



MOJO PWR

Pilots Manual





MOJIBPWR

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THANK YOU

Thank you for choosing to fly Ozone. As a team of free flying enthusiasts, competitors and adventurers, Ozone's mission is to build agile paragliders of the highest quality with cutting edge designs, performance and maximum security.

Confidence and belief in your paraglider is a far greater asset than any small gains in performance - ask any of the Ozone pilots on your local hills, or those who have taken our gliders on ground-breaking adventures or stood on podiums around the world. All our research and development is concentrated on creating the best handling/ performance characteristics possible with optimum security. 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.

As pilots we fully understand just how big an investment a new paraglider is. We know that quality and value for money are essential considerations when choosing a new wing, so to keep costs low and quality high we manufacture all of our products in our own production facility. During production our wings undergo numerous rigorous quality control checks that are fully traceable, this way we can guarantee that all of our paragliders meet the same high standards.

It is essential that you read this manual before flying your wing for the first time. The manual will help you get the most out of your new wing, it details information about the design, tips and advice on how best to use it and how to care for your wing to ensure it has a long life and retains a high resale value. For the latest updates, including all technical datas please refer to the online version. This can be found on the product's page on at www.flyozone.com

If you need any further information about any of our products please check flyozone.com or contact your local dealer, school or any of us here at Ozone.

Safe Flying!
Team Ozone

WARNING

- Paragliding/Paramotoring is a potentially dangerous sport that can cause serious injury including bodily harm, paralysis and death.
- Flying an Ozone paraglider is undertaken with the full knowledge that paramotoring involves risks.
- As the owner of an Ozone paraglider you take exclusive responsibility for all risks associated with its use. Inappropriate use and or abuse of your equipment will increase these risks.
- Ozone paragliders are only suitable for qualified pilots or those under instruction. This manual does not replace proper instruction. Make sure you seek professional tuition and learn with a reputable school.
- 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 a glider outside its certified configuration may jeopardise any insurance (e.g. liability, life etc) you have.
- 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.
- Avoid flying your glider in rain, snow, strong wind, and turbulent weather conditions or clouds.
- Any liability claims resulting from use of this product towards the manufacturer, distributor or dealers is excluded.
- Be prepared to practice as much as you can - especially ground handling, as this is a critical aspect of paramotoring. Poor control whilst on the ground is one of the most common cause 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.
- 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 make sure your engine is pre flight checked and warmed up ready for flight. (See manufacturer's recommendations).
- Always wear a helmet, ear defenders, gloves and boots.
- If you use good, safe judgment you will enjoy many years of paramotoring.

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 more versatile paragliders.

The design team consists of David Dagault, Luc Armant, Fred Pieri, Russell Ogden, and Honorin Hamard.

Dav has a wealth of experience in competition flying, XC, XAlps and paraglider design. Luc, a dedicated XC and competition addict has a background in naval architecture. Fred, our resident geek is a mathematician, mechanical engineer and vol Biv specialist. Russ is a competition pilot and test pilot with 1000s of hours testing experience. Honorin has been flying since he was 13, he is a naturally talented pilot that has already become world champion. Between them, they bring a wealth of knowledge, ideas and experience and work closely together in the design and testing process.

Former female World champion, Emilia Plak manages the paramotor department. She is helped by Mathieu Rouanet and Alex Mateos, two of the finest pilots in the world holding World, European and French Paramotoring champion titles amongst them. They both offer valuable advice and feedback throughout the development process, helping to produce the perfect blend of safety, speed and performance.

Back in the office Mike Cavanagh generally keeps control of the mayhem. Promotion and Team pilots are organised by Matt Gerdes. Karine Marconi, Chloe Vila and Isabelle Martinez make sure we don't spend too much money and look after the ordering system.

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 Khanh and 700 production staff.

YOUR MOJO PWR

Based on the Mojo 5, the Mojo PWR is a versatile wing for both free flying and powered flight. Certified EN A, it is suitable for students in training but ideal for the newly qualified. It is reliable and dependable, suitable for the first 100s hours of paramotoring and paragliding. Due to the specially designed power risers the Mojo PWR is suitable for all types of power units and hang point types including trikes. These risers also feature trimmers for fast cruising, double pulleys for adjusting brake line lengths and magnetic brake connectors.

The Mojo PWR is aerodynamically very clean, the reduced sail drag, optimised line layout, reduced line consumption and newly-shaped cell openings all push the Mojo PWR's performance to the top of the category without compromising safety. Special attention has been made to the ground handling and inflation characteristics of the wing to make the whole process easier, less stressful and ultimately safer. Setting up is easy; the risers are simple and clean the wing inflates smoothly - without overshooting or hanging back - even in zero wind conditions. In stronger winds it inflates progressively with less tendency to "shoot up" and pull the pilot off their feet.

In the air the Mojo PWR is agile, stable and comfortable. In active air the wing is compact and forgiving. It is well damped in pitch, this helps it cut through turbulence efficiently making it very resistant to deflations and improving the re-inflation characteristics. It delivers gentle, predictable feedback and filters air movements in an understandable way. At full speed the leading edge remains solid allowing for a large usable speed range and high cruise speeds. Brake pressure and brake precision have been refined for improved handling - turns are easy to initiate, and the wing maintains bank angles whilst thermalling with minimal input. This precision, along with the deeper overall brake range and higher resistance to stall or spin make the Mojo PWR a super-fun yet forgiving wing to fly.

Rucksack

Your wing is supplied with a specially designed bag that is light in weight and comfortable. It features a padded hip belt, adjustable ergonomic shoulder straps and extra pockets to store keys, accessories and all those extra bits. Its large volume allows you to store all of your equipment whilst distributing the weight for comfortable hiking.

Brake Lines

The brake line lengths have been set carefully during testing. We feel it is better to have slightly long brake lines and to fly with a wrap (one turn of line around the hand). However, if you do choose to adjust their length please keep in mind the following:

- Ensure both main brake lines are of equal length.
- If a brake handle has been removed, check that its line is routed through the pulley when it is replaced.
- When the brakes are fully released in flight, the brake lines should be slack. There must be a substantial bow in them to guarantee no deformation of the trailing edge when accelerated.
- There must be a minimum of 10cm of free play before the brakes begin to deform the trailing edge. This prevents the trailing edge from being deformed when using the speed system.

Risers

The Mojo PWR has been designed with 3 rows of lines and risers. Each riser is covered with coloured webbing, this allows them to be easily identified.

You will notice that the A's are split in two parts, the small riser on the back holding only the outer A line, is the "Baby A"; it has been designed to make applying "Big Ears" simple.

The risers feature adjustable brake height positions and trimmers.

Adjustable Brake Position

The height of the brake handles can be adjusted according to pilot preference to suite the power unit's hang points height. There are 2 settings: upper and lower. The upper setting (as set by the factory) is for

IMPORTANT
In the unlikely event of a brake line snapping in flight, or a handle becoming detached, the glider can be flown by gently pulling the rear risers (C-risers) for directional control.

low hang point motors whilst the lower setting is for units with higher hang points.

If you lower the brake handle, you must also lengthen the brake lines accordingly. Moving the brake handles to the lower pulley requires adding 17cm to the overall brake line length - use the appropriate mark on the brake lines.

- First undo the brake handle's knot and remove the brake line from the upper pulley.
- Re-route the brake line through the lower pulley
- Re-attach the brake handle with an appropriate knot at the correct length using the second mark.

Trimmers

The Mojo PWR is supplied with a trim riser set. The 'neutral' or standard position is when the trimmers are pulled all the way down. It is in this position that the wing is certified. The standard (certified) trim setting is ideal for climbing under power, whilst thermalling and when the air is turbulent. Brake pressure is lighter and the handling is at its best on the standard (certified) trim setting.

To increase cruise speed you can use the speed system or release the trimmers.

In turbulent air the profile is very stable. It will resist reasonable levels of turbulence with a high resistance to collapse without pilot input. However in strong turbulence Ozone recommends to return the trimmers to the standard position (pulled down) and fly the glider actively. This way, you will be in the best position to react correctly should an incident occur.

NOTE: The standard position is when the trimmers are pulled down to the slowest position. In this position the maillons on the risers are level.

IMPORTANT

If you adjust the brake handle height, you MUST re-lengthen the brake lines accordingly. 17cm

NOTE

The Mojo PWR is certified in accelerated flight with the speed bar only and the trimmers set in the standard or slowest position. Releasing the trimmers invalidates any flight certification. For un-powered flight and valid certification the trimmers must be pulled to the slow position and locked in place using the D ring.

Total weight in flight

Each Mojo PWR has been designed with a defined weight range. We strongly recommend that you respect the EN weight ranges for free flight and the recommended weights for powered flight. Flying above or below the recommended weights will have a detrimental affect on the behaviour of the wing and exposes you to unnecessary risk. Do not do it! Choose the size most suited to your weight, that way you can get many hours of both powered and un-powered flight with the same wing.

Towing

The Mojo PWR may be tow-launched. It is the pilot's responsibility to use suitable harness attachments and release mechanisms and to ensure that they are correctly trained on the equipment and system employed. All tow pilots should be qualified to tow, use a qualified tow operator with proper, certified equipment, and make sure all towing regulations are observed.

When towing you must be certain that the paraglider is completely over your head before you start. In each case the maximum tow force needs to correspond to the body weight of the pilot.

Limitations

The Mojo PWR has been designed as a solo intermediate PPG/free flight XC wing and is not intended for tandem flights or aerobatic manoeuvres. A specific standard of certification for aerobatic flying has not been set up yet, Ozone wings although designed to the highest specifications are not certified for this type of flying. Aerobatic manoeuvres such as wingovers are very difficult and complex to perform correctly and put abnormal stresses on the glider and can lead to loss of control.

IMPORTANT

Using the accelerator decreases the angle of attack and makes the wing more prone to collapse, therefore using the accelerator near the ground or in turbulent conditions should be avoided.

NOTE

It is recommended to pilot the wing with the rear risers during accelerated flight.

PREPARATION

Accelerator System

To set up an accelerator on the ground, ask a friend to pull your risers into their in-flight position while you sit in your harness. Now adjust the length of the line so that the main bar sits just beneath your seat. You should now be able to hook your heel in to the secondary (lower) loop of the accelerator.

The accelerator must be slack enough to ensure that the front risers are not pulled down in normal flight, but not so long that it is impossible to use the full range of the speed system.

Once set up, test the full range of the speed system in calm flying conditions: ensure that both risers are pulled evenly during operation. Fine-tuning can be completed when you are back on the ground.

IMPORTANT: Using the accelerator decreases the angle of attack and can make the gliders recovery from a collapse more aggressive, therefore using the accelerator near the ground or in turbulence should be avoided.

Harness and Motor

It will be in your harness that you will enjoy flying so it is recommended that you spend the time on the ground to adjust your harness's different settings. Hang from a solid beam and double check that you are comfortable and that you can reach the brake handles, tip steering handles and that you can achieve the full range of speed bar travel before flying.

The Mojo PWR is suitable for all types of power units. There are many different units available and it is vitally important that you choose one that is suitable for your needs, weight and skill level. Always seek assistance and advice from your instructor or experienced pilots before choosing equipment for yourself.

Wing

To prepare the wing, lay it out on the top surface and perform a thorough daily check. You should inspect the top and bottom surfaces for any rips and tears or any other obvious signs of damage. Lay out the lines one side at a time, hold up the risers and starting with the brake lines, pull all lines clear. Repeat with the stabilo, D (uppers), C, B and A lines, laying the checked lines on top of the previous set, and making sure no lines are tangled, knotted or snagged. Mirror the process on the other side and then inspect the lines for any visual damage. Then inspect the risers for any signs of obvious damage. The general rule is if it looks OK then it is OK, however if you have any doubts please get advice from experienced pilots or your local dealer or instructor.

To familiarise yourself with the glider it is a good idea to perform practice inflations and small flights on a training hill. This will enable you to set up your equipment correctly.

Take-off checklist:

1. Check reserve parachute - pin is in and handle secure
2. Helmet on and fastened
3. All harness buckles closed - check leg-loops again
4. Carabiners and maillons tight
5. Accelerator system connected
6. Holding the A risers and your brake handles correctly
7. Leading edge open
8. Aligned in the middle of the wing and directly into wind
9. Engine warm and able to deliver full power
9. Trimmers set correctly
10. Prop clear of lines
11. Airspace and visibility clear

Launching

Your Mojo PWR will launch with either the forward or reverse launch techniques.

When taking off under power, make sure there is enough clear space upwind of you to launch and climb out safely, avoiding trees, power lines and any other obstacles that may affect you should you have a power failure. Always fly with a safety margin so that power failures do not leave you compromised. You should always be able to glide power off to a suitable landing place.

Whilst inflating your wing, you should hold both of the A risers on each side. Once clipped in, and you have gone through the take-off check list (above), stand central to the wing to ensure an even and progressive inflation. Run in an upright position so that the motor is generating forward thrust, do not lean too far forward otherwise the power of the motor will attempt to push you into the ground! When you have enough airspeed a gentle application of brake will help you lift off. Do not stop running until your feet have left the ground and you are sure of a safe climb out.

For faster inflation, especially in nil wind conditions you may release the trimmers by a few cms.

Forward Launch - Nil to Light winds

When the wind is favourable, move forward positively: your lines should become tight within one or two steps. The wing will immediately start to inflate. You should maintain a constant pressure on the risers until the wing is overhead.

Do not pull down or push the risers forward excessively, or the leading edge will deform and possibly collapse making taking-off more difficult and potentially dangerous.

Move smoothly throughout the entire launch, there is no need to rush or snatch at it. You should have plenty of time to look up and check your canopy before committing yourself. Once you are happy that the Mojo PWR is inflated correctly, progressively apply full power and accelerate smoothly for the launch.

IMPORTANT
Never take off with a glider that is not fully inflated or if you are not in control of the pitch/roll of your wing.

Reverse Launch -Light to Strong Winds

Lay out your Mojo PWR as you would for the forward launch. However, this time face the wing, and attach the risers in the correct manor (half a turn in each riser, and crossed in the direction you want to turn). Now you can pull up the Mojo PWR by its A-risers. Once the wing is overhead, brake it gently, turn and launch.

In stronger winds, be prepared to take a few steps towards the glider as it inflates. This will take some of the energy out of the glider and it will be less likely to over-fly you. Once stable and above your head apply progressive power and accelerate smoothly for a controlled take off.

Practice ground handling and launching as much as possible! It is great fun, and will give you a much better feel for your Mojo PWR's flight characteristics. It will also improve your overall enjoyment of flying by making your launches easier and safer.

The Climb Out

Once in the air you should continue flying into wind whilst gaining height. By setting the trimmers to the standard (certified) position you will achieve the best climb rate. Do not attempt to climb too steeply or too quickly by using the brakes. The wing already has a high angle of attitude, coupled with a higher AoA (if you use the brakes) plus the engine's full thrust acting on the pilot, this could contribute to make the glider more prone to stall. Furthermore, in the event of an engine failure the resulting backward pendulum motion of the pilot and the forward dive of the wing may bring you back to the ground very hard. Do not initiate turns until you have sufficient height and airspeed. Avoid low turns downwind with insufficient airspeed.

The Mojo PWR is well damped in roll but under certain circumstances it is possible for the pilot to induce oscillations. This is caused by a combination of the engine/propeller torque and pilot weightshift and/or brake inputs. To stop oscillations it is best to reduce the power slightly and ensure that you remain static with weightshift and brake inputs. Once settled you can once again apply full power.

Under full power the torque effect will attempt to gently turn the wing, using weightshift or adjusting the trims asymmetrically is the best method to correct this.

NOTE
Using the trims asymmetrically will invalidate certification

Turning

The handling characteristic of the Mojo PWR is truly amazing. We have worked hard on tuning the wing so that it turns tightly but also efficiently, as the ability to climb in a turn is very important for powered and free flight, making the climb out fun and thermalling easy.

To familiarize yourself with the Mojo PWR your first turns should be gradual and progressive. To make efficient and coordinated turns with the Mojo PWR first look in the direction you want to go and check that the airspace is clear. Your first input for directional change should be weight-shift, followed by the smooth application of the brake until the desired bank angle is achieved. To regulate the speed and radius of the turn, coordinate your weight shift and use the outer brake.

Normal Flight

Once at a safe height you can release the trimmers for a faster cruise speed. If your motor has enough power, the Mojo PWR will achieve very good straight line speeds whilst maintaining level flight at high speeds.

For better penetration in headwinds and improved glide performance in sinking air, crosswinds or headwinds, you should fly faster than trim speed by using the accelerator system, the trimmers or both. For maximum efficiency whilst flying downwind, release the speed bar and return the trimmers to the standard (certified) position.

By pulling the trimmers to the standard position and applying the brakes approximately 30cm, the Mojo PWR will achieve its best minimum-sink rate; this is the speed to use for thermalling and ridge soaring whilst free flying.

Active Flying

In turbulent air the profile is stable. It will resist reasonable levels of turbulence without pilot input. However in stronger turbulence Ozone recommends to return the trimmers to the standard position and fly the glider actively. This way, you will be in the best position to react correctly should an incident occur.

The key elements of effective active flying are pitch control and pressure control:

IMPORTANT

Never initiate a turn at minimum speed (i.e. with full brakes on) as you could risk entering a spin.

IMPORTANT

Never apply the brakes whilst flying at full speed - it makes the wing more prone to collapse.

IMPORTANT

Always keep hold of your brakes. Do not fly in turbulent conditions

In turbulent air, if the glider pitches hard in front of you, use the brakes to slow it down. Equally, if the glider drops behind you, release the brakes to allow it to speed up.

In severe turbulence, flying with a small amount of brake applied (approx. 20cm) will give you tension in the brakes and feedback from the wing. In turbulent conditions the internal pressure of the wing can change and you can feel this through the brakes. The aim is to maintain a constant pressure through the brakes. If you feel a loss in pressure apply the brakes until normal pressure is resumed then raise hands back to original position (this must be done quickly).

Avoid flying with continuous amounts of brake in rough air as you could inadvertently stall the wing. Always consider your airspeed.

No pilot and no glider are immune to collapses. In severe turbulence active flying will virtually eliminate any tendency to collapse. When the conditions are very turbulent, be more active and anticipate the movements of your wing. Always be aware of your altitude and do not over-react. We advise you to keep hold of your brakes at all times and not to fly in turbulent conditions.

IMPORTANT: In turbulent air return the glider to trim speed - release the speed bar or return the trims to the slow position

Landing

The Mojo PWR shows no unusual landing characteristics. We recommend the trimmers be returned to the normal slow position for landings. You can land un-powered or powered, here are some tips:

- Always set up your landing early, give yourself plenty of options and a safe margin for error and make sure you are heading INTO wind.
- Once below 30 metres avoid turning tightly as the glider will have to dive to accelerate back to normal flight.
- Allow the glider to fly with speed for your final descent until you are around 1 metre above the ground. Apply the brakes slowly and progressively to slow the glider down until the glider stalls and

IMPORTANT

In turbulent air return the glider to trim speed - release the speed bar or return the trims to the slow position

- you are able to step onto the ground.
- It is safest to perform un-powered landings as this reduces the likelihood of propeller damage caused by either falling over or allowing the lines to foul the prop. Turn off the engine at around 30m and glide in like a normal paraglider.
 - Powered landings offer the chance to power up and continue with the flight if you misjudge your final approach, but can be more expensive if you get it wrong!
 - Choose the appropriate approach style in function of the landing area and the conditions.
 - In light winds you need a strong, long and progressive flare to bleed off all your excess ground speed. In strong winds your forward speed is already low so you are flaring only to soften the landing. A strong flare may result in the glider climbing upwards and backwards quickly, leaving you in a vulnerable position.
 - In strong winds you need to turn towards the glider the second your feet touch the ground. Once facing the wing pull smoothly and symmetrically down on the brakes to stall the wing. If the glider pulls you, run toward it.
 - If the wind is very strong, and you feel you might be dragged, stall the glider with the C risers. This stalls the Mojo PWR in a very quick and controllable way and will drag you less than if you use the brakes.
 - Always land heading into wind!

ADVANCED FLIGHT TECHNIQUES

Ozone would like to remind you that the following manoeuvres should be learnt under the supervision of a qualified instructor and always used with caution. Never forget that properly analysing the conditions before launch will help avoid the need to use these techniques.

Big Ears

Folding in the wingtips increases the sink rate without radically changing the airspeed. This is useful for staying out of cloud or descending quickly through the lift band of the hill, for example when top landing.

To pull big ears, keep hold of your brake handles and take the outermost A-line on each side, then pull out and down (preferably one at a time) until the wingtips fold under. The Outer A line is attached to the Baby A riser, making identification and use of the big ear system easier. The size of the big ears can be adjusted by pulling more line, or reaching higher up the line. For directional control while using the Big Ears, you should use weight shift. To reopen the ears, release both A lines at the same time. To help reinflation, brake gently one side at a time until tips regain pressure. Avoid deep symmetric applications of the brake as this could accidentally induce parachutal or full stalls.

You may use Big ears for the final landing approach but they should be released before making the final flare. Ozone advise to not use this technique in turbulent or windy conditions due to the reduced ability to fly actively and the risk of an inadvertent stall whilst descending through the wind gradient.

Once the big ears are engaged you can further increase the sink rate by pushing on the accelerator bar, however NEVER try to pull the Big Ears in if the accelerator is already pushed. The lower angle of attack and the act of deflating the tips can lead to a major deflation. Always make the Big Ears first and then apply the speed bar.

Whilst it is possible to enter a spiral dive whilst holding in Big Ears, the high forces applied to the lower lines could exceed the breaking strain of the lines leading to equipment failure!

Ozone strongly recommend to NOT perform Spiral Dives with Big Ears engaged.

NEVER induce Big Ears in accelerated flight, this can lead to a major deflation. Always pull the Big Ears first and then apply the speed bar.

B-Line Stall

B-stall is for fast descents in emergency situations only. It is faster and safer to lose altitude with a spiral dive than a B-stall.

To initiate the B-stall, keep the brakes in your hand and take hold of both the B risers, or place your fingers between the lines above the maillons. As you pull the B-lines down the airflow over the wing is broken and the glider loses its forward speed but remains open with a reduced cord. You can descend at around 6 m/s.

To exit the B-stall the B-risers should be released symmetrically and in one smooth, progressive motion. The glider will resume normal forward flight without further input. Check you have forward flight again before using the brakes.

If you pull too much B-line the glider may horseshoe and move around a lot. If this occurs, slowly release the B lines until the wing stabilises or simply exit the B line stall by immediately release the B risers. Do not attempt to maintain a B line stall that is not stable.

Spiral Dives

If you turn your glider in a series of tightening 360's it will enter a spiral dive. This will result in rapid height loss. To initiate a spiral, look and lean in to the direction you want to go, then smoothly pull down on the inside brake. The Mojo PWR will first turn almost 360 degrees before it drops into the spiral. Once in the spiral you should re-centre your weight shift and apply a little outside brake to keep the outer wing tip pressured and inflated.

Safe descent rates of more than 8m/s (1600 ft/min approx.) are possible in a spiral dive, but at these rates the associated high speeds and G-forces can be disorientating. Always pay particular attention to your altitude. To exit the spiral dive, ensure your weight shift is in a centred position and then smoothly release the inside brake. As the Mojo PWR decelerates allow it to continue to turn until enough energy is lost for it to return to level flight without an excessive climb and surge.

IMPORTANT
The pitching movement on exiting the B stall is small but necessary. We recommend you do not brake the glider until you are sure that the glider is flying properly again.

IMPORTANT
Always be prepared to pilot the wing out of a spiral dive. Use opposite weight shift and apply enough outside brake to stop the wing from spiralling.

The Mojo PWR shows little tendency to remain stable in a spiral dive; however some parameters could interfere with its behaviour. These might include: tight chest strap settings, total weight in flight outside of the certified weight range, high hang point harnesses or power units or being in a very deep spiral at a very high sink rate >14m/s. You should always be prepared to pilot the wing out of such a spiral dive. To do so, smoothly use opposite weight shift and apply enough outside brake to stop the wing from spiralling, the glider will then start to resume normal flight. Never attempt to recover from a spiral with hard or quick opposite inputs as this will result in an aggressive climb and surge.

Active C Riser Control

When gliding in accelerated flight it is possible to pilot the wing with the C risers, this gives an improved feel and control over the wing enabling you to fly actively without using the brakes. Using brakes whilst accelerated causes drag which is not only inefficient but it also reduces the inherent stability of the profile - using the brakes whilst accelerated can actually lead to a collapse. Using the C risers increases the angle of attack more evenly across the chord and does not weaken the profile. The direct feel allows you to stop collapses before they happen and maintain higher speeds and higher levels of efficiency through turbulence.

To fly with the C risers, keep hold of your brake handles (remove any wraps) and take hold of the C risers. With the C risers you can fly actively through turbulence; If you see or feel the leading edge lose pressure, at the same time as releasing some or all of the accelerator you can also apply pressure to the C's, this will help keep the nose open. Be careful to use only small inputs with the C risers, you risk stalling part or all of the wing if you are over enthusiastic. The amount of pressure and size of the input is dependent on the amount of turbulence/loss of pressure, but always be gentle at first. Learn the feel of the wing - how much speed bar to release and the force required on the C's to keep the nose open without inducing unnecessarily large pitch movements.

Be prepared for plenty of practice as this new method may take some time for it to become totally intuitive, efficient and comfortable. This control method is suitable for gliding in good 'normal' air, it does not replace proper active flying with the brakes in strong turbulent conditions. If you are unsure about the air return the glider to trim speed, release the C risers and fly the glider actively with the brakes.

DO NOT perform spiral dives with Big Ears engaged.

Deflations

Due to the flexible form of a paraglider, turbulence may cause a portion of the wing suddenly to collapse. This can be anything from a small 30% (asymmetric) collapse to a complete (symmetric) collapse.

If you have a collapse, the first thing to do is to control your direction. You should fly away from the ground or obstacles and other pilots. Asymmetric collapses should be controlled by weight shifting away from the collapse and applying enough brake to control your direction. This action alone will be enough for a full recovery of the wing most of the time.

Once a glider is deflated it is effectively a smaller wing, so the wing loading and stall speed are higher. This means the glider will spin or stall with less brake input than normal. In your efforts to stop the glider turning towards the collapsed side of the wing you must be very careful not to stall the side of the wing that is still flying. If you are unable to stop the glider turning without exceeding the stall point then allow the glider to turn whilst you reinflate the collapse.

If you have a deflation which does not spontaneously reinflate, make a long smooth progressive pump on the deflated side. This pumping action should take about 1-2 seconds per pump. Pumping too short and fast will not reinflate the wing and pumping too slow might take the glider close to, or beyond, the stall point.

Symmetrical collapses reinflate without pilot input, however 15 to 20cm of brake applied symmetrically will speed the process. After a symmetric collapse always consider your airspeed. Make sure the glider is not in parachutal stall before making any further inputs.

If your Mojo PWR collapses in accelerated flight, immediately release the accelerator and manage the collapse using the same methods described above.

WARNING
Uncoordinated wingovers can lead to large asymmetric collapses and cravats, therefore they should never be executed near the ground.

IMPORTANT
A bad preparation on launch, aerobatic flying, flying a wing of too high a level or in conditions too strong for your ability, are the main causes of cravats.

Cravats

If the tip of your wing gets stuck in the lines, this is called a 'cravat'. This can make your glider go into a spiral, which is difficult to control. The first solution to get out of this situation is to stabilise the glider into normal flight, i.e get control of your direction and then pull down the stabilo line (CR4 - green line on the C riser) until the wing tip clears. You must be careful with any brake inputs or you may stall the opposite wing. You can also use strong deep pumps of the brake on the cravated side, when doing so it is important to lean away from the cravat otherwise you risk spinning or deepening the spiral. The aim is to empty the air out of the wing tip, but without spinning. Correctly done, this action will clear the cravat.

If it is a very large cravat and the above options have not worked then a full stall is another option. This should not be attempted unless you have been taught how to do it and can only be done with a large amount of altitude. Remember if the rotation is accelerating and you are unable to control it, you should throw your reserve parachute whilst you still have enough altitude.

Deep Stall / Parachutal Stall

It is possible for gliders to enter a state of parachutal stall. This can be caused by several situations including; a very slow release from a B-line stall; flying the glider when wet; or after a front/symmetric deflation. The glider often looks as though it has recovered properly but carries on descending vertically without full forward motion. This situation is called 'deep stall' or 'parachutal stall'.

It is unlikely to happen on any Ozone glider, but should it do so your first reaction should be to fully raise both hands. This normally allows the glider to return to normal flight but if nothing happens after a few seconds, reach up and push the A-risers forwards or apply the speed bar to encourage the wing to regain normal flight. Ensure the glider has returned to normal flight (check your airspeed) before you use the brakes again.

Do not fly in rain, doing so significantly increases the likelihood of parachutal stalls occurring. To reduce the chance of stalling in rain avoid using deep brake movements or Big Ears. Find a safe area to land and using the speed bar, maintain a good airspeed at all times.

IMPORTANT
Only a few cms of input from your brakes can maintain your wing in the stall. Always release your wraps if you have taken them!

IMPORTANT
Never fly in the rain or with a wet glider

CARE AND MAINTENANCE

Packing

To prolong the life of your wing and to keep the plastic reinforcements in the best possible condition it is very important to pack the wing carefully.

Ozone recommends to use the concertina packing method exactly as shown so that all of the cells rest alongside each other and the plastic reinforcements are not unnecessarily bent. Using an Ozone Saucisse or Saucisse light pack will help preserve the life of the wing and aid with the speed and ease of packing.

Step 1. Lay mushroomed wing on the ground. It is best to start from the mushroomed position as this reduces the dragging of the leading edge across the ground.



Step 2. Group LE reinforcements with the A tabs aligned, make sure the plastic reinforcements lay side by side.



Step 3. Lay wing on its side and Strap LE...Note the glider is NOT folded in half; it is folded with a complete concertina from tip to tip. It is really important to not stress the middle cell or bend the plastic too tightly.



Step 4. Group together the middle/trailing edge of the wing by sorting the folds near the B, C and D tabs.

If using a Saucisse pack go to Step 8.



Step 5. Once the LE and rear of the wing have been sorted, turn the whole wing on its side.

Step 6. Fold the wing with 3 or 4 folds whilst being careful to not crush the LE.



Step 7. Now place the folded wing into the stuff sack.



Step 8. If using the Saucisse Pack, carefully zip it up without trapping any material.



Step 9. Turn the Saucisse on its side and make the first fold just after the LE reinforcements. Do not fold the plastic reinforcements, use 3 or 4 folds around the LE.



IMPORTANT: Do NOT lay the wing flat on the ground before packing the glider, this will cause abrasion damage to the top surface as you pull the glider towards the middle. ALWAYS pack from a mushroom or lift the wing off the ground when gathering the wing and grouping the leading edge.



IMPORTANT: Do not fold the glider in the centre, you will bend the plastics, instead pack the wing with a full concertina method from tip to tip before packing into the stuff sac.



Caring Tips

Careless ground handling damages many paragliders. Here are some things to avoid in order to prolong the life of your aircraft:

- DO NOT drag your wing along the ground to another take-off position - this damages the sailcloth. Lift it up and carry it.
- DO NOT try to open your wing in strong winds without untangling the lines first - this puts unnecessary strain on the lines.
- DO NOT walk on the wing or lines.
- DO NOT repeatedly inflate the glider and then allow it to crash back down. Try to keep this movement as smooth as possible by moving towards the glider as it comes down.
- DO NOT slam your glider down on the ground leading edge first! This impact puts great strain on the wing and stitching and can even explode cells.
- FLYING in salty air, in areas with abrasive surfaces (sand, rocks etc.) and ground handling in strong winds will accelerate the aging process.
- DO NOT fly in the rain or expose the wing to moisture.
- DO NOT expose the wing to unnecessary UV. Pack away once you have finished flying. Do not leave it sitting in the sun.
- If you fly with a wrap, you should regularly undo the twisting that appears on the main brake lines. By twisting the line become shorter and you can end up with a constant tension on the trailing edge (which can lead to problem on launch, stalling, glider not flying symmetrically, ...)
- Change your main brake lines if they are damaged.
- Be Careful when groundhandling to not saw the brake lines against the risers or main lines. The abrasion caused by a sawing motion can damage the main lines and lead to premature ageing of the risers. If you notice any signs of abrasion, especially to the lines, make sure you get the wing professionally serviced and importantly modify your groundhandling technique to stop any further damage.
- Your Ozone wing has an opening closed using velcro on the trailing edge of the tip called the 'Butt hole'. This has been designed to easily empty all the things which have been accumulating in your wing (sand, leaves, rocks, mobile phones etc).

It is recommended that you regularly CHECK your wing, especially after a heavy period of use, after an incident or after a long period of storage.

Storage and Transport

Always store all your flying equipment in a dry room, protected from direct heat. Your wing should be dry before being packed away. Moisture, heat and humidity are the worst elements for damaging your glider. Storing a damp glider in your car under the sun would be terrible for example.

If you land in salt water, you must first rinse it thoroughly with clean fresh water. Dry the wing completely, preferably out of the sun, in the wind. Never use a hair dryer, etc.

Take care that no insects get packed away with the wing. They may eat the cloth and make holes in a bid to escape. They can also leave acidic deposits if they die and decompose.

Transport the wing in the supplied bags and keep away from oils, paints, chemicals, detergents etc.

Cleaning

Any kind of wiping/scratching can damage the coating of the cloth. We recommend to not clean the wing, but if you do have to, use a soft cloth dampened with a small amount of water and use gentle movements little by little across the surface.

Wing Repairs

Always let a registered dealer, professional repair centre or the manufacturer carry out any major or complex repairs, especially those near seam margins.

If you damage the sail:

If the rip is small and in the middle of a panel however you can fix it yourself. You'll find all the materials in the repair kit you need. The fabric can be simply mended with the sticky rip stop/spinnaker tape. When cutting out the patches allow ample overlap of the tear and make sure both sides are different sizes. Make sure to round off each corner of the patches.

IMPORTANT
Never pack away or store your glider wet.

IMPORTANT
Never use detergent or chemical cleaners.

You can find more information about repairing your wing on the Ozone website, including step by step instructions with pictures.

If you damage a line:

Any line that is visually damaged MUST be replaced. Use a reputable paragliding service centre to make the replacement lines. Alternatively you can order them from your local Ozone dealer or directly from our website <http://www.flyozone.com/paragliders/en/shop/lines.php>

It is important that replacement lines are made from the correct materials and diameters. You should check lengths against their counterpart on the other side of the wing to make ensure symmetry. Once the line has been replaced, inflate and check the glider before flying.

Maintenance Checks

Your wing, like a car, should be technically checked to ensure proper airworthiness. Your wing should be checked by a qualified professional for the first time after 24 months, or after 100 hours. However, if you are a frequent flyer (more than 100 hrs per year), then we recommend, that you get your glider checked annually. The checker should inform you about the condition of your glider and if some parts will need to be checked or changed before the next normal service check period.

The sail and the lines do not age in the same way or at the same rate; it is possible that you may have to change part or all of the lines during the wing's life. For this reason it is important to do regular inspections so that you know the exact condition of all of the components of your glider. We recommend that inspections are carried out by a qualified professional.

You alone are responsible for your flying kit and your safety depends on it. Take care of your equipment and have it regularly inspected. Changes in inflation/groundhandling/flying behaviour indicates the gliders aging, if you notice any changes you should have the wing checked before flying again. These are the basic elements of the check up (full details and permissible figures can be found on our website): Porosity is measured with a porosity meter, the time taken by a certain volume of air to go through a certain surface of the cloth. The time in seconds is the result. A measurement is done in a several places on the top surface along the span of the glider behind the leading edge.

The tearing resistance of the cloth - A non-destructive test following the TS-108 standard which specifies minimum tear strength for sky diving canopies should be made using a Bettsometer. (B.M.A.A. Approved Patent No. GB 2270768 Clive Betts Sails)

Strength of the lines - An upper, middle and lower A line, along with a lower B and a lower C (and lower D if applicable) line should be tested for strength. Each line is tested to breaking point and the value recorded. The minimum value is 8 G for all lower A+B lines and 6 G for all lower remaining lines, calculated from the maximum certified flying weight of the glider. The added minimum strength for the middle lines and for the top lines should be the same. If the breaking strength is too close to the minimum value calculated, the professional should give a period after which you will have to test the strength of the lines again.

Lengths of the lines - The overall length (riser lines + mid lines + upper lines) has to be checked under 5Kgs of tension. The difference between the measured length and the original length should not exceed +/- 10mm. The changes that could appear are a slight shrink on the C or Ds and/or a slight stretch on the A, B. The consequences of these changes can include a slower trim speed, difficult inflation etc.

Risers - Visual inspection for signs of wear or abrasion. Differences to manual lengths should not exceed +/-5mm.

Canopy check - A full visual check should be carried out: All the components of the wing (stitching, ribs, diagonals, lines, tabs, ...) should be checked for signs of deterioration.

Finally, a flight test to confirm that the wing behaves normally should be carried out by a professional.

Modifications

Your Ozone Mojo PWR was designed and trimmed to give the optimum balance of performance, handling and safety. Any modification means the glider loses its certification and will also probably be more difficult to fly. For these reasons, we strongly recommend that you do not modify your glider in any way.

IMPORTANT
Take care of your glider and make sure you have it checked and serviced according to the schedule.

OZONE QUALITY GUARANTEE

At Ozone we take the quality of our products very seriously, all our gliders are made to the highest standards in our own manufacturing facility. Every glider manufactured goes through a stringent series of quality control procedures and all the components used to build your glider 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.

If you need to dispose the wing, do so in an environmentally responsible manner. Do not dispose of it with the normal household waste.

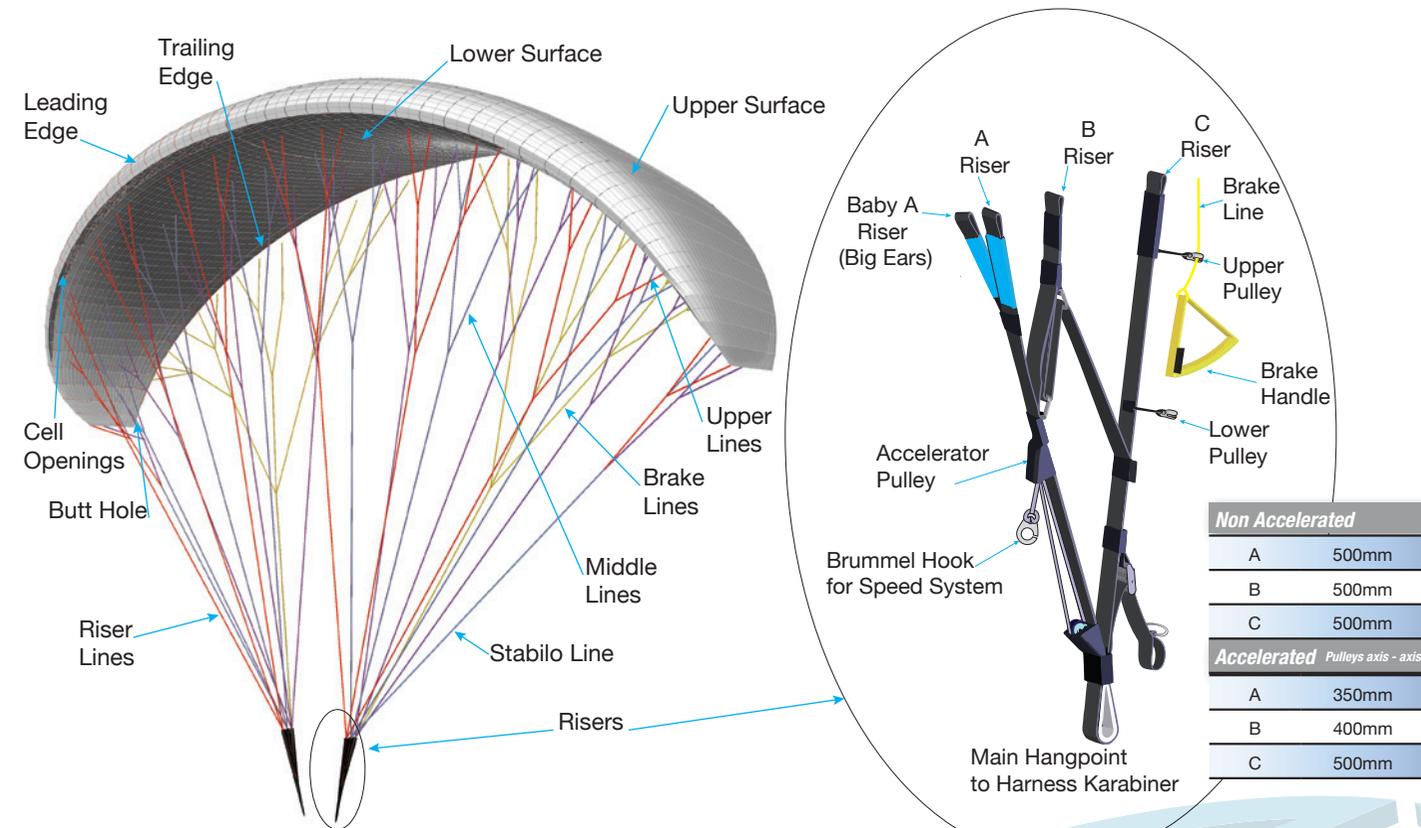
Finally, RESPECT the weather, it has more power than you can ever imagine. Understand what conditions are right for your level of flying and stay within that window.

Happy flying & enjoy your Mojo PWR.
Team Ozone

TECHNICAL SPECIFICATIONS

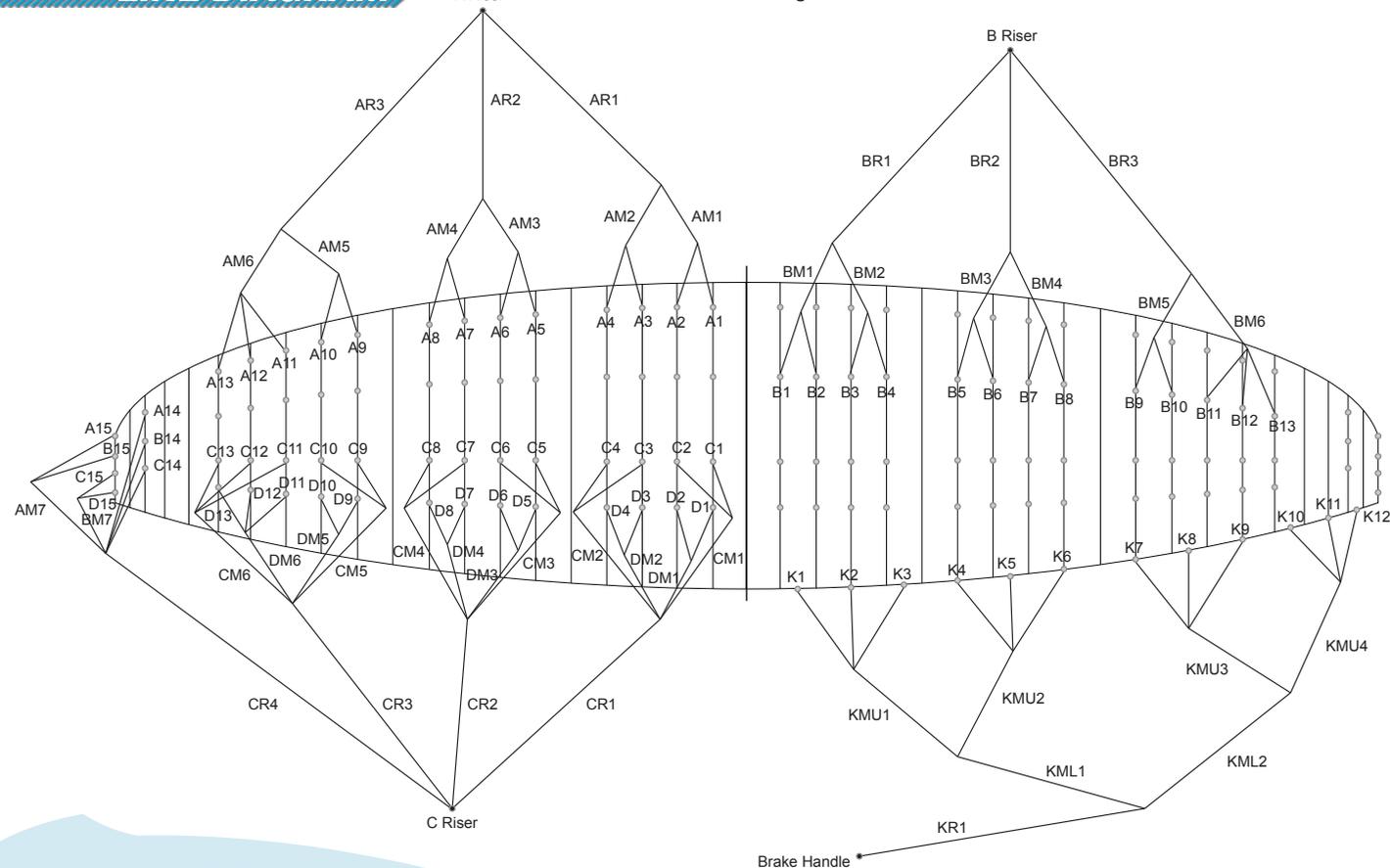
	XS	S	M	L	XL
No. of Cells	40	40	40	40	40
Projected Area (m2)	18.7	20.3	22.1	24	26.1
Flat Area (m2)	22	23.9	26	28.3	30.7
Projected Span (m)	8.05	8.39	8.75	9.12	9.51
Flat Span (m)	10.39	10.83	11.29	11.77	12.27
Projected Aspect Ratio	3.46	3.46	3.46	3.46	3.46
Flat Aspect Ratio	4.9	4.9	4.9	4.9	4.9
Root Chord (m)	2.72	2.83	2.95	3.08	3.21
Glider Weight (Kg)	4.50	4.77	5.03	5.45	5.83
Max Control Travel (cm)	75	75	75	75	75
EN Weight Range (Kg)	55-70	65-85	80-100	95-115	110-130
PPG Weight Range (Kg)	55-90	65-110	80-130	95-150	110-180
Maximum EN Load 8G (kg)	178	178	178	178	178
Maximum DGAC Load 5.25G (kg)	271	271	271	271	271
Certification DGAC EN/LTF	A	A	A	A	A

TECHNICAL DRAWINGS



LINE DIAGRAM

Individual and linked line lengths can be found online.



MATERIALS

All Ozone gliders are made from the highest quality materials available.

Cloth

Upper Surface

Dominico DOKDO 30D MF

Lower Surface

Dominico DOKDO 30D MF

Internal Ribs

Dominico DOKDO 30D FM

Leading Edge Reinforcement

P18 plastic pipe

MainLine Set

Riser Lines

Edelrid 6843 - 160/200kg

Middle Lines

Liros DSL - 140kg

Upper Lines

Liros DSL - 70kg

Brake Lines

Main brake Lines

Liros - 10-200-040

Middle brake lines

Liros DSL - 70kg

Upper brake lines

Liros DSL - 70kg

Risers and hardware

Shackles

Maillon Rapide - Pegeut

Riser webbing

20mm zero stretch polyester webbing

Pulleys

Austri Alpin



1258 Route de Grasse
Le Bar sur Loup
06620
France

Inspired by Nature, Driven by the Elements

www.flyozone.com