MANUAL

Version 1/2023

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Congratulations on buying your
PANDION 2
and welcome to the family
of ICARO - pilots!

Before you get to know your glider please read the manual, there is important information inside.

Your PANDION 2 is pattern tested in B.

Therefore, the glider is a "paraglider with good passive safety and forgiving flight characteristics. It is relatively resistant to abnormal flight conditions. It is suitable for pilots who have regular flying experience and advanced aeronautical knowledge and should have at least around 20-30 flight hours per year

The flight maneuvers during the certification process should not be overrated. Certification results provide only little information when you are flying in thermically active and turbulent air because the glider classifications serve to inform solely regarding the performance of a paraglider during extreme flight maneuvers in stable air conditions.

The use of this paraglider is entirely at your own risk. It may be only used for those purposes described in this manual.

It is strictly prohibited to fly the PANDION 2

- *under the influence of drugs or alcohol,*
- *in insufficient experience or training of pilots,*
- *without guilty license,*
- *beyond the minimum and maximum recommended Take Off- Weight,*
- *with damaged glider, lines, risers, or harness*
- *in the rain, in snow, in the clouds and fog and in turbulent weather condition and with passengers.*

Our products are made with great care and state of the art. Each glider before it is delivered to the dealer or flight school is checked by ICARO paragliders (incoming test). This date is entered in the identification plate and as well guarantee as the first 2-year-check period starts. The incoming test must also be documented in the manual. Test flights are made only on a random basis.

Every new ICARO paraglider must be checked again for correct basic settings by the dealer or the flying school by means of a test flight, pulling up on the practice slope, etc. before delivery and this date must be entered on the nameplate of the paraglider. From this point in time, both the period for the first 2-year check and the term of the guarantee begins. The use of this paraglider is entirely at your own risk. Every pilot bears the responsibility of his/her own safety.

In order to get to know your glider, we recommend that you practice with your glider on the ground. Pulling up in flat gradients is great practice for fine tuning

your launch techniques. Here you can get to learn the reactions of your glider without any stress and hectic. Ground practice pays off in the air.

All technical data and instructions were drawn up with great care. ICARO paragliders cannot be made responsible for any possible errors in this manual.

Important information in this manual is written in *fat cursive writing*.

Any important changes to this manual will be published in our homepage (www.icaro-paragliders.de).

Should you decide to sell this glider later, please pass on this manual to the new owner.

Each alteration of the glider (lines, canopy, and riser) is dangerous, and reactions of the glider are not predictable. Your glider will lose its pattern test result and guarantee.

You can only fly your glider with a valid flying license and in accordance with local rules and regulations.

The manufacturer or distributor assumes no responsibility for accidents occurring while using it.

Every pilot must ensure that the glider is properly checked at regular intervals.

Many countries have specific regulations or laws regarding paragliding activity. It's your responsibility to know and observe the regulations of the region where you fly.

We would like to point out that despite careful editing, all information in this manual is provided without guarantee and that ICARO Paragliders and the author cannot accept any liability.

Environmental aspects:

The materials of which a paraglider is made require a special waste disposal. So please send disused gliders back to us. We will care about a professional waste disposal without costing for you.

Please do our nature-near sport in a way which does not stress nature and environment!

Please do not walk beside the marked ways, do not leave your litter, do not make unnecessary loud noises and respect the sensitive balance in the mountains.

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To get to know your *PANDION 2*

Allowed for training		yes			
Certified / allowed for aerobatics		no / no			
Certified / allowed for flying with passengers		no/ no			
Certified / allowed for towing		yes			
Certified / allowed for flying with motor drive		no / no			
		XS	S	M	L
Certification LTF/ EN		B	B	B	B
Certification number		DHV-GS-01-2839-23	DHV-GS-01-2838-23	DHV-GS-01-2827-23	DHV-GS-01-2840-23
Number of cells		42	42	42	42
Number of miniribs		40	40	40	40
Number of risers		3+1	3+1	3+1	3+1
Weight	kg	4,0	4,3	4,6	4,8
Wing Area flat	m²	22	24	25,5	28
Wing Area projected	m²	18,7	20,5	22,3	24,2
Wingspan flat	m	11	11,5	11,8	12,4
Wingspan projected	m	8,5	8,9	9,3	9,7
Aspect Ratio		5,5	5,5	5,5	5,5
Aspect Ratio projected		3,9	3,9	3,9	3,9
Weight range	kg	55 - 75	70-90	85-105	95 - 120
Max. accelerating	mm	120	120	120	120
Horizontal distance of the main karabiners (recommended)	kg	< 80		80 - 100	> 100
	cm	38 - 42		42 -46	46 - 50
Recommended storage temperature		degree Celsius + 5^0 bis + 30^0			
Recommended storage humidity		relatively humidity 55% bis 75%			
24 months or **150** operating hours, depending on what occurs sooner.					

With the PANDION 2 we have succeeded in creating a worthy successor to our PANDION. The completely redesigned wing flies even easier, has significantly more power and yet even more passive safety characteristics than its predecessor. Even in rougher conditions the PANDION 2 gives a lot of smoothness, no matter if with open brake or fully accelerated. Our new PANDION 2 is a symbiosis between safety, performance, and dynamics, making it ideal for stress-free flying.

Target group and flight requirements

For ambitious beginner pilots who attach particular importance to the highest possible passive equipment safety paired with appealing performance in this glider category, the PANDION 2 is already excellently suited as safe initial paragliding equipment due to its simple launch behavior. Back-riders from higher classes and less experienced pilots will also appreciate the performance of the glider.

With the PANDION 2, we have placed special emphasis on the manageability of the descent aids. No pilot must compromise when it comes to a quick descent. The ears simply fold back with one pull on the split A-risers, the sink rate increases significantly, and spirals are particularly easy to enter and exit.

In normal flight, the flight and control characteristics of the PANDION 2 require mastery of the flight techniques taught in basic training. For safe thermal flights, mastery of active flying is essential. In the event of malfunctions, it is advantageous to have the theoretical knowledge learned in training to avoid and control malfunctions.

Therefore, it is recommended to learn and practice both malfunction avoidance and rapid descent techniques during safety training.

The PANDION 2 is neither suitable nor certified for aerobatics.

Canopy

The revised canopy concept with modified wing curvature and a leading edge with slightly modified openings enabled a performance-optimized profile. This makes the PANDION 2 more powerful and yet even safer than its predecessor. Different sail material on the top and bottom sail, the mini ribs on the leech as well as new rods in the nose make the leading edge more stable, also the weight was noticeably reduced as a result.

The advantages that this new profile offers the pilot are:

- The canopy launches better and easier,

- A better dynamic pressure is achieved over the entire angle of attack range, because: the higher this is, the more stable the canopy is also over the entire speed range.

- The glider stalls later, giving the pilot a larger control line range.

- In high-speed flight, the profile has a higher shape fidelity than conventional profiles and

- The reduced drag gives better glide and climb performance.

Lines

The entire line system is formed from individual lines, which are sewn and looped at both ends. The lines and stitching are subject to rigorous production controls, to ensure high and consistent manufacturing quality.

Upon delivery, the PANDION 2 is provided with an "anchor stitch" trim loop on the C level. These are used to compensate for the unavoidable changes in length of the lines, which depend, among other things, on climatic conditions, the storage of the glider, maneuvers, the type of line used, etc. As a rule, the A and B planes stretch slightly due to the higher load in the front area of the canopy, while the C-level mostly remains unchanged or even shrinks a little under certain circumstances. This makes the glider a little slower due to the higher angle of attack.

The first signs of a trim change are

• worse start

• changed flight behavior, the glider is slower and more sluggish or

• tending to deep stall when flying with big ears.

After the first 15 to 20 flight hours, the lines stretch or shrink the most, so ICARO Paragliders recommends carrying out an initial trim check by an authorized workshop.

But even later, the lines either become shorter or longer, which also depends on the flying style, maneuvers, and general handling of the paraglider (care, storage).

If one of these possibilities occurs, we recommend opening the trim loops on the C level step by step to counteract these effects (first, instead of the anchor stitch, use a double loop. If nothing changes in the above properties, then open the double loop and hang the line in the line lock).

If there is still no improvement, the glider must be checked and measured by qualified personnel. He has the option of either trimming the canopy without changing the lines or, in the worst case, replacing the affected lines with new ones.

It is imperative to ensure that the line locks are securely and firmly seated. If you are not sure or have any questions, please contact your dealer.

The PANDION 2 is delivered from the factory with the best **brake position** for most pilots. But tall or short pilots, or those with a harness with non-standard attachment points might consider it necessary to change the position of the brake handles.

If the brakes are to be shortened, it is extremely important to avoid the adjustment affecting the glider's trim speed. There must always be some slack in the brakes when they are fully released.

This can be checked with the glider inflated above the pilot's head. There should be a noticeable bow in the brake lines, and the brakes should be having no effect on the shape of the trailing edge.

If the brake lines are to be lengthened, it is important to ensure that the pilot can still stall the canopy (i.e., during extreme manoeuvres or landing) without the need to take wraps.

If you need to change the brake line lengths, do it maximum 5 cm at a time, and check it at an easy training hill. Check especially that both lines are the same length, as any asymmetry will lead to tiring and possible dangerous flying characteristics.

Risers

The Glider has 3-fold risers with separated A-risers an acceleration system which will be activated with a foot bar. The risers are signified. The main break line comes through a return pulley; the handle of the main break line is mounted on the C- riser. The acceleration system is mounted on the A- riser.

To fix it with the foot bar you must connect the brummel hooks of the foot bar with the brummel hook of the acceleration system.

How to vary the speed of the glider

The glider has an acceleration system which will be activated with a foot bar and no trimmer.

Acceleration system

When flying normal all risers have the same length. When using the accelerator system, the risers are shortened by a constructive exactly defined length.

Therefore, the angle of attack of the canopy is smaller and speed increases.

The length of the accelerator is adjusted to the left and right of the foot pedal so
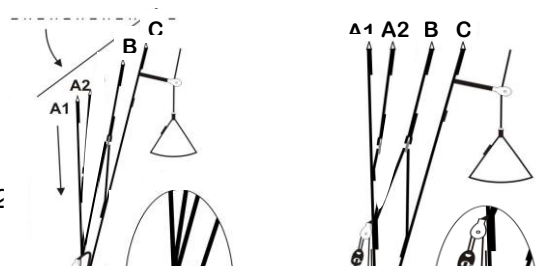
that when your leg is fully extended, then the acceleration is at maximum – both rollers are touching.

Please pay attention that the glider will not be pre-accelerated, while the accelerator is loosened, when the acceleration ropes are set too short. Assembling the accelerator is reliant upon the harness, e.g., numbers of return pulleys, rope guide …

The more turbulent the weather conditions and when near the ground, the less acceleration should be used.

Do not use the acceleration system and brakes at the same time! It is very dangerous to use both simultaneously as it can result in serious collapses.

Flying with the **PANDION 2**

Harness

The **PANDION 2** is certified for use with harnesses GH type. Practically all modern harnesses are GH type harnesses. Older harnesses with fixed cross belts (GX type) are not certified and should not be used.

The adjustment of the harness chest strap controls the distance between karabiners and affects the handling and stability of the glider.

Excessive tightening the chest strap increases stability but also the risk of twists following glider collapse, and it also increases the frequency of getting collapses due to poor feedback from the glider.

The risk of twisting is also strongly affected by the seating position of pilot.

Flying in a laid back (reclined) position makes it much more difficult to react in time to prevent riser twisting. With the chest strap in a more closed position the glider also has more tendency to maintain a stable spiral, lengthening of the chest strap gives more feedback from the glider but decreases stability.

ICARO paragliders recommends following settings:

Take-off weight	< 80kg	80 kg -100 kg	> 100kg
Horizontal distance of the main karabiners	38 cm – 42 cm	42 cm – 46 cm	46 cm – 50 cm

Flight preparation

- When choosing an area to lay out the glider before launching, try to find somewhere that is relatively free of stones and sharp rocks. Pay particular attention to the top surface, where the canopy touches the ground.
- Never step on your glider – stepping on it will weaken the cloth.
- We recommend keeping an eye on other pilots, spectators, and smoking people near of the glider. Many of them do not appreciate the fragility of the lines and cloth.

- Whilst unfolding your paraglider check the canopy and cell walls for damage. Always take into consideration that the paraglider may have become damaged during transportation.
- Make sure that no sand, stones, or snow get inside the canopy as the extra weight collected in the trailing edge may slow down or even stall the glider. Sharp edges damage the canopy.
- Check the lines for knots, twisting and damage, the brake lines for knots, kinks and their symmetric. Loose or incorrect brake knots can cause serious accidents through loss of the steering of the glider!
- Separate the line groups carefully and bring the risers in order. All lines must run freely from harness to canopy. It is equally important that the lines are unhindered and cannot get caught up during the launch.
- There should not be any lines underneath the canopy. If the lines wrap around the canopy, this can result in injury or death!
- Check the rescue system (handle's pins fixed in the loops and the closed cover of your harness).
- Check your harness and make sure that all connections to pilot are correctly closed. Check that all karabiners are closed and can not be opened accidentally in flight and the risers are not twisted.
- Check canopy (all cells are open), wind direction and airspace.

Do not launch if there are any defects!!!

Launch preparations

Before every launch you should carry out the standard 5-point checking procedure. Do the checks following the same sequence every time.

- Helmet, harness, carbines closed.
- Lines, risers, and accelerator, ok?
- Leading edge open?
- Wind direction and strength, ok?
- Airspace and start area, ok?

Launch

The most important thing during the take-off is, like at all other gliders too, not the force but the constancy of the pull.

At the start advice to fix the accelerator with the Velcro which is attached at the front of the sitting board, in order to avoid tripping while pulling up the glider or when starting up.

Hold only the middle A risers and the handles of the brakes. When you pull on the A-risers, the lines in the middle of the wing should be under tension before the lines on the wing ends. This ensures an even easier start. Use progressive pressure on the A risers and the energy of our own bodies weight until the wing is fully inflated overhead. The canopy is inflated quickly due to the super short lines. When there is no pull from the lines and the wing is overhead, use slight pressure on the brake. Look up and make sure that the canopy is fully inflated. After a few accelerating steps and at the same time let go of the brakes gently, you will take off. Then use slight pressure again on the brakes to fly at a speed with minimal sink rate.

When there is strong wind the reverse launch technique is recommended. Holding the brakes, turn around to face the wing passing one set of risers over your head as you turn. We suggest building a "wall" by partially inflating your glider on the ground, thus sorting out the lines thoroughly.

By towing by winch there are no special techniques needed.

Avoid large brake inputs until you are reasonably high if course correction is necessary close to the ground. Do not try to climb steeply during the first part of the tow.

Active flying

Active flying in normal flight means that the wing is always kept at a safe angle of attack and, if possible, vertically above the pilot. The moving air affecting the wing often changes the angle of attack in an unwanted way. When flying into an upwind the paraglider often bucks, the wing drops back, the angle of attack increases, getting closer to a stall. In upwind the canopy pitches forward, the angle of attack is reduced and there is the risk of a collapse. Both can occur symmetrically, on both sides or asymmetrically, on one side only. It is impossible to control the angle of attack by looking to the canopy. Look in the direction you are flying, changes in the horizon inform the pilot about the canopy's movements.

Braking is also an absolute must! If the canopy pitches forward, the angle of attack decreases. In the case of strong forward pitching there is a risk of the canopy collapsing due to its insufficient angle of attack. The pilot must therefore prevent the canopy from pitching forward by pulling the controls down on both sides. Inversely, the angle of attack increases if the wing drops back behind the pilot, e.g. when entering into a thermal. The canopy is closer to stalling.

In these flight situations a significant braking movement by the pilot can lead to a spin or a stall. When the wing drops back, the pilot therefore must not brake and/or if the pilot is already holding the controls low, he must release them accordingly.

Any change in the angle of attack immediately transfers in to a change in the control pressure of the brakes. The control pressure presents the pilot with immediate information on the angle of attack and on what the canopy is doing or about to do.

Flying with accelerator

When using the accelerator, be careful. The accelerator should be employed, to compensate for high angles of attack and the associated potential risk of a stall.

Do not step too quickly because your glider will dive down from the strong change in angle of attack. Put equal pressure on the speed bar with your feet until the pulley touches the A-riser, and the glider will quickly gain speed and the sink speed remains very moderate from beginning up to full speed.

The more turbulent the weather conditions and when near the ground, the less acceleration should be used. Using the accelerator decreases the angle of attack and can make the glider more prone to collapse.

Do not use the acceleration system and brakes at the same time! It is very dangerous to use both simultaneously as it can result in serious collapses.

Turning

A combined steering technique is suitable for every situation. The glider is agile and reacts to steering impulses quickly and directly. Strong, one-sided pulling of

the brakes brings the glider into an obvious side angle and the glider flies fast steep curves until spiral dive begins.

If the brake lines are pulled too fast or too far the glider will be stalled!

A one-sided stall is signalized clearly by: The curves inner side of the wing is getting soft, and nearly stops. In this case you have to release the brake lines!

Landing

Always stand up in the harness in the landing position very early to be able to react as fast as possible to sudden events. Set up your final landing leg to face into the wind to minimize groundspeed. If you leave the inflated leading-edge bang on the ground, this can cause the cell walls to burst!

Do not brake too much, to avoid a stall of the glider in this very low altitude! Do not reduce height by "pumping" with the brakes.

Descent techniques

The methods described here can stress the material and structure of the paraglider and the pilot to their physical and psychological limits. They should therefore only be used for training and in emergency situations.

- ***Training of descent techniques and simulation of flight incidents (SFI) should only take place at professional safety training seminars with professional trainer and only while flying over water.***

- ***Before inducing any exercise control the airspace beneath.***

- ***During the exercises stay in contact with the canopy.***

- ***If the glider is out of control, use your reserve parachute.***

Big & Small Ears

The aim of this exercise is to descend in strong thermals. Only take the outer lines of the A-risers in your hand, without releasing the brakes and pull down leaving it run through your hands (use gloves!). Sink rate increases but not the forward speed. If you use the acceleration system, then higher sink speeds can be achieved. Reopen the wing by pushing up with your hands and if necessary, then pump the brakes with short symmetric movements. For directional control while using the big ears, you should use weight shift.

Never attempt tight turns or spirals with Big Ears, as the A-lines will be over stressed.

B-Line-Stall

B-Line-Stall is not so effective, furthermore stresses the material of the glider and reduces operating life of the canopy.

To enter and hold a B-line-stall requires considerable strength.

It is very dangerous performing a B-line-stall incorrectly and following errors must be avoided:
- ***pulling too far on the B-line-stall aid, so that the A-lines are pulled too,***
- ***exit is too slow,***
- ***releasing the B-line-stall aid without simultaneously pushing up with your hands,***

- ***using brakes during or directly after exiting,***
- ***Brakes must not be shortened by twisting around your hand during the exercise.***

Spiral Dive

With stronger, one-sided control line pull and corresponding weight shifting, the paraglider takes on a clear lateral inclination and flies fast, steep turns, which can continue up to a spiral dive. When initiating a turn, always release the outer brake line completely and allow the glider time to absorb the turning movement.

Once you are in the spiral, take a neutral pilot position by taking back the weight shifted to the inside of the turn. Apply the outer brake so strongly that the glider cannot accelerate any further. In the spiral phase the inner brake remains static (only minor corrections), via the outer brake you control the spiral (steeper or flatter). If the glider slows down, release the brake a little, if it speeds up, apply the outer brake more. Try to keep the pressure on the inner brake relatively constant.

To exit the turn, shift your weight slightly to the outside, release the inside brake in a controlled manner and gently apply the brakes on the outside of the turn until you notice that the glider starts to straighten up. Reduce the turn energy in circles until the canopy is normally above you.

Here is a summary of the most important points:

- Initiate in a controlled manner and do not pull through abruptly. If the steering lines are pulled through too far or too fast, there is a risk of stall. Note that control pressures in a spiral dive are much higher than in normal flight.

- If the outside brake is not applied enough, the glider can go into a very steep spiral, because on the one hand it is not prevented from "going on the nose", and on the other hand the outer wing is prevented from collapsing, which would normally dampen a too aggressive acceleration and transition into the spiral dive.

- If you spiral stably under unfavorable conditions, the spiral dive must be actively rejected. This is done by decisively breaking the outer side of the turn in addition to shifting your weight outwards until you notice that the glider starts to straighten up. Then brake again sensitively on the inside of the turnover several turns until normal flight is achieved. During this process the glider can pitch forward strongly, and you must slow it down with dosed use of the brakes.

- Always check the sink rate! Do not put weight in the spiral as well but follow the centrifugal force. The sink rates in the spiral can be very high and therefore also the g-load for the body. Depending on the physical constitution, this can also lead to unconsciousness. If there are any signs of dizziness or blackout, immediately exit the spiral in a controlled manner.

- Only fly the spiral dive if you have mastered this maneuver and it is necessary.

- ***With high sink rates, make sure that the wing turns and pitches further forward, so that you must pull the wing harder.***

Wingover

The **PANDION 2** is an agile glider, and it is quite easy to get to an excessively high angle of bank in just a few turns. Practice wingovers gently at first, as there is a chance of quite large collapses at high bank angles.

What happens when it happens?

Knots and tangles

The best way to avoid knots and tangles is to inspect the lines before you inflate the wing for take-off. If you notice a knot before, take off, immediately stop running and do not take-off.

If you have taken-off with a knot you will have to correct the drift by leaning on the opposite side of the knot and gently apply the brake line on that side too. You can gently try to pull on the brake line to see if the knot becomes unfastened or try to identify the line with the knot in it. Try to pull the identified line to see if the knot releases. If the knot is too tight and you cannot remove it, carefully and safely fly to the nearest landing place.

Be very careful when trying to remove a knot. When there are knots in the lines or when they are tangled, do not pull too hard on the brake lines, there is an increased risk of the wing to stalling or negative turn being initiated.

Deep / Parachute Stall

Your glider has been carefully designed to resist entering deep stall. Before exiting a deep stall, please ensure that the brakes are fully released. Actively exit the deep stall by reaching up and push forward with both palms on the A-risers or pull on them. Avoid flying in very humid air or in rain. A wet canopy may have very unpredictable flying characteristics, one of which is a radically increased risk of deep stall.

Never pull the brake-lines during a parachute stall because the glider would go into a full stall immediately. If you find yourself flying in unavoidable rain, we strongly recommend that you avoid any sudden movements or radical brake line input, that you do not pull Big Ears or B-Line-Stall, and that you steer clear of turbulence and avoid a deep flare on landing.

Asymmetric Collapse

While flying in turbulent conditions it may occur that a portion of your glider deflates. However, just like in flying in turbulences, please pull gently on both brakes. Re-inflation is speeded up by counteracting the turning movement of the canopy until normal forward flight return. Then pump the brake line on the collapsed side.

If the canopy is in front of the pilot after an asymmetrical collapse, the pilot must immediately and decisively break down the open side to prevent an uncontrolled rotation. The same rule applies here: If the wing is ahead, braking is a must. Sometimes, however, the angle of attack on the open, not-collapsed side is relatively high and the wing is behind the pilot. Then a significant control movement would cause a stall and its potentially extreme reactions.

If the collapsed part of the canopy is very big, you have to brake the open side very dosed (not too much!) to avoid a stall.

Symmetric Collapse

Your PANDION 2 normally re-inflates promptly in a symmetric collapse without pilot input. Applying the brakes symmetrically will speed things up.

Emergency Steering

Should it no longer be possible to steer your glider, for example due to a broken line, the glider may be steered by gently pulling on either rear riser.

By steering this way airspeed is reduced hardly. Therefore, for landing you must change to the rear risers to control your glider. Handling will be more direct so being careful not to pull too hard.

Negative Spin

If the pilot abruptly applies full brake to one side of the glider while the other side is at zero brake, the faster side may fly around the braked and stalled side resulting in a spin. Alternatively, if flying very slowly with almost full brakes on both sides, if one hand releases one brake suddenly, while the other continues with full brake, the glider may enter a negative spin. To exit a spin just do "hands up" to release the brakes and the glider will return to normal flight.

If you do not have control over your glider and you are running out of altitude, immediately deploy your reserve parachute.

Front stall

After a front stall of the canopy, the wing moves backwards while the pilot with his higher mass moves further ahead. Wing behind, pilot ahead, significantly high angle of attack – there is only one thing to do:

Do not brake or you run the risk of a dangerous stall.

The pilot must not pull the control lines before the canopy is at least above him again. If the canopy then shoots forward dynamically, it is vital to stop the motion in a consistent and decisive manner via the brakes.

Full Stall

Spin and full stall are both dangerous and somewhat unpredictable exercises. Do not stall or spin your paraglider on purpose.

To initiate a full stable stall, apply both brakes to maximum arm extension. If possible, grasp the seat of your harness to assist keeping your arms locked. The pilot will swing back under the canopy and finally the canopy will stabilize to a full stall. Once in a stable stall, the exercise can be completed. Release the brakes just a little and let the glider fill until it regains shape. Then release the brakes fully and your glider will return to normal flight.

It is imperative that the pilot fully completes this exercise and holds on, as a premature release while the glider is still falling back may cause the glider to rapidly dive ahead past the pilot. There is a possibility of the pilot landing in or entangling in the glider.

Care instructions, repairs, inspection

Care Instructions

- A new wing supplied from the factory is often compressed hard. The compression serves to reduce shipping costs but should not be repeated once the wing has been unpacked and flown for the first time.

- Note that the glider bag should not be used as a seat.

- Even with good care and maintenance, just like any item exposed to the elements, your glider can wear out after a certain amount of use. This can change flight behavior and safety. We recommend a regular safety inspection of the canopy and all lines.

- If you clean your glider, it is best to use warm water and a soft sponge.

- Store your glider in a dry and dark place, ideally between 5° and 30° Celsius and humidity between 55 and 65%. Do not store it near chemicals or petrol.

- If you will not fly for longer period, store the glider releasing all compression straps and take it out of its backpack so that the fabric is not compressed, creased or stretched.

- Avoid storing your glider for days at a time in a hot car.

- Unpack your paraglider shortly before launch and pack away immediately after landing to avoid any unnecessary UV exposure.

- When unfolding the paraglider ensure that neither the canopy nor the lines become too dirty. Dirt particles can damage the material and lines.

- Never use chemical cleaning agents, brushes, or hard sponges on the material, as these destroy the coating and affect the strength of the cloth. The canopy will become porous and will lose structural strength.

- Never attempt to clean your paraglider in a washing machine. Even without using detergents the simple mechanical abrasion will quickly finish the canopy and render it useless.

- If you are flying near the sea most the wing may age faster because the air is humid and salty. In this case we suggest you have it checked more often than prescribed in this manual.

- Also avoid dipping it in a swimming pool; the chlorine will damage the cloth.

- If you must rinse or clean your glider do so with fresh water. Frequent cleaning will accelerate the ageing process*.*

- If the glider has become wet, lay it out so that air can get to all areas of the fabric.

- After landings in trees or on water you should check the length of the lines and the canopy.

- Flying all the descent or acrobatic exercises will not normally pose a structural problem but freestyle training accelerates the ageing process dramatically.

- There is no special method packing your glider. ICARO paragliders commends the "Cell to Cell-method bag because the reinforcements of the leading edge stay flex-free on top of each other and do not fold.

- When folding your glider make sure that there are no insects inside the canopy. Many insect species contain acids that could damage the cloth. Grasshoppers gnaw their way out of a folded canopy, making it full of holes in the process.

- When you did not fly for a longer period ICARO commends to check the glider (e.g., mildew stains, splice of the lines, corrosion of the shackles and carbines). If you are not convinced of the glider's airworthiness, please send your glider to an authorized ICARO dealer to check your glider. The same is commended for harnesses.

Repairs

Only use original ICARO parts for repairing your glider. If you don't you lose the warranty for your glider.

Small holes in the canopy (max. 20x20 mm) can be repaired by the pilot by using self-adhesive sailcloth on both sides of the perforation.

Damage to the lines or any other repairs should only be carried out at an authorized ICARO center.

If your glider needs to be repaired, please contact your local ICARO paragliders dealer.

Inspection

It is important to have your glider inspected by a trained ICARO technician, but it is also allowed to check your glider for yourself.

In the annex you find the regulations for checks of certified gliders and items to perform a paraglider inspection you need.

Inspection interval

24 months or **150** operating hours**,** depending on what occurs sooner.

Without regular certified inspections, your glider will lose its pattern test result and warranty.

ICARO recommends having wings that are often used for training of descent exercises, acrobatics or flying in salty ore sandy conditions subjected to checkups all 100 operating hours or 12 months.

It is also important, that ground handling also will be considered. All gliders, especially gliders manufactured with light and thin material are mechanically more stressed than other gliders. Therefore, ICARO recommends multiplying ground handling time with the factor 1, 5.

Not only gliders have a recurrent inspection interval. Airworthiness of harnesses and rescue systems must also be verified. Generally, it is recommended to change aluminum snap hooks after 24 months or 200 operating hours.

According to German and Austrian aeronautical legislation the owner of a glider can check the airworthiness by his own or order a third person (for example manufacturer/importer) to do this.

To perform your own airworthiness check, ICARO paragliders must give you a briefing. Should you decide to check the wing by yourself you must make sure that our guidelines are adhered to. Failing to do so will void the certification.

ICARO paragliders highly recommend that you let the manufacturer or authorized supplier/ person do the check of airworthiness.

All inspections and repairs must be documented (manual page 2).

Terms of the warranty

ICARO warranty covers the cost of materials and workmanship on gliders accepted by ICARO paragliders to fall under the warranty.

Paragliders: **24** month or **150** operating hours**,** depending on what is first

Harnesses and rescue systems: **24** months

Warranty is only valid for ICARO products with LTF/ EN certification.

What is covered by the warranty?

Provided that ICARO paragliders accept the fault the warranty contains all necessary spare parts related to the replacement or repair of defective parts and working time.

ICARO paragliders accept no freight costs (outbound and return transportation).

What are the conditions of the warranty?

Provided that ICARO paragliders accept the fault, the warranty contains all necessary spare parts related to the replacement or repair of defective parts and working time.

- ICARO paragliders needs to be informed immediately after the discovery of a defect and the defective product must be sent to us for testing.
- The glider/ harness/ rescue system was used in normal circumstances and maintained according to the instructions. This includes the careful drying, cleaning and storage.
- The glider/ harness/ rescue system was used only within the applicable guidelines and all rules have been complied with all times.
- All flights must be accounted for within the flight book.
- There were only original spare parts used and checks, exchange and / or repairs were conducted by an authorized dealer or by ICARO paragliders company / person and properly documented.
- The online form on www.icaro-paragliders.com must be sent at least 6 weeks after buying to ICARO paragliders.

What is excluded from warranty?

- Gliders and harnesses that are used for training purposes, Acro or other official competitions,
- Gliders / harnesses who were involved in an accident,
- Rescue equipment, which has been thrown for an emergency,
- Gliders / harnesses and rescue equipment, which have been changed by yourself,
- Gliders / harnesses and rescue equipment that were not purchased from an authorized dealer / flight school,
- Gliders / harnesses and rescue equipment where the required inspection intervals were not met, and the verification of the glider was not conducted by a ICARO paragliders authorized operation / person.
- Damage which has occurred due to improper treatment (i.e., storage in humidity, heat or direct sunlight)
- Parts that need to be replaced due to normal wear and tear,

- Discoloration of the cloth material used,
- Damage caused by solvents, salt water, insects, sun, sand, humidity or "debag-jumps".
- Damage caused by force majeure.
- Damage caused by the motor (Oil, fuel, damage in cause of the prop) and towing by winch.

In case of a concluded claim the period of warranty carries on. The period of warranty and the connected claim are not prolongated and are only valid until the original date of expiry.The freight costs (transport to and from) are not paid by ICARO paragliders.

In conclusion ....

The satisfaction of our customers is the first priority of our efforts.

Therefore, we are open to all suggestions for improvement and constructive criticism from you because only then can we incorporate them into our new products. We also want to be able to inform you at any time about current technical innovations as well as information about your paraglider. However, we can only do this if you register with ICARO Paragliders by means of a warranty registration.

You can find this on our homepage at www.icaro-paragliders.com.

Annex

Warranty Card

Please fill in the guarantee card which you find on our homepage www.icaro-paragliders,com and send it.

Users needs for Inspections.

You will need the following items to perform a paraglider inspection:

- o Standardized inspection report
- o Porosity meter
- o Spring scale
- o Equipment for measuring line lengths.
- o Equipment for line strength testing
- o Sewing machine
- o Big, clean, and bright room

Technical specifications about your glider (type, serial number, size, and year of production). Please call ICARO Paragliders for information.

A three-week course at ICARO Paragliders, specified to a glider type together with a legal flight license is the necessary prerequisites for permission to inspect ICARO Paragliders.

Inspection Instructions

Record Information

Spread out your paraglider in a big bright room and make a note of information such as model, type and serial number.

Porosity Test

Use your porosity meter to perform porosity checks at 4 different places of the canopy. The results are recorded in the inspection protocol and are to be evaluated according to the internal guidelines of the workshop.

Visual Control of the Canopy

Hang up the canopy so that you can do a visual check of your canopy. Check for perforations in the upper and lower sailcloth, damaged stitching between the cells, and damage to the leading/trailing edge reinforcements.
Each cell must be checked.

Visual Control of the Risers and Lines

Check the risers, the trimmers, the stitching at each line loop, the brake lines, all seams, and line contact points. Each line must be measured and inspected for kinks.

Strength test of the lines

One complete A-and B- line must be removed, measured, and submitted to a strength test. The measured value of each individual line must be noted in the inspection protocol. The minimum of the line's strength is 125% of the normative guidelines.

Measurement of the lines

Measure every single line while stressing it with defined tractive force (5daN). The results are recorded in the inspection protocol and are to be evaluated according to the internal guidelines of the workshop. For all information about the lines (single length, total length, mechanical strength) please call ICARO paragliders, office@icaro-paragliders.com

Assessment

The measurements of all procedures are noted in the inspection protocol. When all facts have been recorded, the technician must make a general assessment. Check the backpack for damage to the zips, seams and straps and repair if necessary, with a sewing machine.

General Remarks

Any other repairs, corrections etc. to the general condition of the paraglider must be evaluated. A copy of the results of each inspection must be sent on to ICARO Paragliders.

The technician must report any unusual faults to ICARO Paragliders within 3 days.

Inspection Reference

Only an authorized technician who has been trained by ICARO Paragliders is authorized to sign and date the glider type label and sign the manual.

Line Name all sizes

Rib	A - LINES			
2	a1			
3	a2	A1	AI	
5	a3			
6	a4	A2		amain
8	a5	A3		
10	a6			
12	a7	A4		
14	a8		AII	
16	a9	A5		
18	a10			
20	a11			
22	st1	ST1		

Rib	B - LINES			
2	b1			
3	b2	B1	BI	
5	b3			
6	b4	B2		bmain
8	b5	B3		
10	b6			
12	b7	B4		
14	b8		BII	
16	b9	B5		
18	b10			
20	b11	B6	STI	
22	st2			

Rib	C - LINES			
2	c1			
3	c2	C1	CI	
5	c3			
6	c4	C2		cmain
8	c5	C3		
10	c6			
12	c7	C4		
14	c8		CII	
16	c9	C5		
18	c10			
20	c11			
22	st3	ST2		

Rib	D - LINES
2	d1
3	d2
5	d3
6	d4
8	d5
10	d6
12	d7
14	d8
22	st4

Rib	BR - LINES			
r 2	br1			
r 4	br2	BR1		
r 6	br3		BRI	
r 8	br4	BR2		
r 10	br5			
r 12	br6	BR3		br5.1
r 14	br7			
r 16	br8	BR4		brmain
r 18	br9		BRII	
r 20	br10			
r 21	br11	BR5		
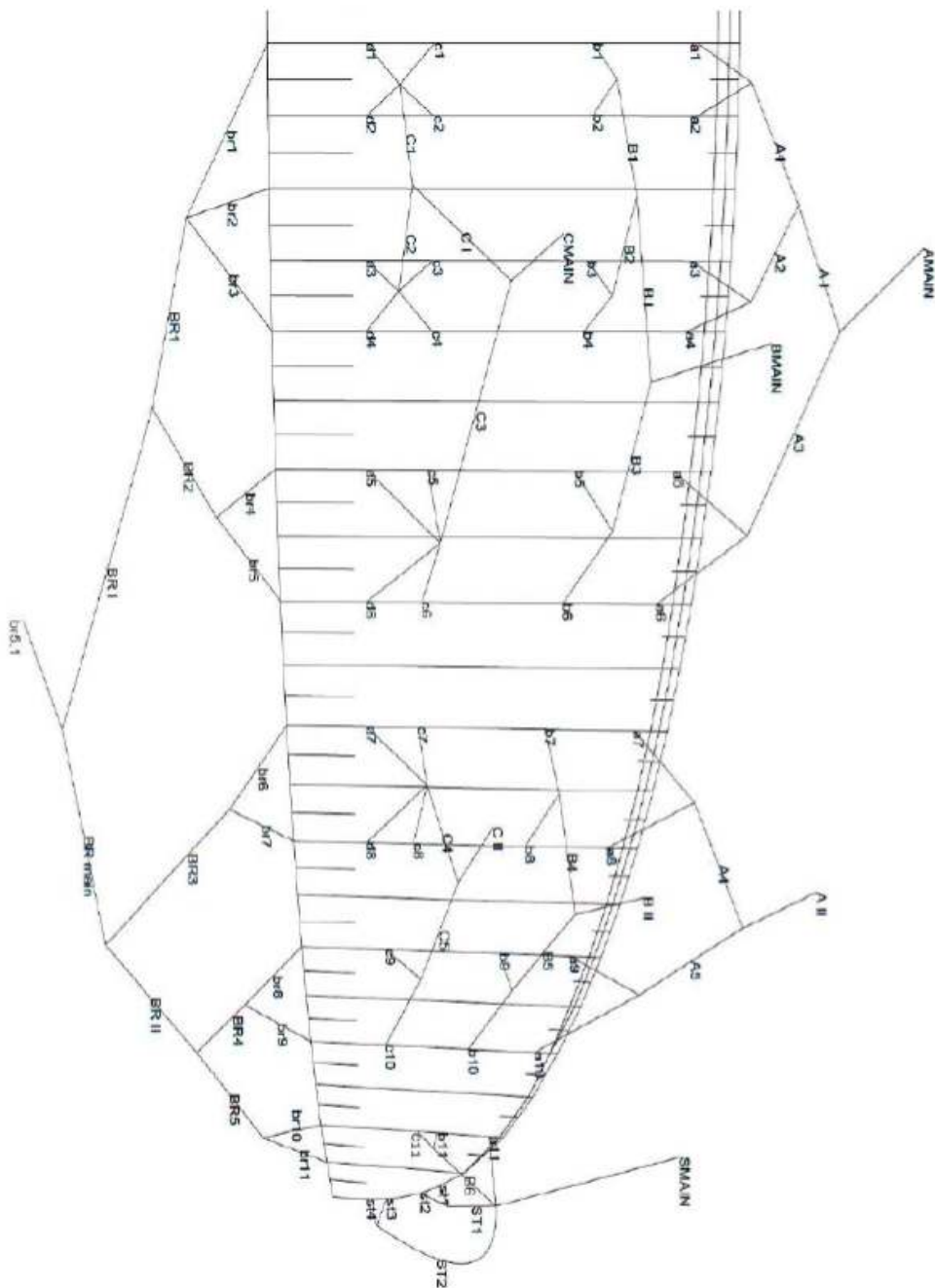
Partlist

STÜCKLISTE PANDION 2 ALL SIZE

	Bezeichnung	Type	Material	Oberfläche	Abmessung	Hersteller
Tragegurt	Fangleinenschloss	Triangel	Edelstahl	Edelstahl	d = 3,5 cm	Maillon
	Leinensammler	Clip	Kunststoff			
	Schlaufenband	Schiffchen-ware	Nylon		12,5 mm	Schmahl
	Faden	TEX 138	Polyester			A & E
Leinen	Stammleine	TSL 380 TSL 280	Aramid	ummantelt	d = 2,2 mm d = 1,8 mm	Liros
	Mittelleine 1. Gabel	TSL 190 PPSL 120	Aramid	ummantelt	d = 1,55 mm d = 1,2 mm	Liros
	Galerieleine 2. Gabel	DSL 70	Dyneema	ummantelt	d = 0,95 mm	Liros
Bremse	Stammleine	DSL 350	Dyneema	ummantelt	d = 2,0 mm	Liros
	Mittelleine 1. Gabel	TSL 140	Dyneema	ummantelt	d = 1,3 mm	Liros
	Galerie 2. Gabel	DSL 70	Dyneema	ummantelt	d = 0,95 mm	Liros
Tuch	Obersegel	SKYTEX 38	Nylon	beschichtet		SKYTEX
	Untersegel	MJTEX 32	Nylon	beschichtet		MJTEX
	Profile	SKYTEX 32 hard	Nylon	beschichtet		
	Profilverstärkung	Nylon Webbing	Nylon		d = 2,7 mm	
	Faden	TEX 45	Polyester			A & E
	Einfassband	NCV 20 mm Mylar Tape	Mylar		20 mm, 90g	Porcher Marine

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ICARO Paragliders
a brand of FLY & MORE GmbH,
Hochries Str. 1, 83126 Flintsbach, Germany

Wolfgang Kaiser (CEO)

Description of the riser

A A1 B C BR

Steering line

Handle

Brummelhook

Accelerator

Main suspension
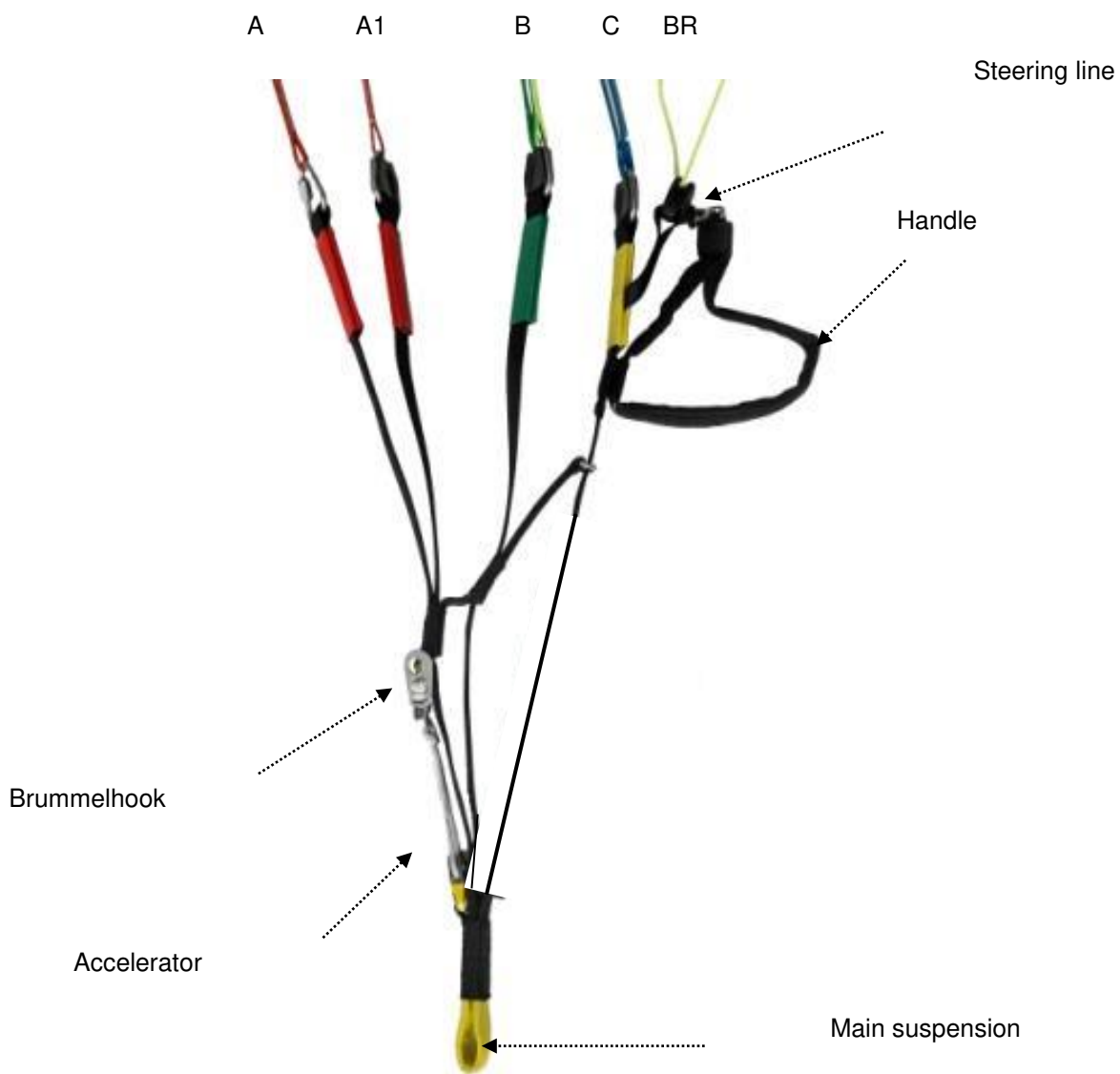
All sizes

Riser not accelerated (mm)

A1	A2	B	C
520	520	520	520

Riser accelerated (mm)

A1	A2	B	C
400	400	425	520

Line length and material

Leinenlängen und -typen PANDION 2 "XS"

Line LENGTH | Line TYPE

A - LINES (Length)

Rib	A-LINES				Checking
2	636				6595
3	594	1647	1979		6551
5	594				6506
6	623	1602		2355	6533
8	1416	2728			6482
10	1447				6512
12	1342	1976			6399
14	1261		3095		6315
16	1104	2025			6207
18	1027				6128
20	1326				5922
22	234	965			5790

A - LINES (Type)

Rib			
2	DSL 70		
3	DSL 70	PPSL 120	TSL 190
5	DSL 70		
6	DSL 70	PPSL 120	TSL 380
8	DSL 70	PPSL 120	
10	DSL 70		
12	DSL 70	PPSL 120	
14	DSL 70		TSL 380
16	DSL 70	PPSL 120	
18	DSL 70		
20	DSL 70		
22	DSL 70	DSL 70	

B - LINES (Length)

Rib	B-LINES				Checking
2	581				6539
3	535	1647	1979		6492
5	533				6445
6	563	1602		2355	6473
8	1356	2728			6423
10	1396				6460
12	1299	1976			6355
14	1230		3094		6285
16	1093	2025			6196
18	1023				6124
20	188	1130	4601		5910
22	226				5780

B - LINES (Type)

Rib			
2	DSL 70		
3	DSL 70	PPSL 120	TSL 190
5	DSL 70		
6	DSL 70	PPSL 120	TSL 380
8	DSL 70	PPSL 120	
10	DSL 70		
12	DSL 70	PPSL 120	
14	DSL 70		TSL 280*
16	DSL 70	PPSL 120	
18	DSL 70		
20	DSL 70	DSL 70	PPSL 120
22	DSL 70		

C - LINES (Length)

Rib	C-LINES				Checking
2	807				6625
3	752	1506	1971		6568
5	730				6519
6	755	1480		2370	6543
8	1028	3132			6498
10	1063				6531
12	1013	2324			6418
14	951		3109		6354
16	962	2236			6277
18	881				6193
20	201				5923
22	169	1039			5798

C - LINES (Type)

Rib				
2	DSL 70			
3	DSL 70	PPSL 120	TSL 190	
5	DSL 70			
6	DSL 70	PPSL 120	TSL 280*	*cowboy loop
8	DSL 70	PPSL 120		
10	DSL 70			
12	DSL 70	PPSL 120		
14	DSL 70		TSL 280*	*cowboy loop
16	DSL 70	PPSL 120		
18	DSL 70			
20	DSL 70			
22	DSL 70	DSL 70		

D - LINES (Length)

Rib	D-LINES	Checking
2	891	6705
3	839	6651
5	812	6597
6	834	6618
8	1115	6582
10	1143	6607
12	1071	6472
14	1007	6406
22	203	5829

D - LINES (Type)

Rib	
2	DSL 70
3	DSL 70
5	DSL 70
6	DSL 70
8	DSL 70
10	DSL 70
12	DSL 70
14	DSL 70
22	DSL 70

BR - LINES (Length)

Rib	BR-LINES				Checking
r 2	1791				7334
r 4	1481	1412			7022
r 6	1402		2287		6941
r 8	1122	1539			6791
r 10	1167				6833
r 12	973	1965		1854	6665
r 14	940				6630
r 16	921	735	1884		6590
r 18	882		1214		6549
r 20	275				6513
r 21	267	1306			6503

BR - LINES (Type)

Rib				
r 2	DSL 70			
r 4	DSL 70	DSL 70		
r 6	DSL 70		TSL 140	
r 8	DSL 70	DSL 70		
r 10	DSL 70			
r 12	DSL 70	DSL 70		DSL 350
r 14	DSL 70			
r 16	DSL 70	DSL 70	TSL 140	
r 18	DSL 70		DSL 70	
r 20	DSL 70			
r 21	DSL 70	DSL 70		

Leinenlängen und -typen PANDION 2 "S"

Line LENGTH

A - LINES

Rib					Checking
2	663				6881
3	620	1719	2064		6836
5	620				6789
6	650	1672		2457	6817
8	1477	2847			6764
10	1510				6795
12	1391	2061			6667
14	1306		3229		6580
16	1142	2112			6468
18	1062				6385
20	1383				6180
22	244	1007			6042

B - LINES

Rib					Checking
2	606				6824
3	558	1719	2064		6774
5	556				6725
6	588	1672		2457	6755
8	1415	2847			6702
10	1456				6741
12	1356	2061			6632
14	1284		3228		6558
16	1140	2112			6466
18	1068				6391
20	196	1179	4801		6167
22	235				6032

C - LINES

Rib					Checking
2	837				6908
3	780	1572	2056		6849
5	756				6798
6	783	1544		2472	6823
8	1068	3268			6776
10	1104				6810
12	1057	2425			6697
14	993		3243		6631
16	1004	2333			6550
18	919				6463
20	209				6180
22	177	1084			6050

D - LINES

Rib		Checking
2	925	6992
3	870	6935
5	842	6879
6	865	6900
8	1159	6863
10	1188	6890
12	1118	6754
14	1050	6684
22	211	6083

BR - LINES

Rib					Checking
r 2	1869				7653
r 4	1546	1473			7328
r 6	1463		2386		7243
r 8	1171	1605			7086
r 10	1217				7130
r 12	1016	2051		1934	6955
r 14	981				6919
r 16	961	767		1965	6876
r 18	921		1267		6834
r 20	287				6796
r 21	278	1362			6785

Line TYPE

A - LINES

Rib				
2	DSL 70			
3	DSL 70	PPSL 120	TSL 190	
5	DSL 70			
6	DSL 70	PPSL 120		TSL 380
8	DSL 70	PPSL 120		
10	DSL 70			
12	DSL 70	PPSL 120		
14	DSL 70		TSL 380	
16	DSL 70	PPSL 120		
18	DSL 70			
20	DSL 70			
22	DSL 70	DSL 70		

B - LINES

Rib				
2	DSL 70			
3	DSL 70	PPSL 120	TSL 190	
5	DSL 70			
6	DSL 70	PPSL 120		TSL 380
8	DSL 70	PPSL 120		
10	DSL 70			
12	DSL 70	PPSL 120		
14	DSL 70		TSL 280*	
16	DSL 70	PPSL 120		
18	DSL 70			
20	DSL 70	DSL 70	PPSL 120	
22	DSL 70			

C - LINES

Rib				
2	DSL 70			
3	DSL 70	PPSL 120	TSL 190	
5	DSL 70			
6	DSL 70	PPSL 120		TSL 280* *cowboy loop
8	DSL 70	PPSL 120		
10	DSL 70			
12	DSL 70	PPSL 120		
14	DSL 70		TSL 280* *cowboy loop	
16	DSL 70	PPSL 120		
18	DSL 70			
20	DSL 70			
22	DSL 70	DSL 70		

D - LINES

Rib	
2	DSL 70
3	DSL 70
5	DSL 70
6	DSL 70
8	DSL 70
10	DSL 70
12	DSL 70
14	DSL 70
22	DSL 70

BR - LINES

Rib				
r 2	DSL 70			
r 4	DSL 70	DSL 70		
r 6	DSL 70		TSL 140	
r 8	DSL 70	DSL 70		
r 10	DSL 70			
r 12	DSL 70	DSL 70		DSL 350
r 14	DSL 70			
r 16	DSL 70	DSL 70		TSL 140
r 18	DSL 70		DSL 70	
r 20	DSL 70			
r 21	DSL 70	DSL 70		

Leinenlängen und -typen PANDION 2 "M"

Line LENGTH

Rib	A - LINES			Checking
2	699			7176
3	654	1790	2150	7129
5	654			7080
6	685	1741	2559	7109
8	1547	2965		7054
10	1581			7086
12	1465			6961
14	1376	2147	3363	6870
16	1206			6753
18	1122	2200		6667
20	1441			6437
22	254	1049		6294

Rib	B - LINES			Checking
2	631			7108
3	581	1790	2150	7056
5	579			7005
6	612	1741	2559	7036
8	1474	2965		6981
10	1517			7022
12	1412	2147		6908
14	1337		3362	6831
16	1188	2200		6735
18	1112			6657
20	204	1228	5001	6424
22	245			6283

Rib	C - LINES			Checking
2	881			7205
3	821	1637	2142	7143
5	797			7090
6	825	1608	2574	7116
8	1121	3404		7067
10	1159			7103
12	1096	2526		6971
14	1029		3377	6902
16	1041	2430		6818
18	952			6727
20	218			6438
22	184	1129		6302

Rib	D - LINES	Checking
2	972	7292
3	915	7233
5	886	7175
6	910	7197
8	1216	7158
10	1246	7186
12	1159	7030
14	1089	6958
22	220	6336

Rib	BR - LINES				Checking
r 2	1947				7972
r 4	1610	1534			7633
r 6	1524		2485		7545
r 8	1220	1672			7381
r 10	1268				7427
r 12	1058	2136		2015	7245
r 14	1022				7207
r 16	1001	799	2047		7163
r 18	959		1319		7119
r 20	299				7079
r 21	290	1419			7068

Line TYPE

Rib	A - LINES			
2	DSL 70			
3	DSL 70	PPSL 120	TSL 190	
5	DSL 70			
6	DSL 70	PPSL 120		TSL 380
8	DSL 70	PPSL 120		
10	DSL 70			
12	DSL 70	PPSL 120		
14	DSL 70		TSL 380	
16	DSL 70	PPSL 120		
18	DSL 70			
20	DSL 70			
22	DSL 70	DSL 70		

Rib	B - LINES			
2	DSL 70			
3	DSL 70	PPSL 120	TSL 190	
5	DSL 70			
6	DSL 70	PPSL 120		TSL 380
8	DSL 70	PPSL 120		
10	DSL 70			
12	DSL 70	PPSL 120		
14	DSL 70		TSL 280*	
16	DSL 70	PPSL 120		
18	DSL 70			
20	DSL 70	DSL 70	PPSL 120	
22	DSL 70			

Rib	C - LINES			
2	DSL 70			
3	DSL 70	PPSL 120	TSL 190	
5	DSL 70			
6	DSL 70	PPSL 120		TSL 280* *cowboy loop
8	DSL 70	PPSL 120		
10	DSL 70			
12	DSL 70	PPSL 120		
14	DSL 70		TSL 280*	*cowboy loop
16	DSL 70	PPSL 120		
18	DSL 70			
20	DSL 70			
22	DSL 70	DSL 70		

Rib	D - LINES
2	DSL 70
3	DSL 70
5	DSL 70
6	DSL 70
8	DSL 70
10	DSL 70
12	DSL 70
14	DSL 70
22	DSL 70

Rib	BR - LINES			
r 2	DSL 70			
r 4	DSL 70	DSL 70		
r 6	DSL 70		TSL 140	
r 8	DSL 70	DSL 70		
r 10	DSL 70			
r 12	DSL 70	DSL 70		DSL 350
r 14	DSL 70			
r 16	DSL 70	DSL 70		TSL 140
r 18	DSL 70		DSL 70	
r 20	DSL 70			
r 21	DSL 70	DSL 70		

Leinenlängen und -typen PANDION 2 "L"

Line LENGTH

A - LINES

Rib					Checking
2	725				7447
3	679	1857	2231		7398
5	679				7347
6	711	1806		2655	7377
8	1605	3076			7320
10	1641				7353
12	1530	2228			7233
14	1437		3489		7138
16	1261	2283			7017
18	1174				6928
20	1495				6680
22	264	1088			6531

B - LINES

Rib					Checking
2	655				7376
3	603	1857	2231		7322
5	601				7269
6	635	1806		2655	7301
8	1530	3076			7244
10	1574				7287
12	1465	2228			7168
14	1387		3488		7089
16	1233	2283			6989
18	1154				6908
20	212	1274	5189		6666
22	254				6520

C - LINES

Rib					Checking
2	915				7478
3	853	1699	2223		7413
5	828				7358
6	857	1668		2670	7385
8	1164	3532			7334
10	1204				7372
12	1132	2621			7229
14	1063		3503		7157
16	1075	2521			7070
18	983				6975
20	226				6681
22	191	1171			6540

D - LINES

Rib		Checking
2	1010	7568
3	950	7507
5	920	7447
6	945	7469
8	1263	7429
10	1294	7458
12	1197	7290
14	1125	7215
22	228	6575

BR - LINES

Rib					Checking
r 2	2020				8273
r 4	1671	1592			7921
r 6	1581		2578		7829
r 8	1266	1735			7659
r 10	1316				7707
r 12	1098	2216		2091	7518
r 14	1060				7479
r 16	1039	829	2124		7433
r 18	995		1368		7387
r 20	310				7346
r 21	301	1472			7334

Line TYPE

A - LINES

Rib				
2	DSL 70			
3	DSL 70	PPSL 120	TSL 190	
5	DSL 70			
6	DSL 70	PPSL 120		TSL 380
8	DSL 70	PPSL 120		
10	DSL 70			
12	DSL 70	PPSL 120		
14	DSL 70		TSL 380	
16	DSL 70	PPSL 120		
18	DSL 70			
20	DSL 70			
22	DSL 70	DSL 70		

B - LINES

Rib				
2	DSL 70			
3	DSL 70	PPSL 120	TSL 190	
5	DSL 70			
6	DSL 70	PPSL 120		TSL 380
8	DSL 70	PPSL 120		
10	DSL 70			
12	DSL 70	PPSL 120		
14	DSL 70		TSL 280*	
16	DSL 70	PPSL 120		
18	DSL 70			
20	DSL 70	DSL 70	PPSL 120	
22	DSL 70			

C - LINES

Rib				
2	DSL 70			
3	DSL 70	PPSL 120	TSL 190	
5	DSL 70			
6	DSL 70	PPSL 120		TSL 280* *cowboy loop
8	DSL 70	PPSL 120		
10	DSL 70			
12	DSL 70	PPSL 120		
14	DSL 70		TSL 280*	*cowboy loop
16	DSL 70	PPSL 120		
18	DSL 70			
20	DSL 70			
22	DSL 70	DSL 70		

D - LINES

Rib	
2	DSL 70
3	DSL 70
5	DSL 70
6	DSL 70
8	DSL 70
10	DSL 70
12	DSL 70
14	DSL 70
22	DSL 70

BR - LINES

Rib				
r 2	DSL 70			
r 4	DSL 70	DSL 70		
r 6	DSL 70		TSL 140	
r 8	DSL 70	DSL 70		
r 10	DSL 70			
r 12	DSL 70	DSL 70		DSL 350
r 14	DSL 70			
r 16	DSL 70	DSL 70		TSL 140
r 18	DSL 70		DSL 70	
r 20	DSL 70			
r 21	DSL 70	DSL 70		

Description of the canopy
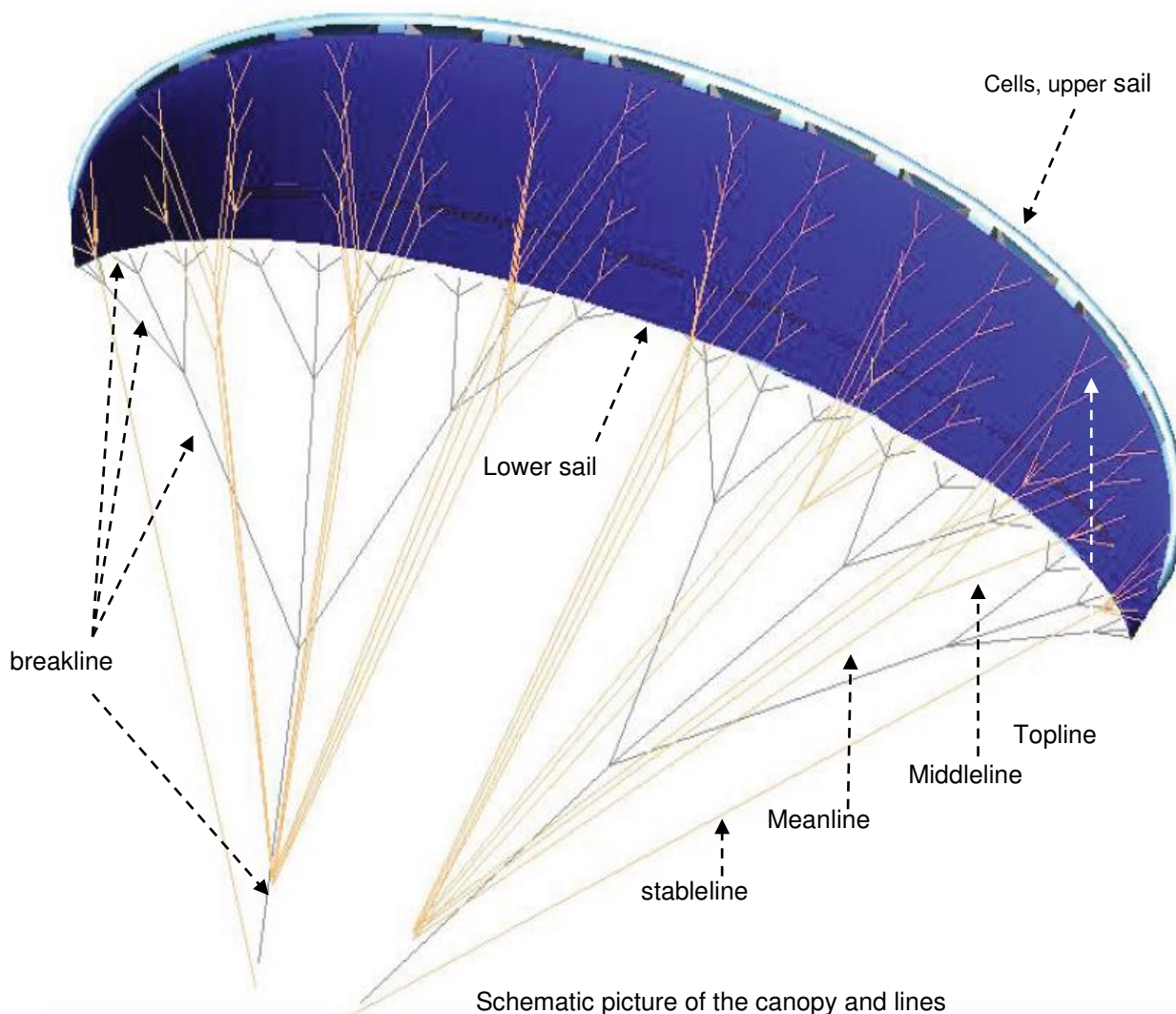
Cells, upper sail

Lower sail

breakline

Topline

Middleline

Meanline

stableline

Schematic picture of the canopy and lines

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ICARO
PARAGLIDERS

Colors

COLORS PANDION 2 All SIZE

CC1

CC2

CC3

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Wolfgang Kaiser (CEO)