



ADVANCEZETA

Operating manual  
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# Thank you for flying ADVANCE

Our sincere thanks to you for deciding on a ZETA - another ADVANCE quality product. We hope that you will enjoy many rewarding hours in the air with it.

This Operating Manual is an important companion to the paraglider. In it there are instructions and important information about safety, care and maintenance. We therefore recommend that you carefully read through the manual before your first flight.

On [www.advance.ch](http://www.advance.ch) you will find the latest version of this manual and more information. Any new safety-related knowledge about the product will be published here on the website. Please contact your dealer or ADVANCE direct if you have any questions or problems.

Now we wish you a lot of fun with your ZETA and, as always, “happy landings”.

Team ADVANCE

# About ADVANCE

ADVANCE is a worldwide leading paraglider manufacturer based in Switzerland. Since its founding in 1988 the company has continued to follow its own policies and ideas in both development and production. The result is fully-finished products with distinctive characteristics.

The team of experts behind the ADVANCE brand share both the passion for and confidence in their ADVANCE products. At home in the air themselves, they bring valuable personal experience and dedication to the workplace.

Thorough checking of the production process and supervision of the working practices in ADVANCE's own factory in Vietnam guarantee high quality work. A long-standing relationship with cloth and line manufacturers means that ADVANCE know-how finds its way directly into the development of new materials.

ADVANCE place great importance on after-sales service, and have a well-developed worldwide service network. A continuous exchange of experience with customers keeps new knowledge flowing in, which has an influence on ADVANCE products – and so the "Circle of Service" is completed.

# The ZETA

The ZETA is the most precise and dynamic ADVANCE wing. In fact it specialises in precision and performance. This EN/LTF certified free-style paraglider demonstrates a high level of passive safety and its pilot stays in charge in any situation. A high trim speed makes the ZETA an excellent soarer, and thermal flying is fun as well.

## **Other important details**

### **ADVANCE Standards**

ADVANCE pays a lot of attention to small details. Sewn-in tension straps improve the wing's stability, and the distinctive winglets reduce induced drag (vortex-effect). Velcro closures at the wingtips make it easy to remove debris like sand and snow from the glider. The ZETA is made from high quality fabrics, and the ball bearings in the speed system pulleys ensure minimal rolling resistance. Like all ADVANCE models the ZETA comes with swivels on the brake lines and magnet clips for the brake handles.

Aluminium acro bars are available as an option.

# Pilot requirements

The ZETA is intended for freestyle pilots; in other words pilots who have the necessary feeling for a wing, who fly actively and can anticipate and prevent trouble – and have a good grasp of the normal fast descent techniques.

## **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 paraglider used.

Wearing an adequate helmet, suitable boots and clothing, and the carrying of an emergency parachute 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 their participation 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.



Important: The legal conditions regarding acro flying and extreme flight attitudes should be observed.

# Using the paraglider

## **Delivery**

Every ADVANCE paraglider has to be flown by the dealer before delivery to check for correct settings and trim. The dealer finally enters the date of the first flight on the type placard fastened on a rib at the centre of the wing. This entry together with your completed warranty form ensures that deficiencies in the product, due the manufacturer, are covered by the ADVANCE warranty. See 'Warranty' in the "Service" section.

ZETA delivery includes a COMFORTPACK rucksack, an inner bag, a compression strap, a repair kit, speed lines with speedbar, a mini-windsock in the glider colours and a «Getting Started» booklet.

## **Basic settings**

At delivery the basic set up of the ZETA will be the original trim situation that the ADVANCE test team found to be best. Certification was also gained in this condition. Any alterations or changes to the paraglider, such as altering the line lengths or fitting different risers or quicklinks, will result in a loss of the glider's certification. See section "Certification".

## **Adjusting the brake lines**

The length of the brake lines has been set at the factory so that, with hands fully up, the trailing edge remains unbraked in accelerated flight – (no crease in the wing).

If the brake line length does have to be reset there should be 8 cm of initial free brake line movement between the brakes fully released position in unaccelerated flight, and that point where the lines first affect the trailing edge. We recommend a bowline knot for attaching the handles. See illustration in the appendix.

## **Setting up the speed system**

The ZETA has a speed system (speedbar), which provides an additional 13 km/h above trim speed. The front risers are shortened in accelerated flight and this reduces the wing's angle of attack. The ZETA speed system is designed so that the wing profile shape is maintained in accelerated flight. This, of course, means that the wing's good qualities are kept at high speed.

Set up the ZETA speed system correctly before the first flight. Make sure that the speed lines run freely through the pulleys on the harness. Connect the lines to the risers with the Brummel hooks. Finally check



that your adjustment means that the full range of the speed system can be used. To do this it is best to hang the harness up, sit in it, connect the risers and speed lines, and have someone else hold the risers up.

The ZETA speed system is arranged so that the profile shape of the wing is fully retained over the angle-of-attack range of the speed system. This maintains the beneficial qualities of the profile at high speeds.



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

### **Suitable harnesses**

Basically the ZETA can be flown with any harness that does not have rigid cross bracing (see section “Certification”).

The chosen harness should ideally have a carabiner distance of ca. 45 cm and a support height of between 40 and 48 cm.

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

### **Weight range**

The weight range is given in the section «Technical data». The figures given there represent the 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.).

# 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 ZETA's handling qualities, from the very beginning.

## 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 ZETA takeoff behaviour is very smooth and easy for both forward and reverse takeoffs. The canopy inflates quickly and rises progressively, without hanging back or shooting in front.

Because the ZETA rises very easily it is very important to match the pull-up impulse to the conditions. This means:

- In a lot of wind and/or on a steep slope the ZETA needs little or almost no pull-up impulse.
- In calm conditions and/or flat land a relaxed pull-up makes sense.

## Takeoff in light wind (forward takeoff)

The ZETA 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 correcting should only be done by decisive going-under-the-wing, without using the brakes. After any necessary correcting and a satisfactory visual check a few determined steps with good leaning forward will achieve lift off, even in little wind.

Info: A ZETA takeoff is exceptionally easy to do. Match your efforts (as described in the section "Takeoff") to the wind conditions and takeoff slope.

## Takeoff in stronger wind (reverse takeoff)

The reverse takeoff is mainly recommended for stronger winds. During the pull-up you should walk towards the ZETA necessary. Turning round and taking off with the ZETA 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 ZETA's characteristics very well, and try out takeoffs, stalling, shoo-

ting forward tendency and collapses – while remaining safely on the ground. The ADVANCE test team have a motto: one hour ground training is worth 10 high flights.

N.B: Ground handling practice can increase wear on your glider.

Info: The ZETA is very easy to take off. Just as for the forward takeoff you should also suit your pull-up impulse to the wind and slope when making a reverse pull-up (as described in section "Takeoff").

## **Normal flight**

In calm air the ZETA 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 (flying into a thermal; wing swings back) the brake lines should be temporarily released fully, until the glider returns to its overhead position.
- When the angle of attack reduces (glider dives forwards, pilot swings back) the wing should briefly be braked more.

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

## **Turning flight**

The ZETA 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, stabilised or reduced by the appropriate pull on the brake line.

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 and, in particular, keep a check on the rate of turn. Too much brake on the outside wing will slow the turn and the air-speed down, and lose the glider's good steering qualities.

A harness that is matched to the ZETA 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 ZETA with enough airspeed while turning in thermals – not too much outside brake.

Tip: If a brake line breaks you can steer the ZETA using the C risers.

### **Accelerated flight**

The ZETA wing remains extremely stable even in accelerated flight. However, paragliders operate at a lower angle of attack while flying at their higher speeds, and the degree of stability is generally reduced. The higher aerodynamic forces involved at higher airspeeds mean that a collapse can be more dynamic. See also section «Collapses».

When encountering strong turbulence while flying accelerated you should first release the speedbar completely before applying the brake necessary to stabilise the wing. The high stability of the ZETA allows light turbulence to be flown through while accelerated. While doing this active accelerating should be used, whereby the angle of attack is accommodated by using the speedbar instead of the brakes.

By doing this pitch attitude disturbances will be minimised and good gliding performance maintained.

- If the angle of attack increases (e.g. wing goes back in rising air) 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 ZETA is stable in accelerated flight you should only use as much speedbar as you feel happy with.

Tip: Make sure that you do not 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 next climb.

## **Collapses**

### **Asymmetric collapse of the wing**

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

If, however, the wing does collapse asymmetrically at trim speed the canopy will turn to the side dynamically for collapses of over 50%, but this is easily contained with light opposite braking. Normally, the wing will reopen without pilot action.

An asymmetric collapse in accelerated flight causes a more impulsive reaction because of the increased aerodynamic forces at higher air-speed. The turning behaviour is still quite manageable even following a collapse at full speed.

If a collapse is slow to reopen, a deep but fast pull on the closed side brake will help. 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.

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 rotation (spiralling). Stop an increase in rotation rate by just the correct amount of outside brake. Then open the cravated wingtip by pulling the orange stabilo line. Clearing a cravat can be also done more quickly by 'pumping'. The appropriate brake should be applied to 75% brake travel within a maximum of two seconds, and then released immediately.

### **Symmetric collapse (frontstall)**

After a spontaneous or A-riser provoked collapse the airflow breaks away from the profile and the canopy will pitch back. The pilot swings back underneath after a short delay. 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 forceably encourage reopening by the use of excessive brake, because of the risk of a fullstall.



Caution: After a very impulsively provoked front collapse in accelerated configuration (for example during SIV training) it can happen that the front of the canopy does not open by itself. Opening should be encouraged with a brief brake

impulse, achieved by pulling the brakes down to 75% within one second, then releasing them immediately.

### **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)**

To enter this manoeuvre pull both outer red marked A lines quickly down together. This will fold the wingtips in, and you can hold them there easily. To reopen release the A-lines; the ZETA wingtips then open themselves thanks to the high internal wing pressure.

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



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.



Caution: Be aware that flying with big ears brings the stall closer. Be careful with the brake lines when big ears are applied, and do not use this descent method if the wing is wet. See also section «Flying with a wet paraglider».

Tip: If you want to lose height as quickly as possible and fly away from a danger zone 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 and centrifugal force.

The behaviour of the spiralling paraglider can be separated into two phases: in the beginning the glider begins with 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 with an increase of acceleration. During this phase of the manoeuvre try to keep a neutral sitting position and give way to the centrifugal force – your body will be pushed to the outside.

Recovery from the manoeuvre is achieved by progressively releasing the inside brake. While coming out of a spiral dive with high vertical speeds and rotational rates it is essential to release the brake carefully, and/or reapply a little inside brake if necessary, so that you can prevent the wing pitching back excessively, and then diving in front. Make sure that you start the recovery with plenty of height remaining 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 sink rate will be higher!

### ***Important Safety Information***

The ZETA was developed with dynamic and precise handling in mind. This means that it is a dynamic wing that must be controlled actively. This precise and dynamic character, combined with high wing loading, requires the pilot to actively recover from the steep spiral – in every

case. The pilot must therefore apply outside weightshift, and outside brake until the rotation stops. This active recovery for the ZETA is easy to do – but it must be done.



Caution: The ZETA does not come out of a steep spiral by itself. With a neutral sitting position and no outside brake this paraglider stays in the stable spiral. Active recovery is necessary.



Caution: The ZETA 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 don't fly B-stalls on a regular basis. If the B-Stall is to be flown however, recovery must

consist of a complete and hesitation-free release of the B-risers, so that normal flight is resumed within two seconds. The B-stall is difficult for light pilots to do because of the high force required.

## **Stalling**

### **One-sided stall (spin)**

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

If a wing stalls completely the paraglider will go into a spin / negative rotation. The ZETA will react dynamically, but will still be manageable by the less experienced 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). The canopy can be arrested while shooting forward 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 one-sided stall, you should immediately release both brakes fully – hands up!

## **Fullstall**

ZETA brake effect and resistance starts early, but the brake travel is very long.

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 parachutal stall. Then further brake will cause complete airflow breakaway, and the wing will fall back in fullstall. The ZETA has a strong desire to fly again, but is easy to hold in the stall. A half wrap of the brakes is recommended to fly fullstalls.

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 ZETA flies again relatively gently, with moderate shooting forward.

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



## Deep stall

Stable parachutal stall cannot be established, whether attempted by brake or B-stall.

In rain, or if the canopy is wet, the ZETA, like all paragliders, is more vulnerable to parachutal stall. If the wet glider were to go into parachutal stall you should recover only by accelerating using the speed-bar. See also section "Flying with a wet paraglider".

## Landing

Always make a proper landing circuit with a well-planned 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, 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

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.

All these actions have a small effect in reducing the angle of attack.

Should the wet glider get into deep stall, recovery can only be achieved using the speed bar. See also section «Deep stall».

### **Winching**

The ZETA is suitable for winch launching. When taking off in windless conditions, ensure that the paraglider is laid out in an arched or even wedge shape (to avoid risk of the glider 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 paraglider winching.

### **Paramotoring**

The ZETA is not suitable for paramotoring.

### **Acrobatics**

The ZETA was developed with the focus on precise and dynamic behaviour.

Assuming suitable pilot skill and correct technique, the ZETA is very good at flying manoeuvres such as the Wingover, Helicopter, Fullstall, Tail Glide, Looping, SAT, Misty Flip, Asymmetric Spiral, Twister, Parachutal flight, McTwist and Dynamic Fullstall. The materials, design and construction of the highly stressed parts have been specifically chosen so that the ZETA's long life can be assured.

However: 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

Pack your ZETA rib to rib, so that the plastic rods in the ribs at the leading edge lie as flat as possible on one another, all at the same height. This will prolong your ZETA'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 same cell. Only pack and store a dry paraglider, and avoid unnecessary compressing and tight packing.

## 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.

## What to do if the leading edge gets damaged?

If a plastic rod breaks or its seam rips the glider must be taken to an ADVANCE checking facility where the rod can be replaced or sewn back in. To guarantee a long lifespan it is important that the wing is not allowed to fall on its leading edge after landing, otherwise the fabric can be damaged by abrasion. But mainly there is a risk, as in all paragliders, that the crossports could tear.

## Check

A new ADVANCE paraglider must be given a check every 24 months (2 years). With intensive use (> 150 flying hours per year, or excessively 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](http://www.advance.ch).

## 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 small tears (up to 5 cm) 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.

## Disposal

Environmental protection plays an important role in the selection of materials and the manufacture of an ADVANCE product. We use only non-toxic 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

## ZETA

**21**

Flat surface		21.0
Projected surface	m <sup>2</sup>	17.6
Recommended take off weight *	kg	60-110
Glider weight	kg	4.4
Aspect ratio		5.15
Projected aspect ratio		3.62
Span	m	10.4
Projected span	m	7.99
Number of cells		45
Number of risers		3
Max chord	m	2.52
Length of risers	cm	50
Max length of the lines with risers	cm	679
Trim speed **	km/h	38-43
Max. accelerate range **	km/h	13

\* Pilot, wing, equipment

\*\* depending on take off weight

## Materials used

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

### Leading edge

Skytex 38 Universal 9017 E25, 38 g/m<sup>2</sup>

### Top surface

Skytex 38 Universal 9017 E25, 38 g/m<sup>2</sup>

### Under surface

DOMENICO DOKDO-20MF, 34 gr/m<sup>2</sup>

### Ribs

Skytex 40 Hard 9017 E29, 40 g/m<sup>2</sup>

### Diagonals

Skytex 40 Hard 9017 E29, 40 g/m<sup>2</sup>

### Leading and training edge tapes

Polyester laminiert 20 mm

### Intake lower edge tapes

Polyamid 16 mm

### Lines

- Edelrid Aramid 7343, 230/190/140, covered, 1.7 / 1.5 / 1.3 mm (base lines)
- Edelrid Aramid 8000/U, 90/70/50, uncovered, 0.8 / 0.7 / 0.5 mm (upper gallery)
- Liros Dyneema, DSL 70 / DFL 115, covered, 0.95 / 1.3 mm (brake lines)
- Liros Dyneema, DFLP 232, covered 1,9 mm (brake lines)

### Risers

Polyester 13 mm

### Riser quicklinks

Maillon Rapide, Inox stainless, 3.5 mm S12

## **Certification**

The ZETA has EN and LTF D certification. The test reports can be downloaded from [www.advance.ch](http://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 Center**

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, which have many years' experience and in depth product-specific expertise. The ADVANCE worldwide service network includes other authorised service centres that provide the same services. All service facilities use original ADVANCE materials exclusively. You can find all information on checks and repairs and the relevant addresses at [www.advance.ch](http://www.advance.ch).

## **The ADVANCE website**

At [www.advance.ch](http://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**

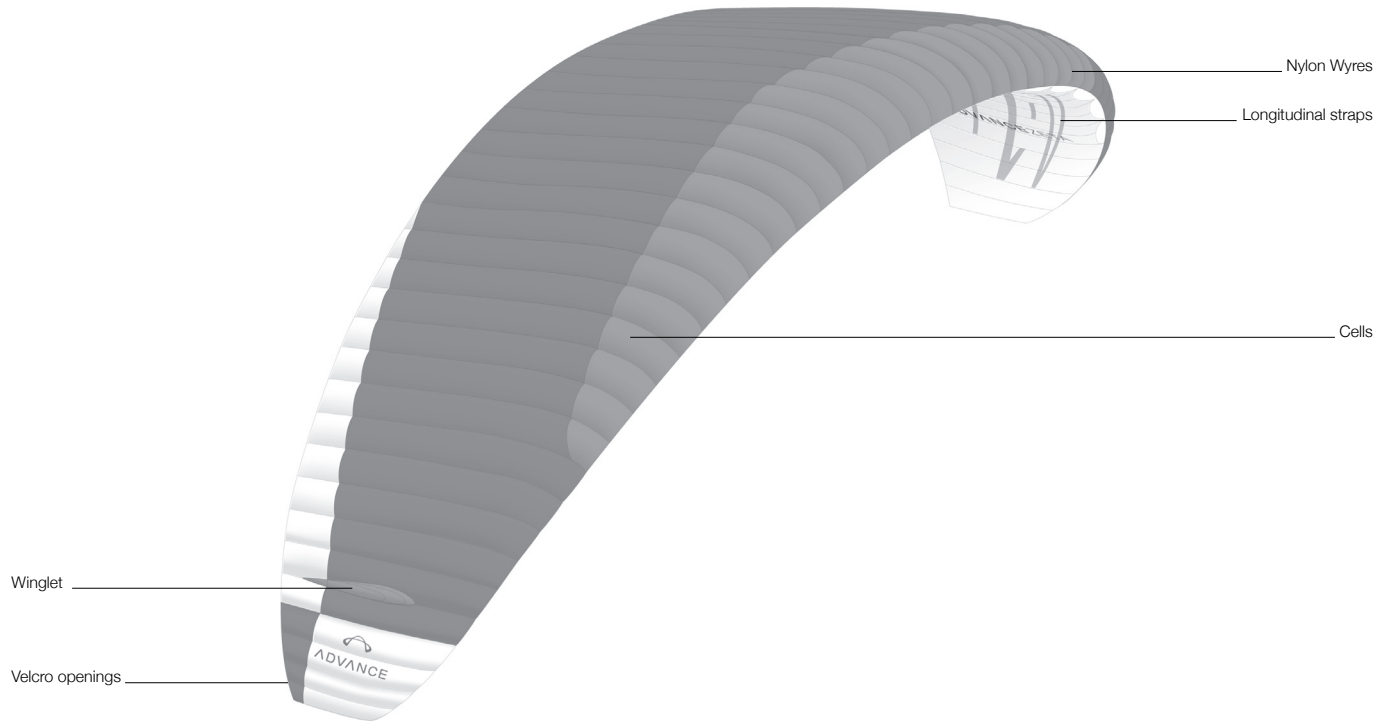
In order to enjoy the full benefits of the ADVANCE warranty, you are requested to complete the relevant form on the website in the «Warranty» section within 10 days of purchase.

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.

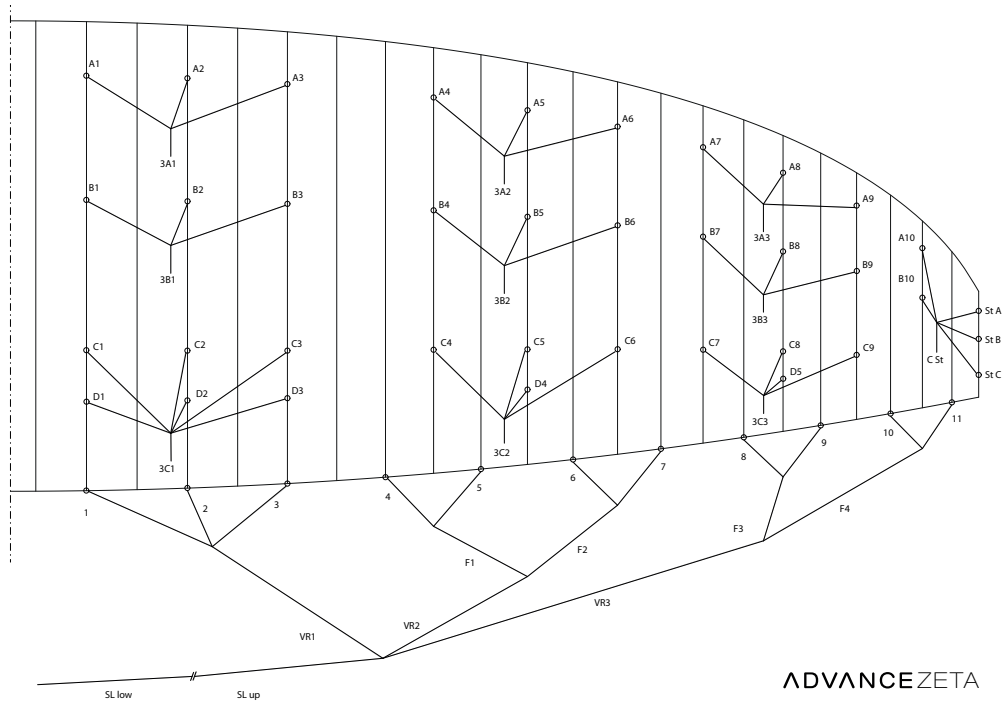


The ADVANCE warranty does not cover any claim other than those listed above. Claims in respect of damage resulting from careless or incorrect use of the product (e.g. inadequate maintenance, unsuitable storage, overloading, exposure to extreme temperatures, etc.) are expressly excluded. The same applies to damage attributable to an accident or normal wear and tear.

# List of parts

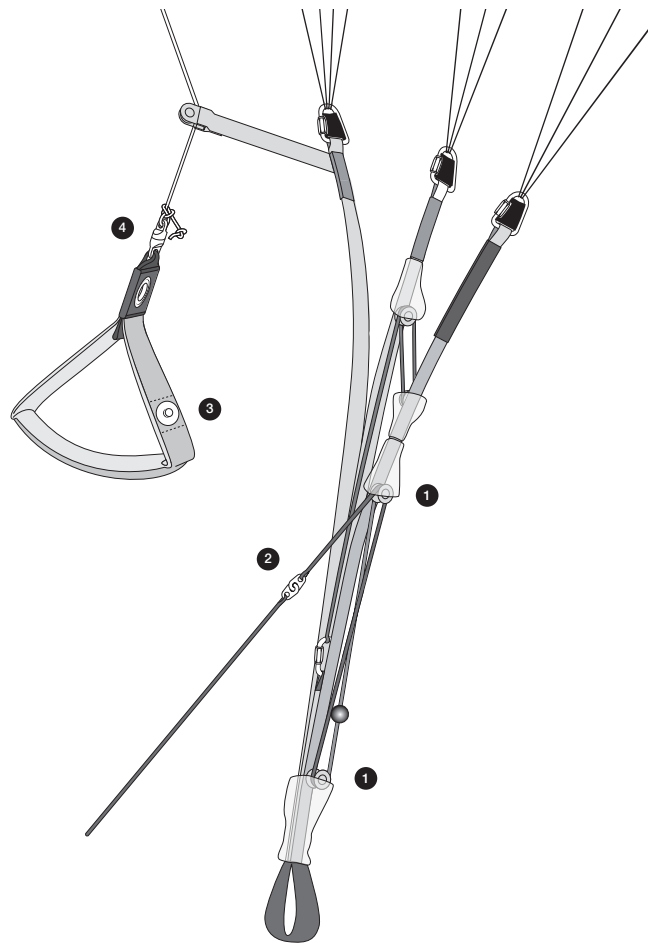


# Line plan



# Risers

1. Pulley speed system
2. Quick link
3. Magnetic clips
4. Swivel



# Bowline knot

Step 1



Step 2



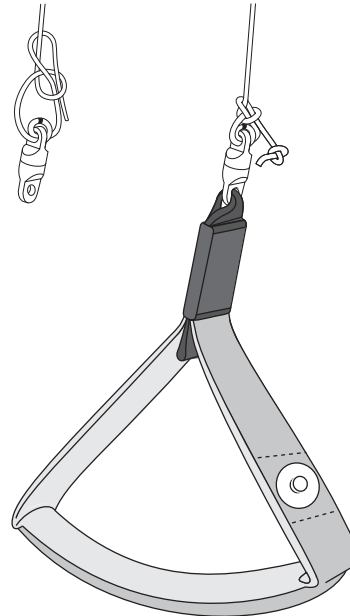
Step 3



Step 4



Step 5







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