



 **OZONE**

EXOCERT

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THANK YOU

Thank you for choosing Ozone.

As a team of free flying enthusiasts, competitors and adventurers, our mission is to produce paragliding equipment of the highest quality using cutting edge designs and the best technical materials available.

The Exoceat is a modern sleek high performance solo harness intended for experienced pilots. Ergonomically designed from the ground up, the Exoceat is very comfortable and efficiently aerodynamic, optimised for serious XC and competition flying.

Our development team is based in the south of France. This area, which includes the sites of Gourdon, Monaco and Col de Bleyne, guarantees us more than 300 flyable days per year. This is a great asset in the development of the Ozone range. We know that quality and value for money are essential considerations when choosing equipment, so to keep costs low and quality high we build all our wings and harnesses in our own production facility. During production all Ozone products undergo numerous rigorous quality control checks. This way we can guarantee that our equipment meets the same high standards that we expect ourselves.

Please watch the Exoceat assembly video at <http://flyozone.com/paragliders/en/products/harnesses/exoceat/watch-the-video/>

Safe Flying!
Team Ozone

WARNING

- Paragliding is a potentially dangerous sport that can cause serious injury including bodily harm, paralysis and death. Flying an Ozone harness is undertaken with the full knowledge that paragliding involves such risks.
- As the owner of an Ozone harness you take exclusive responsibility for all risks associated with its use. Inappropriate use and or abuse of your equipment will increase these risks.
- Any liability claims resulting from use of this product towards the manufacturer, distributor or dealers are excluded.
- Be prepared to practice as much as you can - especially ground handling, as this is a critical aspect of paragliding. Poor control while on the ground is one of the most common causes of accidents.
- Be ready to continue your learning by attending advanced courses to follow the evolution of our sport, as techniques and materials keep improving.
- Use only certified paragliders, harnesses with protector and reserve parachutes that are free from modification, and use them only within their certified weight ranges. Please remember that flying outside of certified configurations may jeopardise any insurance (e.g. liability, life etc) you have. It is your responsibility as the pilot to verify your insurance cover.
- Make sure you complete a thorough daily and pre-flight inspection of all of your equipment. Never attempt flying with unsuitable or damaged equipment.
- Always wear a helmet, gloves and boots.
- All pilots should have the appropriate level of license for their respective country and third party insurance.
- Make sure that you are physically and mentally healthy before flying.
- Choose the correct wing, harness and conditions for your level of experience.
- Pay special attention to the terrain you will be flying and the weather conditions before you launch. If you are unsure do not fly, and always add a large safety margin to all your decisions.
- NEVER fly your glider in rain, snow, strong wind, turbulent weather conditions or clouds.
- If you use good, safe judgment you will enjoy many years of paragliding.
- Respect the environment and look after your flying sites.
- If you need to dispose the wing, do so in an environmentally responsible manner. Do not dispose of it with the normal household waste.

Remember, PLEASURE is the reason for our sport!

TEAM OZONE

Everyone at Ozone continues to be driven by our passion for flying, our love of adventure and our quest to see Ozone's paraglider development create better, safer and higher performing paragliders.

The paraglider design team is led by David Dagault; Dav has a wealth of experience both in competition, adventure flying and paraglider design. Also on the design team are Luc Armant, Fred Pieri and Russell Ogden. Luc is a top competition pilot and XC addict with a background in naval architecture, he brings a wealth of knowledge and ideas to the design team. Fred is a mathematician, mechanical engineer and vol Biv specialist. Together with Luc he works closely with Dav in the design process. Russ is a top competitor and test pilot, he can usually be found putting the latest creations through a series of test manoeuvres. Harness development is lead by Erich Lotscher. Erich has a great deal of experience designing and developing harnesses and is responsible for many of the latest Ozone harnesses including the Ozium and Forza.

Mike Cavanagh is the boss and multiple winner of the UK XC league. When he's not out flying he generally keeps control of the mayhem. Promotion and team pilots are organised by BASE jumping legend and mini wing specialist Matt Gerdes. He works closely with graphic designer Loren Cox. Loren is a keen pilot from Salt Lake City, USA.

Back in the office Karine Marconi, Chloe Vila and Isabelle Martinez run the show. These wonderful ladies look after the ordering system, the dealers, the design team and the general day to day running of the company - without them it would be chaos.

Our manufacturing facility in Vietnam is headed up by Dr Dave Pilkington who works relentlessly manufacturing gliders and producing prototypes as well as researching materials and manufacturing processes for our future products. He is backed up by a superb team managed by Khanh and Phong with over 700 production staff.

YOUR EXOCEAT

The Exoceat is a low-drag, high-performance harness for serious XC and competition flying. It is the result of a multi-year development process which included extensive testing, wind-tunnel research, and a prolonged beta phase involving the world's top competition pilots. With a technically advanced foot-support system, bomb bay-reserve deployment system, and super-low-drag fairing developed from real aerodynamic research, the Exoceat is a no compromise next-generation competition harness.

Creating a harness design centered around the reduction of drag was the primary concern, testing various faring designs at the ISAE school in Toulouse, France. The Ozone R&D Team structured the rest of the design around an optimised flight position, faring, and harness frame.

The Exoceat features a special air inlet which is result of two important requirements: first, it must be smooth and low drag, and second, it must provide maximum pressure to the faring regardless of its position in the air during harness movement (yaw, pitch, or thermalling positions).

As with paraglider design, we focused on the reduction of wrinkles, creases, and deformation throughout the harness. The Exoceat's inflatable nose cone, rear faring, and main surfaces are all very smooth. Closed cell foam provides a light but rigid shell encompassing the pilot and encasing the double reserve container. From leading edge to trailing edge, the Exoceat is remarkably smooth and low-drag, making it the most efficient harness we have ever built.

In addition to drag efficiency, the design of the Exoceat focuses on pilot comfort and stability. The bucket seat design creates a highly consistent loading of the frame, with no pressure points or compression zones on the pilot, even in highly-loaded situations such as spiral dives. The seat design is fully supported from your upper upper back to the bottom of your feet, with a specially designed stirrup system that creates the sensation of resting your legs "on" something, instead of "pushing" against a bar. This "footrest" sensation, coupled with the rigidity and support of the bucket seat, means that there is no compression against your shoulder straps and you can easily relax against the back of the harness – saving energy and increasing pilot efficiency.

The Exoceat features many adjustments, allowing the pilot to tailor the "handling" of the harness to taste. Fully adjustable roll stability settings allow the pilot to fine tune the characteristic of the harness and the additional (optional) ballast pocket is ideally located to not disturb the center of gravity.

PREPARATION

Reserve deployment is a very real scenario in high level competition and XC flying, and providing for the widest range of imaginable reserve deployment situations was integral to the Exoceat's development and design. The low-drag ambidextrous double-bomb bay reserve design was created to provide easy and fast opening in low or high-G situations. With two parachutes installed deployment can be with either hand, this is useful in high G situations where access to one side can be impossible, or if the first parachute fails to deploy cleanly.

The Mousse bag is generously padded under the seat of the harness and along the entire length of the back. It is EN and LTF certified with a maximum load of 125kgs and meets or exceeds CIVL Section 7 competition harness requirements.

The flight deck has been positioned so that it is oriented 90 degrees to the pilot's line of sight. This is important for reading modern instruments easily in bright sunlight, as it ensures the minimum amount of glare and reflection. The cockpit floats in front of the pilot, even when loaded with ballast it does not rest on the pilot's legs allowing freedom of movement and comfort during long flights.

The Exoceat is delivered with the following:

- Mousse-bag (back foam)
- Plastic bars x2
- Foot plate
- Seat plate
- Cockpit
- Carabiners
- Speed system
- Dummy rescue
- 2 rescue handles
- Rescue pin for dummy rescue
- Spare reserve system closure loops
- Plastic pipe to aid parachute installation

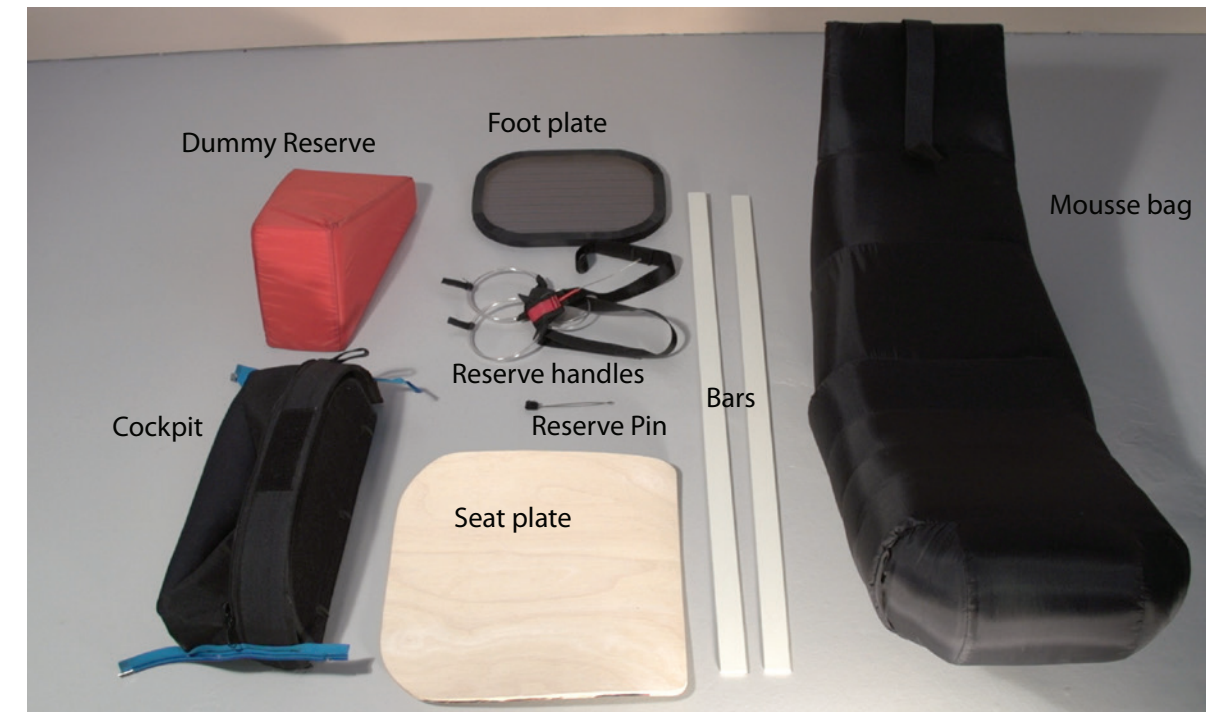
OPTIONAL EXTRAS:

- Ballast container
- Rescue carabiner
- Rescue bridles

Upon delivery the harness needs to be assembled before it can be flown.

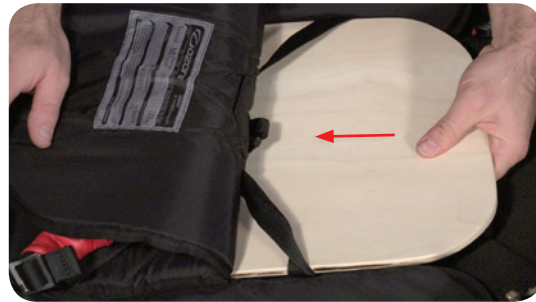
Please watch the assembly video here:

<http://www.flyozone.com/paragliders/en/products/harnesses/exoceat/watch-the-video/>



BARS

Insert x2 white bars into the pockets that run up the length of the back. The openings of these pockets are located under the seat cushioning. Slide the bars in fully, ensure they reach the far end of the pockets. Close the bottom ends firmly with the Velcro flaps.



SEAT PLATE

Insert the seat plate with the straightest edge facing forwards. Lift up the seat cushioning and push the leg straps apart to create enough space to slide the seat plate into the space available. Once inserted correctly, align the leg straps over the seat plate and close the flap using the plastic clip.



MOUSSE BAG

The zipped pocket is located under the seat plate. Insert the Mousse bag thin end first, once fully inserted close the zip.



FOOT PLATE

Open the Velcro at the end of the pod and insert the foot plate. Neatly secure the Velcro back into place.



SPEED SYSTEM

Route the speed system line through both pulleys on each side. The first pulley is located inside the pod at the rear of the seat plate. The second is close to the lumbar support attachment. Ensure the lines run cleanly between the pulleys and pass on the outside of all structural webbing straps. Double-check the lines have not inadvertently wrapped around the structural webbing. Feed the line through the hole on the side of the pod. (3)



IMPORTANT: The speed bar lines must be of equal length, ensure they are not too short as this will inadvertently activate the speed system when under tension in the air. Always double-check lengths and symmetry whilst on the ground before flying.

Once in the air, and when it is safe to do so, check that you can place your foot on the bar easily and that the system operates smoothly all the way to full speed without excessive friction. The 3 step system is fully adjustable, each stage can be set to preference.

RESERVE PARACHUTE INSTALLATION

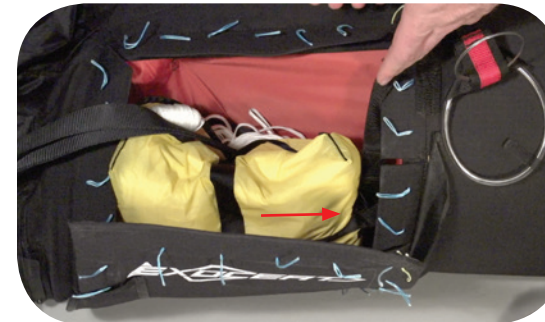
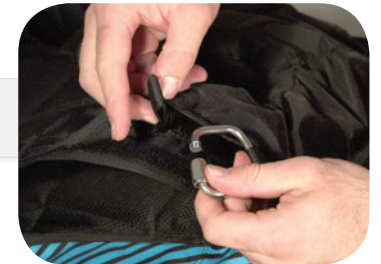
The Exocet features integral reserve containers for two parachutes. The innovative system uses bomb doors that fully open once the pin is removed, so even in high G situations the parachutes can be deployed freely with either hand. The bomb door containers have large volumes, enough to fit all types of modern parachutes.

The parachute(s) need to be installed precisely using a new and innovative method, so please refer carefully to the instructional video for clear visual instructions. When delivered both parachute containers are closed correctly. Take note of the overall look and pay attention to the trellis thread pattern and where the reserve handle bridle emerges from the bomb door.

Attach the bridles to the appropriate attachment points with a suitable connector (not supplied). The attachment points are located on the shoulder straps under the Velcro flaps. The bridles should then be routed along the protective Velcro channel.



Make sure the harness bridles are attached to the parachute's bridle using a suitable connector (not supplied).



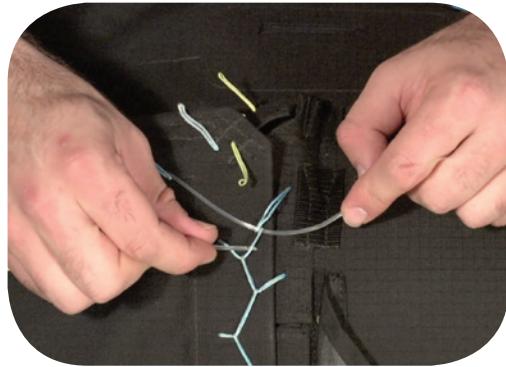
Attach the deployment handle to the deployment bag of your reserve parachute using a Lark's foot or small connector.

Place the deployment bag into the bomb door container, the reserve handle should be facing towards the front of the bomb door.



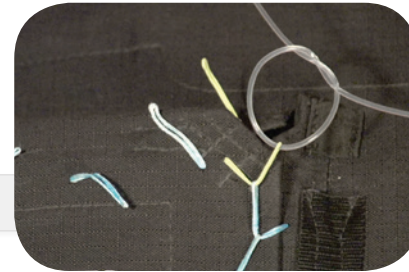
The parachute container is closed by threading the blue Dyneema loops in a trellis like pattern. **It is strongly recommended to watch the Video and follow the instructions carefully at this point.**

Start at the front end of the container doors and identify the first loops (1 and A) by following the central seam. The process can be started by hand but it is best to use the small lengths of plastic to help with the threading.



Begin by threading line A through line 1; then 2 through A; B through 2; 3 through B and so on.

After you have passed the yellow line 6 through line E, tie a knot in the small piece of plastic. This will keep the loops secure so you can move on to the next stage.



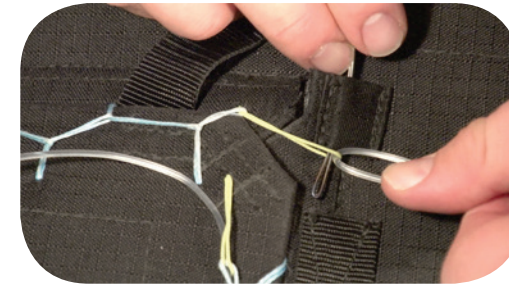
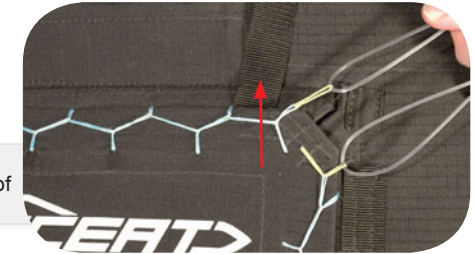
IMPORTANT: Do not snag the blue Dyneema line with the end of the plastic and do not twist the loops as you thread them.

Now you are ready to secure the rear of the parachute container. Again, use the stitching in the centre of the bottom panel to identify the starting point. Loop the threads using the same technique as before.



Be careful when you reach the corner. The reserve bridles from the shoulder straps should be routed through this point and the thread pattern must be followed accurately.

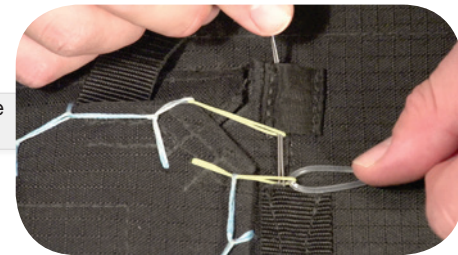
Before arriving at the yellow line on the top row, make sure the reserve handle bridle exits the bomb doors in the position shown. Complete the top row threading, leaving the piece of plastic in the yellow loop to stop the threads undoing themselves.



Install the handle by feeding the reserve pin first through the upper channel sewn into the harness and then through the top yellow loop. Once the end of the pin is through the upper yellow loop the plastic can be removed.

FITTING

Repeat the same process for the lower yellow loop and reserve pin channel. This time the lower yellow loop is threaded first, before sliding the pin through the lower channel.



Push the handle into its securing slot by squeezing the metal loops to fit and attach the Velcro. The completed system should look exactly as shown.

Double check everything looks visually correct and then make a test deployment. Make sure you perform a practice throw from a static hang point. Not only does this ensure the correct functioning of your deployment system it also allows you to become more familiar with the installation process. Double check that the handle and pin release easily and the threaded loops unfold themselves without restriction.

If only one reserve is fitted, the reserve dummy reserve should be installed in the unused side, this will help to keep the shape and form of the harness. Secure the dummy with the supplied spare reserve pin to reduce the chances of accidentally deploying (and thus losing) the spare reserve handle.

Before your first flight, we recommend to suspend the harness from a suitably strong point to check that it fits you correctly and to become familiar with the features and adjustments. You can set the shoulder adjustment-straps to find the best fit, and adjust the lumbar support so that they leave you in a comfortably reclined position.

WARNING: Ozone strongly recommends that the reserve parachute system is installed by a qualified professional. Always seek experienced advice if you have any doubts.

To put the harness on first place the shoulder straps over your shoulders and bring the leg/chest strap through your legs.



Fasten the leg/chest strap buckles. Ensure that the buckles are closed properly, there is an audible click when they are locked in place.



Attach the cockpit using the large blue zips on both sides. The automatic pod closing system can now be connected. First put the male buckle of the left hand pod through the loop found on the front right hand side of the cockpit and fasten it to the female buckle.



Now secure the right hand pod with the eyelet attached to blue line on the left hand pod through the blue loop on the left hand pod.



The shoulder strap retainer clip should now be fastened.

ADJUSTMENTS

Before your first flight, we recommend to suspend the harness from a suitably strong point to check that it fits you correctly and to become familiar with the features and adjustments. You can set the shoulder adjustment-straps to find the best fit, and adjust the lumbar support so that they leave you in a comfortably reclined position.

SHOULDER STRAPS

The length of the Shoulder straps can be modified using the adjustment straps. Adjust the shoulder lengths so that the harness feels comfortably snug when standing up. The edge of the seat plate should be near the back of your knees but not below them. Whilst suspended in the seated position ensure the straps are comfortable and supportive, they should not be too tight nor too loose.



LUMBAR SUPPORT

The Lumbar support should be adjusted for a comfortable flying position. Precise adjustments can be made in the air so that your lower back is completely supported and there is no tension in your stomach muscles. Be sure to adjust the lumbar supports carefully, setting them too loose will result in a very reclined position in the air.

LEG STRAPS/CHEST STRAP

The length of the leg straps and chest strap affects the overall stability of the harness. For maximum weightshift the chest strap and leg straps should be left in their longest position. For greater roll stability the straps can be tightened. It is important to test fly and adjust to find the position that is best for your style of flying and overall comfort.



HANG POINT HEIGHT

The height of the hang points can be set on the ground with the adjustments made on the side of the structure directly underneath the hang points. Changes made here have a direct affect on the feel, roll stability and feedback of the harness so pay attention and only make incremental changes between flights. We recommend starting in the position shown and adjusting to your taste from there. Lowering the hangpoint will make the harness more roll unstable whilst raising will increase stability.

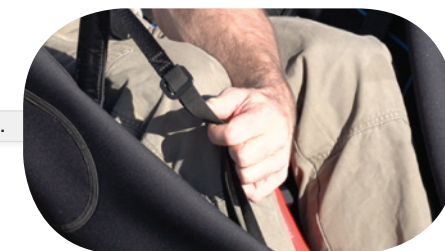


LEG SUPPORT ANGLE

The angle of the seat plate can be adjusted for comfort and handling. Tightening the straps will raise the knees, whilst releasing the straps will lower them.

FINE TUNING OF THE POD

Minor changes to the overall length of the pod can be made with the adjustment straps.



IMPORTANT: Any adjustments should be symmetrical, make sure both sides are equal. When fine tuning the harness, take your time to find the position that suites you best, only make small, incremental adjustments.

FEATURES

COCKPIT

The flight deck has been positioned in the pilot's line of sight. This is important for reading modern instruments easily in bright sunlight, as it ensures the minimum amount of glare and reflection. The cockpit floats in front of the pilot, even when loaded with ballast it does not rest on the pilot's legs allowing freedom of movement and comfort during long flights. It features a removable Velcro instrument board and internal pockets for storing spare batteries etc. It comes with removable external straps that can be attached to the shoulder straps, these are especially useful for smaller pilots who need to carry potentially heavy ballast to help support the cockpit and keep it away from the knees and interfering with the take off run.



AIRTUBE

In order for the rear section to remain well inflated, it is important to keep the tube free of obstructions and to ensure that it is not heavily kinked when packing the rear pocket with your bag etc. Position the end of the tube as shown. It can be 'locked' in place with the Velcro.

HYDRATION ACCESS SYSTEM

The Exoceat includes a hydration access system consisting of an inner pocket located in the rear storage pocket. Position the zips of the rear compartment so the drinking tube can exit on the side of your choice.

IMPORTANT: Make sure to route the drinking tube **BELOW** the reserve bridles



UNDERSEAT BALLAST BAG (OPTIONAL)

An optional 8lit ballast bag can be fitted under the seat. Secure the ballast bag using a triangular maillon attached to the loops in each corner. If fitted, double check that the ballast bag will not interfere with the operation of the speed system. Adjustment may be necessary.



CARE AND MAINTENANCE

The Exoceat will last many flights and many years if looked after correctly. To keep your harness clean and airworthy, please note the following:

- Avoid excessive exposure to UV, heat and humidity.
- Pack the harness dry and store in a cool dry place.
- Never drag or land on your harness.
- Keep your harness clean of dirt, oils and any corrosive substance.
- Use water and a cloth to clean if necessary.
- Always check the reserve deployment system before each flight

INSPECTION

For safety, routine inspection of all of your equipment is vitally important. Ozone recommends a service interval of 12 months in addition to the usual pre flight checks. Before each flight visually inspect the reserve deployment system, the Dyneema lines should be visually OK without excessive fraying and there should be no obstructions within the trellis threads (twigs etc).

For a periodic thorough inspection, visually check the stitching and general condition of the structural webbing. Look in the hard to reach and structurally important areas. Pay particular attention to the webbing around the hang point areas under the carabiners, this is where abrasion is most likely.

Thoroughly check the reserve deployment system. Remove the parachute(s) to inspect the Dyneema loops, they should be visually OK without excessive fraying or obvious signs of damage.

A few spare replacement loops are delivered with each harness: Type A are the most common, Type B are longer, these are used in the corners and Type C are the yellow loops to retain the reserve handle pin. If you need to change a loop, make sure to use the correct type. Full replacement sets are available from your Ozone dealer.

If you find damage to any part of the harness or if you have any doubts, please make sure the harness is checked by a professional.

OZONE QUALITY GUARANTEE

At Ozone we take the quality of our products very seriously, all our harnesses are made to the highest standards in our own manufacturing facility. Every harness manufactured goes through a stringent series of quality control procedures and all the components used are traceable. We always welcome customer feedback and are committed to customer service. Ozone guarantees all of its products against manufacturer's defects or faults. Ozone will repair or replace any defective product free of charge. Ozone and its distributors provide the highest quality service and repair, any damage to products due to wear and tear will be repaired at a reasonable charge.

If you are unable to contact your dealer then you can contact us directly at info@flyozone.com.

Summary

Safety is paramount in our sport. To be safe, we must be trained, practised and alert to the dangers around us. To achieve this we must fly as regularly as we can, ground handle as much as possible and take a continuous interest in the weather. If you are lacking in any of these areas you will be exposing yourself to more danger than is necessary.

Every year many pilots get hurt launching; don't be one of them. Launching is the time that you are most exposed to danger so practice it lots. Some launch sites are small and difficult and conditions aren't always perfect. If you're good at ground handling you'll be able to confidently and safely launch whilst others struggle...practice as much as you can. You'll be less likely to get hurt and more likely to have a great day's flying.

Respect the environment and look after your flying sites.

Finally, RESPECT the weather, it has more power than you can ever imagine. Understand what conditions are right for your level of flying and stay within that window.

Happy flying & enjoy your Exocean.
Team Ozone

TECHNICAL SPECIFICATIONS

SIZING

The harnesses is available in four different sizes; XS, S, M, and L.

The harness structure remains the same for S, M, L sizes, changes being a shorter or longer pod sizes. The XS features a smaller harness structure and reduced length pod.

	XS	S	M	L
Pilot Height cm	160-170	170-180	175-190	180-200
Weight*	9.3	9.4	9.5	9.7
Certified max load	125kg	125kg	125kg	125kg

* Includes: carabiners, dummy rescue, cockpit, mousse bag. Excludes angled flight deck (130gr)

MATERIALS

Outer fabric (Cover)

Nylon Oxford 210D PU2

Main webbing

Polyster 25 mm 2000 kg

Structure fabric

Nylon Oxford 210D PU2

Chest strap closure system

Austrialpin Alu Cobra buckles

Pod

Neoprene 3.0 mm

TOWING

The Exocean is suitable for towing. The tow bridles should be attached to the main carabiners, If you have any doubts ask a qualified towing instructor or see the operating instructions supplied with your tow release system.





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Inspired by Nature, Driven by the Elements

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