PRODUCT MANUAL - WEIGHTLESS

Product Manual

Version 18.11.2021

ADVANCE Thun AG
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TABLE OF CONTENTS

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 also be found on our website www.advance.swiss.

Product Registration
Register your new ADVANCE product online in your MyADVANCE account at www.advance.swiss/garantie 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. All this information can also be found on our website www.advance.swiss.

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

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

Greetings from Thun your ADVANCE Team

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 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.
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

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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 WEIGHTLESS 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 WEIGHTLESS certification up to 120 kg is restricted exclusively to paraglider sport.

3. HANDLE WITH CARE

The WEIGHTLESS is an ultralight harness. The life of this product is highly dependent on your care. Mechanical stresses such as dragging on the ground etc. accelerate the ageing process and should be avoided. A lightweight product is much more sensitive to stress of all kinds.

SIV Overloads
Do not use this lightweight product for SIV training. Excessive loading can cause non-safety-related damage to the product, which is not covered by the ADVANCE guarantee.

Warning	We strongly advise against making a rescue deployment with the WEIGHTLESS during safety induction training (SIV). After a rescue release, non-safety related damage to the harness may occur which is not covered by the ADVANCE warranty.
Warning	The harness must be inspected by a qualified person after each rescue descent!

4. FEATURES

4.1. Features

1. GRIVEL Plume Carabiners
2. Drink tube opening
3. Reserve bridle channel with zip
4. Two side pockets
5. Detachable Cockpit
6. Easy Connect System
7. Built-in reserve compartment
8. Relief tube exit (left side)
9. Rear fairing air intake (left & right side)
10. Interchangeable Speedbag
11. Windshield

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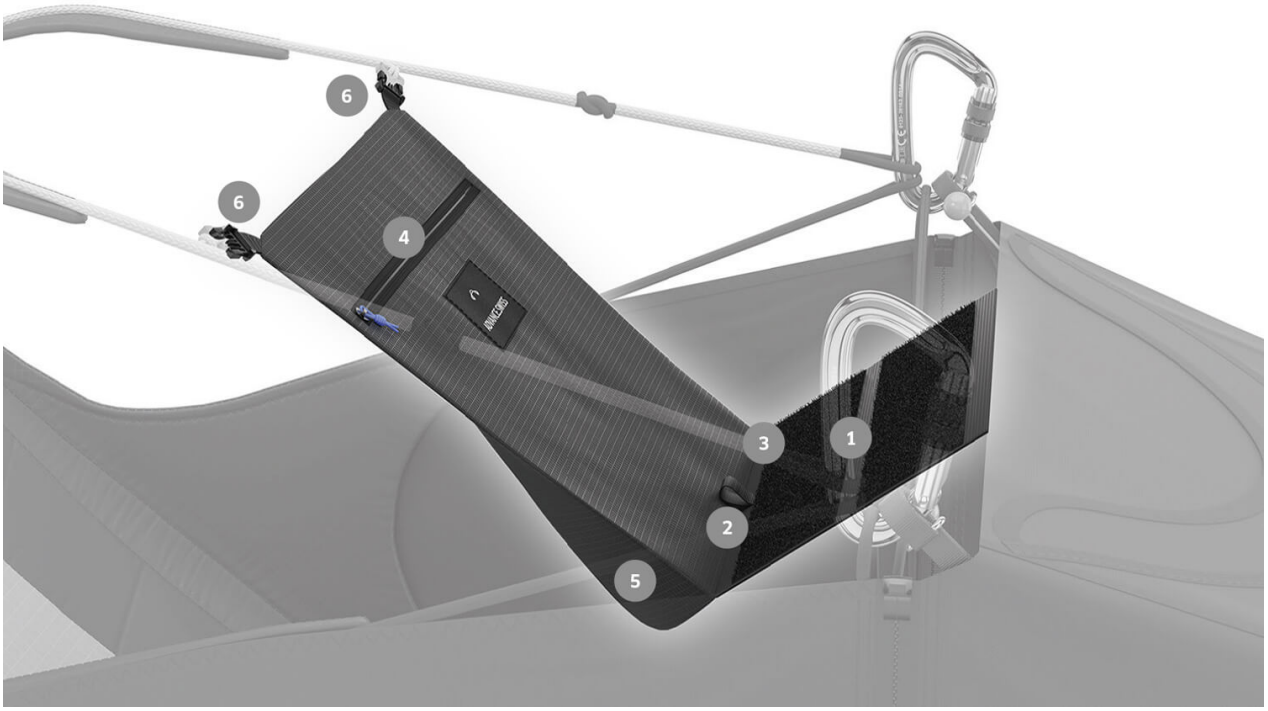
4.2. Cockpit

1. Instrument panel with Velcro
2. Fastening loop for instruments
3. Cable exit
4. Zipped pocket
5. Battery compartment on the back
6. Shoulder strap clips



4.3. Pockets & Compartments

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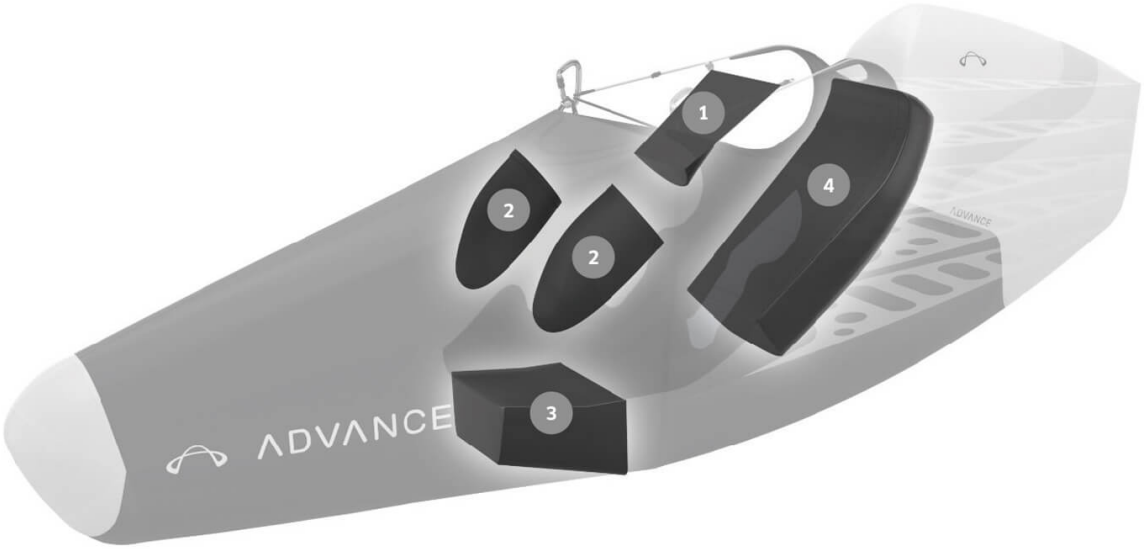
1. Cockpit pocket
2. Two side pockets
3. Additional stowage
4. Large back compartment with extra pocket and holder for drink system



4.4. LIGHTPACK ULS

1. Hike & Fly shoulder straps with pockets
2. Velcro for smartphone
3. Elasticated side pockets for trekking poles, water bottles etc.
4. Waist strap with pockets
5. Adjustment straps
6. Helmet holder
7. Helmet holder attachment points
8. Practical top-loading
9. Zipped pocket
10. Grab handle
11. Back foam & protector element (removable)

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4.5. Two-part protector

The WEIGHTLESS has a two-part protector system consisting of a foam protector (Part 1) and the rucksack with built-in back foam (Part 2). The rucksack is stowed in the compartment above the main protector (Version A). This system allows more compact packing of the equipment and leaves more available storage space in the back compartment.

As an alternative, the back foam 1 can be removed from the rucksack and permanently stored in its sleeve 2 as an additional protective element in the protector compartment (Version B). In this case, the rucksack is stowed in the back compartment in the usual way.

Warning	Familiarize yourself with the protector system, it is for your safety.
Info	Detailed instructions for the protector system can be found in the section, "Installing the protector".

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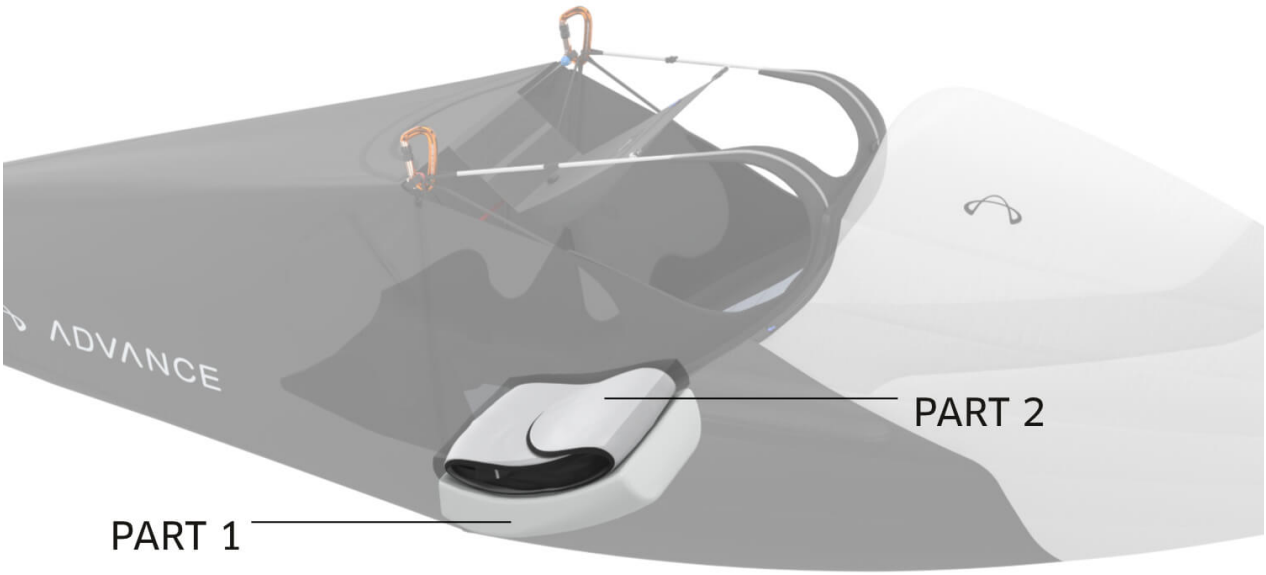

Version A

Version B

5. PREPARING THE PRODUCT

5.1. 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.

5.1.1. Delivery includes

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- WEIGHTLESS
- LIGHTPACK ULS
- Rucksack back foam
- Protector element sleeve
- Main protector
- Comfort foam
- Windshield with cover
- Hook knife
- Shoulder strap shortener
- 2 Grivel Plume carabiners
- Inner container with handle
- Speed system
- Speedbag
- Carbon footboard 2.0
- Cockpit
- Ronstan pulleys

5.2. Installing a reserve

General

The WEIGHTLESS 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!

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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 WEIGHTLESS reserve compartment are a function of harness size: Size S: 2 - 4.0 liters, M: 2 - 4.5 liters, L: 2 - 5.0 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 WEIGHTLESS.
Warning	A newly-folded reserve can occupy up to 30% greater volume. ADVANCE strongly recommend a compatibility test.

Steerable reserves

The WEIGHTLESS 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 not possible to install quick-out carabiners.

Video Tutorial Installing the Reserve

5.2.1. 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 LTF.

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

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Packing the reserve parachute in the inner container

Always pack your reserve parachute to fit the shape and size of the supplied WEIGHTLESS 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 WEIGHTLESS.

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

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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.

5.2.2. Connecting the reserve to the harness

By looping

Based on extensive testing, ADVANCE harnesses can also be looped with Companion reserves, provided basic

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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. Pay attention to symmetry and twists

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4. Neoprene cover

With a Maillon Rapide

Connect the sewn bridles of the WEIGHTLESS 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

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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 WEIGHTLESS, the V-line Neoprene Cover must be pulled over the connection.
Warning	Never attach the inner container to the reserve parachute!

5.2.3. Putting the inner container in the reserve compartment

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When installing the reserve, always place the bridle in the reserve compartment first and then the inner container. Green dot to green 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	Green dot to green dot!

5.2.4. Closing the reserve compartment

Warning	Make sure the red flap is in the correct location (red on red).

1. Detailed view of the flap.

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2. Insert the reserve as described. Make sure the red flap is in the correct place (red on red).

3. Pull the lower flaps upwards.

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4. Pull the white loops through the closing eyelets using the packing aid and close them with the yellow cable. Then stow the yellow cables in the buttonholes.

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5. Now close the right zipper all the way to the right in the zipper garage!!!

Warning The zipper must be stowed in the zipper garage. Release blockage danger!!!

Close the V-line channel

6. Then close the left zipper/V-line channel and stow the zipper in the zipper garage.

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7. Finally, fix the reserve handle using the Velcro.

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

5.2.5. Compatibility Test

The correct installation of the reserve must essentially be tested by a trial release. Put the harness on, close the main buckle and the speedbag and then clip yourself with the WEIGHTLESS 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.

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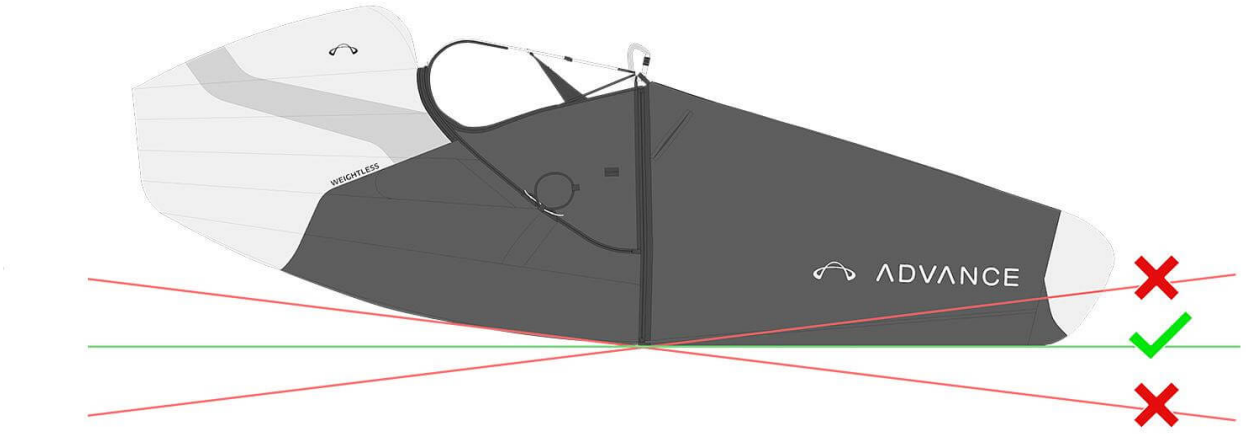
5.3. Adjusting the harness

General Information

- Take some time to adjust your WEIGHTLESS and always keep these two criteria in mind: comfort (no pressure points) and aerodynamics (speedbag base horizontal).
- The majority of pilots with a normal upper body/leg-length ratio will not be far from the basic settings.
- Take a step-by-step approach to your adjustments following the guidance here, and approach the correct lengths in loop variations or 2 cm steps. Make sure that adjustments are exactly the same both sides.
- Repeat the process as often as required until you are satisfied with the result.
- Then perform a first, short test flight to check the -settings before you go cross-country flying for -several hours.
- Make adjustments after a few flights if necessary.
- If you do not get a satisfactory result, contact your dealer and check with them whether a different speedbag size could solve the problem. Any harness size can be combined with any speedbag size S, M or L.



Variable speedbag size S, M, L

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Video Tutorial Adjusting the harness

5.3.1. Preparation and basic settings

General information

- Install the reserve before adjusting the harness.
- Install the TWIN-FIT protector.
- Load the back compartment with your equipment.
- Set all straps to the basic settings (as delivered).
- Shoulder strap delivery setting: long version with kite loop.
- Upper back strap delivery setting: with single loop.
- Speedbag delivery setting: as in the pictures.
- Close the harness and speedbag and hang this arrangement on a simulator (harness hanger).
- Ask a bystander to assess your harness position (flying attitude).

Basic settings

1. Harness

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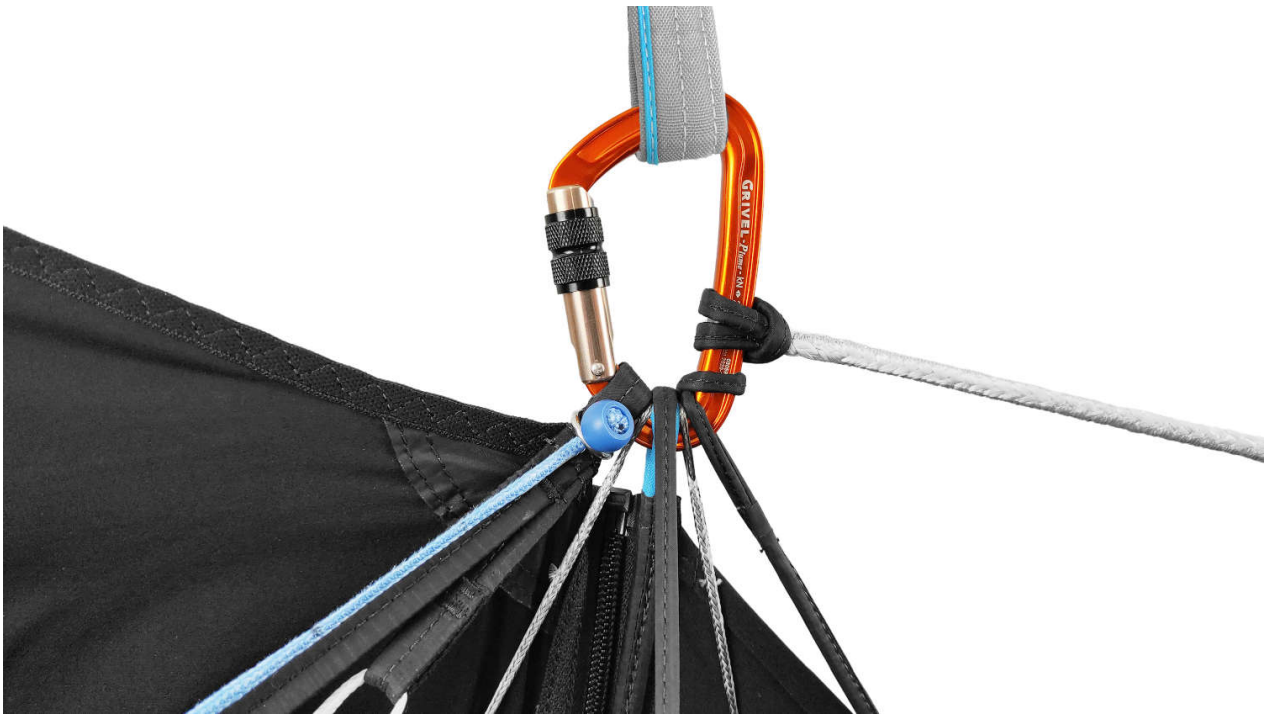
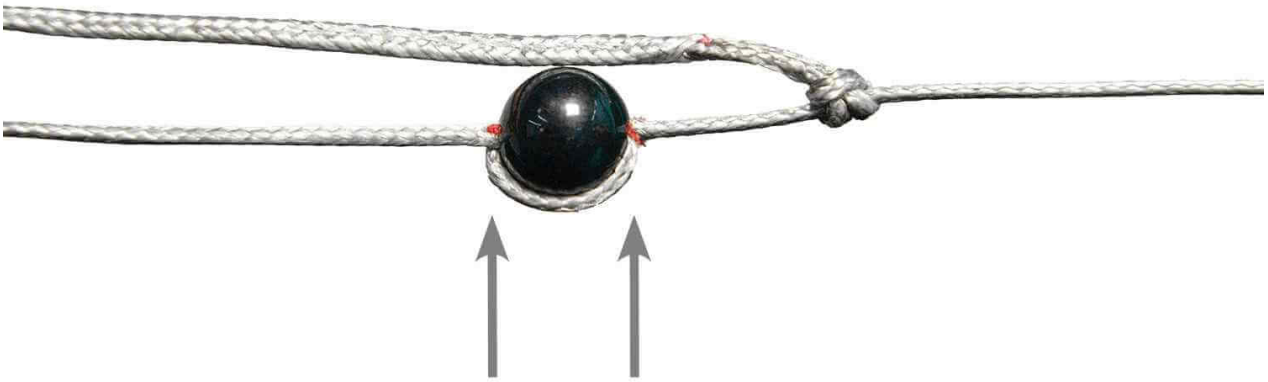


2. Speedbag



Adjust loops and lengths

Info

The shoulder straps can be adjusted to a total of eight different lengths with four loop variations and the "Strap shortener". The upper back strap can be adjusted to four positions with the four loop variations.

1. Neutral loop

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2. Single loop

3. Kite loop

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4. Double loop

5. Shoulder strap shorteners

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5.3.2. Adjustment steps

Body (center of gravity) position in the seat shell

1. A comfortably supported back is a good indication of an ideal body position in the seat shell. An indication of the correct size and position in the harness is the distance between the edge of the harness and the shirt collar.

2. If your center of gravity is too far back (feet in the air) push it forward by pulling in the lower back straps – or vice versa.

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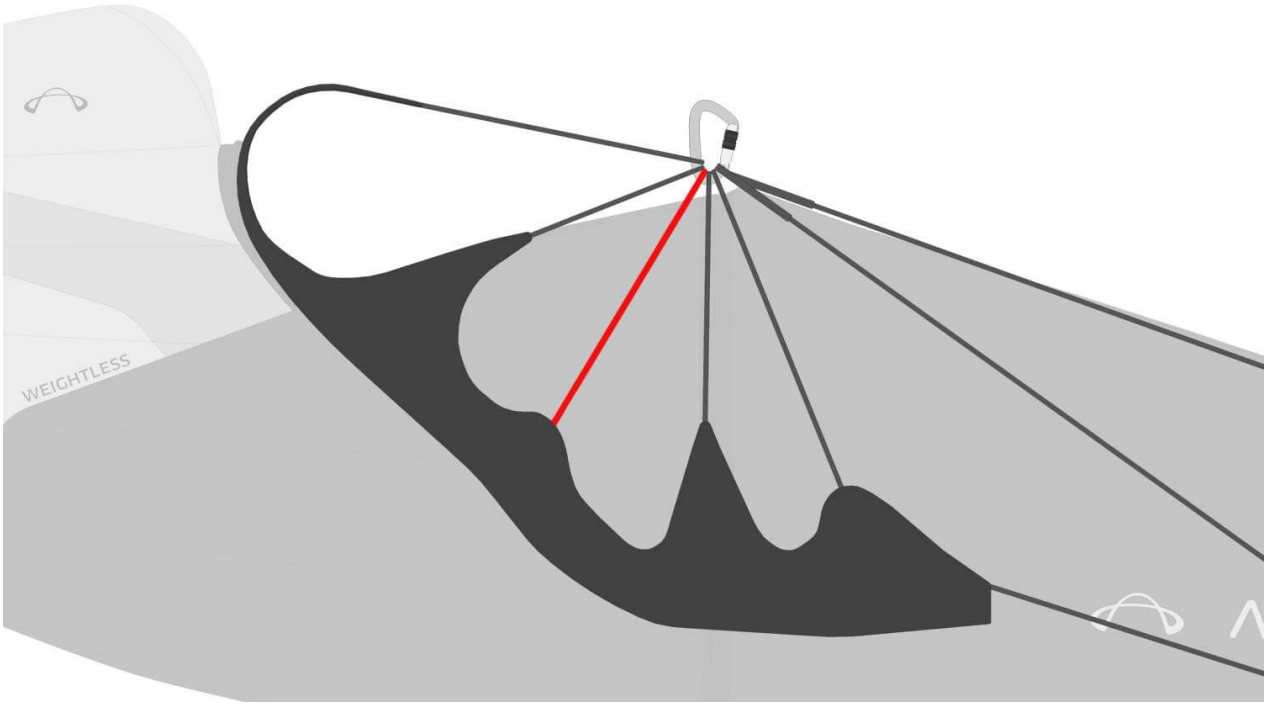
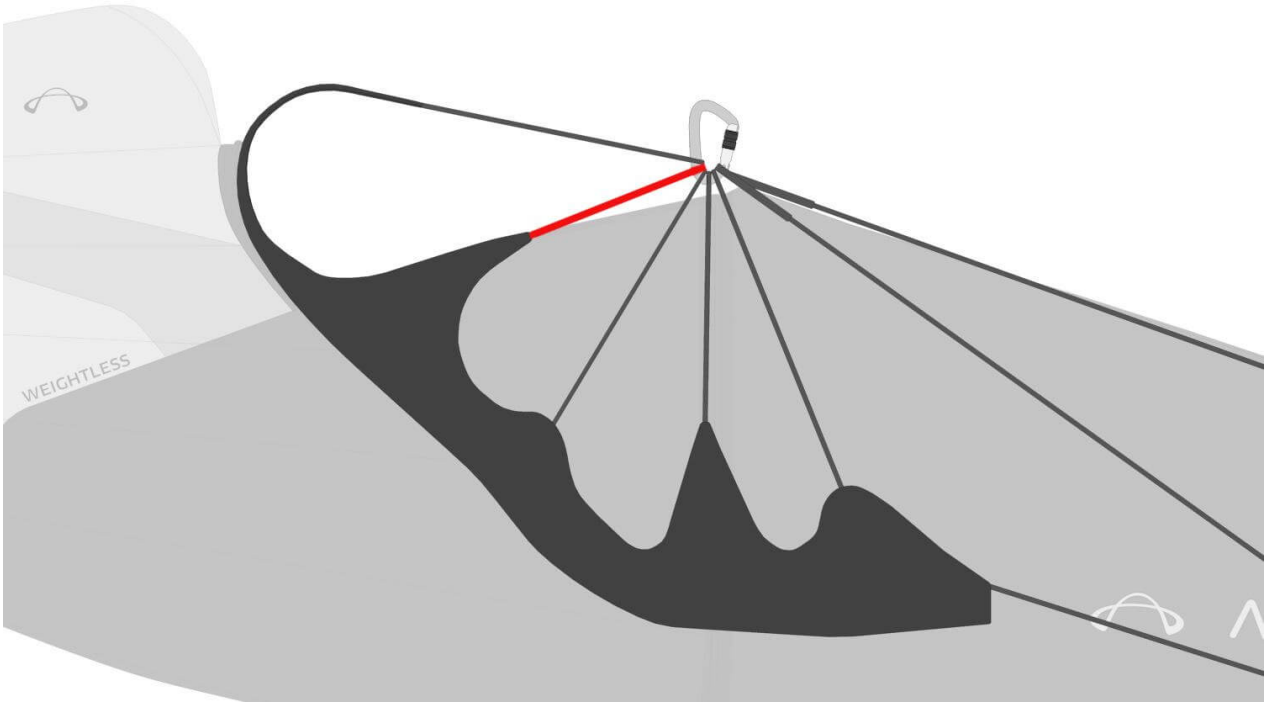


3. Then adjust the upper back straps (in or out) -until your back is comfortably -supported.



Adjusting upper body angle

4. Now you can also adjust the shoulder straps so that they lie on your shoulders with some tension.

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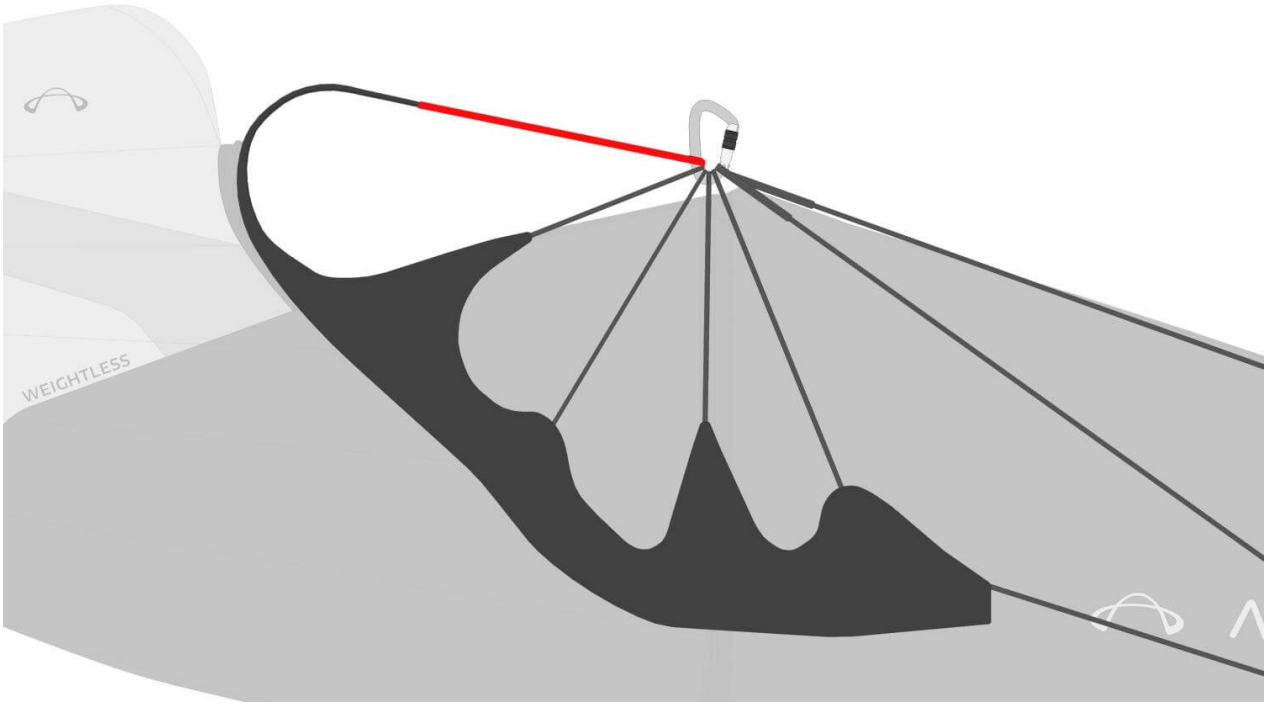

Info

Make sure you always have some tension on the shoulder straps, this helps to stretch the seat shell.

Aligning the speedbag

5. Release or loosen the anchor hitches and move the balls to adjust the speedbag.

6. Adjust the lower line to a speedbag length where your outstretched legs press the footboard with light pressure.

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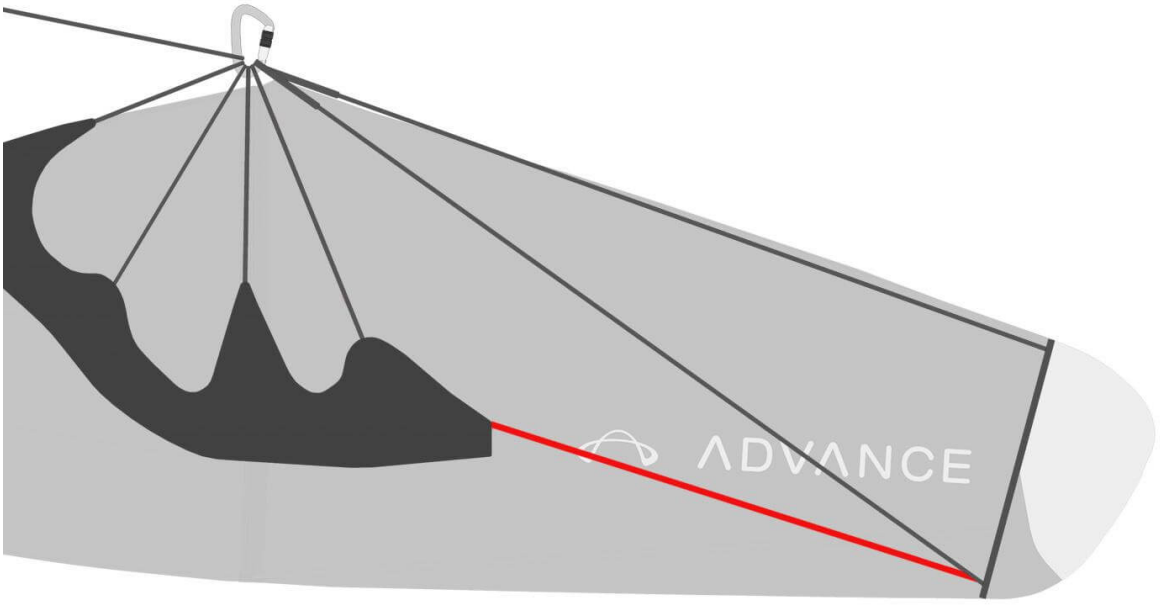
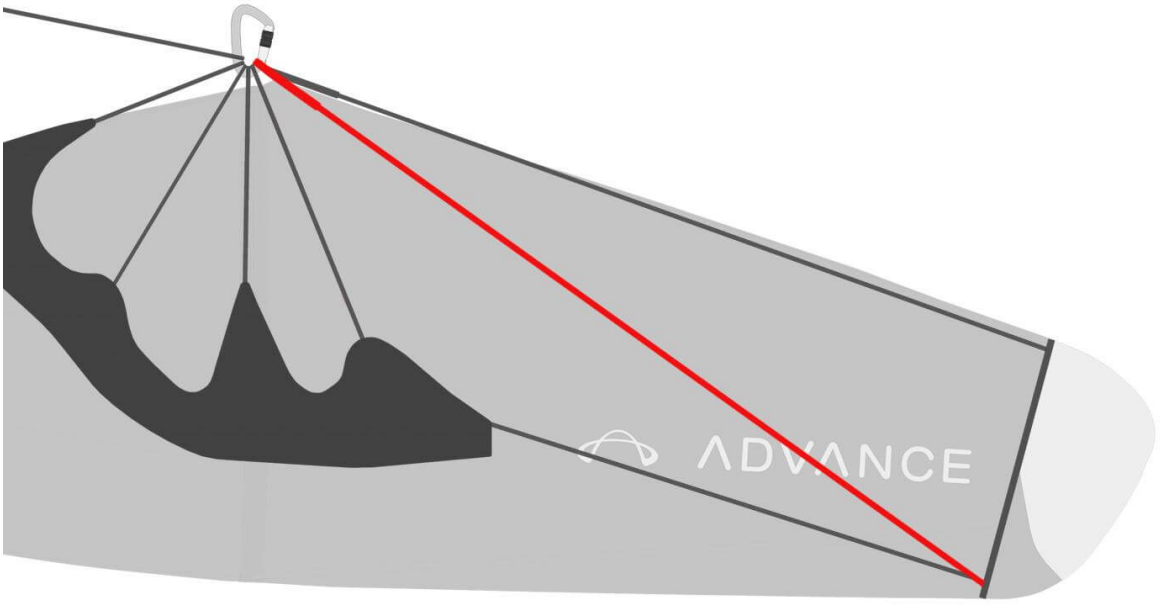


7. Now adjust the speedbag angle with the diagonal line. The speedbag underside should be horizontal.



8. Now adjust the angle of the footboard with the upper speedbag line.

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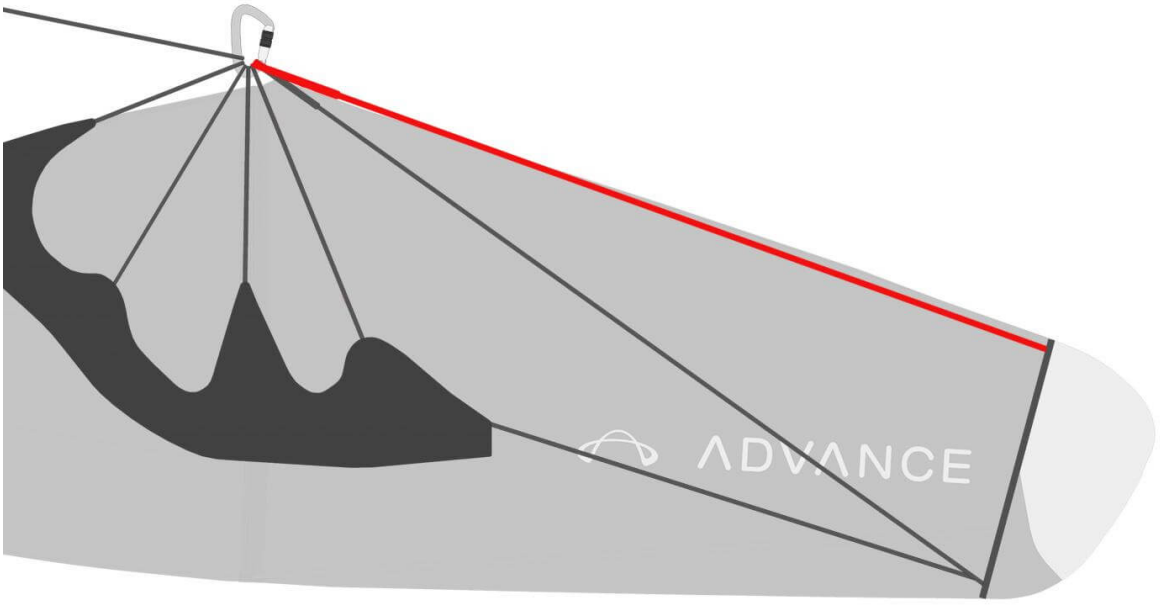
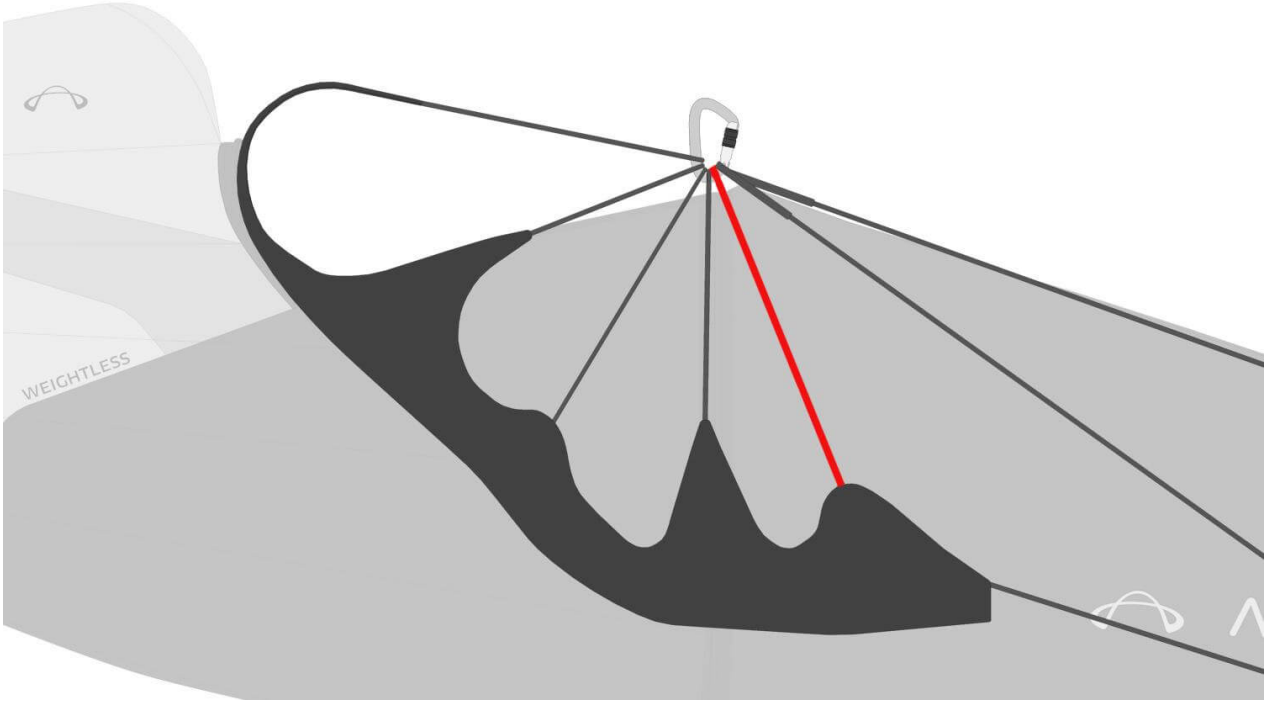


Adjusting the seat shell

9. The thigh strap should be adjusted so that you feel a comfortable pressure under the thighs.



5.3.3. Setting up the speed system

The speed system is already pre-assembled. You only need to adjust it to the appropriate length according to your needs. The easiest way to do this is to hang up the harness for adjustment.

1. Connect the speed lines of the WEIGHTLESS to your paraglider using Brummel hooks or anchor hitches.
2. Position the knots on the speed lines inside the speedbag to the correct position and pull the anchor hitches to the same position each side.
3. The speed bar is held in position by an elastic line attached to the carbon footplate. This elastic line is

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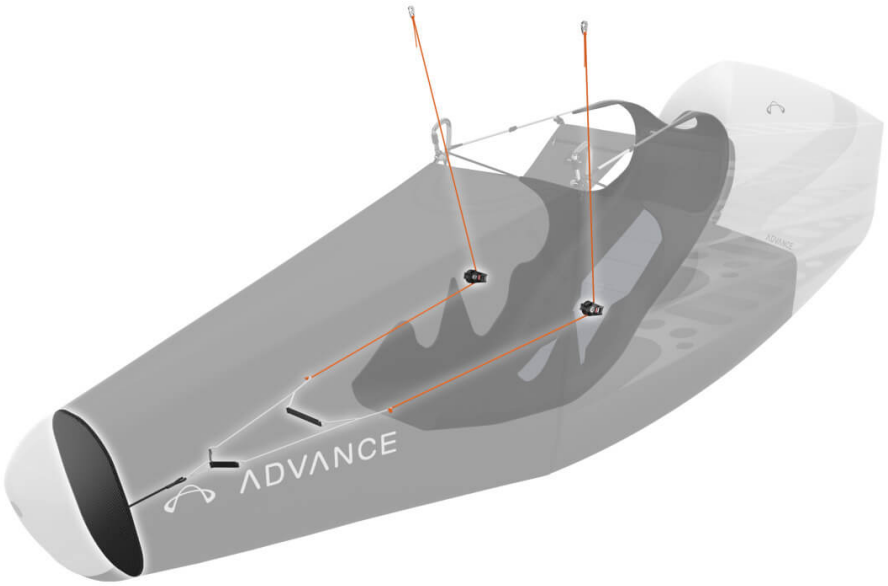
looped in the middle of the footplate as standard. If preferred, it can also be attached in one of the loops on the sides of the footplate.



Info The speed system is correctly set when you can reach the full range of the acceleration system with the second rung of the speed loop.

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

Hint See also the Part: "Speedsystem handling"

6. PREPARATION FOR FLIGHT

6.1. 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.

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

6.2. Relief tube routing

The opening for the relief tube is located on the left inner side and marked with a red band.

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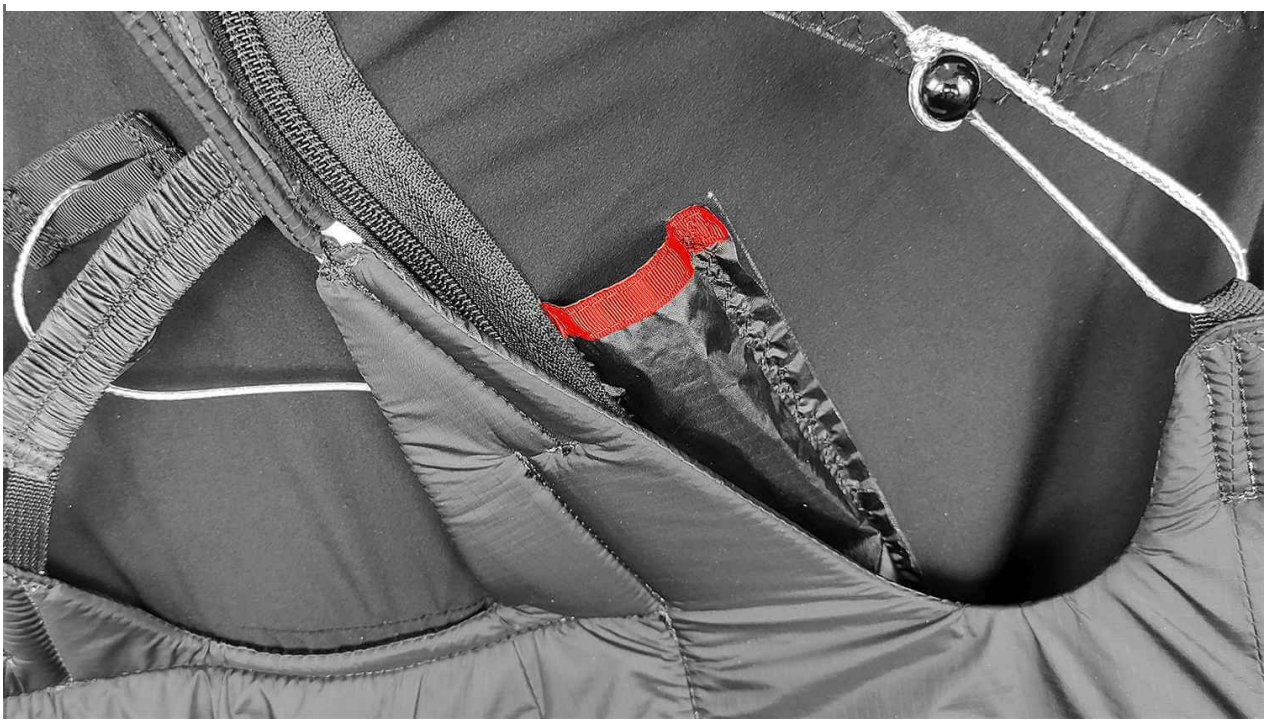

6.3. Installing the protector

Video Tutorial Installing the Protector

Before flight, either the rucksack with built-in back foam or the back foam in its dedicated sleeve 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.

6.3.1. Rucksack-Protector System

Installing the rucksack

1. Open the protector compartment with the zipper in the seat shell.

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2. Pack the rucksack with the back foam & protector element installed, using the following packing method.

Warning	Remove all hard objects from the rucksack pockets before stowing it in the compartment. They may cause uncomfortable pressure points or even have negative effects in the event of an impact.
Warning	Make sure the rucksack maintains the size of the folded foam.
Info	The foam has two defined creases in the middle to help you pack.

3. Put the rucksack flat on the floor.

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4. Fold in the right and left sides of the rucksack.

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5. Fold the upper part of the rucksack.

6. Fold half of the rucksack over. The crease in the protector will help you.

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7. Pass the rest of the backpack fabric once under the folded foam protector and fold it over the protector pack thus formed.

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8. Slide the folded rucksack into the protector compartment. Make sure you push it forward into the pocket filling up the space nicely. Finally, press the protruding "corners" under the zipper "curve".

9. Now close the protector compartment with the zipper. Make sure the rucksack does not get caught in the zipper.

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Info

The protector compartment is now "packed". It will adjust to your body during flight, so you won't feel any pressure points!

Info

This system gives you the maximum amount of space in the back compartment and is thus excellent for Hike & Fly and bivouac flights. However, it requires that you study the system in detail and adjust your launch routine.

6.3.2. Permanent-Protector System

Install the protector element

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1. Remove the back foam & protector element from the back of your rucksack.

2. Now pack the folded protector element into the sleeve and close its zipper.

Info

The sleeve is deliberately made slightly larger than the protector element so that a controlled expansion is possible in the event of an impact.

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3. Slide the complete protector package into the protector compartment. Make sure you slide it forward into the pocket nicely filling the space.

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4. Close the protector compartment with the zipper.

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5. You can now stow the backpack in the back compartment as usual.

Info

This system offers you maximum simplicity. It is suitable for many flights in one day, but takes up space in the back compartment.

6.4. Pack the back compartment

Careful packing of the back compartment contributes significantly to flight comfort. Hard objects will be felt through the back wall or harness shell and can affect your comfort.

Pack the paraglider COMPRESSBAG first at the bottom of the back compartment. Then roll the LIGHTPACK ULS/DLS, if you are flying with the protector version, 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. Do not overfill the back compartment.

Hint

Since this is an ultralight product, you must cover the sharp/tipped ends of your hiking poles with a protective cap, otherwise they can damage the harness.

6.5. Closing the harness

Video Tutorial Closing the harness

Close the front strap

Climb into the harness correctly via the one-side step-in. Close the front strap by pushing the T-piece through the red loop and secure it with the black elastic.

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Warning

Make sure the T-piece is pushed correctly through the red loop. Perform these steps carefully!

Correct closing:

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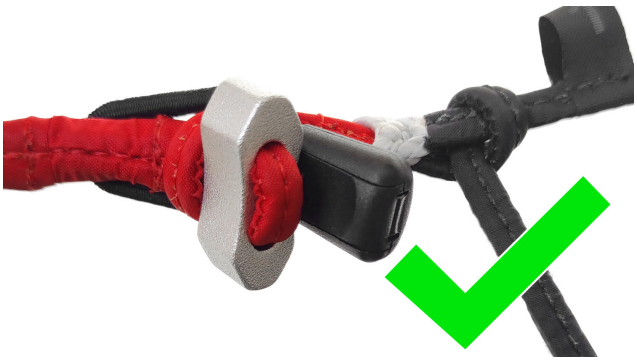
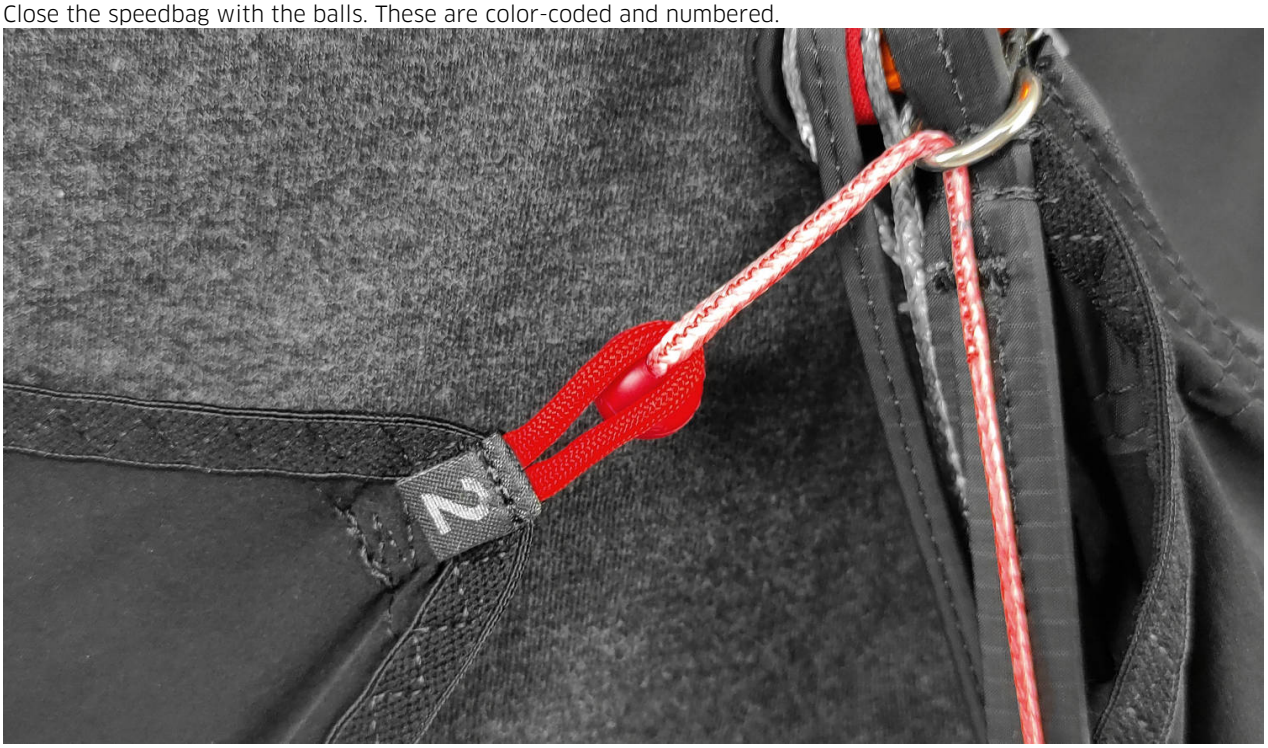


Incorrect closing: Attention!!!

Close speedbag

Close the speedbag with the balls. These are color-coded and numbered.



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Hint

Loop the red ball from top to bottom and the blue ball from bottom to top. (No bulge on speedbag due to the ball).

Attach cockpit

1. Attach the cockpit with the Velcro in the marked area.

2. Clip the two cockpit clips to the shoulder straps to complete the assembly.

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Info

You can change the cockpit clips on the shoulder strap. The position of the cockpit can be adjusted to a certain degree. To do so, open the zipper on the cockpit and adjust the length of the strap.

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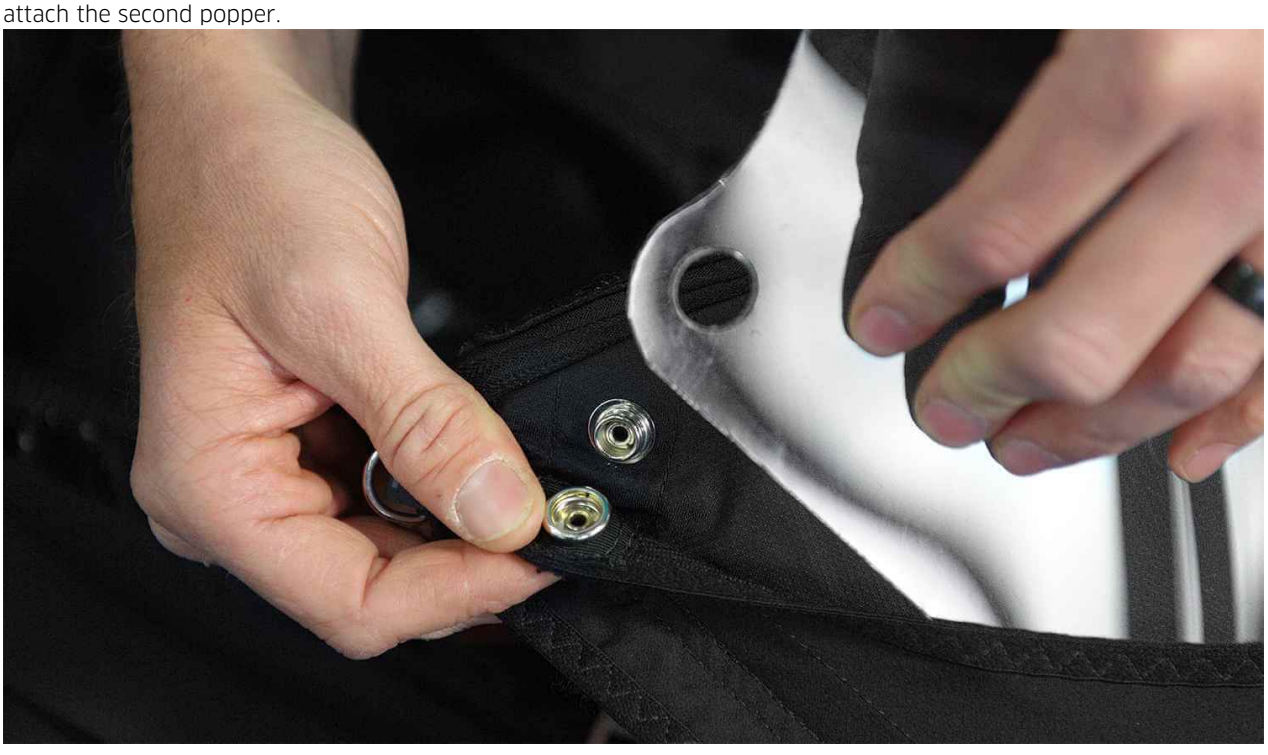
Warning Check that the front strap is still properly closed, especially after an aborted takeoff. With an open front strap you could fall out of the harness!

Warning Always make sure that all buckles are closed correctly!

Installing the optional windshield

Attach the speedbag popper on one side, then insert the windshield under the elastic edge of the speedbag and attach the second popper.



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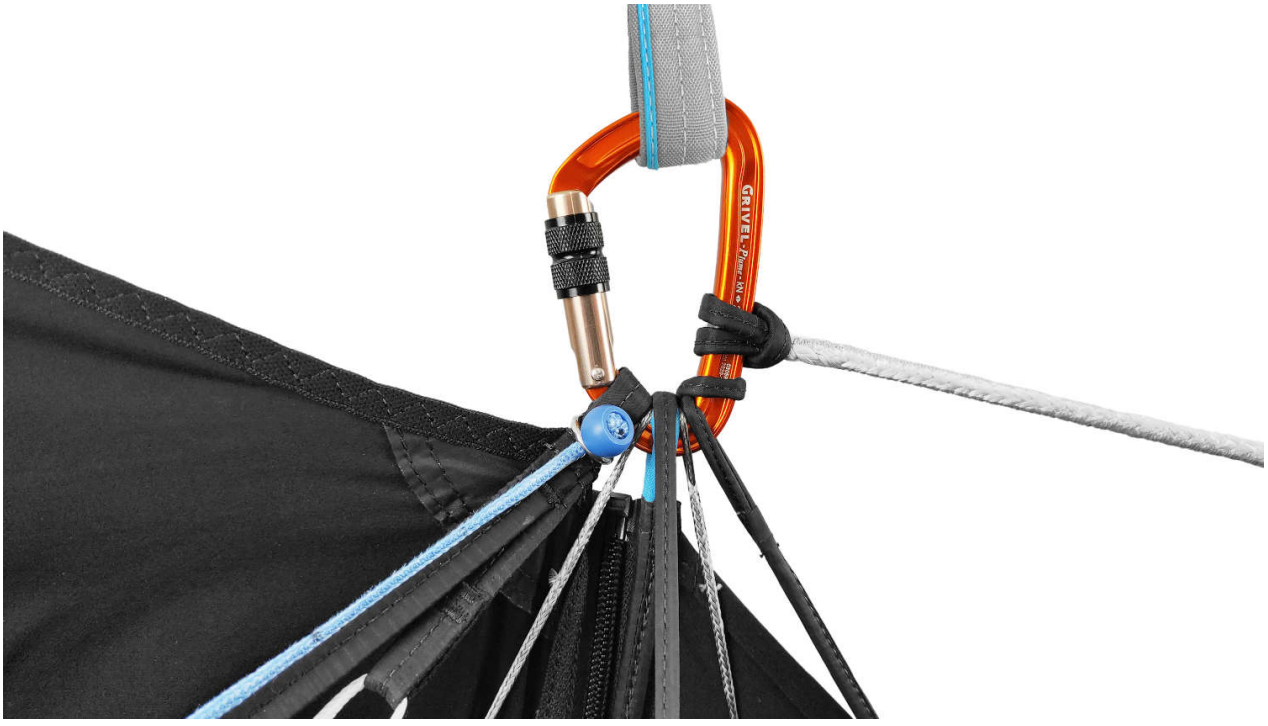
6.6. Clipping in the paraglider

The EASY CONNECT SYSTEM with its coloured markings on the WEIGHTLESS's 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 WEIGHTLESS support points. The EASY CONNECT SYSTEM improves safety before takeoff.



6.7. Takeoff preparation and checks

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

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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.

7. USE IN PRACTICE

7.1. Paraglider models of other brands

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

7.2. Winching

The WEIGHTLESS 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.

7.3. Acro

The WEIGHTLESS is not suitable for acro flying. Handle with Care!

7.4. Tandem flying

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

7.5. Use in the school environment

The WEIGHTLESS is an ultra-light harness and therefore not suitable for school use.

7.6. Using the Windshield

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Cross-country advantages

The Windshield has two distinct advantages for cross-country flying, which will only become obvious when you have tried it for yourself. The first: the Windshield reduces windchill a lot, and therefore delays upper body cooling. Second: it suppresses annoying and tiring wind noise, and reduces wind pressure on the face and eyes.

Hint We encourage you to try out the Windshield for yourself and feel the difference.

Careful packing & storing

Never pack the harness with the Windshield still in place. Take the Windshield off after landing, before laying the harness on the ground, and put it in its gray cover so it doesn't get scratched. Always store the Windshield flat so that it doesn't get bent, preferably tucked between the folds of the glider, after it is packed in its COMPRESSBAG.

7.7. Speedbag use

For takeoff

A quick and trouble-free step into the speedbag after takeoff needs some practice for any reclining harness. With the right technique you should be able to do this without using your hands (letting go of the brakes).

Observe the following instructions:

1. At liftoff remain in a forward-leaning attitude and do not slide into the harness.
2. After liftoff look quickly down at the speedbag opening.
3. Put your right heel in the opening and tension the speedbag.
4. Put your left leg into the speedbag and follow it with the right.
5. Stretch both legs forward on the footboard. The speedbag will close by itself.

Hint Alternatively, you can attach the elastic connector to your footwear to make it easier to get into the speedbag. The connector is pre-mounted in the speedbag.

For landing

Get both legs out of the speedbag in good time before landing and adopt an upright position. A stand-up landing should always be made to avoid damage to yourself or your equipment.

7.8. Speed system handling

Symmetrical acceleration

The two rungs of the WEIGHTLESS speed loop are reinforced in the middle. This not only increases comfort when pushing the accelerator, but also makes it easier to center the feet in the accelerator and thus accelerate symmetrically.

Changing to the second step

Use only one foot to accelerate with the first rung, and leave the other on the footboard. The second foot takes over the load when stepping into the second rung. Be careful not to press the heels into the speedbag fabric. Heels should not be lower than the bottom of the footboard. Low heels can spoil the clean speedbag airflow (more drag), and could overstretch and damage the material.

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Setting up the speed system is described in detail in chapter Setting up the speed system.

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.

7.9. Packing the equipment

The WEIGHTLESS is easy to pack due to its compact dimensions. Put the speedbag including the foot plate into the seat. Then fold the harness once and fold the rear spoiler. Turn the now compact package over once as shown in the picture.

Prepare your rucksack and your glider as shown in the picture. Put your glider in the backpack and slide it all the way down under the rucksack flap. Then place the folded harness on top of the glider with the protector facing upwards and pull the flap of the rucksack over the glider and the harness. This will allow the zipper to close smoothly.

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Warning Always remove the Windshield before packing.

Info When closing the rucksack, always make sure the zipper runs smoothly. It should never be under lateral tension when pulling the zipper.

Handle with Care

Warning The life of your LIGHTPACK highly depends on your care. Mechanical stresses such as dragging on the ground etc. accelerate the ageing process and should be avoided. A lightweight product is much more sensitive to stress of all kinds.

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7.10. Emergencies

7.10.1. 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

After throwing a reserve get your feet out of the speedbag immediately and stabilise the paraglider. Then try to open the cockpit and the speedbag while descending, so that you only have to open the T-piece of the front harness after touchdown.

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. This is why it is important that all buckles except the front strap should be open before touchdown.

Warning	In the event of very strong winds on the ground, consider also cutting the paraglider risers on at least one side with the hook knife before touchdown.
Warning	If a buckle or the speedbag cannot be opened, cut it with the hook knife before touching down on the ground.
Warning	The front buckle will not open under tension. Immediately after touchdown, open the T-piece as soon as it unloads. If this is not possible, use the hook knife here as well and cut the strap.

7.10.1.1. Direction of pull

Warning	When pulling the reserve, it is imperative to ensure that the direction of pull is to the side. If the reserve handle is pulled backwards/downwards at the same time, the deployment forces increase significantly.
Warning	If the reserve parachute is not pulled straight out of the emergency parachute compartment, it could become jammed in its compartment. In extreme cases, this can lead to a release blockage.

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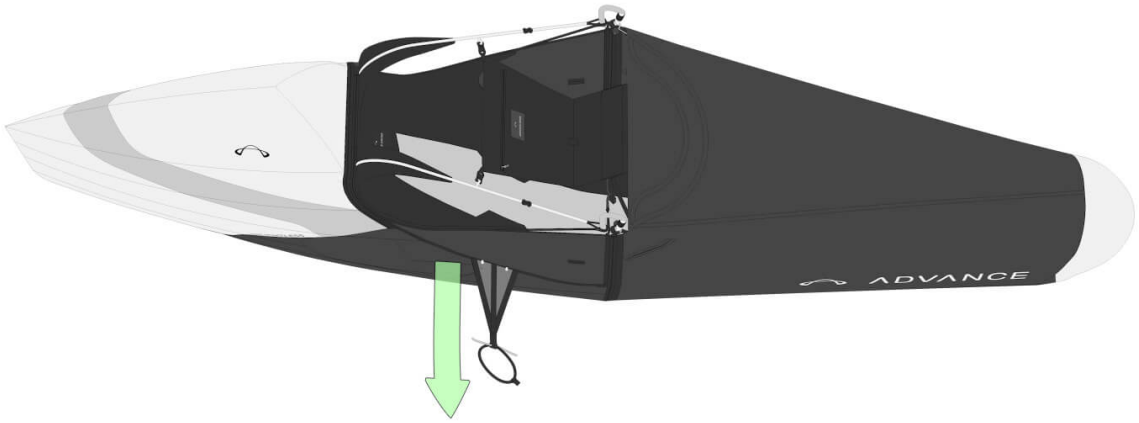

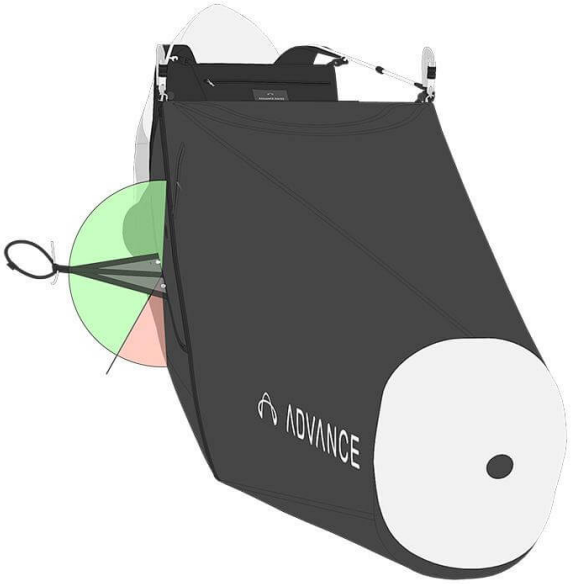

7.10.2. Water landing

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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	Landing in water with a speedbag also raises the danger level, in that there are more fastenings to open than for a simple sit-up harness.
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.

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.

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 WEIGHTLESS. 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

7.10.3. 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 cockpit so that you can secure your harness to a branch and relax while you wait.

8. MAINTENANCE

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8.1. Maintenance harness

General care

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.

Packing the reserve parachute

Most reserve parachute manufacturers recommend maintenance or repacking of the reserve parachute every 6 months to ensure reliable and quick opening at all times. If the reserve gets wet, damp or overheated, it must be definitely repacked. We strongly recommend that you let a qualified person pack your reserve. ADVANCE also strongly recommends that you regularly check the yellow locking cables in the locking loops of your harness. It is sufficient to move the cables slightly.

8.2. Foam protector

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.

8.3. Check harness

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

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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.

8.4. Carabiner service life

GRIVEL PLUME

Maximum 3 years

The main support carabiners are high quality GRIVEL PLUME Alu Carabiners (37 g, 20 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 3 years after being put into service (time period starts with the first flight) or after 300 flights and may not be used again.

8.5. 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.

8.6. Repairs harness

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.

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8.7. Removing & replacing components

General

The WEIGHTLESS is delivered with a built-in main protector, comfort foam, mounted speedbag and acceleration system. All individual parts can be easily removed, e.g. to carry out any repairs or to replace them.

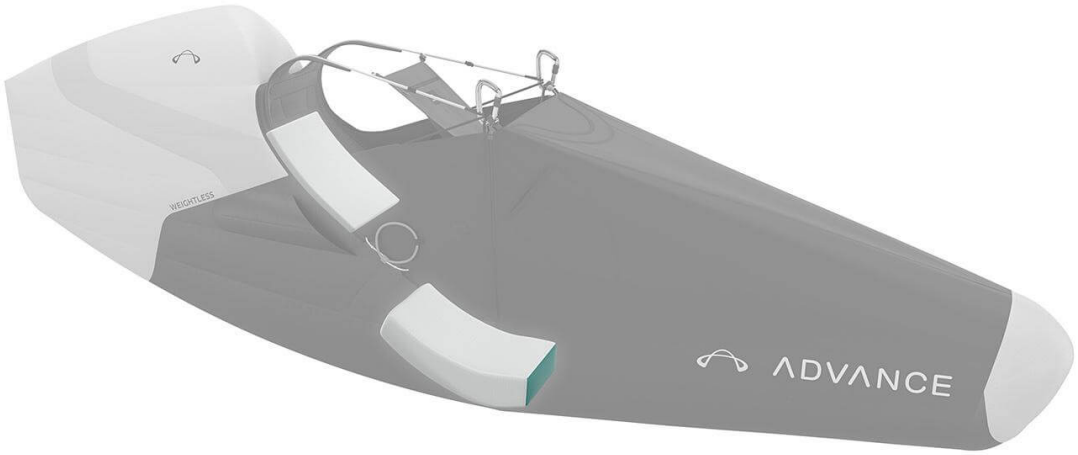
Comfort foam

The comfort foam is stored in a separate compartment in the back compartment. To remove it, open the back compartment and then pull the comfort foam out of its compartment. To reinstall, proceed in reverse order.

Main protector

The main protector compartment is located under the seat area. Open the zipper of the upper protector compartment, then you can open the zipper of the main protector compartment. Then pull out the foam protector. When reinstalling, make sure that the protector is installed correctly. The areas are marked in green. Then close all zippers correctly.

Warning — The WEIGHTLESS must always be flown with complete protector; without the complete protector it loses its certification!



Footboard

To replace the carbon footboard, remove it from its compartment inside the leg bag and insert the new one. Make sure to insert the footboard in the center.

Speed system

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Unloop the Brummel hooks and pull the speed bar lines out of the Ronstan pulleys on either side of the harness. To reinstall, reverse the procedure.

{INFO.} The elastic tensioner in the foot area can be replaced separately.

Warning Check the routing of the speed bar lines and the speedbag lines. These must not cross each other, danger of chafing!

Warning Use only the original accelerator lines. A different line or even an accelerator bar could damage the leg bag and the harness considerably due to friction.

Speedbag

The WEIGHTLESS is delivered with a mounted speedbag as standard. To mount a new speedbag you have to remove the old one first. Proceed as follows:

Warning When replacing a speedbag, always use the speedbag lines belonging to the respective speedbag.

Remove speedbag

1. Detach the foot accelerator.
2. Detach the suspension loops from the main carabiners.
3. Open the zippers on both sides.
4. Open the Velcro on the bottom of the harness.
5. Loosen the two lower gray speedbag lines that connect the speedbag to the harness.
6. Loosen the anchor stitch knot under the black adjustment ball and release the gray line completely from the black tab on the edge of the seat shell.
7. Release both lower gray speedbag lines from their attachments on the footboard. To do this, loosen the anchor stitch knots and pull each gray line off the red attachment line.

Installing the speedbag

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1. Pull the upper end of the gray speedbag line through the black loop at the edge of the seat shell.
2. Form an anchor stitch with the upper loop of the leash and pull the lower, red sewn part of the leash through it.
3. Tighten the anchor stitch behind the adjustment ball.
4. Attach the lower, red-marked end of the line with an anchor stitch to the red attachment line on the footboard.
5. Close the zippers that attach the speedbag to the harness.
6. Attach the speedbag cover to the bottom of the harness.
7. Fix the suspension loops in the main carabiners.

Warning — It is mandatory to fix the suspension loops in the main carabiners otherwise the speedbag zippers will be damaged. Attach the foot accelerator as described in the manual.

8.8. 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 that are subjected to continuous quality and environmental impact assessments. When your harness reaches the end of its useful life in a number of years' time, please remove all metal parts and dispose of the rest of the harness in a waste incineration plant.

9. TECHNICAL DATA

10. MATERIALS

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Main straps	D-PRO XTR 4mm, 15kN
Shoulder straps	D-PRO XTR 4mm, 15kN
Chest strap	D-PRO XTR 4mm, 15kN
Leg straps	D-PRO XTR 4mm, 15kN
Safe-T-buckle System	Trimmers, T3 toggle Regular Aluminium
Speedbag	LNT 16008, 136 g/m2
Outer covering	Nylon Robic 100D, 122g/m2 g/m2, Ripstop 20D A853, PU3, 54 g/m2
Carabiner	Grivel Plume, 22kN, 37gr.

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