MANUAL

CURE 3



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BRUCE GOLDSMITH DESIGN

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CURE 3 OWNER'S MANUAL

Solo paraglider | EN/LTF C

Welcome

Welcome to BGD, a world leader in the design and production of paragliders. For many years Bruce Goldsmith and 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 CURE 3. The CURE 3 is a performance paraglider, certified LTF/EN C. It is ideal for cross-country pilots looking for refined handling and performance, and is suitable for those stepping up from the EN-B class. It is not suitable for beginners.

As with all aircraft, regular maintenance and checks are mandatory. Proper care will ensure your new glider keeps its original characteristics and lasts for many years.

This manual contains information on how to look after your paraglider and how to get the best out of it in the air. If you ever need replacement parts or advice, do not hesitate to contact your nearest BGD dealer or contact BGD directly.

Quick Summary

The CURE 3 is a 2-liner. The following things should be noted in particular:

1. You should launch using the main A risers (marked red) without the separate AR3 lines. The risers should be grasped above the low-friction ring.

2. For a rapid descent you should spiral dive, or perform Big Ears. The stabilo is integrated into the AR3 line and Big Ears are done using the AR3 lines. B-Line stall is not appropriate for two-liners.

3. The CURE 3 is a high-performance glider and should be treated with care. We do not recommend performing SIV manoeuvres on the CURE 3. It was certified using collapse lines – if you do wish to perform collapses, collapse lines can be purchased from BGD via your dealer.

Recommended checks and inspections:

Trim check	After 30 hours
Release loops on rear lines	After 30 hours
Full inspection	Every 100 hours or 12 months
Change the line set	Every 200 hours

Introduction

Limitations

The CURE 3 is a solo 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.

The CURE 3 has not yet been tested for paramotor use.

Suitable for ...	
Tandem	No
Towing	Yes
Paramotor	Not yet tested

Warning

Do not perform spiral dives with big ears or asymmetric collapses. The high G loading on fewer lines could overload and break the lines.

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

Information about the BGD warranty can be found on the Warranty page of our website. In order to benefit from it, 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 waranty may be void if the test flight 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 in flight. We recommend pilots fly in the 'ideal' part of the weight range, as shown in the specs table.

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, higher speed or you 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, 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 line lengths
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 was tested with a 'GH' (without diagonal bracing) type harness. The GH category includes weightshift harnesses as well as ABS style (semi-stable) harnesses. The EN standard harness dimensions are a seat board width of 42cm. The horizontal distance between the attachment points of the paraglider risers (measured from the centre line of the karabiners) should be:

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

Environmental protection and recycling

Our sport takes place in the natural environment, and we should do everything we can 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.

Speed system

The CURE 3 has accelerator risers. It can be flown with or without a speed bar attached. The speed bar should be connected and adjusted following the instructions in your harness manual to ensure correct routing of the lines.

Attaching the speed system in a fully-faired harness

When attaching the speed system in a fully-faired harness, make sure that the new line is attached in a similar way to the old line that you removed. It should be looped around both pieces of webbing holding the pulley. If it is looped around a single piece of webbing only, the pulley is likely to break. A pulley which breaks for this reason will not be covered by the BGD warranty.



Correct: Speed bar looped around both sections of webbing



Incorrect: Speed bar looped around one piece of webbing only. High risk of breaking!

Speed system attachment points

The risers have two sets of attachment points for the speed-system line. It is delivered set up as in image A. With this set-up, bar pressure is light, and bar travel longer. To shorten the bar travel, the speed system line can be attached to the lower attachment points instead (image B). Bar pressure will be greater in this set-up. The glider's speed at full bar is not affected by moving the attachment points.



A

The speed-system line is attached to the upper loop where the top pulley attaches

With this set-up:

Greater bar travel
Lighter pressure



B

The speed-system line is attached to the lower loop, a few centimetres below the top pulley.

With this set-up:

Shorter bar travel
Heavier pressure

Step by step: changing the speed system attachment points



1. Release the lark's foot and remove the Brummel hook from the speed system line





2. Pull the line back through both pulleys



3. Remove the line from the attachment point





4. Thread the line through the new attachment point (a piece of string can be helpful). Either, secure with a lark's foot (A).



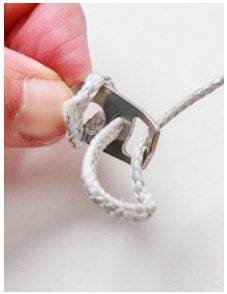


Or if desired, extra loops can be made around the attachment point in order to shorten the the remaining speed system line, B.

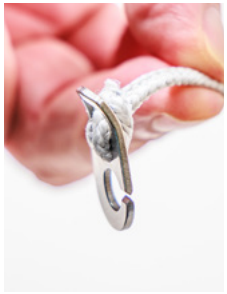




5. Feed the speed system line back through the pulleys, lower first then upper. Use string to help if necessary







6. Re-attach the Brummel hook to the line. The Brummel hook has a curve and should be threaded in the direction shown in the photos

Adjusting the speed system length

The speed system length should be adjusted by moving the knots on the line at the harness end. To check the length is correct, sit in your harness and ask a helper to hold the risers up in their in-flight position. The speed system should be set to such a length that the A-risers are not inadvertently being pulled when the bar is not applied. You should be able to hook your heels into the bar and attain full bar extension 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.

Pre-flight checks

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.

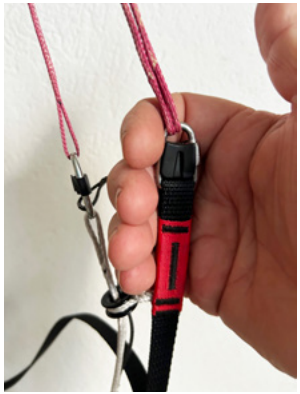
5. Before getting in to the harness you should be wearing a good **helmet**. Check the **parachute** container is correctly closed and the **handle** is secure. Put on the harness ensuring all the buckles are fastened and that it is well adjusted for comfort.

Your paraglider is now ready for flight.

Flight Characteristics

This manual is not intended as an instruction book on how to fly your paraglider – you should be a qualified pilot. The following describes how to get the best from your wing.

Take-off



The wing should be inflated using the main A risers only, without the AR3 line, as shown in the image. The main A-riser is marked with red material. Grasp this above the low-friction ring. The glider will rise smoothly overhead to the flying position and can be launched 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 and begin your launch run, pulling gently and smoothly on the A-risers. As soon as the canopy starts to rise off the ground, release your hands and maintain pressure on all the risers evenly through the harness. Maintaining gentle pressure on the A-risers helps in very calm conditions. Be 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 sail and it will be less likely to overshoot.

Straight Flight

Your paraglider will fly smoothly in a straight line without any input.

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. The wing will turn far more efficiently if you weightshift into the turn in the harness. To attain a more efficient turn at minimum sink, apply some brake to the outside wing to slow the turn and prevent excessive banking. Care must be taken not to over-apply the brakes, as this could result in a spin. 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 collapses 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 weightshifting 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. 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).

Using the speed system

Launching and general flying is normally done without using the accelerator. To accelerate the glider, push with your feet on the speed bar. Full speed is achieved when the two pulleys on each A-riser touch. The speed-bar limiter will be under tension at this point. Using excessive force or pushing beyond this will not make the glider go faster! When you come off the bar it is important to do so smoothly and progressively, to manage the pitch. It is possible for any paraglider 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 bar before you use full 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).

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

Rear-riser Steering

The CURE 3 has T-handles on the rear risers that can be used to make pitch adjustments or control the direction when gliding, without using the brakes. Take care not to accidentally stall the glider as the range is much less than on the brakes. We recommend you keep hold of the brakes (no wraps) when using the T-handles.

Rapid descent procedures

B-Line stalls are not appropriate for two-liners.

Big Ears
The stabilo is integrated into the AR3 line. Big Ears can be performed on the CURE 3 by pulling on AR3 line. It is important to grasp the line high, around 10cm above the top of the riser, and not to pull the riser itself. B-ears are very stable and easy to pull, and are an effective rapid descent method.

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 through 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.

Recovery Techniques

Test pilots have tested the glider well beyond the normal flight envelope. 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 paraglider are dangerous manoeuvres and are not recommended.

Line knots

Flying a glider with knots in the lines will affect its airworthiness – checking for knots should always be part of your pre-flight checks. If you do notice a knot in your glider's lines after you have pulled the canopy up, if you can safely abort the launch, then do so. If you are already airborne, you should avoid accelerating the glider and avoid deep brake inputs. Use weightshift or minimal brake inputs to steer the glider to a safe landing place as soon as possible.

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.

Stalls

Full Stall

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 reconstruction of the full span is recommended to avoid the tips getting cravatted during the recovery.

Pilots are advised not to attempt this manoeuvre unless under SIV instruction.

An intentional full stall with the CURE 3 should always be performed in two steps, to prevent the tips from touching each other as the glider falls back into the stall. First, apply deep brake until the glider stops flying. The tips will peel back and the glider will feel as if it is in deep stall. Release the brakes smoothly and quickly until you fall back underneath the glider, then immediately reapply the brakes to the backfly position.

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.

When in deep stall the pilot will notice the following:

- Very low airspeed.
- Almost vertical descent (like a round canopy), typically around 5m/s.
- The paraglider appears quite well inflated but does not have full internal pressure. It looks and feels a bit limp.

To recover from deep stall, the first reaction is simply to put your hands up. This should allow the glider to retun to normal flight. If the glider does not resume normal flight, pulling gently on the A-risers will help the airflow to re-attach to the leading edge. Be careful not to pull down too hard as this will induce a front collapse.

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 and 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.

Asymmetric Collapse

Your paraglider is very resistant to deflations; however, if the canopy collapses on one side due to turbulence, your first reaction should be to control the direction of flight by countering on the opposite brake. The act of controlling the direction will likely 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.

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.

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 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.

Storage, repairs and servicing

Storage and care

If you have to pack your canopy away wet, don't 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 flammable!

Always store the canopy in a dry, warm place. Ideally this should be in the temperature range of 5°C to 25°C. Never let your canopy freeze, particularly if it is damp.

Your paraglider is made from high quality nylon which is treated to protect it 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 out in strong sunshine unnecessarily.

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.

Never drag or slide the surface of the glider over concrete or other hard surface as this can cause abrasion damage to the sail.

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.

Packing

We recommend concertina-packing the wing as it helps to extend its life. Always start with a bunched glider. Do not lay it out, as this would mean pulling it across the ground when you gather the leading edge, risking damage from abrasion.

Stack the leading edge plastics together first, creating a single 'pile' from tip to tip (do not fold it in the middle). Turn the pile onto its side so the plastics are laid flat, and secure with the glider strap while you concertina-fold the rest of the glider. Push the air out, from the trailing edge towards the leading edge, and then fold the glider into three or four sections to fit the inner bag. Remove the strap from the leading edge, and close around the whole glider, before placing it into the inner bag.

A concertina packing bag can make concertina-packing the glider much easier. It has a dedicated strap to hold the stacked leading edge in place. The rest of the glider can then be gathered and zipped into the bag, from the leading edge towards the trailing edge. Finally, the bag can be folded into three and secured with the outside strap. Bruce demonstrate how to use the concertina bag in this video.

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 of up to around 10cm 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

The dimensions of the lines can change during the first part of their life; high performance gliders are especially sensitive to trim changes, we recommend having a performance trim check after the first 30 hours of use to keep your CURE 3 within intended tolerances. We recommend changing the entire line-set after 200 hours of use.

It is important to have your glider regularly serviced. Your wing should have a thorough check / inspection every 12 months or every 100 flight hours, whichever occurs first. This should be done by a qualified professional. If you fly more than 100 hours per year, then the wing should be inspected annually.

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 repairs carried out by an approved service centre, and lines which we have produced and which have been fitted by an approved service centre. A list of approved service centres can be found on our website.

If you are concerned about any aspect of the integrity or airworthiness of your paraglider please contact your BGD dealer or talk to BGD directly.

Lines

Releasing loops on the rear lines



Left: with loops; Right: no loops

All BGD gliders are rigged from new with loops on the maillons of the rear lines and the stabi line. The loops are there so that they can be released to compensate for any shrinkage of the back lines as the glider gets older.

BGD recommends releasing the loops on the CURE 3 when the performance trim check is done, or earlier if the pilot feels the glider does not come up as easily on launch.

When the first line check is done, normally at 2 years, the loops should already have been released, and this should be verified and fine-tuned by the check centre.

Mounting Replacement Lines

If you need to replace lines on your glider, we recommended that a professional should mount the new lines. The airworthiness of your glider, and your safety, depends on it being done correctly.

You can identify the line(s) you need to replace from the line layout diagram for your wing. The line lengths are in this

manual, and the latest versions of the line length checksheets for all models can be downloaded from https://tinyurl.com/BGDlines.

Replacement lines can be ordered from the Accessories section of www.flybgd.com. Check that the lines you have received correspond with the line plan and match your glider.

The quickest way to remove the old lines is to cut them off. Sometimes only a partial line-set is needed (eg excluding top lines or brakes) so take care not to cut any lines that need to be retained.

It is important that lines are fitted the right way up. Unsheathed micro lines are reinforced at one end, denoted by a yellow thread. This end is the line-junction end. The non-reinforced end is marked with white thread and should be attached to the glider tab or the maillon. Sheathed lines have no additional reinforcement and can be mounted either way up.

Correct alignment of micro lines

Yellow thread denotes the reinforced end of a micro line.

White thread denotes the non-reinforced end of a micro line.



Alignment on the tabs

The A tabs are inclined backwards on all BGD gliders to align with the direction of pull of the line. Lines should be placed symmetrically on the tab, except where the tab is inclined. So when assembling the lines, the A tab should be angled back, and all other tabs should be perpendicular to the undersurface of the wing.

Attaching the lines

Lines are connected to other lines or to tabs with lark's foot junctions. Make sure that they are joined correctly with interlocked junctions and not looped junctions.



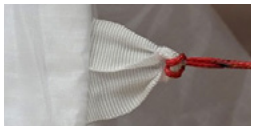
Interlocked – correct



Looped – incorrect



Interlocked – correct



Looped – incorrect





Loops on rear lines

A risers: new lines should be mounted without loops; The stabi and rear risers should have a single loop.

Maillon inserts

BGD maillons have black plastic inserts to prevent them from accidentally coming undone and the lines from falling out. Always ensure that they are correctly installed after rigging the glider. If they are lost, use a line lock insert to hold the link closed. New inserts can be ordered from www.flybgd.com.

Pre-flight checks

After rigging the wing, always do a full dimensional check of the lines, and inflate it to ensure that everything is correct before flying.

Technical Data

Materials

The CURE 3 is made from the following quality materials:

Sail

Top surface	Porcher Skytex 32g/m²
Top surface leading edge	Porcher Skytex 38g/m²
Bottom surface	Porcher Skytex 32g/m²
Internal structure	Porcher Skytex 32g/m² hard finish
Nose reinforcing	LSNR (linear stock nylon rod) yellow
Risers	12 mm Kevlar / nylon
Pulleys	Sprenger (brakes and speed system) and Riley

Lines

Top lines	Edelrid Magix Pro Dry 8001U-50,70,90 unsheathed Kevlar
Middle lines	Edelrid Magix Pro Dry 8001U-50,70,90,130 unsheathed Kevlar
Lower lines	Edelrid Magix Pro Dry 8001U-130,190,280,340 unsheathed Kevlar
Brakes	9200U-30, 8001U-50. PPSL200 unsheathed Dyneema

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

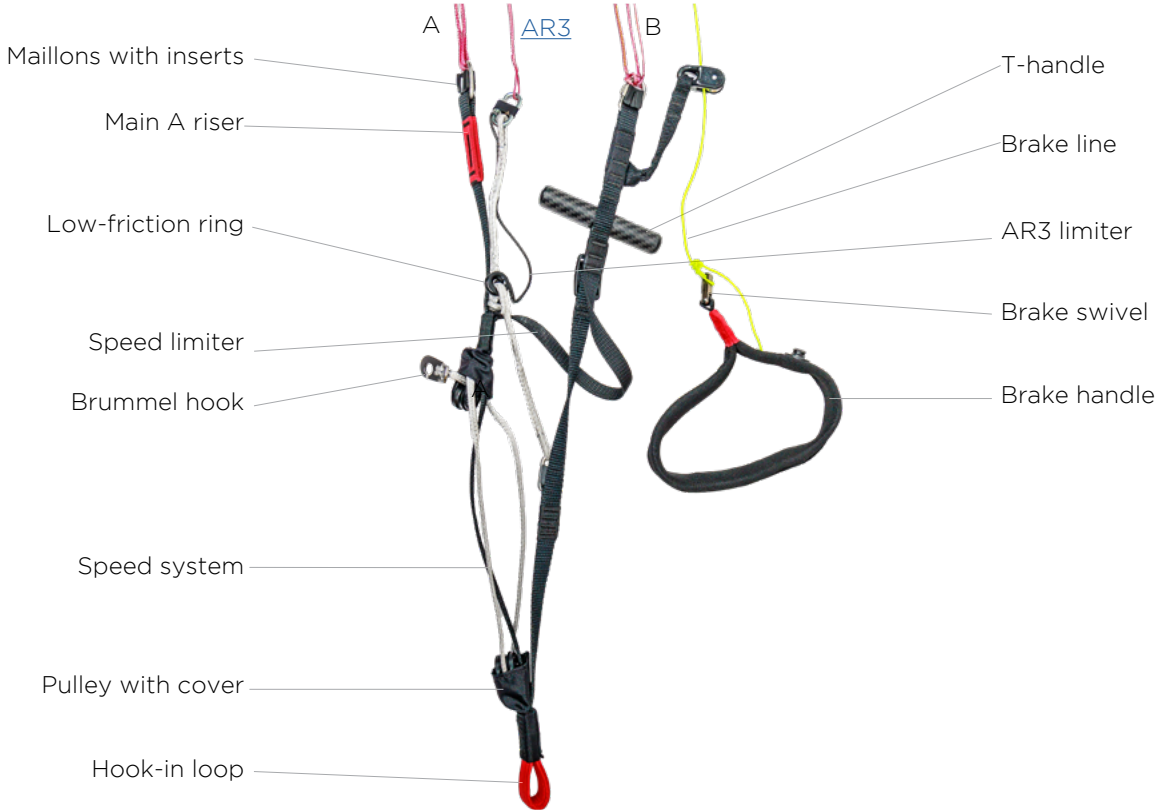
Specifications

	S	M	ML	L
Linear scaling factor	0.97	1	1.04	1.08
Projected area (m^2)	17.6	18.9	20.5	21.9
Flat area (m^2)	21.0	22.5	24.4	26.1
Glider weight (kg)	4.8	5.1	5.4	5.7
Number of main lines	3/3			
Cells	70			
Flat aspect ratio	6.7			
Projected aspect ratio	5.1			
Root chord (m)	2.29	2.37	2.46	2.55
Certified weight range (kg)	65-85	75-95	85-108	95-119
Ideal weight range (kg)	73-84	84-95	95-108	108-119
Certification	EN C			

Glider overview diagram



Riser diagram



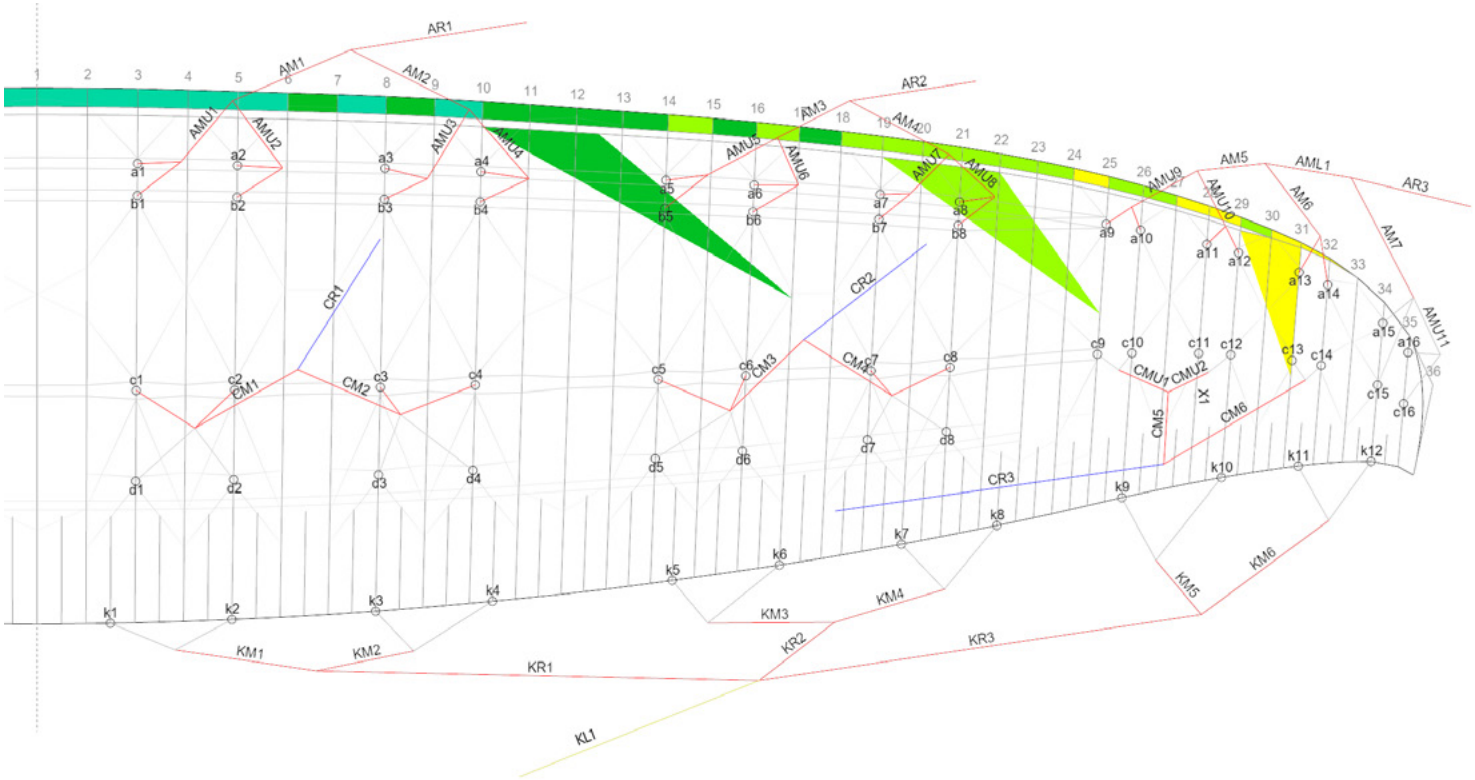
The riser set does not have trimmers, or any other adjustable or removable device.

Riser lengths and brake & accelerator travel

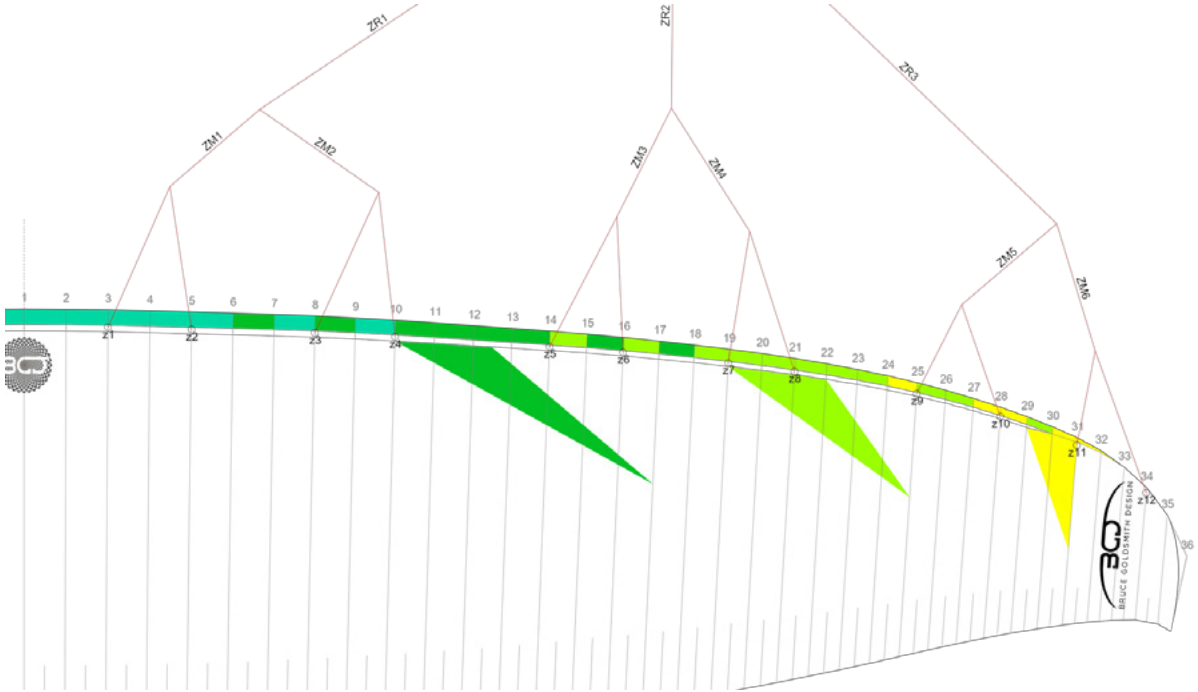
Size	Riser lengths trim speed (mm)*	A-riser length accelerated (mm)	Accelerator travel (mm)	Brake travel (mm)**
S	500	320	180	620
M	500	320	180	650
ML	500	300	200	670
L	500	300	200	700

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

Line Layout


AR1
AR2
AR3
AM1
AM2
AM3
AM4
AM5
AML1
AM6
AM7
AMU1
AMU2
AMU3
AMU4
AMU5
AMU6
AMU7
AMU8
AMU9
AMU10
AMU11
CR1
CR2
CR3
CM1
CM2
CM3
CM4
CM5
CM6
CMU1
CMU2
X1
KM1
KM2
KM3
KM4
KM5
KM6
KR1
KR2
KR3
KL1

Collapse lines



Bridle check sheet

Top	Middle	Riser		
a1	AMU1	AM1	AR1	
a2	AMU2	AM1	AR1	
a3	AMU3	AM2	AR1	
a4	AMU4	AM2	AR1	
a5	AMU5	AM3	AR2	
a6	AMU6	AM3	AR2	
a7	AMU7	AM4	AR2	
a8	AMU8	AM4	AR2	
a9	AMU9	AM5	AML1	AR3
a10	AMU9	AM5	AML1	AR3
a11	AMU10	AM5	AML1	AR3
a12	AMU10	AM5	AML1	AR3
a13	AM6	AML1	AR3	
a14	AM6	AML1	AR3	
a15	AM7	AR3		
a16	AMU11	AM7	AR3	

b1	AMU1	AM1	AR1
b2	AMU2	AM1	AR1
b3	AMU3	AM2	AR1
b4	AMU4	AM2	AR1
b5	AMU5	AM3	AR2
b6	AMU6	AM3	AR2
b7	AMU7	AM4	AR2
b8	AMU8	AM4	AR2
c1	CM1	CR1	
c2	CM1	CR1	
c3	CM2	CR1	
c4	CM2	CR1	
c5	CM3	CR2	
c6	CM3	CR2	
c7	CM4	CR2	
c8	CM4	CR2	
c9	CMU1	CM5	CR3
c10	CMU1	CM5	CR3
c11	CMU2	CM5	CR3
c12	CMU2	CM5	CR3
c13	CMU3	CM6	CR3
c14	CMU3	CM6	CR3
c15	AM7	AR3	
c16	AMU11	AM7	AR3

d1	CM1	CR1	
d2	CM1	CR1	
d3	CM2	CR1	
d4	CM2	CR1	
d5	CM3	CR2	
d6	CM3	CR2	
d7	CM4	CR2	
d8	CM4	CR2	
k1	KM1	KR1	KL1
k2	KM1	KR1	KL1
k3	KM2	KR1	KL1
k4	KM2	KR1	KL1
k5	KM3	KR2	KL1
k6	KM3	KR2	KL1
k7	KM4	KR2	KL1
k8	KM4	KR2	KL1
k9	KM5	KR3	KL1
k10	KM5	KR3	KL1
k11	KM6	KR3	KL1
k12	KM6	KR3	KL1

Collapse lines

Rib	Chord					
3	4	z1	ZM1	ZR1	RA2	RA
5	4	z2	ZM1	ZR1	RA2	RA
8	4	z3	ZM2	ZR1	RA2	RA
10	4	z4	ZM2	ZR1	RA2	RA
14	4	z5	ZM3	ZR2	RA2	RA
16	4	z6	ZM3	ZR2	RA2	RA
19	4	z7	ZM4	ZR2	RA2	RA
21	4	z8	ZM4	ZR2	RA2	RA
25	4	z9	ZM5	ZR3	RA2	RA
28	4	z10	ZM5	ZR3	RA2	RA
31	4	z11	ZM6	ZR3	RA2	RA
34	4	z12	ZM5	ZR3	RA2	RA

Line Lengths

The latest versions of the line layout diagrams and line lengths for all BGD wings can be downloaded from https://tinyurl.com/BGDlines.

All measures are in mm, with 50 N 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.

Compliance of the test sample's suspension lines, control lines and risers with the dimensions given in the user's manual are checked by the testing laboratory after the test flights have been completed

The difference in line lengths between the manual and the sample may be no more than 10 mm. The measured lengths are in the appendix.

Size S

	A	B	C	D	K
1	6901	6889	6855	6973	7580
2	6796	6781	6759	6882	7220
3	6744	6729	6710	6825	6945
4	6766	6751	6727	6832	6854
5	6643	6631	6611	6716	6601
6	6544	6528	6506	6604	6468
7	6457	6443	6425	6509	6373
8	6445	6434	6427	6494	6453
9	6247		6234		6349
10	6214		6197		6403
11	6147		6141		6501
12	6142		6151		6708
13	6078		6093		
14	6070		6098		
15	6020		6069		
16	6020		6114		

Bridle check ▲
Single line lengths ▶

a1	237	AM1	1314	c12	231	k1	668	z1	6563
a2	235	AM2	1210	c13	242	k2	308	z2	6445
a3	229	AM3	1283	c14	246	k3	542	z3	6386
a4	223	AM4	1129	c15	666	k4	451	z4	6419
a5	208	AM5	1550	c16	488	k5	514	z5	6273
a6	200	AML1	985	CMU1	793	k6	425	z6	6144
a7	185	AM7	3130	CMU2	704	k7	446	z7	6043
a8	173	AR1	4344	CMU3	342	k8	480	z8	6050
a9	256	AR2	4089	CM1	1180	k9	439	z9	5847
a10	223	AR3	1757	CM2	1103	k10	538	z10	5692
a11	273	b1	224	CM3	990	k11	253	z11	5604
a12	266	b2	219	CM4	885	k12	459	z12	5655
a13	262	b3	212	CM5	1348	KM1	1245		
a14	253	b4	208	CM6	1642	KM2	735		
a15	617	b5	194	CR1	4082	KM3	1030		
a16	394	b6	184	CR2	4168	KM4	914		
AMU1	522	b7	170	CR3	3349	KM5	539		
AMU2	417	b8	161	d1	1192	KM6	876		
AMU3	475	c1	1075	d2	1101	KR1	2207		
AMU4	502	c2	979	d3	1121	KR2	1552		
AMU5	562	c3	1007	d4	1128	KR3	1866		
AMU6	468	c4	1023	d5	1038	KLU1	2189		
AMU7	549	c5	933	d6	926	KL1	1245		
AMU8	549	c6	828	d7	935				
AMU9	1199	c7	851	d8	920				
AMU10	1082	c8	853						
AM6	2565	c9	226						
AMU11	226	c10	189						
		c11	221						

Size M

	A	B	C	D	K
1	7156	7143	7076	7198	7564
2	7049	7032	6978	7104	7237
3	6994	6977	6929	7049	6997
4	7019	7004	6949	7057	6946
5	6879	6865	6824	6934	6707
6	6776	6758	6718	6820	6545
7	6685	6671	6634	6721	6440
8	6676	6664	6636	6706	6502
9	6466		6439		6331
10	6434		6401		6303
11	6365		6346		6343
12	6359		6358		6501
13	6292		6302		
14	6285		6308		
15	6234		6283		
16	6232		6328		

Bridle check ▲
Single line lengths ▶

a1	245
a2	244
a3	237
a4	231
a5	216
a6	207
a7	191
a8	179
a9	265
a10	232
a11	282
a12	276
a13	271
a14	263
a15	638
a16	409
AMU1	540
AMU2	433
AMU3	490
AMU4	521
AMU5	581
AMU6	485
AMU7	567
AMU8	569
AMU9	1244
AMU10	1124
AM6	2673
AMU11	232

AM1	1351
AM2	1245
AM3	1320
AM4	1162
AM5	1618
AML1	1049
AM7	3286
AR1	4517
AR2	4257
AR3	1789
b1	232
b2	226
b3	219
b4	216
b5	201
b6	190
b7	176
b8	167
c1	1111
c2	1012
c3	1039
c4	1060
c5	963
c6	856
c7	878
c8	881
c9	234
c10	195
c11	228

c12	240
c13	250
c14	255
c15	688
c16	505
CMU1	816
CMU2	727
CMU3	355
CM1	1200
CM2	1123
CM3	1019
CM4	912
CM5	1394
CM6	1700
CR1	4244
CR2	4319
CR3	3476
d1	1232
d2	1137
d3	1159
d4	1168
d5	1072
d6	958
d7	966
d8	950

k1	752
k2	425
k3	637
k4	586
k5	616
k6	499
k7	513
k8	530
k9	539
k10	556
k11	337
k12	495
KM1	1202
KM2	749
KM3	995
KM4	874
KM5	667
KM6	890
KR1	2960
KR2	2380
KR3	2420
KL1	2629

z1	6804
z2	6693
z3	6634
z4	6655
z5	6505
z6	6383
z7	6281
z8	6276
z9	6021
z10	5931
z11	5886
z12	5984

Size ML

	A	B	C	D	K
1	7430	7418	7381	7508	8201
2	7244	7304	7280	7412	7816
3	7267	7249	7227	7353	7522
4	7291	7277	7248	7362	7427
5	7161	7146	7125	7239	7154
6	7054	7037	7014	7119	7009
7	6960	6945	6928	7019	6909
8	6948	6937	6930	7003	6995
9	6735		6723		6887
10	6701		6682		6938
11	6628		6623		7040
12	6621		6634		7258
13	6554		6572		
14	6547		6577		
15	6494		6547		
16	6494		6594		

Bridle check ▲
Single line lengths ▶

a1	255	AM1	1412	c12	249	k1	720	z1	7114
a2	253	AM2	1304	c13	261	k2	334	z2	6988
a3	246	AM3	1380	c14	266	k3	584	z3	6927
a4	240	AM4	1216	c15	718	k4	488	z4	6965
a5	224	AM5	1669	c16	525	k5	554	z5	6808
a6	215	AML1	1060	CMU1	853	k6	454	z6	6670
a7	199	AM7	3372	CMU2	758	k7	477	z7	6562
a8	186	AR1	4719	CMU3	368	k8	518	z8	6570
a9	276	AR2	4450	CM1	1270	k9	478	z9	6351
a10	241	AR3	1941	CM2	1189	k10	573	z10	6183
a11	294	b1	241	CM3	1064	k11	280	z11	6088
a12	286	b2	236	CM4	954	k12	498	z12	6142
a13	282	b3	228	CM5	1452	KM1	1341		
a14	274	b4	225	CM6	1769	KM2	797		
a15	665	b5	209	CR1	4437	KM3	1110		
a16	425	b6	198	CR2	4536	KM4	987		
AMU1	560	b7	183	CR3	3656	KM5	588		
AMU2	451	b8	174	d1	1284	KM6	939		
AMU3	510	c1	1157	d2	1188	KR1	2391		
AMU4	541	c2	1056	d3	1208	KR2	1695		
AMU5	604	c3	1083	d4	1217	KR3	2026		
AMU6	505	c4	1104	d5	1119	KLU1	2479		
AMU7	591	c5	1005	d6	998	KL1	1245		
AMU8	592	c6	893	d7	1008				
AMU9	1291	c7	917	d8	991				
AMU10	1165	c8	918						
AM6	2764	c9	244						
AMU11	243	c10	203						
		c11	239						

Size L

	A	B	C	D	K
1	7683	7669	7630	7761	8495
2	7569	7553	7525	7662	8097
3	7514	7497	7474	7604	7793
4	7542	7526	7496	7614	7696
5	7404	7389	7368	7487	7414
6	7295	7277	7252	7363	7264
7	7197	7181	7165	7259	7161
8	7186	7174	7168	7243	7251
9	6967		6954		7141
10	6931		6912		7190
11	6857		6851		7292
12	6850		6863		7516
13	6781		6798		
14	6772		6803		
15	6717		6769		
16	6717		6817		

Bridle check ▲
Single line lengths ▶

a1	263	AM1	1459	c12	258	k1	745	z1	7375
a2	261	AM2	1350	c13	270	k2	347	z2	7245
a3	254	AM3	1426	c14	275	k3	603	z3	7184
a4	249	AM4	1257	c15	742	k4	506	z4	7223
a5	231	AM5	1725	c16	543	k5	574	z5	7062
a6	223	AML1	1095	CMU1	882	k6	468	z6	6919
a7	206	AM7	3486	CMU2	784	k7	491	z7	6807
a8	192	AR1	4897	CMU3	380	k8	536	z8	6816
a9	286	AR2	4620	CM1	1311	k9	496	z9	6590
a10	249	AR3	2028	CM2	1231	k10	590	z10	6416
a11	304	b1	249	CM3	1100	k11	292	z11	6317
a12	296	b2	244	CM4	987	k12	516	z12	6373
a13	292	b3	236	CM5	1501	KM1	1386		
a14	283	b4	232	CM6	1828	KM2	827		
a15	687	b5	216	CR1	4605	KM3	1147		
a16	439	b6	205	CR2	4709	KM4	1021		
AMU1	579	b7	189	CR3	3801	KM5	612		
AMU2	467	b8	180	d1	1327	KM6	967		
AMU3	526	c1	1196	d2	1228	KR1	2478		
AMU4	559	c2	1091	d3	1250	KR2	1763		
AMU5	624	c3	1120	d4	1260	KR3	2102		
AMU6	522	c4	1142	d5	1157	KLU1	2615		
AMU7	609	c5	1039	d6	1034	KL1	1245		
AMU8	611	c6	923	d7	1042				
AMU9	1335	c7	948	d8	1026				
AMU10	1205	c8	950						
AM6	2858	c9	252						
AMU11	251	c10	210						
		c11	247						

Service Record

Service No 1

Date

Nº flights

Type of Service

Notes

Stamp / Signature

Service No 2

Date

Nº flights

Type of Service

Notes

Stamp / Signature

Service No 3

Date

Nº flights

Type of Service

Notes

Stamp / Signature

Service No 4

Date

Nº flights

Type of Service

Notes

Stamp / Signature

Service No 5

Date

Nº flights

Type of Service

Notes

Stamp / Signature

Service No 6

Date

Nº flights

Type of Service

Notes

Stamp / Signature

BRUCE GOLDSMITH DESIGN

Owner Record

Pilot No 1

First name	
Family name	
Street	
City	
Post code	
Country	
Telephone	
Email	

BRUCE GOLDSMITH DESIGN

Pilot No 2

First name	
Family name	
Street	
City	
Post code	
Country	
Telephone	
Email	

Closing Words

Your paraglider promises many hours of safe and enjoyable flying, provided you treat it with care and always respect the potential dangers of aviation. Please 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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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.