



ADVANCE AXESS⁴

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Thank you for flying ADVANCE

Congratulations on your choice of an AXESS 4 – a quality product from ADVANCE. We hope that you will spend many rewarding hours in the air with it.

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

Register your AXESS 4 online on www.advance.ch/warranty; you will then receive product updates or safety-related bulletins about the AXESS 4 direct from us. This information will also be available to download from our website at www.advance.ch, as will the latest version of this manual and further updated information.

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

Now we wish you a lot of enjoyment with your AXESS 4, and always «happy landings».

Team ADVANCE

About ADVANCE

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

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

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

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

AXESS 4 – Elementary Allrounder

The AXESS is the classic ADVANCE beginner harness, and has become the ADVANCE bestseller - because of its large range of usefulness. In this fourth generation removable SAS-TEC visco-elastic soft-foam side and back protection, inherited from motorsport, joins the well-established Air-Foam Hybrid main protector. These additions mainly provide defence against sharp objects, but also lessen the effects of impacts. With its small packed volume and base features such as balance strap, Easy Connect and logical adjustment systems the seatboard harness is intended to be an allrounder, for which generally simple handling is essential.

Outstanding Features

Elementary

The AXESS 4 has all the basic qualities that make up a beginner, and also allround harness. These range from easy adjustment, very straightforward securing system, safe riser clip-in system to easy sliding back after takeoff and standing up again before landing.

Compact & robust

The AXESS 4 is constructed to be robust, has a seatboard and now SAS-TEC crash protection in addition to the main protector. The harness packs down small, especially considering the safety items it contains. When folded the back section folds snugly to the seatboard, and the main protector compresses when confined in the paraglider rucksack.

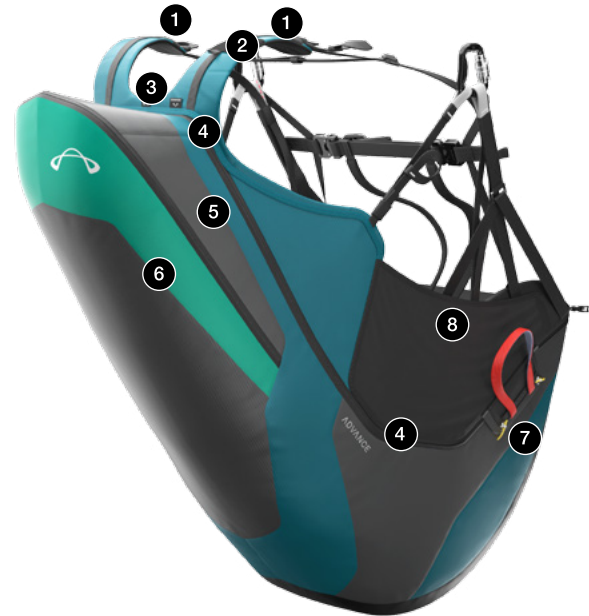
Safe

The AXESS 4 has the removable ADVANCE Air-Foam Hybrid model main protector – now in its third generation. This protector was specially developed for the AXESS 2, and is notable for its full protection function before a takeoff attempt. Visco-elastic SAS-TEC components at the side and all the way up the back to the neck vertebrae also provide protection from pointed objects and mild mishap impacts.

Features at a glance

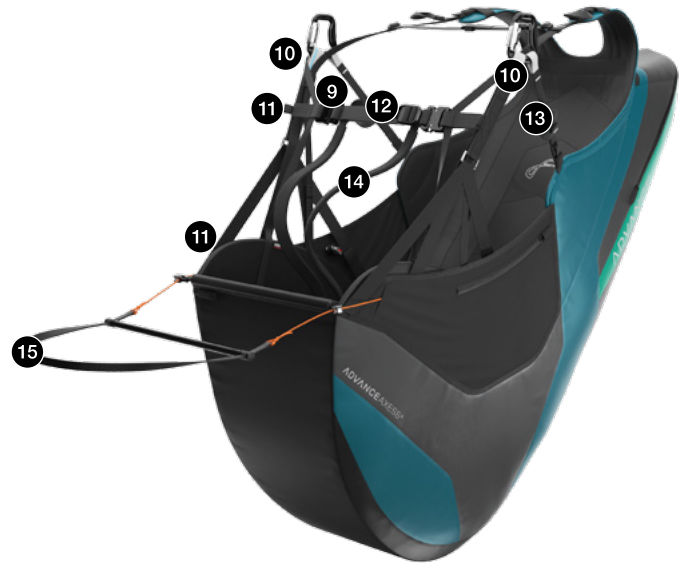
Side view

- 1 Drink tube guides
- 2 Shoulder strap Velcro (e.g. for Solario)
- 3 Drink tube exit
- 4 Reserve V-connection channel with zip
- 5 Pocket inside for drink system
- 6 Generous back pocket
- 7 Outer container with Labyrinth closure
- 8 2 side pockets: 1 zip-up outside pocket (left),
1 inside mesh pocket (right)



Front view

- 9 Popular 2-buckle closure system
- 10 Easy Connect System
- 11 Attachment for optional foot stirrup
- 12 Cockpit or front container compatible
- 13 Markings on the straps for basic settings
- 14 Neoprene covers on the leg straps
- 15 Speed system with carbon speedbar

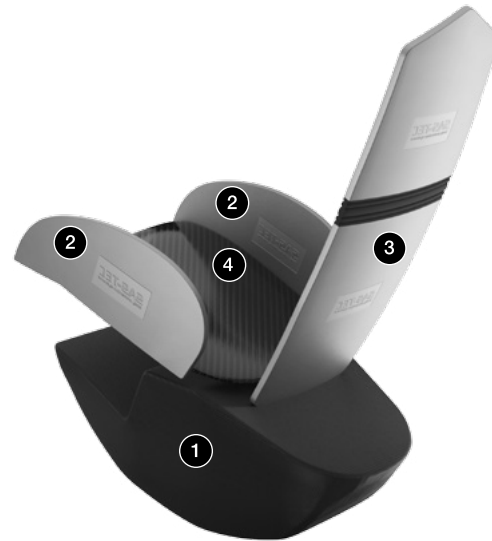


Protectors at a glance

The AXESS 4 has a LTF (91/09) certified Air-Foam Hybrid-Protector, visco-elastic soft-foam protection at the sides and the back – extending up to the neck vertebrae. The visco-elastic parts from the German SAS-TEC company attenuate impacts and provide protection from pointed obstructions.

All the protection parts can be replaced. See also section “Replacement Parts”.

- 1 Air-Foam Hybrid-Protector
- 2 SAS-TEC Side crash and penetration protection
- 3 SAS-TEC Back crash and penetration protection
- 4 Carbon Seatboard



Safety information

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 should be made before the harness is flown. Correct adjustment of the AXESS 4 greatly contributes to safety, correct function and comfort in flight.

No protector can provide complete and guaranteed protection. The Air-Foam Hybrid-Protector solely serves to attenuate impacts and thereby minimise injuries that could result from a crash from a low height that may be associated with a takeoff or landing mishap. The SAS-TEC elements at the sides and back reduce the effects of impacts and resist the penetration of sharp objects.

When carrying out SIV training over water you should be aware that the air in the Air-Foam Hybrid-Protector floats in the water – and can tip the pilot head down. Then there's the risk that foam parts will eventually fill with water and sink, with the pilot.

AXESS 4 certification is restricted exclusively to paraglider sport.

General recommendations about paragliding

Taking part in paragliding sport requires appropriate training and a comprehensive knowledge of the equipment, as well as the necessary insurance and licences. A pilot must be able to correctly assess the weather conditions at the chosen site before taking off. His abilities must be sufficient for the demands of the selected paraglider. When carrying out paragliding the pilot must also take responsibility for his care of the natural world and the landscape.

The wearing of an adequate helmet, suitable footwear and clothing, and the carriage of a reserve parachute are all essential. Before every flight all items of equipment must be checked for damage and airworthiness. A pre-takeoff check must always be carried out.

While engaged in paragliding every pilot bears sole responsibility for all risks, including those resulting in injury and death. Neither the manufacturer nor the seller of a paraglider can guarantee the safety of a pilot, or be held responsible for it.

Preparing the product

Delivery

Before delivery every ADVANCE product has to be checked by the dealer for delivery package contents and correct initial settings. A completed warranty form makes sure that deficiencies of the product, attributable to the manufacturer, are covered by the ADVANCE warranty (see under “Warranty” in the section “Service”).

We ask you to complete this form on the ADVANCE website under “Warranty”, within 10 days of purchase.

Delivery package

Delivery of a AXESS 4 harness contains:

- Removable EN/LTF-certified Air-Foam Hybrid Protector
- 2 side SAS-TEC soft foam protection
- 1 SAS-TEC back soft foam protection
- Speed system with Carbon speedbar
- 2 Edelrid Alias alu carabiners
- Ronstan ball-bearing speed pulleys
- Reserve connection
- Reserve handle with attached four flap inner container

- Getting Started Booklet

Optional:

- Foot stirrup incl. fitting speed system
- Radio pocket to attach to shoulder strap

Air-Foam Hybrid-Protector

The Air-Foam Hybrid-Protector built into the AXESS 4 has an ingenious interior design and needs no special treatment. Under normal circumstances it inflates itself with air automatically within 60 seconds of unpacking the harness. It will therefore be ready to provide full protection by the time takeoff can take place. Should there be a mishap it absorbs deceleration energy and dampens the impact. The risk of back or pelvis injury is significantly reduced.

The Airbag consists of a framework of vertical PU walls, like the frames and bulkheads of a ship. The predetermined tensioning between these walls assembles the Airbag in all directions when it is permitted to inflate. Air intake and venting is controlled by an assortment of sewing technology.

The airbag conforms to the LTF 91/09 certification requirements.

Setting up the harness

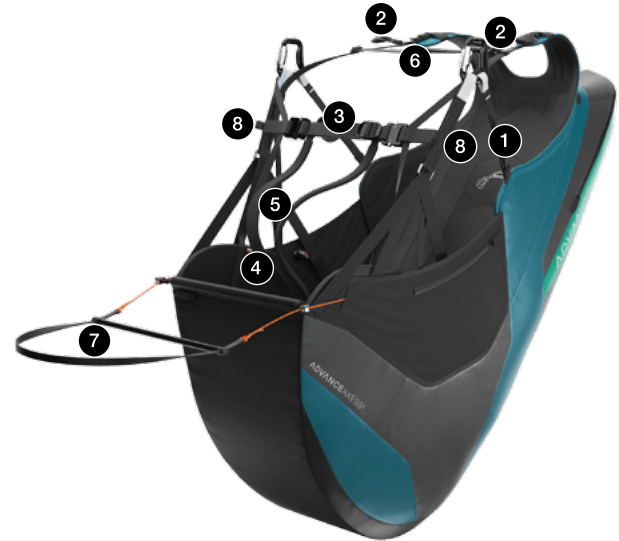
Adjusting the AXESS 4 is very simple. Put the harness on, close the chest strap and leg straps (2-buckle system) and hang the AXESS 4 up by its carabiners in a harness stand.

Neoprene covers protect the shoulder, back and chest strap buckles. Their straps are smoothly adjustable over their full lengths, so the sitting position can be quickly and easily adjusted in flight.

The development team have defined the basic settings, and these are indicated as standard by grey sewing on the shoulder, back and leg straps. Pictures in this manual show the various adjustment possibilities.

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.

i **Info:** For realistic adjustment the harness back pack should be packed as for flight, and the reserve mounted as well. These preparations will provide a good simulation of an in-flight situation.



1 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.

2 Setting the shoulder straps

The AXESS 4 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.

3 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.



Caution: Make sure you close the buckles properly.

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

4 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.

5 Seatboard angle adjustment

The seatboard **5** angle can be quickly adjusted to any position. Seatboard setting is purely a matter of taste, to suit the pilot's preference.



Tip: Loosened seatboard straps make it very easy to slip into the harness after takeoff, and the resulting bent leg angle provides roll stability.

6 Setting the small chest strap

The small chest **6** strap holds the shoulder straps in the best position for takeoff and landing. The width can be adjusted to any position.

7 Adjusting the speed system

The speed system **7** should be adjusted to a length where the full travel of the paraglider speed system can be used. Make sure that the speedlines are not set too short – the wing must not be permanently accelerated in flight.

8 Mounting the foot stirrup and a cockpit

The optional foot stirrup can be attached to the two tape loops **8** underneath the chest strap. These loops can also be used to additionally fasten a cockpit or front container using softlinks. Both of these additional items can also be attached to the carabiners.



Caution: When a reserve parachute is carried in a front container it is imperative that its connection lines are hooked in the main carabiners. The two tape loops are only for securing the container.

Exchanging parts

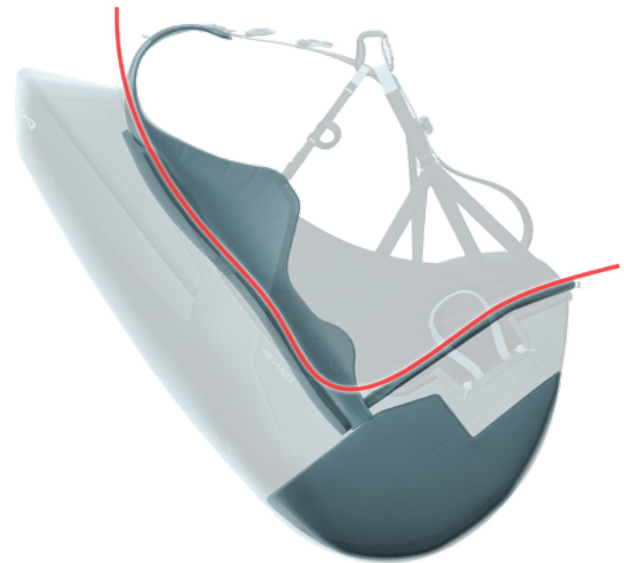
The AXESS 4 is delivered complete with an installed Air-Foam Hybrid-Protector, visco-elastic SAS-TEC soft-foam side protection and a similar back protection component. These individual parts can be removed for repair or exchange.

Air-Foam Hybrid-Protector

The Air-Foam Hybrid-Protector forms part of the harness certification and should only be removed if necessary – e.g. for drying after a SIV water landing, for inspection, or for replacement if damaged in an accident. It lives in its separate compartment under the seatboard.

To remove it, feel around inside the bottom of the back pocket for the zipper, and open it carefully. Caution: the zip slider does not have a puller tag! Then press the air out of the protector with the hands and pull it out of its compartment. This stowage is exactly tailored to the protector so patience may be required.

To replace: first press the air out of the protector by hand and lead it in- to its compartment, with the tapered lower end facing forward. Make sure that it ends up directly under the seatboard. Close the protector compartment with its zip slider, then the back pocket, as required.



SAS-TEC soft-foam back protection

To save weight the SAS-TEC soft-foam back protection can be taken out. It has its own pocket in the back of the harness. Open the V-connection zip. Under the V-connection line attachments is a pocket for stowing these lines when a steerable reserve is used for the AXESS 4. The zip you need is in this pocket; find and carefully open its slider (no puller tag). Bend the SAS-TEC soft foam component forwards and pull it upwards, out of its pocket.

To reinstall, repeat the above in the reverse order. To get the SAS-TEC foam back in its pocket it has to be bent forward. Only when it is fully back in position can it then be coaxed flat again.



Info: removing the SAS-TEC soft-foam back protection saves about 300gm. Take note that without this component the overall AXESS 4 safety provision is reduced, and there may be a small comfort penalty to pay (back support).

SAS-TEC soft-foam side protection

To remove a SAS-TEC soft-foam side protection open the zip of the relevant pocket and pull the foam out carefully. Reverse the procedure to reinstall. SAS-TEC side components fit their pockets perfectly and can be difficult to remove or refit. As well as that, they contribute to the perfect shape and comfort of the AXESS 4. As a general rule ADVANCE advise against dismantling your harness to save weight.

Fitting the optional foot stirrup

The optional foot stirrup, included in AXESS 4 LTF 91/09 certification, should be fitted as follows:

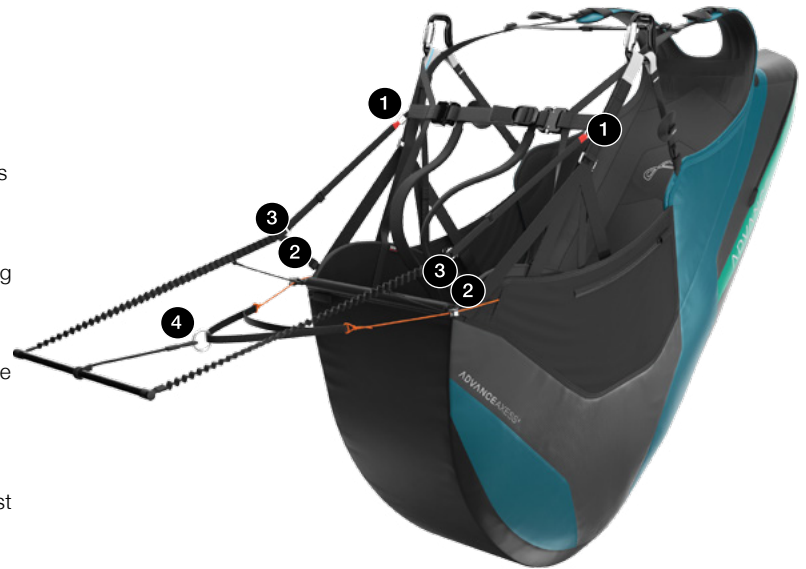
The black loops at the ends of the stirrup support lines attach to the small tapes loops below the carabiners **1** with small quick-links (Maillons Rapides). The bungee holdbacks from the harness go through the D rings at the front of the seat shell **2**, and should be tied to the small loops halfway 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.

Cockpit attachment


A cockpit can be supported from the small tape loops below the chest strap, or from the main carabiners.



Installing the reserve

General advice


The AXESS 4 reserve compartment is in the aerodynamically ideal low position


 **Caution:** Installing the reserve must be done by a suitably skilled person. Your safety depends on it!


Bear in mind that every reserve/harness combination has its own peculiarities. To ensure reliable functioning it is essential that pilot and packer are familiar with the system before the reserve is installed. We strongly recommend that the reserve is installed by a qualified person or your ADVANCE dealer.


Suitable reserves/reserve compartment volume

Older type, relatively bulky reserves, are more difficult to deploy from modern and more compact harnesses, especially under high g loadings. The certified reserve volume for the AXESS 4 depends on harness sizes. S + M size: 2.5–6.5 litres, L size: 2.5–7.0 litres.

 **Info:** for a general approximation of a reserve volume, its weight in kilos x 2.7 gives a volume in litres. But, depending on packing style and skill, it can still be that a reserve that conforms to the maximum certified volume for a container, using the weight formula above, cannot be released without problem.


 **Caution:** if the volume of the packed reserve lies within the upper third of the certified volume range, it is especially important to observe that the reserve has been correctly folded to conform to the length of the inner container!

 **Caution:** when installation is complete only a test release/compatibility check can confirm that the actual reserve/AXESS 4 combination will work.

 **Caution:** a reserve parachute volume can expand by up to 30 % when it has been newly folded. ADVANCE therefore strongly recommend that a new compatibility test is carried out after every repack.

Steerable reserves

The AXESS 4 can be used with a steerable reserve. The reserve risers connect to the coloured supports under the covers on the harness shoulders, using two maillons, each of 2400 daN minimum safe working load. The reserve risers run to the reserve compartment via the channel at the side. The unused harness V-connection can be led through the opening into the back pocket and stowed away.

 **Caution:** steerable reserves tend to take up more volume.

i **Info:** you can also use QuickOut carabiners with a steerable reserve on the AXESS 4.

In general

The reserve handle and the four-flap inner container are fixed together and this combination is designed so that the pull of the handle acts equally over the whole width of the inner container. This minimises the risk of the container jamming in the reserve compartment, or the reserve lines getting caught up. The reserve handle together with the four-flap inner container are essential parts of the harness, and this arrangement conforms to the latest LTF certification requirements. Only the original reserve handle with its four-flap inner container is allowed to be used.

Packing the reserve in the inner container

Always fold your reserve to the shape and dimensions of the inner container supplied with the AXESS 4. At the final packing stage put the line bundles opposite the reserve handle. When the lines have been stowed in the inner container there should be 90 cm of reserve line remaining outside, between the inner container and bridle/steerable risers.



Close the container flap in the order indicated (1-3). Secure the final container flap (3) with a 5 to 6 cm line loop (ca. 3 finger widths). Now check the tension of the bungee loop and adjust if necessary. --> lift the package by the lines - the weight of the reserve should release the line loop.



Closing the inner container

Now close the outer container flap (red border) with two similar line loops (5 to 6 cm). These two line loops are secured in the two attached rubber bands through their eyelets on the outer flap.



Connecting the reserve to the harness

The reserve bridle and the harness connection must be connected to each other by the means of a suitable quicklink of at least 2400 daN safe load (fig. 1). These two lines must be stabilised at the maillon, for example by using rubber O rings, to prevent the webbings slipping round and cross-loading the maillon during a reserve deployment.

In collaboration with the PMA (Paraglider Manufacturer's Association) and German climbing rope manufacturer Edelrid, ADVANCE carried out an exhaustive series of tests in 2017 to investigate the strength of the direct loop-in-loop method of connecting these two webbing items (fig. 2). This involved a series of material combinations of harness V-lines and reserve bridles, such as are used in ADVANCE harnesses with COMPANION reserves. Compared with a Maillon Rapide connection the strength of this arrangement was slightly reduced, but not to an extent that would compromise its function.

For this reason loop in loop connection between ADVANCE products and COMPANION reserves is approved, so long as basic safety measures are observed: namely, loops centred and the webbing connection pulled as tight as possible. We cannot make a definitive statement about the strength of such a connection of ADVANCE harnesses with other reserve.



Caution: don't use sticky tape instead of O rings for locating the loops on the maillon!



Info: when looping a COMPANION reserve to the AXESS 4 the V-line Neoprene protector must finally be pulled over the connection.

Fig. 1

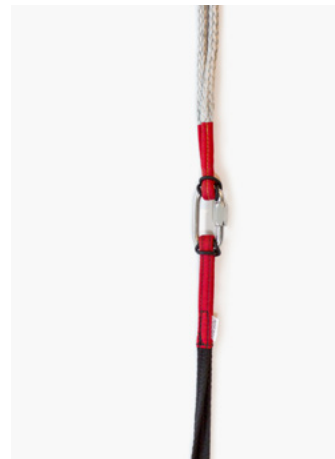


Fig. 2



Putting the inner container in the reserve compartment

First lay the harness V-connection in the compartment, then put the inner container on top. It is essential that the inner container closure flaps face the bottom (when in flight) of the harness. Follow the directions indicated on the inner container and the inside of the reserve compartment. The silver points must lie one on the other. When the inner container is in the compartment two silver rectangles should be visible. the reserve handle connection must not be twisted.

! **Caution:** If a repacked reserve does not fit the shape of the inner container it must be refolded to the correct shape.



Closing the reserve container

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 left side goes between the flaps of the right side (Labyrinth seal). The Labyrinth closes itself using small magnets. Now carefully slide the right hand zipper from right to left, then back to the right **4** and stow it in its zipper garage.

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 **5** to close the channel. Finally stow this zipper in its zipper garage.

i Info: 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 two short lengths of line 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**. It is also possible to do this for the AXESS 4 without the help of the packing lines.

Remove these lines carefully, leading them under the yellow cables to avoid damaging the white loops by friction.

! **Caution:** To guarantee a correct release always make sure that the yellow cables run freely.

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

! **Caution:** Never connect the reserve directly to the inner container!



Compatibility check

Correct installation of a reserve must always be tested by a test release. To do this sit in the harness, straps fastened with packed back pocket, hanging by its carabiners from a harness hanger. Then pull the reserve out by its handle. It is not sufficient to pull the reserve out when not sitting in the harness as for flight. The release procedure must take place in the flying position, without hindrance, and in accordance with the requirements of this manual. The force required to release the reserve must not be less than 4 daN and not more than 7 daN. If in doubt you should contact a qualified person or your ADVANCE dealer.

The correct throwing technique has to be used – a pull to the side. Anything else can make deployment more difficult.

The following factors can make successful reserve opening more difficult, or prevent it – especially if any apply together:

- Reserve too big – too much volume for the compartment or inner container.
- Reserve not folded to the shape of the inner container.
- Incorrect throwing technique. A pull to the side is required (Caution: don't pull the reserve handle straight upwards).
-

- The reserve volume was suitable for the harness when first fitted in the new harness, but after a repack it is too big.
- Pilot arm length is a factor: short pilots with short arms can sometimes not pull out the reserve.
- Deployment under high g (more than 3g, for example in a spiral dive).



Info: A successful compatibility test can reinforce the tester's confidence in the reserve system.



Caution: Before every flight check that the reserve handle is in its correct position, and that the yellow cables are correctly sited.



Tip: We recommend a brief check of the reserve handle during every flight. This helps to memorise its position. We also advise you to mentally rehearse the sideways pulling and throwing action.

Use in Practice

General

The AXESS 4 should principally be flown sitting in a upright position. This gives the best view in the air

The AXESS 4 has many helpful qualities. If the harness is correctly set up information from the glider is transmitted directly to the pilot's mid section. The weight of the upper body is evenly distributed up to the shoulders; pressure points are avoided, blood flow is not restricted, and mental concentration remains good, even on long flights.

The AXESS 4 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.

Ground handling

The AXESS 4 is very convenient for ground handling because of its light weight and the ability of its pilot to stand upright.

Clipping in

The EASY CONNECT coloured markings on the carabiner support loops make it especially easy to clip in an ADVANCE paraglider to the AXESS 4. The pilot only has to make sure that the red and

blue markings on the paraglider risers join the equivalent red and blue lines on the AXESS 4 harness carabiner loops. The EASY CONNECT SYSTEM contributes to greater safety before takeoff.

Takeoff preparation and check

Before every takeoff you should check the following:

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

Takeoff and Landing/Balance Strap System


AXESS 4 freedom of pilot movement combined with the Balance Strap System greatly simplifies takeoffs and landings. Running shoulder straps enable a pilot to adopt a completely upright stance for takeoff and landing, and freely carry out the expansive steps sometimes required.

The running single-point seatboard support of the Balance Strap System makes it easy for the pilot to slide into the seat after takeoff, and stand up again before landing. This traditional balance principle

first comes into effect after lift off if the pilot raises the thighs to a 90 degree angle to the body. Without the help of the hands the pilot then automatically slips back into the seat. Pushing the hips and legs forward before landing has the opposite effect, and the AXESS 4 tips the pilot forward for landing and running. Like at takeoff, hands can stay safely on the brakes. The Balance Strap System looks after itself – another safety plus.

Using the speedbar

The AXESS 4 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.


 **Caution:** Connect the speed system to the paraglider for every flight. Free-swinging speed lines could prevent a successful reserve throwing.

Flying with the foot stirrup

ADVANCE recommends that you only use the optional foot stirrup specially designed for the AXESS 4, and the only model to have been included in the LTF 91/09 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.

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

Flying with ballast

The AXESS 4 was not designed for carrying water ballast and does not have special stowage space for it.

If you want to increase your weight with water ballast, the two tape loops under the ends of the chest strap could be used as attachment points. The main carabiners could also be used for this purpose.



Info: If a water bag is hung from the main carabiners, or the loops mentioned above, you should be aware that the flying behaviour of the wing can be altered, and, in particular, agility reduced.

Use for training

The AXESS 4 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.

Winching

ADVANCE harnesses are suitable for winch launching. The AXESS 4 may only be connected to the tow link using rope loops or maillons (quick links) fixed directly to the main carabiners. If you are in any doubt you should always consult the winch driver or someone authorised by the manufacturer.

Acro flying

The geometry and strength of the AXESS 4 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.

Tandem flying

Because of its size the AXESS 4 is not suitable for tandem flying – either for pilot or passenger.

Paraglider compatibility

The harness can be flown with every paraglider. There is no restriction.

Landing in water

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. As with all harnesses you should consider that the protector floats initially and can turn the pilot face down, head under water. Wearing a lifejacket is essential during SIV training.

Landing in water without a lifejacket

If an unintentional water landing takes place, outside the protection of the SIV environment, the harness buckles must be unfastened immediately and the AXESS 4 taken off. Otherwise the risk of drowning is very high. As general advice ADVANCE recommend that the AXESS 4 is not flown over water.

Landing in water with a lifejacket

Even when landing in the water during SIV, with a lifejacket, it is recommended that the AXESS 4 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.


Care and maintenance after landing in water

After contact with water all the AXESS 4 protectors should be taken out. Then harness, protectors and reserve inner container should be carefully laid out in the shade outside to dry, or, even better, the empty harness itself could be hung up by its carabiners and gently wafted to and fro. The reserve should be removed and dried separately. It must then be repacked and reinstalled in the AXESS 4.

Care, check & repair

Care and maintenance

The AXESS 4 was designed for high loading and extreme demands. The requirements for the choice of materials were accordingly set especially high. But the life of the harness depends, to a great extent, on the way it's looked after by its users, and we recommend that the harness is routinely inspected for signs of wear, damaged seams and webbing, and that damaged parts are replaced. It is especially important to note that any suspected damage should be immediately taken to an authorised workshop for repair.

 **Caution:** Do not modify your harness, and never fly with a harness that has any kind of damage to its webbing.

It is recommended that the harness is completely checked at least once a year: this must include the condition of the seams and webbing parts, and the operation of the buckles. Don't forget the regular airing and repacking of your reserve parachute. If your reserve has been thrown in an emergency your harness should also be checked by the manufacturer or an authorised service centre.

Ultraviolet light, temperatures below -20°C and above $+60^{\circ}\text{C}$, humidity, salt water, aggressive cleaning agents, unsuitable storage as well as physical abuse (dragging over the ground) speed up the ageing process.

The life of your harness can be greatly extended if you observe the following points:

- Allow a wet or damp harness to dry completely at room temperature, or outside in the shade. Always repack your reserve.
- If your harness gets wet with sea water rinse it thoroughly in fresh water. Always repack your reserve.
- Only clean your harness with fresh water, and a little neutral soap if necessary. Never use solvents.
- Check the harness connection and reserve bridle after every reserve deployment.
- A qualified person must check the harness after any very high loading (e.g. heavy crash).
- Regularly inspect the harness for damaged seams and webbing. In particular check the harness/reserve connection and the seams near the main carabiners.
- Don't subject the harness to extremes of temperature and make sure it gets adequate ventilation, to prevent condensation forming.
- Do not leave the harness in the sun (UV radiation) before and after flying.

Most reserve parachute manufacturers recommend an inspection and repacking every six months, so as to guarantee a fast and routine opening every time. If the reserve gets wet, damp or overheated it must definitely be repacked. We strongly recommend that you let a qualified person pack your reserve. In addition, ADVANCE also strongly recommend that you regularly check the front container to see that the yellow cables run through their loops properly. Then you can be sure they will easily release the reserve when required.

Air-Foam Hybrid-Protector Care

For maximum protector life it should not be compressed for extended periods, and never stored wet or damp. Apart from this requirement the Air-Foam Hybrid-Protector needs no special care during normal use. If, however, it is involved in a crash, it must unquestionably be inspected for signs external damage. If the Protector suffers damage it must be replaced. The harness/rucksack must not be stored close to aggressive substances or in long-term heat.

Check

The complete set of equipment has to have a check at an official ADVANCE checking organisation after every 24 months. At a check all components are evaluated according to strict guidelines and with great

care. Finally the overall condition of the paraglider is assessed and recorded on the test record.

You can find more information about the check in this manual in section «Service», or on www.advance.ch.

Repairs

As a general rule you should not attempt to repair a harness yourself. The various seams are made with great precision, and, for this reason, only the manufacturer or an authorised service centre may make repairs using original materials.

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.

Technical Data

AXESS 4

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Pilot height	cm	155–172	165–183	178–202
Seat width	cm	34.0	35.5	37.0
Seat depth	cm	40	44	46
Support point height	cm	42	44	46
Chest strap width	cm	42–54	42–54	42–54
Harness weight	kg	3.70	3.90	4.10
Weight speed system	kg	0.08	0.08	0.08
Harness and protector certification		EN 1651 & LTF 91/09, 120 kg		
Colours		Anthrazit/Spectra Green – Coffee Brown/Fusion Yellow		

Material description

Description	Name & Dimension	Manufacturer	Breaking Load
Leg strap	70337 – 15 mm – Polyamid	Güth & Wolf	1'000 kg
Back strap	70337 – 15 mm – Polyamid	Güth & Wolf	1'000 kg
Shoulder strap	70337 – 15 mm – Polyamid	Güth & Wolf	1'000 kg
2 buckle closure system	Clip-in buckle system Cobra	Austrialpin	
Seat cloth	Nylon Oxford 210D, PU3	Seunghee	
Back cloth	Nylon Ripstop Oxford 210D, PU3 Stripes: Nylon Robic 100D, PU2	Seunghee	
Carabiners	Alias – 22 kN Aero Tec Twist Lock	Edelrid	2'243 kg
Reserve-V-connection	Dyneema 10 mm	Techni Sangle	2'320 kg
Air-Foam Hybrid-Protector	Internal 25 mm foam wall structure – N-Robic 100D & 20kg/cu.m foam	Seunghee	

Certification

The AXESS 4 was tested and certified in accordance with DIN EN-Norm 1651 at 120 kg supported weight. The Airfoam-Hybrid-Protector has LTF certification. Only the original reserve handle and its attached four-flap inner container may be used. This conforms to the latest requirements of LTF 91/09.

Service

ADVANCE Service Centres

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

The ADVANCE website

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

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

- complete the warranty card online up to 10 days after purchasing the glider, enabling you to enjoy the full benefits of the ADVANCE warranty.

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

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

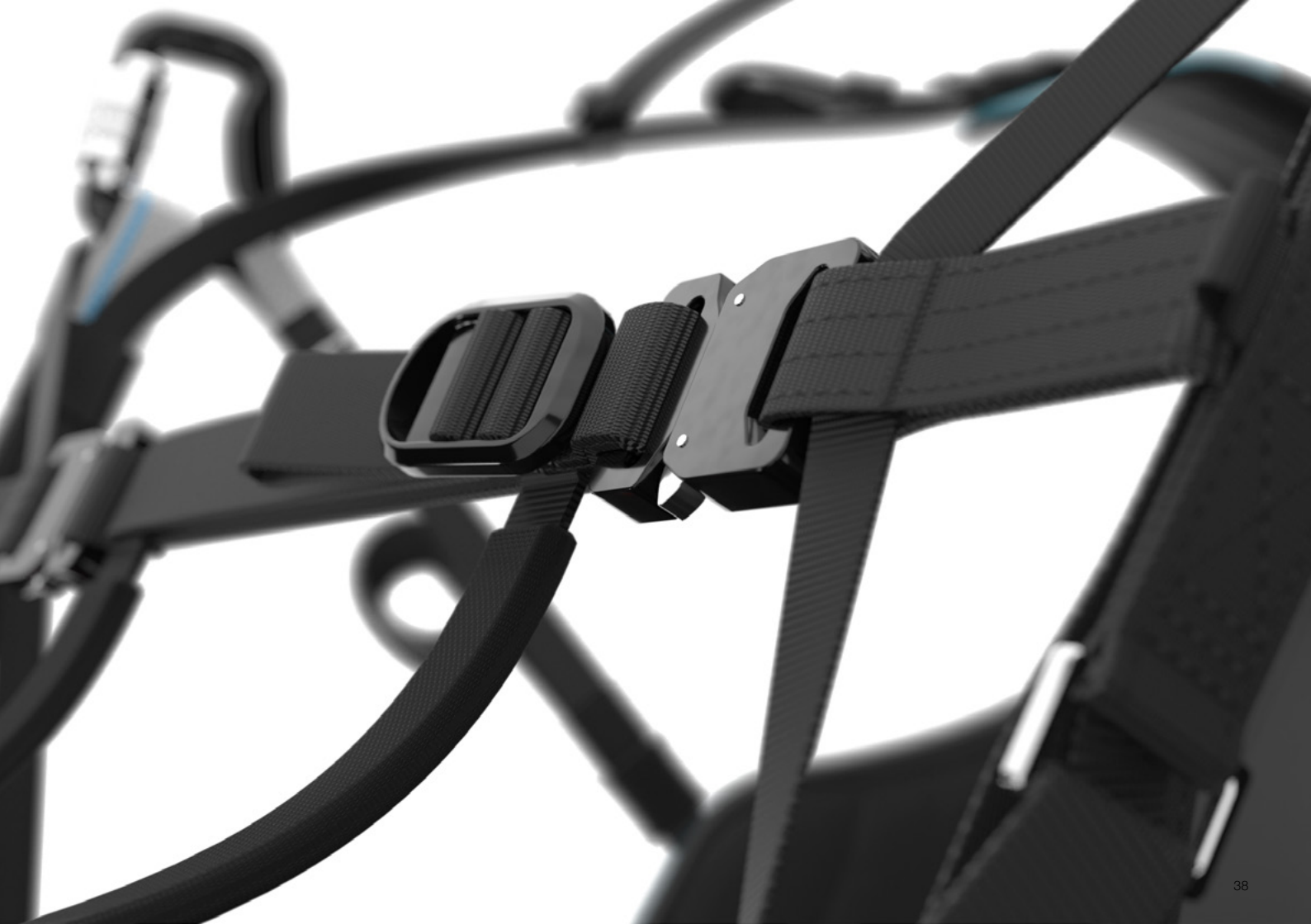
Product registration

Set up a MyADVANCE-Account on www.advance.ch/garantie and register your harness direct online after purchase. You will then benefit from the extended ADVANCE Warranty. This is valid for 3 years and covers defects that can be attributed to manufacturing faults.

In the MyADVANCE-Account you can find all the documentation for your harness as PDF, e. g. manual and other information. You can also look at spare parts for your product and ask ADVANCE support direct.

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). This warranty is valid for three years from the date of purchase of the product. Warranty and Service Intervals begin from the date of the first flight, recorded on the identification plate. If no date is evident the applicable date is that on which the harness 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.



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