



ADVANCE ALPHA⁶

Contents

About ADVANCE	4		
The ALPHA 6	6		
ALPHA 6 – come fly with me	6		
Outstanding features	6		
All the details	7		
Piloting Requirements	8		
General advice about paragliding	8		
Using the paraglider.	10		
Delivery	10		
Basic settings	10		
Adjusting the brake lines	10		
Speed system	11		
Suitable harnesses.	11		
Weight range	12		
Flight characteristics	14		
Connecting the Risers	14		
Takeoff	14		
Normal flight.	16		
Turning flight.	16		
Accelerated flight	17		
Collapses	18		
Rapid descents	19		
Stalling	22		
Deep Stall	23		
		Landing	23
		Flying with a wet paraglider (risk of deep stall)	24
		Winching	24
		Paramotoring	25
		Acrobatics	25
		Maintenance, repairs and care	27
		Packing	27
		Care and maintenance.	27
		Taking Care	28
		Check	28
		Repairs.	28
		Disposal.	29
		Technical details.	30
		Materials used	31
		Certification	32
		Service	34
		ADVANCE Service Centres	34
		The ADVANCE website	34
		Warranty	34
		Wing parts	36
		Line plan	37
		Risers	38
		Boline Knot	39

Thank you for flying ADVANCE

Congratulations on your choice of an ALPHA 6 - a quality product from ADVANCE. We hope that you will spend many rewarding hours in the air with it.

This user manual is an important part of the glider. Here you will find instructions and important information about safety, care and maintenance, and that's why we recommend that you read this document carefully before your first flight

Register your ALPHA 6 online on www.advance.ch/warranty; you will then receive product updates or safety-related bulletins about the ALPHA 6 direct from us. This information will also be available to download from our website at www.advance.ch, as will the latest version of this manual and further updated information.

If you have any further questions or problems please contact your dealer or get in touch directly with ADVANCE.

Now we wish you a lot of enjoyment with your ALPHA 6, and always «happy landings».

Team ADVANCE

About ADVANCE

ADVANCE, based in Switzerland, is one of the world's leading paraglider manufacturers. Since it was founded in 1988, the company has consistently pursued its own directions and concepts, both in development and production. The results are quality products with distinctive characteristics.

Behind the ADVANCE brand name is a team of specialists who share the passion and trust in the company's products. At home in the air themselves, they contribute their valuable personal experience and dedication to the working processes.

Total control of the production process and supervision of the working practices at the ADVANCE factory in Vietnam ensure a high standard of workmanship. Long term relationships with fabric and line manufacturers means that ADVANCE knowledge and expertise also finds its way directly into the development of new materials.

ADVANCE attaches great importance to after-sales customer support, and has built up a worldwide service network for this purpose. An on-going interaction with its customers brings in a steady flow of new knowledge that finds its way into ADVANCE products, thus completing the «Circle of Service».



The ALPHA 6

ALPHA 6 – come fly with me

The ALPHA 6 is the perfect paraglider for first flights, building experience or occasional flying. As a beginner you can trust this wing 100%. The ALPHA model is the well-tried classic for first flights, and after basic training, offers many possibilities of exploring further afield. This 6th generation of the ALPHA series is modern in concept, founded on many years' experience, and promises reliability and durability.

Outstanding features

Easy takeoff

A revised ALPHA 6 line concept leaves the wing with visibly fewer suspension points and fewer lines - easy to sort and easy to see. After a simple takeoff your ALPHA 6 is in the air. The ALPHA 6 is also light – thanks to carefully designed internal structure and high quality materials.

Great in the air

Modern „Advanced Air Inlet Technology“ brings flying safety and wing stability. The typical ADVANCE combination of semi-circular intakes with an „Air Scoop Technology“ provides higher pressure in the wing at high angles of attack. This results in progressive brake loading and

minimises any tendency to spin when turning. This means more passive safety.

Lasting fun

Modern design ensures that the fun continues long after your training with your ALPHA 6. Double 3D shaping around the leading edge creates a smooth upper wing surface, giving you better performance. The spartan line concept with its sophisticated diagonal ribs inside further raises gliding performance - noticeably high for the A classification.

All the details

«Easy Connect System»

The risers have a new «Easy Connect System» which makes it simple and quick to connect them to the harness. Concept and colour minimize the risk of clipping in with risers twisted or on the wrong side.

«Quick Snap»

The ALPHA 6 has split A-risers for trouble-free big ears. Before takeoff the divided A-risers are held together by magnets. This simplifies take-off handling, and during takeoff they separate themselves for normal flight.

«Smart Sail System»

The «Smart Sail System» aligns the weave of the fabric around the air intakes with the local tension vector. Specially impregnated robust cloth at this highly loaded place extends the glider's life.

Extended weight range

On top of its recommended weight range the ALPHA 6 has another 15 kg added on, but at these weights the wing remains in the EN/LTF A category. This significantly widens the glider's area of use.

ADVANCE Standards

Distinctive winglets have been reducing induced drag (vortex-effect) on ADVANCE wings for 25 years. Like all ADVANCE models the ALPHA 6 has swivels on the brake lines and comes with different sized brake handles, to suit the glider size. At the risers the brake lines run through brake rings.

Piloting Requirements

Right from the start the ALPHA 6 gives the beginner or leisure pilot the safety they need when they lift off into the third dimension. A sense of achievement is guaranteed from the beginner's first flights, encouraged by the knowledge that you can always trust the ALPHA 6 completely. The ALPHA 6 is perfect for schools, but it also provides improving pilots with continued flying enjoyment, with maximum passive safety, long after they have finished their training.

General advice about paragliding

Flying a paraglider calls for appropriate training and a sound knowledge of the subject, as well as, of course, the necessary insurance cover and licence. A pilot must be able to correctly assess the weather conditions before taking off. His or her capabilities must be adequate for the actual paraglider.

Wearing an adequate helmet, suitable boots and clothing, and carrying an emergency parachute (a 'reserve') are essential. Before every flight all items of equipment should be checked for damage and airworthiness. A proper pre-takeoff check must also be carried out.

Every pilot bears sole responsibility for all risks, including injury or death, when participating in the sport of paragliding. Neither the manufacturer nor the seller of a paraglider can guarantee or be held responsible for the pilot's safety.



Using the paraglider

Delivery

Before delivery every ADVANCE paraglider has to be flown by the dealer and checked for correct settings and trim. When this has been done the dealer enters the date of the first flight on the label attached to a centre rib. This entry, together with a completed warranty card, will ensure that defects in the product attributable to manufacturing faults are covered by the ADVANCE warranty. See 'Warranty' in the section «Service».

Within 10 days of purchasing your glider we ask you to fill in the registration form on the internet, to be found under "Warranty".

The ALPHA 6 comes with an COMFORTPACK rucksack, an inner bag, a compression strap, a repair kit, a mini windsock in the canopy colours and a 'Getting Started' booklet.

Basic settings

The length of the brake lines is set at the factory so that the trailing edge is not braked (is crease-free) when brakes are fully released in fully accelerated flight. This setting should be kept as a matter of principle.


Adjusting the brake lines

If the length of the brake lines has to be readjusted there must be 8cm of slack (free travel) between the brakes free position and the first influence of brake effect in unaccelerated flight (brake starts to take effect). We recommend that the brake handles are secured with a bowline knot. See the illustration at the end of this manual.

Speed system

The ALPHA 6 has a speed system which can improve the glide performance, and increase wing stability at speeds above trim speed. In accelerated flight the system shortens the front risers, so reducing the wing's angle of attack. The ALPHA 6 speed system is designed to fully retain the wing profile during accelerated flight, keeping the wing's good qualities at high speed.


Adjust the speed system correctly before your first ALPHA 6 flight. Make sure that the speed lines run freely through all the pulleys in your harness. Connect the speed lines to the glider risers using Brummel hooks. Finally check that your settings allow you to use the full travel of the speed system. To do this it is best to hang the harness up, sit in it, connect the risers and have someone else hold them up as if in flight..

 **Caution:** The speed system is correctly adjusted when you can use the full travel available on the wing. Make certain that the speed lines are not set too short, thus causing the wing to be pre-accelerated all the time.

Suitable harnesses

The ADVANCE ALPHA 6 is certified for harnesses in Group GH (without rigid cross-bracing - see section «Certification»). The suspension points of the chosen harness should ideally have a carabiner distance of approximately 45 cm (equivalent to your shoulder width) and a height of 40 to 48 cm.

The ALPHA 6 is neither suitable nor certified for use with harnesses in group GX (with effective cross-bracing). The use of such harnesses can have a bad effect on both handling and extreme flight characteristics.

 **Info:** Experience has proved the theory – a streamlined harness can significantly improve gliding performance.

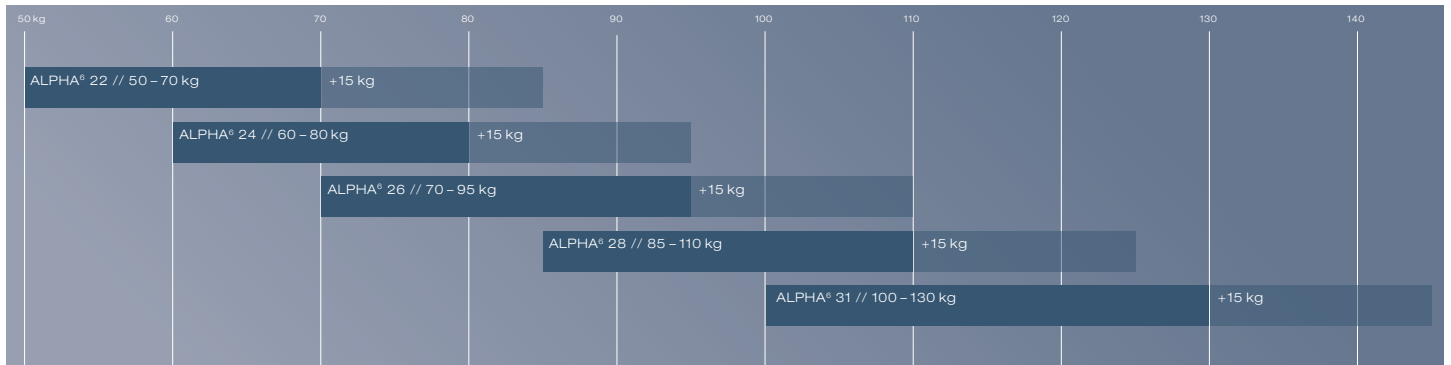
Weight range

The weight ranges of the different wing sizes are given in the section «Technical Data». The figures there represent total in-flight weights. This includes the pilot's body weight, plus clothes, as well as the weight of all the equipment (glider, reserve, harness, instruments etc.).

Flying at the lower or upper weight limits can have an effect on the paraglider's flying characteristics and handling, without affecting the pilot's safety. Glide performance remains the same over the whole weight range, but climbing performance will be altered – lighter means better climbing in easy conditions. When the ALPHA 6 is flown in its upper weight area, the higher wing loading produces a higher trim speed, and a more dynamic and agile flying character.



Info: The ALPHA 6 has a weight range that has been extended above the recommended region, but still keeps its EN/LTF A certification; the EN/LTF A approval includes a weight increase of around 15 kg above the recommended weight ranges for all sizes. When the ALPHA 6 is flown in its upper weight region, the higher wingloading produces a higher trim speed, and a more dynamic and agile flying character. The fact that the ALPHA 6 keeps its EN/LTF A rating at the higher wing loadings confirms its high degree of passive safety



Empfohlenes Startgewicht
 Recommended takeoff weight
 Plage de poids conseillée total volant

Erweiterter Gewichtsbereich
 Increased takeoff weight
 Plage de poids étendue

Flight characteristics

We recommend that you make your first flights with your new glider in quiet conditions, in a familiar flying area. A few pull-ups at an easy site will give you confidence in the ALPHA 6's handling qualities, from the very beginning.

Connecting the Risers

The ALPHA 6 has an "Easy Connect System" on the risers, to simplify connecting the risers. Each riser has coloured sewing running up the back of the C-riser, red for left and blue for right, in the direction of flight.

The coloured sewing facing the pilot, and the riser running cleanly upward to the lines confirm that the riser has not been connected with an 180 degree twist. For additional assistance all ADVANCE harnesses will, in future, have the same marking on their suspension loops (red to red, blue to blue).

The "Easy Connect System" also enables you to clip in while facing the wing. This can be helpful for a reverse takeoff in windy weather.

Takeoff

Before every takeoff carry out the following pre-takeoff checks:

1. Harness and helmet done up, reserve OK?
2. Lines free?
3. Canopy open?
4. Wind direction and strength assessed?
5. Airspace and field-of-view clear?

The ALPHA 6 has split A-risers; the thin outer one is used for big ears. We recommend the use of both A-risers for takeoff (each side will be clipped together by its "Quick Snap" magnet). The wing will then fill reliably from the middle out, and will pull up straight with little effort. During takeoff the "Quick Snap" magnets will snap apart by themselves.



Tip: To get the wing in the right shape for takeoff do the following: pull the brake lines in while you are sorting the lines until the canopy arrives at the perfect banana shape

The ALPHA 6 takeoff behaviour is very smooth and easy for both forward and reverse takeoffs. The canopy inflates quickly and rises progressively, without hanging back.

The ALPHA 6 rises exceptionally easily, so it is very important that you match your pull up technique to the weather conditions and the steepness of the slope. This means:

- In a lot of wind and/or on steep ground the ALPHA 6 needs little or almost no initial tug (just lead it up).
- In zero wind and/or on flat ground a more reasonable impulse would be sensible.

Takeoff in light wind (forward takeoff)

The ALPHA 6 only needs a moderate pull-up impulse even in a light wind. It is not necessary to step back and 'run into the lines'. Guide the glider up with pronounced leaning forward, but without too much of a pull on the A-risers, until the canopy is overhead. During the pull-up phase any directional correcting should only be done by decisive going-under-the-wing, without using the brakes. After any necessary corrections and a satisfactory visual check a few determined steps with good leaning forward will achieve lift off, even in little wind. Careful braking can shorten the takeoff run.

Takeoff in stronger wind (reverse takeoff)

The reverse takeoff is mainly recommended for stronger winds. Like the forward takeoff we recommend that you use both ALPHA 6 risers. During the pull-up you should walk towards the ALPHA 6 as necessary to control its rising rate. Turning round and taking off with the ALPHA 6 will then prove to be easy.



Tip: Playing with the glider on flat ground in some wind gives a good feeling for the wing. You can get to know the ALPHA 6's characteristics very well, and try out takeoffs, stalling, shooting forward tendency and collapses – while remaining safely on the ground. The ADVANCE test team have a motto: one hour's ground training is worth 10 high flights. But bear in mind that ground practice puts use on the glider.

Normal flight

In calm air the ALPHA 6 best glide is achieved with fully released brakes. Light braking brings the glider to its minimum sink condition. When flying into a headwind, through descending air, or when proceeding to the next thermal, glide performance will be distinctly improved by appropriate use of the speed system.

Despite the wing's high stability an active flying style is recommended - collapses can be almost completely avoided. This means keeping the lightly-braked glider directly above you; in other words, countering roll and pitch disturbances.

- When the angle of attack increases (e.g. wing swings back when entering a thermal) the brake lines should be briefly released fully, until the glider returns to its overhead position.
- When the angle of attack reduces (e.g. glider shoots forwards) the wing should briefly and strongly braked.

Be careful not to get below minimum speed, and don't overreact with the brakes.

Turning flight


The ALPHA 6 has precise response to brake application. It reacts directly and progressively to increasing steering demands, once the brake line free travel has been taken up. Steering can be effectively assisted by active weight shift. Angle of bank can always be increased, steadied or reduced by appropriate adjustment of brake position.

When circling in a thermal choose the desired angle of bank and corresponding turn radius by using the inside brake line, and let the paraglider turn steadily like this. Stabilise the outside wing with outside brake as required, in particular to keep the rate of turn constant. Too much brake on the outside wing will slow the turn rate and airspeed down, allow the pilot to swing back under the wing, and lose the glider's ability to turn.

A harness that is matched to the ALPHA 6 flying qualities helps you enter and settle on a very steady turn. See also section «Suitable harnesses».



Caution: To keep good manoeuvrability make sure to fly your ALPHA 6 with enough airspeed while turning in thermals - not too much outside brake.


 **Tip:** If a brake line were to break you can steer your ALPHA 6 with the rear C-risers if necessary.


Accelerated flight


The ALPHA 6 canopy remains very stable even when accelerated. At their upper speed range however, paragliders fly at a lower angle of attack, and are generally considered to be less structurally stable at high speed. Because of the higher forces and energy, collapses at high speed are more dynamic. See also section “Collapses”.

When encountering strong turbulence while accelerated you should first release the speedbar completely before applying the brake necessary to stabilise the wing. The high stability of the ALPHA 6 does allow you to fly through turbulence while accelerated. When doing this, active speed system should be used, adjusting angle of attack and controlling pitch attitude by using speedbar instead of brakes. Pitch disturbances can then be reduced to a minimum, and better gliding performance attained. See also section “Adjusting the Speed system”.

- When the angle of attack increases (e.g. wing goes back meeting a thermal) the speedbar should be briefly but strongly pushed.
- If the angle of attack reduces (e.g. wing shoots forward) the speedbar should be released.

 **Caution:** Even though the ALPHA 6 is stable in accelerated flight you should only use as much speedbar as you feel happy with.

 **Tip:** Take care not to use speedbar and brake at the same time, otherwise you will get into the worst possible gliding situation, to no advantage.

 **Tip:** For best gliding always choose a speed that takes into account actual headwind, sink rate and expected quality of next climb.

Collapses

Asymmetric collapse of the wing

The ALPHA 6 has a very stiff and stable canopy. With an active flying technique collapses can be almost completely prevented in normal flying conditions.

If the glider does, however, suffer a side collapse at trim speed, it will respond to a collapse of more than 50% of the whole wing with moderate turning, allowing heading to be easily held with light counter-steering. Normally, the wing will reopen without pilot action.

Due to higher aerodynamic forces during accelerated flight the glider will respond to a side collapse with more energy. But the turning tendency in fully accelerated flight is unspectacular and slow.

If a collapse is slow to reopen, a deep, fast but brief pull on the folded side brake will help. Here it is important to completely release the brake again to let the glider keep its flying speed. Be careful with the brake on the open side, and only apply enough to keep straight – so as not to stall the wing. This side is providing the lift necessary to keep the glider flying under control.


Poorly flown wingovers can cause a wingtip to fold inwards from the side, causing it to catch in the lines and create a cravat. Due to the high drag they produce cravats can lead to strong turning (spiralling). Prevent this from developing by using just enough (but no more) outside brake. Then open the cravated wingtip by pulling the orange stabilo line. Clearing a cravat can be also done more quickly by 'pumping'. Apply 75% of brake on the affected side within a maximum of two seconds, then release immediately.

Symmetric collapse (frontstall)

After a spontaneous or a deliberate front collapse using all A-risers the airflow breaks away from the profile and the canopy will pitch back. The pilot will soon swing back underneath. Wait, without applying brake, until the wing is again above you and returns to normal flight. After a big collapse reopening may be delayed, but do not forcefully encourage reopening by the use of excessive brake, because of the risk of a fullstall.

Rapid descents

For quick and efficient ways of getting down the ADVANCE test team recommend big ears (with or without speed bar) or the spiral dive – the choice depends on the situation.


 **Tip:** Fast descents should be practised now and then in quiet conditions – so they won't become emergencies when you need them.


Symmetrical collapsing of the wingtips (big ears)


The ALPHA 6 has split A-risers, which make applying big ears easy. The outer, narrower A-risers with a red covered line are separated specially for this. To do this manoeuvre pull both of these narrower, outer risers. This will fold the wingtips in, and you can hold them there easily.

To reopen release the risers; the ALPHA 6 wingtips then open themselves thanks to the high internal wing pressure.

Sink rate can be further increased by using the speedbar when the ears are folded. Depending on the situation the glider can be steered using weight shift.

 **Info:** Big ears is also possible using two lines (per side) with the ALPHA 6. Here it is important that the glider must then be accelerated as well, and the trailing edge must not be braked.

 **Caution:** Do not fly spirals or sharp changes of direction with big ears applied; the increased loading carried by fewer lines can damage the structure.

 **Tip:** If you want to lose height as quickly as possible and fly away from a problem area at the same time we recommend the following: apply big ears and use as much speedbar as conditions allow.

Spiral dive

For the most comfortable way of doing this we recommend a neutral sitting position without active weight shift, and a shoulder-width carabiner distance (approx 45 cm).

Enter the spiral by progressively pulling one brake. Your head and field of view should be directed in the turn direction. As the angle of bank increases so will the rate of turn, airspeed and centrifugal force, which makes the pilot feel heavier.

The behaviour of the spiralling paraglider can be separated into two phases: in the beginning the glider makes a normal turn which progressively tightens, with increasing angle of bank. In the second phase the paraglider engages its spiral mode. This means that the wing dives forward and assumes a more vertical flightpath. During this phase of the manoeuvre try to keep a neutral sitting position and give way to the centrifugal force – your body will be pulled to the outside of the turn.

To recover keep the neutral sitting position and progressively release the inside brake. Your body weight will be somewhat tipped to the outside. While coming out of a spiral dive of high vertical and rotational speeds some assistance with outside brake is essential. Careful releasing of the inside brake will prevent the wing from recovering too quickly, thus pitching back excessively before diving in front - if the

turn stops with too much speed remaining. Make sure that you start the recovery with plenty of height above the ground. Generally speaking you should allow the same amount of time to recover as it took to enter the manoeuvre, but remember that the vertical speed will be higher, and much more height will be used!

The ALPHA 6 comes out of a steep spiral dive by itself if a neutral sitting position is maintained. Active weight shift to the inside of the turn can lead to stronger acceleration and the glider may show less desire to recover by itself.



Caution: The ALPHA 6 was tested in accordance with the latest certification requirements. In a neutral sitting position, and after releasing the inside brake, a spiral dive of up to 14 m/s sink rate recovers by itself. Spirals of higher sink rates can remain in a stable spiral if weight shift is applied to the inside of the turn. Weight shift to the outside or pulling outside brake is sufficient to recover from a high speed spiral.



Caution: The ALPHA 6 is certified for harnesses in group GH (without rigid cross-bracing). Group GX harnesses (with cross-bracing) or those with very low hang points could drastically alter the flying behaviour in the spiral dive. See section «Suitable harnesses».



Caution: Do not fly spiral dives or aggressive changes of direction with big ears applied: the raised wing loading carried by fewer lines can damage the glider.

B-Stall


The whole paraglider structure and its profile shape would be severely strained by a B-stall. We recommend that you do not carry out B-stalls on a regular basis. If you do fly a B-stall the recovery requires that the B-lines are completely released without hesitation, so that normal flight is resumed within 2 seconds. B-stall is difficult for light pilots because of the high force required.

Stalling

One-sided stall (spin)

When circling tightly in a thermal the ALPHA 6 indicates early and clearly, by strongly increasing brake load, the risk of a stall. However, if a wing reaches its stall point you will feel a marked reduction of brake load on the inside of the turn. If this happens you must immediately release the brake lines, so that the ALPHA 6 can return to normal flight by itself.

If one wing does stall the paraglider will go into a spin/negative rotation (negative means a wing going backwards). The ALPHA 6 will react dynamically, but will still be manageable by an untrained pilot. Even so – depending on the situation from which the paraglider is allowed to fly again – the reaction can be quite vigorous (shooting forward with a raised risk of collapse). This shooting forward can be restrained by well-judged braking. Normal flight can then be resumed without a further collapse.


 **Tip:** Basically, in all out-of-control flight situations, but especially the onset of a spin, you should immediately release both brakes fully – hands up!

Fullstall

The ALPHA 6 quickly responds to a steering demand, but the available brake travel is very long, and the brake loading gets very high before the stall point. This gives the pilot a large safety margin.

Entry into a fullstall is achieved by progressively and symmetrically pulling down both brake lines. Forward speed reduces. Airflow and wind noise reduce. After reaching minimum speed the paraglider first goes into a brief phase of deep stall. Then further brake will cause complete airflow breakaway, and the wing will fall back in fullstall. The ALPHA 6 has a strong desire to fly again, but is easy to hold in the stall. A brake wrap makes sense when flying a fullstall.

To recover, the canopy has to be pre-inflated. To do this the brakes should, at first, be released slowly and symmetrically, and only fully released when pre-inflation is complete. The ALPHA 6 then flies away relatively gently, without shooting forward too much.

 **Tip:** Basically, in all out-of-control flight situations, you should immediately release both brakes fully – hands up!


Deep Stall


It has not been possible to establish stable deep stall by using brakes or a slow recovery from B-Stall.


However, in rain or when the canopy is wet the ALPHA 6, like every other paraglider, becomes more prone to deep stall. If the wing does go into deep stall, recovery should be made by using the speed system, exclusively. See also section «Flying with a wet paraglider».


Landing

Always make a proper landing circuit with a clearly defined final approach. As the ground approaches progressively increase brake to level the flight-path, before applying full brake to completely arrest the forward speed.

 **Caution:** Steep turn reversals lead to strong swinging of the pilot, and should not be done near the ground.

 **Caution:** Braking will reduce your speed and increase your sink rate, but it will certainly seriously restrict your ability to manoeuvre.

 **Caution:** Getting below minimum speed leads to stalling: this should unquestionably be avoided when top landing, and on final approach.

 **Caution:** Never let your glider fall to the ground on its leading edge. The overpressure so caused inside the wing can rip the cell walls and damage the leading edge.

Flying with a wet paraglider (risk of deep stall)

Flying with a wet glider creates a risk of deep stall. Deep stall is often the result of a combination of factors. The weight of the wet canopy goes up, and this increased weight increases the angle of attack, which always puts the glider nearer the deep stall limit. Added to this, water drops on the top surface have a detrimental effect on the laminar flow of the boundary layer near the leading edge, which distinctly reduces the maximum lift coefficient. If the wet glider is also being flown at its lower weight limit there is a further small effect of increasing the angle of attack, as well as there being a lower airspeed because of the reduced wing loading.

In order to avoid the risk of deep stall with a wet glider, the wing should be braked as little as possible, and big ears not used at all. As a further preventative measure apply moderate (25-40%) speed bar. These actions have a small effect in reducing the angle of attack. If the wet glider does go into deep stall you should recover by using the speed bar only. See also section «Deep stall».

Winching

The ALPHA 6 is suitable for winch launching. When taking off in windless conditions, ensure that the paraglider is laid out in banana or even wedge shape to make sure the centre inflates before the wingtips (avoid risk of rosetting).

Winch launch is only permitted if:

- the pilot has completed a tow training course ((only Germany/DHV);
- the winch system is certified for use with paragliders;
- the winch operator has been fully trained in how to winch paragliders.

Paramotoring

The ALPHA 6 is certified for paramotoring. You can find the paramotoring appendix to the ALPHA 6 manual on www.advance.ch under Downloads.

Acrobatics

While developing the ALPHA 6 attention was concentrated on simple and safe use, and similarly-natured flying behaviour.

Assuming adequate pilot ability and correct technique, the ALPHA 6 lends itself well to flying such manoeuvres as wingovers, SAT, helicopter and asymmetric spiral. The wing was tested to the usual 8g load factor, but is not specially strengthened for industrial strength acro.

Be aware that dynamic manoeuvres put greater loading on the structure and can shorten the glider's life. This means that a regular check of the paraglider is essential for your safety. In addition there will be the special requirements of your country to be observed.



Maintenance, repairs and care

Packing

Gather your ALPHA 6 rib on rib, so that the plastic rods at the leading edge lie as flat as possible on one another, all at the same height. This will prolong your ALPHA 6's life and keep its fast and excellent filling qualities at takeoff. You should randomly offset your packing centreline so that the final chordwise fold is not always along the same cell. Only store your dry paraglider in a dry and dark place.

Care and maintenance

Ultraviolet light, heat, humidity, sea water, aggressive cleaning agents, unsuitable storing and physical abuse (dragging across the ground) speed up the ageing process.

The life of a paraglider can be extended significantly by observing the following advice:

- Allow a wet or damp glider to dry by leaving it completely unpacked at room temperature, or outside in the shade.
- If the glider gets wet with salt (sea) water rinse it thoroughly with fresh water.
- Clean the glider only with fresh water, and a little neutral soap if necessary. Do not use solvents under any circumstances.
- If the glider has been subjected to increased stress (such as a tree

landing) have it examined by an expert.

- Regularly remove sand, leaves, stones and snow from the cells. Openings with Velcro closures are provided at the wing tips for this purpose.
- Do not leave the glider out in the sun unnecessarily before and after flight (UV light).
- Do not subject the packed glider to excessive temperature fluctuations, and do ensure adequate air circulation to prevent condensation forming.
- Do not drag the glider across the ground.
- When landing, make sure that the canopy does not fall on its leading edge.

Taking Care

To ensure a long life it is important that you try not to allow your wing to fall on its leading edge after landing – whenever possible. The fabric and sewing at the leading edge can be damaged by the friction and strain so caused, but also there's the risk that the ribs inside could be ripped by the sudden increase in air pressure.

Check

A new ADVANCE paraglider must be given a check every 24 months (2 years). With intensive use (> 150 flying hours per year, or especially demanding use) an annual check is needed, after the first check. When a check is carried out the condition of all materials is assessed in accordance with strict guidelines, and tested with great care. Finally the overall condition of the glider is rated and recorded in a test report. You can find additional information about the check in this manual in the section «Service», or at www.advance.ch.

The general check procedure for paragliders is a constituent part of the ALPHA 6 manual. This manual also contains basic technical information and the line lengths of the glider.

Repairs

As a general rule you should not attempt to repair a paraglider yourself. The various seams and lines are made with great precision, and, for this reason, only the manufacturer or an authorised service centre may fit identical replacement parts or replace entire cells. Exceptions to this rule are the replacement of lines and the repair of the small tears or holes in the fabric that may be glued with the self-adhesive ripstop included in the repair kit. After a repair, or the replacement of a line, the glider must always be opened out and checked on the ground before the next flight.

Spare parts such as lines, quicklinks and repair materials for the ALPHA 6 can be obtained from ADVANCE or an ADVANCE Service Centre and/or dealer.

Disposal

Environmental protection plays an important role in the selection of materials and the manufacture of an ADVANCE product. We use only non-hazardous materials that are subjected to continuous quality and environmental impact assessments. When your paraglider reaches the end of its useful life in a number of years time, please remove all metal parts and dispose of the lines, canopy and risers in a waste incineration plant.

Technical details

ALPHA 6		22	24	26	28	31
Area flat	m ²	22.1	24	26.1	28.5	31.9
Area projected	m ²	18.9	20.6	22.3	24.4	27.3
Recommended Takeoff weight ²	kg	50-70	60-80	70-95	85-110	100-130
Increased takeoff weight ²	kg	70-85	80-95	95-110	110-125	130-145
Glider weight		4.3	4.55	4.75	5.25	5.75
Aspect ratio flat		4.8	4.8	4.8	4.8	4.8
Aspect ratio projected		3.6	3.6	3.6	3.6	3.6
Span flat	m	10.3	10.8	11.2	11.7	12.4
Span projected	m	8.2	8.6	8.9	9.3	9.9
Trim speed ¹	km/h	38 +/-1	38 +/-1	38 +/-1	38 +/-1	38 +/-1
Max. speed ¹	km/h	48+/-1	48+/-1	48+/-1	48+/-1	48+/-1
Certification		EN/LTF A	EN/LTF A	EN/LTF A	EN/LTF A	EN/LTF A
Number of cells		39	39	39	39	39
Number of risers		3+1	3+1	3+1	3+1	3+1
Maximum chord	m	2.65	2.77	2.88	3.01	3.19
Riser lengths	cm	47.5	47.5	50.0	51.5	53.0
Max. accelerate travel	cm	15	15	16	17	18
Max. line lengths incl. risers	m	6.61	6.88	7.18	7.50	7.91
Trims		none	none	none	none	none
Other adjustable / removable / variable devices		none	none	none	none	none

¹ Values depending on wing loading, harness/pilot and glider size

² Pilot, wing, equipment

Materials used

We routinely inspect and test our materials many times over. Like all ADVANCE products the ALPHA 6 is designed and produced as a result of the latest developments and contemporary knowledge. We have chosen all the materials very carefully, under conditions of the strictest quality control.

Leading edge

Skytex 38, 9017 E25

Upper surface

Skytex 38, 9017 E25

Lower surface

Skytex 38, 9017 E25

Ribs

Skytex 40, 9017 E29

Miniribs

Skytex 40, 9017 E29

Lines:

Edelrid Technora (Aramid) 6843, 340/240/200/160, covered, 2.4 mm / 2.1 mm / 1.9 mm / 1.5 mm (base lines)

Edelrid Technora (Aramid), 6843, 120, covered, 1.4 mm (middle galleries)

Liros Dynema, DSL 70, covered, 0.95 mm (upper galleries)

Liros Dynema, DSL 70 / DFL 115, covered, 0.95 / 1.3 mm (brake lines)

Liros Dynema, DFL 115, covered, 1.3 mm (upper main brake lines)

Edelrid Dyneema, 7850, 240, covered 1,9 mm (brake main lines)

Risers:

Polyester 22 mm – 1100 kg

Riser quicklinks:

Maillon Rapide, stainless, 3.5 mm – 750 kg

Sewing thread:

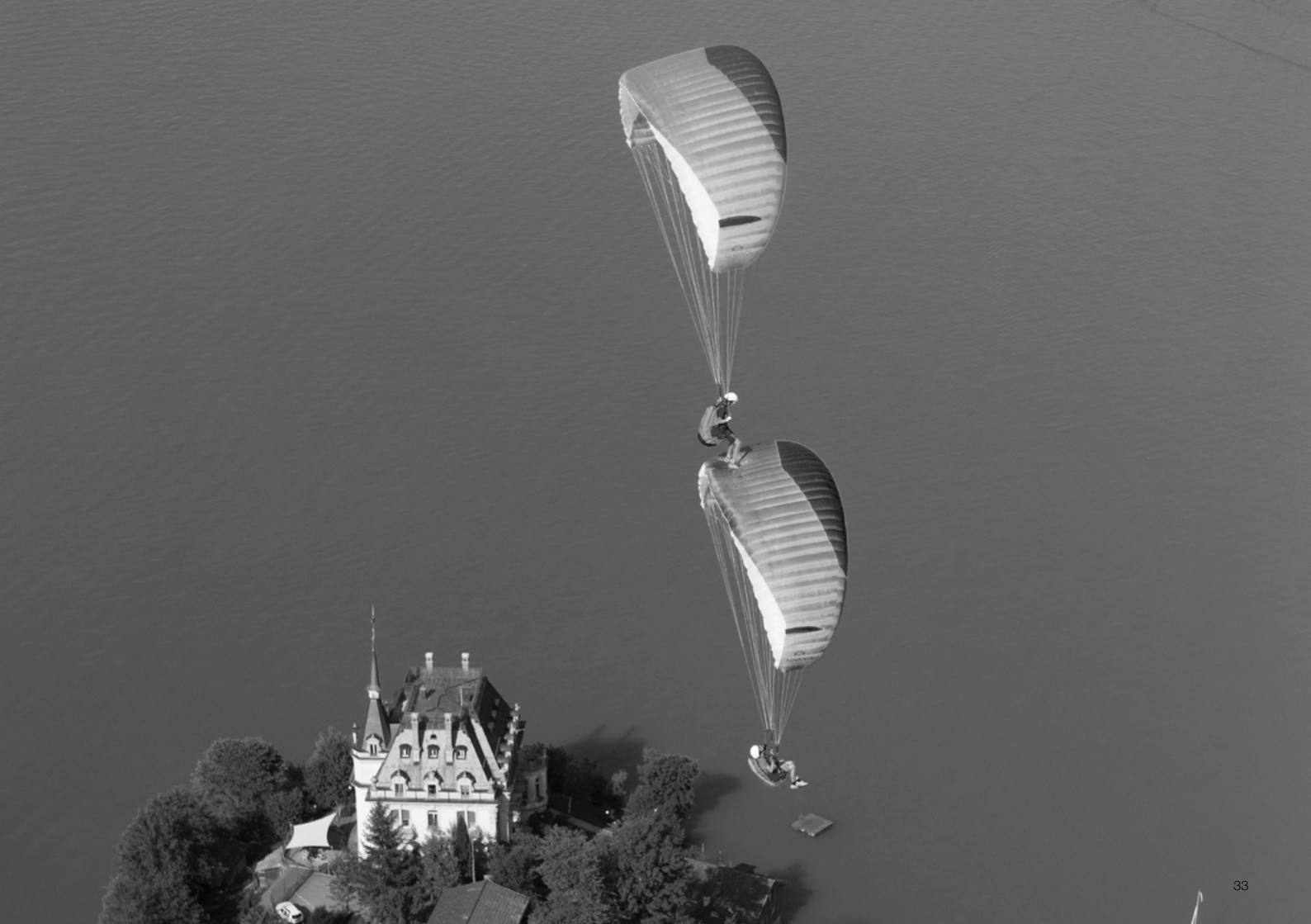
Polyester

Certification

The ALPHA 6 has EN and LTF certification. The test reports can be downloaded from www.advance.ch.

Certification ratings can only provide limited information about a paraglider's flying behaviour in thermally active and turbulent air. The certification grading is based primarily on provoked extreme flight manoeuvres in calm air.

During the development of an ADVANCE paraglider, the emphasis is first and foremost on flying behaviour and handling, and not exclusively on the certification test. The result is a well-rounded product with the familiar ADVANCE handling. Nevertheless, the certification rating occupies a significant proportion of the specifications that have to be met.



Service

ADVANCE Service Centres

ADVANCE operates two company-owned Service Centres that carry out checks and repairs of all types. The workshops based in Switzerland and France are official maintenance operations, certified by the German Hanggliding and Paragliding Federation (DHV), which has many years' experience and in-depth product-specific expertise. The ADVANCE worldwide service network includes other authorised service centres which provide the same services. All service facilities use original ADVANCE materials exclusively. You can find all the information about checks and repairs, and the relevant addresses at www.advance.ch.

The ADVANCE website

At www.advance.ch you will find detailed information about ADVANCE and its products, as well as useful addresses which you can contact if you have any questions.

Among the things you will be able to do on the website are:

- complete the warranty card online up to 10 days after purchasing the glider, enabling you to enjoy the full benefits of the ADVANCE warranty.
- find out about new safety-related knowledge and advice concerning ADVANCE products

- download an application form in PDF format which you can use when sending your glider in for a check at ADVANCE.
- find an answer to a burning question among the FAQs (Frequently Asked Questions)
- subscribe to the ADVANCE Newsletter so that you will be regularly informed by e-mail about news and products.

It is well worth visiting the ADVANCE website regularly because the range of services offered is continuously being expanded.

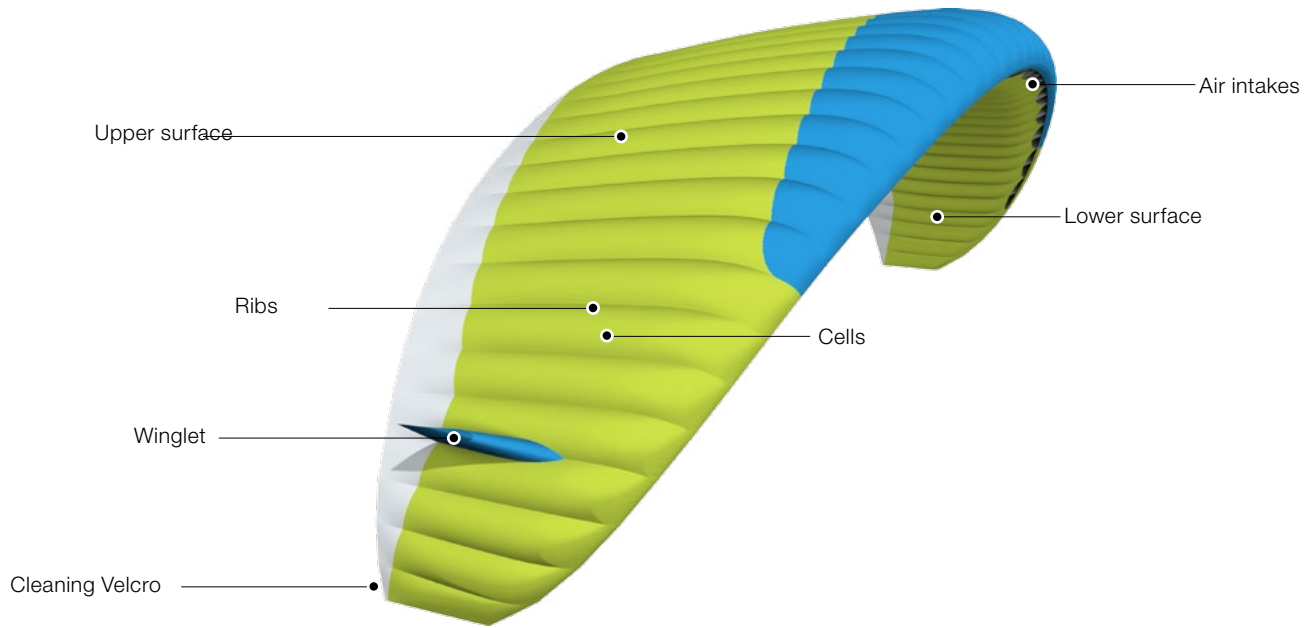
Warranty

In order to enjoy the full benefits of the ADVANCE warranty, you are requested to complete the relevant form on the website in the «Warranty» section within 10 days of purchase.

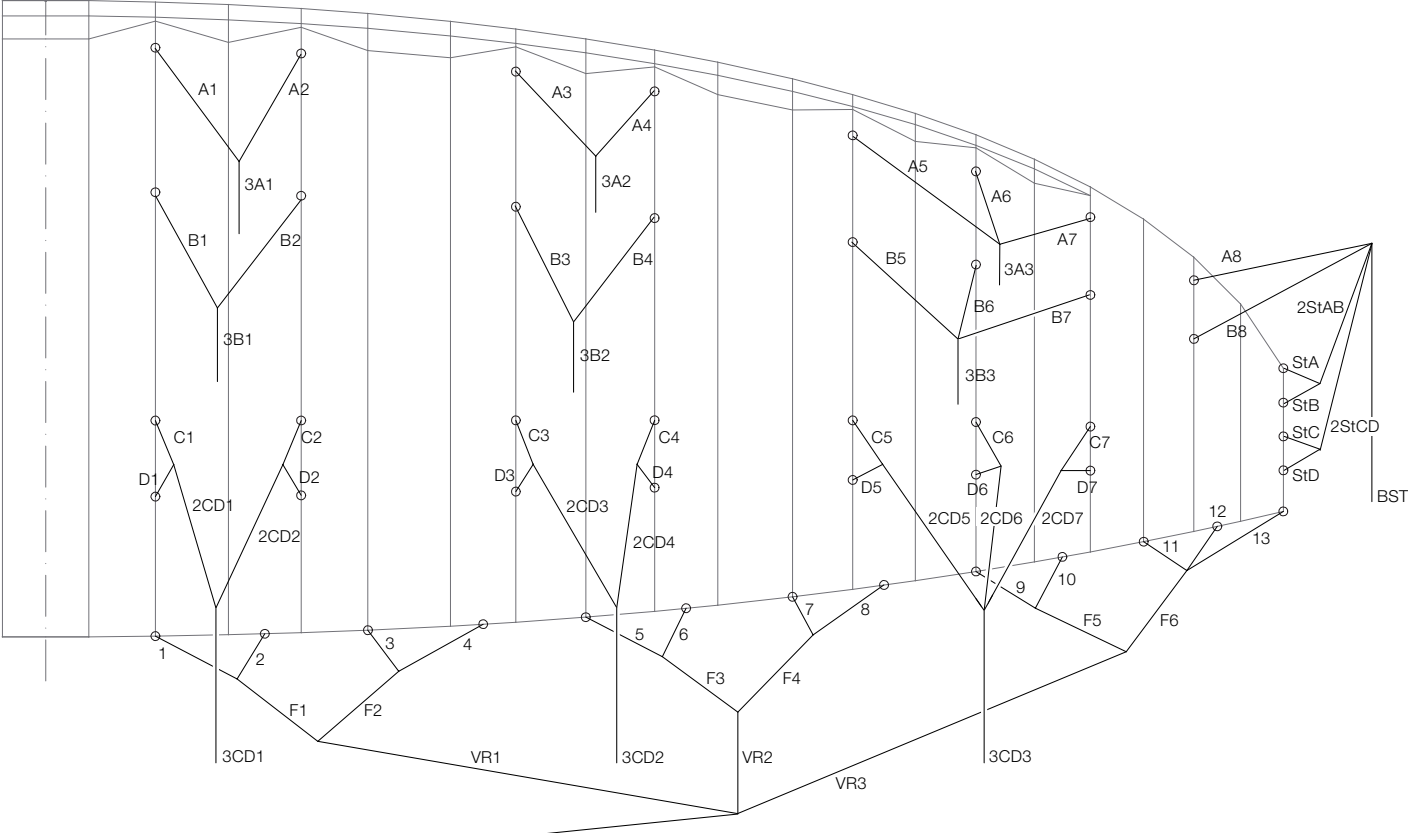
As part of the ADVANCE warranty, we undertake to rectify any defects in our products that are attributable to manufacturing faults. In order for a warranty claim to be made, ADVANCE must be notified immediately on discovery of a defect, and the defective product sent in for inspection. The manufacturer will then decide how a possible manufacturing fault is to be rectified (repair, replacement of parts or replacement of the product). This warranty is valid for three years from the date of purchase of the product. Warranty and Service Intervals begin from the date of the glider's first flight, recorded on the identification

plate. If no date is evident the applicable date is that on which the glider was transferred from ADVANCE to the ADVANCE dealer. The ADVANCE warranty does not cover any other claim. Claims in respect of damage resulting from careless or incorrect use of the product (e.g. inadequate maintenance, unsuitable storage, overloading, exposure to extreme temperatures, etc.) are expressly excluded. The same applies to damage attributable to an accident or normal wear and tear.

Wing parts

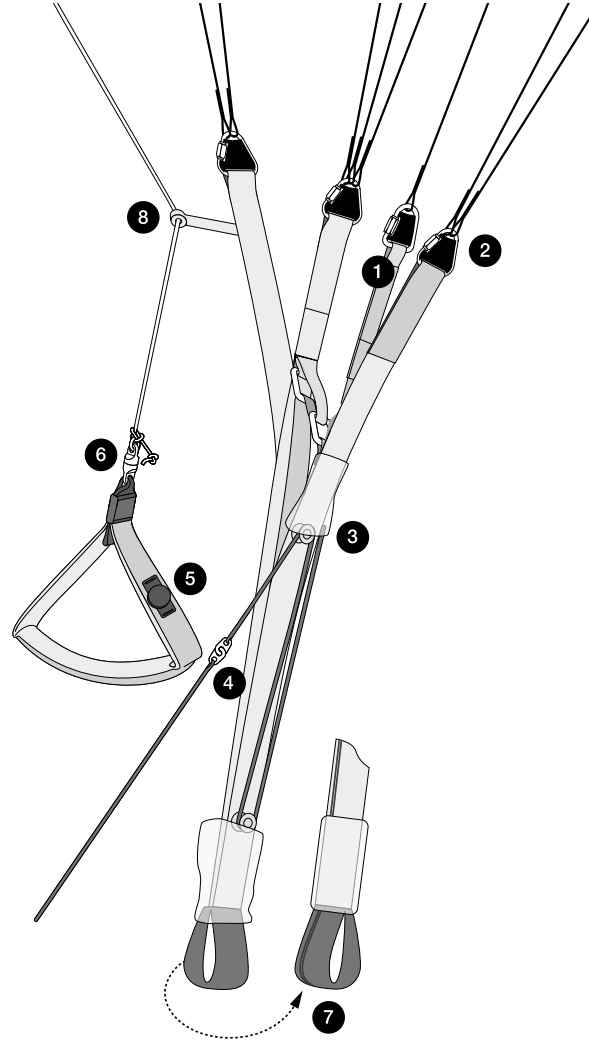


Line plan



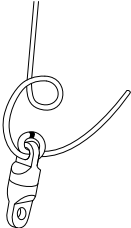
Risers

1. Big ears system with «Quick Snap»
2. Quicklinks and clips
3. Speed system pulleys
4. Brummel hooks
5. Magnet clips
6. Swivel
7. Suspension loop with «Easy Connect System» marks
8. Brake ring



Bowline

Step 1



Step 2



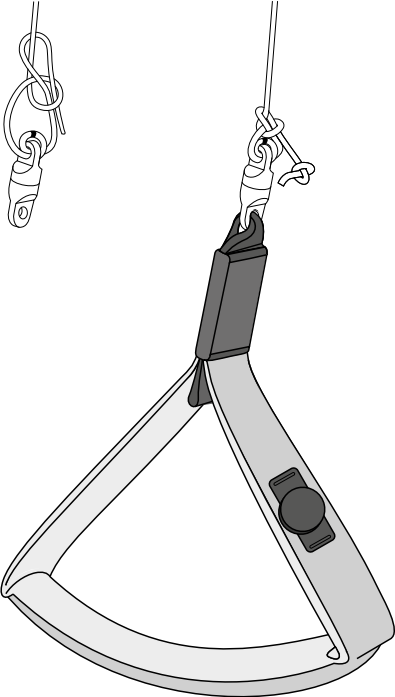
Step 3



Step 4



Step 5





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ADVANCE ALPHA⁶ MOTOR

User manual supplement Edition 1 / 12_2015

The ALPHA 6 Paramotor

In this supplement to the ADVANCE ALPHA 6 manual you will find everything you need to know for flying this glider with a motor.


Range of use

Because of its good takeoff qualities, high stability, damped behaviour and compactness the ALPHA 6 is ideally suitable for paramotoring. Hybrid-Risers, which can also be used for flight without the motor, are recommended.

Hybrid-Risers

The Hybrid-Risers are fitted with trimmers. These can be used for both counteracting the turning effect of the motor and adjusting the flying speed. For flight without a motor the trimmers must be disabled by hooking them into the main carabiners. The wing then keep its paraglider certification.

The Hybrid-Risers have a speed system for use when flying without the motor. Illustrations of the Hybrid-Risers can be found on pages 5 and 6.

 **Caution:** You are advised not to use the trimmers and speed system at the same time.


Flight characteristics

This section is added to “Flight characteristics” in the ALPHA 6 manual, which also basically applies to paramotoring.

The flight characteristics of the ALPHA 6 are virtually identical when flying with or without a motor, especially at the same wing loading. In the expanded weight ranges for paramotoring (see table) manoeuvring will be slightly more dynamic because of the higher wing loading.

Similarly with trims open manoeuvres will be a little more dynamic because of the lower angle of attack. Even though the ALPHA 6 is very stable and compact the trimmers should stay closed when flying through turbulent air.

Thanks to the ALPHA 6’s good takeoff behaviour the trims don’t have to be opened when taking off with light wind. The wing pulls up more easily if the trimmers are opened by about 3 cm (as far as the grey marks), but you should then expect a longer takeoff run.

 **Caution:** If you fly the ALPHA 6 as a paramotor in its expanded weight range the trim speed will be higher. Lift off and landing speeds will also be higher, and this is clearly noticeable in light wind.

Compatible motors

The certification test flights are carried out with a commercially available motor. Provided that maximum engine performance figures are not exceeded (see table), other motor models can be expected to produce similar handling behaviour.

Certification

Provided that it is equipped with the Hybrid-Risers appropriate to the ALPHA 6 has EN / LTF certification as a paraglider. Sizes 24 to 31 have DGAC certification for motor flying. Relevant certified weight ranges are shown in the adjoining table.



Info: ALPHA 6 EN / LTF certification for flight without motor but with the Hybrid-Risers is only valid when the lower hangpoints are used and the trimmers stowed i.e. hung up.

The certification requirements can be seen on www.advance.ch/alpha.

Technical Data

ALPHA 6 with Hybrid-Risers		24	26	28	31
Takeoff weight paramotor ¹	kg	60 – 130	70 – 140	85 – 150	100 – 150
Length of risers (upper hang point)	cm	40.5	43	44.5	46
Length of risers (lower hang point)	cm	48	50	51.5	53
Trimmer travel	cm	8.0	9.0	10.0	11.0

¹ Pilot, wing, equipment with engine

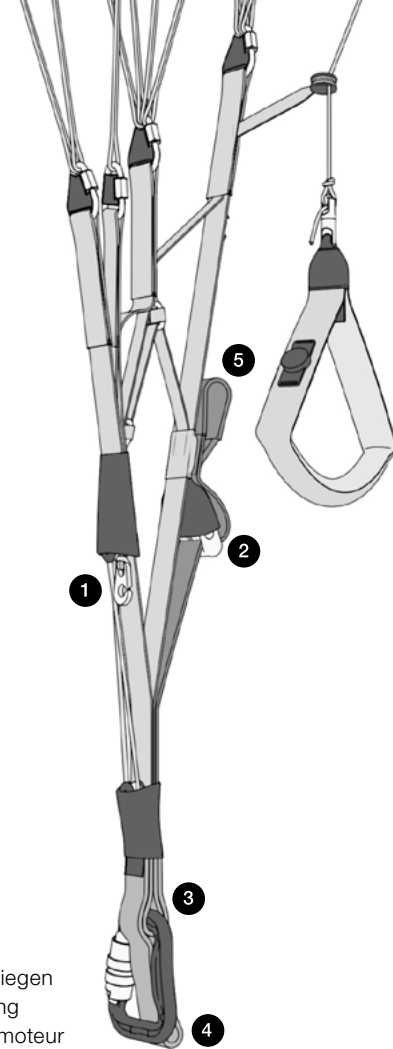
Hybrid-Tragegurten

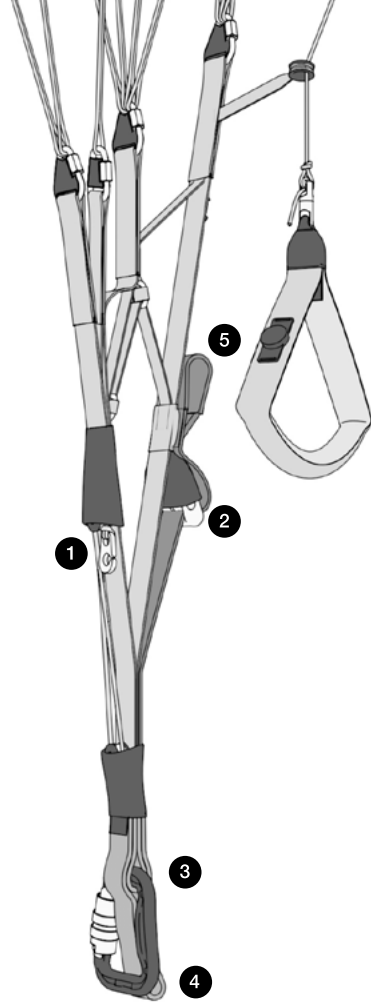
Hybrid-Risers

Elévateurs hybrides

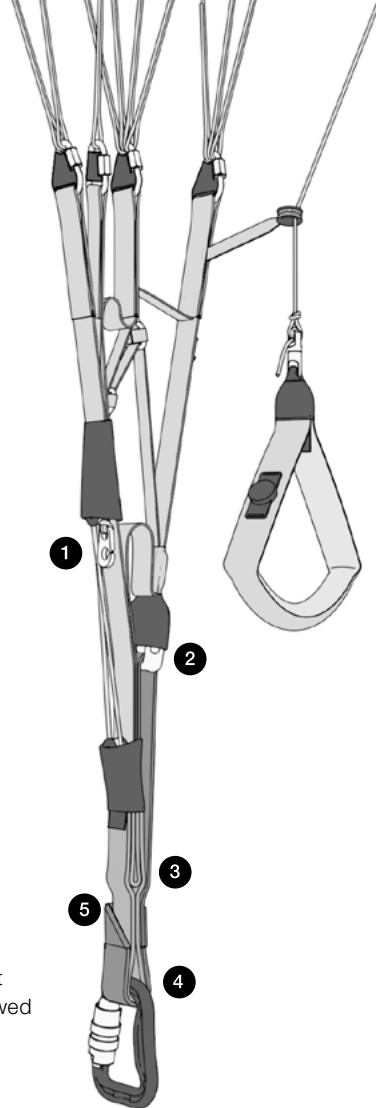
1. Fussbeschleuniger
Speed system
Accélérateur à pieds
2. Trimmer
Trimmer
Trim
3. Oberer Einhängpunkt
Upper hang point
Point d'ancrage supérieur
4. Haupteinhängpunkt
Lower hang point
Point d'ancrage inférieur
5. Trimmer-Schleife zur Fixierung
Stowable trimmer loops
Boucle de réglage et de verrouillage

Zwei Einhängpunkte zum Motorfliegen
Two hangpoints for paramotor flying
Deux point d'attache pour le paramoteur





Trimmer offen
 Trimmers in use
 Trim déverrouillé



Trimmer fixiert
 Trimmers stowed
 Trim verrouillé

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