MANUAL

Base2

Version 1.1 October 2020

BRUCE GOLDSMITH DESIGN

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BASE 2 OWNER'S MANUAL

Solo paraglider | EN/LTF B

Welcome to Bruce Goldsmith Design

BGD is a world leader in the design and production of paragliders. For many years Bruce Goldsmith and his team have been developing products with world-beating performance for pilots who want the best. We apply our competitive knowledge to design top quality products that combine the highest performance with the safe handling our customers value and respect. BGD pilots appreciate our quality and reliability. BGD´s world-class status is based on the skills and expertise we have developed in combining aerodynamic design with cloth and materials technology. All BGD products are developed and made with the same skill and attention to good design that are synonymous with the ultimate performance and precision required by paragliders.

Congratulations on your purchase of the BGD BASE 2

The BASE 2 is a cross-country paraglider with the perfect balance of performance, handling, comfort and safety that make it totally confidence inspiring. It offers good feedback and direct, precise handling. It is a high performance sports intermediate wing and is not suitable for beginners.

The BASE 2 has been designed to a high standard of safety and stability, but it will only retain these characteristics if it is properly looked after. This manual has been prepared to give you information and advice about your paraglider. If you ever need any replacement parts or further information, please do not hesitate to contact your nearest BGD dealer or contact BGD directly.

Please read this manual carefully from the first to the last chapter to ensure you get the best out of your paraglider.

2. INTRODUCTION

Limitations

The BASE 2 is a single-seat paraglider. It is not intended for tandem use or for aerobatic manoeuvres. It is suitable for winching. Both pilot and winch operator should have the necessary training and qualifications for winching, and the winch system should be certified for paraglider use.

This paraglider must not:

1. Be flown outside the certified weight range
2. Have its trim speed adjusted by changing the length of risers or lines
3. Be flown in rain or snow
4. Be towed with a tow-line tension in excess of 200kg

Test flight and Warranty

All information about the BGD warranty can be found on the Warranty page of our website. In order to enjoy the full benefits you must complete the warranty registration form on the website.

It is your dealer´s responsibility to test fly the paraglider before you receive it, to check the trim settings are correct. The record of this is in the service booklet at the end of this manual – please check that this has been completed.

THE WARRANTY MAY BE VOID IF THE TEST FLIGHT RECORD HAS NOT BEEN COMPLETED BY THE DEALER.

Weight Range

Each wing size is certified for a certain weight range. The weight refers to the 'overall take-off weight'. This means the weight of the pilot, the glider, the harness and all other equipment carried with you in flight. We generally recommend your paraglider is flown in the middle of the weight range.

If you mainly fly in weak conditions you might wish to fly towards the lower end of the weight range to benefit from a better sink rate. In the lower half of the weight range the turning agility will be lower and the glider will be more damped. In strong turbulence the wing will have a greater tendency to deform or collapse with a lower wing loading.

If you prefer dynamic flight characteristics, want better speed or fly in strong conditions you might choose to fly higher in the weight range. If you fly in the upper half of the weight range agility and speed will be higher and you will have greater stability in turbulence, but there will be reduced self-damping in turns and after collapses.

Modifications

Any modifications to your glider, e.g. changing the line lengths or the speed system, can cause a loss of airworthiness and certification. We recommend that you contact your dealer or BGD directly before performing any kind of modifications.

Brake lines
The length of the brake lines is set at the factory so that the trailing edge is not deformed at all when brakes are not applied. There should be around 7cm slack in the brake lines, before they take effect on the canopy.

It should not be necessary to shorten the brake lines. However, it is possible that shrinkage can occur. If necessary, the brake lines can be lengthened by adjusting the knots.

Harness

The paraglider has been tested with a 'GH' (without diagonal bracing) type harness. The GH category includes weight-shift harnesses as well as ABS style (semi-stable) harnesses.

The harness complies with the EN standard harness dimensions, which are:

Seat board width: 42cm.

The horizontal distance between the attachment points of the paraglider risers (measured from the centre-line of the karabiners) must be:

38cm for pilots under 50kg
42cm for pilots from 50-80kg
46cm for pilots above 80kg

3. PREPARATION

Connecting the speedbar

Your paraglider comes with accelerator risers and can be flown with or without a speedbar attached. The speedbar should be connected and adjusted following the instructions in your harness manual to ensure correct routing of the lines. Connect the Brummel hooks on the speedbar to those on the risers' speed system, ensuring the lines run freely and are not caught around anything (reserve handle, risers or lines).

To adjust the speedbar length, sit in your harness and ask an assistant to hold the risers up in their in-flight position. The speedbar length should be adjusted, by moving the knots, so that the bar sits just beneath your harness seat. You should be able to hook your heels into the bar, and to attain full bar extension (the two pulleys touching) when you push your legs out. Once you have set the bar up in this way on the ground, a test flight in calm air can be useful to fine-tune the length, ensuring it is even on both sides.

On launch

1. Select a suitable take-off area determined by wind and terrain, clear of any obstacles that may catch in the lines or damage the canopy.

2. Take your paraglider to the top of the take-off area, and allow the canopy to unroll itself down the hill if on a slope. This should leave the paraglider with the bottom surface facing upwards, the openings at the downwind/uphill end of the take-off area, and the harness at the trailing edge at the upwind side.

3. Unroll the canopy to each side so that the leading edge openings form a semicircular shape, with the trailing edge drawn together to form an arc. The harness should be drawn away from the canopy until the suspension lines are just tight.

Pre-flight inspection

Your paraglider is designed to be simple to inspect and maintain but a thorough pre-flight procedure is mandatory on all aircraft. The following pre-flight inspection procedure should be carried out before each flight.

1. Whilst opening the paraglider check the outside of the canopy for any tears where it could have been caught on a sharp object or even have been damaged whilst in its bag. Visually inspect the risers for any signs of damage.

2. Check the lines for signs of damage, twists or knots. Divide the suspension lines into groups, each group coming from one riser. By starting from the harness and running towards the canopy remove any tangles or twists in the lines. Partially inflating the canopy in the wind will help to sort out the lines.

3. Ensure the brakes are clear and free to move. Check the knot which attaches the brake handles to the brake lines. Avoid having too many knots, as there is a risk the knots could become stuck in the brake pulleys. Both brakes should be the same length and this can be checked by having an assistant hold the upper end of the brake lines together whilst you hold the brake handles. The brake lines should be just slack with the wing inflated when the brakes are not applied.

4. Always check the buckles and attachments on the harness. Ensure the two main attachment maillons/ karabiners from the harness to the main risers, and the individual shackles which attach the risers to the lines, are tightly done up.

5. Before getting in to the harness you should be wearing a good helmet. Check the parachute container is correctly closed and the handle is secure. Put on the harness ensuring all the buckles are fastened and that it is well adjusted for comfort.

Your paraglider is now ready for flight.

4. FLIGHT CHARACTERISTICS

This manual is not intended as an instruction book on how to fly your paraglider. You should be a qualified pilot, but the following comments describe how to get the best from your wing.

Take-off

The wing is easy to inflate in light or stronger winds and will quickly rise overhead to the flying position. It will launch easily using either the forward launch technique (best for light winds) or reverse launch (best for stronger winds).

Forward Launch
Stand facing into wind with your back to the canopy and all the A-lines taut behind you, then take one or two steps back (do not walk all the way back to the canopy). Take an A-riser in each hand (the A-risers are marked with red cloth to make them easier to find) and begin your launch run pulling gently and smoothly on the A-risers. As soon as the canopy starts to rise off the ground stop pulling so hard on the A-risers but put pressure on all the risers evenly through the harness. Maintaining gentle pressure on the A-risers helps in very calm conditions. Have your hands ready to slow up the canopy with the brakes if it starts to accelerate past you.

Reverse Launch
In winds over 10km/h it is recommended to do a reverse launch and inflate the canopy whilst facing it, using the A-risers. Releasing pressure on the A-risers when it is at about 45° will help to stop it overshooting. The stronger the wind and the greater the pressure on the A-risers, the more quickly the canopy will rise. In stronger winds taking a step towards the glider as it rises can take some of the energy out of the glider and it will be less likely to overshoot.

Straight Flight

Your paraglider will fly smoothly in a straight line without any input. At the maximum in-flight weight, without the

accelerator it will fly at approximately the trim speed shown in the Specifications table.

Turning

Your wing does not require a strong-handed approach to manoeuvring. For a fast turn smoothly apply the brake on the side to which the turn is intended. The speed with which the brake is applied is very important. If a brake is applied fairly quickly the canopy will do a faster banking turn, but care must be taken not to bank too severely. To attain a more efficient turn at minimum sink, apply some brake to the outside wing to slow the turn and prevent excessive banking. The glider flies very well like this, but care must be taken not to over-apply the brakes, as this could result in a spin. The wing will turn far more efficiently if you weight-shift into the turn in the harness. Remember that violent brake application is dangerous and should be avoided.

Active piloting

The objective of active piloting is to get the glider to fly smoothly through the air with a stable position above your head, and controlled angle of incidence. Active piloting means flying in empathy with your paraglider, guiding it through the air and being aware of feedback from the wing. If the air is smooth the feedback can be minimal but in turbulence feedback is continuous and needs to be constantly checked.

In order to get the best performance from your wing, it is best to control it though small brake inputs and weightshift rather than constantly being present on the brakes. A small brake movement early is more efficient than a big input later. The more you let the glider fly at trim speed, the better performance you will get out of it.

Your paraglider is resistant to collapse without any pilot action, but flying actively will increase the safety margin. Active piloting can make your flying experience safer and more enjoyable, and it becomes instinctive in good pilots.

Thermalling

To attain the best climb rate your wing should be thermalled using a mild turn, as described above, keeping banking to a minimum. In strong thermals a tighter banking turn can be used to stay closer to the thermal´s core. Remember that weight-shifting in the harness will make the turn more efficient and reduce the amount of brake required.

Care must be taken not to apply so much brake as to stall. This is easy to avoid as the brake pressure increases greatly as you approach the stall point. Only fly near the stall point if you have enough height to recover (at least 100m).

Speed System

The paraglider is sold with accelerator risers and a speed stirrup but can be flown without the speed stirrup attached. Launching and general flying is normally done without using the accelerator. A pilot flying at the maximum in-flight weight should be able to reach the top speed noted in the specifications table when using the accelerator system.

Full speed is achieved when the two pulleys on each A-riser touch. Do not go beyond this point by using excessive force to attempt to make the glider go faster as this may result in the glider collapsing.

When you come off the bar it is also important to do so smoothly and progressively, to manage the pitch. It is possible for paragliders to front-collapse if the bar is released too quickly.

We recommend you only fly in conditions where you can progress into wind with no speed-bar applied, so that you have the extra airspeed in reserve should you need it.

IMPORTANT:

1. Practise using the speed system in normal flying and get fully used to using half speed-bar before you use the

full speed-bar.

2. The speed increase is achieved by reducing the angle of attack, which means the canopy has slightly more collapse tendency.Take care when flying fast in rough or turbulent conditions as deflations are more likely to occur at speed.

3. Remember that your glide deteriorates at higher speeds. Best glide is achieved when the risers are level and the brakes are off, or with a little accelerator applied (up to 25% speed).

The dyneema line in the accelerator system is designed not to be tight. It should have the correct amount of slack in it so that when full speed-bar is applied the B-riser is 50mm longer than the A-riser. This line can be adjusted for length or replaced where it is looped on the maillon of the B-riser.

Check the component parts of the speed system regularly for signs of wear and tear, and ensure that the system always works smoothly.

C-steering

The BASE 2 is designed with an effective and light C-steering system that allows you to actively pilot the wing without using the brakes which is particularly useful when flying accelerated.

The risers are equipped with a new 'speed riser'. This is an extra riser that is attached to the back of the speed system. This speed riser is also attached to the front of the C steering handle. The idea is to balance the load on the C steering handle giving you more control over the glider when using the C-steering.

To fly with the C-steering system, keep hold of the brakes, and grasp the C-steering handle with your fingers as shown in FIG. 1.

C-steering

FIG. 1: Keeping the brake in your hand, grasp the C-steering handle with your fingers

The C-steering system allows you to make small pitch adjustments when gliding, especially on speed. The C-steering can also be used to control direction, but you must take care not to accidentally stall the glider as the range is much less than on the brakes.

Rapid descent procedures

Big Ears
The wingtips of your paraglider can be folded in to increase its sink rate. The Big Ear facility allows you to descend quickly without substantially reducing the forward speed of your glider. (B-line stalls also allow for fast descent, but they result in greatly reduced forward speed).

To engage Big Ears, lean forward in the harness and grasp the outer A-lines, or the maillons of the 'Baby-A' risers, keeping hold of both brake handles if possible. Pull the outer A-lines or Baby-A risers out and down at least 30cm so as to collapse the tips of the glider. It is very important that the other A-lines are not affected when you do this as pulling these could cause the leading edge to collapse. Steering with Big Ears in is possible by weight-shifting. When you let go of the outer A-lines or the Baby A risers, the Big Ears will come out on their own. A pump on the brakes can speed this up if necessary.

Before using Big Ears in earnest you should practise with plenty of ground clearance in case a leading-edge collapse occurs. Always keep hold of both brakes in order to retain control. Putting your hands through the brake handles so they remain on your wrists is a good method of doing this.

B-Line Stall
This is a fast descent method and is a useful emergency procedure. With both hands through the brake handles, take hold of the top of the B-risers, one in each hand, and pull them down by 10-15cm. This will stall the canopy and its forward speed will drop to zero. Make sure you have plenty of ground clearance because the descent rate can be over 10m/sec.

To increase the descent rate pull harder on the B-risers. When you release the B-risers the canopy will automatically start flying again, normally within two seconds. Sometimes the canopy will turn gently when it exits from the B-line stall. It is normally better to release the B-risers fairly quickly rather than slowly, as the latter may result in the canopy entering deep stall. Always release the risers symmetrically, as an asymmetric release from a B-line stall may result in the glider entering a spin.

B-line stalls are useful if you need to lose a lot of height quickly, perhaps to escape from a thunderstorm. They should not be performed with less than 100m of ground clearance (see also also Chapter 5).

Spiral Dive

A normal turn can be converted into a spiral dive by continuing to apply one brake. The bank angle and speed of the turn will increase as the spiral is entered. Be careful to enter the spiral gradually and with control, as too quick a brake application can cause a spin or a high G spiral.

Spiral dives are one of the most dangerous manoeuvres in paragliding and the high G-force and quick loss of altitude can easily catch pilots out. A mistake in judging these factors can lead to a very serious accident, so spirals must be treated with great respect. Pilots are advised to practise spiral dives under close supervision or during an SIV course.

To pull out of a steep spiral dive, release the applied brake gradually and/or apply opposite brake gradually. A sharp release of the brake can cause the glider to surge and dive as the wing converts speed to lift. Always be ready to damp out any dive with the brakes. Also be ready to encounter turbulence when you exit from a spiral because you may fly though your own wake, which can cause a collapse.

CAUTION: SPIRAL DIVES CAN CAUSE LOSS OF ORIENTATION OR BLACK OUT AND THEY TAKE SOME TIME TO EXIT FROM. THIS MANOEUVRE MUST BE EXITED IN TIME AND WITH SUFFICIENT HEIGHT!

Landing

Landing is very straightforward. When landing in light winds, flare in the normal way from an altitude of around 2m. It may sometimes help to take wraps on the brakes to make the flare more effective.
Strong-wind landings require a different technique. If you use the brakes to flare in a strong wind the wing tends to convert this energy to height, which can be a problem. The best method is to take hold of the rear-risers at the maillons just before landing, and collapse the canopy using these when you have landed. The glider will collapse very quickly using this method.

After landing, the B-risers can also be used to collapse the canopy, although it is more difficult to control the collapsed canopy on the ground with the B-risers.

5. RECOVERY TECHNIQUES

Stalls

Stalls are dangerous and should not be practised in the course of normal flying. Stalls are caused by flying too slowly. Airspeed is lost as brake pressure increases and as the canopy approaches the stall point it will start to descend vertically and finally begin to collapse. Should this occur it is important that the pilot releases the brakes at the correct moment. The brakes should never be released when the wing has fallen behind the pilot; the brakes should be released fairly slowly, to prevent the forward dive of the canopy from being too strong. A pre-release of the brakes and the reconstruction of the full span is recommended to avoid the tips getting cravatted during the recovery. Pilots are advised never to attempt this manoeuvre unless under SIV instruction. This manual is not intended to give instruction in this or any other area.

Deep Stall (or Parachutal Stall)
Your paraglider has been designed so that it will not easily remain in a deep stall. However, if it is incorrectly rigged or its flying characteristics have been adversely affected by some other cause, it is possible that it could enter this situation. In the interests of safety all pilots should be aware of this problem, and know how to recover from it. The most common way to enter deep stall is from a flying too slowly, from a B-line stall or even from big ears.
When in deep stall the pilot will notice the following:

1. Very low airspeed.

2. Almost-vertical descent (like a round canopy), typically around 5m/s.

3. The paraglider appears quite well inflated but does not have full internal pressure. It looks and feels a bit limp.

Recovery from deep stall is quite simple: The normal method is to simply initiate a mild turn. As the canopy starts to turn it will automatically revert to normal flight, but it is very important not to turn too fast as this could induce a spin.

The second method is to pull gently on the A-risers. This helps the airflow to re-attach to the leading edge, but be careful not to pull down too hard as this will induce a front collapse.

If the deep stall is particularly stubborn and the previous methods do not work then a full stall will solve the problem. To do this apply both brakes fairly quickly, as if to do a strong stall, then immediately release both brakes and damp out the forward surge in the normal way. The canopy will swing behind you then automatically reinflate and surge forward in front of you before returning to normal flight. It is the surge forward that exits the canopy from deep stall.

Spins

Spins are dangerous and should not be practised in the course of normal flying. Spins occur when the pilot tries to turn too fast. In a spin the pilot, lines and canopy basically stay vertical and rotate around a vertical axis. Your glider will resist spinning, but if a spin is inadvertently induced you should release the brake pressure but always be ready to damp out any dive as the glider exits the spin. Failure to damp the dive on exiting the spin may result in an asymmetric deflation.

Symmetric Front Collapse

It is possible that turbulence can cause the front of the wing to symmetrically collapse, though active piloting can largely prevent this from occurring accidentally.

During the early stages of a front collapse the pilot should apply brake symmetrically on both sides for a maximum of one second. This will push the air from the back of the canopy towards the front, stopping the collapse from becoming deep. Make sure the brakes are fully released during the later stages of the collapse, or this may induce a full stall. The glider will normally recover on its own as long as the pilot keeps the brakes up. If the glider does not recover on its own it may be necessary to make a second pump on the brakes.

A pilot can reproduce the effect during an SIV course by taking hold of both the A-risers and pulling down sharply on

them, then immediately releasing. Make sure that you pull all four A-risers at the same time, two risers in each hand (make sure to include the baby-A risers). The glider will automatically recover on its own from this situation in around three seconds. During this recovery period it is advisable not to apply the brakes as this could stall the wing.

Asymmetric Front Collapse

Your paraglider is very resistant to deflations; however if the canopy collapses on one side due to turbulence, you should first of all control the direction of flight by countering on the opposite brake. Most normal collapses will immediately reinflate on their own and you will hardly have time to react before the wing reinflates automatically. The act of controlling the direction will tend to reinflate the wing. However, with more persistent collapses it may be necessary to pump the brake on the collapsed side using a long, strong, smooth and firm action. Normally one or two pumps of around 80cm will be sufficient. Each pump should be applied in about one second and smoothly released. In severe cases it can be more effective to pump both brakes together to get the canopy to reinflate. Be careful not to stall the wing completely if this technique is used.

Releasing a trapped tip (cravat)

Following a severe deflation it is possible for a wingtip to become trapped in the glider's lines (cravat). If this occurs then first of all use the standard method of recovery from a tip deflation as described in Asymmetric Front Collapse above. If the canopy still does not recover then pull the rear risers to help the canopy to reinflate. Pulling the stabilo line is also a good way to remove cravats, but remember to control your flight direction as your number-one priority. If you are very low then it is much more important to steer the canopy into a safe landing place or even throw your reserve.

NOTE: Test pilots have tested the model well beyond the normal flight envelope, but such tests are carried out in a very precise manner by trained test pilots with a back-up parachute, and over water. Stalls and spins on any paragliders are dangerous manoeuvres and are not recommended.

Loss of brakes

In the unlikely event of a brake line snapping in flight, or a handle becoming detached, the glider can be flown by gently pulling the rear risers for directional control.

6. STORAGE AND SERVICING

Storage

If you have to pack your canopy away wet, do not leave it for more than a few hours in that condition. As soon as possible dry it out, but do not use direct heat sources as it is inflammable!

Always store the canopy in a dry, warm place. Ideally this should be in the temperature range of 5°C to 13°C.
Never let your canopy freeze, particularly if it is damp.

Your paraglider is made from high quality nylon which is treated against weakening from ultraviolet radiation However, UV exposure will still weaken the fabric and prolonged exposure to harsh sunlight can severely compromise the safety of your canopy. Therefore once you have finished flying, put your wing away. Do not leave it laying in strong sunshine unnecessarily. If you are concerned about any aspect of the integrity of your paraglider please contact your nearest BGD dealer or talk to BGD directly.

Do not treat your canopy with chemical cleaners or solvents. If you must wash the fabric, use warm water and a little soap. If your canopy gets wet in sea water, wash it with warm water and carefully dry it.

Small Repairs

Small tears in the top or bottom surface (not normally the ribs) of a canopy can be repaired with a patch of self-adhesive ripstop nylon. Tears no longer than 100mm can be repaired in this way providing they are not in high-stress areas. If you have any doubt about the airworthiness of your canopy please contact your dealer or BGD directly.

Servicing / Inspection

It is important to have your glider regularly serviced. Your wing should have a thorough check / inspection every 24 months or every 150 flight hours, whichever occurs first. This check must be made by the manufacturer, importer, distributor or other authorised persons.

Please print out the service pages from this manual, fill in the number of flights and hours flown in the Service Record, and send together with your glider when it goes for inspection or servicing. The manufacturer will only accept responsibility for paraglider lines and repairs which we have produced and fitted or repaired ourselves.

Environmental protection and recycling

Our sport takes place in the natural environment, and we should do everything to preserve our environment. A glider is basically made of nylon, synthetic fibres and metal. At the end of your paraglider's life, please remove all metal parts and put the different materials in an appropriate waste/recycling plant.

7. TECHNICAL DATA

Materials

The BASE 2 is made from the following quality materials:

Top surface:	Porcher Skytex 38g/m^2
Bottom surface:	Porcher Eazyfly 40g/m^2
Internal Structure:	Porcher Skytex 40g/m^2 Hard
Nose reinforcing:	Plastic wire 2.0, 2.4, 2.7
Risers:	13mm Kevlar / nylon webbing
Pulleys:	Harken P18, Spenger, Riley stainless steel
Top lines:	Edelrid 8000U series (unsheathed)
Middle lines:	Edelrid 8000U series (unsheathed)
Lower lines:	Liros PPSL (unsheathed)
Brakes:	Liros DC60 & DC100, DSL350

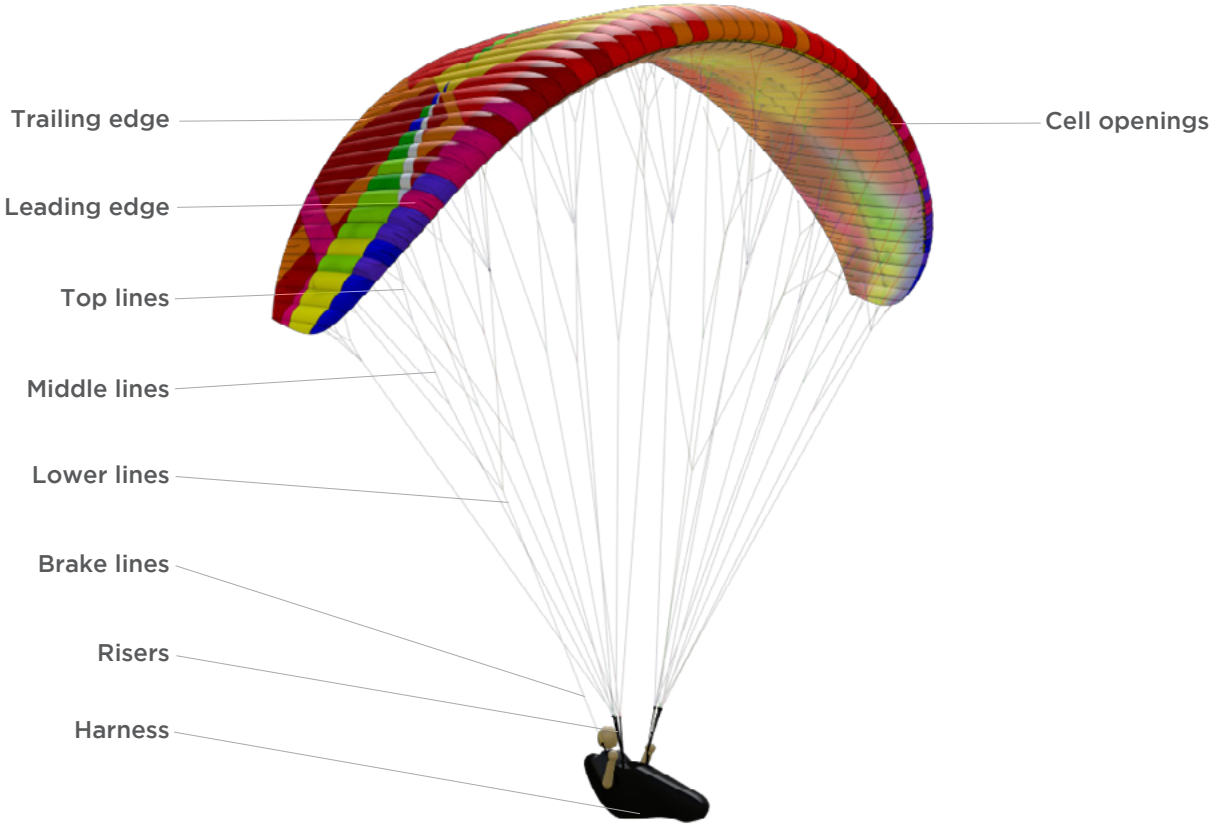
Spare parts can be obtained directly from BGD or though our network of registered BGD repair shops.

For a full list check www.flybgd.com

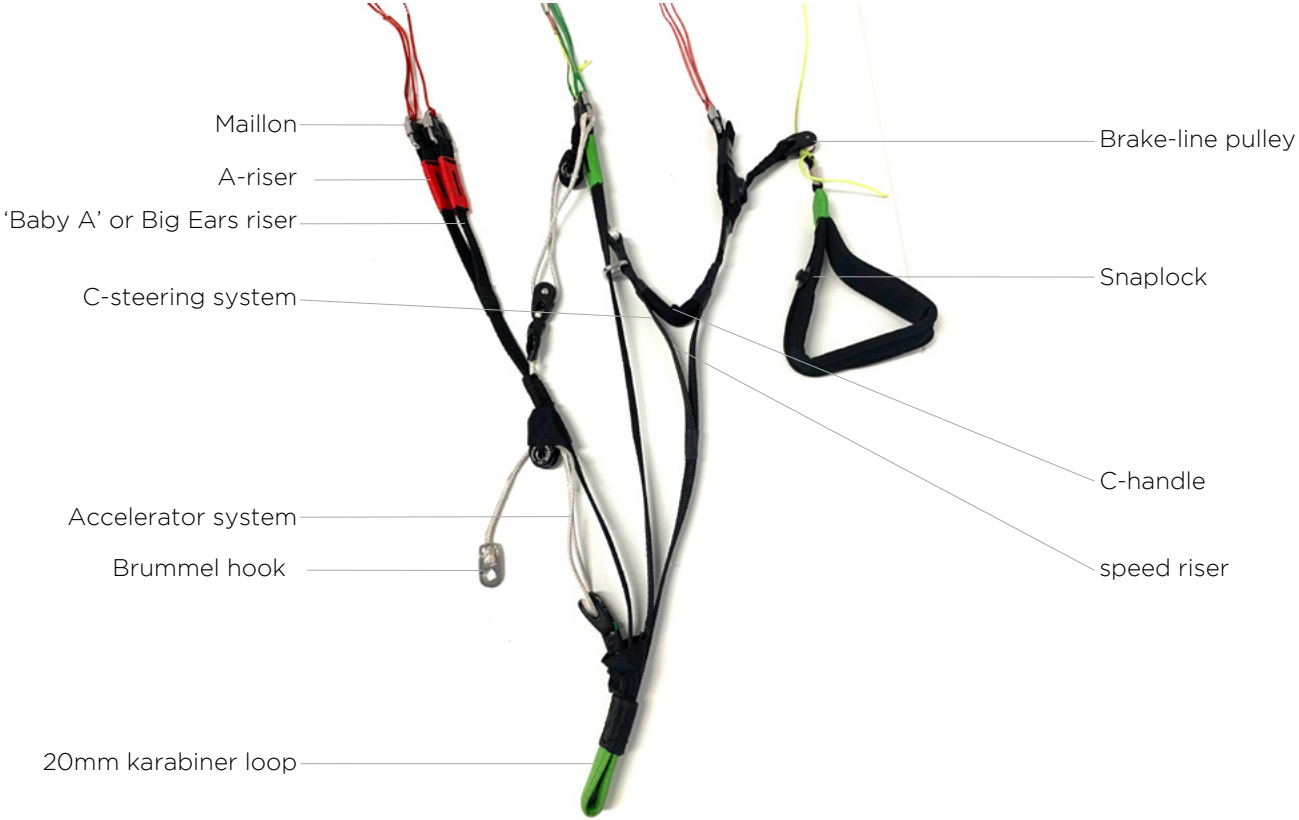
Specifications

	XS	S	M	ML	L
Linear scaling factor	0.92	0.96	1	1.04	1.08
Projected area (m^2)	17.8	19.5	21.2	22.9	24.6
Flat area (m^2)	21	23	25	27	29
Glider weight (kg)	4.2	4.6	5.0	5.4	5.8
Total line length (m)	222	243	265	285	306
Height (m)	6.9	7.2	7.5	7.8	7.8
Number of main lines			3/4/3		
Cells			57/112		
Flat aspect ratio			5.7		
Projected aspect ratio			4.4		
Root chord (m)	2.4	2.5	2.6	2.7	2.8
Flat span (m)	11.1	11.6	12.1	12.6	13.0
Projected span (m)	8.8	9.2	9.6	10.0	10.3
Certified weight range (kg)	55 - 75	65 - 85	75 - 95	88 - 108	100 - 125
Trim speed (km/h)			39		
Top speed (km/h)			55		
Min. sink (m/s)			1		
Best glide			10.5		
Certification			EN+LTF: B		

Overview of glider parts



Risers



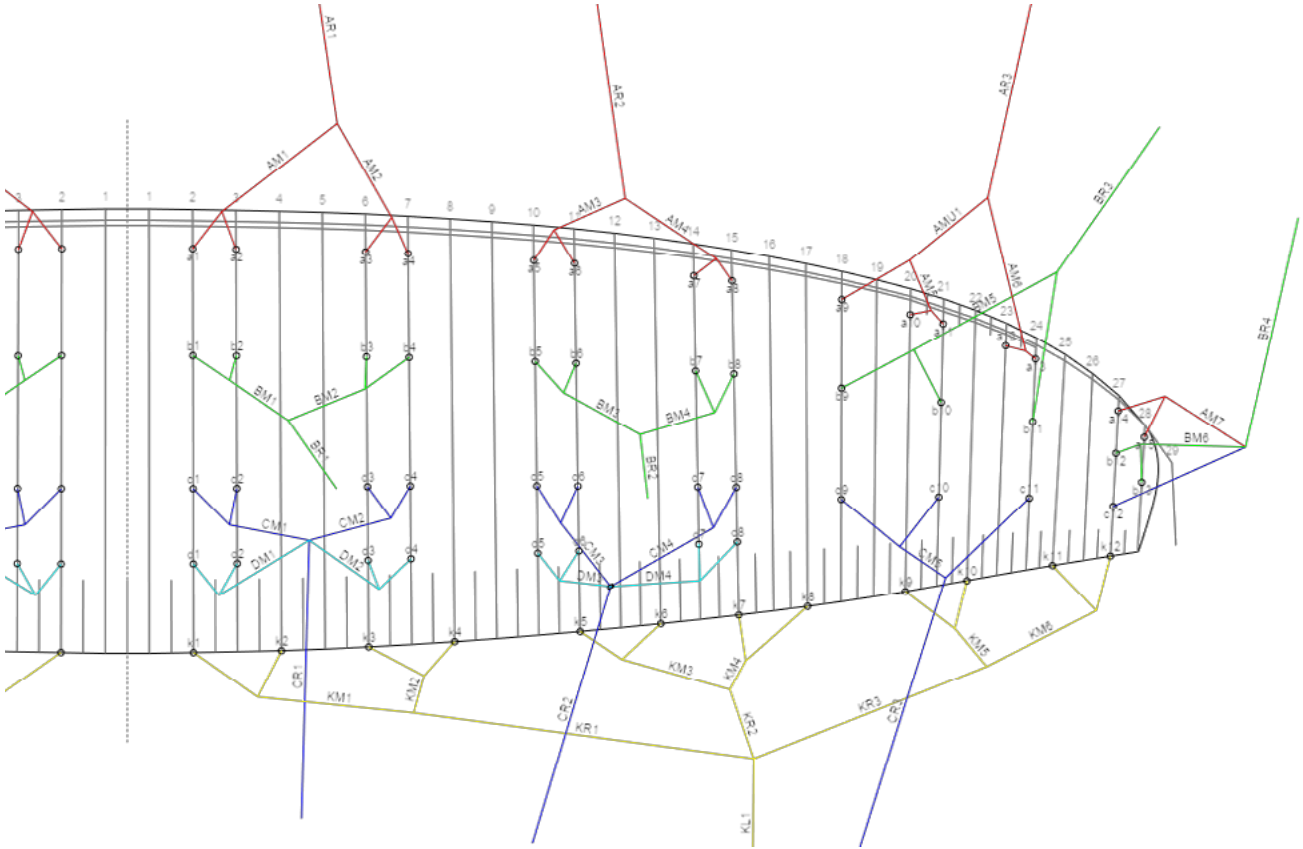
The riser set does not have trimmers, or any other adjustable or removable device.

Brake and accelerator travel

Size	Riser length (mm)*	Accelerator travel (mm)	Brake range (cm)**
XS	460	120	60
S	500	120	63
M	500	120	65
ML	500	150	67
L	500	150	70

*Actual riser lengths may differ by not more than 5mm
** Maximum symmetrical control travel at maximum weight in flight

Line Plan


AR1
AR2
AR3
AM1
AM2
AM3
AM4
AM5
AM6
AM7
AMU1
BR1
BR2
BR3
BR4
BM1
BM2
BM3
BM4
BM5
BM6
CM1
CM2
CM3
CM4
CM5
DM1
DM2
DM3
DM4
DM5
KM1
KM2
KM3
KM4
KM5
KM6
KR1
KR2
KR3
CR1
CR2
CR3
KL1

Line length checks

All measures are in mm, with 50N line tension, the tension being slowly and gradually applied before taking the measurement.

The lengths are measured from the lower surface of the canopy and include the risers.

During the EN certification process, the test team has checked the lengths of the suspension lines, control lines and risers given in the manual against the sample glider, after the test flights have been carried out. The difference in line lengths between the manual and the sample may be no more than 10mm.

BRUCE GOLDSMITH DESIGN

Size M

	A	B	C	D	K
1	7569	7451	7554	7679	8037
2	7522	7410	7487	7615	7740
3	7469	7359	7436	7561	7559
4	7482	7365	7471	7592	7495
5	7393	7293	7383	7489	7263
6	7346	7244	7316	7420	7133
7	7259	7161	7238	7339	7043
8	7252	7159	7257	7338	7047
9	7114	7040	7117		6923
10	7014	6910	6987		6914
11	6988	6850	6922		6871
12	6907	6728	6895		6984
13	6882	6740			
14	6715				
15	6653				

Bridle check ▲
Single line lengths ▶

A		B		C		D		K	
a1	317	b1	319	c1	331	d1	341	k1	614
a2	270	b2	278	c2	264	d2	277	k2	317
a3	298	b3	299	c3	281	d3	294	k3	515
a4	311	b4	305	c4	316	d4	325	k4	451
a5	339	b5	315	c5	330	d5	321	k5	518
a6	292	b6	266	c6	263	d6	252	k6	388
a7	307	b7	292	c7	277	d7	279	k7	400
a8	300	b8	290	c8	296	d8	278	k8	404
a9	1579	b9	1651	c9	1478			k9	367
a10	323	b10	1521	c10	1348			k10	358
a11	297	b11	2208	c11	2264			k11	247
a12	305	b12	352	c12	809			k12	360
a13	280	b13	364						
a14	352								
a15	290								
AM1	2281	BM1	2667	CM1	1568	DM1	1681	KM1	1162
AM2	2200	BM2	2595	CM2	1500	DM2	1610	KM2	783
AM3	2451	BM3	2318	CM3	1516	DM3	1629	KM3	938
AM4	2347	BM4	2207	CM4	1424	DM4	1521	KM4	836
AM5	1162	BM5	752	CM5	985			KM5	819
AM6	2352	BM6	293	CR3	4131			KM6	887
AM7	282	BR3	4109	CR1	5135			KR1	3244
AR1	4437	BR4	5558	CR2	5016			KR2	2790
AR2	4070	BR1	3940					KR3	2720
AMU1	1285	BR2	4135					KL1	2970
AR3	3717								

8. SERVICE BOOKLET

Test Flight Record

Model	
Size	
Serial Number	
Colour	
Date of test flight	
Company signature and stamp	

BRUCE GOLDSMITH DESIGN

Service Record

Service No 1:
Date :

Stamp - Signature :

No flights :

Type of service :

Service No 2:
Date :

Stamp - Signature :

No flights :

Type of service :

Service No 3:
Date :

Stamp - Signature :

No flights

Type of service :

BRUCE GOLDSMITH DESIGN

Owner Record

Pilot No 1

First name	
Family name	
Street	
City	
Post code	
Country	
Telephone	
Email:	

BRUCE GOLDSMITH DESIGN

Owner Record

Pilot No 2

First name	
Family name	
Street	
City	
Post code	
Country	
Telephone	
Email:	

9. Closing Words

Your paraglider is an advanced, stable glider that promises many hours of safe and enjoyable flying, provided you treat it with care and always respect the potential dangers of aviation.

Please always remember that flying can be dangerous and your safety depends on you. With careful treatment your wing should last for many years. It has been tested to current international airworthiness standards, and these represent the current knowledge concerning the safety of a paraglider. However, there are still many unknowns, for example the effective lifespan of the current generation of gliders and how much material material ageing is acceptable without affecting the airworthiness. There are natural forces that can seriously threaten your safety, regardless of the quality of construction or the condition of your glider. Your security is ultimately your responsibility. We strongly recommend that you fly carefully, adapt to the weather conditions and keep your safety in mind.

Flying in a club or a school with experienced pilots is highly recommended.

We recommend that you fly with a standard harness with back protection and a reserve parachute. Always use good equipment and an approved helmet.

See you in the sky!

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10. APPENDIX

EN line measurements

The tables below show the line measurements for the test wings, as measured by the test house during the certification procedure. These figures relate to the Bridle Check Tables in section 7.

Size M

Weight of EN test sample = 4.80kg

	A	B	C	D	K
1	7564	7445	7559	7686	8023
2	7516	7407	7493	7622	7727
3	7462	7360	7445	7565	7550
4	7478	7366	7479	7594	7485
5	7390	7291	7380	7488	7272
6	7345	7244	7316	7422	7122
7	7257	7153	7237	7339	7031
8	7251	7150	7254	7334	7053
9	7113	7047	7127		6927
10	7011	6917	6998		6899
11	6986	6859	6934		6878
12	6903				6990
13	6878				