{mm} at TE bottom

Free plays are measured with the stick (or cockpit controls) locked central. The tab is measured with the elevator locked.

*The tab is 5° down with the elevator neutral.

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	81	150

	Knots	Kph
Aerotow	81	150
Winch / auto tow	59	110

Max winch weak link: 750 Kg (Red)

Tyre pressure: 36 psi (2,5 Bar)

Semi aerobatic. Cloud flying permitted. The Cobras were originally fully aerobatic but were reduced to semi aerobatic on reaching 16 years old by a manufacturers' instruction.

Notes: -

Wing span 15 meters

This sheet compiled by: Tim Macfadyen Date: 4 April 2003

BGA glider data sheet - Condor 4

Data source: The world's Sailplanes Vol 1

Date of issue: 1962

Manufacturer: Henri Dittmar Moewe Flugzeugbau

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	520	1147
BGA concession non-aerobatic max weight (dry) [+3%]	536	1181
Max pilot weight (seat load)	100	220

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)		
Rear pilot position (aft of datum)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	92	170
Rough air	54	100

	Knots	Kph
Aerotow		
Winch / auto tow		

Max winch weak link: 1000 Kg (Black)

Tyre pressure: psi (Bar),

Semi aerobatic, Cloud flying permitted

Notes: -

Span 18 meters

This sheet compiled by: Tim Macfadyen Date: April 2002

BGA glider data sheet - Dart 15 & 17 (T.51)

Data source Pilots Notes

Date of issue: April 1975

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	354	780
BGA concession non-aerobatic max weight (dry) [+3%]	365	803
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)	229	9.0
Aft C of G limit (aft of datum)	345	13.6
Pilot position (forward of datum)	584	23

Control deflections in mm

	Up	Down	Measuring point	Max free play
Ailerons	105 ±5	55 ±5	TE inboard end	6mm total at top of stick
Elevator	60 ±5	77 ±5	Inboard end	3mm between halves 6mm total at top of stick
Trim	26 +4 -2	32 +4 -2	Inboard end (TP at -5°)	
Airbrakes	142 min		Top paddle	
Rudder	Left & right 185 small rudder (15M) 218 large rudder (17 M)		Measure at extreme TE	

Elevators to be within ¼° of each other. Elevator load at centre of stick hand grip with spring connected to be 2lb greater than with spring disconnected. Load to move trimmer 10lb±1lb at TE of tab. The air brakes are to be ¾ mm below the wing surfaces when locked. When a metal tailplane (Mod 60) is fitted add 3mm to all elevator and trim deflections.

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:30 tail down

Maximum speeds

	Knots	Kph
VNE	119	220
Rough air	82	152

	Knots	Kph
Aerotow	82	152
Winch / auto tow	71	132

Max winch weak link: 1000 lb (450 Kg) (BGA 500 Kg White)

Tyre pressure: 25 PSI (1.76 Kg/cm²)

Semi aerobatic - Cloud flying permitted

Notes: -

This sheet compiled by: Tim Macfadyen Date: 14 September 2001

BGA glider data sheet - DG 100 (all moving tailplane)

Data source: Manufacturer's Handbook

Date of issue: Oct 1975

Manufacturer: Glaser-Dirks Flugzeugbau GmbH

Web site dgflugzeugbau.de

UK Agent: Bob McLean

Phone: 01904 738653

Fax: 01904 738146

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	418	922
Max weight (dry)	385	849
BGA concession non-aerobatic max weight (dry) [+3%]	397	874
Max weight of non lifting components (everything except wings)	265	585
BGA concession non-aerobatic max weight of non lifting components [+5%]	278	614
Max pilot weight (seat load)	117	258
Water ballast capacity	100	220

mm Inches

Forward C of G limit (aft of datum)	200	7.86
Aft C of G limit (aft of datum)	365	14.37
Pilot position (forward)	481	18.93

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max moment. Gram meters
Ailerons	102±5	46±5	188	70
Elevator				
Rudder	243 ± 10 left and right		460	90
Controls max free play (controls central) With the stick fixed neutral ±1.5 mm at each aileron 188mm from the hinge. Rudder axial play at top hinge 0,5mm.				

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage sloping rear down 36.7: 1000

Maximum speeds

	Knots	Kph
VNE	140	260
Rough air	140	260
Manoeuvre	89	165
Wheel down	89	165

	Knots	Kph	VNE at altitude	Knots	Kph
Aerotow	89	165	6-9000 feet	133	246
Winch / auto tow	70	130	9-12000 feet	126	233
Airbrakes open	140	260	12-15000 feet	120	222
			15-18000 feet	113	209

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main 36 psi (2.5 bar), rear 28 psi (2 bar)

Semi aerobatic without water. Cloud flying permitted.

With a standard 2.2 Kg weight on the right of the panel, min cockpit weight is reduced 3.6 Kg (8 lb).

Notes: -

Span 15 meters

The DG 100 has an all moving tailplane. The DG 100G has a fixed tailplane and elevator.

This sheet compiled by: Tim Macfadyen Date: 23 August 2002

BGA glider data sheet - DG 100G (Fixed tailplane and elevator)

Data source: Manufacturer's Handbook

Date of issue: Oct 1975

Manufacturer: Glaser-Dirks Flugzeugbau GmbH

Web site dgflugzeugbau.de

UK Agent: Bob McLean

Phone: 01904 738653

Fax: 01904 738146

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	418	922
Max weight (dry)	385	849
BGA concession non-aerobatic max weight (dry) [+3%]	397	874
Max weight of non lifting components (everything except wings)	265	585
BGA concession non-aerobatic max weight of non lifting components [+5%]	278	614
Max pilot weight (seat load)	117	258
Water ballast capacity	100	220

mm Inches

Forward C of G limit (aft of datum)	220	8.66
Aft C of G limit (aft of datum)	357	14.06
Pilot position (forward)	492/ 537	19.4/ 21.1

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max moment. Gram meters
Ailerons	102±5	46±5	188	70
Elevator	61±2	29±1	150	97.5

The elevator is neutral with a straight edge on top of the elevator and the TP trailing edge.

Rudder	243 ± 10 left and right	460	90
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Controls max free play (controls central)

With the stick fixed neutral ±1.5 mm at each aileron 188mm from the hinge.

With elevator fixed neutral ±3mm total at top of stick.

Rudder axial play at top hinge 0,5mm.

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage sloping rear down 36.7: 1000

Maximum speeds

	Knots	Kph
VNE	140	260
Rough air	140	260
Manoeuvre	89	165
Wheel down	89	165

	Knots	Kph	VNE at altitude	Knots	Kph
Aerotow	89	165	6-9000 feet	133	246
Winch / auto tow	70	130	9-12000 feet	126	233
Airbrakes open	140	260	12-15000 feet	120	222
			15-18000 feet	113	209

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main 36 psi (2.5 bar), rear 28 psi (2 bar)

Semi aerobatic without water. Cloud flying permitted.

With a standard 2.2 Kg weight on the right of the panel, min cockpit weight is reduced 3.6 Kg (8 lb).

Notes: -

Span 15 meters

The DG 100 has an all moving tailplane. The DG 100G has a fixed tailplane and elevator.

This sheet compiled by: Tim Macfadyen Date: 20 August 2002

BGA glider data sheet - DG 200/202 15 & 17 meters

Data source: Manufacturer's flight & maintenance manuals Date of issue: 1980
 Manufacturer: Glaser-Dirks Flugzeugbau GmbH Web site dgflugzeugbau.de
 UK Agent: Bob McLean Web site: Phone: 01904 738653 Fax: 01904 738146
 Link to mandatory mods: <http://www.dg-flugzeugbau.de/tech-mitteilungen-e.html>

Weighing Data:

	Kg	Pounds
Max weight with water 15 Meters	480	1058
Max weight with water 17 Meters	450	992
Max weight of non lifting components (everything except wings)	250	551
BGA concession non-aerobatic max weight of non lifting components [+5%]	262	579
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	230	9.06
Aft C of G limit (aft of datum)	385	15.16
Front pilot position (forward)	560-580	22-23

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons	42±3	21±3	123
Elevator	57±1	48±1	150
Flap±12°	30±3	30±3	145
Rudder	Left & right 243±10		460
Controls max free play (controls central)			
Aileron 2mm total with other aileron fixed.			
Flap 3mm total with other flap fixed.			
With one aileron fixed 3mm total at top of stick.			
With elevator fixed 3mm total at top of stick.			
Rudder vertical play 0,5mm.			

Longitudinal datum: Wing root LE

Horizontal datum: Top of rear fuselage 1000:36.7 rear down

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	103	190
Manoeuvre	103	190
Aerotow	103	190

	Knots	Kph
Winch / auto tow	70	130
U/C down	103	190
Flaps +4 & +8	103	190
Landing flap	80	150

VNE at altitude	Knots	Kph
0-6600 feet	146	270
6600-10 000	138	256
10 000-13 000	131	243
13 000-16 000	124	230
16 000-20 000	117	218

Notes: -

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main 42 psi (3 bar), rear 28 psi (2 bar)

Semi aerobatic only in 15 meter span without water only. Cloud flying permitted.

With a standard 2.2 Kg weight on the right of the panel, min cockpit weight is reduced 3.6 Kg (8 lb).

Span 15 or 17 meters

This sheet compiled by: Tim Macfadyen Date: 20 March 2006

BGA glider data sheet - DG 300 & DG 300 /303 Elan

Data source: Manufacturer's Handbook

Date of issue: May 1984

Manufacturer: Glaser-Dirks Flugzeugbau GmbH

Web site dgflugzeugbau.de

UK Agent: Bob McLean

Phone: 01904 738653

Fax: 01904 738146

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	525	1157
Max weight (dry)		
BGA concession non-aerobatic max weight (dry) [+3%]		
Max weight of non lifting components (everything except wings)	246	542
BGA concession non-aerobatic max weight of non lifting components [+5%]	258	570
Max pilot weight (seat load)	110	242
Water ballast capacity	190	419

mm Inches

Forward C of G limit (aft of datum)	325	12.8
Aft C of G limit (aft of datum)	160	6.3
Pilot position (forward)	549	21.6

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Controls mass & moments
Ailerons	62±3	31±3	120	3 - 5,7 Kg 8 - 9,9 Kg cm
Elevator	63±1	36±1	150	1,6 - 2,2 Kg 6,7 - 8,7 Kg cm without pushrod

The elevator is neutral with a straight edge on top of the elevator and rear part of the TP.

Rudder	215 ± 5 left and right	414	2,5 - 4 Kg 4 - 6 Kg cm (with mass ball)
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Controls max free play (controls central)

With the elevator & both ailerons fixed 3 mm total at the top of the stick, fore & aft and side to side.

2 mm at one aileron with the other fixed.

Negligible play in the elevator connector.

Rudder axial play at top hinge 0,5mm.

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage sloping rear down 36.7: 1000

With standard 2.16 Kg weights on the right of the panel, min cockpit weight is reduced 3.6 Kg per weight.

Maximum fin ballast 5.5 Kg (12 lb). Fin ballast is 4180mm aft of datum. Max baggage 15 Kg (33 lb).

Put a maximum of 1 Kg of water in the fin tank for every 28 Kg in the wings.

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	108	200
Rough air DG303 ELAN	96	178

	Knots	Kph
Manoeuvre	108	200
Wheel down	108	200
Aerotow	108	200
Winch / auto tow	70	130

VNE at altitude

Height in feet	Meters	Knots	Kph
6600 -10 000	2 - 3 000	138	256
10 000-13 000	3 - 4 000	131	243
13 000-16 000	4 - 5 000	124	230
16 000-20 000	5 - 6 000	117	218

Max winch weak link: 680 daN (Blue)

Tyre pressure: Main 49 psi (3.5 bar), rear 28 psi (2 bar)

Semi aerobatic without water. Cloud flying permitted, without water.

Notes: -

Span 15 meters.

This sheet compiled by: Tim Macfadyen Date: 29 August 2002

BGA glider data sheet - DG 500 Trainer (18 meter un-flapped)

Data source: Manufacturer's flight & maintenance manuals Date of issue: 1995

Manufacturer: Glaser-Dirks Flugzeugbau GmbH Web site dgflugzeugbau.de

UK Agent: Bob McLean Web site: Phone: 01904 738653 Fax: 01904 738146

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (take off & landing)	615	1356
BGA concession non-aerobatic max weight (dry) [+3%]	633	1397
Max weight in baggage compartment	15	33
Max weight of non lifting components (everything except wings)	435	959
BGA concession non-aerobatic max weight of non lifting components [+5%]	457	1007
Max front pilot (seat load)	110	242
Max combined front and rear pilot weights (seat loads)	210	463

mm Inches

Forward C of G limit (aft of datum)	185	7.28
Aft C of G limit (aft of datum)	480	18.9
Front pilot position (forward)	1350	53.15
Rear pilot position (forward)	240	9.45

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	75 ± 3	38 ± 3	144	± 1.5
Elevator	99 ± 1	91 ± 1	227	± 2
Rudder	Left & Right 217 to 212		420	1 top hinge

The aileron free play is measured at the aileron root with the stick locked. The elevator play is measured at the stick with the elevator locked.

Also, with both ailerons locked (central) the maximum free play at the stick is ± 2 mm.

Controls weights	Moments & Moment cm Kg	Weights Kg
Rudder	7 - 10	4.4 - 5.1
Elevator	13 - 16	4.3 - 5.1
Ailerons	5 - 7	4.0 - 5.0

Weighing Longitudinal datum: Wing root LE. Horizontal datum: Top of rear fuselage 1000: 33 tail down. The fin battery weighs 4,3 kg & is 5306mm aft of datum. The 4 nose ballast weights weigh 2,16 kg (4.76 lb) each and are 2455mm forward of datum, each reduces min front cockpit load by 3.7 kg (8.16 lb).

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	111	205
Manoeuvre	111	205

	Knots	Kph
Aerotow	111	205
U/C down	111	140
Winch / auto tow	76	205

VNE at altitude			
Altitude - feet	Meters	Knots	Kph
0 - 6600	0 - 2 000	146	270
6600 - 10 000	2 - 3 000	138	256
10 000 - 13 000	3 - 4 000	131	243
13 000 - 16 000	4 - 5 000	124	230
16 000 - 20 000	5 - 6 000	117	218

Notes :-

Max winch weak link: 1000 Kg (black)

Wing oscillating frequency approximately 150 cycles per minute.

Tyre pressures Nose wheel 2.5 bar, 36 psi. Main wheel 2,5 bar, 36 psi. Tail wheel 4 bar, 58 psi

Semi aerobatic ("utility") & cloud flying permitted without water (+5,3, -2,65 G at V_A & +4 & -1.4 G at V_{NE}).

Aerobatic (Inverted flight) +7, -5 G at all speed without water ballast.

Max 3,5 G with airbrakes extended in all configurations.

Replace the elevator rubber cord (bungee) every 5 years. Hydraulic disk brake - replace the brake fluid every 4 years with DOT 3, DOT 4 or SAE J 1703 fluid. Annual leak check of wheel brake system - hold full brake for 2 minutes.

German (LBA) Type certificate number 348. Retracting U/C (with disk brake) & water ballast are options.

This sheet compiled by: Tim Macfadyen

Date: 24 Sept 2002

BGA glider data sheet - DG 500/22 (22 meter flapped two seater)

Data source: Manufacturer's flight & maintenance manuals Date of issue: Dec 1990

Manufacturer: Glaser-Dirks Flugzeugbau GmbH Web site dgflugzeugbau.de

UK Agent: Bob McLean Web site: Phone: 01904 738653 Fax: 01904 738146

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (take off & landing)	750	1653
Max weight of non lifting components (everything except wings)	460	1014
BGA concession non-aerobatic max weight of non lifting components [+5%]	483	1065
Max baggage	15	33
Water capacity	160	353
Max front pilot (seat load)	110	242
Max combined front and rear pilot weights (seat loads)	210	463

mm Inches

Forward C of G limit (aft of datum)	185	7.28
Aft C of G limit (aft of datum)	480	18.9
Front pilot position (forward)	1350	53.15
Rear pilot position (forward)	270	10.63

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons (Flaps at 0°)	64 ± 3	32 ± 3	166	± 1.5
Elevator	99 ± 1	91 ± 1	227	± 2
Rudder	Left & Right 217 to 212		420	1 top hinge
Flaps -10° 0° +15°	-40 ± 3 0 ± 1 + 59 ± 3		228	± 2
The aileron free play is measured at the aileron root with the stick locked. The elevator play is measured at the stick with the elevator locked.				
Controls Moments & weights		Moment Kg	cm	Weights Kg
Rudder		7 - 10		4.4 - 5.1
Elevator		13 - 16		4.3 - 5.1
Inner aileron		4.01 - 5.99		3.6 - 5.0
Outer aileron		2.95 - 3.86		0.8 - 1.1
Flaps		22.24 - 29.36		5.9 - 8.0

Weighing Longitudinal datum: Wing root LE.

Horizontal datum: Top of rear fuselage 1000: 33 tail down.

The fin battery weighs 4,3 kg & is 5306mm aft of datum. The 4 nose ballast weights weigh 2,2 kg each and each reduces min front cockpit load by 3,7 kg.

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	106	197
Manoeuvre	106	197
Aerotow	106	197

	Knots	Kph
Winch / auto tow	76	140
U/C down	106	197
15° flap (landing)	81	150
+5° & +10° flap	106	197

VNE at altitude	Knots	Kph
0-6600 feet	146	270
6600-10 000	138	256
10 000-13 000	131	243
13 000-16 000	124	230
16 000-20 000	117	218

Notes :-

Max winch weak link: 1000 Kg (black)

Tyre pressures: Nose wheel 2.5 bar, 36 psi. Main wheel 3 bar, 44 psi. Tail wheel 4 bar, 58 psi

Semi aerobatic ("utility") & cloud flying permitted, without water.

Wing natural frequency (glider rigged and on its wheels) approximately 122/min.

Replace the elevator & flap rubber cord (bungee) every 5 years. Replace the brake fluid every 4 years with DOT 3, DOT 4 or SAE J 1703 fluid. Annual leak check of wheel brake system - hold full brake for 2 minutes.

German (LBA) Type certificate number 348

This sheet compiled by: Tim Macfadyen

Date: 23 Oct 2002

BGA glider data sheet - DG 505 Elan Orion (17.2, 18 & 20 meter un-flapped)

Data source: Manufacturer's flight & maintenance manuals Date of issue: 1995

Manufacturer: Glaser-Dirks Flugzeugbau GmbH Web site dgflugzeugbau.de

UK Agent: Bob McLean Web site:

Phone: 01904 738653

Fax: 01904 738146

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (take off & landing)	750	1653
Fully aerobatic max weight	625	1378
Max weight (dry) 17.2 Meter	645	1422
Max weight (dry) 18 Meter	650	1434
Max weight (dry) 20 Meter	657	1448
Max weight of non lifting components (everything except wings)	445	981
BGA concession non-aerobatic max weight of non lifting components [+5%]	467	1030
Max front pilot (seat load)	110	242
Max combined front and rear pilot weights (seat loads)	210	463

mm Inches

Forward C of G limit (aft of datum)	185	7.28
Aft C of G limit (aft of datum)	480	18.9
Front pilot position (forward)	1350	53.15
Rear pilot position (forward)	240	9.45

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	75 ± 3	38 ± 3	144	± 1.5
Elevator	99 ± 1	91 ± 1	227	± 2
Rudder	Left & Right 217 to 212		420	1 top hinge

The aileron free play is measured at the aileron root with the stick locked. The elevator play is measured at the stick with the elevator locked.

Controls weights	Moments & Moment cm Kg	Weights Kg
Rudder	7 - 10	4.4 - 5.1
Elevator	13 - 16	4.3 - 5.1
Inner aileron	5 - 7.08	4.0 - 5.0
Outer aileron	0.8 - 1.2	0.4 - 0.6

Weighing Longitudinal datum: Wing root LE. Horizontal datum: Top of rear fuselage 1000: 33 tail down. The fin battery weighs 4,3 kg & is 5306mm aft of datum. The 3 nose ballast weights weigh 2,2 kg each and are 1920mm forward of datum, each reduces min front cockpit load by 2,9 kg. Tail tank A (wing water compensation) is 5032mm aft of datum, it holds 6.6 kg. Tail tank B (pilot weight compensation) is 5160mm aft of datum, it holds 12,3 kg.

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	103	190
Manoeuvre	103	190

	Knots	Kph
Aerotow	103	190
Winch / auto tow	76	140
U/C down	103	190

VNE at altitude	Knots	Kph
0-6600 feet	146	270
6600-10 000	138	256
10 000-13 000	131	243
13 000-16 000	124	230
16 000-20 000	117	218

Notes :-

Max winch weak link: 1000 Kg (black)

Tyre pressures: Nose wheel 2.5 bar, 36 psi. Main wheel 3 bar, 44 psi. Tail wheel 4 bar, 58 psi

Semi aerobatic ("utility") Cloud flying permitted, 750 Kg AUW (+5,3, -2,65 G at V_A & +4 & -1.4 G at V_{NE}).

Aerobatic (Inverted flight) +7, -5 G at all speeds. Max AUW 625 Kg, 17.2 & 18M only, no water ballast.

Max 3,5 G with airbrakes extended in all configurations.

Replace the elevator rubber cord (bungee) every 5 years. Replace the brake fluid every 4 years with DOT 3, DOT 4 or SAE J 1703 fluid. Annual leak check of wheel brake system - hold full brake for 2 minutes.

German (LBA) Type certificate number 348

This sheet compiled by: Tim Macfadyen

Date: 24 Sept 2002

BGA glider data sheet - DG 600 15 & 17 meters

See separate sheet for 18 meter version

Data source: Manufacturer's flight & maintenance manuals Date of issue: April 1988
 Manufacturer: Glaser-Dirks Flugzeugbau GmbH Web site dgflugzeugbau.de
 UK Agent: Bob McLean Web site: Phone: 01904 738653 Fax: 01904 738146
 Link to mandatory mods: <http://www.dg-flugzeugbau.de/tech-mitteilungen-e.html>

Weighing Data:

	Kg	Pounds
Max weight with water	525	1157
Max weight of non lifting components (everything except wings)	246	542
BGA concession non-aerobatic max weight of non lifting components [+5%]	258	570
Max in baggage compartment	15	33
Max water (standard)	130	287
Max water (option)	180	397
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	220	8.66
Aft C of G limit (aft of datum)	380	14.97
Pilot position (fwd) 70 Kg pilot	510	20

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons (Flaps -5°)	42.5 ± 3	21.5 ± 3	122
Elevator	61.5 ± 1	55 ± 1	160
Flaps -15° -5° +15°	-21.5 ± 3 0 ± 1 +42.5 ± 3		122
Rudder	Left & right 160 to 165		318
Controls max free play (controls central)			
Flaperons 2mm total with other flaperon fixed.			
With flaperons fixed 3mm total at top of stick.			
With elevator fixed 3mm total at top of stick.			
Rudder vertical play 0,5mm.			

Longitudinal datum: Wing root LE. Horizontal datum: Top of rear fuselage 1000:24 rear down
 Max water in fin tank 6 Kg (13 lb). This is 4378mm aft.
 The fin battery weighs 4.3 kg (9.5 lb) and is 4312mm aft. It increases min cockpit load by 20 kg (44 lb).
 The three 2.16 Kg weights on the right of the panel each reduce min cockpit weight by 3.75 Kg (8.27 lb).

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	108	200
Manoeuvre	108	200
Aerotow	108	200

	Knots	Kph
Winch / auto tow	81	150
Flaps +5 & +10	108	200
Landing flap +15	81	150
U/C raising or lowering	108	200

VNE at altitude	Knots	Kph
0-6600 feet	146	270
6600-10 000	138	256
10 000-13 000	131	243
13 000-16 000	124	230
16 000-20 000	117	218

Notes: -

Max winch weak link: 680 Kg (Blue)
 Tyre pressure: Main 46 psi (3.3 bar), rear 28 psi (2 bar)
 Semi aerobatic without water. Cloud flying permitted.
 Wing oscillation frequency 148 at 15 meters and 128 at 17 meters. Glider rigged and resting on its wheels.
 All limitations apply to 15 meter (with or without winglets) and 17 meter span, unless otherwise stated.
 LBA Type certificate number 370

This sheet compiled by: Tim Macfadyen

Last update: 1 June 2005

BGA glider data sheet - DG 600 15/18 meters

See separate sheet for 15/17 meter version

Data source: Manufacturer's flight & maintenance manuals Date of issue:
 Manufacturer: Glaser-Dirks Flugzeugbau GmbH Web site dgflugzeugbau.de
 UK Agent: Bob McLean Web site: Phone: 01904 738653 Fax: 01904 738146
 Link to mandatory mods: <http://www.dg-flugzeugbau.de/tech-mitteilungen-e.html>

Weighing Data:

	Kg	Pounds
Max weight with water	525	1157
Max weight of non lifting components (everything except wings)	246	542
BGA concession non-aerobatic max weight of non lifting components [+5%]	258	570
Max in baggage compartment	15	33
Max water (standard)	130	287
Max water (option)	180	397
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	220	8.66
Aft C of G limit (aft of datum)	380	14.97
Pilot position (fwd) 70 Kg pilot	510	20

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons (Flaps -5°)	42.5 ± 3	21.5 ± 3	122
Elevator	61.5 ± 1	55 ± 1	160
Flaps -10° -5° +15°	-11.5 ± 3 0 ± 1 +42.5 ± 3		122
Rudder	Left & right 160 to 165		318
Controls max free play (controls central) Flaperons 2mm total with other flaperon fixed. With flaperons fixed 3mm total at top of stick. With elevator fixed 3mm total at top of stick. Rudder vertical play 0,5mm.			

Longitudinal datum: Wing root LE. Horizontal datum: Top of rear fuselage 1000:24 rear down
 Max water in fin tank 6 Kg (13 lb). This is 4378mm aft.
 The fin battery weighs 4.3 kg (9.5 lb) and is 4312mm aft. It increases min cockpit load by 20 kg (44 lb).
 The three 2.16 Kg weights on the right of the panel each reduce min cockpit weight by 3.75 Kg (8.27 lb).

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	100	185
Manoeuvre	100	185
Aerotow	100	185

	Knots	Kph
Winch / auto tow	81	150
Flaps +5 & +10	100	185
Landing flap +15	81	150
U/C raising or lowering	100	185

VNE at altitude	Knots	Kph
0-6600 feet	146	270
6600-10 000	138	256
10 000-13 000	131	243
13 000-16 000	124	230
16 000-20 000	117	218

Notes: -

Max winch weak link: 680 Kg (Blue)
 Tyre pressure: Main 46 psi (3.3 bar), rear 28 psi (2 bar)
 Semi aerobatic without water. Cloud flying permitted.
 Wing oscillation frequency 148 at 15 meters. Glider rigged and resting on its wheels.
 All limitations apply to 15 meter (with or without winglets) and 18 meter span, unless otherwise stated.
 LBA Type certificate number 370

This sheet compiled by: Tim Macfadyen

Last update: 1 June 2005

BGA glider data sheet - DG 800S 15 & 18 meters

Data source: BGA data

Date of issue:

Manufacturer: Glaser-Dirks Flugzeugbau GmbH

Web site dgflugzeugbau.de

UK Agent: Bob McLean Web site:

Phone: 01904 738653

Fax: 01904 738146

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	525	1157
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max in baggage compartment	15	33
Max water		
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Pilot position (fwd) 70 Kg pilot		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons (Flaps -5°)			
Elevator			
Flaps -15° -5° +15°			
Rudder			
Controls max free play (controls central)			

Longitudinal datum: Wing root LE.

Horizontal datum: Top of rear fuselage rear down

Max water in fin tank Kg (lb). This is mm aft.

The fin battery weighs kg (lb) and is mm aft. It increases min cockpit load by kg (lb).

The three Kg weights on the right of the panel each reduce min cockpit weight by Kg (lb).

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	103	190
Manoeuvre	103	190
Aerotow	103	190

	Knots	Kph
Winch / auto tow	81	150
Flaps +5 & +10	103	190
Landing flap +15	81	150
U/C raising or lowering	103	190

VNE at altitude	Knots	Kph
0-6600 feet	146	270
6600-10 000	138	256
10 000-13 000	131	243
13 000-16 000	124	230
16 000-20 000	117	218

Notes: -

Max winch weak link: 680 Kg (Blue)

Tyre pressure: Main 46 psi (3.3 bar), rear 28 psi (2 bar)

Semi aerobatic without water. Cloud flying permitted.

Wing oscillation frequency at 15 meters and at 18 meters. Glider rigged and resting on its wheels.

All limitations apply to 15 meter (with or without winglets) and 18 meter span, unless otherwise stated.

LBA Type certificate number

This sheet compiled by: Tim Macfadyen

Date: 28 November 2002

BGA glider data sheet - Diamant 16.5 meter

Data source: Manufacturers flight manual

Manufacturer: Flug-und Fahrzeugwerke AG, Alternrhein 9422, Staad SG, Switzerland

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	408	900
Max weight dry	390	860
BGA concession non-aerobatic max weight (dry) [+3%]	402	886
Water capacity		
Max weight of non lifting components (everything except wings)	220	485
BGA concession non-aerobatic max weight of non lifting components [+5%]	231	509
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)	241	9.5
Aft C of G limit (aft of datum)	406	16
Pilot position (forward of datum)	610	24.0

Control deflections in mm

	Up	Down	Measuring point
Elevator	63.5± 5	63.5±5	TE at centre
Rudder	196 ± 10 left & right		TE at top
Ailerons			Outer ends
Flaps neutral	44 ± 4	19 ± 4	
Flaps full + (+15°)	31 ± 4	31 ± 4	
Flaps full - (-12°)	48 ± 4	8 ± 4	
Flaps set	Ailerons set	Flap travel	
+15°	Neutral	43 ± 3 Down	
- 12°	Neutral	35 ± 3 Up	
0°	Up	13 ± 2 Up	
0°	Down	17 ± 2 Down	

Measure flaps at their inboard ends.

Longitudinal datum: Wing root LE

Horizontal datum: Fuselage top immediately behind the canopy tail down 35 mm over first meter.

Nose weights are 65 inches (1650mm) forward of datum

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	130	240	U/C down	130	240
Rough air	90	165	U/C operation	81	150
Manoeuvre	90	165	Airbrakes open	130	240
Aerotow	84	155	Flaps fully positive	84	155
Winch / auto tow	65	120			
Always use full negative flaps above 110 Knots (204 Kph)					

Max winch weak link: 923 Kg (Brown)

Tyre pressure: 2 bar (30 psi).

Semi aerobatic. Cloud flying is permitted.

The rudder hydraulic damper must always be completely full of hydraulic fluid - ESSO UNIVIS J43

This sheet compiled by Tim Macfadyen Date 7 May 2003

BGA glider data sheet - Diamant 18 meter

Data source: Manufacturers flight manual Date of issue: Jan 1969

Manufacturer: Flug-und Fahrzeugwerke AG, Alternrhein 9422, Staad SG, Switzerland

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	440	970
Max weight dry	408	900
BGA concession non-aerobatic max weight (dry) [+3%]	420	927
Water capacity 50 -60 litres	50 - 60	110 - 132
Max weight of non lifting components (everything except wings)	240	530
BGA concession non-aerobatic max weight of non lifting components [+5%]	252	556
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)	267	10.5
Aft C of G limit (aft of datum)	345	13.8
Pilot position (forward of datum)	610	24.0

Longitudinal datum: Wing root LE

Horizontal datum: Fuselage top immediately behind the canopy tail down 35 mm over first meter.

Maximum speeds

	Knots	Kph
VNE	130	240
Rough air	90	165
Manoeuvre	90	165
Aerotow	81	150
Winch / auto tow	81	150
Always use full negative flaps above 110 Knots (204 Kph)		

	Knots	Kph
U/C down	130	240
U/C operation	81	150
Airbrakes open	130	240
Flaps fully positive	81	150

Max winch weak link: 923 Kg (Brown)

Tyre pressure: 2 bar (30 psi).

Semi aerobatic. Cloud flying is permitted.

The rudder hydraulic damper must always be completely full of hydraulic fluid - ESSO UNIVIS J43

This sheet compiled by Tim Macfadyen

Date 25 September 2002

Control deflections in mm

	Up	Down	Measuring point
Elevator	65 ± 5	65 ± 5	TE at Centre
Rudder	225 ± 10 left & right		TE at top
Ailerons			Outer ends
Flaps neutral	44 ± 4	19 ± 4	
Flaps full +	31 ± 4	31 ± 4	
Flaps full -	48 ± 4	8 ± 4	
Flaps set	Ailerons set	Flap travel	
+15°	Neutral	43 ± 3 Down	
- 12°	Neutral	35 ± 3 Up	
0°	Up	13 ± 2 Up	
0°	Down	17 ± 2 Down	

Measure flaps at their inboard ends.

BGA glider data sheet - Discus a, b & cs

Data source: Flight Manual

Date of issue: Dec 1984

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

	Kg	Pounds
Max weight (with water)	525	1157
Max weight dry		
BGA concession non-aerobatic max weight (dry) [+3%]		
Max weight of non lifting components (everything except wings)	240	529
BGA concession non-aerobatic max weight of non lifting components [+5%]	252	556
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	260	10.24
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward of datum)	450	17.72

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	65±5	35±5	162	±3
Elevator	47±4	47±4	157	±3
Rudder	Left 160 ±20	Right 160 ±20	340	

	Weight kg	Moment kg cm
Ailerons	3,71 - 4,21	1,7 - 3,7
Elevator	0,67 - 0,85	2,6 - 3,3
Rudder	4,43 - 4,97	0 - 4,9

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:31 tail down, Discus a & 1000:44, Discus b

Max fore & aft play at the wing tip 30mm total.

For every 28 litres of water in the wings put 1 litre in the fin tank.

Each nose weights weighs 2.2 kg and reduces min pilot weight by 5 kg.

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	108	200
Manoeuvre	108	200
Aerotow	97	180
Winch / auto tow	81	150

VNE at altitude

Height (meters)	Height (feet)	Knots	Kph
4 - 5 000	13 - 16400	131	243
Up to 6 000	Up to 19680	124	230
Up to 7 000	Up to 22960	117	217
Up to 8 000	Up to 26240	111	205
Up to 9 000	Up to 29520	104	193
Up to 10 000	Up to 32800	98	182
Up to 12 000	Up to 39360	85	158

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Up to 360 Kg (794 lb) AUW 50 psi, 3,5 bar. Higher weights, 64 psi, 4,5 bar, tail wheel 2 Bar.

~~Non~~/semi/fully aerobatic, cloud flying permitted

This sheet compiled by: Tim Macfadyen

Date: 8 Nov 2002

BGA glider data sheet - Discus BT

Data source: Flight Manual

Date of issue: Dec 1984

Span 15 meters

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water) without engine or fuel tank installed	525	1157
Max weight (with water) with engine & fuel tank installed	450	992
Max landing weight = max take off weight		
Max weight of non lifting components (everything except wings) With engine & fuel tank installed	290	639
Max weight of non lifting components (everything except wings) Without engine & fuel tank installed	255	562
Max pilot weight (seat load)	110	242

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	65±5	35±5	162	±3
Elevator	47±4	47±4	157	±3
Rudder	Left 160 ±20	Right 160 ±20	340	

	mm	Inches
Forward C of G limit (aft of datum)	260	10.24
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward of datum)	450	17.72

	Weight kg	Moment kg cm
Ailerons	3,71 - 4,21	1,7 - 3,7
Elevator	0,67 - 0,85	2,6 - 3,3
Rudder	4,43 - 4,97	0 - 2,4

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:44 tail down

Max fore & aft play at the wing tip 35mm total.

For every 28 litres of water in the wings put 1 litre in the fin tank.

Each standard 2.2 kg nose weight reduces minimum pilot weight by 5 kg.

Maximum speeds

VNE at altitude

	Knots	Kph
VNE	135	250
Rough air	97	180
Manoeuvre	97	180
Aerotow	97	180
Winch / auto tow	81	150
Engine extended	86	160

Height (meters)	Height (feet)	Knots	Kph
4 - 5 000	13 - 16400	131	243
Up to 6 000	Up to 19680	124	230
Up to 7 000	Up to 22960	117	217
Up to 8 000	Up to 26240	111	205
Up to 9 000	Up to 29520	104	193
Up to 10 000	Up to 32800	98	182
Up to 12 000	Up to 39360	85	158

Max winch weak link: 680 Kg (Blue)

Tyre pressure: Up to 360 Kg (794 lb) AUW 50 psi, 3,5 bar. Higher AUW, 64 psi, 4,5 bar.

Tail tyre pressure 29 psi, 2 Bar

With engine installed - non aerobatic, non cloud flying

Without engine installed & without water ballast - semi aerobatic & cloud flying permitted

This sheet compiled by: Tim Macfadyen

Date: 29 May 2003

BGA glider data sheet - Discus 2a

Data source: Flight Manual

Date of issue: Oct 1998

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	525	1157
Max landing weight (with water)	525	1157
Max weight dry	370	816
BGA concession non-aerobatic max weight (dry) [+3%]	381	840
Max weight of non lifting components (everything except wings)	250	551
BGA concession non-aerobatic max weight of non lifting components [+5%]	262	579
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	247	9.72
Aft C of G limit (aft of datum)	381	15.00
Pilot position (forward of datum)	450	17.72

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	63±3	30±3	152	±3
Elevator	44 +3 -2	44 +3 -2	138	±3
Rudder	Left & Right 155 ± 15		315	
		Weight kg	Moment kg cm	
Rudder		3,90 to 4,80	-2,0 to 3,2	
Elevator half		0,85 to 1,06	1,1 to 1,6	
Inner ailerons				
S/N 1 to 11		4,00 to 4,90	0 to 1,27	
S/N 12		3,00 to 3,70	3,40 to 4,40	
Outer ailerons				
S/N 1 to 11		1,00 to 1,22	-0,30 to 0.08	
S/N 12		0,95 to 1,16	-0,30 to 0,20	

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:31 tail down.

Distance wheel behind datum (a) 139mm. Main wheel to tail wheel/skid (b) 3927mm

Max fore & aft play at the wing tip 30mm total.

Max play between inner & outer ailerons ±1 mm (107mm from hinge).

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	108	200
Manoeuvre	108	200
Aerotow	97	180
Winch / auto tow	81	150
U/C down	97	180

VNE at height

Height (meters)	Height (feet)	Knots	Kph
4 - 5 000	13 - 16400	131	243
Up to 6 000	Up to 19680	124	230
Up to 7 000	Up to 22960	117	217
Up to 8 000	Up to 26240	111	205
Up to 9 000	Up to 29520	104	193
Up to 10 000	Up to 32800	98	182
Up to 12 000	Up to 39360	85	158

Max winch weak link: 683 Kg (Blue)

Tyre pressure: 5 bar (73 psi), tail wheel 2 Bar (29 psi).

Semi aerobatic, cloud flying permitted

Each (2.1 kg) lead weight mounted on the right hand side of the stick reduces min cockpit load by 5 kg.

Fill 1 litre of water in the tail tank for each 25 litres of water in the wings.

This sheet compiled by: Tim Macfadyen

Date: 8 Nov 2002

BGA glider data sheet - Discus 2b

Data source: Flight Manual

Date of issue: Oct 1998

Manufacturer: Schempp Hirth, Flugzeugbau GmbH, Postfach 1443, D-73222 Kirchheim/Teck, Germany
Phone: 00 49 7021 7298-0 Fax: 00 49 7021 7298-199 www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	525	1157
Max landing weight (with water)	525	1157
Max weight dry	370	816
BGA concession non-aerobatic max weight (dry) [+3%]	381	840
Max weight of non lifting components (everything except wings)	250	551
BGA concession non-aerobatic max weight of non lifting components [+5%]	262	579
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	396	15.59
Pilot position (forward of datum)	500	19.69

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	63±3	30±3	152	±3
Elevator	44 +3 -2	44 +3 -2	138	±3
Rudder	Left & Right 155 ± 15		315	
		Weight kg	Moment kg cm	
Rudder		3,90 to 4,80	-2,0 to 3,2	
Elevator half		0,85 to 1,06	1,1 to 1,6	
Inner ailerons				
S/N 1 to 11		4,00 to 4,90	0 to 1,27	
S/N 12		3,00 to 3,70	3,40 to 4,40	
Outer ailerons				
S/N 1 to 11		1,00 to 1,22	-0,30 to 0.08	
S/N 12		0,95 to 1,16	-0,30 to 0,20	

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:44 tail down.

Distance wheel behind datum (a) 128mm. Main wheel to tail wheel/skid (b) 4150mm

Max fore & aft play at the wing tip 30mm total. Max play between inner & outer ailerons ±1 mm.

Maximum speeds

VNE at height

	Knots	Kph
VNE	135	250
Rough air	108	200
Manoeuvre	108	200
Aerotow	97	180
Winch / auto tow	81	150
U/C down	97	180

Height (meters)	Height (feet)	Knots	Kph
4 - 5 000	13 - 16400	131	243
Up to 6 000	Up to 19680	124	230
Up to 7 000	Up to 22960	117	217
Up to 8 000	Up to 26240	111	205
Up to 9 000	Up to 29520	104	193
Up to 10 000	Up to 32800	98	182
Up to 12 000	Up to 39360	85	158

Max winch weak link: 683 Kg (Blue)

Tyre pressure: 4 bar (58 psi), tail wheel 2 Bar (29 psi).

Semi aerobatic, cloud flying permitted

Each (2.1 kg) lead weight mounted on the right hand side of the stick reduces min cockpit load by 5 kg.

Fill 1 litre of water in the tail tank for each 25 litres of water in the wings.

This sheet compiled by: Tim Macfadyen

Date: 8 Nov 2002

BGA glider data sheet - Duo Discus

Data source: Flight & maintenance manuals

Date of issue: 1994

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (take off & landing) with water	700	1543
Max weight dry	660	1455
Max wing water	198	435
Max fin water	11	24
Max weight of non lifting components (everything except wings)	440	970
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 5265mm aft of datum, tailskid is 5300mm 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

VNE at altitude

Height in feet	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)

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.

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

German (LBA) Type certificate number 396

This sheet compiled by: Tim Macfadyen

Date: 6 Dec 2002

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Link to mandatory mods:

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, spinning permitted. 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 FMVVS 116, DOT 3 resp. DOT 4

This sheet compiled by: Tim Macfadyen

Date: 6 December 2002

BGA glider data sheet - Eagle 2 & 3 (T.42)

Data source: The world's Sailplanes Vol 1 & BGA data

Date of issue: 1962

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	567	1250
BGA concession non-aerobatic max weight (dry)	612	1350
Max pilot weight (seat load)		

mm inches

Forward C of G limit (aft of datum)	317	12.5
Aft C of G limit (aft of datum)	473	18.63
Front pilot position (forward)	802	31.6
Rear pilot position (forward)	122	4.8

Control deflections in degrees

	Up	Down	Measuring point	
Ailerons	29°	9.6°	Measured at TE root	
Elevator	26.6°	26.6°	Measured at TE root	
Trim				
Rudder	Left & Right 28.4°		At TE	

Longitudinal datum: Wing root LE

Horizontal datum: down

Maximum speeds

	Knots	Kph
VNE	118	218
Rough air	70	130

	Knots	Kph
Aerotow	70	130
Winch / auto tow	70	130

Max winch weak link: 600 Kg (Blue)

Tyre pressure: 45 - 50 psi

Semi aerobatic - Cloud flying permitted

Notes: -

Span 17.8 meters

This sheet compiled by: Tim Macfadyen

Date: 16 May 2002

BGA glider data sheet - ELFE S2 & S3

Data source; Flight manual

Date of issue:

Manufacturer: A Neukom, Neuhausen, Switzerland

Link to mandatory mods:

Weighing Data:

	S2 (Kg)	S3 (Kg)
Max weight (dry)	350	325
BGA concession non-aerobatic max weight (dry) [+3%]	361	335
Max pilot weight (seat load)	110	110
	S2 (mm)	S3 (mm)
Forward C of G limit (aft of datum)	250	250
Aft C of G limit (aft of datum)	390	360
Pilot position (forward of datum)	671	600

Control deflections in degrees

	Up	Down
Ailerons	25°	16°
Elevator	23°	20°
Rudder	Left 30°	Right 30°

Longitudinal datum: Wing root LE (Rib 1).

Horizontal datum: Rear fuselage top 1000:75 tail down (bottom of baggage tray horizontal).

Design loads: S2 +4 to -2G S3 +5.3 to -2.65 G

Maximum speeds

	Knots		Kph	
	S3	S2	S3	S2
VNE	108	97	200	180
Rough air	75	65	140	120
Aerotow	75	65	140	120

	Knots		Kph	
	S3	S2	S3	S2
Winch / auto tow	54	54	100	100
Airbrakes open	108	97	200	180
U/C down	108	97	200	180

Max winch weak link: 540 Kg (White)

Tyre pressure: 36 psi, 2,5 Bar

~~Non~~/semi/fully aerobatic, cloud flying permitted by BGA

Notes: -

Unusual composite construction. The wings have wooden spars and glass/balsa/glass skins.

The centre section is held to the fuselage with bolts in tension. It is absolutely vital that of the threads of these bolts are in first class condition.

The rotating trailing edge brakes suck open badly. It is recommended to fit springs to help close them. Details are available from Tim Macfadyen.

This sheet compiled by: Tim Macfadyen

Date: 11 March 2003

BGA glider data sheet - ELFE S4A

Data source: BGA data

Date of issue:

Manufacturer: A Neukom, Neuhausen, Switzerland

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	370	816
BGA concession non-aerobatic max weight [+3%]	381	840
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Pilot position (forward)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing root LE at rib

Horizontal datum: 1000:44

Maximum speeds

	Knots	Kph
VNE	113	210
Rough air	84	155
Manoeuvre		

	Knots	Kph
Aerotow	75	140
Winch / auto tow	59	110
Airbrakes open		

Max winch weak link:

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, cloud flying permitted

Span 15 meters

Swiss type certificate No. 80.525-11

This sheet compiled by: Tim Macfadyen Date: 11 March 2003

BGA glider data sheet - EoN Baby

Data source: BGA data

Date of issue:

Manufacturer: Elliotts of Newbury

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	277	610
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Pilot position (forward)	178	7.0

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	87	161
Rough air	55	102
Manoeuvre		

	Knots	Kph
Aerotow	55	102
Winch / auto tow	48	89
Airbrakes open		

Max winch weak link: 500 kg (White)

Tyre pressure: Main psi (Bar)

Non aerobatic, non cloud flying

Span 13.54 meters (44ft 5in)

This glider is a version of the Grunau Baby 2b. It has an enclosed cockpit. Production started in 1948.

This sheet compiled by: Tim Macfadyen Date: 11 March 2003

BGA glider data sheet - Fauvel AV 22

Data source: The world's Sailplanes Vol 1 & BGA data

Date of issue: 1962

Manufacturer: Fauvel

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight non aerobatic	445	982
Max weight semi aerobatic	360	793

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)		
Rear pilot position (aft of datum)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	26°	14°		
Elevator	19°	13°		
Trim				
Rudder	Left & right 20°			

The AV-22-01 has lower surface spoilers. The AV-22-02 has bottom surface Schempp Hirth brakes.

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	112	207
Rough air	85	157

	Knots	Kph
Aerotow	87	161
Winch / auto tow	64	118

Max winch weak link: 600kg Blue

Tyre pressure: psi (Bar)

Semi aerobatic up to 360 Kg AUW, Cloud flying permitted

Notes: -

Two seater flying wing 16.6 meters span. French type certificate No 42

BGA glider data sheet - Fauvel AV 36

Data source: The world's Sailplanes Vol 1 & BGA data

Date of issue: 1962

Manufacturer: Fauvel

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	225	496
BGA concession non-aerobatic max weight (dry) [+3%]	232	511
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)	305	12
Aft C of G limit (aft of datum)	380	15
Front pilot position (aft of datum)	82	3.25

Max control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	26°	13°		
Elevator	26°	13°		
Trim				
Rudders	38° outwards 15° inwards			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	75	140

	Knots	Kph
Aerotow	65	120
Winch / auto tow	54	100

Max winch weak link: 500 Kg (White)

Tyre pressure: psi (Bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 11.95 Meters

BGA glider data sheet - Fauvette (Breguet 905S)

Data source: BGA data

Date of issue:

Manufacturer: Breguet

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	272	600
BGA concession non-aerobatic max weight (dry) [+3%]	280	618
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	244	9.6
Aft C of G limit (aft of datum)	368	14.5
Front pilot position (forward)	559	22

Control deflections in mm

	Up	Down	Measuring point
Ailerons	58 - 68	33 - 43	TE
V tails as elevator	77 - 90	29 - 33	LE horn
V tails as rudder	118 - 127 both ways		

Note - The "Up" deflection of the elevator is measured with the horn down & vica versa.

Longitudinal datum: Wing LE at 122.5mm from aircraft centre line

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	110	204
Rough air	75	140

	Knots	Kph
Aerotow	65	120
Winch / auto tow	52	96

Max winch weak link: 600 Kg (Blue)

Tyre pressure: psi (Bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 15 Meters V tail

Warning: - Rigging the V tail control surfaces after changing the operating cables is difficult.

This sheet compiled by: Pete Philpot & Tim Macfadyen

Date: 5 May 2002

BGA glider data sheet - Foka 3 - SZD 24

Data source: BGA data

Manufacturer: PZL Poland

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	360	794
BGA concession non-aerobatic max weight (dry) [+3%]	371	818
Max pilot weight (seat load)	129	284

mm Inches

Forward C of G limit (aft of datum)	232	9.14
Aft C of G limit (aft of datum)	325	12.8
Front pilot position (forward)	580	22.8

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	132	245
Rough air	82	152
Aerotow	71	132
Winch / auto tow	61	113

Max winch weak link: 600 Kg (Blue)

Tyre pressure: psi (Bar)

Semi aerobatic Cloud flying permitted

Notes: -

Warning: - Wing drop at stall is normal.

This sheet compiled by: Tim Macfadyen Date: 27June 2002

BGA glider data sheet - Foka 4 - SZD 24 B & C

Data source: The world's Sailplanes Vol 2 (SZD 24B) & BGA (SZD 24C) Date of issue: 1963

Manufacturer: PZL

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	385	849
BGA concession non-aerobatic max weight (dry) [+3%]	396	874
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)	129	284

mm Inches

Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	375	14.76
Front pilot position (forward)	580	22.8

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	34±2	16±1		
Elevator	24±	18±		
Trim				
Rudder	Left & right 35±1			

Longitudinal datum: Wing root LE at root rib

Horizontal datum: Level points on fuselage level

Maximum speeds

	SZD 24 B		SZD 24 C	
	Knots	Kph	Knots	Kph
VNE	140	260	126	233
Rough air	86	160	82	152
Aerotow	76	140	92	170
Winch / auto tow			65	120

Max winch weak link: Blue

Tyre pressure: psi (Bar)

Fully aerobatic Cloud flying permitted

Notes: -

15 meter span

This sheet compiled by: Tim Macfadyen Date: 2 July 2002

BGA glider data sheet - Foka 5 - SZD 32A

Data source: Manufacturers' Handbooks

Date of issue: 1969

Manufacturer: PZL Poland

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	385	849
BGA concession non-aerobatic max weight (dry) [+3%]	396	874
Max weight of non lifting components (everything except wings)	245	540
BGA concession non-aerobatic max weight of non lifting components [+5%]	257	567
Max pilot weight (seat load)	129	284

	mm	Inches
Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	375	14.76
Front pilot position (forward)	580	22.8

Control deflections in degrees

	Up	Down	Max control friction forces Kg At control top
Ailerons	34±2	16±1	0.8 neutral 3.5 at full travel
Elevator (all moving TP)	13±1	7±1	1.0 neutral 1.8 at full travel
Tab*	19.5 ±1.5	10.5± 1.5	7.0
*Tab movement when elevator is moved and trim is set neutral.			
Trim	0.5± 0.5	6.5± 0.5	
With cockpit trim lever neutral & neutral elevator the tab is 4±0.5 down.			
Rudder	Left & right 35±1		6.0 (2 cm below rudder top)
Airbrakes			7.0 15 unlock
Cable release			6.0 at knob

Longitudinal datum: Wing root LE at root rib

Horizontal datum: Level points on fuselage level

Maximum speeds

	Smooth air		Rough air	
	Knots	Kph	Knots	Kph
VNE	132	245		
Rough air			86	160
Aerotow	92	170	70	130
Winch / auto tow	65	120	60	110

Max winch weak link: 700 Kg (Blue)

Tyre pressure: 28 psi (2 Bar)

Fully aerobatic Cloud flying permitted

Notes: -

Wing span 15 meters

This sheet compiled by: Tim Macfadyen Date: 2 July 2002

BGA glider data sheet - Fox MDM - 1 & 1P (14 & 16.15 meters)

Data source: Flight Manual

Date of issue: Dec 1998

Manufacturer: Zakład Remontów i Produkcji Sprzętu Lotniczego, Bielsko - Biala Poland

UK Agent: P R Stoward, 15 Deans Meadow, Dagnall, Berkhamsted, Herts, HP4 1RW

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight 14 Meters(aerobatic)	530	1168
Max weight 16.15 Meters (utility)	535	1179
Max weight of non lifting components (everything except wings)	165	364
Max pilot weight (seat load)	100	242
Max luggage	Nil	Nil

mm Inches

Forward C of G limit (aft of datum)	213	8.4
Aft C of G limit (aft of datum)	379	14.9
Front pilot position (forward)	950	37.4
Rear pilot position (aft of datum)	60	2.4

Control deflections

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				
Trim				

Longitudinal datum: Wing root LE

Horizontal datum:

Two 5,5 kg weights can be fitted 1 520mm (59,8 in) forward of datum.

Maximum speeds

	Knots	Kph
VNE	152	282
Rough air	122	225
Manoeuvre	116	214

	Knots	Kph
Aerotow	81	150
Winch / auto tow	81	150
Airbrakes open	152	282

Tyre pressure: Main psi (Bar), rear psi (bar).

Semi/fully aerobatic - see weight limits Cloud flying permitted

Max altitude 3 000 meters (9840 feet) as there is no provision for oxygen.

Aerobatic (14 meter span) G limits Dual +7,0 / -5,0 Solo (100 kg max) +9,0 / -6,0

Utility (16.15 meter span) G limits +5,3 / -2,65

Cloud flying permitted

Polish type certificate number BG - 197 was issued 27 July 1994.

This sheet compiled by:

Date: Tim Macfadyen 11 November 2002

BGA glider data sheet - Geier 1

Data source: BGA data

Date of issue:

Manufacturer: Segelflugzeugbau

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	359	792
BGA concession non-aerobatic max weight (dry) [+3%]	370	815
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	414	16.3
Aft C of G limit (aft of datum)	531	20.9
Pilot position (forward)	584	23

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	92	170
Rough air	65	120
Manoeuvre		

	Knots	Kph
Aerotow	65	120
Winch / auto tow	64	100
Airbrakes open		

Max winch weak link:

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, cloud flying permitted

Span 17 meters

German (LBA) Type certificate No 175

This sheet compiled by: Tim Macfadyen

Date: 11 March 2003

BGA glider data sheet - Glasflügel 304 B

Data source: BGA data

Date of issue:

Manufacturer: Glasflügel

Web site

Agent: H G Streifeneder, Glasfaser-Flüzeug-Service, Brühlstrasse 12, 7318-Lenningen 2, Germany

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	450	992
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max in baggage compartment		
Max water		
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	200	7.87
Aft C of G limit (aft of datum)	325	12.79
Pilot position (fwd)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons			
Elevator			
Flaps °			
Rudder			
Controls max free play (controls central)			

Longitudinal datum: Wing root LE.

Horizontal datum: Top of rear fuselage 1000:52 rear down

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	108	200
Manoeuvre		
Aerotow		

	Knots	Kph
Winch / auto tow	81	150
Flaps	108	200
Landing flap		
U/C raising or lowering		

VNE at altitude	Knots	Kph
0-6600 feet		
6600-10 000		
10 000-13 000		
13 000-16 000		
16 000-20 000		

Notes: -

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main psi (bar), rear psi (bar)

Semi aerobatic without water. Cloud flying permitted.

Span 15 meters

LBA Type certificate number 335/88

This sheet compiled by: Tim Macfadyen

Date: 28 November 2002

BGA glider data sheet - Glasflügel 304C, CZ & CZ-17

Data source: FAA Web site

Date of issue: 13 Jan 2003

Manufacturer: HPH s.r.o. Karlov 197, PO Box 112, 284 01 Kutná Hora, Czech Republic

Web site

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	450	992
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max in baggage compartment		
Max water		
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	200	7.87
Aft C of G limit (aft) 15 M span	325	12.79
Aft C of G limit (aft) 17 M span	318	12.52

Control deflections in degrees

Glasflügel 304C			Controls max free play
	Up	Down	
Ailerons	34° ± 2°	13° ± 2°	
Elevator	32° ± 2°	27° ± 1°	
Rudder	Left & Right 29° ± 1°		

Glasflügel 304 CZ & CZ-17			
	Up	Down	
Ailerons	23° ± 2°	10° ± 2°	
Elevator	17° ± 2°	17° ± 1°	
Rudder	Left & Right 25° ± 2°		
Flaps	8° ± 1.5°	12° ± 1.5°	

Longitudinal datum: Wing root LE.

Horizontal datum: Top of rear fuselage 1000:52 rear down

Maximum speeds

	15 meter span Glasflügel 301CZ		17 meter span Glasflügel 301CZ-17	
	Knots	Kph	Knots	Kph
VNE	135	250	135	250
Rough air	108	200	97	180
Manoeuvre	108	200	97	180
Aerotow	81	150	81	150
Flaps down	108	200	97	180
Winch / auto tow	81	150	81	150

VNE at altitude meters	VNE at altitude feet	Knots	Kph
0 - 4 000	0-13 000 feet	135	250
4 000 - 5 000	13 000 – 16 400	130	240
5 000 - 6 000	16 400 – 19 700	122	226
6 000 - 7 000	19 700 – 23 000	116	214
7 000 - 8 000	23 000 - 26 000	109	202
8 000 - 9 000	26 000 - 29 500	103	191
9 000 - 10 000	29 500 - 32 000	97	179
10 000 - 12 000	32 000 - 39 000	86	159

Notes: -

Max winch weak link: 650 Kg (Blue)

Tyre pressure: Main psi (bar), rear psi (bar)

Semi aerobatic without water. Cloud flying permitted.

Span 15 meters for 304B, 304C & 304CZ. The 304CZ-17 is 17.43 meters span.

The original Glasflügel 304B had LBA Type certificate number 335/88 and was produced by Glasflügel. The following types are produced in The Czech Republic by HPH s.r.o. -

The 304CZ is very similar to the 304B, it has flaps and trailing edge brakes. The 304CZ-17 is a 304CZ with the span extended to 17.43 meters. The 304C has no flaps, conventional brakes & 15M span.

This sheet compiled by: Tim Macfadyen Date: 21 July 2003

BGA glider data sheet - Glasflügel 604

Data source: BGA data

Date of issue:

Manufacturer: Glasflügel

Web site

Agent: H G Streifeneder, Glasfaser-Flügezeug-Service, Brühlstrasse 12, 7318-Lenningen 2, Germany

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	650	1433
Max weight dry & max landing	650	1433
Max weight of non lifting components (everything except wings)		
Max water	110	242
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	375	14.8
Aft C of G limit (aft of datum)	455	17.9
Pilot position (fwd)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons			
Elevator			
Flaps °			
Rudder			
Controls max free play (controls central)			

Longitudinal datum: Wing root LE. 500mm from centre of fuselage

Horizontal datum: Top of rear fuselage 2.5° rear down

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	80	150
Manoeuvre		
Aerotow	80	150

	Knots	Kph
Winch / auto tow	70	130
Flaps +1 setting	108	200
Flaps +2 setting	80	150
Landing flap		

VNE at altitude	Knots	Kph
0-6600 feet		
6600-10 000		
10 000-13 000		
13 000-16 000		
16 000-20 000		

Notes: -

Max winch weak link: 850 Kg (Brown)

Tyre pressure: Main psi (bar), rear psi (bar)

Non aerobatic. No spinning. Cloud flying permitted.

Span 22 meters

This sheet compiled by: Tim Macfadyen

Date: 2 December 2002

BGA glider data sheet - **Grasshopper (Primary) T.38**

Data source: BGA & HQ Air Cadets Manual ACP 173 section 2

Date of issue:

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	249	550
Max pilot weight (seat load)	110	243

mm Inches

Forward C of G limit (aft of datum)	318	12.5
Aft C of G limit (aft of datum)	483	19.0
Pilot position (forward)	318	12.5
Forward ballast forward of datum	1092	43
Aft ballast aft of datum	1473	58

Longitudinal datum: Wing root LE

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Rudder	Left & right °			

Horizontal datum: Bottom of keel horizontal.

Pilots weight v ballast

Pilots weight (lb)	60 - 79	80 - 99	100 - 119	120 - 139	140 - 149	150 - 159	160 - 240
Weights (lbs)	40	30	20	10	0	10	20
	Front brackets					Rear brackets	

Maximum speeds

	Knots	Kph
VNE	70	130
Winch/auto tow	38	70

	Knots	Kph
Aerotow	46	85

Max winch weak link: 500 Kg (White)

Non aerobatic, cloud flying not permitted

Notes: -

11.886 meters span

This sheet compiled by: Tim Macfadyen

Date: 16 September 2002

BGA glider data sheet - Grob 103 Twin II & Grob 103A Twin II Acro

Data source: Manufacturer's flight manual

Date of issue: December 1980

Manufacturer: Burkhart Grob GmbH

UK Agent: Web site: Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	580	1279
BGA concession non-aerobatic max weight (dry) [+3%]	597	1317
Max weight of non lifting components (everything except wings)	400	882
BGA concession non-aerobatic max weight of non lifting components [+5%]	420	926
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	260	10.24
Aft C of G limit (aft of datum)	460	18.11
Front pilot position (forward)	1150	45.28
Rear pilot position (aft of datum)	40	1.57

Control deflections in mm

	Up	Down	Distance - hinge to measuring point		
Ailerons	90 ±10	50 ± 8	208		
Rudder	Left & Right 233 ± 10		450		
Airbrakes	Fully extended 170 ± 10		Measure at outboard end		
Evevator Different serial numbers	3501-3729	Option 3501-3729	3730 - 3838	3839 - 3878	3879 on
Up	90±6	97±8	97±8	95±8	95±8
Down	70±5	76±6	76±6	74±6	74±6
Measurement point to hinge	212	233	245	240	240
Trim tab					
Up	45±5	54±5	70±7	45±5	Spring trim (no tab)
Down	60±5	72±6	70±7	45±5	
Measurement point to hinge	96	116	90	60	

Longitudinal datum: Wing root LE at rib

Horizontal datum: Top of rear fuselage 1000: 40 tail down.

Each standard (5.6 Kg) trim weight in the nose reduces the minimum front pilot weight by 7.5 Kg (17 lb).

Maximum speeds

	Knots	Kph
VNE	135	250
Twin II rough air & manoeuvre	92	170
Accro rough air & manoeuvre	98	180

	Knots	Kph
Aerotow	92	170
Winch / auto tow	65	120
Airbrakes open	135	250

VNE at altitude	Knots	Kph
0-6500 feet	135	250
6500-10 000	128	237
10 000-13 000	121	225
13 000-16 500	115	213
16 500-19 000'	109	202

Max winch weak link: 850 Kg (Brown)

Tyre pressure: Main 2,8 atm 40 psi , nose & tail 2,5 atm 36 psi

Semi aerobatic, cloud flying permitted.

Notes: -

G 103A Acro "G" limits :- +6.5 & - 4 up to 98 knots, + 5,3 & - 3 to V_{NE} (G 103A Twin II is semi-aerobatic)

For control surface max weights and moments see the manufacturer's maintenance manual page 17a.

This sheet compiled by: Tim Macfadyen

Date: 10 September 2002

BGA glider data sheet - Grob G103C Twin III & Twin III Acro

Type: Grob G103C Twin III Data source: Manufacturer's flight manual Date of issue: 7.10.91

Manufacturer: Burkhart Grob GmbH, Am Flugplatz, D-8939 Mattsies, Germany

UK Agent: Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	600	1323
BGA concession non-aerobatic max weight (dry) [+3%]	618	1363
Max weight of non lifting components (everything except wings)	420	926
BGA concession non-aerobatic max weight of non lifting components [+5%]	441	972
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	270	10.6
Aft C of G limit (aft of datum)	480	18.9
Front pilot position (forward)	1132	44.6
Rear pilot position (aft of datum)	35	1.4

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	67 - 83	45 - 55	215	+/-8 up +/-5 dn
Elevator	94 - 110	68 - 80	240	+/-8 up +/-6 dn
Airbrakes	127 up at inner end			
Rudder	Left & right 223 - 243		450	+/-5 L +/-10 R

Longitudinal datum: Wing root LE at rib

Horizontal datum: Top of rear fuselage 1000: 40 tail down.

Maximum speeds

	Twin III		Twin III Accro	
	Knots	Kph	Knots	Kph
Rough air	105	194	108	200
Manoeuvre	94	175	100	185
Aerotow	94	175	100	185
Airbrakes open	140*	260*	151*	280*
Winch / auto tow	75	140	75	140

	Twin III		Twin III Accro	
VNE at altitude Feet	Knots	Kph	Knots	Kph
0-6562	140*	260*	151*	280*
6562-9842'	133	246	143	265
9842-16404'	120	222	130	240
16404-22966'	107	198	116	215
22966-29528'	96	178	103	190

*VNE is restricted to 250 KpH (135 Kts) unless the fuselage has been strengthened by extra stiffeners.

Max winch weak link:- 862 Kg (Brown)

Tyre pressure: Main 36 – 40 psi , nose and rear 36 psi

Semi aerobatic, cloud flying permitted.

Notes: -

This sheet compiled by: Tim Macfadyen & Afandi Darlington Date: 18 March 2004

BGA glider data sheet - Grunau Baby IIb

Data source: The world's Sailplanes Vol 1 & LBA Data sheet

Date of issue: 1962

Manufacturer: Schneider

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	250	551
Max weight of non lifting components (everything except wings)	160	353
Max pilot weight (seat load)	80	176
	mm	Inches
Forward C of G limit (aft of datum)	350	13.8
Aft C of G limit (aft of datum)	430	16.9
Pilot position (forward)	222	8.75
Pilot position Nos 370 to 1226	152	6.0

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	80±5	50±5	230	
Elevator	230 ±10	180 ±10	550	
Rudder	340 to 250 Left & Right		730	

Longitudinal datum: Wing root LE

Horizontal datum: Upper longeron horizontal

Maximum speeds

	Knots	Kph
VNE	81	150
Rough air	*53	*98

	Knots	Kph
Aerotow	54	100
Winch / auto tow	43	80

* Increase approved by BGA Tech Committee 22.3.1962

Max winch weak link: 540 Kg (White)

Tyre pressure: Main psi (Bar)

Non aerobatic. Cloud flying not permitted

Span 13.57 M

Wing natural frequency 310 cycles/min

Best LD 17:1 at 60 kph (32 Kts) min sink 0.85 m/s at 55 kph (30 Kts)

This sheet compiled by: Tim Macfadyen Date: 29 July 2004

BGA glider data sheet - Grunau Baby III

Data source: The world's Sailplanes Vol 1 & BGA data sheet

Date of issue: 1962

Manufacturer: Schneider

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	260	573
BGA approved max weight	272	600
Max pilot weight (seat load)	90	198

mm Inches

Forward C of G limit (fwd of datum)	350	13.8
Aft C of G limit (fwd of datum)	430	16.9
Pilot position (forward)	178	7.0

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator				
Trim				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum: Upper longeron horizontal

Maximum speeds

	Knots	Kph
VNE	86	160
Rough air	48	90

	Knots	Kph
Aerotow	48	90
Winch / auto tow	43	80

Max winch weak link: 500 Kg (White)

Tyre pressure: Main psi (Bar)

Non aerobatic. Cloud flying not permitted

Notes: -

Span 13.50 M

This sheet compiled by: Tim Macfadyen Date: 6 May 2003

BGA glider data sheet - Gull 1 & 1B

Data source: BGA data

Date of issue:

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	231	510
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	394	15.5
Aft C of G limit (aft of datum)	483	19.0
Front pilot position (forward)	213	8.4

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	70	129
Rough air	52	96

	Knots	Kph
Aerotow	52	96
Winch / auto tow	43	80

Max winch weak link: 500 Kg (White)

Non aerobatic, Cloud flying not permitted

Notes: -

15.33 meters span

This sheet compiled by: Tim Macfadyen Date: 11 June 2002

BGA glider data sheet - Gull 3

Data source: BGA data

Date of issue:

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	283	625
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	394	15.5
Aft C of G limit (aft of datum)	483	19.0
Front pilot position (forward)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	86	160
Rough air	65	120

	Knots	Kph
Aerotow	65	120
Winch / auto tow	43	80

Max winch weak link: 500 Kg (White)

Tyre pressure: psi (Bar)

Non aerobatic, cloud flying not permitted

Notes: -

Span 15.33 meters

This sheet compiled by: Tim Macfadyen Date: 13 June 2002

BGA glider data sheet - Gull IV

Data source: BGA data

Date of issue:

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	317	700
BGA concession non-aerobatic max weight (dry) [+3%]	326	721
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	355	14.0
Aft C of G limit (aft of datum)	485	19.12
Front pilot position (forward)	362	14.25

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	96	178
Rough air	64	118

	Knots	Kph
Aerotow	64	118
Winch / auto tow	52	96

Max winch weak link: 500 Kg (White)

Tyre pressure: psi (Bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 15 meters

This sheet compiled by: Tim Macfadyen Date: 12 June 02

BGA glider data sheet - Harbinger (Permit to fly only)

Also own as the "Shenstone Harbinger"

Data source: BGA data & The Worlds' Sailplanes Vol II

Date of issue: 1963

Manufacturer: F Coleman

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	500	1102
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	330	13
Aft C of G limit (aft of datum)	302	11.9
Front pilot position (forward)	1524	60
Rear pilot position (aft of datum)	355	14

Max control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	28.3°	16°		
Elevator	22°	21°		
Rudder	Left & right 23°			
Trim	No trim fitted			

Longitudinal datum: C/L of spar at root

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	70	130
Rough air	64	118
Manoeuvre		

	Knots	Kph
Aerotow	57	105
Winch / auto tow	57	105
Airbrakes open		

Max winch weak link: Blue

Tyre pressure: Main psi (Bar), rear psi (bar)

Non aerobatic, non cloud flying

Span 18.3 meters

Strutted tandem two seated, only two built, one in UK, one in Canada.

This sheet compiled by: Tim Macfadyen

Date: 11 March 2003

BGA glider data sheet – Hornet (Glasflügel 206)

Data source: Manufacturers' flight & operation manual

Date of issue:

Manufacturer: Glasflügel

Agent: H G Streifeneder, Glasfaser-Flugzeug-Service, Brühlstrasse 12, 7318-Lenningen 2, Germany

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	420	926
Max weight (dry)	420	926
Water capacity A & B models	120	264
Water capacity C model	170	375
Max weight of non lifting components	225	496
BGA concession non-aerobatic max weight of non lifting components [+5%]	236	520
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	375	14.76
Pilot position (forward)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons	20 - 24°	8 - 12°	
Elevator	16 - 19°	16 - 19°	
Rudder	23 - 27° left & right		
Airbrakes	55 - 60° down		3mm at TE

There must be a gap of 3mm minimum between the airbrakes and the ailerons.

Longitudinal datum: Wing root LE 425mm from fuselage C/L

Horizontal datum: Rear fuselage top 1000:52 rear down

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	75	140
Manoeuvre	81	150
Aerotow	75	140
Winch / auto tow	75	140
Airbrakes open	135	250

VNE at altitude

Height feet	Height meters	Knots	Kph
16 000	5 000	129	240
20 000	6 000	122	226
23 000	7 000	115	214
26 000	8 000	109	202
30 000	9 000	103	191
33 000	10 000	97	179
40 000	12 000	86	159

Max winch weak link : Tost white (BGA approved Mod 600 Kg, Tost blue)

Tyre pressure: Main 36 psi (2,5 Bar), rear 22 psi (1,5 bar)

Semi aerobatic (without water), cloud flying permitted

Span 15 meters

The Hornet C has carbon fibre wings, which are 20 kg lighter than the previous glass wings.

This sheet compiled by: Tim Macfadyen Date: 26 Nov 2004

BGA glider data sheet - Hütter H 17a & b

Data source: The world's Sailplanes Vol 1 & BGA data sheet

Date of issue: 1962

Manufacturer: Mostly homebuilt. Designed by Ulrich & Wolfgang Hutter

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry) H17a	204	450
Max weight (dry) H17b	210	463
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (fwd of datum)	152	6
Aft C of G limit (fwd of datum)	43	1.7
Pilot position (forward)	305	12

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	26°	21°		
Elevator				
Trim				
Rudder				

Longitudinal datum: Forward face of fuselage bulkhead

Horizontal datum:

Maximum speeds

	H17a		H17b	
	Knots	Kph	Knots	Kph
VNE	70	130	86	160
Winch / auto tow	45	83	43	80

	Knots	Kph
Aerotow	54	100
Rough air	54	100

Max winch weak link: 500 Kg (White)

Tyre pressure: Main psi (Bar), rear psi (bar)

Non aerobatic, cloud flying not permitted. Spinning permitted on the H17b.

Notes: -

Span 9.45 meters

H17a first flew 1934, H17b first flew 1953

This sheet compiled by: Tim Macfadyen Date: 22 April 2002

BGA glider data sheet - Iris D77

Data source: BGA Data sheet

Date of issue:

Manufacturer: Issoir Aviation

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	330	727
BGA concession non-aerobatic max weight (dry) [+3%]	340	749
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Pilot position (forward)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum: 5° Tail down

Maximum speeds

	Knots	Kph
VNE	120	223
Rough air	87	161
Manoeuvre		

	Knots	Kph
Aerotow	87	161
Winch / auto tow	70	130
Airbrakes open		

Max winch weak link 500 Kg (white)

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, cloud flying permitted

Span 13.5 Meters

C of G limits are 23 - 37% AMC

This sheet compiled by: Tim Macfadyen Date: 29 Jan 2003

BGA glider data sheet - IS 28B2

Data source: BGA Data sheet

Date of issue:

Manufacturer: Brasov (Rumania)

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	590	1301
BGA concession non-aerobatic max weight (dry) [+3%]	608	1340
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)		
Rear pilot position (aft of datum)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				
Flaps	11°	15°		

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	122	226
Rough air	89	165
Manoeuvre		

	Knots	Kph
Aerotow	81	150
Winch / auto tow	67	125
Flaps down	70	130

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, cloud flying permitted

Span 17 meters

C of G limits 22 - 40% SMC

This sheet compiled by: Tim Macfadyen

Date: 29 Jan 2003

BGA glider data sheet - IS 29 D2

Data source: BGA data sheet

Date of issue:

Manufacturer: Brasov (Rumania)

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	360	793
BGA concession non-aerobatic max weight (dry) [+3%]	371	818
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	150	5.9
Aft C of G limit (aft of datum)	300	11.8
Pilot position (forward)	650	25.6

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage rear top 4° ± 10 minutes tail down

Maximum speeds

	Knots	Kph
VNE	121	225
Rough air	65	120
Manoeuvre		

	Knots	Kph
Aerotow	73	135
Winch / auto tow	59	110
U/C down	75	140

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, cloud flying permitted

Span 15 meters

This sheet compiled by: Tim Macfadyen Date: 29 Jan 2003

BGA glider data sheet - IS 30

Type: IS 30

Data source : Flight Manual

Date of issue: 1985

Manufacturer: Brasov

Web site:

Phone:

Fax:

UK Agent:

E Mail: Phone:

Link to mandatory mods:

Fax:

Weighing Data:

	Kg	Pounds
Max weight fully aerobatic	520	1147
Max weight semi aerobatic	590	1300
BGA concession non-aerobatic max weight	608	1340
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	249	9.8
Aft C of G limit (aft of datum)	496	19.5
Front pilot position (forward of datum)		
Rear pilot position (forward of datum)		

Longitudinal datum: Wing root LE .

Horizontal datum:

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	26 ±2	13 ±2		
Elevator	30 ±2	26 ±2		
Trim	25±3	25±3		
Rudder	Left 28 ±2	Right 28 ±2		

Maximum speeds & G

	Semi aerobatic		Fully aerobatic	
	Knots	Kph	Knots	Kph
VNE	121	225	135	250
Rough air	86	160	89	165
Manoeuvre	86	160	89	165
Aerotow	75	140	75	140
Winch / auto tow	67	125	67	125
Max G	+5.3 -2.65		+6.5 -4.0	

Max winch weak link: 600 Kg (blue)

Tyre pressure:

Cloud flying permitted

This sheet compiled by: Tim Macfadyen/Dave Bullock

Date 9 November 2001

BGA glider data sheet - IS 32

Data source: BGA Data sheet

Date of issue:

Manufacturer: Brasov (Rumania)

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	590	1301
BGA concession non-aerobatic max weight (dry) [+3%]	608	1340
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)		
Rear pilot position (aft of datum)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	105	195
Rough air	86	160
Manoeuvre		

	Knots	Kph
Aerotow	75	140
Winch / auto tow	N/A	N/A
Flaps down	75	140

Winch launching is prohibited.

Tyre pressure: Main psi (Bar), rear psi (bar)

Non aerobatic non-spinning, cloud flying permitted

Span 20 meters

C of G limits 19.3 - 44.1% SMC

This sheet compiled by: Tim Macfadyen Date: 7 Feb 2003

BGA glider data sheet - Jantar-1 (SZD-38A) 19 Meter

Data source: Manufacturer's flight manual

Date of issue: 12.9.75

Manufacturer: SZD Poland

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	417	919
BGA concession non-aerobatic max weight (dry) [+3%]	430	948
Max weight (with water)	515	1136
Max weight of non lifting components (everything except wings)	242	536
BGA concession non-aerobatic max weight of non lifting components [+5%]	255	562
Max pilot weight (seat load)	119	262
	mm	Inches
Forward C of G limit (aft of datum)	162	6.4
Aft C of G limit (aft of datum)	343	13.5
Front pilot position (forward)	711	28

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	20° ±1°	14° ±1°	Flaps neutral	
Elevator	27° ±1°	17° ±1°		
Flaps	5° ±1°	5° ±1°		
Rudder	Left 30° ±2°	Right 30° ±2°		
Brakes	115mm minimum extension			

Longitudinal datum: Wing root LE at rib

Horizontal datum: Root rib level (achieve using water manometer on leading and trailing edges)

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	132	245	Aerotow	78	145
Rough air	86	160	Winch / auto tow	59	110
Manoeuvre	78	145	Airbrakes open*	132	245

*Open brakes with caution when above 200 Kph (108 knots).

Max winch weak link: 750 Kg (Red)

Tyre pressure: Main 37 psi

Semi aerobatic without water ballast

Notes: -

This sheet compiled by:

Afandi Darlington & Tim Macfadyen

Date: 23 January 2003

BGA glider data sheet - Jantar-Standard 1 (SZD - 41A) 15 Meter

Data source: Manufacturer's Manuals

Date of issue: 1978

Manufacturer: SZD, Bielsko, Poland

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	360	794
BGA concession non-aerobatic max weight (dry) [+3%]	371	818
Max weight (with water)	460	1014
Max weight of baggage : - In front of spar. Behind spar	5 10	11 22
Max water	100	220
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	220	8.66
Aft C of G limit (aft of datum)	428	16.85
Pilot position (forward)		

Control deflections in mm

	Up	Down	Measuring point	Max free play
Ailerons	60±4	37±4	Root TE	
Elevator	92±3	48±3	Root TE	
Rudder	148±9 Left & right		Top TE	
Brakes (open)	Upper 122±5 Lower 116±5			

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:70 rear down

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	132	245	Aerotow	78	145
Rough air	83	154	Winch / auto tow	59	110
Manoeuvre	83	154	Airbrakes open	132	245

Max winch weak link: 690 Kg (Blue)

Tyre pressure: Main 30 psi, 2 bar

Semi aerobatic without water ballast. Cloud flying permitted.

Notes: -

BGA recommended modification - Secure the seat back to prevent it coming lose under negative G.

This sheet compiled by: Tim Macfadyen

Date: 21 July 2003

BGA glider data sheet - Jantar-Standard 2 (SZD - 48-1) 15 Meter

Data source: Manufacturer's Manuals

Date of issue: 1978

Manufacturer: SZD Poland

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	385	849
BGA concession non-aerobatic max weight (dry) [+3%]	396	874
Max weight (with water)	535	1180
Max water	150	331
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	158	6.22
Aft C of G limit (aft of datum)	336	13.23
Pilot position (forward)	695	27.4

Control deflections in degrees

	Up	Down	Measuring point
Ailerons	60 ± 4	37 ± 4	
Elevator	100 ± 3	54 ± 3	
Rudder	143 ±5 left & right		Top at TE
Brakes	Top 122 ± 5 Bottom 118 ± 5		

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	137	255	Aerotow	81	150
Rough air	108	200	Winch / auto tow	67	125
Manoeuvre	81	150	U/C down	137	254

Max winch weak link: 759 Kg (Red)

Tyre pressure: Main 2 atu (30 psi)

Semi aerobatic without water ballast. Cloud flying permitted.

C of G limits are 21.3% - 45.3% MAC

This sheet compiled by:

Tim Macfadyen

Date: 24 October 2003

BGA glider data sheet - Jantar-2 (SZD-42-1) 20.5 Meter

Data source: BGA Data sheets

Date of issue:

Manufacturer: SZD Poland

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	470	1036
BGA concession non-aerobatic max weight (dry) [+3%]	484	1067
Max weight (+ water) Jantar 2A	605	1334
Max water Jantar 2A	135	298
Max weight (+ water) Jantar 2B	645	1422
Max water Jantar 2B	170	375
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Pilot position (forward)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Flaps				
Rudder				
Brakes				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	135	250	Aerotow	75	140
Rough air	89	165	Winch / auto tow	Not permitted	
Manoeuvre			U/C down	135	250
			Flaps down	75	140

Max winch weak link: Winch launching not permitted

Tyre pressure: Main psi

Semi aerobatic without water ballast and with flaps neutral. Side slipping not recommended.

Cloud flying permitted.

This sheet compiled by:

Tim Macfadyen

Date: 10 Feb 2003

BGA glider data sheet - Jantar-Standard 3 (SZD - 48-3) 15 Meter

Data source: BGA data & Manufacturer's maintenance manual

Date of issue: March 1983

Manufacturer: SZD Poland

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	390	860
BGA concession non-aerobatic max weight (dry) [+3%]	402	886
Max weight (with water)	540	1191
Max in central luggage comp.	25	55
Max in rear luggage comp.	10	22
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	148	5.83
Aft C of G limit (aft of datum)	336	13.23
Pilot position (forward)	605 - 735	23.82 - 28.94

Control deflections in mm

	Up	Down	Measuring point	Max free play
Ailerons	56/64	33/41	TE inboard	± 3 at aileron TE
Elevator	97/100	51/54	TE centre	± 2,5 at elevator TE
Rudder	138/148 left & right		TE bottom	
Brakes	Top 117/127 Bottom 113/123		Outer end above or below wing	

Longitudinal datum: Wing root LE

Horizontal datum: 22mm gap below TE when level is placed below (and touching) root rib bottom.

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	154	285	Aerotow	81	150
Rough air	108	200	Winch / auto tow	67	124
Manoeuvre					

Max winch weak link: 600 Kg (Tost Blue)

Tyre pressure: Main 28 psi, 2,0 bar Tail 21 psi, 1,5 bar

Semi aerobatic without water ballast. Cloud flying permitted.

Note: -

Every 1000 flying hours or 6 years (whichever comes first) maintenance actions must be performed as specified in the manufacturer's Maintenance Handbook.

This sheet compiled by: Tim Macfadyen Last update: 22 May 2005

BGA glider data sheet - Janus A

Data source: BGA data & FAA data

Date of issue: 1976

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199 www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	620	1367
Max landing weight	620	1367
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)	440	970
BGA concession non-aerobatic max weight of non lifting components [+5%]	462	1019
	mm	Inches
Forward C of G limit (aft of datum)	30	1.18
Aft C of G limit (aft)	300	11.81
Front pilot (forward of datum)	1300	51.2
Rear pilot (forward of datum)	190	7.5
Max non fixed baggage 5 Kg.		
Max fixed equipment in centre section 25 Kg.		

	Up	Down	Measuring point
Ailerons (Flaps 0)	90 - 72	48 - 35	Root rib
Elevator	57 - 42	82 - 67	Root rib
Rudder	Left & right 274 - 234		Root rib
Flaps	27 - 21	65 - 59	Root rib

Longitudinal datum: Wing root LE root rib.

Horizontal datum: Rear fuselage top 1000:45 tail down

Maximum speeds

	Knots	Kph
VNE	119	220
Rough air	119	220
U/C down	119	220
Winch / auto tow	65	120

	Knots	Kph
Manoeuvre	92	170
Aerotow	92	170
Flaps "L" & +10	92	170

Max winch weak link: 825 daN (BGA approved increase to 850 Kg, Tost brown)

Tyre pressures: Main 64 psi (4.5 Bar) Nose 35 psi (2.5 bar)

Semi aerobatic. Cloud flying is permitted without water.

Span 18.2 meters

This sheet compiled by: Tim Macfadyen

Date: 12 Feb 2005

BGA glider data sheet - Janus B

Data source: BGA data

Date of issue:

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199 www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	620	
Max landing weight	620	
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
	mm	Inches
Forward C of G limit (aft of datum)	70	
Aft C of G limit (aft)	300	
Front pilot (forward of datum)	1300	51.2
Rear pilot (forward of datum)	190	7.5
Max non fixed baggage 5 Kg.		
Max fixed equipment in centre section 25 Kg.		

	Up	Down	Distance - hinge to measuring point
Ailerons			
Flaps 0			
Elevator			
Rudder			

Longitudinal datum: Wing root LE root rib.

Horizontal datum: Rear fuselage top 1000:45 tail down

Maximum speeds

	Knots	Kph
VNE	119	
Rough air	92	
Manoeuvre		
U/C down		
Winch / auto tow	65	
Aerotow	92	
Flaps "L"		

VNE at altitude			
Height in Meters	Height in feet	Knots	Kph
3 - 4 000	10-13 000		
4 - 5 000	13-16 500		
5 - 6 000	16.5-20 000		
6 - 7 000	20-23 000		
7 - 8 000	23-26 000		
8 - 9 000	26-29 500		
9 - 10 000	29.5-33 000		
10 - 12 000	33-39 500		
12 000+	39 500+		

Max winch weak link: 825 daN (BGA Brown) Tyre pressures: Main 64 psi (4.5 Bar) Nose 35 psi (2.5 bar)

Semi aerobatic. Cloud flying is permitted without water.

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

Span 18.2 meters

This sheet compiled by: Tim Macfadyen

Date: 17 Sept 2002

BGA glider data sheet - Janus C

Data source: Flight Manual

Date of issue: June 1980

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	700	1543
Max landing weight	700	1543
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)	400	882
BGA concession non-aerobatic max weight of non lifting components [+5%]	420	926
	mm	Inches
Forward C of G limit (aft of datum)	40	1.58
Aft C of G limit (aft)	270	10.63
Front pilot (forward of datum)	1300	51.2
Rear pilot (forward of datum)	190	7.5
Max non fixed baggage 5 Kg.		
Max fixed equipment in centre section 25 Kg.		

	Up	Down	Distance - hinge to measuring point
Ailerons Flaps 0	80 +10 -7	40 +7 -5	193
Elevator	55 ±6	55 ±6	182
Rudder	Left & right 255 ± 20		450

The above are as per Mod SB No 295-21

Longitudinal datum: Wing root LE root rib.

Horizontal datum: Rear fuselage top 1000:45 tail down

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	97	180
Manoeuvre	97	180
U/C down	97	180
Winch / auto tow	81	150
Aerotow	97	180
Flaps "L"	76	140

VNE at altitude			
Height in Meters	Height in feet	Knots	Kph
3 000	10 000	129	240
4 000	13 000	122	227
5 000	16 500	116	215
6 000	20 000	111	205
7 000	23 000	104	193
8 000	26 000	98	182
9 000	29 500	93	172
10 000	33 000	87	161
12 000	39 500	76	140

Max winch weak link: 825 daN (BGA Brown) Tyre pressures: Main 64 psi (4.5 Bar) Nose 35 psi (2.5 bar)

Semi aerobatic. Cloud flying is permitted without water.

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

Span 20 meters

This sheet compiled by: Tim Macfadyen

Date: 17 Sept 2002

BGA glider data sheet - Janus CT Self sustainer ("Turbo")

Data source: Flight Manual

Date of issue: June 1980 & Janus CT Flight Manual Sept 1984

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199 www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	700	1543
Max landing weight	700	1543
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)	450	992
BGA concession non-aerobatic max weight of non lifting components [+5%]	472	1042
	mm	Inches
Forward C of G limit (aft of datum)	40	1.58
Aft C of G limit (aft)	270	10.63
Front pilot (forward of datum)	1300	51.2
Rear pilot (forward of datum)	190	7.5
Max non fixed baggage 5 Kg.		
Max fixed equipment in centre section 25 Kg.		

	Up	Down	Distance - hinge to measuring point
Ailerons Flaps 0	80 +10 -7	40 +7 -5	193
Flaps	24 ±3	62 ±7	201
Rudder	Left & right 255 ± 20		450
The above are as per Mod SB No 295-21			

Longitudinal datum: Wing root LE root rib.

Horizontal datum: Rear fuselage top 1000:45 tail down

The fuel tank is 470 mm in front of datum. Contents 27 litres (26 useable). Fuel weight is 20 Kg.

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	97	180
Manoeuvre	97	180
U/C down	97	180
Winch / auto tow	81	150
Aerotow	97	180
Flaps "L"	76	140
Engine extended	86	160
Max engine RPM 4000		

VNE at altitude			
Height in Meters	Height in feet	Knots	Kph
3 000	10 000	129	240
4 000	13 000	122	227
5 000	16 500	116	215
6 000	20 000	111	205
7 000	23 000	104	193
8 000	26 000	98	182
9 000	29 500	93	172
10 000	33 000	87	161
12 000	39 500	76	140

Max winch weak link: 910 daN (Brown)

Tyre pressures: Main 64 psi (4.5 Bar) Nose 35 psi (2.5 bar)

Semi aerobatic. Cloud flying is permitted without water.

Fuel is Automobile premium min 96 RON. Fuel oil mixture 30:1. Oil is Castrol Super TT two stroke oil.

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

Span 20 meters

This sheet compiled by: Tim Macfadyen

Date: 4 Nov 2002

BGA glider data sheet - Jaskolka Z (SZD 8bis)

Data source: The world's Sailplanes Vol 1

Date of issue: 1962

Manufacturer: PZL Poland

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	455	1003
Max weight dry	370	815
BGA concession non-aerobatic max weight (dry) [+3%]	381	840
Max water	95	209
Max pilot weight (seat load)	90	198

mm Inches

Forward C of G limit (aft of datum)	483	19.0
Aft C of G limit (aft of datum)	549	21.6
Front pilot position (forward)	178	7.0

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	30°	15°		
Elevator	30°	23°		
Flaps	0°	25°		
Rudder	Left & right 30°			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	122	226
Rough air	75	140
Flaps down	65	120

	Knots	Kph
Aerotow	65	120
Winch / auto tow	48	90

Max winch weak link: 600 Kg (Blue)

Tyre pressure: psi (Bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 16 meters

This sheet compiled by: Tim Macfadyen Date: 13 June 2002

BGA glider data sheet - Javelot Super WA 22 & WA 22A

Data source: BGA Data & The World's Sailplanes Vol II

Date of issue: 1963

Manufacturer:

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight WA 22	350	772
BGA concession non-aerobatic max weight (dry) [+3%] WA 22	360	795
Max weight WA 22A	358	790
BGA concession non-aerobatic max weight (dry) [+3%] WA 22A	369	814
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)	330	13
Aft C of G limit (aft of datum)	480	18.9
Pilot position (forward)	419	16.5

Control deflections in degrees

	Up	Down		Max free play
Inner ailerons	25°	15°		
Outer ailerons	15°	10°		
Elevator	30°	22°		
Rudder	Left & right 30°			

Serial numbers 60 - 91 are model WA 22. Serial numbers 92 onwards are model WA 22A.

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	108	200	Aerotow	75	140
Rough air	70	130	Winch / auto tow	54	100
Manoeuvre					

Max winch weak link: 500 kg (White)

Tyre pressure: Main psi

Semi aerobatic, cloud flying permitted

Span 15 meters

This sheet compiled by: Tim Macfadyen Date: 12 March 2003

BGA glider data sheet - JP15-34 (Carman)

Data source: BGA Data sheets

Date of issue:

Manufacturer: Carman (available as a home build kit)

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	350	770
BGA concession non-aerobatic max weight (dry) [+3%]	360	793
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Pilot position (forward)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				
Brakes				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	118	219	Aerotow	84	156
Rough air	84	156	Winch / auto tow	60	111
Manoeuvre					

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main psi

Non aerobatic no intentional spinning.

Span 15 meters

This sheet compiled by:

Tim Macfadyen

Date: 11 Feb 2003

BGA glider data sheet - JP15-36 (Carman)

The JP15-36A has water ballast. The JP15-36R has a retractable wheel.

Data source: BGA Data sheets

Date of issue:

Manufacturer: Carman S A

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight dry	335	738
BGA concession non-aerobatic max weight (dry) [+3%]	345	761
Max weight with water	390	860
Max water	80	176
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)	282	11.10
Aft C of G limit (aft of datum)	433	17.05
Pilot position (forward)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 4° tail down

Maximum speeds

	Knots	Kph		Knots	Kph
VNE	119	220	Aerotow	89	165
Rough air	89	165	Winch / auto tow (dry)	60	111
Manoeuvre			Winch / auto tow (with water)	65	120

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main psi

Semi aerobatic, cloud flying permitted

Span 15 meters. DGAC (French CAA) type certificate No 40.

This sheet compiled by: Tim Macfadyen

Date: 11 Feb 2003

BGA glider data sheet - Junior (SZD 51-1)

289Data source: Manufacturers Technical Manual

Date of issue: April 1995

Manufacturer: SZD Allstar, Bielsko-Biala, Poland

UK Agent:

Web site:

Phone:

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight	380	838
BGA concession non-aerobatic max weight (dry) [+3%]	391	863
Max pilot weight (seat load)	110	242
Max in baggage compartment	30	66
Max weight of non lifting components (everything except wings)	275	606
BGA concession non-aerobatic max weight of non lifting components [+5%]	289	637
Forward C of G limit (aft of datum)	287 mm	
Aft C of G limit (aft of datum)	482 mm	
Pilot position (forward)	500 to 510 mm	

	Up	Down	Measuring point	Max free play with stick fixed
Ailerons	75 / 87	38 / 44	TE inboard end	3 mm
Elevator	124 / 138	63.5 / 70.5	TE inboard ends	2.5 mm
Rudder	Left & right 250 / 280		TE bottom	
Airbrakes	Outer ends above wing top surface 176 / 186			
Rudder cable tension 10daN (22 pounds).				

Control surface mass balance – Support the control horizontally on its hinges. Measure the weight at the TE, which must not exceed the following % of the total weight of the control surface: - Aileron 15.8%, at inboard end TE, Elevator 41.1%, at outboard end TE, Rudder 1.16%, at bottom TE.

Longitudinal datum: Wing root LE

Horizontal datum: Datum marks on fuselage side horizontal or wing rib 1 horizontal (front of LE and back of TE at same height).

The two standard nose weights each weigh 0,5 kg. Each reduces the minimum cockpit weight by 1 kg.

Maximum speeds

VNE at altitude

	Knots	Kph
VNE	119	220
Rough air	84	155
Manoeuvre	84	155
Aerotow	81	150
Winch / auto tow	70	130

Height feet	Height meters	Knots	Kph
0 – 6562	0 – 2000	119	220
6562 - 9843	2000 – 3000	113	209
9843 - 13124	3000 – 4000	107	198
13124 - 16405	4000 – 5000	102	188
16405 - 19686	5000 - 6000	96	178

Winch weak link: 690 ± 69 daN = 774 kg max (Tost red)

Tyre pressure: Main 22 psi (1.5 bar), rear 22 psi (1.5 bar)

Semi aerobatic, cloud flying permitted. JAR 22 “Utility” category

Span 15 meters

Manufacturers maximum service life 6000 hours.

BGA glider data sheet - Ka1 & 3

Data source: The world's Sailplanes Vol 1 & BGA data sheet

Date of issue: 1962

Manufacturer: Schleicher (mostly sold as kits for home assembly)

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

10 Meter span	Kg	Pounds
Max weight (dry)	195	430
Max pilot weight (seat load)	95	209
	mm	Inches
Forward C of G limit (fwd of datum)	310	12.21
Aft C of G limit (fwd of datum)	360	14.18
Pilot position (forward)	0	0

Max control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	30°	12.5°		
V Tails	17.5°	17.5°		

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	86	160
Rough air	54	100

	Knots	Kph
Aerotow	54	100
Winch / auto tow	48	90

Max winch weak link: 500 Kg (White)

Tyre pressure: Skid only

Non aerobatic Cloud flying not permitted

Notes: -

10 Meter span

This sheet compiled by: Tim Macfadyen

Date: 7 May 2002

BGA glider data sheet - K 2 & Ka2b

Data source: The world's Sailplanes Vol 1 & BGA data sheet

Date of issue: 1962

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

URL : http://www.as-segelflugzeuge.de/englisch/e_main.htm

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight Ka2	460	1014
BGA concession non-aerobatic max weight Ka2	474	1045
Max weight Ka2b	480	1058
BGA concession non-aerobatic max weight Ka2b	494	1090
Max pilot weight (seat load)	100	220

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	135 ±10	65 ±10	260	
Elevator	160 ±10	160 ±10	470	
Trim				
Rudder	Left 350 ±30	Right 350 ±30	750	

mm Inches

Forward C of G limit (aft of datum)	115	4.5
Aft C of G limit (aft of datum)	244	9.6
Front pilot position (forward of datum)	1041	41
Rear pilot position (forward of datum)	0	0

Longitudinal datum: Wing rib 2 LE .

Horizontal datum: Underside of rib 3 horizontal

Maximum speeds (Equivalent air speeds)

	Knots	Kph
VNE	108	200
Rough air	71	130
Aerotow	71	130

	Knots	Kph
Airbrakes open	108	200
Winch / auto tow	54	100

Max winch weak link: 750 Kg (Tost red)

Tyre pressure: 36 psi (2,5 Bar)

Semi aerobatic Cloud flying permitted

Notes: -

Ka2 is 15 Meter span the Ka2b is 16 Meter span

This sheet compiled by: Tim Macfadyen

Last update 29 Jan 2003

BGA glider data sheet - Rhönlerche II (Often incorrectly called the "Ka 4")

Data source: Manufacturers' Handbook

Date of issue: 1954

Manufacturer: Schleicher (mostly home built)

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight (dry)	408	900
Max pilot weight (seat load)	100	220

Control deflections in mm

	Up	Down	Measuring point	Max free play
Ailerons	135 ±20	55 ±15	Inboard TE	
Elevator	210 ±30	142 ±20		
Airbrakes				
Rudder	Left 420 ±30	Right 420 ±30-		

	mm	Inches
Forward C of G limit (aft of datum)	366	14.4
Aft C of G limit (aft of datum)	540	21.25
Front pilot position (forward of datum)	450	17.7
Rear pilot position (rear of datum)	460	18.1
Ballast weights (forward of datum)	1035	40.75

Longitudinal datum: Wing root LE (Rib 1).

Horizontal datum: Bottom of Rib 1 horizontal

Maximum speeds

	Knots	Kph
VNE	92	170
Rough air	65	120
Manoeuvre		

	Knots	Kph
Aerotow	65	120
Winch / auto tow	49	90

Max winch weak link: 900Kg (brown)

Tyre pressure:

Non/~~semi~~/fully aerobatic non cloud flying, (spinning and stalling are permitted).

Notes: -

The tailplane is at an incidence of -2° with wing rib 1 bottom surface horizontal.

This sheet compiled by: Tim Macfadyen

Date: 21 September 2001

BGA glider data sheet - Ka 6, BR & CR (Rhönsegler)

Data source: Manufacturer's Handbook

Date of issue:

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight (dry)	300	660
BGA concession non-aerobatic max weight (dry) [+3%]	309	680
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)	190	419
BGA concession non-aerobatic max weight of non lifting components [+5%]	200	440

mm Inches

Forward C of G limit (aft of datum)	175	6.9
Aft C of G limit (aft of datum)	352	13.8
Pilot position (forward of datum)	520	20.5

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	110 ±10	45 ±10	220	
Elevator All except "PE" model	105 ±10	105 ±10	330	
Elevator "PE" model	125 ±10	125 ±10	585	
Rudder	Left 355 ±20	Right 355 ±20	680	

Longitudinal datum: Wing root LE Rib 3

Horizontal datum: Rear fuselage top 1000:122 tail down

Maximum speeds (Indicated airspeeds with standard pitot/static system)

	Knots	Kph
VNE	108	200
VNE Ka6 BR-Pe & CR-Pe	97	180
Rough air	83	154
Manoeuvre	83	154

	Knots	Kph
Aerotow	83	154
Winch / auto tow	60	111
Airbrakes open	108	200

Max winch weak link: 600 Kg Blue

Tyre pressure: 36 psi 2,5 Bar

Semi aerobatic. Cloud flying permitted.

Notes: -

The Ka6 is 14.4 Meters span, the others are 15 meters

The "PE" versions have Ka 6E type all moving tailplanes.

The "R" versions have wheels, the previous versions have main skids

This sheet compiled by: Tim Macfadyen Date: 1 July 2003

BGA glider data sheet - Ka 6E (Rhönsegler)

Data source: Manufacturer's Handbook Date of issue: 1965

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight (dry)	300	660
BGA concession non-aerobatic max weight (dry) [+3%]	309	680
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)	190	419
BGA concession non-aerobatic max weight of non lifting components [+5%]	200	440

mm Inches

Forward C of G limit (aft of datum)	180	7.1
Aft C of G limit (aft of datum)	383	15.0
Pilot position (forward of datum)	424	16.7

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	110 ±10	46 ±10	220	
Elevator	125 ±10	125 ±10	585	
Rudder	Left 355 ±20	Right 355 ±20	680	

Longitudinal datum: Wing root LE Rib 3

Horizontal datum: Rear fuselage top 1000:90 tail down

Maximum speeds (Indicated airspeeds with standard pitot/static system)

	Knots	Kph
VNE	108	200
Rough air	81	150
Manoeuvre	81	150

	Knots	Kph
Aerotow	81	150
Winch / auto tow	56	104
Airbrakes open	108	200

Max winch weak link: 600 Kg Blue

Tyre pressure: 36 psi 2,5 Bar

~~Non~~/semi/fully aerobatic. Cloud flying permitted.

Notes: -

BGA glider data sheet - K 7

Data source : Manufacturers' handbook Date of issue: 1958

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone: 01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

URL : http://www.as-segelflugzeuge.de/englisch/e_main.htm

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight	480	1060
BGA concession non-aerobatic max weight	529	1166
Max weight of non lifting components (everything except wings)	320	705
BGA concession non-aerobatic max weight of non lifting components	336	741
Max pilot weight (seat load)	100	220
Max pilot weight (seat load) BGA	110	242

mm Inches

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	135 ±10	65 ±10	260	
Elevator	160 ±10	160 ±10	470	
Trim				
Rudder	Left 350 ±30	Right 350 ±30	750	

Forward C of G limit (aft of datum)	50	2*
Aft C of G limit (aft of datum)	275	11*
Front pilot position (forward of datum)	825	33*
Rear pilot position (forward of datum)	0	0

* These figures are not exact equivalents of the mm figures but are quoted by Schleicher in English manuals and are clearly considered to be sufficiently close whole numbers equivalents.

Longitudinal datum: Wing rib 2 LE .

Horizontal datum: Rear fuselage top longeron 1000:35 tail down (underside of rib 3 horizontal)

Maximum speeds (Indicated airspeeds with standard pitot/static system)

	Knots	Kph
VNE	108	200
Rough air	78	144
Manoeuvre	78	144
Aerotow	78	144

	Knots	Kph
Airbrakes open	108	200
Winch / auto tow	60	111
Winch / auto tow BGA figure (weak link reduced to 850kg)	66	122

Max winch weak link: 1070 Kg (Tost black). 850 Kg (Tost brown) with the BGA max speed of 66 knots

Tyre pressure: 36 psi (2,5 Bar)

Semi aerobatic. Cloud flying permitted

This sheet compiled by: Tim Macfadyen

Last update 4 July 2005

BGA glider data sheet - Ka 8b

Data source Manufacturer's Handbook Date of issue:1963 and BGA data

Manufacturer: Schleicher

Web site:

Phone:

Fax:

UK Agent: Peter Wells

E Mail: zuluglasstek@clara.net

Phone:01844 208 157

Link to mandatory mods:

Fax: 01844 201 028

Weighing Data:

	Kg	Pounds
Max weight (dry)	310	685
BGA concession non-aerobatic max weight (dry) [+3%]	320	706
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)	200	440
BGA concession non-aerobatic max weight of non lifting components [+5%]	210	462

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	120 ±15	48 ±10	230	
Elevator	138 ±15	138 ±15	400	
Trim	25±5	17±3	Measure to elevator TE with elevator neutral	
Rudder	Left 375 ±25	Right 375 ±25	750	

mm Inches

Forward C of G limit (aft of datum)	247	9.7
Aft C of G limit (aft of datum)	390	15.4
Pilot position (forward of datum)	380	15

Longitudinal datum: Wing LE Rib 1

Horizontal datum: Bottom of wing rib 2 horizontal

Maximum speeds (Indicated airspeeds with standard pitot/static system)

	Knots	Kph
VNE	100	185
Rough air	76	141
Manoeuvre	76	141

	Knots	Kph
Aerotow	76	141
Winch / auto tow	60	111
Airbrakes open	100	185

Max winch weak link: 600 Kg Blue

Tyre pressure:36 psi 2,5 Bar

Semi aerobatic. Cloud flying permitted.

This sheet compiled by: Tim Macfadyen

Date: 23 August 2004

BGA glider data sheet - Kestrel 17 (T.59A & E)

Data source: Pilots Notes/Operators Handbook Date of issue: 1973

Manufacturer: Slingsby Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	408	900
Max weight (dry)	408	900
BGA concession non-aerobatic max weight [+3%]	420	926
Max pilot weight (seat load)		
Max water (tank size)	73	160

Control deflections in mm (or degrees where marked °)

	Up	Down	Measuring point	Max free play
Elevator	16.5° ±1.5°	16.5° ±1.5°	Inboard end	1 Total
Airbrakes	113±5		At tip	
Rudder	Left & right 160±20		Bottom TE	6 Total
Ailerons with flaps neutral	20°±2°	10°±2°	Ailerons	1,5 Total

	mm	Inches
Forward C of G limit (aft of datum)	285	11.21
Aft C of G limit (aft of datum)	380	14.93
Pilot position (forward of datum)	445	17.5

Flap setting	Flaps	Ailerons	Flaps 3 Total
-2	-8°±1°	-8°±1°	
0	0°±1° 8°±1° up 4°±1° down with full aileron	0°+1°-2°	
+2	12°±1°	10°±1°	
Landing flap & +2	35°±2°		

T.59A is CAA certified. T.59E is BGA certified.

Longitudinal datum: Wing root LE 500mm from the fuselage centre

Horizontal datum: Rear fuselage top 2.5 degrees tail down

The main wheel is 2.2 inches behind datum. The tail wheel is 163 inches behind the main wheel.

Trim set full forward, force to hold stick full back 5 lb min. Trim set full back, force to hold stick full forward 4.5 lb min.

Maximum speeds

	Knots	Kph
VNE (Flaps -2 or -1)	117	217
Rough air	105	195
Aerotow	81	150
Winch / auto tow	70	130
Gear down	105	195

	Knots	Kph
Airbrakes open	117	217
Flaps 0 & +1	108	200
Flaps + 2	81	150
½ Landing flap	70	130
Landing Flap	65	120

Max winch weak link: 1000 lb (450 Kg) BGA figure 600 Kg (Blue)

Tyre pressure: Main wheel 40 - 45 PSI Tail wheel 17 PSI

Aerobatics prohibited. Cloud flying permitted

Notes: -

This sheet compiled by: Tim Macfadyen Last update: 2 September 2006 (minor clarifications)

BGA glider data sheet - Kestrel 19 (T.59 C, D & F)

Data source: Pilots Notes/Operators Handbook Date of issue: 1973

Manufacturer: Slingsby Phone: 01751 432474 Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	472	1040
Max weight (dry)	449	990
BGA concession non-aerobatic max weight (dry) [+3%]	462	1020
Max pilot weight (seat load)		
Max water (tank size)	73	160

Control deflections in mm (or degrees where marked °)

	Up	Down	Measuring point	Max free play
Elevator	16.5° ±1.5°	16.5° ±1.5°	Inboard end	1 Total
Airbrakes	113±5		At tip	
Rudder	Left & right 160±20		Bottom TE	6 Total
Anti balance tab	17° ±1.5°	16° ±1.5°		
Series 1 trim set full forward, force to hold stick full back 14.5 lb min Series 1 trim set full back, force to hold stick full forward 14.5 lb min Series 2 trim set full back, force to hold stick full forward 7 lb ± ½ lb Series 2 trim set full forward, force to hold stick full back 8.5 lb ± ½ lb				
	Flaps		Ailerons	
Flaps -2	-8°±1°		-8°±1°	Flaps 3 Total
Flaps 0	0°±1° 8°±1° up 4°±1° down with full aileron		0°±1°-2° 20°±2°up 10°±2° down	Ailerons 1,5 Total
Flaps +2	12°±1°		10°±1°	
Landing flap & +2	35°±2°			

T.59 D is CAA certified. T.59 C & F are BGA certified. The T.59 C has a carbon spar.

Series 2 Kestrel 19s have an anti-balance tab on the elevator (Mod 13). C of G limits and max speeds with flaps down change.

The main wheel is 2.5 inches behind datum. The tail wheel is 163 inches behind the main wheel.

Longitudinal datum: Wing root LE 500mm from the fuselage centre

Horizontal datum: Rear fuselage top 2.5 degrees tail down

Maximum speeds

	Knots	Kph		Knots	Kph
VNE (Flaps -2 or -1)	135	250	Flaps 0 & +1 Series 1	108	200
Rough air	105	195	Flaps 0 & +1 Series 2	100	185
Aerotow	81	150	Flaps + 2 Series 1	81	150
Winch / auto tow	70	130	Flaps + 2 Series 2	70	130
Gear down	105	195	½ Landing flap	70	130
Airbrakes open	135	250	Landing Flap	65	120

Max winch weak link: 1000 lb (450 Kg) BGA figure 600 Kg (blue)

Tyre pressure: Main wheel 40 - 45 PSI Tail wheel 22 PSI

Aerobatics prohibited. Cloud flying permitted

Notes: -

This sheet compiled by: Tim Macfadyen Last update: 2 September 2006 (minor clarifications)

BGA glider data sheet - Kestrel 22 (T.59 J)

Data source: BGA Data

Manufacturer: Slingsby Sailplanes Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	658	1450
Max weight dry (& max landing weight)	555	1225
Max pilot weight (seat load)		
Max water		

mm Inches

Forward C of G limit (aft of datum)	343	13.5
Aft C of G limit (aft of datum)	419	16.5
Pilot position (forward of datum)	437	17.2

Control deflections

	Up	Down	Measuring point	Max free play
Elevator				
Airbrakes				
Rudder				
Anti balance tab				
	Flaps		Ailerons	
Flaps -2				
Flaps 0				
Flaps +2				
Landing flap & +2				

Longitudinal datum: Wing root LE 500mm from the fuselage centre

Horizontal datum: Rear fuselage top 2.5 degrees tail down

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	105	195
Aerotow	81	150
Winch / auto tow	70	130
Gear down	105	195

	Knots	Kph
Airbrakes open	108	200
Flaps 0 & +1 Series 2	100	185
Flaps + 2 Series 2	70	130
½ Landing flap	70	130
Landing Flap	65	120

Max winch weak link:

Tyre pressure: Main wheel 40 - 45 PSI Tail wheel 17 PSI

Aerobatics prohibited. Cloud flying permitted

Notes: -

This sheet compiled by: Tim Macfadyen Date: 21 October 2002

BGA glider data sheet - Kirby Kite 1

Data source: The world's Sailplanes Vol 1 & BGA data

Date of issue: 1962

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	254	560
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)	178	7.0

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	69	128
Rough air	52	96

	Knots	Kph
Aerotow	52	96
Winch / auto tow	43	80

Max winch weak link: 500 Kg (White)

Non aerobatic, Cloud flying not permitted

Notes: -

Span 14.17 meters

This sheet compiled by: Tim Macfadyen

Date: 11 May 2002

BGA glider data sheet - Kirby Kite 2B

Data source: The world's Sailplanes Vol 1

Date of issue: 1962

Manufacturer:

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	295	650
BGA concession non-aerobatic max weight (dry) [+3%]	304	670
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	343	13.5
Aft C of G limit (aft of datum)	401	15.8
Front pilot position (forward)	387	15.25

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	88	163
Rough air	68	126

	Knots	Kph
Aerotow	68	126
Winch / auto tow	52	96

Max winch weak link: 500 Kg (white)

Tyre pressure: psi (Bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 15 meters

This sheet compiled by: Tim Macfadyen Date: April 2002

BGA glider data sheet - Kranich II

Data source: LBA Data sheet

Date of issue: 30 June 1952

Manufacturer: Folke-Wulf GmbH, Hunefeldstrasse 1-5, Bremen-Flughafen 2800, Germany

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	465	1025
Max weight of non lifting components (everything except wings)	290	639
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	670	26.4
Aft C of G limit (aft of datum)	780	30.7
Front pilot position (forward)		
Rear pilot position (aft of datum)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	130 ±5	75 ±5	360	
Elevator	170 ±10	235 ±10	520	
Rudder	Left & right 370 to 470		850	

Longitudinal datum: Rib 1 horizontal

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	94	175
Rough air	54	100

	Knots	Kph
Aerotow	54	100
Winch / auto tow	43	80

Max winch weak link: 960 Kg (Brown)

Tyre pressure: Main psi (Bar), rear psi (bar)

Non aerobatic. Cloud flying not permitted. (Designed to German BVS 2)

Span 18 meters

Best L/D 23.6:1 min sink 0.69 m/s

This sheet compiled by: Tim Macfadyen Date: 29 July 2004

BGA glider data sheet - Kranich III

Data source: The world's Sailplanes Vol 1 & LBA

Date of issue: 12 May1986

Manufacturer: Folke-Wulf GmbH, Hunefeldstrasse 1-5, Bremen-Flughafen 2800, Germany

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	520	1146
Max weight of non lifting components (everything except wings)	345	761
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	688	27.1
Aft C of G limit (aft of datum)	818	32.2
Front pilot position (forward)	330	13
Rear pilot position (aft of datum)	965	38

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	170 ±20	50 ±10	405	
Elevator	135 ±10	135 ±10	325	
Trim				
Rudder	Left & right 550 ± 30		1050	

Longitudinal datum: Wing root LE at rib 2

Horizontal datum: Rear fuselage horizontal

Maximum speeds

	Knots	Kph
VNE	100	185
Rough air	70	130

	Knots	Kph
Aerotow	70	130
Winch / auto tow	54	100

Max winch weak link: 850 Kg (Brown)

Tyre pressure: Main psi (Bar), rear psi (bar)

Non aerobatic. Cloud flying not permitted. (Designed to German BVS 2)

This sheet compiled by: Tim Macfadyen Date: 19 July 2004

BGA glider data sheet - L 33 - Solo

Data source: Manufacturer's Manual

Date of issue: Nov 1992

Manufacturer: LET, 686 04 Kunovice, The Czech Republic

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	340	750
BGA concession non-aerobatic max weight (dry) [+3%]	350	772
Max weight of non lifting components (everything except wings)	235	518
BGA concession non-aerobatic max weight of non lifting components [+5%]	247	544
Max in baggage compartment	20	44
Max pilot weight (seat load)	110	242
Max weight of pilot & baggage	120	264

mm Inches

Forward C of G limit (aft of nose tip)	2204	86.8
Aft C of G limit (aft of nose tip)	2352	92.6
Front pilot position		

Longitudinal datum: Aircraft nose.

Horizontal datum:

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Maximum speeds

	Knots	Kph
VNE	134	248
Rough air	85	158
Manoeuvre	85	158
Aerotow	85	158
Winch / auto tow	70	130

VNE at altitude	VNE at altitude	Knots	Kph
16400 - 20 000 feet	5 000 - 6 000 meters	133	246
20 000 - 23 000 feet	6 000 - 7 000 meters	131	243
23 000 - 26 000 feet	7 000 - 8 000 meters	130	241
26 000 - 30 000 feet	8 000 - 9 000 meters	129	238
30 000 - 33 000 feet	9 000 - 10 000 meters	127	235
33 000 - 35 000 feet	10 000 - 11 000 meters	126	233

Max winch weak link: 650 daN (Blue)

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, cloud flying permitted.

Notes: -

Span 14.12 meters

7 Kg of ballast can be fitted under the front part of the seat cushion.

This sheet compiled by: Tim Macfadyen Date: 16 September 2002

BGA glider data sheet - LAK 12

Data source: Flight Manual

Date of issue:

Manufacturer: Sportine Aviacija

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	650	1433
Max weight (dry)		
BGA concession non-aerobatic max weight (dry) [+3%]		
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max water	190	419
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	236	9.29
Aft C of G limit (aft of datum)	365	14.37
Pilot position (forward)	689 - 856	27.0 - 33.7

Control deflections in degrees

	Up	Down	Max free play
Ailerons (Flaps neutral)	23° ±1°	12° ±1°	Max 0,5 ^{mm} at all hinges 2.5 ^{mm} at TE
Elevator	18° ±1°	18° ±1°	2 ^{mm} at TE
Rudder	30° ±2° left & right		5 ^{mm} at TE
Flaps	-7° ±1° -4° ±1° 0° ±1° +5° ±1° +11 ±2° +18 ±2°		2.5 ^{mm} at TE

The tailplane max free play, as measured at the tip, is 5mm up/down and 5mm fore/aft. Also max movement of the whole tailplane fore and aft is 0,5mm.

Longitudinal datum: Wing root LE Horizontal datum: Top of rear fuselage 1000:31.2 tail down

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	95	175
U/C extending or retracting	75	140

	Knots	Kph
Aerotow	75	140
Winch / auto tow	75	140
Flaps down +5°, +11° & +18°	95	175

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main 38 psi (2.6 bar)

Semi aerobatic & cloud flying permitted without water ballast

Span 20.42 meters

This sheet compiled by: Tim Macfadyen

Date: 12 July 2004

BGA glider data sheet -LAK-17A

Data source: Manufacturer's Data sheet 03/02

Date of issue: May 2002

Manufacturer: Sportine aviacija, 4340 Prienai, Pociunai, Lithuania

Web site: www.lak.lt

E Mail: sportavia@prienai.omnitel.net

Phone: 370 49 60567

Fax: 370 49 60568

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	500	1102
Max weight (dry)	347	765
BGA concession non-aerobatic max weight (dry) [+3%]	357	788
Max weight of non lifting components (everything except wings)	227.6	502
BGA concession non-aerobatic max weight of non lifting components [+5%]	239	527
Max water	188	414
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	182	7.16
Aft C of G limit (aft of datum)	305	12.0
Pilot position (fwd) seat back	520	20.5
Pilot position (fwd) seat forward	670	26.4

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	19±2	19±2		
Elevator	21±1	21±1		
Rudder	30±1	30±1		
Flap	5±1	15±1		

Longitudinal datum: Wing root LE at rib Horizontal datum: Rear fuselage top 1000:29 tail down

Fin Battery 3.17 Kg, 4192mm aft of datum. Fin water is 4003mm aft of datum.

Maximum speeds

15 & 18 Meter		
	Knots	Kph
VNE	148	275
Winch / auto tow	75	140
U/C down	110	205

	15 Meters		18 Meters	
	Knots	Kph	Knots	Kph
Manoeuvre	116	215	110	205
Rough air	116	215	110	205
Aerotow	86	160	75	140

Max winch weak link:

Tyre pressure: psi (Bar)

Semi aerobatic, cloud flying permitted

Notes: -

Span 15 & 18 meters. Lithuanian Type Number 03.

This sheet compiled by: Tim Macfadyen Date: 22 May 2002

BGA glider data sheet - Club Libelle (Libelle 205)

Data source: BGA Data & FAA database

Date of issue: 1975

Manufacturer: Glasflügel

Agent: H G Streifeneder, Glasfaser-Flugzeug-Service, Brühlstrasse 12, 7318-Lenningen 2, Germany

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	350	772
BGA concession non-aerobatic max weight (dry) [+3%]	360	795
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	254	10.0
Aft C of G limit (aft of datum)	378	14.9
Pilot position (forward) Short pilot	450	17.7
Pilot position (forward) Tall pilot	372	14.65

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	22° ±2°	10° ±2°		
Elevator	17.5° ±1.5°	17.5° ±1.5°		
Rudder	Left 25° ±2°	Right 25° ±2°		
Brakes	60° +0 -5°			

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000: 52 tail down.

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	81	150
Manoeuvre		

	Knots	Kph
Aerotow	73	135
Winch / auto tow	65	120
Airbrakes open		

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, cloud flying permitted.

Span 15 meters. German (LBA) Type certificate number 304.

This sheet compiled by: Tim Macfadyen

Date: 7 July 2003

BGA glider data sheet - Libelle Standard (Glasflügel 201)

See separate sheet for Standard Libelle 201B

Data source : Manufacturers' handbook

Date of issue: Oct 1973

Manufacturer: Glasflügel Agent: Hansjorg Streifeneder, Glasfaser-Flüzeug-Service, Hofner Weg, D-72582 Grabbenstetten, Germany Web: www.streifly.de Tel 0049 7382 1032 and Fax 0048 7382 1629 and email: streifly@aol.com

Weighing Data:

	Kg	Pounds
Max weight (dry)	290	640
BGA concession non-aerobatic max weight (dry) [+3%]	299	659
Max weight of instrument panel	10	22
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)		245	9.6
Aft C of G limit (aft of datum)		350	13.7
Pilot position (forward of datum)	Max	400	15.75
	Min	300	11.81

Longitudinal datum: Wing LE, 425mm from fuselage centre line

Horizontal datum: Rear fuselage top 1000:70 tail down

Distance of main wheel behind datum ("a") 120mm. Distance from main wheel to tail wheel ("b") 3820mm.

Control deflections in degrees

	Up	Down		Max free play
Ailerons	20° ±1°	11° ±1°		
Elevator	18° ±1°	18° ±1°		
Rudder	Left 25° ±1°	Right 25° ±1°		

Maximum speeds

	Knots	Kph
VNE	119	220
Rough air	81	150
Aerotow	81	150

	Knots	Kph
Manoeuvre	81	150
Winch / auto tow	65	120
Airbrakes out	119	220

Control surface mass and mass balance must remain within 2% of their original values.

Max winch weak link: Tost white (BGA approved Mod 600 Kg, Tost blue)

Tyre pressures: Main & tail wheel 36 psi (2,5 Bar)

BGA classification - Semi aerobatic (without water-ballast), cloud flying permitted.

Notes: -

There is no provision for water ballast on the Standard Libelle 201. The 201B has higher weights, speeds and can carry water ballast.

This sheet compiled by: Tim Macfadyen

Last update: 29 July 2005

BGA glider data sheet - Libelle Standard (Glasflügel 201B)

See separate sheet for Standard Libelle (201)

Data source : Manufacturers' handbook

Date of issue: 1973

Manufacturer: Glasflügel Agent: Hansjorg Streifeneder, Glasfaser-Flüzeug-Service, Hofner Weg, D-72582 Grabbenstetten, Germany Web: www.streifly.de Tel 0049 7382 1032 and Fax 0048 7382 1629 and email: streifly@aol.com

Weighing Data:

	Kg	Pounds
Max weight (dry) without ballast tanks	315	695
Max weight (dry) with ballast tanks	320	706
BGA concession non-aerobatic max weight (dry) [+3%]	324/ 330	715/ 727
Max weight with water	350	772
Max weight of non lifting components (everything except wings)	210	462
BGA concession non-aerobatic max weight of non lifting components [+5%]	221	486
Max pilot weight (seat load)	110	242
	mm	Inches

Forward C of G limit (aft of datum)		245	9.6
Aft C of G limit (aft of datum)		350	13.7
Pilot position (forward of datum)	Max	400	15.75
	Min	300	11.81

Control deflections in degrees

	Up	Down		Max free play
Ailerons	20° ±1°	11° ±1°		
Elevator	18° ±1°	18° ±1°		
Rudder	Left 25° ±1°	Right 25° ±1°		

"FOLLMAN" 17 meter modification
Max speeds unchanged. Max dry weight 330Kg, Max weight with water 360Kg.

"FOLLMAN" Split (landing) flap modification
Max speed with flap lowered 65kts 120Kph
Flap deflection 41°

Longitudinal datum: Wing LE 425mm from fuselage centre line

Horizontal datum: Rear fuselage top 1000:70 tail down

Distance of main wheel behind datum ("a") 120mm. Distance from main wheel to tail wheel ("b") 3820mm.

Maximum speeds

	Knots	Kph
VNE	124	230
Rough air	81	150
Aerotow	81	150

	Knots	Kph
Manoeuvre	81	150
Winch / auto tow	65	120
Airbrakes out	124	230

Control surface mass and mass balance must remain within 2% of their original values.

Max winch weak link: Tost white (BGA approved Mod 600 Kg, Tost blue)

Tyre pressures: Main & tail wheel 36 psi (2,5 Bar), Main 44 psi (3.0 Bar) with water ballast

BGA classification - Semi aerobatic (without water-ballast), cloud flying permitted.

This sheet compiled by: Tim Macfadyen

Last update: 20 March 2006

BGA glider data sheet - Libelle H 301 & H 301b

Data source Manufacturers' Flight & Service Manuals

Date of issue: 1965

Manufacturer: Glasflügel,

Agent: H G Streifeneder, Glasfaser-Flüzeug-Service, Brühlstrasse 12, 7318-Lenningen 2, Germany

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	300	661
BGA concession non-aerobatic max weight (dry) [+3%]	309	681
Max water	Nil	
Max weight of non lifting components (everything except wings) see table in handbook page 6-4 for details	200	441
BGA concession non-aerobatic max weight of non lifting components [+5%]	210	454
Max pilot weight (seat load)	110	242
	mm	inches

Forward C of G limit (aft of datum)	215	8.48
Aft C of G limit (aft of datum)	354	13.9
Pilot position (forward of datum)		

Control deflections in mm

		Up	Down	Distance - hinge to measuring point				
Ailerons 301		35 ± 4	18 ± 3	115				
Ailerons 301B (Flaps neutral)		42 ± 4	22 ± 3	115				
Rudder 301 301B		Left & Right Max 160 Min 115 Max 178 Min 134		360				
Elevator		44 ± 4	44 ± 4	140				
Aileron & flap deflections in mm ± 3mm with stick central (ailerons neutral) + is down - is up								
Flap pos	+4	+3	+2	+1	-1	-2	-3	-4
Aileron 301	+12	+9	+6	+3	-3	-6	-9	-12
Flap 301	+23	+16	+11	+5,5	-4	-8	-12	-16
Flap 301B	+20							-14

Longitudinal datum: Wing LE 425mm from fuselage centre line

Horizontal datum: Rear fuselage rear top 100:7 rear down

Maximum speeds

	Knots	Kph
Aerotow	76	140
Winch tow	65	120
U/C down	86	160
Flaps +4	76	140
Flaps +3	84	155
Flaps +2	92	170
Flaps +1	100	185
Flaps 0	108	200

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	95	175

All data applies to the 301 & 301B except where specified.

Max winch weak link: 670 Kg (Blue)

Tyre pressure: main 43 - 50 psi 3 - 3,5 Bar Tail 36 - 50 psi, 2,3 - 3,5 Bar

Semi aerobatic, cloud flying permitted.

This sheet compiled by: Tim Macfadyen Date: 11 September 2002

BGA glider data sheet - Lo-100

Data source: The world's Sailplanes Vol 1 & BGA data

Date of issue: 1962

Manufacturer: Wolf Hirth GmbH

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight fully aerobatic	245	540
Max weight semi aerobatic	265	584
BGA concession non-aerobatic max weight (dry) [+3%]	273	602
Max pilot weight (fully aerobatic)	90	198
Max pilot weight (semi aerobatic)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	350	13.8
Aft C of G limit (aft of datum)	470	18.5
Front pilot position (forward)	165	6.5

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	30° max	20° max		
Elevator	22° max	22° max		
Flaps	8° max	55° max		
Rudder	Left & right 29°			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

Fully Aerobatic

	Knots	Kph
VNE	156	290
Rough air	121	225
Aerotow	121	225
Winch / auto tow	75	140
Flaps extended	49	90

Semi Aerobatic

	Knots	Kph
VNE	108	200
Rough air	81	150
Aerotow	81	150
Winch / auto tow	67	125
Flaps extended	49	90

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main psi (Bar), rear psi (bar)

Fully aerobatic (see weight limitations), Cloud flying permitted

Notes: -

The Lo-100 has 10 meter span. The Lo-150 is the 15 meter version with higher weights and lower maximum speeds.

Nose ballast is 1110 mm (43.7 inches) forward of datum.

This sheet compiled by: Tim Macfadyen Date: 22 April 2002

BGA glider data sheet - LS 1F

Data source: Manufacturer's Handbook

Date of issue: 24.4.75

Manufacturer: Rollanden-Schneider Web site:

Phone:

Fax:

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	354	781
BGA concession non-aerobatic max weight (dry) [+3%]	365	805
Max weight (water)	390	860
Max weight of non lifting components (everything except wings)	N/K	N/K
BGA concession non-aerobatic max weight of non lifting components [+5%]	N/K	N/K
Max pilot weight (seat load)	125	276

mm Inches

Forward C of G limit (aft of datum)	220	8.7
Aft C of G limit (aft of datum)	385	15.2
Pilot position (forward of datum)	590	23.2

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	70	37		+/-5 for both up & down
Elevator	73	56	145	+/-5 for both up & down
Rudder	Left 185	Right 185		+/- 10

Longitudinal datum: Wing root LE at rib

Horizontal datum: Underside of rear fuselage horizontal

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	135	250
Manoeuvre	96	177

	Knots	Kph
Aerotow	92	170
Winch / auto tow	N/K	N/K
Airbrakes open	135	250

Max winch weak link: White

Tyre pressure: 44 psi main wheel

~~Non~~/semi/fully aerobicatic

Notes: -

Top-hat section stiffeners at base of fin are prone to delamination if overloaded. Inspect through inspection hole at base of fin rear spar after removing rudder.

Load required to collapse undercarriage 12-15 Kg at joint above wheel. Replace gas strut if load is low.

This sheet compiled by:

Afandi Darlington

Date: 31/12/01

BGA glider data sheet - LS 3 (see separate sheet for LS 3A & LS 3-17)

Data source Manufacturers' handbooks Date of issue: 1977

Manufacturer: Rollanden-Schneider Web site:

Phone:

Fax:

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with or without water	472	1041
Max weight of non lifting components (everything except wings)	240	529
BGA concession non-aerobatic max weight of non lifting components [+5%]	252	555
Max pilot weight (seat load)	120	265
	mm	Inches
Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward of datum) 155 lb pilot	530	20.9

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	55 ±5	40 ±5	278mm Flaps +10°	
Elevator	56 ±5	56 ±5	145mm	
Rudder	Left 185 ±10	Right 185 ±10	362mm	
Flaps	113 ±5		278 mm Set at -7°	

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage bottom horizontal

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	103	190
Manoeuvre	103	190
Aerotow	103	190

	Knots	Kph
Winch / auto tow	70	130
Airbrakes open	146	270
Flaps + 10°	103	190

Height feet	VNE Knots	Height meters	VNE Kph
0-6500	146	0-2000	270
<10 000	132	<3000	245
<13 000	119	<4000	221
<20 000	96	<6000	177
<26 000	77	<8000	143
<33 000	60	<10000	111

Max winch weak link: 600 Kg (Blue)

Tyre pressure: 43 - 50 psi

Semi aerobatic (without water-ballast). Cloud flying permitted

Note: -The trim weights in front of the rudder pedals reduce min pilot weight by twice their own weight.

Load required to collapse undercarriage 12-15 Kg at joint above wheel. Replace gas strut if load is low.

This sheet compiled by: Tim Macfadyen Date: 22 Jan 2003

BGA glider data sheet - LS 3A & LS 3-17 (see separate sheet for LS 3)

Data source Manufacturers' handbook

Date of issue: 1980

Manufacturer: Rollanden-Schneider Web site:

Phone:

Fax:

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry) 17 meter only	370	816
BGA concession non-aerobatic max weight (dry) [+3%] 17 M only	381	840
Max weight with water (not 17 M)	472	1041
Max weight of non lifting components (everything except wings)	230	507
BGA concession non-aerobatic max weight of non lifting components [+5%]	242	532
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward of datum) 155 lb pilot	530	20.9

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Elevator	22° ±2°	22° ±2°	148mm
Distance from elevator TE to ref point on fin 300mm when elevator is neutral			
Airbrakes	160± 10		At inner end
Rudder	28°±2° ways 150mm ± 10	both	310mm
Flap Handle position	Flaps position	Aileron position with stick central	Ailerons max travel
20°	17°±3°	17°±3°	
10°	7°±3°	7°±3°	16°±3° down 13°±3° up
0°	0°±1°	0°±1°	
-7°	-5±3°	-5±3°	

Longitudinal datum: Wing root LE Horizontal datum: Rear fuselage bottom horizontal

Maximum speeds

	15 Meter		17 Meter	
	Knots	Kph	Knots	Kph
VNE	146	270	135	250
Rough air	103	190	86	160
Manoeuvre	103	190	86	160
Aerotow	103	190	86	160

	15 Meter		17 Meter	
	Knots	Kph	Knots	Kph
Winch / auto tow	70	130	70	130
Airbrakes open	146	270	135	250
Flaps + 10°	103	190	86	160
Flaps + 20°	86	160	86	160

Max winch weak link: 600 Kg (Blue)

Tyre pressure: 43 - 50 psi

Semi aerobatic in 15 meter span and without water-ballast only. Cloud flying permitted

Note: -The trim weights in front of the rudder pedals reduce min pilot weight by twice their own weight.

Load required to collapse undercarriage 12-15 Kg at joint above wheel. Replace gas strut if load is low.

This sheet compiled by: Tim Macfadyen Date: 22 Jan 2003

BGA glider data sheet - LS 4

Data source Manufacturers' handbooks Date of issue: 1981

Manufacturer: Rollanden-Schneider Web site:

Phone:

Fax:

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	472	1041
Max landing weight		
Max weight of non lifting components (everything except wings)	230	507
BGA concession non-aerobatic max weight of non lifting components [+5%]	241	532
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	225	8.86
Aft C of G limit (aft of datum)	375	14.76
Pilot position (forward of datum) 155 lb pilot	553	21.8

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	65±5	40±3	165mm	3 total
Elevator	*364 ±5	*245 ±5	148mm	3 total
*Distance from TE to reference point on fin. Distance is 300mm with elevator neutral				
Airbrakes	150 min		At inner end	
Rudder	Left & Right 150±10		310mm	1 at top

Moments and weights of control surfaces

	Weight at TE	Total weight
Elevator	0.33 - 0.44 kg	1.41 - 1.90 kg
Rudder	±0.04 kg	3.70 - 4.10 kg
Aileron	0.60 - 0.80 kg	3.50 - 5.00 kg

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage bottom horizontal

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	97	180
Manoeuvre	97	180
Aerotow	97	180

	Knots	Kph
Winch / auto tow	70	130
Airbrakes open	146	270

Height feet	VNE Knots	Height meters	VNE Kph
0-6500	146	0-2000	270
To 10 000	139	To 3000	257
To 20 000	118	To 6000	219
To 33 000	93	To 10000	173

Max winch weak link: 600 kg (Blue)

Tyre pressures: Main wheel 3 - 3.5 bar (43 - 50 psi) Tail wheel 2,5 bar (36 psi)

~~Non~~/semi/fully aerobatic (without water-ballast). Cloud flying permitted

Note: -The trim weights in front of the rudder pedals weigh 2.45 kg (5.4 lb) each, they reduce min pilot weight by twice their own weight.

Load required to collapse undercarriage 12-15 Kg at joint above wheel. Replace gas strut if load is low.

A 2.7 kg battery can be fitted in the top of the fin.

This sheet compiled by: Tim Macfadyen

Date: 27 March 2002

BGA glider data sheet - LS 4A & B

Data source Manufacturers' handbooks Date of issue: 198?

Manufacturer: Rollanden-Schneider Web site:

Phone:

Fax:

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water and max landing weight	525	1158
Max water	170	375
Max weight of non lifting components (everything except wings)	230	507
BGA concession non-aerobatic max weight of non lifting components [+5%]	241	532
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	225	8.86
Aft C of G limit (aft of datum)	400	15.75
Pilot position (fwd) 165 lb pilot	590	23.2

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	65±5	40±3	165mm	3 total
Elevator	*364 ±5	*245 ±5	148mm	3 total
*Distance from TE to reference point on fin. Distance is 300mm with elevator neutral				
Airbrakes	150 min		At inner end	
Rudder	Left & Right 150±10		310mm	1 at top

Moments and weights of control surfaces

	Weight at TE	Total weight
Elevator	0.33 - 0.44 kg	1.41 - 1.90 kg
Rudder	±0.04 kg	3.70 - 4.10 kg
Aileron	0.60 - 0.80 kg	3.50 - 5.00 kg

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage bottom horizontal

Maximum speeds

	Knots	Kph
VNE	151	280
Rough air	103	190
Manoeuvre	103	190
Aerotow	103	190

	Knots	Kph
Winch / auto tow	75	140
Airbrakes open	151	280
U/C down	151	280

Height feet	VNE Knots	Height meters	VNE Kph
0-6500	151	0-2000	280
To 10 000		To 3000	
To 20 000		To 6000	
To 33 000		To 10000	

Max winch weak link: 600 kg (Blue)

Tyre pressures: Main wheel 3 - 3.5 bar (43 - 50 psi) Tail wheel 2,5 bar (36 psi)

Semi aerobatic (without water-ballast). Cloud flying permitted

Note: -The trim weights in front of the rudder pedals weigh 2.45 kg (5.4 lb) each, they reduce min pilot weight by twice their own weight.

Load required to collapse undercarriage 12-15 Kg at joint above wheel. Replace gas strut if load is low.

A 2.7 kg battery can be fitted in the top of the fin.

This sheet compiled by: Tim Macfadyen

Date: 13 May 2002

BGA glider data sheet - LS 6a

Data source Manufacturers' handbooks Date of issue: 1984

Manufacturer: Rollanden-Schneider Flugzeugbau GmbH,

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	380	838
BGA concession non-aerobatic max weight (dry) [+3%]	391	863
Max weight with water	525	1158
Max water	140	309
Max weight of non lifting components (everything except wings) see table in handbook for details	230 -245	507 - 540
BGA concession non-aerobatic max weight of non lifting components [+5%]	242 -257	532 - 567
Max pilot weight (seat load)	110	242
	mm	Inches

Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward of datum) 143 lb pilot. See handbook for details	513	20.20

Control deflections

	Up	Down	Max free play
Ailerons (with flaps set at +10)	14°±1	14°±1	2.8 mm at TE
Elevator	29°±1	23°±1	2.4 mm at TE
Airbrakes	105 mm ± 5 At inner end		
Rudder	Left 28°±2	Right 28°±2	
Flaps	L +14° ±1 10° +9° ±1 5° 4° ±1 0° -1° ±1 -5° -4° ±1		

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage bottom horizontal

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	108	200
Manoeuvre	108	200
Aerotow	108	200
Winch tow	75	140
Flaps + 5° & +10°	108	200
Flaps + 15°	86	160

Maximum speeds at altitude

Height feet	VNE Knots	Height meters	VNE Kph
0-6600	146	0-2000	270
<10 000	139	<3000	257
<20 000	118	<6000	219
<33 000	93	<10000	173

Control weights & moments

	Weight Kg	Moment Kgcm
Elevator	1.00-1.60	3.63-4.44
Rudder	3.8-4.22	± 1.33
Inner flaperon	2.61-3.33	9.85-13.93
Outer flaperon	1.37-1.74	3.74-5.28

Max winch weak link: 800 Kg (Red)

Tyre pressure: main 43 - 50 psi Tail 36 - 50 psi

Semi aerobatic (without water-ballast). Cloud flying permitted

This sheet compiled by: Tim Macfadyen

Date: 22 January 2002

BGA glider data sheet - LS 6b

Data source Manufacturers' handbooks Date of issue: 1987

Manufacturer: Rollanden-Schneider Flugzeugbau GmbH,

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	395	871
BGA concession non-aerobatic max weight (dry) [+3%]	407	897
Max weight with water	525	1158
Max water	160	352
Max weight of non lifting components (everything except wings) see table in handbook page 6-4 for details	240 -255	528 - 562
BGA concession non-aerobatic max weight of non lifting components [+5%]	242 -257	532 - 567
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward of datum) 143 lb pilot. See handbook for details	513	20.20

Control deflections

	Up	Down	Max free play
Ailerons (with flaps set at +10)	14°±1	14°±1	2.8 mm
Elevator	29°±1	23°±1	2.4 mm
Airbrakes (flaps at 0°)	105 mm ± 5 At inner end		
Rudder	Left 28°±2	Right 28°±2	
Flaps L (ailerons neutral)	+14° ±1 10° +9° ±1 5° 4° ±1 0° -1° ±1 -5° -4° ±1		

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage bottom horizontal

Options - Fin battery (2.6 Kg) or fin tank (5.5 Kg max) and 2.45 Kg weight at base of fin. Max baggage 5 Kg.

1 Kg of tail tank water balances 22 Kg of wing water. One (2.5 Kg) nose weight reduces min pilot weight by 5 Kg.

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	108	200
Manoeuvre	108	200
Aerotow	108	200
Winch tow	75	140
Flaps + 5° & +10°	108	200
Flaps + 15°	86	160

Maximum speeds at altitude

Height feet	VNE Knots	Height meters	VNE Kph
0-6600	146	0-2000	270
6.6 -10 000	139	2 - 3000	257
10 - 20 000	118	3 - 6000	219
20 - 33 000	93	6 - 10000	173
Max speeds			
		Knots	Kph
U/C down		146	270
Airbrakes out (flap limit speeds apply)		146	270

Control weights & moments

	Weight Kg	Moment KgCm
Elevator	1.00-1.60	3.63-4.44
Rudder	3.8-4.22	± 1.33
Inner flaperon	2.61-3.33	9.85-13.93
Outer flaperon	1.37-1.74	3.74-5.28

Max winch weak link: 800 Kg (Red)

Tyre pressure: main 43 - 50 psi 3 - 3,5 Bar Tail 36 - 50 psi, 2,3 - 3,5 Bar

Semi aerobatic (without water-ballast). Cloud flying permitted

This sheet compiled by: Tim Macfadyen Date: 28 August 2002

BGA glider data sheet - LS 6c (15/17.5 Meter)

Data source Manufacturers' handbooks Date of issue: 10 Oct 1995

Manufacturer: Rollanden-Schneider Flugzeugbau GmbH,

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

Control deflections

	Kg	Pounds
Max weight (dry)	425	937
BGA concession non-aerobatic max weight (dry) [+3%]	438	965
Max weight with water	525	1157
Max water Normal tanks 150 kg optional tanks 100 kg	150	331
Max weight of non lifting components (everything except wings) see table in handbook page 2-4/5 for details	240 -255	528 - 562
BGA concession non-aerobatic max weight of non lifting components [+5%]	242 -257	532 - 567
Max pilot weight (seat load)	110	242

Carry out weighing with 15 meter wingtips mm Inches

Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward of datum) 143 lb pilot. See handbook for details	513	20.20

	Up	Down	Max free play
Ailerons (with flaps set at -5°)	18 - 22°	5 - 10°	2.5 mm
Elevator	25 - 30°	22 - 26°	2.5 mm
Airbrakes (flaps 0°) Airbrakes (flaps "L")	120mm min average 150mm min average		
Rudder	Left & Right 26° - 28°		
Flaps L (aileron neutral)	10° 5° 0° -5°	+14° ±1 +9° ±1 4° ±1 -1° ±1 -4° ±1	

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage bottom horizontal

Options - Fin battery (2.6 Kg) or fin tank (5.5 Kg max) and 2.45 Kg weight at base of fin. Max baggage 5 Kg.

1 Kg of tail tank water balances 22 Kg of wing water. One (2.5 Kg) nose weight reduces min pilot weight by 5 Kg.

Maximum speeds

Maximum speeds at altitude

Control weights & moments

	Knots	Kph
VNE	146	270
Rough air	103	190
Manoeuvre	103	190
Aerotow	103	190
Winch tow	76	140
Flaps -5° to 0° 0° to +10° 10 to + 15°	146 103 81	270 190 150

Height feet	VNE Knots	Height meters	VNE Kph
0-6600	146	0-2000	270
6.6 -10 000	139	2 - 3000	257
10 - 20 000	118	3 - 6000	219
20 - 33 000	93	6 - 10000	173
Max speeds			
	Knots	Kph	
U/C operation	146	270	
Airbrakes out (flap limit speeds apply)	146	270	

	Weight Kg	Moment KgCm
Elevator	1.00-1.60	
Rudder	3.0-6.80	0 - 8.20
Inner flaperon	2.14-2.74	8.06-9.00
Middle flaperon*	1.19-1.53	3.60-4.75
17.5 M tip ailerons*		
*including connecting pins		

Max winch weak link: 825 Kg (Red)

Tyre pressure: main 43 - 50 psi 3 - 3,5 bar (58 psi, 4 bar with full water)

Tail 36 - 51 psi, 2,5 - 3,5 Bar

Semi aerobatic (without water-ballast). Cloud flying permitted

This sheet compiled by: Tim Macfadyen Date: 6 March 2003

BGA glider data sheet - LS 6c (15/18 Meter)

Data source Manufacturers' handbooks Date of issue: 10 Oct 1995

Manufacturer: Rollanden-Schneider Flugzeugbau GmbH,

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

Control deflections

	Kg	Pounds
Max weight (dry)	425	937
BGA concession non-aerobatic max weight (dry) [+3%]	438	965
Max weight with water	525	1157
Max water Normal tanks 150 kg optional tanks 100 kg	150	331
Max weight of non lifting components (everything except wings) see table in handbook page 2-4/5 for details	240 -255	528 - 562
BGA concession non-aerobatic max weight of non lifting components [+5%]	242 -257	532 - 567
Max pilot weight (seat load)	110	242

Carry out weighing with 15 meter wingtips mm Inches

Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward of datum) 143 lb pilot. See handbook for details	513	20.20

	Up	Down	Max free play
Ailerons (with flaps set at -5°)	18 - 22°	5 - 10°	2.5 mm
Elevator	25 - 30°	22 - 26°	2.5 mm
Airbrakes (flaps 0°) Airbrakes (flaps "L")	120mm min average 150mm min average		
Rudder	Left & Right 26 - 28°		
Flaps L (ailerons 10° neutral) 5° 0° -5°	+14° ±1 +9° ±1 4° ±1 -1° ±1 -4° ±1		

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage bottom horizontal

Options - Fin battery (2.6 Kg) or fin tank (5.5 Kg max) and 2.45 Kg weight at base of fin. Max baggage 5 Kg.

1 Kg of tail tank water balances 22 Kg of wing water. One (2.5 Kg) nose weight reduces min pilot weight by 5 Kg.

Maximum speeds

Maximum speeds at altitude

Control weights & moments

	Knots	Kph
VNE	151	280
Rough air	103	190
Manoeuvre	103	190
Aerotow	103	190
Winch tow	76	140
Flaps -5° to 0° 0° to +10° 10 to + 15°	146 103 81	270 190 150

Height feet	VNE Knots	Height meters	VNE Kph
0-6500	151	0-2000	280
6.5 - 9800	143	2 - 3000	266
9.8 - 13100	136	3 - 4000	253
13 - 19700	122	4 - 6000	227
19.7 - 26200	109	6 - 8000	202
26 - 32800	96	8 - 10000	179

	Weight Kg	Moment KgCm
Elevator	1.00-1.60	
Rudder	3.0-6.80	0 - 8.20
Inner flaperon	2.14-2.74	8.06-9.00
Middle flaperon*	1.19-1.53	3.60-4.75
18M tip flaperons*	0.34 - 0.50	0.51 - 1.00
*including connecting pins		

Max winch weak link: 825 Kg (Red)

Tyre pressure: main 43 - 50 psi 3 - 3,5 bar (58 psi, 4 bar with full water) Tail 36 - 51 psi, 2,5 - 3,5 Bar

Semi aerobatic (without water-ballast). Cloud flying permitted

This sheet compiled by: Tim Macfadyen

Date: 10 Feb 2004

BGA glider data sheet - LS7 & LS7-WL

Data source: Manufacturers' Flight & Maintenance Manuals

Date of issue: June 1993

Manufacturer: Rollanden-Schneider Flügzeughbau GmbH,

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	486	1072
Max weight (dry)	389	858
BGA concession non-aerobatic max weight (dry) [+3%]	400	883
Max weight of non lifting components (everything except wings) See manufacturers' table	235 - 249	518 - 549
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max weight in baggage compartment	5	11
Max pilot weight (seat load)	120	265

mm Inches

Forward C of G limit (aft of datum)	250	9.84
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward)		

Control deflections in degrees

	Up	Down	Max free play	Friction (grams)
Ailerons	21 - 25°	10 - 13°	2,4 total	200 - 300 30mm below stick top
Elevator	28 - 30°	22 - 24°	2,4 total	100 max 30mm below stick top
Rudder	Left & right 26 - 30°		N/A	500 max at rudder bottom TE

	Control weights & moments	
	Mass	Hinge moment
Aileron	2,78 - 3.20 kg	1,85 - 3,00 Kg cm
Elevator	1,00 - 1,60 kg	
Rudder	3,80 - 4,22 kg	±1,33 Kg cm

Longitudinal datum: Wing root LE

Horizontal datum: Underside of rear fuselage level

Each of the three standard 2.5 kg, (6 lb) nose weight reduces minimum pilot weight by 5 kg, (11 lb).

Fill a maximum of 1 litre of water in the fin tank for every 26 litres in the wings.

Maximum speeds

	Knots	Kph
VNE up to 6500 feet (2000 meters)	146	270
Rough air	103	190
Manoeuvre	103	190

	Knots	Kph
Aerotow	103	190
U C operating	146	270
Winch / auto tow	76	140
Air brakes	146	270

Height meters	Height feet	VNE Knots	VNE Kph
2 - 3 000	6500 - 9800	139	257
3 - 4 000	9800 - 13100	132	244
4 - 6 000	13100 - 19700	118	219
6 - 8 000	19700 - 26200	105	195
8 - 10 000	26200 - 32800	93	173

The aileron seals on both the upper and lower surfaces must be fitted.

Max winch weak link: 825 kg (Red)

Tyre pressure: 43 - 50 psi (3 - 3,5 Bar), 58 psi (4 bar) with full water. Rear 36 - 50 psi (2,5 - 3,5bar)

Semi aerobatic and cloud flying permitted without water.

Span 15 meters. German (LBA) type certificate number 375. The WL version has winglets fitted.

Use lower nose static vents for ASI & altimeter. Use upper nose & rear fuselage vents connected together for varios.

This sheet compiled by: Tim Macfadyen Date: 11 June 2003

BGA glider data sheet - LS 8 (15 Meter)

Data source Manufacturers' flight & maintenance manuals. Date of issue: Jan 2000.

Manufacturer: Rollanden-Schneider Flugzeugbau GmbH,

UK Agent: Wells Design

Phone: 01608 685790

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	412	908
BGA concession non-aerobatic max weight (dry) [+3%]	424	936
Max weight with water	525	1158
Max water	190	419
Max weight of non lifting components (everything except wings & water) see maintenance manual page 2-4 for details	239 -249	527 - 549
BGA concession non-aerobatic max weight of non lifting components is +5%.		
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	280	11.02
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward of datum) 143 lb pilot. See handbook for details	513	20.20

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	38 to 40	19 to 22	85	2.5mm
Elevator	35 to 37	27 to 32	72	2.5mm
Rudder	Left & right 178 to 204		395	
Airbrakes open	Fully extended minimum average 150mm.			

Free play is measured with the stick fixed central.

The control surface seals must be in good condition to maintain the required friction to prevent flutter.

Aileron friction 200-500 grams. With trim neutral there should be at least 50mm hysteresis in the elevator system. Both measured 30mm below the top of the stick.

Rudder friction - up to 500 grams at TE bottom.

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage bottom horizontal.

For each 10 kg of pilot weight above min cockpit weight 1.5 litres of water may be put in the tail tank.

For every 25 kg of water in the wings 1 litre may be put in the tail tank. Max baggage weight 5 kg (11 lb).

The three 2,5 kg (5.5 lb) nose weights each reduce min cockpit weight by 5 kg (11 lb).

The rear trim weight weighs 2.5 kg (5.5 lb). The fin battery max weight is 2,6 kg (5.7 lb).

Maximum speeds

	Knots	Kph
VNE	151	280
Rough air	103	190
Manoeuvre	103	190
Aerotow	103	190
Winch tow	76	140
Airbrakes open	151	280
U/C operation	151	280

Maximum speeds at altitude

Height feet	VNE Knots	Height meters	VNE Kph
0-6600	151	0-2000	280
To 10 000	144	To 3 000	266
To 13 100	137	To 4 000	253
To 20 000	122	To 6 000	227
To 26 000	109	To 8 000	202
To 33 000	97	To 10 000	179
To 39 400	84	To 12 000	156

Control weights & moments

	Weight Kg	Moment Kgcm
Inner aileron	3.4 to 4.4	2.04 to 3.87
Outer aileron	.42 to .70	.81 to 1.38
Rudder	4.3 to 5.4	-1.02 to 1.6
Elevator	1.3 to 1.65	3.48 to 4.60
100% Elevator mass balance is achieved with weight in the fin push rod		

Max winch weak link: 825 Kg (Red)

Tyre pressure: main 3 - 3,5 bar (44 - 51 psi). 4 bar (58 psi) with full water. Tail 2,5 - 3,5 bar (36 - 50 psi)

Semi aerobatic and cloud flying permitted without water-ballast.

LBA Type certificate No 402

This sheet compiled by: Tim Macfadyen

Date: 8 November 2002

BGA glider data sheet - L-Spatz 55

Data source: Manufacturer's Datasheet Date of issue: Undated

Manufacturer: Scheibe Flugzeugbau, August-Pfaltz, Str.23, 8060 Dachau bei München

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max gross weight	265	585
BGA concession non-aerobatic max weight (dry) [+3%]	273	602
Max weight of non lifting components (everything except wings)	170	375
BGA concession non-aerobatic max weight of non lifting components [+5%]	179	394
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	190	7.5
Aft C of G limit (aft of datum)	345	13.6
Pilot position (forward of datum)	322	12.7

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	108 ±5	30 ±5	223	
Elevator	100 ±10	120 ±10	300	
Rudder	Left 420 ±20	Right 420 ±20	655	

Longitudinal datum: Wing rib 2 LE

Horizontal datum: Fuselage top longeron at tail platform horizontal

Maximum speeds

	Knots	Kph
VNE	97	180
Rough air	59	110
Manoeuvre		

	Knots	Kph
Aerotow	59	110
Winch / auto tow	49	90

Max winch weak link: 500 Kg (White)

Tyre pressure: 36 psi (2,5 Bar)

Semi aerobatic, cloud flying permitted.

Notes: -

This sheet compiled by: Tim Macfadyen

Date: 11 October 2001

BGA glider data sheet -M100 S

Data sources: The world's Sailplanes Vol 2, BGA data & FAA data

Date of issue: 1963

Manufacturer: Carman (France) and Morelli (Italy)

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max all up weight	315	695
BGA concession non-aerobatic max weight [+3%]	325	716
Max pilot weight (seat load)	115	253
	mm	Inches
Forward C of G limit (aft of datum)	300	11.8
Aft C of G limit (aft of datum)	440	17.3
Pilot position (forward)	310	12.2

Control deflections in degrees

	Up	Down	Max free play
Ailerons	26 - 30°	26 - 30°	
Elevator	26 - 30°	18 - 22°	
Trim	17° min	17° min	
Rudder	Left & right 26 - 30°		

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top, just in front of dorsal fin, 4° tail down (70:1000)

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	76	140
Manoeuvre		

	Knots	Kph
Aerotow	81	150
Winch / auto tow	54	100
Airbrakes open	108	200

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main 35 - 40 psi (2,5 - 3 kg/cm²)

Semi aerobatic Cloud flying permitted

Span 15 meters

This sheet compiled by: Tim Macfadyen Date: 28 July 2003

BGA glider data sheet – M 200

Data source: BGA data & Manufacturer's Manual

Date of issue:

Manufacturer: Carman (Moulins, France)

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight non-aerobatic	570	1257
Max weight semi-aerobatic	520	1147
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	190	7.48
Aft C of G limit (aft of datum)	373	14.7
Front pilot position (forward)	670	26.4
Rear pilot position (forward)	170	6.7

Control deflections in degrees

	Up	Down	Max free play
Ailerons	28 ± 2	28 ± 2	
Elevator	32 ± 2	18 ± 2	
Tab	25 ± 2	25 ± 2	
Rudder	38 ± 2 left & right		

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	121	225
Rough air	81	150

	Knots	Kph
Aerotow	81	150
Winch / auto tow	65	120

Max winch weak link: Blue

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic at up to 520 Kg. Non aerobatic above 520 Kg.

Notes: -

Span 18.4 meters

French Type certificate number 39/25/3/66

This sheet compiled by: Tim Macfadyen & Pete Philpot

Date: 16 July 2002

BGA glider data sheet - Marianne - 201B

Data source: BGA data sheet

Date of issue:

Manufacturer: Centrair (France)

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	655	1444
BGA concession non-aerobatic max weight [+3%]	675	1487
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)		
Rear pilot position (aft of datum)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	124	230
Rough air	92	170
Manoeuvre		

	Knots	Kph
Aerotow	92	170
Winch / auto tow	70	130
Airbrakes open		

Max winch weak link: 750 Kg (Red)

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, cloud flying permitted.

Two seater - span 18.5 meters

This sheet compiled by: Tim Macfadyen

Date: 14 Feb 2003

BGA glider data sheet - ME 7

Data source: BGA data sheet & letter from designer

Date of issue: 14 May 2006

Manufacturer: Federov (Russia)

Designer: Vladimir Fedorov E mail glider-ac@public.mtu.ru

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	250	551
BGA concession non-aerobatic max weight [+3%]	257	568
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm

Forward C of G limit (aft of datum)	46	
Aft C of G limit (aft of datum)	81	
Pilot position (forward of datum) with seat back fully back	380	

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	45 - 55	45 - 55		
Elevator	65 - 75	38 - 48		
Rudder	Left & right 165 - 175			

Longitudinal datum: Wing root LE

Horizontal datum: Wing root chord horizontal

Main wheel is 167mm aft of datum. Tail wheel is 3195mm aft of datum ("a" = 167 "b" = 3028)

Maximum speeds

	Knots	Kph
VNE	119	220
Rough air	97	180
Manoeuvre		

	Knots	Kph
Aerotow	87	160
Winch / auto tow	60	111
Airbrakes open		

Max winch weak link: 500 Kg (White)

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, cloud flying permitted

BGA glider data sheet - Mg 19 a & b

Data source: The world's Sailplanes Vol 1 & BGA data

Date of issue: 1962

Manufacturer: Josef Oberlerchner, Austria Designer Musger

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	480	1058
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)	465	18.30
Aft C of G limit (aft of datum)	585	23.03
Front pilot position (forward)	800	31.50
Rear pilot position (aft of datum)	220	8.66

Control deflections in degrees

	Up	Down		Max free play
Ailerons	30°	12°		
Elevator Mg 19a	16°	22° 30'		
Elevator Mg 19b	18° 40'	22° 30'		
Rudder	Left & right 28° 30'			

Longitudinal datum: Wing root LE at rib 1

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	97	180
Rough air	70	130

	Knots	Kph
Aerotow	70	130
Winch / auto tow	43	80

Max winch weak link: 850 Kg (Brown)

Tyre pressure: psi (Bar)

Non aerobatic, Cloud flying not permitted

Notes: -

Span 17.6 meters. The Mg 19a had Gull wings, the Mg 19b has straight wings. Data is the same except where stated.

This sheet compiled by: Tim Macfadyen Date: 10 June 2002

BGA glider data sheet - Mistral - C

Data source: BGA data sheet

Date of issue:

Manufacturer: ISF Strauber - Fromjyold

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	350	772
BGA concession non-aerobatic max weight [+3%]	360	795
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	2069	81.46
Aft C of G limit (aft of datum)	2226	87.64
Pilot position (aft of datum)	1400	55.12

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Longitudinal datum: Nose

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	86	160
Manoeuvre		

	Knots	Kph
Aerotow	70	130
Winch / auto tow	70	130
Airbrakes open		

Max winch weak link: 500 kg (White)

Tyre pressure: psi (Bar)

Semi aerobatic, cloud flying permitted.

Span 15 meters

This sheet compiled by: Tim Macfadyen

Date: 18 Feb 2003

BGA glider data sheet - Monerai (Permit to fly only)

Data source: BGA data sheet

Date of issue:

Manufacturer: DIY construction

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	204	450
Max weight (dry)	210	463
BGA concession non-aerobatic max weight (dry) [+3%]		
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Pilot position (aft of datum)	1321	52

C of G limits are 25 - 33% of MAC

Longitudinal datum: Nose

Horizontal datum: 5°

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Maximum speeds

	Knots	Kph
VNE	104	193
Manoeuvre		
Rough air	88	163

	Knots	Kph
Aerotow	69	128
Flaps down	78	144
Winch / auto tow	Not permitted	

Max winch weak link: Winch launching not permitted

Tyre pressure: Main psi (Bar),

Semi aerobatic, cloud flying permitted

Span 11 meters

This sheet compiled by: Tim Macfadyen

Date: 18 Feb 2003

BGA glider data sheet - Mosquito A & B

Data source Manufacturers' Handbook

Date of issue:

Manufacturer: Glasflügel

Web site:

Phone:

Fax:

Agent: H G Streifeneder, Glasfaser-Flüzeug-Service, Brühlstrasse 12, 7318-Lenningen 2, Germany

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	380	838
BGA concession non-aerobatic max weight (dry) [+3%]	391	863
Max weight with water	450	992
Max landing weight	380	838
Max weight of non lifting components (everything except wings)	240	529
BGA concession non-aerobatic max weight of non lifting components [+5%]	252	556
Max pilot weight (seat load)	110	242

C of G limits (aft of datum) mm inches

Forward C of G limit Mosquito A	235*	9.25
Aft C of G limit Mosquito A	360*	14.17
Forward C of G limit Mosquito B	200*	7.87
Aft C of G limit Mosquito B	325*	12.80
Pilot position (forward of datum)	440	17.32

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	33 ±3	14 ±2	81 (tip) Flaps neutral	±3 At root
Elevator	41±5	41±5	138	±2 at centre
Airbrakes	60° ±3°		120±5	±2 fully open
Rudder	117 ± 9 Left & Right		270	±5 at bottom
Flaps	28 ±3,5	42 ±3,5	220	±3 at 141 rad

Longitudinal datum: Wing root LE (425mm from fuselage centre).

Horizontal datum: Rear fuselage top 1000:52 tail down

Minimum gap between flaps and ailerons 4,5mm

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	108	200
Manoeuvre		

	Knots	Kph
Aerotow	81	150
Winch / auto tow	81	150
Flaps +1 & +2	108	200

Max winch weak link: 650 Kg [Blue]

Tyre pressure: Main wheel 36/50 psi [2,5/3,5 bar] without water ballast/with water ballast
Tail wheel 22 psi [1,5 bar]

Semi aerobatic. Cloud flying permitted.

Brake/flap gas strut - With the flaps set to -2 the torque to move the flap down is 23-26 Nm [17-19 ftlb].

Rig the glider with the flaps set to -2, the brake handle in the middle and the flaps lifted.

This sheet compiled by: Tim Macfadyen Date: 15 October 2002

BGA glider data sheet -Moswey III

Data source: The world's Sailplanes Vol 1

Date of issue: 1962

Manufacturer: W. Hegetschweiler Moswey Segelflugzeug-Werke

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	250	551
BGA concession non-aerobatic max weight (dry) [+3%]	258	568
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)	298	11.73
Aft C of G limit (aft of datum)	388	15.28
Front pilot position (forward)		

Control max deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	25°	10°		
Elevator	25°	25°		
Trim				
Rudder	Left & right 25°			

Longitudinal datum: Wing root LE at rib 1

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	113	210
Rough air	67	125
Manoeuvre		

	Knots	Kph
Aerotow smooth air	81	150
Aerotow rough air	67	125
Winch / auto tow	67	125

Max winch weak link: 500 Kg (White)

Tyre pressure:psi (Bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 14 Meters (gull wing)

This sheet compiled by: Tim Macfadyen Date: 24 May 2002

BGA glider data sheet - Moswey IVA

Data source: BGA Data sheet

Date of issue:

Manufacturer: W. Hegetschweiler Moswey Segelglugzeug-Werke Switzerland

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	300	660
BGA concession non-aerobatic max weight [+3%]	309	680
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	470	18.5
Aft C of G limit (aft of datum)	775	30.5
Front pilot position (forward)	178	7.0

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE at rib 1

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	65	120
Winch / auto tow*	65	120

	Knots	Kph
Aerotow - Smooth air	81	150
Aerotow - rough air	65	120

* A back-releasing hook must be fitted for winch launching.

Max winch weak link: 600 Kg Blue

Tyre pressure: psi (Bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 15.9 meters

BGA glider data sheet - Mucha 100 (SZD-12)

Data source: The world's Sailplanes Vol 1

Date of issue: 1962

Manufacturer: SZD Poland

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	290	639
BGA concession non-aerobatic max weight (dry) [+3%]	299	659
Max pilot weight (seat load)	105	231

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	35°	17°		
Elevator	25°	17°		
Trim				
Rudder	Left & right 30°			

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	119	220
Rough air		
Manoeuvre		

	Knots	Kph
Aerotow	70	130
Winch / auto tow	51	94
Airbrakes open	108	200

Max winch weak link:

Tyre pressure: psi (Bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 15 meters

BGA glider data sheet **Mucha Standard - SZD - 22 A, B & C**

Data source: The world's Sailplanes Vol 2 & BGA data sheet

Date of issue: 1963

Manufacturer: PZL

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry) "A"	324	715
BGA concession non-aerobatic max weight (dry) [+3%] "A"	334	736
Max weight (dry) "B" & "C"	350	772
Max weight with water "B" & "C"	383	800
BGA concession non-aerobatic max weight (dry) [+3%] "B" & "C"	360	795
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	390	15.3
Aft C of G limit (aft of datum)	486	19.15
Front pilot position (forward)	432	17.0

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	26°	13°		
Elevator	22°	20°		
Trim				
Rudder	Left & right 30°			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	75	140

	Knots	Kph
Aerotow	81	150
Winch / auto tow	54	100

Max winch weak link: 750 Kg (Red)

Tyre pressure: psi (Bar)

Semi aerobatic Cloud flying permitted

Notes: -

Span 15 meters

Caution: - It is normal for a wing to drop at the stall.

The B & C versions have water ballast and the C has some fabric covering on the wings.

This sheet compiled by: Tim Macfadyen Date: 22 April 2002

BGA glider data sheet - MU 13D

Data source: BGA data

Manufacturer: Akaflieg Munich

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	286	630
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	447	17.6
Aft C of G limit (aft of datum)	561	22.1
Front pilot position (forward)	100	4.0

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	87	161
Rough air	55	102

	Knots	Kph
Aerotow	55	102
Winch / auto tow	45	83

Max winch weak link: 500 Kg (White)

Tyre pressure: psi (Bar)

Non aerobatic, Cloud flying permitted

Notes: -

15 Meter span

This sheet compiled by: Tim Macfadyen Date: 11 June 2002

BGA glider data sheet - Nimbus 15 A & B (Mini Nimbus) (single seat 15 meter span)

Data source: Manufacturers' Manual

Date of issue: April 1977

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	450	992
Max water	125	275
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)	230	507
BGA concession non-aerobatic max weight of non lifting components [+5%]	241	533
	mm	Inches
Forward C of G limit (aft of datum)	220	8.66
Aft C of G limit (aft) A model	355	13.98
Aft C of G limit (aft) B & C models	380	14.96
Pilot (forward of datum)	550	21.65

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons (Flaps 0)	28 - 38	13 - 17	82	±4
Elevator A model	45 - 65	50 - 65	287 measure to fin TE top	±3
Elevator B model	44 - 54	44 - 54	162	
Flaps	24 - 34	40 - 50	235	±5
Rudder	Left & right 125 to 155		350	±5
Airbrake			120	±2 brakes fully open

Longitudinal datum: Wing root LE root rib. Horizontal datum: Rear fuselage top 1000:51 tail down

The main wheel is 129 mm aft of datum (a). Main wheel to tail skid (b) 3930mm.

The maximum weight in the baggage compartment is 15 kg (33 lb) of which only 5 kg (11 lb) may be removable.

Max fore & aft play of wing tip mm 30mm

Maximum speeds

Controls weights & moments

	Knots	Kph
VNE	135	250
Rough air	108	200
Manoeuvre	108	200
Aerotow	97	180
U/C down		
Winch / auto tow	81	150
Flaps +10, +6 & 0	97	180

VNE at altitude			
Height in meters	Height in feet	Knots	Kph
5000	16 500	130	240
6000	20 000	122	226
7000	23 000	115	214
8000	26 000	109	202
9000	29 500	103	191
10000	33 000	97	179
12000	39 500	86	159

	Weight kg	Balance cm Kg
Rudder	5.2 max	5.9 max
Elevator (A model)	7.1 max	14.3 max
Flap	4.3 max	17.7 max
Aileron	3.3 max	8.6 max

Max winch weak link: 630 kg (blue)

Tyre pressure: 50 psi (3.5 Bar)

Semi aerobatic (without water), cloud flying is permitted.

German (LBA) type certificate No 328.

Wing flexural frequency approximately 145/min.

The A model has an all moving tailplane (a balance tab is mandatory in UK). The B & C models have conventional tailplanes. The C model has (lighter) carbon fibre wings.

To check the flap gas strut. With the flaps in -7° push the flaps down to 0°. They should return to -7°. The force at the flap TE root to move the flaps from -7° to 0° should be 7.0 to 8.5 kg (15.4 to 18.7 lb).

Use the static vents under the wings for the ASI and the front and rear fuselage static vents for varicos.

This sheet compiled by: Tim Macfadyen

Latest update: 5 May 2005

BGA glider data sheet - Nimbus 15C (Mini Nimbus) (single seat 15 meter span)

Data source: Manufacturers' Manual

Date of issue:

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	500	1102
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)	220	485
BGA concession non-aerobatic max weight of non lifting components [+5%]	231	509
	mm	Inches
Forward C of G limit (aft of datum)	220	8.66
Aft C of G limit (aft) A model	355	13.98
Aft C of G limit (aft) B & C models	380	14.96
Pilot (forward of datum)	550	21.65

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons (Flaps 0)	28 - 34	13 - 17	82	±4
Elevator	44 - 54	44 - 54	162	
Flaps	24 - 34	28 - 38	235	±5
Rudder	Left & right 140 to 180		350	±5
Airbrake			120	±2 brakes fully open

Longitudinal datum: Wing root LE root rib. Horizontal datum: Rear fuselage top 1000:51 tail down

The main wheel is 129 mm aft of datum (a). Main wheel to tail skid (b) 3930mm.

The maximum weight in the baggage compartment is 15 kg (33 lb) of which only 5 kg (11 lb) may be removable.

Max fore & aft play of wing tip mm 30mm

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	108	200
Manoeuvre	108	200
Aerotow	97	180
U/C down		
Winch / auto tow	81	150
Flaps +10, +6 & 0	97	180

VNE at altitude			
Height in meters	Height in feet	Knots	Kph
5000	16 500	130	240
6000	20 000	122	226
7000	23 000	115	214
8000	26 000	109	202
9000	29 500	103	191
10000	33 000	97	179
12000	39 500	86	159

Controls weights & moments

	Weight kg	Balance cm Kg
Rudder	5.2 max	5.9 max
Elevator		
Flap	4.3 max	17.7 max
Aileron	3.3 max	8.6 max

Max winch weak link: 630 kg (blue)

Tyre pressure: 50 psi (3.5 Bar)

Semi aerobatic (without water), cloud flying is permitted.

German (LBA) type certificate No 328.

The A model has an all moving tailplane (a balance tab is mandatory in UK). The B & C models have conventional tailplanes. The C model has (lighter) carbon fibre wings.

To check the flap gas strut. With the flaps in -7° push the flaps down to 0°. They should return to -7°. The force at the flap TE root to move the flaps from -7° to 0° should be 7.0 to 8.5 kg (15.4 to 18.7 lb).

Use the static vents under the wings for the ASI and the front and rear fuselage static vents for varicos.

This sheet compiled by: Tim Macfadyen

Date: 5 May 2005

BGA glider data sheet - Nimbus 2 (a)

Data source: Flight Manual Date of issue: 1976

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

	Kg	Pounds
Max weight with water (Increased by TN 286/8)	580	1278
Max weight (dry)	470	1036
BGA concession non-aerobatic max weight (dry) [+3%]	484	1067
Max weight of non lifting components (Increased by TN 286/22)	250	551
BGA concession non-aerobatic max weight of non lifting components [+5%]	262	579
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	290	11.4
Aft C of G limit (aft of datum)	410	16.1
Pilot position (forward of datum)	570	22.4

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons (Flaps 0)	51 - 66	26 - 41	140	3 mm total
Elevator	37 - 57	62 - 82	287	3 mm total
Rudder	Left & Right 235-275		450	
Large rudder	Left & Right 205-245		400	
Flaps	Serial Nos to 85, 87 - 103 & 110	Serial Nos 86, 104 - 109 & 111 on		3 mm total
Flaps -7	-7° + 0° - 1°	-7° + 0° - 1°		
-4	-4° + 0° - 1°	-4° + 0° - 1°		
0	0°	0°		
+4	+4° + 0° - 1°			
+6	+6° + 0° - 1°	+6° + 0° - 1°		
+10		+10° + 0° - 1°		
L	+11° ± 2°	+17° ± 2°		
Measure flap deflections at inboard TE (163mm radius)				

Longitudinal datum: Wing root LE root rib 1.

Horizontal datum: Rear fuselage top 1000:45 tail down

Maximum speeds (IAS)

	Knots	Kph
VNE	146	270
Rough air	86	160
Manoeuvre	86	160
Winch / auto tow	65	120

	Knots	Kph
Aerotow	86	160
U/C down	146	270
Brakes open	146	270
Flaps +4, +6, +10 & Landing	86	160

VNE at altitude

Height - feet	Knots	Kph
0 - 9800	146	270
9800 - 19700	113	209
19700 - 32800	89	165

Max winch weak link: Blue 600 Kg (BGA figure Red 750 Kg)

Tyre pressure: 50 psi (3.5 Bar) Tail 22 psi (1.5 Bar)

Semi aerobatic, cloud flying permitted

The Nimbus 2a has an all moving tailplane. The 2b has a conventional tailplane. The 2c has trailing edge airbrakes and higher gross weight, it is available with (lighter) carbon fibre wings. All are 20.3 M span.

This sheet compiled by: Tim Macfadyen/Doug Jones

Date: 23 July 2003

BGA glider data sheet - Nimbus 2 b

Data source: Flight Manual & BGA data

Date: 1974

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

	Kg	Pounds
Max weight with water (Increased by TN 286/8)	580	1278
Max weight (dry) & max landing	475	1047
BGA concession non-aerobatic max weight (dry) [+3%]	489	1079
Max weight of non lifting components (Increased by TN 286/22)	250	551
BGA concession non-aerobatic max weight of non lifting components [+5%]	262	579
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	290	11.4
Aft C of G limit (aft of datum)	420	16.5
Pilot position (forward of datum)	570	22.4

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons (Flaps 0)	51 - 66	26 - 41	140	3 mm total
Elevator	37 - 57	39 - 59	162	
Rudder	Left & Right 235 - 275		450	
Flaps -7 -4 0 +6 +10 L	-7° + 0° - 1° -4° + 0° - 1° 0° +6° + 0° - 1° +10° + 0° - 1° +17° ± 2°		163	3 mm total

Longitudinal datum: Wing root LE root rib 1.

Horizontal datum: Rear fuselage top 1000:45 tail down

Maximum speeds (IAS)

	Knots	Kph
VNE	146	270
Rough air	86	160
Manoeuvre	86	160
Winch / auto tow	65	120

	Knots	Kph
Aerotow	86	160
U/C down	146	270
Brakes open	146	270
Flaps +6, +10, 7 Landing	86	160

VNE at altitude

Height - feet	Knots	Kph
0 - 9800	146	270
9800 - 19700	113	209
19700 - 32800	89	165

Max winch weak link: Blue 600 Kg (BGA figure Red 750 Kg)

Tyre pressure: 50 psi (3.5 Bar) Tail 22 psi (1.5 Bar)

Semi aerobatic, cloud flying permitted

The Nimbus 2a has an all moving tailplane. The 2b has a conventional tailplane. The 2c has trailing edge airbrakes and higher gross weight, it is available with (lighter) carbon fibre wings. All are 20.3 M span.

This sheet compiled by: Tim Macfadyen/Doug Jones

Date: 23 July 2003

BGA glider data sheet - Nimbus 2c

Data source: Flight Manual & BGA data

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

	Kg	Pounds
Max weight with water	650	1433
Max weight (dry)	475	1047
BGA concession non-aerobatic max weight (dry) [+3%]	489	1079
Max weight of non lifting components (Excluding pilot and shute)	250	551
BGA concession non-aerobatic max weight of non lifting components [+5%]	262	579
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	290	11.4
Aft C of G limit (aft of datum)	420	16.5
Pilot position (forward of datum)	570	22.4

Longitudinal datum: Wing root LE root rib 1.

Horizontal datum: Rear fuselage top 1000:45 tail down

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons (Flaps 0)	51 - 66	28 - 36	140	3 mm total
Elevator	44 - 54	44 - 54	162	
Flaps	23 - 31	58 - 74	225	3 mm total
Rudder	Left & Right 235 - 275		450	

Maximum speeds (IAS)

	Knots	Kph
VNE	146	270
Rough air	97	180
Manoeuvre	97	180
Winch / auto tow	81	150

	Knots	Kph
Flaps +6, +10 & L	97	180
Aerotow	97	180
U/C down	146	270
Brakes open	146	270

Controls Weights

	Weight Kg	Balance cm Kg
Rudder		
Elevator		
Flap		
Aileron		

Max winch weak link: Blue 630 Kg (BGA figure Red 750 Kg)

Tyre pressure: 50 psi (3.5 Bar) Tail 22 psi (1.5 Bar)

Semi aerobatic, cloud flying permitted

Notes: -

The Nimbus 2a has an all moving tailplane. The 2b has a conventional tailplane and higher gross weight. The 2c has trailing edge airbrakes and is available with (lighter) carbon fibre wings. All are 20.3 M span.

This sheet compiled by: Tim Macfadyen/Doug Jones

Date: 17 March 2003

BGA glider data sheet - Nimbus 3 (single seat) & 3T

Data source: Flight Manual

Date of issue:1982

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

Phone:00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

	Kg	Pounds
Max weight (with water)	750	1653
Max landing weight	750	1653
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	270	10.63
Aft C of G limit (aft)	390	15.35
Aft C of G limit (aft) Turbo	400	15.75
Pilot position (forward of datum)	596	23.46

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons (Flaps 0)	28 ±5	15 ±3	141	3 mm total
Elevator	51 ±5	51 ±5	167	3 mm total
Rudder	Left 255 ±20	Right 255 ±20	463	
Flaps Set 0	32 Up ±3		154	3 mm total
Flaps Set "L"	36 Down ±3			
Max fore & aft play of wing tip 30mm				

Longitudinal datum: Wing root LE root rib.

Horizontal datum: Rear fuselage top 1000:45 tail down

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	108	200
Aerotow	97	180
U/C down	97	180
Winch / auto tow	81	150
Flaps down	86	160

Turbo	Knots	Kph
Rough air	102	190
Engine out	86	160

Controls Weights

	Weight Kg	Balance cm Kg
Rudder s/n 1-27	6.30-7.10	0.4-6.4
Rudder s/n 28 on	5.80-6.60	0.4-6.4
Elevator without fitting	0.77-0.99	3.4-4.3
Flap	3.33-4.30	16.8-21.4
Inboard aileron	2.31-2.95	11.6-13.2
Middle aileron	2.25-2.55	2.4-3.6
Outboard aileron	2.20-2.53	2.6-3.6
Tip aileron	0.14-0.18	0.3-0.4

Max winch weak link: Red

Tyre pressure: 71 psi (5 Bar)

Semi aerobatic but intentional spinning prohibited cloud flying permitted

Notes: -

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

Distance main wheel behind datum (a) 63mm. Main wheel to tail skid (b) 5046mm.

This sheet compiled by: Tim Macfadyen

Date: 14 May 2002

BGA glider data sheet - Nimbus 3DT (two seat "turbo" 25.6 meter span)

Data source: Flight Manual

Date of issue: November 1987

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	800	1764
Max landing weight	800	1764
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)	450	992
	mm	Inches
Forward C of G limit (aft of datum)	20	0.79
Aft C of G limit (aft)	200	7.87
Front pilot (forward of datum)	1468	57.8
Rear pilot (forward of datum)	339	13.35
Each standard nose weight reduced min front pilot weight by 5 Kg.		

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	28 ±5	14 ±3	141	3 mm total
Flaps +2				
Elevator	51 ±5	51 ±5	167	3 mm total
Rudder	Left 190 ±20	Right 190 ±20	410	
Flaps -2 0 L	32 ± 5 0 42 ± 5 down	Up down	185	3 mm total
L & brakes	110±12 down			
Spoileron	75±10 up		53	
Measure spoileron with flaps L and full aileron				

Longitudinal datum: Wing root LE root rib. Horizontal datum: Rear fuselage top 1000:45 tail down

The main wheel is on datum (a = 0). Main wheel to tail skid (b) 5290mm. Main wheel to tail wheel is 5252mm.

The fuel is 291mm aft. Upper tank 16 litres (15 useable, lower tank 14 litres (13.5 useable).

The fin tank is 5290mm aft, max capacity 5 Kg. Engine is 1110mm aft of datum. Max fore & aft play of wing tip 30mm

Maximum speeds

Controls Weights

	Knots	Kph
VNE	148	275
Rough air	103	190
Aerotow	97	180
U/C down	97	180
Winch / auto tow	81	150
Flaps +2, +1 & 0	86	160
Flaps "L"	76	140
Engine out	73	135

VNE at altitude		
Height in feet	Knots	Kph
10 000	142	263
13 000	134	249
16 500	127	236
20 000	121	224
23 000	114	212
26 000	108	200
29 500	102	188
33 000	96	177
39 500	83	154

	Weight Kg	Balance cm Kg
Rudder	4.50-5.85	6 - 7.46
Elevator without fitting	0.77-1.0	3.4-4.6
Flap	3.33-4.80	16.8-22.0
Inboard aileron	2.31-3.20	11.6-14.8
Middle aileron	2.66-3.06	1.5-2.7
Outboard aileron	2.20-2.53	2.6-3.6
Tip aileron	0.14-0.22	0.3-0.4

Engine limitations

Max cylinder head temp	230°C
Max engine speed	5500 RPM

Max winch weak link: 1040 daN (black)

Tyre pressures: Main 57 psi (4 Bar) Tail 43 psi (3 bar)

Non aerobatic, intentional spinning prohibited. Cloud flying is permitted.

Fuel is 2 stroke min RON 96. Fuel oil mixture 30:1. Oil is Castrol Super TT two stroke oil.

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

This sheet compiled by: Tim Macfadyen

Date: 4 Nov 2002

BGA glider data sheet - Nimbus 4DT (two seat "turbo" 26.4 meter span)

Data source: BGA data sheet

Date of issue:

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	800	1764
Max landing weight	800	1764
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)		
	mm	Inches
Forward C of G limit (aft of datum)		
Aft C of G limit (aft)		
Front pilot (forward of datum)		
Rear pilot (forward of datum)		
Each standard nose weight reduced min front pilot weight by Kg.		

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				mm total
Flaps +2				
Elevator				mm total
Rudder	Left	Right		
Flaps -2 0 L L & brakes	Up down down			mm total
Spoileron	up			
Measure spoileron with flaps L and full aileron				

Longitudinal datum: Wing root LE root rib. Horizontal datum: Rear fuselage top 1000: tail down

The main wheel is on datum (a = 0). Main wheel to tail skid (b) mm. Main wheel to tail wheel is mm.

The fuel is mm aft. Upper tank litres (useable, lower tank litres (useable).

The fin tank is mm aft, max capacity Kg. Engine is mm aft of datum. Max fore & aft play of wing tip mm

Maximum speeds

Controls Weights

	Knots	Kph
VNE	154	285
Rough air	97	180
Aerotow	97	180
U/C down	97	180
Winch / auto tow	81	150
Flaps +2, +1 & 0		
Flaps "L"		
Engine out		

VNE at altitude		
Height in feet	Knots	Kph
10 000		
13 000		
16 500		
20 000		
23 000		
26 000		
29 500		
33 000		
39 500		

	Weight Kg	Balance cm Kg
Rudder		
Elevator without fitting		
Flap		
Inboard aileron		
Middle aileron		
Outboard aileron		
Tip aileron		

Engine limitations

Max cylinder head temp	°C
Max engine speed	RPM

Max winch weak link: 1040 daN (black)

Tyre pressures: Main 57 psi (4 Bar) Tail 43 psi (3 bar)

Non aerobatic, intentional spinning prohibited. Cloud flying is permitted.

Fuel is 2-stroke min RON 96. Fuel oil mixture 30:1. Oil is Castrol Super TT two stroke oil.

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

This sheet compiled by: Tim Macfadyen

Date: 19 Feb 2003

BGA glider data sheet - Nimbus 4T (single seat "turbo" 26.4 meter span)

Data source: BGA data sheet

Date of issue:

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight (with water)	800	1764
Max landing weight	750	1654
Max pilot weight (seat load)	110	242
Max weight of non lifting components (everything except wings)		
	mm	Inches
Forward C of G limit (aft of datum)		
Aft C of G limit (aft)		
Pilot (forward of datum)		
Each standard nose weight reduced min pilot weight by Kg.		

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				mm total
Flaps +2				
Elevator				mm total
Rudder	Left	Right		
Flaps -2 0 L L & brakes	Up down down			mm total
Spoileron	up			
Measure spoileron with flaps L and full aileron				

Longitudinal datum: Wing root LE root rib. Horizontal datum: Rear fuselage top 1000: tail down

The main wheel is mm aft of datum (a). Main wheel to tail skid (b) mm. Main wheel to tail wheel is mm.

The fuel is mm aft. Upper tank litres (useable), lower tank litres (useable).

The fin tank is mm aft, max capacity Kg. Engine is mm aft of datum. Max fore & aft play of wing tip mm

Maximum speeds

Controls Weights

	Knots	Kph
VNE	154	285
Rough air	97	180
Aerotow	97	180
U/C down	97	180
Winch / auto tow	81	150
Flaps +2, +1 & 0		
Flaps "L"		
Engine out		

VNE at altitude		
Height in feet	Knots	Kph
10 000		
13 000		
16 500		
20 000		
23 000		
26 000		
29 500		
33 000		
39 500		

	Weight Kg	Balance cm Kg
Rudder		
Elevator without fitting		
Flap		
Inboard aileron		
Middle aileron		
Outboard aileron		
Tip aileron		

Engine limitations

Max cylinder head temp	°C
Max engine speed	RPM

Max winch weak link: 1040 daN (black)

Tyre pressures: Main 57 psi (4 Bar) Tail 43 psi (3 bar)

Non aerobatic, intentional spinning prohibited. Cloud flying is permitted.

Fuel is 2-stroke min RON 96. Fuel oil mixture 30:1. Oil is Castrol Super TT two stroke oil.

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

This sheet compiled by: Tim Macfadyen

Date: 19 Feb 2003

BGA glider data sheet - Oly 1

Data source: BGA Data sheet

Manufacturer: Elliots of Newbury

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	304	670
BGA concession non-aerobatic max weight [+3%]	313	690
Max pilot weight (seat load)		

	mm	inches
Forward C of G limit (aft of datum)	203	8
Aft C of G limit (aft of datum)	381	15
Pilot position (forward of datum)	431	17

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons	130/141	61/72	320
Elevator	157/171	157/171	420
Rudder	Left & Right 375/398		750

Longitudinal datum: 7.9 inches (200mm) forward of frame 10 rear face.

Horizontal datum: Level

Maximum speeds

	Knots	Kph
VNE	104	193
Rough air	56	104

	Knots	Kph
Aerotow	56	104
Winch / auto tow	43	80

Max winch weak link: 1000 lb (BGA figure 500 Kg white)

Tyre pressure: 36 psi

Semi aerobatic - Cloud flying permitted

Notes: -

This sheet compiled by: Tim Macfadyen

Date: 16 May 2006

BGA glider data sheet - Oly 2b

Data source: BGA Data sheet & EoN rigging drawing

Date of issue:

Manufacturer: Elliots of Newbury

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	304	670
BGA concession non-aerobatic max weight [+3%]	313	690
Max pilot weight (seat load)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons	130/141	61/72	320
Elevator	157/171	157/171	420
Trimmer	34/39	34/39	
Rudder	Left & Right 375/398		750

	mm	inches
Forward C of G limit (aft of datum)	203	8
Aft C of G limit (aft of datum)	381	15
Pilot position (forward of datum)	431	17

Longitudinal datum: 7.9 inches (200mm) forward of frame 10 rear face.

Horizontal datum: Fuselage top between front and rear wing attachment points horizontal.

Maximum speeds

	Knots	Kph
VNE	110	204
Rough air	65	120
Manoeuvre		

	Knots	Kph
Aerotow	60	111
Winch / auto tow	55	102
Airbrakes open	110	204

Max winch weak link: 1000 lb (BGA figure 500 Kg white)

Tyre pressure: 36 psi

Semi aerobatic - Cloud flying permitted

Notes: -

Some Oly 2b gliders, it is believed those with a double tailplane fixing, originally had a VNE of 120 knots, some may also have had a VRA of 80 knots. In 2004 the BGA Technical Committee decided to standardise all models at 110 knots VNE and 65 knots VRA.

The longitudinal datum is 200mm forward of the rear face of frame 10. BGA data has previously quoted the front face in error.

This sheet compiled by: Tim Macfadyen & I D (Sid) Smith

Date: 16 May 2006

BGA glider data sheet - Oly 419

Data source: The world's Sailplanes Vol 2 & BGA & FAA data

Date of issue: 1963

Manufacturer: Elliotts of Newbury

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	408	900
BGA concession non-aerobatic max weight (dry) [+3%]	420	927
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit* (aft of datum)	282	11.1
Aft C of G limit* (aft of datum)	423	16.65
Pilot position forward	914 - 991	36 - 39

Control deflections in degrees

	Up	Down	Max free play
Ailerons	29°	10°	
All moving tailplane	8°	10°	
Elevator trim tab	15°	15°	
Elevator geared tab	16°	20°	
Rudder	Left & right 25°		
The FAA web site quotes the Aileron deflections as 25° up & 11° down.			

Longitudinal datum: Wing root LE

Horizontal datum: Straight edge across main-plane joint pins at main & rear spar joints.

* The FAA web site quotes a C G range of +2.64" to +6.0" with datum as the centre line of the main spar.

Maximum speeds

	Knots	Kph
VNE	100	185
Rough air	75	140
Manoeuvre		

	Knots	Kph
Aerotow	60	111
Winch / auto tow	60	111
Airbrakes open		

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, cloud flying permitted

Notes: -

Span 18.9 meters

BGA glider data sheet - Oly 460 and 463

Data source: The world's Sailplanes Vol 2 (1983), BGA data sheet & EoN rigging drawing

Manufacturer: Elliotts of Newbury (EoN)

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	286	630
BGA concession non-aerobatic max weight (dry) [+3%]	294	649
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (forward of datum)	38	1.5
Aft C of G limit (aft of datum)	71	2.8
Pilot pos forward (BGA No 1150)	533	21
Pilot pos forward (serial No 020)	571	22.5
Pilot pos forward (serial No 021 on)	610	24

Control deflections

	Up	Down	Distance - hinge to measuring point
Ailerons	93mm	44mm	
Elevator	150mm	150mm	
Trim	30/32°	10/12°	
Rudder	Left & right 375mm		
Airbrakes	Fully open 140/152 mm from wing surface to most remote part of paddle. Max difference 5 mm.		

Longitudinal datum: Centre of main spar

Horizontal datum: Upper surface of rear fuselage longeron.

Maximum speeds

	Knots	Kph
VNE	117	216
Rough air	78	144
Manoeuvre		

	Knots	Kph
Aerotow	83	154
Winch / auto tow	66	122
Airbrakes open		

Max winch weak link: 500 Kg (White)

Tyre pressure: Main psi (Bar)

Semi aerobatic. Cloud flying permitted.

Notes: -

The Oly 460 was the designation of the prototypes. They had fabric covered rear fuselage tops. The 463 was the production version (which came out in 1963), it has a glass fibre rear fuselage top. The Oly 465 had a thinner wing and strengthened spar. Only 2 were made (for the 1965 world championships).

All the above data applies to the 460 & 463. Some may apply to the 465.

BGA glider data sheet - Pegasus - Centrair 101 & 101A

Data source: Manufacturers' Handbook Date: 1987

Manufacturer: Centrair

Web site:

Phone:

Fax:

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry) no tanks in wings	363	800
BGA concession non-aerobatic max weight (dry) without tanks [+3%]	374	824
Max weight dry with tanks in wings	368	811
BGA concession non-aerobatic max weight (dry) with tanks [+3%]	379	836
Max weight with water	455	1003
Max weight of non lifting components (everything except wings)	235	518
BGA concession non-aerobatic max weight of non lifting components [+5%]	247	544
Max pilot weight (seat load)	110?	242?

mm Inches

Forward C of G limit (aft of datum)	230	9.06
Aft C of G limit (aft of datum)	375	14.76
Pilot position (forward of datum)	650	25.59

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	22 ±2	14 ±2		
Elevator	22 ±3.5	18 ±2		
Rudder	Left 30±3	Right 30±3		

	Controls mass & moment limits	
	Mass Kg	Balance KgCm
Rudder		
Ailerons		
Elevator		

Longitudinal datum: Wing root LE (not the fairing).

Horizontal datum: Rear fuselage top 1000:45 tail down

Maximum speeds

	Kph	Knots
VNE	250	135
Rough air	163	88
Manoeuvre	163	88

	Kph	Knots
Aerotow	163	88
Winch / auto tow	120	65
U/C down	163	88

Max winch weak link: 600 Kg [Blue]

Tyre pressure: 2.6 - 3.4 Bars

Semi aerobatic. Cloud flying permitted.

Notes: -

Each 1Kg lead weight in the nose reduces the min pilot weight by 2 Kg.

Span 15 meters

This sheet compiled by: Tim Macfadyen

Date: 18 June 2002

BGA glider data sheet - Petrel

Data source: BGA data

Date of issue: 1962

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	289	638
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	478	18.8
Aft C of G limit (aft of datum)	640	25.2
Front pilot position (forward)	368	14.5

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	79	146
Rough air	56	104

	Knots	Kph
Aerotow	56	104
Winch / auto tow	43	80

Max winch weak link: 500-Kg white

Non aerobatic, cloud flying not permitted

Notes: -

This sheet compiled by: Tim Macfadyen Date: 12 June 2002

BGA glider data sheet - Phoebus C (17 meter)

Data source: BGA data sheet

Date of issue:

Manufacturer: Bölkow

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water		
Max weight (dry)	375	827
BGA concession non-aerobatic max weight (dry) [+3%]	386	852
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	254	10
Aft C of G limit (aft of datum)	424	16.7
Pilot position (forward)	445	17.5

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum: 1000:25

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	108	200
Manoeuvre		

	Knots	Kph
Aerotow	97	180
Winch / auto tow	65	120
Airbrakes open		

Max winch weak link: 750 kg (Red)

Tyre pressure: Main psi (Bar)

Semi aerobatic, cloud flying permitted

Span 17 meters

This sheet compiled by: Tim Macfadyen

Date: 20 Feb 2003

BGA glider data sheet - Pik 20B

Data source: Flight Manual

Manufacturer: EIRI AVION OY, Kisällinkatu 8, SF-15170 Lahti 17

UK Agent: Phone:

Fax:

Weighing Data:

	Kg	Pounds
Max weight with water	450	992
Max weight dry (& max landing weight)	400	880
BGA concession non-aerobatic max weight (dry) [+3%]	412	908
Max water	140	309
Max weight of non lifting components		
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	2085	82.1
Aft C of G limit (aft of datum)	2225	87.6
Short pilot position (aft of datum)	1402	55.2
Tall pilot position (aft of datum)	1460	57.5

Control deflections in degrees

	Up	Down
Flaps	8° ± 1°	80° +10° -5°
Elevator	20° ± 1°	20° ± 1°
Ailerons	21° - 24° ± 2°	17° - 21° ± 2°
Rudder	Left & Right 27° ± 2°	

Ailerons move 8° ± 1° with flaps

Longitudinal datum: Nose of fuselage. This is 1900 mm (74.80 inches) forward of the wing LE at the root rib.

Horizontal datum: Rear fuselage top 1000:28 tail down

The main wheel is 79.6 inches (2022 mm) aft of datum, the tail wheel is 229.2 inches (5822 mm) aft of datum.

Maximum speeds (IAS)

	Knots	Kph
VNE	142	263
Rough air at max weight	131	242
Winch / auto tow	67	125
More than 45° flap deflection	108	200

	Knots	Kph
Flaps down	108	200
Aerotow	100	185
Manoeuvre	100	185

Max winch weak link 500 Kg (BGA Blue 600 Kg)

Tyre pressures: Main 35 psi (2.5 Bar) Tail 28 psi (2 Bar)

Semi aerobatic (without water & less than 45° flap deflection), cloud flying permitted

Notes: -

This sheet compiled by: Tim Macfadyen

Date: 7 May 2003

BGA glider data sheet - Pik 20D

Data source: Flight Manual

Manufacturer: EIRI AVION OY, Kisällinkatu 8, SF-15170 Lahti 17

UK Agent: Phone:

Fax:

Weighing Data:

	Kg	Pounds
Max weight with water	450	992
Max water (nil for landing)	140	309
Max weight of non lifting components	220	485
BGA concession non-aerobatic max weight of non lifting components [+5%]	231	520
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	185	7.28
Aft C of G limit (aft of datum)	325	12.79
Light pilot position (forward)	480	18.90
Heavy pilot position (forward)	420	16.54

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:28 tail down

Control deflections in degrees

	Up	Down
Flaps	12±1	16±1
Elevator	20±1	20±1
Ailerons	12 - 15 11 - 14 10 - 13	11.5 - 14.5 10 - 13 8.5 - 11.5
		Flaps +16 Flaps 0 Flaps -12
Rudder	Left & Right 33±2	

Control surfaces max free play

Elevator ±3mm with stick locked & ±1mm with push rod in fin locked.

± 2.5mm between ailerons and flaps

± 5mm between flaps

± 2.5mm both flaps moving together

Maximum speeds (IAS)

	Knots	Kph
VNE	158	292
Rough air at max weight	130	240
Rough air without water	108	200
Winch / auto tow	67	125

	Knots	Kph
Flaps down	81	150
Aerotow	103	190
Manoeuvre	103	190

Max winch weak link: Blue 600 Kg

Tyre pressures: Main 35 psi (2.5 Bar) Tail 28 psi (2 Bar)

Semi aerobatic (without water), cloud flying permitted

Notes: -

This sheet compiled by: Tim Macfadyen/Doug Jones

Date: 18 July 2002

BGA glider data sheet - Pilatus B4-PC11 (& -A & -AF)

Data source: Manufacturer's Manual

Date of issue: Dec 1974

Manufacturer: Pilatus Aircraft Ltd, Stans, Switzerland.

Manufactured under licence by Nippy in Japan since 1978 as the NP-100 Albatross.

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	350	772
BGA concession non-aerobatic max weight [+3%]	360	795
Max pilot weight (seat load)	114	252
	mm	Inches
Forward C of G limit (aft of datum)	280	11.0
Aft C of G limit (aft of datum)	420	16.5
Pilot position (forward)	572	22.53

Control deflections in mm

	Up	Down	Measuring point
Ailerons	120 ± 5	58 ± 5	TE inboard end
Elevator PC11	100 ± 5	70 ± 5	TE centre
Elevator PC11A & AF	100 ± 5	85 ± 5	TE centre
Rudder	Left & right 230 ± 10		TE bottom
Airbrakes. 7.25 to 8.25 pounds force required to unlock the mechanism on each wing.			

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:80 tail down

The retractable main wheel is 160mm (6.29") aft of datum. Distance between wheels is 3208mm (126.3").

Maximum speeds

	Knots	Kph
VNE	130	240
Rough air	88	163
Manoeuvre	88	163

	Knots	Kph
Aerotow	88	163
Winch / auto tow	70	130
Airbrakes open	130	240

Max winch weak link: 550 kg (Tost white) BGA concession 600 Kg (Tost blue)

Tyre pressure: Main 27 psi (1.9 bar) Tail 25 psi (2.5 bar)

Pilatus B4-PC11- Semi aerobatic, cloud flying permitted.

Pilatus B4-PC11-A - Fully aerobatic (+ 7.00, -4.79 g). Cleared for inverted flying, rolling manoeuvres and outside loops.

Structurally as B4-PC11 but with toe straps, 5-point harness and increase down elevator travel.

Pilatus B4-PC11-AF - Fully aerobatic. Cleared as "A" model and for flick manoeuvres.

As B4-PC11-A model but with rear fuselage strengthening to cater for flick manoeuvres.

Strengthening may be factory fitted internally or external, fitted as a modification.

Span 15 meters

This sheet compiled by: Tim Macfadyen

Last updated 29 March 2005

BGA glider data sheet - Pirat (SZD 30)

Data source: BGA data sheet & Manufacturer's manuals

Date of issue: 1973

Manufacturer: PZL Poland

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	370	815
BGA concession non-aerobatic max weight [+3%]	381	839
Max pilot weight (seat load) (Pilot + Parachute + Disposable Load)	115	253

mm Inches

Forward C of G limit (aft of datum)	270	10.63
Aft C of G limit (aft of datum)	416	16.38
Pilot position (forward)	277	10.9

Control deflections in mm

	Up	Down	Measuring point
Ailerons	124-140	65 - 73	Root TE
Elevator	67-75	64-72	Centre TE
Trim Tab	8 - 10	18 - 22	Centre TE
Rudder	Left & right 310 - 370		Rear TE
Airbrakes	155-165	165-175	Top of blade to wing surface

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage datum mark 250mm higher than front one. Front mark is approximately 300mm forward of the canopy's front edge. The rear mark is near the rear carrying handle.

Maximum speeds

	Knots	Kph
VNE	134	248
Rough air	75	140
Manoeuvre		

	Knots	Kph
Aerotow	75	140
Winch / auto tow	64	118
Airbrakes open		

Max winch weak link: 600 kg (Blue)

Tyre pressure: Main Wheel 26 psi (1.8 Bar)

Semi aerobatic, cloud flying permitted

This sheet compiled by: Tim Macfadyen & James Hunneman (James_Hunneman@msn.com) Last update: 4 Oct 2005

BGA glider data sheet - Prefect

Data source: The world's Sailplanes Vol 1 (1962) & BGA data

Date of issue: 1962

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	279	615
BGA concession non-aerobatic max weight (dry) [+3%]	287	634
Max pilot weight (seat load)	100.7	222

mm Inches

Forward C of G limit (aft of datum)	330	13.0
Aft C of G limit (aft of datum)	485	19.1
Front pilot position (forward)	143	5.63

Max control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	22.9°	11.7°		
Elevator	26.8°	22.0°		
Rudder	Left & right 27.0°			

Longitudinal datum: Wing root LE at rib

Horizontal datum: Top longeron aft of frame 5 horizontal.

Maximum speeds

	Knots	Kph
VNE	90	167
Rough air	60	111

	Knots	Kph
Aerotow	60	111
Winch / auto tow	50	92

Max winch weak link: 500 Kg (White)

Tyre pressure: 30 - 35 psi (2.5 Bar)

Semi aerobatic. Cloud flying permitted

Notes: -

Span 13.72 Meters

This sheet compiled by: Tim Macfadyen Date: 6 May 2003

BGA glider data sheet - Puchacz SZD-50-3

Data source: Flight Manual

Date of issue: Dec 1985

Manufacturer: PZL (Poland)

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	570	1256
BGA concession non-aerobatic max weight (dry) [+3%]	587	1294
Max weight inverted	540	1190
Max pilot weight (seat load)	110	242
Max pilot weight (seat load) inverted	95	209

mm

Forward C of G limit (aft of datum)	90
Forward C of G limit inverted (aft of datum)	130
Aft C of G limit (aft of datum)	330
Aft C of G limit for flick rolls (aft of datum)	200
Front pilot pos. (forward of datum) 130 lb pilot	1346
180 lb pilot	1375
Rear pilot pos. (forward of datum) 130 lb pilot	305
180 lb pilot	261

Control deflections in mm

	Up	Down	Measuring point
Ailerons	108/120	54/60	Inboard end
Elevator	198/228	149/169	Inboard end
Rudder	513/567 Both ways		Base
Trim Up to serial No 1081	32/38	72/78	Inboard end
Trim From serial No 1082	28/32	73.5/77.5	Inboard end

Longitudinal datum: Wing root LE

Horizontal datum: Datum points on rear fuselage or wing root rib level, using a clear plastic tube filled with water as a level.

Maximum speeds

	Knots	Kph
VNE	116	215
VNE inverted	97	180
Rough air	86	160
Manoeuvre	81	150

	Knots	Kph
Aerotow	81	150
Winch / auto tow	59	110
Airbrakes open	116	215

Max winch weak link: 758 Kg (Tost Red)

Tyre pressures: Front 17 psi (1,2 Bar), main 43 psi (1,9 Bar), rear 36 psi (2,5bar)

Semi/fully aerobatic - see weight limits Cloud flying permitted

This sheet compiled by: Tim Macfadyen

Last updated: 16 June 2005

BGA glider data sheet - PW-5 (Smyk)

Data source: Manufacturer's Manuals

Date of issue: 1994

Manufacturer: WSK "PZL - ŚWIDNIK" S.A. Al. Lotników Polskich 1, 21-045 Świdnik, Poland

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	300	661
BGA concession non-aerobatic max weight (dry) [+3%]	309	681
Max weight of non lifting components (everything except wings)	112	247
BGA concession non-aerobatic max weight of non lifting components [+5%]	118	259
Max load in luggage compartment	5	11
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	235	9.25
Aft C of G limit (aft of datum)	410	16.14
Pilot pos (fwd of datum) seat back	223	8.98
Pilot pos (fwd of datum) seat forward	281	11.06

Control deflections in degrees

	Up	Down	Max free play (total movement).
Ailerons	26° ± 2	13° ± 1	3mm at stick aileron locked.
Elevator	28° ± 2	19° ± 1	2.5mm at the stick, with the elevator locked.
Rudder	Left & right 35° ± 2		
Airbrakes	25 ± 2 mm gap between wing and paddles bottom (root end) with brakes fully open.		

Longitudinal datum: Wing root LE at root Horizontal datum: Wing root LE & rear fuselage datum point horizontal.

Maximum speeds

	Knots	Kph
VNE	121	225
Rough air	81	150
Manoeuvre	81	150

	Knots	Kph
Aerotow	81	150
Winch / auto tow	65	120
Airbrakes open		

Wing span 13.44 meters

Max winch weak link: 700daN (Blue)

Tyre pressure: Front 30 psi (2 bar), main 50 psi (3,5 bar)

Semi aerobatic, cloud flying permitted

Notes: -

Maximum altitude 16 400 feet 5 000 meters.

BGA glider data sheet - Rhönbussard

Data source: German data sheet

Date of issue: 1939

Manufacturer: H Jackobs

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	255	562
Max weight of non lifting components (everything except wings)	155	342
Max pilot weight (seat load)	90	198

mm Inches

Forward C of G limit (aft of datum)	370	14.6
Aft C of G limit (aft of datum)	447	17.6
Front pilot position (forward)	11	0.45

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	95	70	340	
Elevator	155	135	400	
Trim				
Rudder	320 - 355 Left & right			

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	105	195
Rough air	54	100
Manoeuvre		

	Knots	Kph
Aerotow	51	95
Winch / auto tow	43	80
Airbrakes open		

Max winch weak link: 520 Kg (White)

Tyre pressure: Main psi (Bar), rear psi (bar)

No aerobatics, no cloud flying.

Notes: -

Span 14.3 meters

Natural frequency of wings 220 cycles per minute

This sheet compiled by: Tim Macfadyen Date: 15 October 2002

BGA glider data sheet - Rhönsperber

Data source: BGA data sheet

Date of issue:

Manufacturer: Jacobs Flugzeugbau Schweyer, Ludwigshafen, Germany

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	282	622
Max weight of non lifting components (everything except wings)		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Pilot position (forward)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	81	150
Rough air	43	80
Manoeuvre		

	Knots	Kph
Aerotow	54	100
Winch / auto tow	43	80
Airbrakes open		

Max winch weak link: 500 kg (White)

Tyre pressure: Main psi (Bar)

Non aerobatic, cloud flying not permitted

Span 15.3 meters

Date of first manufacture 1935

This sheet compiled by: Tim Macfadyen

Date: 24 Feb 2003

BGA glider data sheet - Sagitta

Data source: BGA data & The World's Sailplanes Vol II

Date of issue: 1963

Manufacturer: N V Vliegtuigbouw (Holland)

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	331	730
BGA concession non-aerobatic max weight (dry) [+3%]	341	752
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	383	15.1
Aft C of G limit (aft of datum)	462	18.2
Pilot position (forward)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	21°	14°		
Elevator	20°	15°		
Rudder	30° Left & right			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	106	196
Rough air	80	148
Manoeuvre		

	Knots	Kph
Aerotow	66	122
Winch / auto tow	66	122
Airbrakes open		

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main psi (Bar)

Semi aerobatic, cloud flying permitted

Span 15 meters

Conventional wooden construction, first flight 1960.

This sheet compiled by: Tim Macfadyen

Date: 25 Feb 2003

BGA glider data sheet - Salto H 101

Data source: BGA data sheet

Date of issue:

Manufacturer: Staat + Flug

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	310	683
BGA concession non-aerobatic max weight (dry) [+3%]	319	704
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	235	9.25
Aft C of G limit (aft of datum)	335	13.19
Pilot position (forward)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing LE 100mm from root

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	81	150
Manoeuvre		

	Knots	Kph
Aerotow	81	150
Winch / auto tow	70	130
Airbrakes open		

Max winch weak link:

Tyre pressure: Main psi (Bar)

Fully aerobatic, cloud flying permitted

Span 13.6 meters

This sheet compiled by: Tim Macfadyen

Date: 25 Feb 2003

BGA glider data sheet - SB-5 B & E

Data source: BGA data sheet

Date of issue:

Manufacturer: Bamberg

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	325	716
BGA concession non-aerobatic max weight (dry) [+3%]	335	738
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	260	10.25
Aft C of G limit (aft of datum)	400	15.75
Pilot position (forward)	300*	11.8*

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

*An alternative source quotes 470mm, (18.5"). This figure should be checked by weighing with the pilot in.

Longitudinal datum: Wing root LE of rib 1.

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	75	140
Manoeuvre		

	Knots	Kph
Aerotow	65	120
Winch / auto tow	54	100
Airbrakes open		

Max winch weak link: 600 kg (Blue)

Tyre pressure: Main psi (Bar)

Semi aerobatic, cloud flying permitted

Span 15 meters

This sheet compiled by: Tim Macfadyen

Date: 27 Feb 2003

BGA glider data sheet - Scud 2

Data source: Laurie Woodage (owner)

Date of issue: 2005

Manufacturer: Abbott Baynes Ltd (Date of first flight 1932)

Weighing Data:

	Kg	Pounds
Max weight (dry)	182	400
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	498	19.6
Aft C of G limit (aft of datum)	571	22.5
Pilot position (forward)	345	13.6

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	61	113
Rough air	52	96

	Knots	Kph
Aerotow	52	96
Winch / auto tow	39	72

Winch weak link: Approximately 600 pounds recommended

Non aerobatic, cloud flying not permitted

Span 12.2 meters

Only one example exists, BGA 231 (AAA) the oldest glider on the BGA register

Information supplied by: Laurie Woodage (L.P.Woodage@herts.ac.uk) 24 March 2005

This sheet compiled by: Tim Macfadyen Date: 24 March 2005

BGA glider data sheet - Scud 3

Data source: BGA data sheet

Date of issue:

Manufacturer: Abbott Baynes Ltd (Date of first flight 1935)

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	247	544
Max pilot weight (seat load)		
	mm	Inches

Forward C of G limit (aft of datum)	556	21.9
Aft C of G limit (aft of datum)	627	24.7
Pilot position (forward)		

Longitudinal datum: Wing root LE

Horizontal datum:

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Maximum speeds

	Knots	Kph
VNE	65	120
Rough air	52	96
Manoeuvre		

	Knots	Kph
Aerotow	52	96
Winch / auto tow	43	80

Max winch weak link: 500 kg (white)

Non aerobatic, cloud flying not permitted

Span 14 meters

This sheet compiled by: Tim Macfadyen

Date: 27 Feb 2003

BGA glider data sheet - SD-3 & SD-3-15T

Data source: BGA data sheet

Date of issue:

Manufacturer: Swales Developments

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight SD-3 (13.5 meters)	333	735
BGA concession non-aerobatic max weight (SD-3) [+3%]	343	757
Max weight SD-3-15 (15 meters)	349	770
BGA concession non-aerobatic max weight (SD-3-15) [+3%]	360	793
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	175	6.9
Aft C of G limit (aft of datum)	314	12.35
Pilot position (forward)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	116	215
Rough air	75	139
Manoeuvre		

	Knots	Kph
Aerotow	75	139
Winch / auto tow	65	120
Airbrakes open		

Max winch weak link: 600 kg (Blue)

Tyre pressure: Main psi (Bar)

Semi aerobatic, cloud flying permitted

These all-metal gliders are developments of the BG135 Gypsy.

The SD-3-13V is 13.5 M span & has a V tail. The SD-3-15 is 15 M span. The SD-3-15T has a T tail.

This sheet compiled by: Tim Macfadyen

Date: 28 Feb 2003

BGA glider data sheet - SF 26A

Data source: Flight Manual

Date of issue: 1963

Manufacturer: Scheibe Flügzeughbau, August-Pfaltz, Str.23, 8060 Dachau bei München, Germany

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	310	684
BGA concession non-aerobatic max weight (dry) [+3%]	319	704
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	329	12.9
Aft C of G limit (aft of datum)	486	19.1
Pilot position (forward of datum)	404	15.9

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	90 ±10	43 ±5	240	
Elevator	140 ±10	140 ±10	300	
Trim	12±5	27±5	80	
Rudder	Left 410 ±20	Right 410 ±20	655	

Longitudinal datum: Wing root LE at rib 1

Horizontal datum: Rear fuselage top 1000:82 tail down

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	75	140
Manoeuvre		

	Knots	Kph
Aerotow	75	140
Winch / auto tow	54	100
Airbrakes open	108	200

Max winch weak link: 650 Kg (Blue)

Tyre pressure: 36 psi (2,5 Bar)

~~Non~~/semi/fully aerobatic, cloud flying permitted.

Notes: -

This sheet compiled by: Tim Macfadyen

Date: 23 July 2003

BGA glider data sheet - SF 27A

Data source: Flight Manual

Date of issue: 1966

Manufacturer: Scheibe Flugzeugbau, August-Pfaltz, Str.23, 8060 Dachau bei München

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	330	728
BGA concession non-aerobatic max weight (dry) [+3%]	340	750
Max baggage	20	44
Max weight of non lifting components (everything except wings)	205	452
BGA concession non-aerobatic max weight of non lifting components [+5%]	215	475
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	291	11.45
Aft C of G limit (aft of datum)	460	18.10
Pilot position (forward of datum)	400	15.75

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	
Ailerons	85 ±10	65 ±5	245	
Elevator	100 ±10	150 ±10	605*	
Trim	30±5	40±5	200 measure with elevator neutral	
Rudder	Left 400 ±30	Right 400 ±30	655	

* Neutral elevator is defined as with the centre of the top of the stick 312mm from the panel.

Longitudinal datum: Wing root LE 400mm from fuselage centre line.

Horizontal datum: Rear fuselage top 1000:25 tail down

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	92	170
Manoeuvre	75	140

	Knots	Kph
Aerotow	75	140
Winch / auto tow	59	110
Airbrakes open	108	200

Wing natural frequency 176 Hz

Max winch weak link: 750 Kg (Red)

Tyre pressure: Front 38 psi (2,7 Bar) Rear 36 psi (2,5 Bar)

Semi aerobatic, cloud flying permitted.

This sheet compiled by: Tim Macfadyen

Date: 20 April 2004

BGA glider data sheet - SF(H) 34 & SNC 34 C

Data source: Flight Manual

Date of issue: 1984

Manufacturer: Scheibe Flugzeugbau, August-Pfaltz, Str.23, 8060 Dachau bei München (SF 34)

And SNC (Society New Centrair) (SNC 34 C)

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	540	1190
BGA concession non-aerobatic max weight (dry) [+3%]	556	1226
Max weight of non lifting components (everything except wings)	370	816
BGA concession non-aerobatic max weight of non lifting components [+5%]	389	856
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	199	7.8
Aft C of G limit (aft) SF 34	367*	14.4*
Aft C of G limit (aft) SNC 34 C	350	13.78
Front pilot position (forward of datum)	1050	41.0
Rear pilot position (forward of datum)	20	0.8

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	
Ailerons	90 ±10	40 ±5	170	
Elevator	80 ±8	80 ±8	210	
Airbrakes	150 Min	40±5	Inboard ends	
Rudder	Left 305 ±15	Right 305 ±15	528	

	Moment limits	Mass limits
Elevator	5,1/6,72 kgcm	1,15/1,51 Kg
Rudder	16,72/21,28 kgcm	4,84/6,16 Kg
Ailerons	9,42/11,98 kgcm	1,98/2,52 Kg

*Changed by TN 336-8

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top horizontal

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	93	172
Manoeuvre	93	172

	Knots	Kph
Aerotow	93	172
Winch / auto tow	65	120
Airbrakes open		

VNE at altitude	

Max winch weak link: 600 (Blue)

Tyre pressure: Front 36 psi (2,5 Bar) Main 43 psi (3 Bar)

Semi aerobatic, cloud flying permitted.

Notes: -

This sheet compiled by: Tim Macfadyen

Date: 14 May 2002

BGA glider data sheet – SG 38 (Primary)

Data source: LBA Data sheet

Date 07.03.1991

Manufacturer: Anateurbau, Germany

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	210	463
Max weight of non lifting components (everything except wings)	155	342
Max pilot weight (seat load)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Ailerons	170 ± 5	110 ± 5	510
Elevator	135 ± 5	ca 260	410
Rudder	270 ± 5 Left & Right		740

	mm	inches
Forward C of G limit (aft of datum)	400	15.75
Aft C of G limit (aft of datum)	480	18.90
Pilot position (forward of datum)		

Longitudinal datum: .

Horizontal datum: Level

Maximum speeds

	Knots	Kph
VNE	32	60
Rough air	32	60

	Knots	Kph
Aerotow	Not permitted	
Winch / auto tow	32	60

Max winch weak link: 306 Kg

Non aerobatic - Cloud flying not permitted

This sheet compiled by: Tim Macfadyen

Date: 30 July 2004

BGA glider data sheet - SHK 1

Data source: Flight Manual

Date of issue: March 1965

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Weighing Data:

	Kg	Pounds
Max weight (dry)	370	816
BGA concession non-aerobatic max weight (dry) [+3%]	381	840
Max weight of non lifting components (everything except wings)	212	467
BGA concession non-aerobatic max weight of non lifting components [+5%]	222	491
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	330	13.0
Aft C of G limit (aft of datum)	466*	18.35*
Pilot position (forward of datum)	370	14.6

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	123 ±5	40 ±5	240	
Elevator	110 ±10	110 +10 -5	616	
Trim	6	6	100	
Rudder	Left 120 ±10	Right 120 ±10	616	

*Note the aft C of G limit was changed from 490mm (19.3 inches) by modification action.

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:80 tail down

Maximum speeds

	Handbook figures (EAS)		Placard figures (IAS)	
	Knots	Kph	Knots	Kph
VNE	108	200	113	210
Rough air	75	140	79	146
Aerotow	75	140	79	146
Winch / auto tow	54	100	56	104

Max winch weak link: 700 Kg (Blue)

Tyre pressure: 49 psi, 3,5 bar

Semi aerobatic, cloud flying permitted

This sheet compiled by: Tim Macfadyen

Date: 4 Jan 2005

BGA glider data sheet - SIE 3

Data source: BGA data sheet

Date of issue:

Manufacturer: Siebert (Germany)

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	340	750
BGA concession non-aerobatic max weight (dry) [+3%]	350	773
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Pilot position (forward)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

The C of G limits are 20 - 33% SMC

Longitudinal datum: Nose

Horizontal datum: Top of rear fuselage 4° rear down

Maximum speeds

	Knots	Kph
VNE	108	200
Rough air	86	160
Manoeuvre		

	Knots	Kph
Aerotow	81	150
Winch / auto tow	60	110
Airbrakes open		

Max winch weak link: 600 kg (Blue)

Tyre pressure: Main psi (Bar)

Semi aerobatic, cloud flying permitted

This sheet compiled by: Tim Macfadyen

Date: 28 Feb 2003

BGA glider data sheet - Sky

Data source: The world's Sailplanes Vol 1

Date of issue: 1962

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	385	850
BGA concession non-aerobatic max weight [+3%]	397	875
Max pilot weight (seat load)		
	mm	Inches
Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)		

Max control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	27.8°	13.9°		
Elevator	23.9°	23.9°		
Trim				
Rudder	Left & right 25.5°			

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	98	182
Rough air	72	134

	Knots	Kph
Aerotow	56	104
Winch / auto tow	44	82

Max winch weak link: 500 Kg (White)

Tyre pressure: psi (Bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 18 Meters

This sheet compiled by: Tim Macfadyen

Date: 22 May 2002

BGA glider data sheet - Skylark 2 & 2B (T.41)

Data source: Slingsby's Rigging & control data Date of issue:

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	331	730
BGA concession non-aerobatic max weight (dry) [+3%]	341	752
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm inches

Forward C of G limit (aft of datum)	342	13.5
Aft C of G limit (aft of datum)	482	19.0
Pilot position (forward of datum)	392	15.43

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 16:1000 tail down (0.9°)

Maximum speeds

	Knots	Kph
VNE	121	224
Rough air	76	141
Manoeuvre	72	133

	Knots	Kph
Aerotow	72	133
Winch / auto tow	61	113
Airbrakes open	121	224

Max winch weak link: 1000 lb (BGA figure 600 Kg blue)

Tyre pressure: Main 35 - 40 psi

Semi aerobatic - Cloud flying permitted

Notes: -

Span 14.63 Meters

Control deflections in mm

	Up	Down	Measuring point
Ailerons	105 ±5	53 ±5	Inboard TE (5±2mm droop)
Elevator	185 ±10	185 ±10	Inboard TE
Trim	50 min	50 min	TE
Rudder	Left 320	Right 320	Extreme TE
Airbrakes	130 min		

Aileron cable tension 25-30 lb

Elevator cable tension 40-50 lb

This sheet compiled by: Dave Bullock & Tim Macfadyen Date: 6 November 2001

BGA glider data sheet - Skylark 3 B & D

Data source: Flight Manual

Date of issue: 1957

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	358	790
BGA concession non-aerobatic max weight (dry) [+3%]	369	814
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm inches

Forward C of G limit (aft of datum)	293	11.52
Aft C of G limit (aft of datum)	420	16.55
Pilot position (forward)	612	24.1
Parachute position (forward)	282	11.1

Control deflections in mm

	Up	Down	Measuring point
Ailerons	134 ±5	50 ±5	Inboard TE (5±2mm droop)
Elevator	240 ±10	240 ±10	Inboard TE
Trim	65 min	65 min	
Rudder	Left 375 min	Right 375 min	
Airbrakes	130 min		
Aileron cable tension 25-30 lb			
Elevator cable tension 40-50 lb			

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 16:1000 rear down (0.9°)

Maximum speeds

	Knots	Kph
VNE Skylark 3B	108	200
VNE Skylark 3D	118	218
Rough air	71	131
Manoeuvre	71	131

	Knots	Kph
Aerotow	71	131
Winch / auto tow	71	131
Airbrakes open Skylark 3B	108	200
Airbrakes open Skylark 3D	118	218

Max winch weak link: 1000 lb (BGA figure 600 Kg blue)

Tyre pressure: Main 35 - 40 psi

Semi aerobatic - Cloud flying permitted

Notes: -

Span 18.2 meters

This sheet compiled by: Dave Bullock & Tim Macfadyen Date: 5 November 2001

BGA glider data sheet - Skylark 3 F

Data source: Pilot's Notes

Date of issue:

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	377	830
BGA concession non-aerobatic max weight (dry) [+3%]	388	855
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm inches

Forward C of G limit (aft of datum)	293	11.52
Aft C of G limit (aft of datum)	420	16.55
Pilot position (forward of datum)	612	24.1
Parachute position (forward)	282	11.1

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 16:1000 rear down (0.9°)

Control deflections in mm

	Up	Down	Measuring point
Ailerons	134 ±5	50 ±5	Inboard TE (5±2mm droop)
Elevator	187 ±10	145 ±10	Inboard TE
Trim	8 max	35 min	
Rudder	Left 375 min	Right 375 min	
Airbrakes	130 min		

Aileron cable tension 25-30 lb

Elevator cable tension 40-50 lb

Aileron tabs 41±4mm down with ailerons up
14±4mm up with ailerons down

Maximum speeds

	Knots	Kph
VNE	118	218
Rough air	71	131
Manoeuvre	71	131

	Knots	Kph
Aerotow	71	131
Winch / auto tow	71	131
Airbrakes open	118	218

Max winch weak link: 1000 lb (BGA figure 600 Kg blue)

Tyre pressure: Main 40 - 45 psi

Semi aerobatic - Cloud flying permitted

Notes: -

Span 18.2 meters

This sheet compiled by: Dave Bullock & Tim Macfadyen Date: 5 November 2001

BGA glider data sheet - Skylark 4 (T.50)

Data source: Pilot's Notes

Date of issue:

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	377	830
BGA concession non-aerobatic max weight (dry) [+3%]	388	855
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)	115	253

mm inches

Forward C of G limit (aft of datum)	293	11.52
Aft C of G limit (aft of datum)	420	16.55
Pilot position (forward of datum)	571	22.5

Control deflections in mm

	Up	Down	Measuring point
Ailerons	96 ±5	37 ±2	Inboard TE (5±2mm droop)
Elevator	187 ±10	145 ±10	Inboard TE
Trim	40 min	40 min	TE
Rudder	Left 375 +15 -0	Right 375 +15 -0	Extreme TE
Airbrakes	130 min		

Aileron cable tension 25-30 lb

Elevator cable tension 40-50 lb

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 42.5:1000 tail down (2.4°)

Maximum speeds

	Knots	Kph
VNE	123	228
Rough air	76	141
Manoeuvre	76	141

	Knots	Kph
Aerotow	76	141
Winch / auto tow	76	141
Airbrakes open	123	228

Max winch weak link: 1000 lb (BGA figure 600 Kg blue)

Tyre pressure: Main 40 - 50 psi

Semi aerobatic - Cloud flying permitted

Notes: -

Span 18.2 meters

This sheet compiled by: Dave Bullock & Tim Macfadyen Date: 6 November 2001

BGA glider data sheet - Standard Austria -

Data source: The world's Sailplanes Vol 2

Date of issue: 1963

Manufacturer: Austrian Aero Club

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	323	712
BGA concession non-aerobatic max weight [+3%]	333	733
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)		
Rear pilot position (aft of datum)		

Control deflections in Degrees

	Up	Down	Max free play
Tailplanes	20°	20°	
Ailerons	30°	15°	
Trim			

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	113	209
Rough air	76	140
Manoeuvre		

	Knots	Kph
Aerotow	61	112.5
Winch / auto tow	61	112.5
Airbrakes open		

Max winch weak link: 600 Kg (Blue)

Tyre pressure:

Semi aerobatic. Cloud flying permitted.

Notes: -

This sheet compiled by: Date:

BGA glider data sheet - Swallow

Data source: Flight Manual

Date of issue:

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	318	700
BGA concession non-aerobatic max weight (dry) [+3%]	327	721
Max pilot weight (seat load)		

mm inches

Forward C of G limit (aft of datum)	488	19.2
Aft C of G limit (aft of datum)	589	23.2
Front pilot position (forward)	300	11.8

Control deflections in mm

	Up	Down	Measuring point
Ailerons	105 ± 5	52 ± 5	TE inboard
Aileron droop 5 ± 2			
Elevator	105 ± 5	160 minimum	
Trim	40 min	40 min	TE inboard
Rudder	Left 320 min	Right 320 min	Extreme TE

Brakes to lie fully closed when locked. Top brake to be 150mm min above wing when fully open. Stops in wing may be up to 15 mm clear of dive brake lever when brakes are open.

With dive brakes closed, lever on rib 1 must be 6 - 12 mm over top dead centre and stopped on the fibre block.

Cable tensions - Ailerons & elevator 30 - 40 lbs (13.6 - 18.1 kg)

Longitudinal datum: Wing root LE

Horizontal datum: Spigots on fuselage left side below wing (bottom longeron) horizontal.

Maximum speeds

	Knots	Kph
VNE	110	204
Rough air	69	128
Manoeuvre		

	Knots	Kph
Aerotow	69	128
Winch / auto tow	64	119
Airbrakes open	110	204

Max winch weak link: 1000 lb (BGA figure 500 Kg white)

Tyre pressure: 40 - 45 psi (2.8 - 3.2 Bar)

Semi aerobatic - Cloud flying permitted

Notes: -

Span 13.72 meters (45 feet)

This sheet compiled by: Tim Macfadyen

Date: 30 April 2003

BGA glider data sheet - Swift S1

Data source: BGA data sheet

Date of issue:

Manufacturer: Zaklad Remontow

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	410	904
BGA concession non-aerobatic max weight (dry) [+3%]	422	931
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Pilot position (forward)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	155	287
Rough air	127	235
Manoeuvre		

	Knots	Kph
Aerotow	81	150
Winch / auto tow	75	139
Airbrakes open		

Max winch weak link: 500 kg (White)

Tyre pressure: Main psi (Bar)

Fully aerobatic, +10/-7.5G, Aerobatics in gusty conditions prohibited, cloud flying permitted

Span 12.6 meters

This glider has no connection with the 15-meter version of the Slingsby Swallow, which was also called the Swift. The only Slingsby Swift was destroyed in 1960.

This sheet compiled by: Tim Macfadyen

Date: 10 March 2003

BGA glider data sheet -SZD 55-1

Data source: Flight manual

Date of issue: 1990

Manufacturer: PZL Bielsko

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	500	1102
Max weight (dry)	350	772
BGA concession non-aerobatic max weight (dry) [+3%]	360	795
Max weight of non lifting components (everything except wings)	248	547
BGA concession non-aerobatic max weight of non lifting components [+5%]	260	574
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	283	11.15
Aft C of G limit (aft of datum)	441	17.37
Front pilot position (forward)	580	22.85

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	68±2	41±2	135	±3*
Elevator	30° ±1	20° ±1	130	±3*
Rudder	Left & right 206 ± 5			
Airbrakes	180 ± 3 at outer end			

*Max free play is measured at the stick with the control surface locked central.

Longitudinal datum: Wing root LE

Horizontal datum: Wing root horizontal (LE & TE at same height above ground)

Aileron mass balance (drive disconnected). Weight at inboard TE / aileron weight ≤ 0.267

Elevator mass balance (drive disconnected). Weight at inboard TE / elevator weight ≤ 0.262

Ruder mass balance (drive disconnected, rudder horizontal ie on its side). Weight at TE ≤ 0

Maximum speeds

VNE at height

Tail tank

	Knots	Kph
VNE	137	255
Rough air	105	195
Manoeuvre	105	195
Aerotow	83	155
Winch / auto tow	78	145
U/C down	105	195
Airbrakes open	137	255

Height (feet)	Knots	Kph
6 500 - 10 000	130	242
10 000 - 15 000	120	223
15 000 - 20 000	110	204
20 000 - 25 000	100	185
25 000 - 30 000	90	167
30 000 - 35 000	80	149
35 000 - 40 000	70	130

Wing water (kg or litres)	Max tail water (kg or litres)
25	1.7
50	3.3
75	4.7
100	6.0
125	7.2
150	8.3
175	9.5

Max winch weak link: 660 Kg (blue)

Tyre pressure: Main 3 Bar (44 psi) Tail wheel 1.5 bar (21 psi)

Semi aerobatic and cloud flying permitted without water

Fin battery weighs 2.2 kg (4.85 pounds) and is 4385mm aft. Fin Water is 4435mm aft.

This sheet compiled by: Tim Macfadyen Date: 3 April 2002

BGA glider data sheet - Tutor

Data source: The world's Sailplanes Vol 1 & BGA data

Date of issue: 1962

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (Manufactured before Jan 1946)	258	570
Max weight (Manufactured after Jan 1946)	286	630
Max pilot weight (seat load)	99	218

mm Inches

Forward C of G limit (aft of datum)	381	15.0
Aft C of G limit (aft of datum)	546	21.5
Front pilot position (forward)	228	9

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	187±3	95±15		
Elevator	160 min	160 min		
Rudder	Left & right 285±30			

Longitudinal datum: Wing root LE at rib 1

Horizontal datum: Cockpit edge horizontal

Maximum speeds

	Knots	Kph
VNE	69	128
Rough air		

	Knots	Kph
Aerotow*	55	102
Winch / auto tow	48	89

*Aerotow only permitted if short bracing struts are fitted (between the main spar and the forward strut).

Max winch weak link: 500 Kg (White)

Tyre pressure: 30 - 35 psi

Non aerobatic, cloud flying not permitted

Notes: -

Span 13.1 meters

This sheet compiled by: Philpot & Tim Macfadyen Date: 5 June 2002

BGA glider data sheet - T.21b (Sedberg)

Data source: Flight Manual

Date of issue:

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	476	1050
BGA concession non-aerobatic max weight (dry) [+3%]	491	1082
Max pilot weight (max seat load on each seat)	102	225

Control deflections in inches

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	5.4 ±0.25	3.6 ±0.25	Measured at root	
Elevator	7.6 ±0.25	7.6 ±0.25	Measured at root	
Trim				
Rudder	Left 15 ±1	Right 15 ±1	At TE	
Spoiler	7.5 ±1*	Measure from TE top of spoiler to back top of cut-out in wing (spoilers fully open).		
*1½ inch max difference between wings.				

mm inches

Forward C of G limit (aft of datum)	597	23.5
Aft C of G limit (aft of datum)	775	30.5
Pilot position (aft of datum)	27.6	1.25

Longitudinal datum: Wing root LE

Horizontal datum: Top longeron of rear fuselage horizontal.

Maximum speeds

	Knots	Kph
VNE	92	170
Rough air	65	120
Manoeuvre	65	120

	Knots	Kph
Aerotow	65	120
Winch / auto tow	55	102
Spoilers open		

Max winch weak link: 1000 lb (BGA figure 500 Kg White)

Tyre pressure: 43 - 47 psi

Semi aerobatic - Cloud flying permitted

Notes: -

Span 16.5 meters

This sheet compiled by: Tim Macfadyen Date: 25 October 2001

BGA glider data sheet - T.31 (Tandem Tutor, Kirby Cadet Mk III)

Data source: Air Cadet Publication and Slingsbys' drawing DRG 31B-301

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	377	830
Max pilot weight (seat load)	109	240

mm inches

Forward C of G limit (aft of datum)	381	15.0
Aft C of G limit (aft of datum)	533	21.0
Front pilot forward of datum	419	16.5
Rear pilot position aft of datum	571	22.5

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	24.5°	12.3°		
Elevator	24.3	24.3		
Trim				
Rudder	Left 21.8° max	Right 21.8° max		

Longitudinal datum: Wing root LE

Horizontal datum: Top longeron horizontal

Maximum speeds

	Knots	Kph
VNE T.31	69	128
VNE Kirby Cadet Mk III	70	130
Rough air	52	96

	Knots	Kph
Manoeuvre	52	96
Aerotow	52	96
Winch / auto tow	48	89

Max winch weak link: 1000 lb (BGA figure 500 Kg white)

Tyre pressure: 35 psi

Non aerobatic - Cloud flying not permitted

Notes: -

Span 13.2 meters

This sheet compiled by: Dave Bullock & Tim Macfadyen Date: 6 May 2003

BGA glider data sheet - T.49b (Capstan)

Data source: Pilots notes

Date of issue: 1964

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	567	1250
BGA concession non-aerobatic max weight (dry) [+3%]	584	1288
Max pilot weight (seat load)	110	242

mm inches

Forward C of G limit (aft of datum)	450	17.7
Aft C of G limit (aft of datum)	655	25.8
Pilot position (forward of datum) Seat fully back	419	16.5
Pilot position (forward of datum) Seat fully forward	510	20.1

Control deflections in mm

	Up	Down	Measuring point	Cable tension
Ailerons	98 ±5	60 ±4	Measured at TE root	40-50 lb
Elevator	165 ±10	180 ±10	Measured at TE root	40-50 lb
Trim	28 min	36 min	At TE	
Rudder	Left 370 ±10	Right 370 ±10	At TE	
Airbrakes	215 min			

Longitudinal datum: Wing root LE

Horizontal datum: Fuselage top between 3 and 8 feet forward of lifting handles $2\frac{1}{3}^{\circ} \pm \frac{1}{4}^{\circ}$ nose down

Maximum speeds

	Knots	Kph
VNE	111	205
Rough air	76	141
Manoeuvre	76	141

	Knots	Kph
Aerotow	76	141
Winch / auto tow	66	122
Airbrakes open		

Max winch weak link with the standard hook: 1000 lb (BGA figure 600 Kg Tost blue),
Max winch weak link where a belly hook is fitted 750 kg (Tost red).

Tyre pressure: 45 - 50 psi

Semi aerobatic - Cloud flying permitted

Speeds & C of G limits for the prototype (T.49A) are different

This sheet compiled by: Tim Macfadyen/Dave Bullock

Last update: 22 September 2006

BGA glider data sheet - T53B & YS53 Sovereign

Data source: BGA data sheet

Date of issue:

Manufacturer: Slingsby Sailplanes & Yorkshire Sailplanes

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight - Non aerobatic	583	1285
Max weight - Semi aerobatic	526	1160
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (forward of datum)	76	3.00
Aft C of G limit (aft of datum)	113	4.47
Front pilot position (forward)	1519	59.80
Rear pilot position (forward)	217	8.56

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Rudder				

Longitudinal datum: Wing root LE 11.6 inches from fuselage centre line

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	123	228
Rough air	80	148
Manoeuvre		

	Knots	Kph
Aerotow	80	148
Winch / auto tow	70	130
Airbrakes open		

Max winch weak link: 750 kg (Red)

Tyre pressure: Main psi (Bar)

Semi aerobatic at 1160 lb max, cloud flying permitted

Type: Aluminium 2 seater

This sheet compiled by: Tim Macfadyen

Date: 13 March 2003

BGA glider data sheet - Vega T65A (15 meter)

Data source: Flight Manual

Date of issue: 1980

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water	440	970
Max weight (dry) & max landing	351	775
BGA concession non-aerobatic max weight (dry) [+3%]	362	798
Maximum water	88	195
Max pilot weight	114	252

mm Inches

Forward C of G limit (aft of datum)	235	9.25
Aft C of G limit (aft of datum)	339	13.36
Pilot position (forward of datum)	457	18

Control deflections

	Up	Down	Max free play	Max out of balance Kg mm	Max Mass Kg
Ailerons	See below		±2mm	58	2.05
Elevator	24° ±1½°	16°½° ±1½°	±2mm	69	1.50
Flaps	8°±½°	8°±½°	±2mm	N/A	17.50
Rudder	Left & Right 125 ^{mm} ±10 ^{mm}		±3mm	173	1.85
Brakes	48 ^{mm} min top up	40°±2 flap down	2mm	N/A	7.95
	Flap 8°±½° up	Aileron 7½°±½° up	Maximum difference between ailerons 1°.		
	Neutral	23°±1 up 10°±1 down			
	8°±½° down	9°±1° down			

Longitudinal datum: Wing root LE.

Horizontal datum: Wing rigging pins horizontal

Main wheel is 1.77 inches aft of datum (a) Main wheel to tail wheel 162.5 inches (b)

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	106	196
Manoeuvre		
Aerotow	100	185

	Knots	Kph
Winch / auto tow	70	130
Airbrakes open	135	250
U/C down	135	250
Flaps extended	135	250

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main 36 psi (2.5 Bar), rear 18 psi (1.2 bar)

Semi aerobatic (without water) Cloud flying permitted

This sheet compiled by: Tim Macfadyen

Date: 11 Feb 2002

BGA glider data sheet - Vega T65A/D 17 meter

Data source: Slingsbys Flight Manual (1980) & 17 Meter approval paperwork (1990)

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	377	830
BGA concession non-aerobatic max weight (dry) [+3%]	388	855
Maximum water	Nil	Nil
Max pilot weight	114	252

mm Inches

Forward C of G limit (aft of datum)	235	9.25
Aft C of G limit (aft of datum)	337	13.26
Pilot position (forward of datum)	457	18

Control deflections

	Up	Down	Max free play	Max out of balance Kg mm	Max Mass Kg
Ailerons	See below		±2mm	58	2.05
Elevator	24° ±1½°	16°½° ±1½°	±2mm	69	1.50
Flaps	8°±½°	8°±½°	±2mm	N/A	17.50
Rudder	Left & Right 125 ^{mm} ±10 ^{mm}		±3mm	173	1.85
Brakes	48 ^{mm} min top up	40°±2 flap down	2mm	N/A	7.95
	Flap 8°±½° up	Aileron 7½°±½° up	Maximum difference between ailerons 1°.		
	Neutral	23°±1 up 10°±1 down			
	8°±½° down	9°±1° down			

Longitudinal datum: Wing root LE.

Horizontal datum: Wing rigging pins horizontal

Main wheel is 1.77 inches aft of datum (a) Main wheel to tail wheel 162.5 inches (b)

Maximum speeds

	Knots	Kph
VNE	125	231
Rough air	106	197
Aerotow	100	185

	Knots	Kph
Winch / auto tow	70	130
U/C down	125	231
Flaps extended	125	231

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main 36 psi (2.5 Bar), rear 26 psi (1.8 bar)

Semi aerobatic. Cloud flying permitted.

Water ballast is not permitted with 17 meter tips.

This sheet compiled by: Tim Macfadyen

Date: 20 Jan 2005

BGA glider data sheet - Vega T65C (Sport)

Data source: Manufacturer's Manual

Date of issue: 1980

Manufacturer: Slingsby

Phone: 01751 432474

Fax: 01751 431173

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	354	780
BGA concession non-aerobatic max weight [+3%]	365	804
Max pilot weight	114	252

mm Inches

Forward C of G limit (aft of datum)	235	9.25
Aft C of G limit (aft of datum)	337	13.26
Pilot position (forward of datum)	457	18

Control deflections

	Up	Down	Max free play	Max out of balance Kg mm	Max mass Kg
Ailerons	46mm min	20mm min	±2mm	58	2.05
Elevator	24° ±1½°	16°½° ±1½°	±2mm	69	1.50
Rudder	Left & Right 125 ^{mm} ±10 ^{mm}		±3mm	173	1.85
Brakes	78±1 ^{mm} LE up	44° ± ½ TE down	2mm	N/A	6.10

Maximum difference between ailerons 1°.

Brakes deflections are measured at the outboard actuator.

Longitudinal datum: Wing root LE.

Horizontal datum: Rigging pins horizontal

Main wheel is 2.00 inches aft of datum (a) Main wheel to tail wheel 164 inches (b)

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	106	196
Manoeuvre		

	Knots	Kph
Aerotow	100	185
Winch / auto tow	70	130
Airbrakes open	135	250

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main 36 psi (2.5 Bar), rear 26 psi (1.8 bar)

Semi aerobatic. Cloud flying permitted

The Spot Vega (T.65C) is a "Club Class" version of the T.65A Vega. The Spot Vega has fixed wheels, no flaps, no water ballast, a glass main spar and ailerons extended slightly at their tips.

This sheet compiled by: Tim Macfadyen

Date: 11 April 2003

BGA glider data sheet - Ventus a & b (15 & 16.6 meter)

Data source: Flight Manuals & BGA data

Date of issue:

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight 15 M	525*	1157*
Max weight 16.6 M	430	948
Max weight of non lifting components (everything except wings)	241	531
BGA concession non-aerobatic max weight of non lifting components [+5%]	253	558
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	200	7.87
Aft C of G limit (aft of datum)	340	13.39
Pilot position (forward of datum)	518	20.4
*Max AUW with 15 meter span was increased from 500 Kg to 525 Kg by TN 349-7 in June 1983.		

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	44±4	25±4	132	±3
Elevator	40±4	47±4	157	±3
Rudder	Left 160 ±20	Right 160 ±20	340	
Flaps	28±2	30±2	141	
Brakes	100±2		120	±3
	Weight kg		Moment kg cm	
Elevator	0.67 - 0.85			
Rudder	4.43 - 4.97			
Flap	2.31 - 2.95			
Inner ailerons	1.10 - 1.40			
Outer ailerons	1.02 - 1.30			
Tip ailerons 16.6 meters	0.14 - 0.18			

Longitudinal datum: Wing root LE Horizontal datum: Rear fuselage top 1000:44 tail down

Each 2 Kg nose weight reduces the minimum cockpit load by 5 Kg.

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	102	190
Rough air Turbo	97	180
Manoeuvre	102	190
Aerotow	97	180
Winch / auto tow	81	150
Flaps 0, +1, +2 & L	86	160
U/C down	97	180

Max winch weak link: 635 Kg (Blue)

VNE at altitude

Height (meters)	Height (feet)	Knots	Kph
Up to 5 000	Up to 16 400	135	250
5 000	16 400	135	250
6 000	19 680	134	249
7 000	22 960	127	235
8 000	26 240	120	222
9 000	29 520	113	209
10 000	32 800	106	197
12 000	39 360	92	171

Max fore & aft play at the wing tip 30mm.

Tyre pressure: Up to 330 Kg (727 lb) AUW 3,5 bar (50 psi),. Over 330 Kg (727 lb) AUW 4,7 bar 67 psi

Semi aerobatic, cloud flying permitted

This sheet compiled by: Tim Macfadyen

Date: 11 April 2003

BGA glider data sheet - Ventus bT (15 & 16.6 meter)

Data source: Flight Manuals & BGA data

Date of issue:

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight	525	1157
Max weight 16.6 M	430	948
Max weight of non lifting components (everything except wings)	270	595
BGA concession non-aerobatic max weight of non lifting components [+5%]	284	625
Max pilot weight (seat load)	110	242
	mm	Inches
Forward C of G limit (aft of datum)	200	7.87
Aft C of G limit (aft of datum)	340	13.39
Aft C of G limit (aft) Turbo	360	14.17
Pilot position (forward of datum)	518	20.4

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	44±4	25±4	132	±3
Elevator	40±4	47±4	157	±3
Rudder	Left 160 ±20	Right 160 ±20	340	
Flaps	28±2	30±2	141	
Brakes	100±2		120	±3
	Weight kg		Moment kg cm	
Elevator	0.67 - 0.85			
Rudder	4.43 - 4.97			
Flap	2.31 - 2.95			
Inner ailerons	1.10 - 1.40			
Outer ailerons	1.02 - 1.30			
Tip ailerons 16.6 meters	0.14 - 0.18			

Longitudinal datum: Wing root LE Horizontal datum: Rear fuselage top 1000:44 tail down

Each 2 Kg nose weight reduces the minimum cockpit load by 5 Kg.

Maximum speeds

	Knots	Kph
VNE	135	250
Rough air	102	190
Rough air Turbo	97	180
Manoeuvre	102	190
Aerotow	97	180
Winch / auto tow	81	150
Flaps 0, +1, +2 & L	86	160
U/C down	97	180
Engine extended	86	160

VNE at altitude

Height (meters)	Height (feet)	Knots	Kph
Up to 5 000	Up to 16 400	135	250
5 000	16 400	135	250
6 000	19 680	134	249
7 000	22 960	127	235
8 000	26 240	120	222
9 000	29 520	113	209
10 000	32 800	106	197
12 000	39 360	92	171

Max winch weak link: 635 Kg (Blue)

Max fore & aft play at the wing tip 30mm.

Tyre pressure: Up to 330 Kg (727 lb) AUW 3,5 bar (50 psi),. Over 330 Kg (727 lb) AUW 4,7 bar 67 psi

Semi aerobatic, cloud flying permitted

BGA glider data sheet - Ventus c & cT (15, 16.6 & 17.6 M)

Data source: Manufacturer's Flight & Maintenance Manuals

Date of issue: June 1987

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight 15 meter span	525	1157
Max weight 16.6 meter span	500	1102
Max weight 17.6 meter span	500	1102
Max weight of non lifting components (everything except wings)	241	531
BGA concession non-aerobatic max weight of non lifting components [+5%]	253	558
Max pilot weight (seat load)	110	242
Max baggage compartment load	2	4.4
	mm	Inches
Forward C of G limit (aft of datum)	200	7.87
Aft C of G limit (aft of datum)	325	12.8
Pilot position (forward) a version	440	17.3
Pilot position (forward) b version	518	20.4

	Up	Down	Distance - hinge to measuring point
Ailerons (	41 ± 4	32 ± 3	172 Check with flaps at -1
Elevator	40 ± 4	47 ± 4	157
Rudder	Left & right 160±20		340
Flaps -2 -1 L	Up 15 ± 2 0 ± 2 Down 46 ± 2		172 Check with ailerons neutral
Max free play between inner & mid ailerons ± 2. Max free play between mid & outer ailerons ± 1			
	Max free play	Weight kg	Moment kg cm
Each elevator	± 3	0.67 - 0.85	2.6 - 3.3
Rudder	Nil	4.43 - 4.97	0 - 2.4
Inner ailerons	± 3 at root	2.31 - 2.95	9.7 - 12.3
Mid ailerons	See above	2.0 - 2.3	1.8 - 3.0
Outer ailerons	See above	1.02 - 1.30	3.2 - 4.1
Tip ailerons 16.6 & 17.6	See above	0.14 - 0.18	0.3 - 0.4

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top 1000:44 tail down -b version

Max fore & aft play at the wing tip 30mm.

Horizontal datum: Rear fuselage top 1000:31.25 tail down - a version

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	97	180
Manoeuvre	97	180
Aerotow	97	180
Winch / auto tow	81	150
Flaps 0, +1, +2 & L	86	160
U/C extension	97	180
Engine extended	86	160

VNE at altitude

Height (meters)	Height (feet)	Knots	Kph
3 000	9840	144	267
4000	13 100	137	253
5 000	16 400	130	240
6 000	19 680	123	227
7 000	22 960	116	215
8 000	26 240	110	203
9 000	29 520	103	191
10 000	32 800	97	180
12 000	39 360	84	156

Max winch weak link: 667 Kg (Blue)

Semi aerobatic without water, cloud flying permitted

Fuselage version "b" the wheel is 100mm aft of datum, the tail skid is 4096mm aft of the main wheel, (tail wheel 4066mm aft).

The 2 kg (4.4 lb) nose weights each reduce min cockpit weight by 5 kg (11 lb).

Put a maximum of 1 kg of water in the fin tank for every 30 kg of water in the wings.

Tyre pressure: Up to 330 Kg (727 lb) AUW 3,5 bar (50 psi). Over 330 Kg (727 lb) AUW 4,7 bar (67 psi). Tail wheel 2 bar (28 psi)

There are two fuselage options. Version "a" is smaller and shorter than version "b". Only version "b" has auto-connect controls.

The ASI is connected to the static vents under the wings. The nose and rear fuselage statics are connected together for varios.

This sheet compiled by: Tim Macfadyen

Date: 29 May 2003

BGA glider data sheet - Ventus 2 a & b (15 Meter)

Data source: Flight Manuals & BGA data

Date of issue:

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

Control deflections in mm

	Kg	Pounds
Max weight with water (take off and landing)	525	1157
Max weight dry	345	761
BGA concession non-aerobatic max weight dry [+3%]	355	784
Max water	200	441
Max weight of non lifting components (everything except wings)	Serial No 1-21	230
	Serial No 22 on	235
	Serial No 22 on	247
Max pilot weight (seat load)	110	242
Max in baggage compartment	2	4.5
	mm	Inches
Forward C of G limit (aft of datum)	220	8.66
Aft C of G limit (aft of datum)	360	14.17
Pilot position (forward) Ventus 2a	455	17.9
Pilot position (forward) Ventus 2b	518	20.4

	Up	Down	Distance - hinge to measuring point
Ailerons (flaps 0)	33±3	25±3	126
Elevator	51±2	47±4	157
Rudder	Left & Right 160±20		340
Flaps S1 0° L	30 ± 2 0 ± 2 22 ± 2		126
Free-play - inboard ailerons ±2, between inboard and mid ailerons ±2, between mid and outboard ±1.			
	Weight kg	Moment kg cm	
Elevator half	0.72 - 0.88	2.75 - 3.5	
Rudder	3.9 - 4.8	-3.0 - 1.0	
Flap/inner aileron	1.5 - 1.85	7.0 - 8.5	
Mid aileron	2.0 - 2.5	2.7 - 3.5	
Outer ailerons	0.54 - 0.66	1.5 - 1.9	

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top tail down Ventus 2a 1000:31.25 Ventus 2b - 1000:44

Max fore & aft play at the wing tip 30mm. The water in the wings is 179mm aft of datum.

Distance datum to wheel (a) 106mm. Distance wheel to skid (b) Ventus 2a 3885mm, Ventus 2b 4050mm.

Ventus 2a fin water & battery are 3900mm aft, nose weights are 1635mm forward, battery at panel is 1005mm fwd.

Ventus 2b fin water & battery are 4050mm aft, nose weights are 1745mm forward, battery at panel is 1095mm fwd.

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	97	180
Manoeuvre	97	180
Aerotow	97	180
Winch / auto tow	81	150
Flaps 0, +1, +2 & L	86	160
U/C down	97	180

VNE at altitude

Height (meters)	Height (feet)	Knots	Kph
3000	10 000	140	260
4 000	13 000	133	247
5 000	6 500	126	234
6 000	20 000	119	221
7 000	23 000	113	209
8 000	26 000	106	197
9 000	30 000	100	186
10 000	33 000	94	175
12 000	40 000	82	151

Max winch weak link: 635 Kg (Blue)

Tyre pressure: 4.7 bar (67 psi)

Semi aerobatic without water, cloud flying permitted

This sheet compiled by: Tim Macfadyen

Date: 12 May 2003

BGA glider data sheet - Ventus 2c & 2cT (15 & 18 meter)

Data source: Flight Manuals

Date of issue: Nov 1995

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

Phone: 00 49 7021 7298-0

Fax: 00 49 7021 7298-199

www.schempp-hirth.com

UK Agent: Southern Sailplanes

Phone: 0148 871774

Fax:

Weighing Data:

	Kg	Pounds
Max weight with water	525	1157
Max weight dry 15 M	430	948
Max weight dry 18 M	441	972
Max weight of non lifting components (everything except wings)	250	551
BGA concession non-aerobatic max weight of non lifting components [+5%]	262	579
Max mass baggage compartment	2	4.4
Max water capacity (approximately)	174	383
Max pilot weight (seat load)	110	242
	mm	inches
Forward C of G limit (aft of datum)	200	7.87
Aft C of G limit (aft of datum)	340	13.39
Pilot position (forward of datum)	520	20.47

Control deflections in mm

	Up	Down	Distance - hinge to measuring point
Elevator	54±2	50±4	161
Ailerons	34±3	26±3	131
Free-play - inboard ailerons ±2, between inboard and mid ailerons ±2, between mid and outboard ±1.			
Rudder	Left & Right 160±20		340
Flaps S1 0° L	31 ± 2 up 0 ± 2 24 ± 2 down		131
		Weight kg	Moment kg cm
Elevator half		0.72 - 0.88	2.5 - 3.5
Rudder		4.0 - 5.0	-2.0 - 2.1
Flap/inner aileron		1.4 - 1.85	6.5 - 8.5
Mid aileron		2.0 - 2.5	2.7 - 3.5
Outer ailerons 15m		0.54 - 0.66	1.5 - 1.9
Outer ailerons 18m		0.7 - 0.9	2.1 - 2.7
Tip ailerons 18m		0.18 - 0.23	0.45 - 0.55

Longitudinal datum: Wing root LE

Horizontal datum: Rear fuselage top tail down 1000:44

Max fore & aft play at the wing tip 30mm. The water in the wings is 179mm aft of datum.

Distance datum to wheel (a) 100mm. Distance wheel to tail skid/wheel (b) 4145mm.

Fin water & battery are 4275mm aft, nose weights are 1740mm forward, battery at panel is 1095mm fwd.

The three nose weights each weigh 2.1 kg (4.6 lb). Each reduces minimum cockpit load by 5 kg (11 lb).

Maximum speeds

	Knots	Kph
VNE	146	270
Rough air	97	180
Manoeuvre	97	180
Aerotow	97	180
Winch / auto tow	81	150
Flaps 0, +1, +2 & L	86	160
U/C down	97	180
Engine extended	86	160

VNE at altitude

Height (Meters)	Height (feet)	Knots	Kph
3000	10 000	139	257
4 000	13 000	132	244
5 000	6 500	125	232
6 000	20 000	119	220
7 000	23 000	112	208
8 000	26 000	106	196
9 000	30 000	100	185
10 000	33 000	89	164
12 000	40 000	81	150

Max winch weak link: 680 daN (Blue)

Tyre pressure: 4 bar (58 psi). Tail wheel 2 bar (29 psi)

Category "Utility" - Semi aerobatic and cloud flying permitted in 15 span and without water only.

LBA Type certificate number 349

The hydraulic wheel brake takes Dot 3/Dot 5 brake fluid.

This sheet compiled by: Tim Macfadyen

Date: 13 May 2003

BGA glider data sheet - Viking 1

Data source: BGA data sheet

Date of issue:

Manufacturer: Scott Light Aviation (manufactured in 1938)

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	317	700
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	399	15.7
Aft C of G limit (aft of datum)	438	17.25
Pilot position (aft of datum)	84	3.3

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	85	157
Rough air	85	157
Manoeuvre		

	Knots	Kph
Aerotow	60	111
Winch / auto tow	50	93
Airbrakes open		

Max winch weak link: 500 kg (White)

Tyre pressure: Main psi (Bar)

Non aerobatic, cloud flying not permitted

Span 15 meters

This sheet compiled by: Tim Macfadyen

Date: 14 March 2003

BGA glider data sheet - Wassmer WA 26P - Squale

Data source: Manufacturer's Manuals

Date of issue: 1974

Manufacturer: Wassmer (France)

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	378	833
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)	110	242

mm Inches

Forward C of G limit (aft of datum)	350	13.78
Aft C of G limit (aft of datum)	490	19.29
Light pilot position (forward)	650	25.59
Heavy pilot position (forward)	740	29.13

Control deflections in mm (unless otherwise stated)

	Up	Down	Measuring point	Mass balance C of G aft of hinge
Ailerons	112 ± 8	37 ± 4	Root TE	46 ± 5
Tailplane	18° ± 1½°	7° ± 1°		60 ± 5*
Trim	4° 20' ± 1°	8° 50'±1½°		
Rudder	Left & right 200 ± 20		Bottom TE	6 - 13 **
Airbrakes	200 ± 20 wheel brake off 240± 20 wheel brake on		Root TE	
*All moving TP with tabs				
**Rudder mass 4060 - 4220 grams				

Longitudinal datum: Wing root LE

Horizontal datum: Tailplane bottom fairing horizontal?

7 Kg (15.4 lb) nose ballast is 1650 mm (65 inches) forward of datum.

Maximum speeds

	Knots	Kph
VNE	121	225
Rough air	86	160
Manoeuvre	86	160
Aerotow	75	140

	Knots	Kph
Winch / auto tow	65	120
U/C down	75	140
Airbrakes open	121	225
Closing airbrakes	92	170

Max winch weak link: 600 Kg (Blue)

Tyre pressure: 23psi (1.6 bar)

Non aerobatic, no voluntary spinning, cloud flying permitted.

Notes: -

15 meter span

French "Fiche de Navigabite" number 123

This sheet compiled by: Tim Macfadyen

Date: 17 October 2002

BGA glider data sheet - WA-28F Espadon

Data source: BGA data sheet

Date of issue:

Manufacturer: Wassmer France

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	376	830
BGA concession non-aerobatic max weight (dry) [+3%]	388	855
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	350	13.78
Aft C of G limit (aft of datum)	490	19.29
Pilot position (forward)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	130	240
Rough air	84	157
Manoeuvre		

	Knots	Kph
Aerotow		
Winch / auto tow		
Airbrakes open		

Max winch weak link:

Tyre pressure: Main psi (Bar)

Semi aerobatic, cloud flying permitted

Span 15 meters

This sheet compiled by: Tim Macfadyen

Date: 14 March 2003

BGA glider data sheet -Weihe 50

Data source: The world's Sailplanes Vol 1 & BGA data sheet

Date of issue: 1962

Manufacturer: Folke-Wulf GmbH, Hunefeldstrasse 1-5, Bremen-Flughafen, Germany

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight (dry)	354	780
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)	422	16.6
Aft C of G limit (aft of datum)	560	22.0
Front pilot position (forward)	488	19.2

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	°	°		
Elevator	°	°		
Trim				
Rudder	Left & right °			

Longitudinal datum: Wing root LE

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE	78	145
Rough air	60	110
Manoeuvre		

	Knots	Kph
Aerotow	60	110
Winch / auto tow	48	90
Airbrakes open		

Max winch weak link: 600 Kg (Blue)

Tyre pressure: psi (Bar)

Non aerobatic no spinning, Cloud flying permitted

Notes: -

Span 18 meters

This sheet compiled by: Tim Macfadyen Date: 27 June 2002

BGA glider data sheet - Woodstock

Permit to fly only - a BGA C of A may not be issued for this type

Data source: Design Drawings

Date of issue: 1988

Manufacturer: Home-built Designer: Jim Maupin (deceased) USA

UK Agent: none Richard Harvey Tel 01692 650740 has built one

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	229	505
Max weight of non lifting components (everything except wings)	160	354
Max pilot weight (seat load)	94	208

mm Inches

Forward C of G limit (aft of datum)	273	10.75
Aft C of G limit (aft of datum)	355	14.0
Pilot position (forward)		

Control deflections

	Up	Down	Measuring point	Max free play
Ailerons	32°	8°	Inboard TE	
Elevator	111 mm	71 mm	Centre TE	
Rudder	Left and right 216 mm		Rear TE	

Longitudinal datum: Wing root LE at rib 1

Horizontal datum: Rear fuselage top corner

Maximum speeds

	Knots	Kph
VNE	86	159
Rough air	67	124
Manoeuvre	67	124

	Knots	Kph
Aerotow	73	135
Spoilers open	67	124
Winch / auto tow	Not permitted	

Number of 1.9 pound ballast weights required in the nose.

Cockpit load	160	165	170	175	180	185	190	195	200	205	208
Ballast weights required	10	9	8	7	6	5	4	3	2	1	0

Max winch/auto tow weak link:- Winch launching is not permitted.

Tyre pressure: 35 psi (2.5 Bar)

Non aerobatic, non cloud flying

Span 11.89 meters

This sheet compiled by: Tim Macfadyen with data supplied by Richard Harvey Date: 29 May 2003

BGA glider data sheet - Zugvogel III

Data source: The world's Sailplanes Vol 1 & FAA Web-site

Date of issue: 1962

Manufacturer: Scheibe-Flugzeugbau-GmbH, August Pfaltz-Str. 23, Dachau/Obb., Germany

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight	365	805
BGA concession non-aerobatic max weight (dry) [+3%]	376	829
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)	120	265

mm Inches

Forward C of G limit (aft of datum)	343	13.5
Aft C of G limit (aft of datum)	508	20.0
Pilot position (forward)		

Control deflections in degrees

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons	28.5° max	10° max		
Elevator	20° max	20° max		
Trim				
Rudder	Left & right 30°max			

Longitudinal datum: Wing root LE 550mm (21.6 inches) from the fuselage centre line.

Horizontal datum: Tangent on wing 550mm (21.6 inches) from the fuselage centre line.

Maximum speeds

	Knots	Kph
VNE	108	200
Airbrakes out	108	200
Rough air	75	140

	Knots	Kph
Aerotow	75	140
Winch / auto tow	54	100

Max winch weak link: 600 Kg (Blue)

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic, Cloud flying permitted

Notes: -

Span 17 Meters

BGA glider data sheet -

Data source:

Date of issue:

Manufacturer:

UK Agent:

Web site:

Phone:

Fax:

Link to mandatory mods:

Weighing Data:

	Kg	Pounds
Max weight with water		
Max weight (dry)		
BGA concession non-aerobatic max weight (dry) [+3%]		
Max weight of non lifting components (everything except wings)		
BGA concession non-aerobatic max weight of non lifting components [+5%]		
Max pilot weight (seat load)		

mm Inches

Forward C of G limit (aft of datum)		
Aft C of G limit (aft of datum)		
Front pilot position (forward)		
Rear pilot position (aft of datum)		

Control deflections in mm

	Up	Down	Distance - hinge to measuring point	Max free play
Ailerons				
Elevator				
Trim				
Rudder				

Longitudinal datum: Wing root LE at rib

Horizontal datum:

Maximum speeds

	Knots	Kph
VNE		
Rough air		
Manoeuvre		

	Knots	Kph
Aerotow		
Winch / auto tow		
Airbrakes open		

Max winch weak link:

Tyre pressure: Main psi (Bar), rear psi (bar)

Semi aerobatic

Notes: -

This sheet compiled by:

Date: