



# PRODUCT MANUAL - BOUNDLESS

Product Manual

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## 1. THANK YOU FOR FLYING ADVANCE

Thank you for choosing an ADVANCE quality product with Swiss engineering.

### User manual

This user manual is an important part of your product. You will find instructions for Putting into service and use in practice as well as important information on safety, care and maintenance. We encourage you to read this document carefully before your first flight. Video instructions can be accessed via QR codes if available. All information can be found on our website in the "Download" section.

Download section

### Product Registration

Register your new ADVANCE product online in your MyADVANCE account no later than 10 days after purchase for a warranty extension or to be informed promptly by e-mail about updates and safety-relevant findings regarding your product

Product registration

### Our story: Pioneering spirit and Swiss precision

Putting our ideas into the air. That's what we can do. For more than 30 years, ADVANCE have kept the needs and wishes of our pilots at the forefront. With Swiss precision we refine model after model. Highest quality and absolute reliability have our top priority, in the air and in our customer service. So from pioneers we have become perfectionists, and a leading worldwide comprehensive service provider.

### Questions and support

You can always contact your ADVANCE dealer or our support team, we will be happy to help you. Send an email to [support@advance.ch](mailto:support@advance.ch)

We wish you many exciting and enjoyable hours in the air with your new product!

## 2. SAFETY INFORMATION

### 2.1. General safety advice

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. The paraglider pilot is also required bear a sense of responsibility towards the natural world, especially regarding the preservation of wildlife and landscape.

**Warning** Wearing an appropriate helmet, suitable footwear, and clothing, as well as carrying a rescue parachute (reserve), is strongly recommended. Before every flight, all equipment must be checked for damage and airworthiness. Additionally, a complete pre-flight check must be performed.

**Warning** 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.

### 2.2. Range of use and load limits

Like all commercially available reserve parachutes, paraglider harnesses are never suitable for free fall parachuting because



their design and construction details do not allow such a thing. Neither the reserve parachute nor its attachments to the harness can withstand the loadings involved in an abrupt opening.

All harness adjustments must be made before the harness is flown. Correct adjustment of the BOUNDLESS greatly contributes to safety, correct function and comfort in flight.

**Warning** No protector can offer complete protection against injury. The EN/LTF certified protector can only absorb some of the energy of impacts and therefore minimise injuries that might result from unlucky takeoffs and landings.

**Warning** The BOUNDLESS certification up to 120 kg is restricted exclusively to paraglider sport.

### 3. FEATURES

#### 3.1. Features

1. Velcros for Mini Vario and Hook Knife
2. Drink tube opening
3. Reserve bridle channel with zip
4. Inside pocket with mounting toggle for drink system
5. Three side pockets, two with zipper and one without
6. Easy Connect System
7. Familiar 2-buckle closure system
8. Reserve container with labyrinth closure
9. Elastic holdback for speedbar
10. Leg strap position holder





## 3.2. Backpack

1. Adjustable shoulder straps
2. Drink tube opening
3. Elasticated side pockets for water bottles etc.
4. Waist strap with pockets
5. Helmet holder
6. Helmet holder attachment points
7. Comfortable top-loading function
8. Zipped pocket
9. Grab handle
10. Back foam & protector element (removable)



## 4. PREPARING THE PRODUCT

### 4.1. Delivery

Every ADVANCE harness must be checked by the authorized dealer before delivery to ensure that the scope of delivery is complete and that the basic settings are correct.

Register your new ADVANCE product in your MyADVANCE account no later than 10 days after purchase to benefit from the extended ADVANCE warranty. More information under Warranty.

#### 4.1.1. Delivery includes

- Backpack
- Protector elements



- Rucksack back foam
- Honeycomb Seatboard PP
- 2 Alu carabiners Edelrid
- Speed system
- Inner container with handle
- Getting Started Booklet



## Options

- Foot stirrup
- Cockpit
- Hook knife
- Radio pocket



## 4.2. Installing a reserve

### General

The BOUNDLESS has an integrated reserve compartment.

### Important advice about the reserve system

Every reserve/harness combination has its own characteristics. It is essential that pilot and packer have confidence in the system, and are therefore thoroughly familiar with its operation - especially when a new combination is installed (new reserve in existing harness or vice versa), so that reliable functioning is assured.

**Warning** Installing a reserve must only be done by a qualified person. Your safety depends on it!

### Compatibility of the reserve/harness system



Bulky reserves of an older generation can be relatively difficult to release from compact, modern harnesses, especially under high-G circumstances. Certified volumes of reserves for the BOUNDLESS reserve compartment are a function of harness size: S: 2.5 - 6.0 liters, M: 2.5 - 6.0 liters, L: 3.0 - 6.5 liters.

- Info** For a broad approximation for reserve volume in liters a factor of x 2.7 can be applied to the reserve weight in kgs. Depending on method and packing skill a reserve with a volume arrived at by this formula, which is within the certified limits for a harness, still may not release without problems.
- Warning** If a reserve volume lies within the top third of the certified volume, special care must be taken that the reserve is folded to match the length of the inner container's longest side.
- Warning** In every case a test release/compatibility test carried out by the pilot in realistic conditions is the only way to prove that the particular reserve will reliably release from the BOUNDLESS.
- Warning** A newly-folded reserve can occupy up to 30% greater volume. ADVANCE strongly recommend a compatibility test.

#### Steerable reserves

The BOUNDLESS can also be used with a steerable reserve. Connection to the harness should be made with two maillons of minimum strength of 2,400 daN, direct to the coloured marked suspension points under the covers on the shoulder straps. Then the steerable risers and lines should be led through the channel on the harness to the reserve compartment.

- Info** It is possible to install quick-out carabiners.

#### 4.2.1. Packing the reserve in the inner container

##### General

The release handle and the five-flap inner container are connected and designed in such a way that the pull from the release handle is evenly distributed over the entire width of the inner container. This reduces the risk of the inner container jamming in the reserve compartment and of reserve lines entangling with the inner container, and guarantees optimal deployment. The release handle used with the five-flap inner container is part of the harness and complies with the latest certification requirements according to NfL.

- Warning** Only use the original reserve handle and its attached inner container.



## Packing the reserve parachute in the inner container

Always pack your reserve parachute to fit the shape and size of the supplied inner container. Place the rescue lines in the back in the direction of flight/throw. When all lines are stowed, there should be about 90 cm of line length left to the bridle.

### Warning

If your reserve parachute does not fit in the inner container without excessive squeezing, this indicates that it is too big for the BOUNDLESS.



#### Close inner container

Close the five-flap inner container in the order of the numbers on each flap 1-3. Secure the last flap 3 with a line loop that should be about 5 to 6 cm long (about 3 fingers wide). Now check the pull of the elastic and shorten or lengthen it as needed.

#### Info

The line loop should release under the weight of the reserve parachute itself.



Close the last flap of the container with two line loops of equal length (5 to 6 cm). These final loops are held by two elastics that pass through the eyelets of the outer flap of the container. The two elastics are pre-assembled at the factory.



#### 4.2.2. Connecting the reserve to the harness

By looping



Based on extensive testing, ADVANCE harnesses can also be looped with Companion reserves, provided basic precautions such as center looping and maximum tightening of the straps are observed. We cannot make any binding statement about the strength of ADVANCE harnesses in combination with other reserve systems.

### 1. Looping



### 2. Detailed view



### 3. Neoprene cover



## With a Maillon Rapide

Connect the sewn bridles of the BOUNDLESS and the bridle of your rescue parachute with a Maillon Rapide of at least 2,400 daN strength. Secure the straps in the Maillon with a rubber ring or neoprene tape, to prevent slipping and thus transverse





loading of the Maillon in the event of a reserve deployment.

## 1. Using a Maillon Rapide



## 2. Neoprene cover





**Warning** Do not use tape instead of the rubber ring to fix the Maillon Rapide!

**Info** When looping a COMPANION reserve with the BOUNDLESS, the V-line Neoprene Cover must be pulled over the connection.

**Warning** Never attach the inner container to the reserve parachute!

#### 4.2.3. Putting the inner container in the reserve compartment

When installing the reserve, always place the bridle in the reserve compartment first and then the inner container. It is essential that the inner container closure flaps face the back (when in flight) of the harness. Follow the directions indicated on the inner container and the inside of the reserve compartment. Silver dot to silver dot! The connection to the reserve handle must be without twists.

**Warning** If a reserve parachute does not fit in the inner container after repacking, it must be refolded to the shape of the inner container.

**Warning** Put the bridle in first, then the reserve.

**Warning** Silver dot to silver dot!



#### 4.2.4. Closing the reserve compartment

The outer container flaps are closed by loops (1) and cable (2). Outer container design supplies the necessary tensions and pressures on the closure loops and cable.

First fold the outer container sides (3) in. The right side goes between the flaps of the left side (Labyrinth seal). The Labyrinth closes itself using small magnets.



Next in sequence comes the zip on the left side, which closes the harness/reserve connection channel. Carefully guide the zip puller all the way down the left side of the container - to the start of the zip track. Then return it upwards (4) to close the channel. Finally stow this zipper in its zipper garage.





**Warning** The zipper must be stowed in the zipper garage. Pre-Flight check! Release blockage danger!!!

**Warning** After a not-so-good 'crash' landing on the protector you should check that the reserve compartment is still properly closed.

#### Securing the reserve handle

The two eyelets for the release loops are on the Neoprene pocket that holds the release handle. Fold this pocket (6) down and push the end of the reserve handle inside (7).

Using a short length of line (5) thread the two white closure loops (1) through the metal eyelets, secure the white loops with the ends of the yellow cable (8) and lead these into their buttonholes (9).

Remove the line carefully, leading it under the yellow cables to avoid damaging the white loops by friction.

**Warning**

After installing the reserve, it is mandatory to remove all auxiliary equipment and the red packing device! Danger of release blockage!

**Warning**

To guarantee a correct release always make sure that the yellow cables run freely.

**Warning**

Never connect the reserve directly to the inner container!

**Info**

The zip fasteners will always open easily and reliably when required – even after long intervals between openings.

**4.2.5. Compatibility Test**

The correct installation of the reserve must essentially be tested by a trial release. Put the harness on, close it completely and then clip yourself with the BOUNDLESS by the two main carabiners into a harness hanger. Then pull out the reserve as if in flight.

**Info**

A successful compatibility test carried out by a pilot can greatly increase confidence in the reserve system.

Operation of the reserve handle must take place in a normal flying position, and work without hindrance, in accordance with the requirements of this manual. You therefore must be sitting in the harness. If you are not sure of this procedure you should contact a qualified person or your ADVANCE dealer.

Here are some factors that could make a reserve deployment difficult or impossible:

- Reserve too big for the compartment or inner container.
- Reserve not packed to the dimensions of the inner container.
- Reserve not pulled out with the correct technique. A pull then throw to the side is correct.



- The volume of the reserve worked originally in the new harness, but after a repack it has become too big.
- Pilot dimensions and arm length may have a significant effect on reserve-throwing success. Small pilots with short arms can have difficulties.
- Conditions such as high G-loading (3G +, as in spiral dive).

**Warning** A combination of these factors could make a reserve deployment impossible.

**Info** Occasionally reach to the reserve handle after launch to memorize the position.

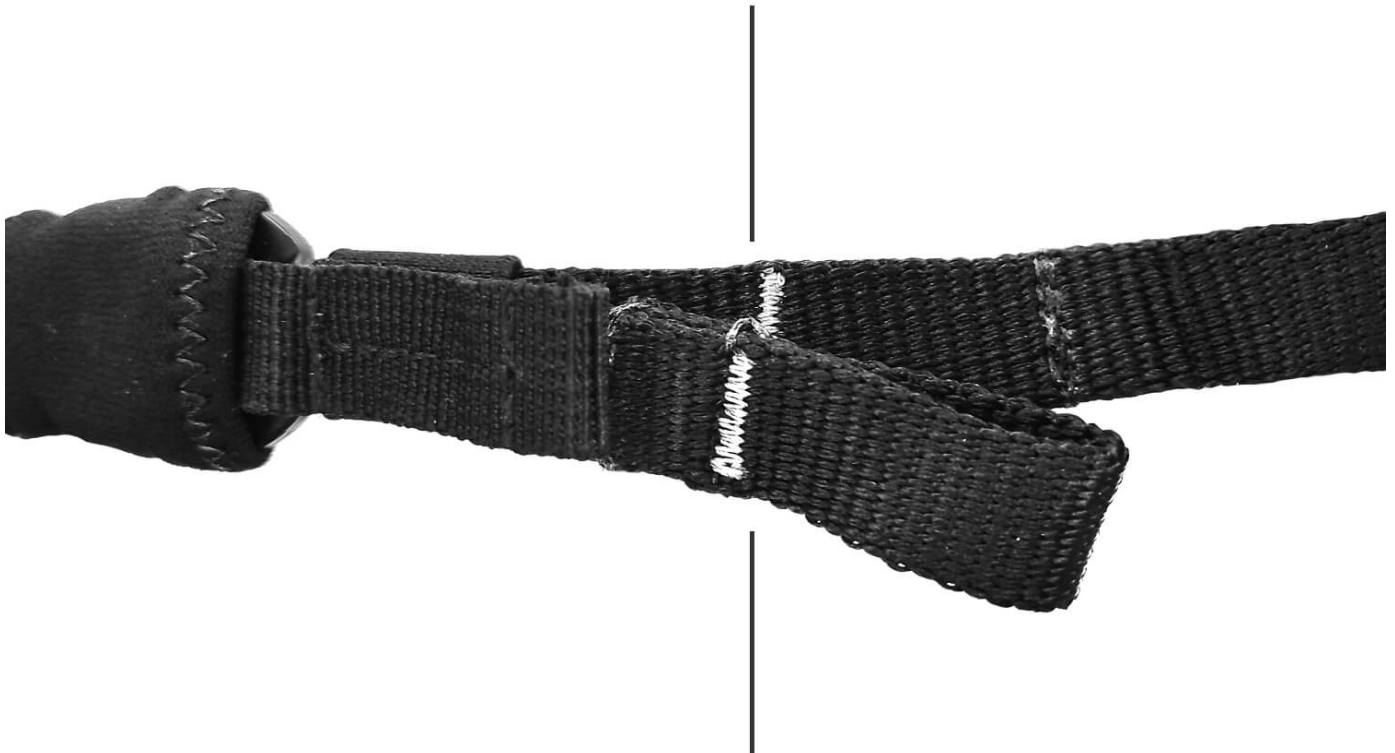
## 4.3. Adjusting the harness

### 4.3.1. Preparation and basic settings

#### General information

- Install the reserve before adjusting the harness.
- Load the back compartment with your equipment.
- Set all straps to the basic settings (as delivered).
- Close the harness and hang yourself (in the harness) up in a harness hanger.
- Make adjustments if necessary. The main straps are also adjustable in flight.

#### Basic settings



**Hint** ADVANCE recommend that you thoroughly familiarise yourself with these adjustments before your first flight in the harness. As well as that you should always make your first test flight with new equipment in quiet weather conditions.

### 4.3.2. Adjustment steps

#### Adjusting the upper body angle



Upper body attitude is altered by the adjustable back straps (1). Pull them in to a reasonably upright back position at which you feel comfortable. They also set the recline angle quickly and easily during flight. These straps are mounted relatively high at the sides to give good back support, and take weight off your shoulders. Pulling in the back straps results in an upright back - loosening them completely will put the pilot in something approaching a lying position. ADVANCE recommend the basic setting.



## Setting the shoulder straps

The BOUNDLESS shoulder straps (2) can be adjusted to suit the pilot's height and desired sitting position. The neoprene-covered adjusters are at shoulder height and can be set to any position. Pull in the shoulder straps to a loose fit, until they provide light support without putting pressure on the shoulders.

## Chest strap adjustment

The chest strap (3) is used to change the distance between the carabiners. The chest strap is secured with the automatic Quick-release buckles and these make up the Safe-T-System. The wider the chest strap the more agile the seat, and therefore the more effective will be steering by weightshift. A narrow setting results in a quiet and damped feeling from the wing. The adjustment range is very large and the harness agility can be changed to any setting to suit the conditions, as the pilot prefers.



**Warning** Make sure you close the buckles properly.

**Hint** The most important thing about setting the chest strap is that you feel happy in your harness.

#### Leg strap adjustment

The two leg straps (4) should be adjusted equally, and to a reasonable length that allows free movement during takeoff. This helps with a safe takeoff, and makes sure that you can easily get into your comfortable position when clear of the ground. To adjust the leg straps tilt the seat board forward. The buckles are directly under the seat board trailing edge. The length of the leg straps does not affect agility and weight-shift steering.

#### Setting the small chest strap

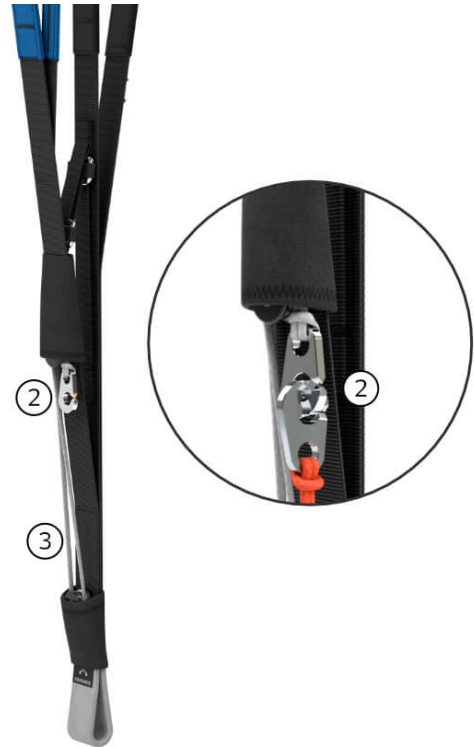
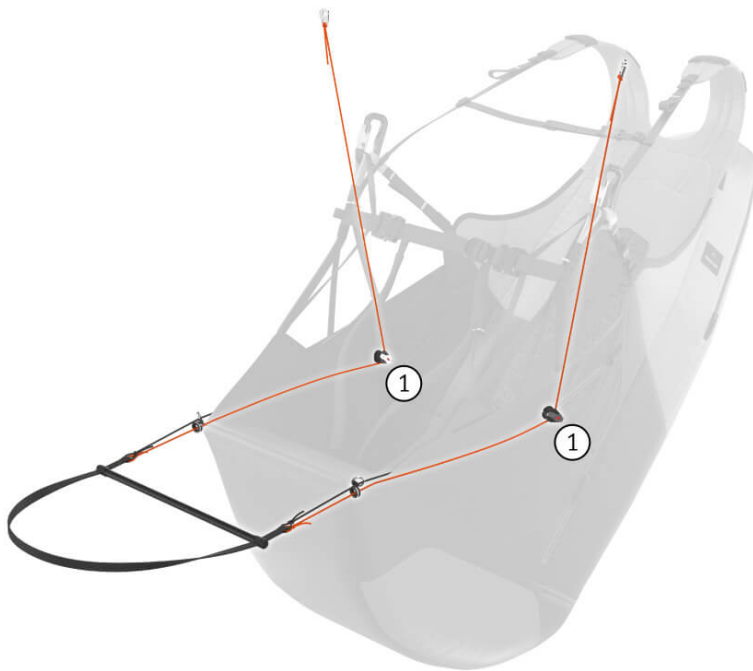
The small chest (5) strap holds the shoulder straps in the best position for takeoff and landing. The width can be adjusted to any position.



#### 4.3.3. Setting up the speed system

The speed system is already fitted and only needs to be adjusted for length.

1. Make sure that the speed lines run freely through all their pulleys on the harness.
2. Connect the speed lines to the risers by Brummel hooks or anchor hitches.
3. Make sure that your final setting allows the full travel of the speed system to be used.



**Warning**

Make sure that the speed lines are not so short that the wing would be permanently accelerated in flight.

## 5. PREPARATION FOR FLIGHT

### 5.1. Pack the back compartment

Careful packing of the back compartment contributes significantly to flight comfort. Pack the paraglider COMPRESSBAG first at the bottom of the back compartment. Then roll the COMFORTPACK into a long, thin shape and push it into the back compartment. You should use the remaining space logically. Pack trekking poles – with the tips up –, food and clothing carefully around the backpack.

### 5.2. Setting up the drink system

1. The tube is guided upwards via a loop on the right shoulder strap and fed into the back compartment in the middle under the ADVANCE label and the H2O label.

**Hint**

Use your finger to open the hole first.

2. The drink container is stowed in its pocket. There it can be fastened accordingly.

### 5.3. Installing the protector



## Video Tutorial Installing the Protector



YouTube video player: <https://www.youtube.com/embed/YOKQyKuJi3U>

Before flight, either the rucksack with built-in back foam or the back foam must be stowed in the protector compartment as an additional protector element.

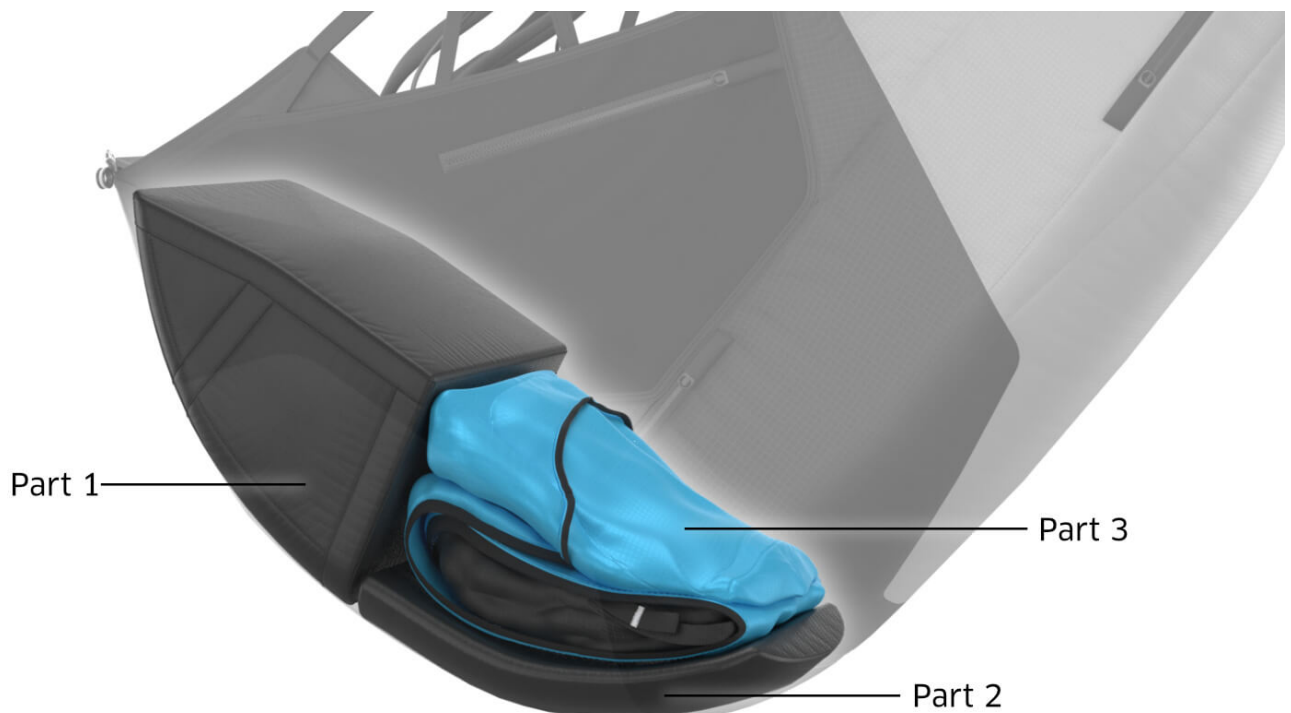
### Warning

The protector is approved, and full protection achieved, only if one of the above requirements is fulfilled.

### 5.3.1. Rucksack-Protector System

#### Multi-piece protector

The protector system consists of an air-foam element (Part 1), a foam element (Part 2) and the backpack with built-in back foam (Part 3).



#### Standard method

The backpack is connected to the harness. It can be stowed in the compartment above the foam element before launch, without being detached from the harness. Simply fold the backpack around the back foam, then hold the red handle with one hand, fold the halved backpack into the compartment and close it with the zipper. This method allows for more compact packing and leaves more storage space in the back compartment.

1.



2.



3.



4.

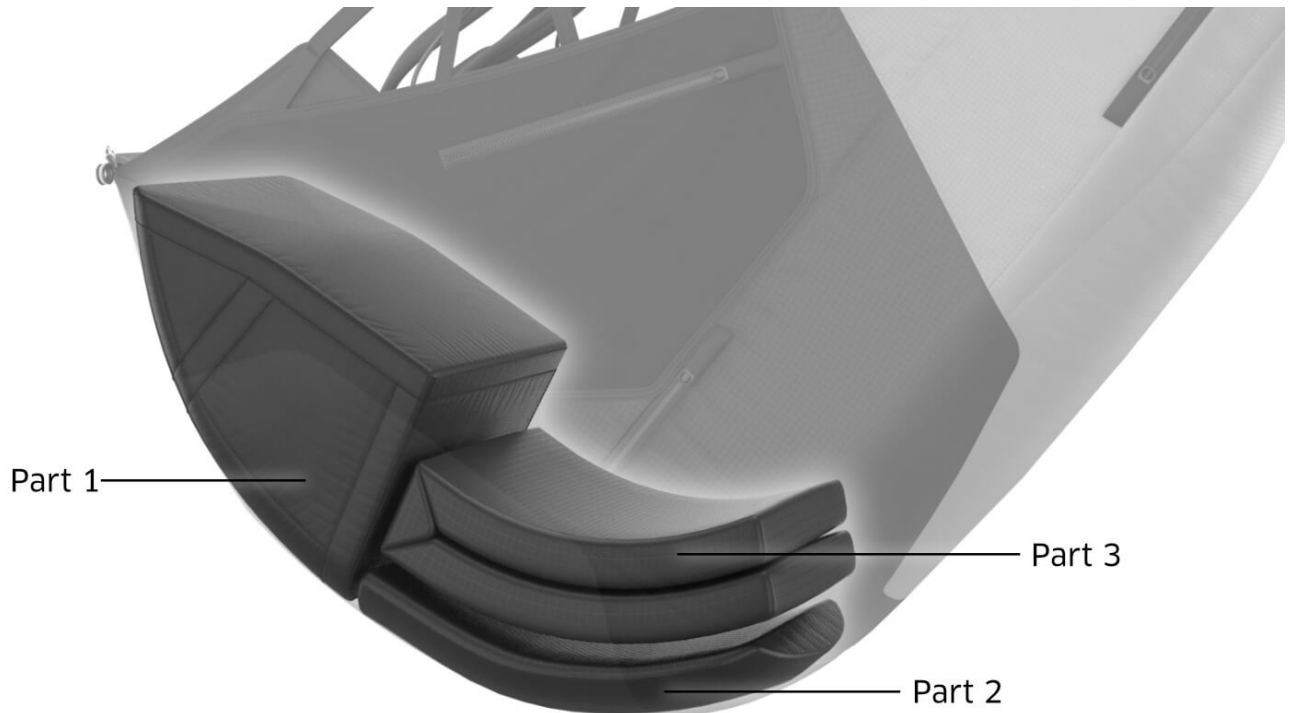


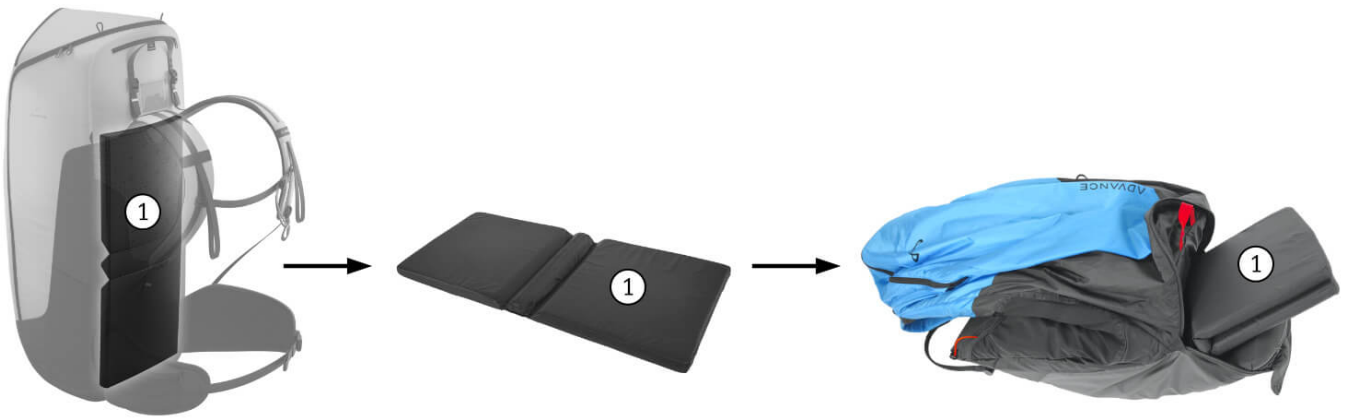
**Warning** Make sure that the zipper of the protector compartment is closed correctly.

### 5.3.2. Permanent-Protector System

**Alternative method**

Alternatively, you can remove the back foam (1) from the backpack and permanently stow it, without the backpack, as the third protector element (Part 3) in the compartment above the foam element (Part 2). The backpack can be detached from the harness and stowed in the back compartment in the conventional way.



**Warning**

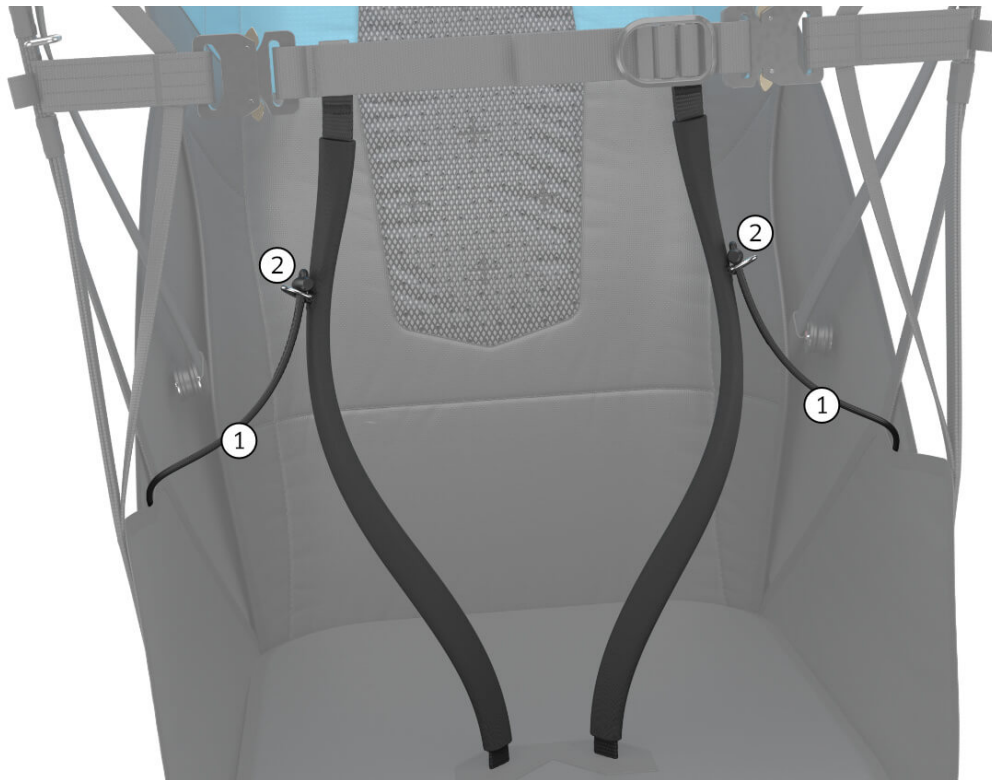
Although the damping values under test conditions are almost identical for both methods, we recommend stowing the backpack in the protector compartment to ensure maximum protection.

**Warning**

Make sure that the zipper of the protector compartment is closed correctly.

#### 5.4. Leg strap position holder

For comfortable ground handling, the BOUNDLESS has two elastic cords (1) that keep the leg straps in a comfortable position. The cords are stored in a pocket on the side and can be connected to the leg straps with bullet toggles (2) if required (e.g. for ground handling and soaring sessions with touch and go).



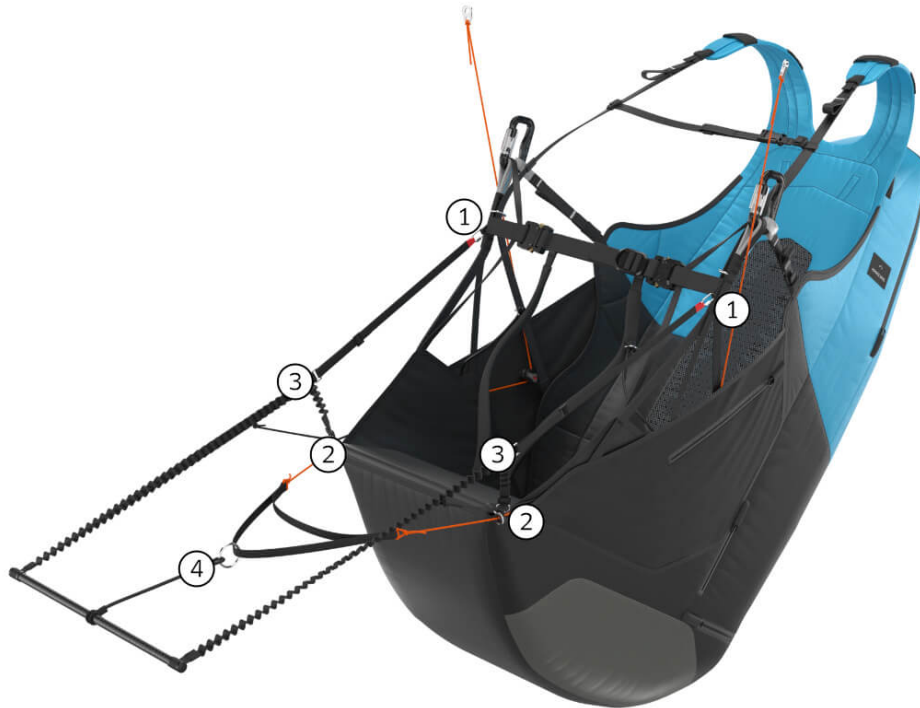
### 5.5. Fitting the optional foot stirrup

The optional foot stirrup, included in BOUNDLESS NfL certification, should be fitted as follows:

The black loops at the ends of the stirrup support lines attach to the small tapes loops below the carabiners (1) with small quicklinks (Maillons Rapides). The bungee holdbacks from the harness go through the D rings at the front of the seat shell (2), and should be tied to the small loops halfway down the stirrup lines (3) – as short as practical, but not under permanent tension.

A speed loop accelerate system is supplied with the foot stirrup. ADVANCE recommend that only this speed system is used when flying with the foot stirrup.

A split ring (4) connects the speed loop to the footrest so that the loop can always be conveniently picked up by a foot while flying with the foot stirrup.



**Warning** Only the ADVANCE original foot stirrup designed for the BOUNDLESS may be used.

## 5.6. Clipping in the paraglider

The EASY CONNECT SYSTEM with its coloured markings on the BOUNDLESS main support loops makes clipping in an ADVANCE wing especially straightforward. The pilot only has to check that the red and blue lines on the glider risers match the same colours on the BOUNDLESS support points. The EASY CONNECT SYSTEM improves safety before takeoff.

## 5.7. Takeoff preparation and checks

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

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

### Hint

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.

### Warning

Before each flight, check that the reserve handle is in the intended position and that the yellow locking cables of the reserve handle are correctly stowed.

## 6. USE IN PRACTICE

The BOUNDLESS should principally be flown sitting in a upright position. This gives the best view in the air. The BOUNDLESS

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can be made very agile, or strongly damped in flight. The agility of the harness is set by the chest strap, and this can be easily adjusted in flight. We recommend that the harness is set quite damped for the student, and in turbulent air. But this is very much a matter of personal taste, and will always be up to the pilot.

### 6.1. Paraglider models of other brands

The harness can be flown with any paraglider. There are no restrictions.

### 6.2. Winching

The BOUNDLESS is suitable for winch towing. The tow link must only be fixed to the harness's main carabiners. If there is any doubt, the winch driver or a person authorised by the manufacturer should be consulted.

### 6.3. Acro

The geometry and strength of the BOUNDLESS means that it is capable of flying acro manoeuvres without problem; but this harness has stowage for only one reserve parachute. As a matter of principle ADVANCE would only recommend a harness with provision for two reserves for acro flying.

### 6.4. Tandem flying

Due to its dimension the BOUNDLESS is basically not suitable for tandem flying – neither for the pilot nor the passenger.

### 6.5. Use in the school environment

The BOUNDLESS is perfect for flying schools. Suitable adjustment provides comfortable standing upright before takeoff, ease of getting in the seat after takeoff, a pleasant upright sitting position in the air, damped agility from the harness in flight and quick standing up before landing. An appropriately adjusted harness agility in flight, and the quick and instinctive stand up facility for landing contribute much to comfort and safety.

### 6.6. Flying with the foot stirrup

ADVANCE recommends that you only use the optional foot stirrup specially designed for the BOUNDLESS, and the only model to have been included in the NfL certification process. High attachment points provide a maximum of comfort. The legs are supported without effort, and long flights remain a pleasant experience. Attachment adjacent to the seatboard and elastic locating tapes make it impossible for the stirrup to get caught up with the reserve.

**Warning** Only use the supplied speedbar when flying with a foot stirrup.

### 6.7. Using the speedbar

The BOUNDLESS has a speed system already fitted. The carbon speedbar hangs under the front of the seatboard and is easy to reach because of the bungee hold-backs. These also make sure that the speedbar does not interfere with a reserve throwing.

**Warning** Make sure the speed system is always connected to the wing in flight, even when you do not intend to use it. A loose speed line could prevent a successful reserve deployment.

### 6.8. Packing the equipment

1. Take the backpack out of the protector compartment and lay it flat on the ground.



2. Put all straps in the harness and fold the harness onto the backpack so that the air-foam protector is facing upwards.



3. Put the glider in the COMPRESSBAG on top of the protector and close the backpack



**Info** The method is the same if the rucksack and harness are attached or separated.

## 6.9. Emergencies

### 6.9.1. Reserve

#### Throwing the reserve

Use the correct technique to release and throw the reserve. This is a pull then throw to the side. Do not pull straight up. Throw the reserve inner container as far away as possible in the transverse direction so that the lines are quickly extended and tensioned.

**Hint** We recommend that you make a brief tactile check on your reserve handle during every flight. This will program the subconscious as to where it is. We advise that you also mentally rehearse the throwing technique.

In strong rotational flight such as a spiral dive, very high G-loading can occur. This can make reserve throwing much more difficult.

**Hint** Take your harness along to a G-Force Trainer and practise releasing your reserve under high G-loading.

#### Landing under the reserve

Immediately after the reserve deployment, try to collapse the canopy if possible, or separate from it with a Hook Knife or Quick Out carabiner to avoid a shear position. Due to the shoulder attachment you should land with your legs on the ground first. Try to absorb the energy with a landing roll.

#### Reserve landing in strong wind



In a strong surface wind there's a risk that the pilot, attached at the shoulders, will be dragged over the ground by the reserve and paraglider. Options for dealing with this are distinctly limited.

**Warning** In the event of very strong winds on the ground, consider also cutting the paraglider risers or lines on at least one side with the hook knife before touchdown.

**Warning** The front buckle will not open under tension. Immediately after touchdown, open it as soon as it unloads. If this is not possible, use the hook knife here as well and cut the strap.

### 6.9.2. Water landing

In general, caution is advised when flying over water, whether it be crossing a lake during a cross country, or during SIV safety training. In particular a pilot can land in the water during SIV, intentionally or otherwise.

**Warning** Water landings are dangerous and should be avoided at all costs. Landing in flowing water or in coastal surf is often fatal (drowning). ADVANCE recommends that you always carry a hook knife.

**Warning** After a water landing, separate yourself from your harness as quickly as possible and get clear of your equipment so that you do not get caught up in the reserve or paraglider lines.

**Warning** You should be aware that the foam protector in any harness will try to float. This can automatically tip the pilot head down in the water. Wearing a lifejacket is essential during SIV training.

#### Involuntary reserve descent into water

Especially in this case it is very important, if possible, to get out of the speedbag before splashdown, and open all buckles except the front belt or use the hook knife. Immediately after entering the water the front belt must be opened or cut. Get away from the harness and all your equipment as quickly as possible.

#### Landing in water with a lifejacket

Even when landing in the water during SIV, with a lifejacket, it is recommended that the BOUNDLESS buckles are unfastened and the harness taken off before getting into the boat. When full of water the harness gets very heavy and makes it very difficult for the pilot to board the rescue boat.

**Warning** The front strap will not open under load.

#### Water landing without reserve

Everything described so far applies. Depending on the situation and danger (current, waves) it may be useful to cut straps with the hook knife before touching down, as the front strap cannot be opened under tension, or even to cut all straps and jump or slide out of the harness into the water.

**Warning** If a buckle or speedbag will not open, cut it with the hook knife before landing in the water. You can mount a hook knife on the shoulder strap and secure it with a long line.

#### Maintenance and care of the harness after a water landing



After contact with water, all protectors and the comfort foam should be removed from the BOUNDLESS. See chapter "Installing/removing components". Everything should then be allowed to dry in a shaded place outside, or carefully laid out in a dry room – or the harness could be hung by its carabiners and gently wafted to and fro. The reserve must be taken out and dried separately. Obviously it should then be repacked.

**Info** The protectors may take several days to dry

### 6.9.3. Tree landing

In the event of a tree landing, with or without a reserve parachute, there is a risk of a possible fall.

**Warning** The most dangerous part of a tree landing is climbing down. Always wait for a rescue party to get you out of the tree.

**Info** We recommend that you keep a rope sling with a carabiner in the harness so that you can secure your harness to a branch and relax while you wait.

## 7. MAINTENANCE & CARE

### 7.1. Maintenance harness

ADVANCE recommends that you visually inspect the harness regularly for signs of wear. This includes checking the general condition, the condition of the seams and straps and the functioning of the buckles. In addition, the rescue parachute must be regularly aired and repacked. Any defects (damaged seams, webbing, etc.) must be repaired immediately by the manufacturer or an authorized service center.

**Warning** Do not make any modifications to your harness and never fly with a harness whose straps are damaged in any way.

**Warning** If the harness was used as part of a rescue emergency opening, the harness must then be inspected by the manufacturer or an authorized service center.

Ultraviolet radiation, temperatures below -20°C and above +60°C, humidity, salt water, aggressive cleaning agents, improper storage as well as mechanical stress (e.g. grinding on the ground) accelerate the aging process.

The life span of your harness can be extended considerably if you pay attention to the following points:

- Allow wet or damp harness to dry completely at room temperature or outside in the shade. Repack the reserve regularly.
- Thoroughly rinse a harness that has been in contact with salt water with fresh water. Always repack the reserve.
- Clean the harness only with fresh water and neutral soap if necessary, never with solvents.
- Check the main connection bridle between the harness and the reserve after every reserve deployment.
- Have the harness checked by a qualified person after any very high loading (e.g. serious impact).
- Inspect the harness regularly for defective seams and straps, especially the reserve connection and the seams of the main carabiners.



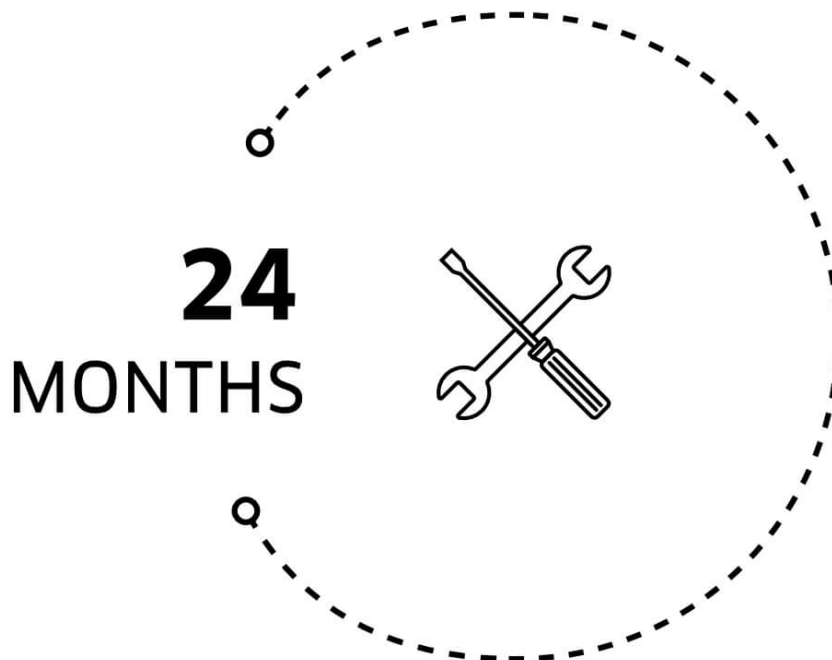
- Do not subject the harness to extremes of temperature and make sure it gets adequate ventilation, to prevent condensation forming.
- Do not expose the harness unnecessarily to the sun (UV radiation) before and after the flight.

## 7.2. Air-Foam Hybrid

The foam protector does not require any special care, but it should definitely be inspected for possible damage after an impact. In case of damage to the outer shell, the protector must be replaced. If you are flying with the Permanent Protector system, also check the sleeve of the protector element.

## 7.3. Inspection

Inspect your harness regularly for damage and have it thoroughly visually inspected by a professional every 24 months. The inspection includes a visual assessment of the fabric, straps and connections, major stitching and main carabiners. All parts are inspected for tears, kinks, pre-damaged seams, damage and severe wear. Detected damage requires the harness to be professionally repaired before the next flight.



You can find more information about the check in the "Service" chapter of this manual or at [www.advance.swiss](http://www.advance.swiss).

## 7.4. Carabiner service life

### EDELRID FORAS

Maximum 5 years

The main support carabiners are high quality EDELRID Foras Alu Carabiners (51 g, 23 kN). Aluminium carabiners must be regularly visually inspected for metal discolourations, dents, obvious scratches or cracks. In addition you must be careful that



a carabiner is always loaded vertically – along its major axis. If a carabiner shows any of the above visually evident conditions or has been incorrectly loaded, both carabiners must be replaced immediately. In any case the carabiners must be replaced no later than 5 years after being put into service or first flight (if unknown, 5 years after production date), and may not be used again. The production date is printed on the carabiner.



### 7.5. Overstress

When using the product there is always the risk of unpredictable overstress in flight, for example caused by flying conditions or a surprise bump in the air. In rare cases the product could suffer damage. This is especially disappointing in that, usually, neither the manufacturer nor the pilot can be held responsible. Light products tend to be more susceptible to damage due to overstress.

**Info**

In the event of damage, please contact your dealer and they will contact us. We strive to be accommodating in such cases and work together to find the best possible solution. This is individual and depends on the assessment of each case.

### 7.6. Repairs

You should never carry out harness repairs yourself. The various seams are prepared with the greatest precision. Only the manufacturer or an authorised Service Centre should carry out repairs with original materials.

### 7.7. Removing & replacing components

**General**

All individual parts can be easily removed, e.g. to carry out any repairs or to replace them.



### 1. Seatboard

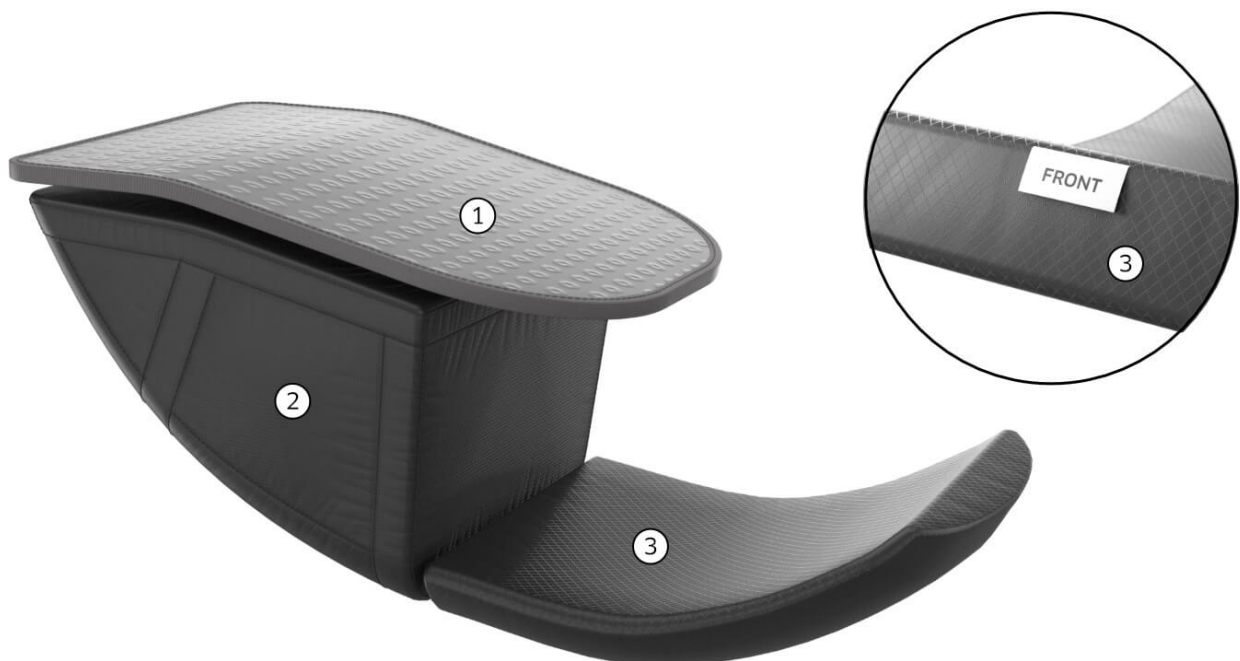
Pulled out from lower rear end of seat shell, after releasing the Velcro.

### 2. Air-foam protector element

Accessed via a zipper in the protector compartment. When installing, make sure that the wedge shape is inserted correctly, and that the Velcro is fixed at the front edge.

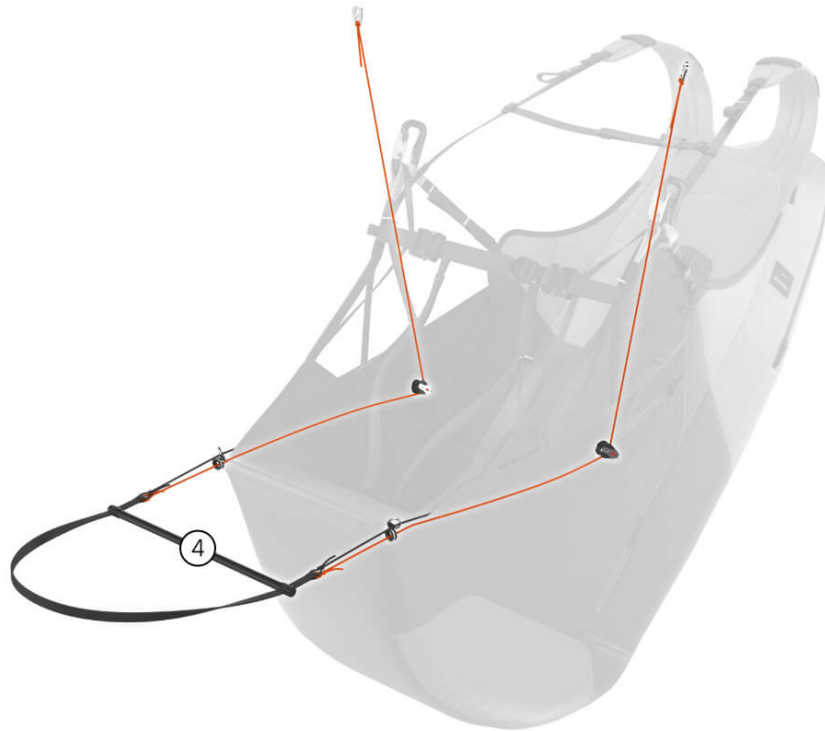
### 3. Foam protector element

Accessed via a zipper in the protector compartment. When installing, make sure that the label "FRONT" is positioned at the front.



### 4. Speed system

Unloop the Brummel hooks and untie the knots of the elastic retainer, then unthread the speed lines. The elastic retriever can be replaced separately.



### 5. Backpack

Use a paper clip to release the zipper.



### 6. Backpack foam element



Accessed via a zipper inside the backpack at the upper edge of the foam.



## 7.8. 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 and fabrics that are subjected to continuous quality and environmental impact assessments. When your equipment reaches the end of its useful life, please remove all metal parts (recycling) and dispose of straps and material in the designated facilities.

## 8. SERVICE & WARRANTY

### 8.1. 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.swiss](http://www.advance.swiss).

### 8.2. Support (Website)

At [www.advance.swiss](http://www.advance.swiss) you will find detailed information about ADVANCE and our products as well as contact details for any questions you may have.

You also have the opportunity to register your product online up to 10 days after purchase in order to enjoy the full benefits of the ADVANCE warranty. You can also:

- Keep yourself updated about new safety-related findings about ADVANCE products.



- Download an application form for the check at ADVANCE as a PDF in order to be able to send in your product.
- To find an answer to a burning question under FAQ (frequently asked questions).
- Subscribe to the ADVANCE newsletter to receive regular e-mail updates about new products and services.

### 8.3. Online Account

Set up a MyADVANCE account at [www.advance.swiss/warranty](http://www.advance.swiss/warranty) and register your product directly online after purchase.

In the MyADVANCE account you will find all documents for your product as PDF, e.g. the manual, security updates and much more. You can also view spare parts for your product and make support requests directly.

### 8.4. Warranty

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). Basically, the legal warranty obligations of your country apply. If you register your product for free on our website within 10 days of purchase you receive an extended warranty of 12 months beyond the legal warranty period of your country!

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.

## 9. TECHNICAL DATA

### 9.1. Data

BOUNDLESS		S	M	L
Pilot height	cm	155-172	165-183	178-202
Seatboard width	cm	30	31.2	32.8
Seatboard length	cm	37.5	40.5	42.5
Carabiner height	cm	43	44	45
Chest strap width	cm	40-46	41-47	42-48
Rucksack volume	l	78	83	90
Harness weight	kg	3.80	3.95	4.10
Weight without Backpack	kg	3.10	3.25	3.35
Harness certification		EN & NfL / 120 kg	EN & NfL / 120 kg	EN & NfL / 120 kg