

# **USER'S MANUAL ICEPEAK 8**



## ICEPEAK 8

Changing the competition rules

### WELCOME

We wish to welcome you to our team and thank you for the confidence that you have placed in a NIVIUK Glider.

We would like to share with you the commitment, the passion and emotions of the Niviuk design team, which have resulted in the creation of the new ICEPEAK 8. Niviuk are very proud of this new glider, a glider carefully designed to bring you maximum pleasure whilst allowing you learn and progress.

The ICEPEAK 8 is the answer: a top competition glider designed and made for the most demanding pilots. The result is a wing comprised of more than two thousand parts to create a unique composition.

We are confident that you will enjoy flying this wing and that you will soon understand the meaning of our slogan: "The importance of small details"

This is the user's manual that we recommend you to read in detail.

The **NIVIUK Gliders** Team.

## USER'S MANUAL

NIVIUK Gliders ICEPEAK 8.

This manual offers all the necessary information that will familiarize you with the main characteristics of your new paraglider. Although this manual informs you about your glider, it does not offer the instruction requirements necessary for you to be able to pilot this type of wing. Flying instruction can only be set by the competent organism in your country of flying zone.

Nevertheless we remind you that it is important that you carefully read all the contents of the manual for your new ICEPEAK 8.

Severe injuries to the pilot and passenger, including death, can be the consequence of the misuse of this equipment. Neither the manufacturer nor the dealers or sellers of this product are responsible of the damage derived from using this glider inappropriate way. Only the pilot is entirely accountable for any damage derived there from.

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NIVIUK GLIDERS C/ DEL TER 6, NAVE D 17165 LA CELLERA DE TER - GIRONA - SPAIN

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TEL. +34 972 42 28 78 FAX +34 972 42 00 86

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info@niviuk.com www.niviuk.com

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## 1. CHARACTERISTICS

### 1.1 WHO IS IT DESIGNED FOR?

The ICEPEAK 8 has been designed for experienced pilots and those wishing to compete in high performance competitions. It has been conceived for competition; therefore, it is able to fly kilometre after kilometre with an intensive pace. Its strengths are its glide, its excellent rapid ascent in thermals and its speed when flying. Moreover, it provides to the pilot a perfect transmission of the air flow and an incomparable security sensation in its category.

Description of the skills and experience required for this glider:  
For those pilots used to recovery techniques, active piloting, to fly on turbulent conditions and capable of flying these kind of demanding gliders.

### 1.2 CERTIFICATION

The ICEPEAK 8 has successfully achieved the CIVL Competition Class (CCC). This test was carried out in the Swiss Air-Turquoise laboratories in Switzerland.

All the commercially available sizes passed every required test with excellent results and the ICEPEAK 8 received CCC certification for all sizes.

The ICEPEAK 8 passed the essential load test of 8g without experiencing any problems.

We recommend paying special attention on the flight test report made by the certification laboratory, and specially attention to the test pilot comments.

On the flight test report there is all necessary information to know how the

new paraglider will react on each manoeuvre tested. It is important to take into account that each size can have a different reaction on the same manoeuvre. Furthermore, the same size on maximum load or minimum load can experiment a different behaviour.

Description of flight characteristics on CCC class:

Paragliders with very demanding flying characteristics and potentially violent reactions to turbulence and pilot errors. Recommended for experienced and regularly flying pilots. The intervention of the pilot is needed to recover a normal flight state.

Check the certification results and figures on the last pages of this manual or at [www.niviuk.com](http://www.niviuk.com)

### 1.3 IN-FLIGHT BEHAVIOUR

Designing a new high-featured and accessible glider is the result of years of research and extensive testing flights under all conditions and in different places in order to provide an easy piloting wing.

Its new profile makes the most of the airflow to maximize the efficiency of the glider. More compact and clean leading edge. New materials in the internal part of the glider to provide the endurance needed in competition and lightness.

Excellent feeling on thermals, better climb rate and stall recovery. The outcome of putting all this technology together is a trusty and stable glider even at maximum speed. It is more demanding, but providing fantastic turning for a 2-liner glider and the same comfort that characterize all Icepeak models.

With an aspect ratio of 7.6 it is a 2 liner wing that provides clear and useful information to the pilot; it usually situates itself into the center of the thermal or it follows the ascendant (good) air flow. While flying the

ICEPEAK 8 the pilot feels that can reach his full potential. In thermals, you will realize that you are piloting a glider with a big capacity to reach the nucleus. Regarding speed and L/D, ICEPEAK 8 is surprising; the pilot can feel the glider, through the accelerator pulley, and can anticipate its movements. Even at high speed the wing is stable. The accelerator pulley of ICEPEAK 8 works gradually and lets you enjoy real acceleration without losing L/D in the first part of the accelerator. The wing is homogeneous, fast and capable to fly as far as you dreamed possible. The second part of the accelerator is very accessible and pleasure to use. The glider keeps its excellent glide angle throughout a full days flying in all conditions.

If you already are a Niviuk pilot the improvements of this glider will surprise you. If this is the first time you pilot one of our gliders, just enjoy it!

#### 1.4 ASSEMBLY, MATERIALS

The ICEPEAK 8 has all the technological innovations as used on other Niviuk gliders. Furthermore it is full of small details destined to enhance the pilots' comfort and to improve the performance.

The new generation profile of the ICEPEAK 8 has been conceived to efficiently distribute the total load across the two rows of lines. The chosen materials and line dimensions have minimum air resistance while respecting the security and maximum load efficiency.

The fabrics used in the construction of the ICEPEAK 8 have been carefully selected for their lightweight, uv standards and resilient properties when used during normal conditions.

Not a single millimetre of error is possible in the manufacturing process from Olivier's computer to the cutting of the fabric. An automatic process controlled by a laser-cutting program cuts each of the sections that compose the different parts of the wing. This program not only cuts the

pieces of fabric but it also paints the guideline marks that will aid the assembly; it also numbers the separate pieces of material. All this is carried out before human handling of the pieces begins. So we eliminate possible and understandable errors that may occur during this delicate procedure.

The lines are semi-automatically manufactured and all the sewing is finished under the supervision of our specialists. The jigsaw puzzle of the assembly process is made easier using this method. We minimize the processes while making the quality control more efficient. All the different parts of the canopy are cut and assembled under the strict conditions induced by the automation of the whole process.

It is strongly recommended that all lines are thoroughly checked by the pilot prior to every flight and ultimately checked by a service centre or Niviuk dealer after the first 30 hours of flight. We should not forget that we are using materials with great performance but that they need a rigorous check before every flight.

All NIVIUK Gliders go through an extremely thorough and efficient final inspection. Every single line of each glider is measured individually once the final assembly has concluded. Each wing is then individually inflated for the last visual revision.

Each glider is packaged following the maintenance and conservation instructions recommended for the advanced materials. NIVIUK Gliders are made of first class materials as demanded by the performance, durability, and homologation requirements of the present-day market.

Information about construction materials is given on the last pages of this manual.

#### 1.5 ELEMENTS, COMPONENTS

The ICEPEAK 8 is delivered to its owner together with a series of

components that, although not fundamental, do take an important part in the use, transport and storage of the paraglider:

The new large capacity Kargo rucksack, ideal for packing also one competition harness (such as the Drifter). Capacity and comfort all in one.

The N-Kare bag which makes easy the glider folding process. Moreover, it protects the wing when packing and carrying. An adjustable strap for quick and easy compression to fold the wing as small as possible

A small fabric repair including auto adhesive rips top (same colours of the wing) and replacement maillon blockers.

The user's manual with the answers all our questions about our new ICEPEAK 8 is available at [www.niviuk.com](http://www.niviuk.com)

## 2. UNPACKING AND ASSEMBLY

### 2.1 CHOOSE THE RIGHT PLACE

We recommend that you unpack and assemble your wing on a schooling slope or a flat clear area without too much wind and free of obstacles. These conditions will allow you to carry out all the steps required for you to check and inflate the ICEPEAK 8.

We recommend that an instructor or a retailer supervises the entire procedure as only they are competent to resolve any doubt in a safe and professional way.

### 2.2 PROCEDURE

Take the paraglider out of the rucksack, open it and spread it open with the lines on top of the underside, position the wing as if you were to inflate

it. Check the condition of the fabric and the lines, making sure there are no abnormalities. Check the maillons, which attach the lines to the risers, are properly closed. Identify and if necessary disentangle the lines from A and A' and B risers, the brake lines and the corresponding risers. Make sure that there are no ties or knots.

### 2.3 ASSEMBLY OF THE HARNESS

Correctly place the risers on the harness karabiners. The risers and lines should not have any twists and they should be in the right order. Check that the harness buckles are correctly locked.

### 2.4 TYPE OF HARNESS

The ICEPEAK 8 has been certified on CCC which allows it to be flown with most of the harnesses on the market, even the ones that use cocoon. We strongly recommend that you adjust the distance of the chest strap according to the values used during certification. This varies according to the size of the chosen harness.

Wide 41cm/Height 46cm

Incorrect adjustment can seriously affect the piloting of the glider. A distance, which is too wide between the karabiners, may provide more feedback but could affect the overall stability of the glider. A distance, which is too narrow between the karabiners, would provide less feedback but also increase any risk of developing a twist in during a large collapse.

Any change made to these specifications may affect the wing's performance and reactions. This would therefore effect the glider's configuration and would not conform to the homologation.

### 2.5 ASSEMBLY OF THE ACCELERATOR

The acceleration mechanism of the ICEPEAK 8 works when you push with your feet on the accelerator bar, this is supplied with the equipment. On delivery the accelerator bar has not yet been installed and it is recommended that it is fit by yourself before flight.

Most harnesses are equipped with a pre-installed acceleration system. When fitting any accelerator system ensure that all preinstalled items within the harness, such as roller pulleys are used correctly. After fitting, take into account that you will have to adjust the length of the accelerator lines for correct use. This will vary according to the length of the pilot's legs!

We recommend that you try the correct fitting of the acceleration system on equipment designed to do this, most paragliding schools have this sort of equipment.

## 2.6 INSPECTION AND WING INFLATION ON THE GROUND

Once you have checked all the equipment and made sure that the wind conditions are favourable, inflate your ICEPEAK 8 as many times as necessary in order to become acquainted with the wing's behaviour.

The ICEPEAK 8 inflates easily and smoothly. An excess of energy is not necessary and the wing will inflate with minimum pressure on the harness when you move forward. This may be assisted by using the A lines. Do not pull on them; just accompany the natural rising movement of the wing. Once the wing is in the 12 o'clock position, simply apply correct pressure on the brake lines and the ICEPEAK 8 will sit over your head.

## 2.7 ADJUSTING THE BRAKES

The length of the main brake lines is adjusted at the factory to the length established during certification. However, the length can be changed to adapt to the pilots' flying style. Nevertheless, we recommend that you fly for a while with these, set at the original length. This will allow you to

become accustomed to the ICEPEAK 8 and its unique flying behaviour. If you then decide to change the length of the brake lines, untie the knot, slide the line through the brake link to the desired length, and strongly re-tie the knot. Qualified personnel should carry out this adjustment. You must ensure that this adjustment does not slow down the glider without any pilot input. Both brake lines should be symmetrical and measure the same length. The most recommended knots are the clove hitch knot or bowline knot.

When changing the brakes length, it is necessary to check that they do not act when the accelerator is used. When we accelerate the glider rotates over the B riser and the trailing edge elevates. We must check that the brake is adjusted taking in consideration this extra length in acceleration.

## 3. THE FIRST FLIGHT

### 3.1 CHOOSE THE RIGHT PLACE

We recommend that the first flight with your ICEPEAK 8 is made on a smooth slope (a school slope) or in your usual flying area.

### 3.2 PREPARATION

Repeat the procedures detailed in chapter 2 UNPACKING AND ASSEMBLY in order to prepare your equipment.

### 3.3 FLIGHT PLAN

Draw out a flight plan before take-off in order to avoid possible flight errors.

### 3.4 PRE-FLIGHT CHECK LIST

Once you are ready, but before you take-off, carry out another

equipment inspection. Ensure correct installation of all equipment and that all lines are free of hindrances or knots. Check that the weather conditions are suited for your flying skills.

### 3.5 WING INFLATION, CONTROL, AND TAKE-OFF

Smoothly and progressively inflate the wing (chapter 2.6 INSPECTION AND WING INFLATION ON THE GROUND). The ICEPEAK 8 inflates easily and does not require excessive energy. It does not tend to over-take you, so the wing inflation phase is carried out without anguish. These take off characteristics provide a perfect control phase and enough time for the pilot to decide whether to accelerate and take off.

Whenever the wind speed allows it, we recommend a reverse launch technique; this type of launch allows you to carry out a better visual check of the wing. The ICEPEAK 8 is especially easy to control in this position in strong winds. However, wind speeds up to 25 to 30 km/h are considered strong and extra consideration should be given to any thought of flight.

Preparation and positioning of the wing on the take-off is especially important. Choose a location which is appropriate for the direction of the wind. Position the paraglider as if it were part of a large circle, taking into account the shape of the canopy in flight. All this will assist in a trouble free take-off.

### 3.6 LANDING

The ICEPEAK 8 lands excellently, it transforms the wing speed into lift on the pilot's demand, allowing an enormous margin of error. You will not have to wrap the brake lines around your hand to get greater braking efficiency.

## 4. IN FLIGHT

### 4.1 FLYING IN TURBULENCE

The ICEPEAK 8 has an excellent profile to withstand the very different aero-logical conditions so allowing the best possible piloting and stability. It reacts admirably in passive flight, thus offering a high level of safety in turbulent conditions. Nonetheless, the pilot always has to pilot according to the prevailing weather conditions, the pilot is the ultimate safety factor.

We recommend active piloting, making the necessary fine adjustments to keep the wing in control. He/she should stop braking to allow it to fly at the required wing speed after a correction is made.

Do not maintain any correction for longer than necessary (braked) this would cause the wing to enter into critical flying situation. Whenever necessary, control a situation, react to it and then re-establish the required speed.

### 4.2 POSSIBLE CONFIGURATIONS

We recommend that training to master these manoeuvres be carried out under the supervision of a competent school.

#### Asymmetric collapse

In spite of the stability of the profile of the ICEPEAK 8, heavy turbulent conditions may cause part of the wing to collapse asymmetrically. This usually happens when the pilot has not foreseen this possible reaction of the wing. When the wing is about to experience an asymmetric collapse the brake lines and the harness will transmit a loss of pressure to the pilot. To prevent the collapse from happening, pull the brake line corresponding to the compromised side of the wing, this will increase the angle of incidence. If the collapse does happen the ICEPEAK 8 will not react violently, the turn tendency is very gradual and it is easily controlled. Lean your body towards the side that is still flying in order to counteract the turn and to maintain a straight course, if necessary slightly slow down

the same side. The collapse will normally open by itself but if that does not happen, pull completely on the brake line on the side, which has collapsed (100%). Do this with a firm movement. You may have to repeat this operation to provoke the re-opening. Take care not to over-brake on the side that is still flying (turn control) and when the collapse has been solved; remember to let the wing recover its flying speed.

#### Symmetric collapse

In normal flying conditions the design of the ICEPEAK 8 ensures that a symmetric collapse is quite improbable. The profile of the wing has been designed to widely tolerate extreme changes in the angle of incidence. A symmetric collapse may occur in heavy turbulent conditions, on entry or exit of strong thermals or lack of adapting the use of the accelerator to the prevailing air conditions. Symmetrical collapses usually re-inflate without the glider turning but you can symmetrically apply the brake lines with a quick deep pump to quicken the re-inflation. Release the brake lines immediately to recover optimum flight speed.

#### Negative spin

This configuration is out of the normal flight behaviour of the ICEPEAK 8. Certain circumstances however, may provoke this configuration such as trying to turn when the wing is flying at very low speed (while heavily braking). It is not easy to give any recommendations about this situation since it varies depending on the circumstances. Remember that you should restore the relative air speed over the wing. To achieve this, progressively reduce the pressure on the brake lines and let the wing gain speed. The normal reaction would be a lateral surge with a turn tendency no greater than 360° before restoring to normal flight conditions.

#### Parachutal stall

If it does happen, the feeling would be that the wing would not be advancing; you would feel a kind of instability and a lack of pressure on the brake lines, although the canopy would appear to be correctly inflated. The correct reaction would be to release the pressure on the brake lines and push the A lines forward or rather lean your body to any

side WITHOUT PULLING ON THE BRAKE LINES.

#### Deep stall

The possibility of the ICEPEAK 8 falling into this configuration during normal flight is very unlikely. This could happen if you are flying at a very low speed, whilst over steering in a number of manoeuvres and in turbulent conditions. To provoke a deep stall you have to take the wing to minimum flight speed by symmetrically pulling the brake lines, when you reach this point, continue pulling until you reach 100% and then hold. The glider will first fall behind you and then situate itself above you, rocking slightly, depending on how the manoeuvre was carried out. When you start to provoke a stall, be positive and do not doubt an instant. Do not release the brake lines when half way through the manoeuvre. This would cause the glider to surge violently forward with great energy and may result in the wing below the pilot. It is very important that the pressure on the brake lines is maintained until the wing is well established vertical above.

To regain normal flight conditions, progressively and symmetrically release the brake lines, letting the speed be re-established. When the wing reaches the maximum advanced position ensure that the brakes are fully released. The wing will now surge forward, this is necessary so that air speed is completely restored over the wing. Do not over brake at this point because the wing needs to recover speed to quit the stall configuration. If you have to control a possible symmetrical front stall, briefly and symmetrically pull on the brake lines and let go even when the wing is still ahead of you.

#### Wing tangle

A wing tangle may happen after an asymmetric collapse, the end of the wing is trapped between the lines (Cravat). This situation could rapidly cause the wing to turn, although it depends on the nature of the tangle.

The correction manoeuvres are the same as those applied in the case of an asymmetrical collapse, control the turn tendency by applying the

opposite brake and lean your body against the turn. Then locate the line that reaches the stabiliser that is trapped between the other lines. This line has a different colour and belongs to the external lines of the A' riser. Pull on this line until it is tense, this should help to undo the wing tangle. If you cannot undo the tangle, fly to the nearest possible landing spot, control the flying course with your body movements and a little pressure on the opposite brake. Be careful when attempting to undo a tangle if you are flying near a mountainside or near to other paragliders, you may lose control of the flying course and a collision may occur.

#### Over handling

Most flying incidents are caused by incorrect actions of the pilot, which chained one after another creates abnormal flying configurations (a cascade of incidents). You must remember that over handling the wing will lead to critical levels of functioning. The ICEPEAK 8 is designed always to try to recover normal flight by itself, do not try to over handle it.

Generally speaking, the reactions of the wing, which follow over handling, are neither due to the input made or the intensity, but the length of time the pilot continues to over handle. You have to allow the profile to re-establish normal flight speed after any type of handling.

#### 4.3 USING THE ACCELERATOR

The profile of the ICEPEAK 8 has been designed to fly stable through its entire speed range. It is useful to accelerate when flying in strong winds or in extreme descending air. When you accelerate the wing, the profile becomes more sensitive to possible turbulence and closer to a possible frontal collapse. If you feel a pressure loss, you should release the pressure on the accelerator and pull slightly on the brake lines to increase the angle of incidence. Remember that you have to re-establish the flight speed after correcting the incidence.

It is NOT recommended to accelerate near to the mountainside or in very turbulent conditions. If necessary you will have to constantly adjust the

movements and pressure on the accelerator whilst constantly adjusting the pressure applied to the brake lines. This balance is considered to be "active piloting."

The ICEPEAK 8 risers have been designed with built-in non adjustable, removable or variable "limiters" to prevent an incorrect use of the accelerator system.

#### 4.4 FLYING WITHOUT BRAKE LINES

The ICEPEAK 8 is a new generation 2 liner CCC class glider which allows piloting with the back risers. The back risers of the ICEPEAK 8 have handles conceived to do that.

The ICEPEAK 8 allows the classical piloting using only the breaks. However, piloting using the back risers is now a common technique that allows reaching more control and precision over the wing while keeping the glider accelerated without utilizing the breaks.

#### 4.5 KNOTS IN FLIGHT

The best way to avoid these 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 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 undoes. 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 because there is an increased risk of the wing to stalling or negative turn being initiated.

Before trying to remove a knot, make sure there are no pilots flying nearby and never try these manoeuvres near the mountainside. If the knot is too tight and you cannot remove it, carefully and safely fly to the nearest landing place.

## 5. LOSING HEIGHT

The knowledge of the different descent techniques is an important resource to use in certain situations. The most adequate descent method will depend on the particular situation.

We recommend that you learn to use these manoeuvres under the tuition of a competent school.

### 5.1 EARS

Big ears is a moderate descent technique, achieving about  $-3$  or  $-4$  m/s and a reduction in ground speed of between 3 and 5 km/h. Effective piloting then becomes limited. The angle of incidence and the surface wing load also increases. Push on the accelerator to restore the wing's horizontal speed and the angle of incidence.

To activate big ears take the line on each A' risers and simultaneously, smoothly pull them outward and downward. The wingtips will fold in. Let go of the lines and the big ears will re-inflate automatically. If they do not re-inflate, gently pull on one of the brake lines and then on the opposite one. We recommend that you re-inflate asymmetrically, not to alter the angle of incidence, more so if you are flying near the ground or flying in turbulence.

**Please, read this carefully: risk of full stall!!!**

The ICEPEAK 8 has a relatively short brake travel and it should be noted that by reaching for the 4a3 line to make big ears it is possible

to apply brake pressure without realising it. The same happens whilst pulling down the 4a3 line to make the ears. This can obviously lead to a significant speed decrease.

The ICEPEAK 8 has a new high arch concept and applying ears induces more resistance. With this new arch, the ears don't stick but they do tend to "hang". Because of this, there will be more resistance, compared to ears on a standard glider.

The ICEPEAK 8 is designed with little cord, which is good in normal flight conditions. However, on the other hand the glider could get into trouble when recovering normal speed if it is allowed ears and achieve an extreme angle of incidence.

These are 3 particularities, which together with turbulent conditions could cause an unintentional stall.

The solution: big ears may still be applied but the pilot must be fully aware of the above-mentioned points and act accordingly. To avoid the stall simply use the accelerator halfway (this is sufficient) to increase the speed, which naturally rises the speed and decreases the angle of incidence. In this way you will maintain a safe margin and avoid this phenomenon. Take care not to pull the brakes while making the ears!!

### 5.2 4C3 TECHNIQUE

On the new generation paragliders the application of big ears can create a high degree of trailing turbulence which in turn creates a significant loss of airspeed. When big ears are applied to high aspect ratio wings the ears tend to "flap" which also adds to the amount of unwanted turbulence.

This new rapid descent technique was first discovered by our Niviuk team Pilots in 2009 while flying a competition prototype wing, which because of its line plan and high aspect ratio would not allow big ears

to be applied. In fact big ears on wings with a profile of 2 lines can often prove difficult.

For all these reasons, we advise the use of the 4C3descent technique on the ICEPEAK 8. This technique ensures a rapid descent is achieved whilst forward wing speed is maintained and so the risk of a deep stall is eliminated.

#### HOW?

Locate the 4C3on your risers and as you would when applying big ears simply pull down firmly and smoothly until you see both wingtips drop back slightly. The forward speed of the glider speed will then reduce slightly, quickly stabilize and then increase. You will then experience a fall rate of around 5-6m/s. Controlled turning of the wing can easily be maintained by weight shifting the harness, exactly the same as you would with big ears. We recommend the application of the speed bar whilst using this technique. To exit the maneuver release the lines as you would with big ears, control the pitch and the wing will quickly adopt normal flight.

This new technique allows a comfortable and controllable rapid descent without the risk of experiencing a “cravat” or “deep stall”.

We advise you to first try this technique in smooth conditions with sufficient altitude above appropriate terrain.

### 5.3 B-LINE STALL

This manoeuvre is not possible with this wing.

### 5.4 SPIRAL DIVE

This is a more effective way for rapidly losing height. You have to know that, the wing can gain a lot of vertical speed and rotation speed (G force). This can cause a loss of orientation and consciousness (blac-

kouts). These are the reasons why it is best to carry out this manoeuvre gradually so your capacity to resist the G forces increases and you will learn to fully appreciate and understand the manoeuvre. Always practice this manoeuvre when flying at high altitude.

To start the manoeuvre, first lean your bodyweight and pull the brake line to the side to which you are leaning. You can regulate the intensity of the turn by applying a little outside brake.

A paraglider flying at its maximum turn speed can reach -20 m/s, equivalent 70 km/h vertical speed and stabilize in a spiral dive from 15 m/s onwards.

These are the reasons why you should be familiar with the manoeuvre and know how to carry out the exit methods.

To exit this manoeuvre you must progressively release the inside brake and also momentarily apply outside brake. Whilst doing this you must also lean your bodyweight towards the outside. This exit manoeuvre has to be carried out gradually and with smooth movements so you can feel the pressure and speed changes at the same time.

The after effect of the exit manoeuvre is that the glider will rock briefly with lateral surge, depending on how the manoeuvre has been carried out.

Practice these movements at sufficient altitude and with moderation.

### 5.5 SLOW DESCENT TECHNIQUE

Using this technique (do not hurry to descend) we will fly normally, without forcing neither the material nor the pilot. It means looking for descending air areas and turn as it was a thermal – in order to descend. We have to avoid danger areas when looking for descent zones. Safety is the most important thing.

## 6. SPECIAL METHODS

### 6.1 TOWING

The ICEPEAK 8 does not experience any problem whilst being towed. Only qualified personnel should handle the qualified equipment to carry out this operation. The wing has to be inflated in the same way as in normal flight.

### 6.2 ACROBATIC FLIGHT

Although the ICEPEAK 8 has been tested by expert acrobatic pilots in extreme situations, it HAS NOT been designed for acrobatic flight and we DO NOT RECOMMEND THE USE OF THIS GLIDER for that use. We consider acrobatic flight to be any form of piloting that is different to normal flight. To learn safely how to master acrobatic manoeuvres you should attend lessons, which are carried out and supervised by a qualified instructor over water. Extreme manoeuvres take you and your wing to centrifugal forces that can reach 4 to 5g.

Materials will wear more quickly than in normal flight. If you do practice extreme manoeuvres we recommend that you submit your wing to a line revision every six months.

## 7. FOLDING INSTRUCTIONS

In order to guarantee the correct preservation of the glider and to keep it in perfect flying condition, we recommend using always an appropriate folding method.

Folding should be carried out cell to cell (accordion style) with the SLE ribs remaining parallel to the leading edge at all times. The same technique should then be applied to STE ribs on the trailing edge and when complete the cell structures along the entire chord of the wing should lay parallel and

neatly alongside each other.

The wing should then be folded into three sections of equal width with each section stacked upon the other. In order to avoid placing undue stress on the internal structures when packed, it is important that each section is folded to the same length as the internal structure of the SLE. Several smaller folds should be avoided.

## 8. CARE AND MAINTENANCE

### 8.1 MAINTENANCE

Careful maintenance of your equipment will ensure continued performance.

The fabric and the lines do not need to be washed, if they become dirty, clean them with a soft damp cloth.

If your wing gets wet with salty water, immerse it in fresh water and dry it away from direct sunlight. The sunlight may damage the materials of your wing and cause premature aging. Once you have landed, do not leave the wing in the sun, store it properly.

If you use your wing in a sandy area, try to avoid the sand from entering through the cell openings of the leading edge. If sand is inside the wing, remove it before folding.

If it gets wet of sea water, you should submerge it into fresh water and let it dry far away from the sun.

### 8.2 STORAGE

It is important that the wing is correctly folded when stored. Store your flying equipment in a cool, dry place away from solvents, fuels or oils. It is not advisable to store your flying equipment in the trunk of your car. Temperatures inside a car parked in the sunlight, can be very high. Inside

a rucksack and in the sunlight temperatures can reach 60°C. Weight should not be laid on top of the equipment.

If the flying gear is stored with organic material (such as leaves or insects) inside, the chemical reaction can cause irreparable damage.

### 8.3 CHECKS AND CONTROLS

We strongly recommend that all actions on the glider were advised for professionals.

Always check all the flying equipment before every flight.

In spite of providing much more benefits to the pilots, 2 liner gliders need more care and control of the calibration. The ICEPEAK 8 mechanic and UV resistance are one of the highest for this type of line. With a 2 liner glider every little variation on the calibration of the lines has a directly effect on the performance of the wing.

We recommend checking the lines calibration after the first 30 hours +/- of flight. This examination must be taken apart from the regular checking every 100 hours of use or every two years (whichever happens first).

Why is it necessary?

Thanks to the experience acquired with the 2 liner gliders on the previous seasons and to the incessant control task of our R&D team over the Abac Team gliders, we are capable now of predicting how to take appropriately care of this kind of lines to assure the best performance of the profile. Following the controls recommended the glider will keep its original features for longer.

The conditions of the flight zone, the climate area, temperature, humidity, wing load, ...cause a different impact over the wing. That's why the calibration would be set taking in consideration these factors.

Only qualified professionals should realize it. Do not modify the wing considering the calibration required for other pilots before being sure that it is really necessary for us.

### 8.4 REPAIRS

If the wing is damaged, you can temporarily repair it by using the rip stop found in the repair kit, so long as no stitches are involved in the tear. Any other type of tear must be repaired in a specialized repair shop or by qualified personnel. Do not accept a home repair.

### 8.5 LINE REPLACEMENT

The use of new high performance materials in modern wings is now a reality. The achievements made using these materials in terms of performance are widely accepted by all as part of the evolution of our sport. However, along with these advances in technology and achievements there are added responsibilities which cannot be avoided. The revision and replacement of the lines must now be carried out on a more frequent basis and that increased frequency appears to be encouraging many pilots to try and replace the line set themselves.

**WE STRONGLY RECOMMEND THAT ANY LINE REPLACEMENT IS ONLY CARRIED OUT BY AN AUTHORISED AND SPECIALISED PERSON.**

However that choice is ultimately the responsibility of the pilot and if the pilot chooses to carry out any line replacement themselves without guidance from a professional then we suggest the following guidelines are applied.

Before removing any lines, check:

- That the line plan is correct
- That the lines in the supplied set are present and correct.
- Never assume, check every line individually.

- After confirming all the lines are correct: Fit the new lines WITHOUT removing the label.
- Once replaced measure the total line length. Inflate the wing ensuring perfect symmetry and ease of inflation checking for any abnormalities. The line labels may then be removed but NOT BEFORE.

Niviuk strongly recommend that any line replacement is carried out only by an authorised professional and will not accept responsibility for any damage or injury caused as a result of incorrect re-assembly.

## 9. SAFETY AND RESPONSIBILITY

It is well known that paragliding is considered a high-risk sport, where safety depends on the person who is practising it.

Wrong use of this equipment may cause severe injuries to the pilot, even death. Manufacturers and dealers are not responsible for any act or accident that may be the result of practicing this sport.

You must not use this equipment if you are not trained. Do not take advice or accept any informal training from anyone who is not properly qualified as a flight instructor.

## 10. GUARANTEE

The entire equipment and components are covered by a 2-year guarantee against any manufacture fault.

The guarantee does not cover misuse or abnormal use of the materials.

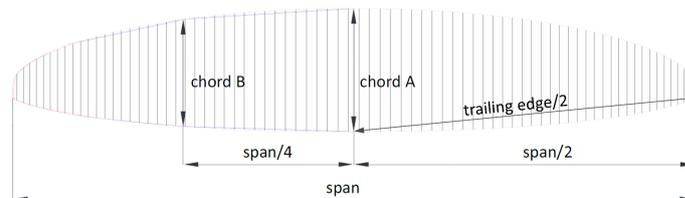
## 11. TECHNICAL DATA

### 11.1 GENERAL TECHNICAL DATA

ICEPEAK 8			22	24	26
CELLS	NUMBER		99	99	99
	CLOSED		14	14	14
	BOX		27	27	27
FLAT	AREA	M <sup>2</sup>	22,5	24	25,5
	SPAN	M	13,08	13,51	13,92
	ASPECT RATIO		7,6	7,6	7,6
	PROJECTED	AREA	M <sup>2</sup>	19,31	20,6
	SPAN		10,74	11,1	11,44
	ASPECT RATIO		5,98	5,98	5,98
FLATTENING		%	15	15	15
CORD	MAXIMUM	M	2,13	2,2	2,27
	MINIMUM	M	0,48	0,5	0,51
	AVERAGE	M	1,72	1,78	1,83
LINES	TOTAL METERS	M	220	227	235
	HEIGHT	M	8	8,26	8,52
	NUMBER		230	230	230
	MAIN	6 + BRAKE	2/1/3+B	2/1/3+B	2/1/3+B
RISERS	NUMBER	3	A/A/B	A/A/B	A/A/B
	TRIMS		NO	NO	NO
	ACCELERATOR	M/M	120	120	130
TOTAL WEIGHT	MINIMUM	KG	80	95	105
IN FLIGHT	MAXIMUM	KG	100	115	125
GLIDER WEIGHT		KG	6	6,15	6,3
CERTIFICATION			CCC	CCC	CCC

### 11.2 TECHNICAL DATA: CIVL COMPETITION CLASS (CCC)

ICEPEAK 8 CCC			22	24	26
FLAT	AREA	M <sup>2</sup>	22,5	24	25,5
	SPAN	M	12,73	13,18	13,6
	ASPECT RATIO		7,28	7,28	7,28
CORD	CORD A	M	2,17	2,25	2,32
	CORD B (RIB N°21)	M	1,92	1,99	2,06
TRAILING EDGE/2		M	6,49	6,69	6,88



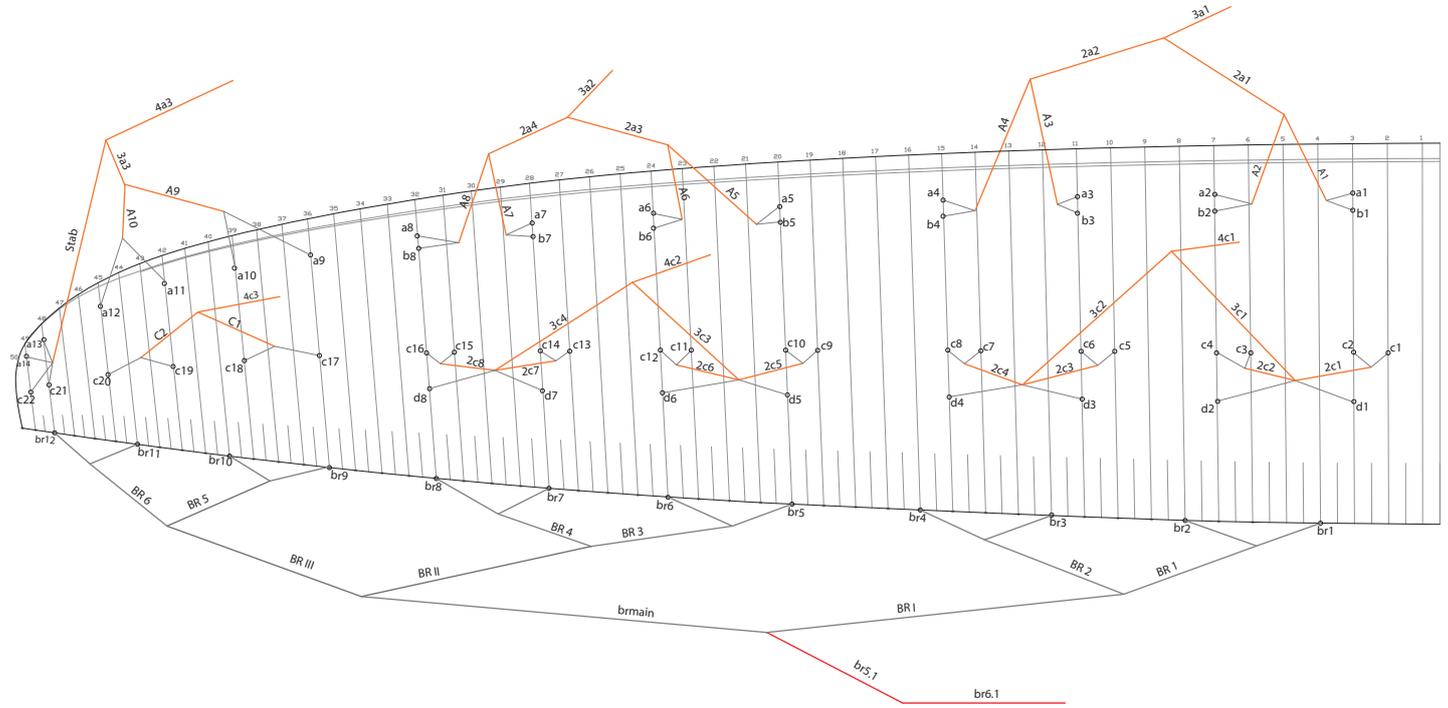
Canopy measurements referenced to points 7.1 and 7.5 in CIVL Competition Class (CCC), 2015 Edition, Revision 3.5.

## 11.3 SUSPENSION LINES TECHNICAL DATA

### ICEPEAK 8

MATERIAL CODE		DC	DC	16140	16330	12240	12470	12950	TNL
STRENGTH CODE		040	060	70	145	115	200	405	280
DIAMETER m/m	Ø	0,5	0,6	0,7	1	0,9	1,2	1,6	1,8
CORE MATERIAL		DYNEEMA	DYNEEMA	VECTRAM	VECTRAM	VECTRAM	VECTRAM	VECTRAM	TECHNORA
SLEEVE MATERIAL		NO	NO						POLYESTER
WEIGHT G/M	TOTAL	0,19	0,24	0,39	0,77	0,56	1,17	2	2,7
BREAKING STRENGTH	MINIMUM	40	60	70	145	115	200	405	280
	MAXIMUM	48	84	74	153	122	215	430	320
STRENGTH AFTER									
5.000 BENDING	TEST EN	33	74	31	77,5	60,9	112,1	237,5	138,6
CYCLES									
ELONGATION AT	5 DAN EN %			0,75	0,2	0,2	0,2	0,35	0,2
	10 DAN EN %		0,43	1	0,4	0,4	0,3	0,4	0,3
	15 DAN EN %			1	0,7	0,4	0,4	0,5	0,4
	20 DAN EN %			1,4	0,8	0,9	0,5	0,7	0,4
	25 DAN EN %			1,75	0,9	1	0,6	0,9	0,5
	30 DAN EN %		1,2	2,75	1,5	1,6	1	1	0,9
	75 DAN EN %				2	2	1,4	1,3	1,3
	100 DAN EN %				2,4	3	1,7	1,7	1,7
	125 DAN EN %				3		2,1	1,8	2
	150 DAN EN %				3,6		2,4	1,9	2
	175 DAN EN %						2,8	2	2,7
	200 DAN EN %						3,2	2,4	2,8
	250 DAN EN %							2,7	
ELONGATION MAX. BREAKING STRENGTH %			3,2	3,7	3,7	3,5	3,4	4,2	4

# 11.4 LINE PLAN



## 11.5 SUSPENSION LINES 22

### ICEPEAK 8

22																								
REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m
A					B					C					D					BRAKE				
a1	DC	60	WHT	204	b1	DC	60	WHT	192	c1	DC	40	WHT	262	d1	DC	40	WHT	1.319	br1	DC	40	WHT	884
a2	DC	60	WHT	202	b2	DC	60	WHT	189	c2	DC	40	WHT	197	d2	DC	40	WHT	1.201	br2	DC	40	WHT	530
a3	DC	60	WHT	198	b3	DC	60	WHT	184	c3	DC	40	WHT	250	d3	DC	40	WHT	1.168	br3	DC	40	WHT	730
a4	DC	60	WHT	193	b4	DC	60	WHT	179	c4	DC	40	WHT	245	d4	DC	40	WHT	1.262	br4	DC	40	WHT	829
a5	DC	60	WHT	192	b5	DC	60	WHT	177	c5	DC	40	WHT	251	d5	DC	40	WHT	1.191	br5	DC	40	WHT	811
a6	DC	60	WHT	189	b6	DC	60	WHT	174	c6	DC	40	WHT	236	d6	DC	40	WHT	1.089	br6	DC	40	WHT	609
a7	DC	60	WHT	184	b7	DC	60	WHT	170	c7	DC	40	WHT	208	d7	DC	40	WHT	992	br7	DC	40	WHT	618
a8	DC	60	WHT	168	b8	DC	60	WHT	157	c8	DC	40	WHT	252	d8	DC	40	WHT	1.054	br8	DC	40	WHT	706
a9	DC	60	WHT	837						c9	DC	40	WHT	244						br9	DC	40	WHT	567
a10	DC	60	WHT	726						c10	DC	40	WHT	191						br10	DC	40	WHT	536
a11	DC	60	WHT	718						c11	DC	40	WHT	223						br11	DC	40	WHT	258
a12	DC	60	WHT	727						c12	DC	40	WHT	222						br12	DC	40	WHT	481
a13	DC	60	WHT	574						c13	DC	40	WHT	219										
a14	DC	60	WHT	562						c14	DC	40	WHT	204										
										c15	DC	40	WHT	178										
										c16	DC	40	WHT	211										
										c17	DC	40	WHT	678										
										c18	DC	40	WHT	571										
										c19	DC	40	WHT	552										
										c20	DC	40	WHT	592										
										c21	DC	40	WHT	576										
										c22	DC	40	WHT	584										
A1	12240	115	ORG	1.327						2c1	16140	70	ORG	1.052						BR1	DC	40	WHT	951
A2	12240	115	ORG	1.201						2c2	16140	70	ORG	882						BR2	DC	40	WHT	637
A3	12240	115	ORG	1.236						2c3	16140	70	ORG	859						BR3	DC	40	WHT	814
A4	12240	115	ORG	1.278						2c4	16140	70	ORG	944						BR4	DC	40	WHT	723
A5	12240	115	ORG	1.206						2c5	16140	70	ORG	946						BR5	DC	40	WHT	398
A6	12240	115	ORG	1.087						2c6	16140	70	ORG	815						BR6	DC	40	WHT	796
A7	12240	115	ORG	1.055						2c7	16140	70	ORG	738										
A8	12240	115	ORG	1.076						2c8	16140	70	ORG	803										
A9	16140	70	ORG	682						C1	12100	50	ORG	556										
A10	16140	70	ORG	624						C2	16140	70	ORG	526										
2a1	12470	200	ORG	1.284						3c1	12240	115	ORG	1.049						BR1	DC	60	WHT	3.604
2a2	12470	200	ORG	1.209						3c2	12240	115	ORG	1.037						BR1I	DC	40	WHT	1.731
2a3	12470	200	ORG	1.093						3c3	12240	115	ORG	918						BR1II	DC	40	WHT	2.101
2a4	12470	200	ORG	1.071						3c4	12240	115	ORG	960						brmain	DC	60	WHT	1.561
3a3	16330	145	ORG	2.072																				
3a1	12950	405	ORG	4.722						4c1	12470	200	ORG	5.228						br5.1	12240	115	ORG	1.543
3a2	12950	405	ORG	4.834						4c2	12470	200	ORG	5.253						br6.1	TNL	280	RED	1.510
4a3	16330	145	ORG	3.397						4c3	12240	115	ORG	5.756						Point at:				1.310
										Stab	16140	70	ORG	2745										

# 11.6 SUSPENSION LINES 24

## ICEPEAK 8

24

REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m
A					B					C					D					BRAKE				
a1	DC	60	WHT	211	b1	DC	60	WHT	199	c1	DC	40	WHT	270	d1	DC	40	WHT	1.362	br1	DC	40	WHT	913
a2	DC	60	WHT	209	b2	DC	60	WHT	195	c2	DC	40	WHT	204	d2	DC	40	WHT	1.241	br2	DC	40	WHT	547
a3	DC	60	WHT	205	b3	DC	60	WHT	190	c3	DC	40	WHT	258	d3	DC	40	WHT	1.205	br3	DC	40	WHT	753
a4	DC	60	WHT	199	b4	DC	60	WHT	185	c4	DC	40	WHT	254	d4	DC	40	WHT	1.303	br4	DC	40	WHT	856
a5	DC	60	WHT	198	b5	DC	60	WHT	183	c5	DC	40	WHT	259	d5	DC	40	WHT	1.230	br5	DC	40	WHT	838
a6	DC	60	WHT	195	b6	DC	60	WHT	180	c6	DC	40	WHT	244	d6	DC	40	WHT	1.125	br6	DC	40	WHT	629
a7	DC	60	WHT	190	b7	DC	60	WHT	175	c7	DC	40	WHT	215	d7	DC	40	WHT	1.024	br7	DC	40	WHT	638
a8	DC	60	WHT	174	b8	DC	60	WHT	162	c8	DC	40	WHT	260	d8	DC	40	WHT	1.088	br8	DC	40	WHT	729
a9	DC	60	WHT	865						c9	DC	40	WHT	252						br9	DC	40	WHT	585
a10	DC	60	WHT	750						c10	DC	40	WHT	198						br10	DC	40	WHT	553
a11	DC	60	WHT	742						c11	DC	40	WHT	230						br11	DC	40	WHT	267
a12	DC	60	WHT	750						c12	DC	40	WHT	229						br12	DC	40	WHT	497
a13	DC	60	WHT	593						c13	DC	40	WHT	226										
a14	DC	60	WHT	581						c14	DC	40	WHT	211										
										c15	DC	40	WHT	184										
										c16	DC	40	WHT	218										
										c17	DC	40	WHT	700										
										c18	DC	40	WHT	589										
										c19	DC	40	WHT	570										
										c20	DC	40	WHT	611										
										c21	DC	40	WHT	595										
										c22	DC	40	WHT	603										

A1	12240	115	ORG	1.371	2c1	16140	70	ORG	1.086	BR1	DC	40	WHT	982
A2	12240	115	ORG	1.242	2c2	16140	70	ORG	911	BR2	DC	40	WHT	658
A3	12240	115	ORG	1.276	2c3	16140	70	ORG	887	BR3	DC	40	WHT	840
A4	12240	115	ORG	1.321	2c4	16140	70	ORG	975	BR4	DC	40	WHT	747
A5	12240	115	ORG	1.246	2c5	16140	70	ORG	978	BR5	DC	40	WHT	411
A6	12240	115	ORG	1.123	2c6	16140	70	ORG	842	BR6	DC	40	WHT	823
A7	12240	115	ORG	1.090	2c7	16140	70	ORG	763					
A8	12240	115	ORG	1.111	2c8	16140	70	ORG	829					
A9	16140	70	ORG	704	C1	12100	50	ORG	574					
A10	16140	70	ORG	644	C2	16140	70	ORG	544					

2a1	12470	200	ORG	1.324	3c1	12240	115	ORG	1.083	BR1	DC	60	WHT	3.722
2a2	12470	200	ORG	1.250	3c2	12240	115	ORG	1.073	BR1I	DC	40	WHT	1.787
2a3	12470	200	ORG	1.129	3c3	12240	115	ORG	948	BR1II	DC	40	WHT	2.171
2a4	12470	200	ORG	1.107	3c4	12240	115	ORG	992	brmain	DC	60	WHT	1.615
3a3	16330	145	ORG	2.151										
3a1	12950	405	ORG	4.894	4c1	12470	200	ORG	5.416	br5.1	12240	115	ORG	1.655
3a2	12950	405	ORG	5.019	4c2	12470	200	ORG	5.446	br6.1	TNL	280	RED	1.510
4a3	16330	145	ORG	3.524	4c3	12240	115	ORG	5.966	Point at:				1.310
					Stab	16140	70	ORG	2845					

11.7 SUSPENSION LINES 26

**ICEPEAK 8**

**26**

REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m	REF.	MAT.	KG	COLOR	m/m
A					B					C					D					BRAKE				
a1	DC	60	WHT	217	b1	DC	60	WHT	205	c1	DC	40	WHT	279	d1	DC	40	WHT	1.403	br1	DC	40	WHT	941
a2	DC	60	WHT	215	b2	DC	60	WHT	201	c2	DC	40	WHT	211	d2	DC	40	WHT	1.279	br2	DC	40	WHT	565
a3	DC	60	WHT	211	b3	DC	60	WHT	196	c3	DC	40	WHT	266	d3	DC	40	WHT	1.241	br3	DC	40	WHT	776
a4	DC	60	WHT	205	b4	DC	60	WHT	191	c4	DC	40	WHT	261	d4	DC	40	WHT	1.342	br4	DC	40	WHT	883
a5	DC	60	WHT	204	b5	DC	60	WHT	189	c5	DC	40	WHT	267	d5	DC	40	WHT	1.267	br5	DC	40	WHT	864
a6	DC	60	WHT	201	b6	DC	60	WHT	186	c6	DC	40	WHT	251	d6	DC	40	WHT	1.159	br6	DC	40	WHT	649
a7	DC	60	WHT	196	b7	DC	60	WHT	181	c7	DC	40	WHT	221	d7	DC	40	WHT	1.055	br7	DC	40	WHT	658
a8	DC	60	WHT	179	b8	DC	60	WHT	167	c8	DC	40	WHT	268	d8	DC	40	WHT	1.121	br8	DC	40	WHT	752
a9	DC	60	WHT	891						c9	DC	40	WHT	260						br9	DC	40	WHT	603
a10	DC	60	WHT	773						c10	DC	40	WHT	204						br10	DC	40	WHT	571
a11	DC	60	WHT	764						c11	DC	40	WHT	238						br11	DC	40	WHT	275
a12	DC	60	WHT	774						c12	DC	40	WHT	236						br12	DC	40	WHT	512
a13	DC	60	WHT	612						c13	DC	40	WHT	233										
a14	DC	60	WHT	598						c14	DC	40	WHT	217										
										c15	DC	40	WHT	189										
										c16	DC	40	WHT	225										
										c17	DC	40	WHT	721										
										c18	DC	40	WHT	607										
										c19	DC	40	WHT	588										
										c20	DC	40	WHT	630										
										c21	DC	40	WHT	613										
										c22	DC	40	WHT	621										

A1	12240	115	ORG	1.413						2c1	16140	70	ORG	1.119						BR1	DC	40	WHT	1.011
A2	12240	115	ORG	1.281						2c2	16140	70	ORG	940						BR2	DC	40	WHT	680
A3	12240	115	ORG	1.315						2c3	16140	70	ORG	913						BR3	DC	40	WHT	865
A4	12240	115	ORG	1.362						2c4	16140	70	ORG	1.006						BR4	DC	40	WHT	771
A5	12240	115	ORG	1.285						2c5	16140	70	ORG	1.007						BR5	DC	40	WHT	423
A6	12240	115	ORG	1.158						2c6	16140	70	ORG	868						BR6	DC	40	WHT	848
A7	12240	115	ORG	1.123						2c7	16140	70	ORG	786										
A8	12240	115	ORG	1.146						2c8	16140	70	ORG	855										
A9	16140	70	ORG	726						C1	12100	50	ORG	592										
A10	16140	70	ORG	664						C2	16140	70	ORG	560										

2a1	12470	200	ORG	1.364						3c1	12240	115	ORG	1.115						BRI	DC	60	WHT	3.835
2a2	12470	200	ORG	1.290						3c2	12240	115	ORG	1.107						BRII	DC	40	WHT	1.841
2a3	12470	200	ORG	1.163						3c3	12240	115	ORG	977						BRIII	DC	40	WHT	2.239
2a4	12470	200	ORG	1.142						3c4	12240	115	ORG	1.023						brmain	DC	60	WHT	1.667
3a3	16330	145	ORG	2.227																				
3a1	12950	405	ORG	5.060						4c1	12470	200	ORG	5.598						br5.1	12240	115	ORG	1.728
3a2	12950	405	ORG	5.193						4c2	12470	200	ORG	5.632						br6.1	TNL	280	RED	1.500
4a3	16330	145	ORG	3.642						4c3	12240	115	ORG	6.168						Point at:				1.300
										Stab	16140	70	ORG	2942										



## ICEPEAK 8 22

NAME	LENGTH	MATERIAL	COLOUR
F1	1552	TNL 80	RED
F2	1426	TNL 80	RED
F3	1457	TNL 80	RED
F4	1486	TNL 80	RED
F5	1419	TNL 80	RED
F6	1294	TNL 80	RED
F7	1264	TNL 80	RED
F8	1257	TNL 80	RED
F9	609	TNL 80	RED
F10	499	TNL 80	RED
F11	843	TNL 80	RED
F12	803	TNL 80	RED
F13	894	TNL 80	RED
2F1	1411	TNL 80	RED
2F2	1333	TNL 80	RED
2F3	1212	TNL 80	RED
2F4	1173	TNL 80	RED
2F5	1132	TNL 80	RED
2F6	700	TNL 80	RED
3FI	4701	TNL 80	RED
3FII	4812	TNL 80	RED
3FIII	5333	TNL 80	RED

## ICEPEAK 8 24

NAME	LENGTH	MATERIAL	COLOUR
F1	1603	TNL 80	RED
F2	1473	TNL 80	RED
F3	1504	TNL 80	RED
F4	1535	TNL 80	RED
F5	1466	TNL 80	RED
F6	1337	TNL 80	RED
F7	1306	TNL 80	RED
F8	1298	TNL 80	RED
F9	629	TNL 80	RED
F10	516	TNL 80	RED
F11	870	TNL 80	RED
F12	829	TNL 80	RED
F13	923	TNL 80	RED
2F1	1456	TNL 80	RED
2F2	1379	TNL 80	RED
2F3	1251	TNL 80	RED
2F4	1212	TNL 80	RED
2F5	1169	TNL 80	RED
2F6	723	TNL 80	RED
3FI	4872	TNL 80	RED
3FII	4990	TNL 80	RED
3FIII	5529	TNL 80	RED

## ICEPEAK 8 26

NAME	LENGTH	MATERIAL	COLOUR
F1	1652	TNL 80	RED
F2	1520	TNL 80	RED
F3	1550	TNL 80	RED
F4	1583	TNL 80	RED
F5	1511	TNL 80	RED
F6	1378	TNL 80	RED
F7	1346	TNL 80	RED
F8	1338	TNL 80	RED
F9	648	TNL 80	RED
F10	532	TNL 80	RED
F11	897	TNL 80	RED
F12	855	TNL 80	RED
F13	951	TNL 80	RED
2F1	1500	TNL 80	RED
2F2	1422	TNL 80	RED
2F3	1289	TNL 80	RED
2F4	1250	TNL 80	RED
2F5	1205	TNL 80	RED
2F6	746	TNL 80	RED
3FI	5037	TNL 80	RED
3FII	5163	TNL 80	RED
3FIII	5719	TNL 80	RED

For information regarding folding lines please contact NK Office, set lines will be given under special order.

## 11.9 OVERALL LENGHT

### ICEPEAK 8 22

LINES HEIGHT+RISER+MAILLON m/m					
	A	B	C	D	br+handle
1	8.059	8.047	8.094	8.100	8.373
2	7.931	7.917	8.030	7.982	8.018
3	7.887	7.873	7.913	7.937	7.904
4	7.923	7.909	7.908	8.030	8.003
5	7.847	7.837	7.879	7.866	7.850
6	7.725	7.715	7.864	7.764	7.648
7	7.667	7.657	7.921	7.709	7.567
8	7.672	7.666	7.964	7.771	7.654
9	7.509		7.866		7.560
10	7.398		7.812		7.529
11	7.332		7.713		7.650
12	7.341		7.712		7.873
13	7.237		7.675		
14	7.224		7.660		
15			7.698		
16			7.731		
17			7.494		
18			7.387		
19			7.339		
20			7.379		
21			7.244		
22			7.252		

### ICEPEAK 8 24

LINES HEIGHT+RISER+MAILLONm/m					
	A	B	C	D	br+handle
1	8.321	8.309	8.360	8.366	8.661
2	8.190	8.176	8.294	8.245	8.296
3	8.146	8.132	8.173	8.199	8.178
4	8.185	8.171	8.169	8.297	8.281
5	8.113	8.098	8.140	8.129	8.124
6	7.987	7.972	8.124	8.024	7.916
7	7.927	7.912	8.184	7.967	7.833
8	7.933	7.921	8.230	8.031	7.924
9	7.764		8.129		7.827
10	7.649		8.074		7.796
11	7.581		7.972		7.921
12	7.590		7.970		8.151
13	7.482		7.932		
14	7.469		7.917		
15			7.956		
16			7.991		
17			7.745		
18			7.634		
19			7.584		
20			7.625		
21			7.483		
22			7.491		

## ICEPEAK 8 26

LINES HEIGHT+RISER+MAILLON m/m

	A	B	C	D	br+handle
1	8.580	8.567	8.618	8.623	8.896
2	8.446	8.431	8.550	8.500	8.520
3	8.401	8.387	8.426	8.453	8.399
4	8.442	8.428	8.422	8.555	8.506
5	8.369	8.354	8.393	8.383	8.345
6	8.240	8.224	8.377	8.275	8.131
7	8.178	8.163	8.439	8.217	8.045
8	8.184	8.172	8.486	8.283	8.140
9	8.012		8.383		8.041
10	7.893		8.327		8.009
11	7.823		8.222		8.138
12	7.832		8.220		8.376
13	7.721		8.181		
14	7.707		8.165		
15			8.206		
16			8.242		
17			7.989		
18			7.875		
19			7.823		
20			7.865		
21			7.722		
22			7.730		

## 11.10 RISER ARRANGEMENT



### ICEPEAK 8 22

RISERS LENGHT + MAILLON m/m			
A	A'	B	
522	521	522	STANDARD
402	461	522	ACCELERATED
120	60	0	TRAVEL

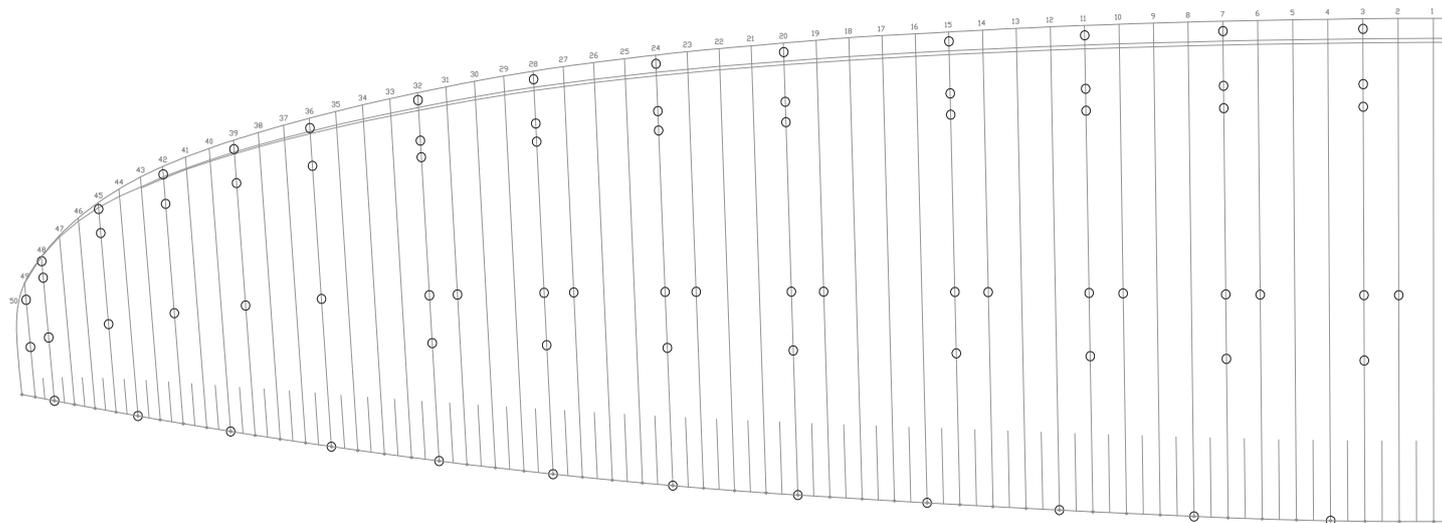
### ICEPEAK 8 24

RISERS LENGHT + MAILLON m/m			
A	A'	B	
521	520	523	STANDARD
401	460	523	ACCELERATED
120	60	0	TRAVEL

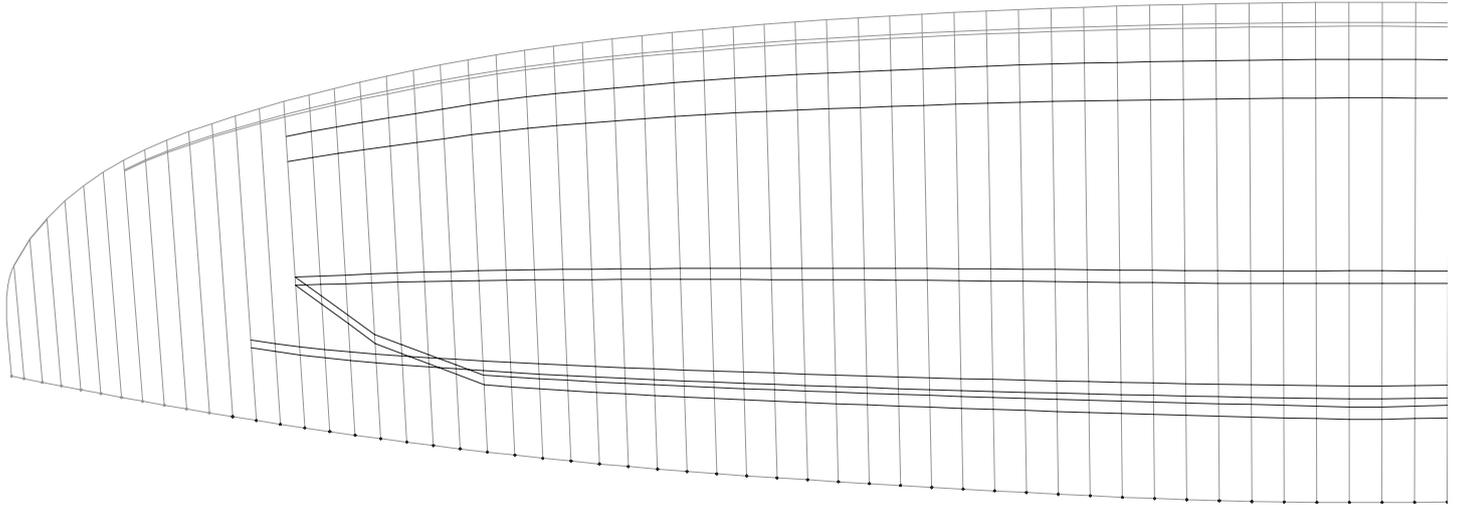
### ICEPEAK 8 26

RISERS LENGHT + MAILLON m/m			
A	A'	B	
525	525	525	STANDARD
395	460	525	ACCELERATED
130	65	0	TRAVEL

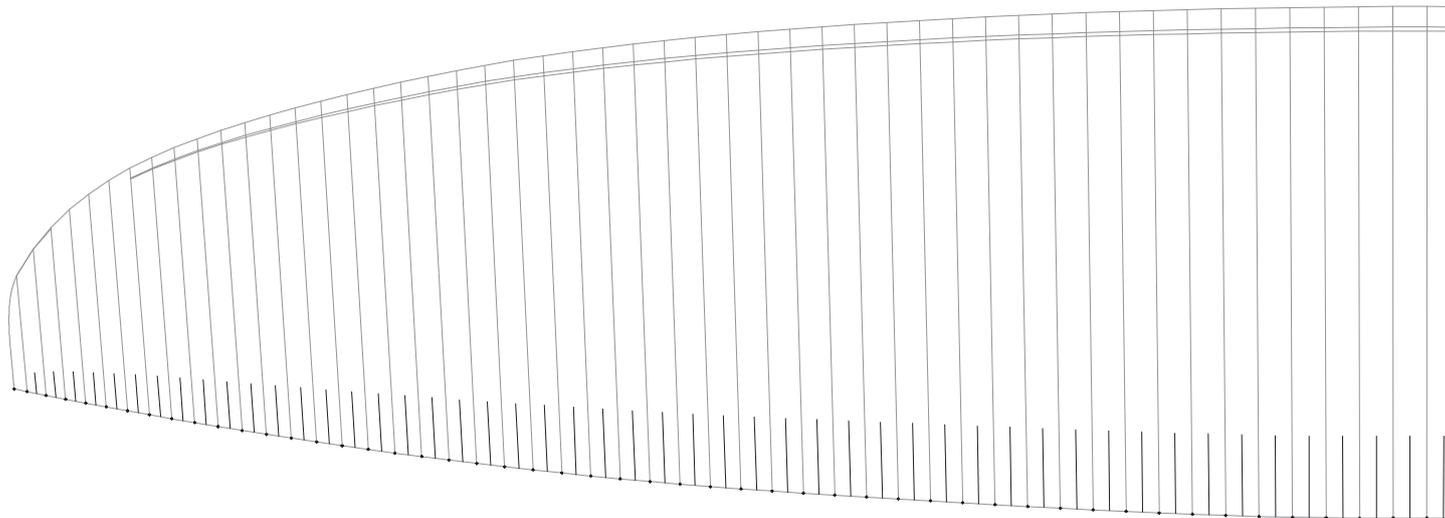
# 11.11 ATTACHMENT POINTS POSITION



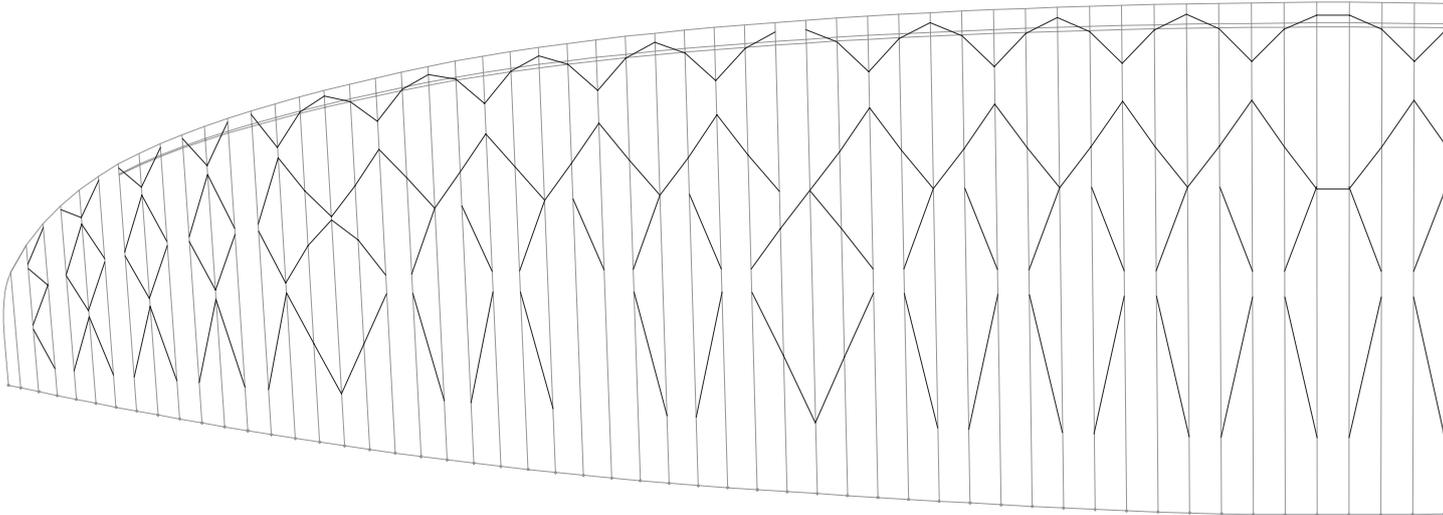
## 11.12 TENSION BANDS



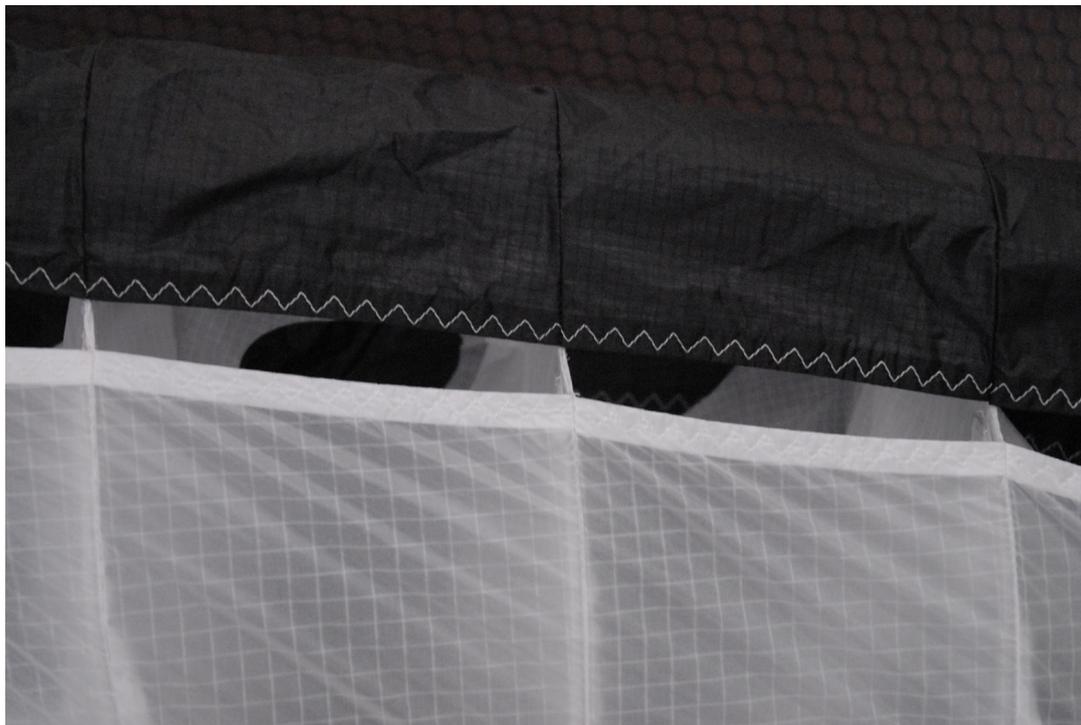
## 11.13 MINIRIBS



11.14 DIAGONALS



## 11.15 INLET SHAPE



## 12. CERTIFICATION SPECIMEN TEST

ICEPEAK 8 22

<b>CERTIFICATE of CONFORMITY</b>	
<b>for flight and load tests</b>	
<b>Air Turquoise SA</b> , having thoroughly tested in flight and structure the Paraglider mentioned hereunder, certifies its compliance with all criteria defined by the CIVL for:	
<b>FAI Category 1 Cross-Country events</b> <b>2015 Edition   Revision 3.5   01 Sept 2014</b>	
Manufacturer:	<b>NIVIUK Gliders</b>
Address:	Air Games S.L. Niviuk Gliders C. Del Ter, 6 – Nave D 17165 La Celler de Ter Girona Spain
Glider model:	<b>Icepeak 8 22</b>
S/N:	Icepeak 8 7-22 pattern v1
Certification number:	CCC_003.2014
Date of flight test:	06/10/2014
Date of load test:	04/09/2014
Place of test:	Villeneuve
Classification:	FAI CCC
Total weight in flight:	100 kg
Delivery date:	09/10/2014
 <a href="http://www.para-test.com">www.para-test.com</a>	
<b>Gilles Beruex</b> Technical department Air Turquoise SA	

ICEPEAK 8 24

<b>CERTIFICATE of CONFORMITY</b>	
<b>for flight and load tests</b>	
<b>Air Turquoise SA</b> , having thoroughly tested in flight and structure the Paraglider mentioned hereunder, certifies its compliance with all criteria defined by the CIVL for:	
<b>FAI Category 1 Cross-Country events</b> <b>2015 Edition   Revision 3.5   01 Sept 2014</b>	
Manufacturer:	<b>NIVIUK Gliders</b>
Address:	Air Games S.L. Niviuk Gliders C. Del Ter, 6 – Nave D 17165 La Celler de Ter Girona Spain
Glider model:	<b>Icepeak 8 24</b>
S/N:	Icepeak 8 7-24 pattern v1
Certification number:	CCC_004.2014
Date of flight test:	06/10/2014
Date of load test:	04/09/2014
Place of test:	Villeneuve
Classification:	FAI CCC
Total weight in flight:	115 kg
Delivery date:	09/10/2014
 <a href="http://www.para-test.com">www.para-test.com</a>	
<b>Gilles Beruex</b> Technical department Air Turquoise SA	

## **CERTIFICATE of CONFORMITY**

### **for flight and load tests**

**Air Turquoise SA**, having thoroughly tested in flight and structure the Paraglider mentioned hereunder, certifies its compliance with all criteria defined by the CIVL for:

**FAI Category 1 Cross-Country events**  
**2015 Edition | Revision 3.5 | 01 Sept 2014**

Manufacturer: **NIVIUK Gliders**

Address: Air Games S.L.  
Niviuk Gliders  
C. Del Ter, 6 – Nave D  
17165 La Cellera de Ter Girona  
Spain

Glider model: **Icepeak 8 26**

S/N: Icepeak 8 7-26 pattern v1

Certification number: CCC\_005.2014  
Date of flight test: 10/10/2014  
Date of load test: 04/09/2014  
Place of test: Villeneuve  
Classification: FAI CCC

Total weight in flight: 125 kg

Delivery date: 13/10/2014

**Gilles Beruex**  
Technical department  
Air Turquoise SA





