

# QUBIK 2

User manual &  
*Technical data*



**PIVIUK** BEYOND  
THE GLIDE

# Dare *to advance*

## WELCOME

We welcome you to our team and thank you for the trust you have placed in us by choosing a Niviuk paraglider. We would like you to share the enthusiasm with which we have created this paraglider and the importance and care with which we have developed the design and manufacture of this new model. All this, in order to be able to offer you the maximum pleasure in every flight under a Niviuk paraglider.

The QUBIK 2 is an intermediate paramotor wing designed for everyday recreational use and for pilots who are starting to want to fly longer distances more efficiently.

This improved model offers a more direct and comfortable handling, making launches easier thanks to its lighter and simplified internal structure and its lineset, which has been reduced from 4 to 3 line areas. You will be able to make longer and faster flights without compromising the safety and stability you need.

We are confident you will enjoy flying this glider specifically designed for paramotoring and will soon discover the meaning of our motto:

“The importance of small details to make great things happen”.

This is the user manual and we recommend you read it carefully.

CATEGORIES



PROGRESSION



CROSS-COUNTRY



PARAMOTOR

## **USER MANUAL**

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This manual provides you with the necessary information on the main characteristics of your new paraglider.

Whilst it provides information on the wing, it cannot be viewed as an instructional handbook and does not offer the training required to fly this type of paraglider.

Training can only be undertaken at a certified paragliding school and each country has its own system of licensing.

Only the aeronautical authorities of respective countries can determine pilot competence. The information in this manual is provided in order to warn you against adverse flying situations and potential dangers.

Equally, we would like to remind you that it is important to carefully read all the contents of your new QUBIK 2 manual.

Misuse of this equipment could lead to severe injuries or death. The manufacturers and dealers cannot be held responsible for misuse of the paraglider. It is the responsibility of the pilot to ensure the equipment is used correctly.

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# 1. CHARACTERISTICS

## 1.1 WHO IS IT DESIGNED FOR?

The QUBIK 2 is perfect for cross-country: a stable and safe progression glider for those distance flights you've always wanted to do. It will take you to new heights and encourage you to progress with longer flights and extra speed.

You can also use it for recreational flights. The QUBIK 2 has been designed to enjoy for everyday and distance flying with more direct and efficient piloting. Explore new routes with confidence.

## 1.2 CERTIFICATION

The QUBIK 2 has been submitted for the European EN and LTF certification.

All certification tests were performed at the Swiss testing house Air Turquoise.

All sizes have passed the tests required by DGAC. The procedure followed the methodology stipulated in EN 926-1:2015 & LTF NFL II-91/09 chapter 3.

The load test withstood 5.25g of maximum load stress for 3 seconds.

The tensile test withstood 1,000daN of shock.

The rating of the pilot is the responsibility of the relevant national aeronautical authorities.

For details of the flight tests and the corresponding certification number, see the final pages of this manual or visit [the download section](#) of our website.



### 1.3 IN-FLIGHT BEHAVIOUR

The development of the QUBIK 2 focused on improving every aspect of piloting, offering precision, safety and comfort in all phases of flight. Its design combines more responsive handling with smooth, controlled launches and landings. Ideal for pilots looking to perfect their technique without sacrificing safety.

Our goal has been to provide optimal performance without sacrificing stability, resulting in an accessible, compact wing with a clear and predictable feel. Its redesigned profile improves stability in all conditions, withstands turbulence and minimises the need for pilot intervention.

- **Optimised manoeuvrability:** the handling of the QUBIK 2 has been significantly improved. The glider's response to the pilot's inputs is precise and progressive, facilitating turns with direct and comfortable control at every stage of flight. It is ideal for a dynamic and fluid experience.
- **Increased speed range:** the QUBIK 2 features a trimmer and speed-bar system that improves control at high speeds, offering greater stability and reaching a higher speed compared to the previous model.
- **Increased performance:** it offers superior performance thanks to a more aerodynamic design. The aerofoil has been optimised, the number of cells reduced and the lineset simplified, to ensure the perfect balance between stability, comfort and performance on long flights in all conditions.
- **Easy launches and landings:** the QUBIK 2 inflates progressively, facilitating a controlled launch with minimal pilot effort and no pitching movements.  
  
During landing, it allows precise speed control, ensuring smooth and safe manoeuvres and turns at all times.
- **Uniform leading edge:** the leading edge of the QUBIK 2 incorporates an additional longitudinal seam and uses 3DP technology to ensure uniform, crease-free tension, resulting in a perfectly smooth and aerodynamic profile.
- **Optimised internal design:** the internal structure of the QUBIK 2 has been redesigned, optimising ribs, diagonals and attachment points. In addition, air inlets with RAM technology ensure uniform and constant internal pressure, improving the stability and uniformity of the glider. This increases performance and optimises fuel consumption.

### 1.4 TECHNOLOGIES, CONSTRUCTION, MATERIALS

The QUBIK 2 benefits from all the construction and assembly techniques used in our factory. It has all the current technology and accessories available to improve pilot comfort whilst increasing safety and performance.

In the design of all Niviuk products the team aims to ensure development and continuous improvement. The technologies developed in recent years have allowed us to develop greater, better wings. It is in this context that we would like to introduce the technologies included in this new model:

**RAM Air Intake** - the system is characterised by the arrangement of the air inlets, to ensure optimal maintenance of internal pressure across the whole range of angles of attack.

The result? Having greater internal pressure means better tolerance of turbulence, greater consistency of the profile shape across the speed range; excellent handling at low speed is achieved by allowing the pilot to extend the braking limit, there is a lower risk of collapse and consequently, greater control and safety.

**TNT Titanium Technology** - a revolutionary technique using titanium. Using Nitinol in the internal construction provides a more uniform profile and reduces the weight to gain efficiency in flight. Nitinol provides the highest level of protection against deformation, heat or breaks. Nitinol now features in all our wings.

**SLE Structured Leading Edge** - SLE is the application of Nitinol rods in the leading edge. This technology provides increased strength and stability by maintaining the shape of the aerofoil throughout all phases of flight. This increases performance, efficiency and stability, absorbs turbulence better and makes the wing much more durable over time.

**3DP Pattern Cut Optimisation** - this involves placing the fabric of each panel in one direction only, taking as a reference its location on the leading edge. It has been proved that, if the cloth pattern is correctly aligned to the direction of the load axes, the material deforms much less flight after flight, so the leading edge keeps its shape better and is much more durable over time. Over the years, the design of our paragliding and paramotoring wings has evolved a lot, with a positive and specific advancement of the leading edge. The leading edge incorporates an additional longitudinal seam and uses 3DP technology to ensure uniform, crease-free tension, resulting in a perfectly smooth and aerodynamic profile.

**3DL 3D Leading Edge** - this means adjusting the material of the leading edge to avoid ballooning and the creases that form in this curved area of the wing. Specifically, the leading edge is divided into "sub-panels" sewn into each of the cells at the front of the glider. As a result, the tension of the leading edge cloth is perfectly uniform, increasing the performance and durability of the glider.

**Drag Reduction Structure** - the DRS aims to reduce the adverse pressure gradient and drag by optimising the aerodynamic shape of the wing. Its application makes the airflow direction much more progressive at the trailing edge. This increases performance without reducing safety and control of the wing and reduces the brake pressure.

The mini-ribs are integrated directly into the trailing edge, with special slots to incorporate them into the wing seam. This gives a cleaner profile, eliminating external seams and protecting them from wear and tear when in contact with the ground.

**Reflex System Profile** - the RSP is a profile morphologically designed to fit the technical characteristics of paramotor gliders. Solid in character, it provides greater pitch stability and more safety for the pilot, especially at high speeds.

The reflex of the profile curvature and arc have been optimised to improve pitch stability. The angles of attack have been increased, widening the speed range and adapting the wing to the demands of this category. The QUBIK 2 is much more aerodynamic and offers better performance at higher speeds.

The use of these technologies is a big technological leap forward in building wings and a big improvement in flight comfort.

For the construction process of the QUBIK 2 we use the same criteria, quality controls and manufacturing processes as in the rest of our range. From Olivier Nef's computer to fabric cutting, the operation does not allow for even a millimetre of error. The cutting of each wing component is performed by a rigorous, extremely meticulous, automated computer laser-cutting robotic arm. This program also paints the guideline markers and numbers on each individual fabric piece, thus avoiding errors during this delicate process.

The jigsaw puzzle assembly is made easier using this method and optimises the operation while making the quality control more efficient. All Niviuk gliders go through an extremely thorough and detailed final inspection. The canopy is cut and assembled under strict quality control conditions facilitated by the automation of this process.

Every wing is individually checked with a final inspection.

Manufactured from highly durable and robust materials, specifically selected to withstand intensive use and maintain good performance over time and use.

The entire lineset is made of polyester sheathed Dyneema and Technora. The sheath protects the core from UV rays and abrasions.

The line diameter has been calculated depending on the workload and aims to achieve the required best performance with the least drag.

The lines are semi-automatically cut to length and all the sewing is completed under the supervision of our specialists. The lineset has been optimised and the risers of the QUBIK 2 have been simplified compared to the previous model. It has been reduced from 4 to 3 line areas, reducing the overall weight of the equipment, simplifying pre-flight preparation and reducing drag. This also maximises performance and efficiency.

Every line is checked and measured once the final assembly is concluded.

Each paramotor wing is packed following specific maintenance instructions as recommended by the fabric manufacturer.

Niviuk gliders are made of premium materials that meet the requirements of performance, durability and certification that the current market demands. The precision workmanship produces an impeccable finish, much tauter to avoid creases, and reduces the aerodynamic drag of the profile as much as possible.

Information about the various materials used to manufacture the wing can be viewed in the final pages of this manual and in the technical data sheet.

## 1.5 ELEMENTS, COMPONENTS

The QUBIK 2 is delivered with a series of accessories that will greatly assist you in the maintenance of your equipment:

- The Inner Bag, that allows you to keep your glider protected during storage and transport.
- An adjustable compression strap, which allows you to compress the Inner Bag as much as possible to reduce packing.
- A riser bag, to protect and pack them neatly.
- A repair kit with self-adhesive ripstop fabric.
- The Koli Bag: this is not included in the scope of delivery, but its purchase is recommended. With it you can carry all the equipment comfortably and without space problems. The Koli Bag is an ultra-fast stuff sack that converts into a backpack for easy transport. An excellent accessory for paramotor pilots.



## 2. UNPACKING AND ASSEMBLY

### 2.1 CHOOSING THE RIGHT LOCATION

We recommend unpacking and assembling the wing on a training hill or a flat clear area without too much wind and free of obstacles. It will help you to carry out all the recommended steps required to check and inflate the QUBIK 2.

We recommend the whole assembly procedure is supervised by a qualified professional instructor or official dealer. Only they can address any doubts in a safe and professional way.

### 2.2 PROCEDURE

Take the paraglider out of the rucksack, open and unfold it on the ground with the lines positioned on the undersurface, oriented in the direction of inflation. Check the condition of the fabric and the lines for defects. Check the maillons are closed and connect the lines to the risers. Identify, and if necessary, untangle, the A, B and C-lines, the brake lines and corresponding risers. Make sure that there are no knots.

### 2.3 CONNECTING THE HARNESS

After carefully laying out the wing, connect the risers to the harness/engine according to the paramotor manufacturer instructions and set the trimmers to the neutral position.

Check the engine manufacturer's specification on attachment points.

The QUBIK 2 risers are colour-coded:

- Right: green
- Left: red

This colour-coding makes it easier to connect the wing to the correct side and helps prevent pre-flight errors.

Correctly connect the risers to attachment points of the harness so that the risers and lines are correctly ordered and free of twists.

Check that the carabiners are properly fastened and securely locked.

### 2.4 HARNESS TYPE

Check the engine manufacturer's specification on attachment points.

Before any flight commences it is strongly recommended that the pilot checks the connection of the wing to the harness/engine and whilst seated in the harness, checks the length of the brake lines, that they can easily reach the brake handles and also easily reach and operate the trimmers on both sides.

The QUBIK 2 is fitted with three brake height options so the pilot can choose their optimal brake position.

### 2.5 SPEED-BAR INSTALLATION

The speed-bar is a means of temporary acceleration by changing the flow over the profile. The speed system comes pre-installed on the risers and is not modifiable as it conforms to the measurements and limits stipulated in its certification.

The QUBIK 2 includes a speed system with a differential between the A – C risers of 10 cm.

The speed system is engaged when the pilot pushes the speed-bar (not included as standard with this glider model) with their feet (see 2.5.1 Speed system assembly).

The speed system uses an action/reaction system. Released, the speed-bar is set to neutral. When the bar is pushed using the feet, the wing accelerates. The speed can be regulated by varying the pressure on the bar. Once the pressure on the bar is released, the speed system returns to the neutral setting.

The speed system is efficient, sensitive and precise. The pilot can use the system whenever they want during the flight. In the neutral position the glider will fly at the standard speed and glide. Using full speed-bar, the wing will fly at maximum speed, but the glide will be adversely affected.

- Released speed-bar: the A, B and C-risers are aligned.
- Full speed-bar: the difference between the A – C risers becomes 10 cm in all sizes.

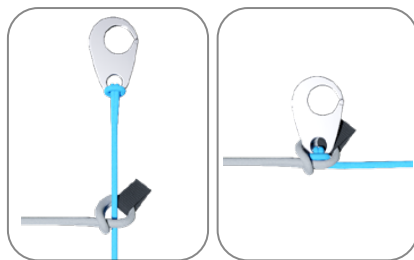
⚠ PLEASE NOTE! The use of the speed system results in changes to the speed and reactions of the wing. For more information, please see the certification report.



## 2.5.1 SPEED SYSTEM ASSEMBLY

The speed-bar consists of the bar that the pilot pushes with their feet, as well as the two cords that connect it to the speed system components on the risers. Once you have chosen the type of speed-bar you prefer, you must install it. Some considerations:

- You should use the type of speed-bar you consider appropriate, depending on the type of harness, personal preferences, etc.
- The speed-bar is detachable to facilitate its connection and/or disconnection to the risers as well as subsequent adjustment.
- To connect it to the harness, please follow the instructions of the harness manufacturer. The majority of harnesses have a speed system pre-installed.
- The standard connection of the speed-bar to the speed system is via Brummel hooks, where two slots in the hooks are interlocked, making their connection / disconnection easy.



*Diagram 1.*  
Speed-bar connection by means of the Brummel hook. The blue line is from the harness, and the gray from the riser.

## 2.5.2 CHANGING THE RISER CORDS

In spite of the speed system having pulleys with bearings to reduce friction to a minimum, the frequency with which the speed-bar is used causes the cords to wear and you may need to replace them.

In all Niviuk gliders the speed system cords on the risers are completely removable and easily replaceable. You can use the Brummel hooks, not use them, remove them, use another type of connector, etc. It is even possible to fix the speed-bar cords directly to the speed system on the risers. This last option makes the connection / disconnection more laborious, but means the cord has maximum travel without obstructions or restrictions which is very useful for some models of harnesses.

## 2.6 TRIMMERS

The trimmers are an adjustable profile modification system. They are activated by releasing trimmers. To open the trimmers, press the trim tab inwards until the tape is released. Release the tape until it is in the desired position. When the trim tab is no longer pressed, the tape is locked in that position.

Once it is locked in that position, it will not release automatically and return to its initial position. The pilot is solely responsible for opening and closing the trimmers.

To close the trimmers, pull the tape down using the handle - without touching the trimmer tabs. Release the handle when you reach the required position. Colloquially this is called "closing" the trimmers. .

The trimmers must be applied symmetrically.

- Trimmers closed or in the neutral position: the A, B and C risers are aligned.
- Trimmers fully open: the difference between the A-C risers becomes: 15 cm in all sizes.

**Launch:** Thanks to the QUBIK 2's profile design, the pilot can easily control all phases of take off. The SLE system automatically adjusts the air inlets for easy inflation and profile configuration, especially in light wind conditions.

Even with the trimmers closed, the QUBIK 2 inflates without difficulty. However, the pilot can adjust the rate of inflation by releasing the trimmers depending on the situation. It is important not to confuse inflation speed with running speed.

The minimum take off speed is achieved with the trimmers fully closed. As they are released, the take off speed increases, allowing the pilot to adapt their run according to the terrain.

**In flight:** The QUBIK 2 offers a wide range of speed adjustment via the trimmers. Identification markings on the tape allow you to check whether the trimmers are symmetrical or require adjustment. They also show how much trimmer travel is available, making it easy to use them accurately.

With the trimmers closed, the QUBIK 2 is able to glide even with the engine idling. In addition, it allows the brakes to be used throughout their travel, maintaining control and stability at all times.

## 2.7 INSPECTION AND WING INFLATION ON THE GROUND

After your gear has been thoroughly checked and the weather conditions deemed favourable for flying, inflate your QUBIK 2 as many times as necessary to familiarise yourself with its behaviour. Inflating the QUBIK 2 is easy and should not require a great deal of physical effort. Inflate the wing with a little pressure from the body using the harness. 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 inflated to the overhead position, appropriate control with the brakes will be sufficient to hold it there.

## 2.8 ADJUSTING THE BRAKES

The length of the main brake lines is adjusted at the factory and conform to the length stipulated during certification. However, they can be changed to suit your flying style. It is advisable to fly with the original setting for a period of time to get used to the actual behaviour of the QUBIK. In case it is necessary to modify the brake length, loosen the knot, slide the line through the brake handle to the desired point and re-tighten the knot firmly. Only qualified personnel should carry out this adjustment. You must ensure that the modification does not affect the trailing edge and slow the glider down without pilot input. Both brake lines should be symmetrical and the same length. We recommend using a clove hitch or bowline knot.

When changing the brake length, it is necessary to check that they do not engage when the speed-bar is used. When we accelerate, the glider rotates over the C-riser and the trailing edge elevates. It is important to check that the brake is adjusted to take into consideration this extra distance during acceleration. With this profile deformation there is a risk of generating turbulence and causing a frontal or asymmetric collapse.

## 2.9 BRAKE PULLEY ADJUSTMENT

The brake pulleys can be adjusted in different positions to improve comfort during flight, depending on the pilot's seating position or the paramotor's attachment points.

The pulleys are attached to the riser by means of a loop which can be easily undone. The riser has three attachment points along its length to adapt to the pilot's needs.

## 3. THE FIRST FLIGHT

### 3.1 CHOOSING THE RIGHT LOCATION

For the first flight we recommend going to your usual flying area and that a qualified instructor is present and supervising the entire procedure.

### 3.2 PREPARATION

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

### 3.3 FLIGHT PLAN

Planning a flight before taking off to avoid possible problems later is always a good idea.

### 3.4 PRE-FLIGHT CHECK

Once ready, but before taking off, conduct another equipment inspection. Conduct a thorough visual check of your gear with the wing fully open, the lines untangled and properly laid out on the ground to ensure that all is in working order. Be certain the weather conditions are suited to your flying skill level.

### 3.5 WING INFLATION, CONTROL AND TAKEOFF

Progressive inflation: the air inlets on the leading edge and the internal slot distribution have been structured to optimise a progressive inflation and maintain the stability of the wing during launches.

Launching with the QUBIK 2, whether on foot or in a trike, requires no special technique. Its control is intuitive, the wing rises smoothly, easily and progressively, setting itself overhead without oscillations. If it is necessary to correct the inflation, it reacts responsively and provides feedback to the pilot at all times. The brakes are always operational, allowing adjustments and control of the wing without difficulty.

When the pilot decides to take off, the QUBIK 2 offers excellent load capacity. Engine thrust is quickly converted into lift.

In nil-wind conditions, take off is also uncomplicated. The wing is designed to rise without overshooting or hanging back, with excellent

directional stability and fast, progressive loading. A smooth, gradual inflation is all it takes, with no need to apply extra physical effort.

It is important to check the position of the trimmers before take off (see section 2.6).

### 3.6 LANDING

The QUBIK 2 facilitates comfortable and precise landings, without the need for long runs. With the trimmers closed, the wing acts like a conventional wing, offering a smooth glide, low speed and controlled landing in tight spaces.

In nil-wind, the pilot must compensate for inertia by progressive braking or by extending the run. In moderate wind conditions, ground speed is lower, allowing soft landings with progressive braking.

It is also possible to land with the trimmers open or partially open, but this will require more space and careful adjustment of the braking during the round-out.

The QUBIK 2 converts speed into lift according to the pilot's needs, offering easy and effective landings with or without wind.

### 3.7 PACKING

The QUBIK 2 has a complex leading edge, manufactured using a variety of different materials and it must be packed carefully. A correct folding method is very important to extend the useful life of your paraglider.

It should be concertina-packed, with the leading edge reinforcements flat and the flexible rods stacked one on top of the other. This method will keep the profile in its original shape and protect the integrity of the wing over time. Make sure the reinforcements are not bent or folded. It should not be folded too tightly to avoid damage to the cloth and/or lines.

To ensure greater durability and optimal maintenance of your QUBIK 2, we recommend using the Koli Bag, a bag specially designed by Niviuk to facilitate the folding and storage of your paramotor wing. Its intuitive design allows you to fold the wing neatly and quickly into a cauliflower shape, preserving the structure of the leading edge and avoiding unnecessary creases. The Koli Bag reduces wear caused by incorrect

folding and protects the materials against external factors such as humidity and dirt.

Niviuk have also designed the NKare and ZipNkare Bag. These will assist you in quickly folding the paraglider, keeping the profile and integrity of the internal structures in perfect condition.

The NKare Bag will guide you through the folding process by allowing you to place the rods one on top of the other on the longitudinal axis to "concertina" pack the glider. Then you can easily make the sectional folds that each model requires. This folding system ensures that both the cloth and the reinforcements of the internal structure remain in perfect condition. Watch [the video tutorial](#) to learn how to pack it correctly.

The ZipNkare Bag facilitates exactly the same folding procedure and, through a zip, becomes a much easier to carry case.



## 4. IN FLIGHT

We recommend that you pay close attention to the flight test report issued by the testing house responsible for the certification. In it you will find all the necessary information to know how the QUBIK 2 reacts to each of the tested manoeuvres.

It is important to note that depending on the size of the wing, the manoeuvre may vary, or even within the same size, the behaviour and reactions of the wing may be different, at maximum or minimum load.

Having the knowledge provided by the testing house through the flight test is essential to know how to deal with these possible situations.

The performance of the QUBIK 2 will depend directly on the engine power and the wing loading at which it is being flown.

To become familiar with the manoeuvres described below, we recommend practising within the auspices of a licensed training outfit.

### 4.1 DOUBLE STEERING SYSTEM

The QUBIK 2 has two steering lines: the main brake (conventional brake) and the High Speed Tip (fixed to a separate handle on the riser). The High Speed Tip gives the pilot the ability to turn without pulling the brakes, thus avoiding deforming the profile and therefore preventing a decrease in performance and speed.

#### Tip brake: High-speed control

The high speed control of the QUBIK 2 consists of a fixed line on the stabilo. It enables the pilot to correct the trajectory easily and accurately without having to use the main brake controls and therefore the performance of the glider is not affected.

This additional brake is designed for high speed flying. It is a system that improves manoeuvrability, offering more direct and precise control inputs at all times, ideal for a more dynamic experience in the air. It can be used in conjunction with the main brake, or independently.

The QUBIK 2 has been designed to allow the use of the brake when the trim is fully open and the accelerator is 100% engaged. It does not present any issues with collapses when braking in this configuration. However, we always recommend using the tip brake instead of the main brake, as it has been specifically designed for this purpose.



### 4.2 FLYING IN TURBULENCE

The QUBIK 2 has an excellent profile to deal with incidents; it is very stable in all conditions and has a high degree of passive safety, even in turbulent conditions.

All paragliders must be piloted for the prevailing conditions and the pilot is the ultimate safety factor.

We recommend active flying in turbulent conditions, always taking measures to maintain control of the wing, preventing it from collapsing and restoring the speed required by the wing after each correction.

Do not correct the glider (braking) for too long in case this provokes a stall. If you have to take corrective action, make the input then re-establish the correct flying speed.

### 4.3 POSSIBLE CONFIGURATIONS

To become familiar with the manoeuvres described below, we recommend practising within the environment of a licensed training outfit. You must adapt your use of the brakes depending on the wing-loading and avoid over-steering.

It is important to note that the type of reaction to a manoeuvre can

vary from one size of wing to another, and even within the same size the behaviour and reactions may be different depending on the wing-loading.

In the test report, you will find all the necessary information on how to handle your new wing during each of the tested manoeuvres. Having this information is crucial to know how to react during these manoeuvres in real flight, so you can deal with these situations as safely as possible.

#### Asymmetric collapse

Despite the QUBIK 2's inherent profile stability, turbulence may still cause asymmetric collapses if not managed with active piloting. In this case the glider conveys a loss of pressure through the brake lines and the harness.

To prevent the collapse from happening, pull the brake handle on the affected side of the wing. It will increase the incidence of the wing (angle of attack). If the collapse does happen, the QUBIK 2 will not react violently, the turning tendency is gradual and easily controlled. Weight-shift toward the open, flying side (the opposite side of the collapse) to keep the wing flying straight, while applying light brake pressure to that side if necessary. Normally, the collapsed side of the wing should then recover and reopen by itself. If it does not, try to weight-shift towards the collapsed side. If this does not resolve the issue, pull the brake handle on the collapsed side decisively and quickly all the way (100%) down and release it back up immediately. You may have to repeat this action to provoke the re-opening of the collapsed glider side. Do not over-brake or slow down the flying side of the wing (control the turn). Once the collapsed side is open make sure you return to normal flying speed.

#### Frontal collapse

Due to the QUBIK 2's design, in normal flying conditions frontal collapses are unlikely to take place. The wing's profile has great buffering abilities when dealing with extreme incidence changes. A frontal collapse may occur in strong turbulent conditions, entering or exiting powerful thermals.

Frontal collapses usually re-inflate without the glider turning, but a symmetrically applied quick braking action with a quick deep pump of both brakes will accelerate the re-inflation if necessary. Release the brake lines immediately to return to default glider air speed.

## Negative spin

A negative spin does not conform to the QUBIK 2's normal flight behaviour. Certain circumstances however, may provoke a negative spin (such as trying to turn when flying at very low air speed whilst applying a lot of brake). It is not easy to give any specific recommendation about this situation other than quickly restoring the wing's default air speed.

## Parachutal stall

The possibility of entering or remaining in a parachutal stall have been eliminated from the QUBIK 2. A parachutal stall is virtually impossible with this wing. If it did enter into a parachutal stall, the wing loses forward motion, becomes unstable and there is a lack of pressure on the brake lines, although the canopy appears to be fully inflated. To regain normal air speed, release brake line tension symmetrically and manually push on the A-lines or weight- shift your body to any side WITHOUT PULLING ON THE BRAKE LINES.

## Deep Stall

The possibility of the QUBIK 2 stalling during normal flight is very unlikely. It could only happen if you are flying at a very low air speed, whilst over-steering or performing dangerous manoeuvres in turbulent air.

To provoke a deep stall, the wing has to be slowed down to its minimum air speed by symmetrically pulling the brake lines all the way (100%) 10 down until the stall point is reached and held there. The glider will first pitch rearward and then reposition itself overhead, rocking slightly, depending on how the manoeuvre is done.

When entering a stall, remain clear-headed and ease off the brake lines until reaching the half-way point of the total brake travel. The wing will then surge violently forward and could reach a point below you. It is most important to maintain brake pressure until the glider has returned to its default overhead flying position.

To resume normal flight conditions, progressively and symmetrically release the brake line tension to regain air speed. When the wing reaches the overhead position, the brakes must be fully released. The wing will then surge forward to regain full air speed. Do not brake excessively at this moment as the wing needs to accelerate to pull away from the stall configuration. If you have to control a possible frontal collapse, briefly pull both brake handles down to bring the wing back up and release them immediately while the glider is still in transition to reposition itself overhead.

## Cravat

A cravat may happen after an asymmetric collapse, when the end of the wing is trapped between the lines. Depending on the nature of the tangle, this situation could rapidly cause the wing to spin. The corrective manoeuvres to use are the same as those applied in case of an asymmetric collapse: control the turn/spin by applying tension on the opposite brake and weight shift opposite to the turn. Then locate the stabilo line (attached to the wing tip) trapped between the other lines. This line has a different colour and is located on the outside position of the B-riser.

Pull this line until it is taut. This action will help to release the cravat. If ineffective, fly down to the nearest possible landing spot, controlling the direction with both weight-shift and the use of the brake opposite to the tangled side. Be cautious when attempting to undo a tangle while flying near terrain or other paragliders; it may not be possible to continue on the intended flight path.

## Over-controlling

Most flying problems are caused by wrong pilot input, which then escalates into a cascade of unwanted and unpredicted incidents. We should note that the wrong inputs can lead to loss of control of the glider. The QUBIK 2 was designed to recover by itself in most cases. Do not try to over-correct it!

Generally speaking, the reactions of the wing, which are caused by too much input, are due to the length of time the pilot continues to over-control the wing. You have to allow the glider to re-establish normal flying speed and attitude after any type of incident.

## 4.4 ACCELERATED FLIGHT

The QUBIK 2's profile was designed for stable flight throughout its entire speed range. The speed-bar can be used in strong winds or significant sink.

When accelerating the wing, the profile becomes more sensitive to turbulence and closer to a possible frontal collapse. If a loss in internal wing pressure is felt, tension on the speed-bar should be reduced to a minimum and a slight pull on the brake lines is recommended to increase the wing's incidence angle. Remember to re-establish the air speed after correcting the angle of attack.

It is NOT recommended to accelerate near obstacles or in very

turbulent conditions. If necessary, constantly adjust the movements and pressure on the speed-bar whilst doing the same to the brake lines. This balance is considered to be 'active piloting'.



## 4.5 FLYING WITHOUT BRAKE LINES

If, for any reason at all, the QUBIK 2's brake lines become disabled in flight, it will become necessary to pilot the wing gently using the C-risers and weight shifting until landing. These risers steer easily because are not under significant tension. You will have to be careful and not handle them too heavily in case this causes a stall or negative spin.

The wing must be flown at full speed (not accelerated) during the landing approach, and the C-risers should be pulled symmetrically shortly before contact with the ground. This braking method is not as effective as using the brake lines, and hence the wing will land with a higher ground speed.

## 4.6 LINE KNOT(S) IN FLIGHT

The best way to avoid knots and tangles is to thoroughly inspect the lines as part of a systematic pre-flight check. If a knot is spotted during the take off phase, immediately abort the launch sequence and stop.

If inadvertently taking off with a knotted line, the glider drift will need to be compensated by weight-shifting to the opposite side and applying a slight brake pull to that side. Gently pull the brake line to see if the knot can be undone or try to locate the problem line. Try pulling it to see if the knot can be undone. Beware of trying to clear a knotted line or untangle a line in flight when close to the terrain. If the knot is too tight and cannot be undone, carefully and safely fly to the nearest landing zone. Be careful: do not pull too hard on the brake handles because there will be an increased risk of stalling the wing or entering a negative spin. Before attempting to clear a knot, make sure there are no other pilots flying in the vicinity. 11 Knowledge of different descent techniques could become vital in certain situations. The most suitable descent method will depend on the particular situation. To become familiar with the manoeuvres described below, we recommend practising within the environment of a licensed training outfit.



## 5. LOSING ALTITUDE

Knowledge of different descent techniques could become vital in certain situations. The most suitable descent method will depend on the particular situation.

To become familiar with the manoeuvres described below, we recommend practising within the environment of a licensed training outfit.

### 5.1 BIG EARS

"Big Ears" is a moderate descent technique, able to increase the sink rate to  $-3$  or  $-4$  m/s and reduces the ground speed by 3 to 5 km/h. The angle of attack and effective wing-loading will also increase due to the smaller surface area of the wing.

To perform the Big Ears manoeuvre, take the 3A3 line on each A-riser, as high as you can and simultaneously, smoothly pull them outward and downward. The wingtips will fold in.

To re-establish forward speed and the correct angle of attack, accelerate once the ears are pulled.

Keep the ears pulled in until you have lost the desired altitude.

To open the wing, first slow down and let go of the lines. If it does not open on its own, brake first on one side and then on the other. An asymmetric reopening is recommended so as not to compromise the angle of attack, especially near the ground and in turbulence.

### 5.2 SPIRAL DIVE

This is a more effective way to rapidly lose altitude. Beware that the wing will experience and be subjected to a tremendous amount of descending and rotating speed (g-force), which can cause a loss of orientation and consciousness (blackout). This manoeuvre must therefore be done gradually to increase one's capacity to resist the g-force exerted on the body. With practise, you will fully appreciate and understand it. Only practise this manoeuvre at high altitude and with enough ground clearance.

To start the manoeuvre, first weight shift and pull the brake handle located on the inner side of the turn. The intensity of the turn can be controlled by braking slightly using the outer brake handle.

A paraglider flying at its maximum rotating speed can reach  $-20$  m/s, or the equivalent of a 70 km/h vertical descent, and will stabilise in a spiral dive from 15m/s onwards. Good enough reasons to familiarise yourself with the manoeuvre and understand how to exit it.

To exit this manoeuvre, the inner brake handle (down side of the turn) must progressively be relaxed while momentarily applying tension to the outer brake handle opposite to the turn.

The pilot must also weight shift and lean towards the opposite side of the turn at the same time. The exit should be performed gradually and smoothly so that the changes in pressure and speed can be noted.

When exiting the spiral, the glider will briefly experience an asymmetrical acceleration and dive, depending on how the manoeuvre was carried out.

Practise these manoeuvres at sufficient altitude and carefully.



## 6. SPECIAL METHODS

### 6.1 TOWING

The QUBIK 2 does not experience any problem whilst being towed. Only qualified winch personnel should handle the certified equipment to carry out this operation. The wing must be inflated similarly as during a normal take off.

It is important to use the brakes to correct the flight path alignment, especially in the first phase of the tow. Since the wing is subject to a slow airspeed and with a high positive angle of attack, we must make any corrections with a high degree of feel and delicacy, in order to avoid a stall.

### 6.2 ACROBATIC FLIGHT

Although the QUBIK 2 was tested by expert acrobatic pilots in extreme situations, it was not designed for it. We do not recommend using this glider for acrobatic flying!!!

We consider acrobatic flights to be any form of piloting different than standard flights. Learning acrobatic manoeuvres should be conducted under the supervision of qualified instructors within a school environment and over water with all safety/rescue elements in place. Centrifugal forces as high as 4 to 5 g can be exerted on the body and wing during extreme manoeuvres.


## 7. CARE AND MAINTENANCE

### 7.1 MAINTENANCE

Careful maintenance of your equipment will ensure continued top performance. Apart from the general checks, we recommend actively maintaining your equipment.

A pre-flight check is obligatory before each flight. If there is any damage to the equipment or you suspect any areas of the wing are susceptible to wear, you should inspect these and act accordingly.

Niviuk we are firmly committed to make technology accessible to all pilots. Therefore, our wings are equipped with the latest technological advances gained from the experience of our R&D team. Thanks to these new technologies, paragliders are gaining more safety and performance, which requires greater care of the materials.

 **IMPORTANT:** it is critical to avoid any kind of impact or dragging the leading edge on the ground. This part is reinforced with very durable and strong Nitinol rods that can be easily replaced. Dragging and/or hitting the leading edge can cause serious damage to the fabric, which is much more complicated and costly to repair.

The fabric and the lines do not need to be washed. If they become dirty, clean them with a soft damp cloth, using only water. Do not use detergents or other chemicals.

If your wing is wet from contact with water, place it in a dry area, air it and keep it away from direct sunlight.

Direct sunlight may damage the wing's materials and cause premature aging. After landing, do not leave the wing exposed to the sun. Pack it properly and stow it away in its backpack.

If you fly in sandy areas, avoid getting sand in the cells or down into the trailing edge. At the end of the flight, empty any sand that is in your wing. The openings at the end of the wingtips make this much easier.

If your wing is wet from contact with salt water, immerse it in fresh water and dry it away from direct sunlight.

### 7.2 STORAGE

It is important for the wing to be correctly folded when stored. Keep it in the in a cool, dry place away from solvents, fuels, oils.

Do not leave your gear inside a car boot, as cars left in the sun can become very hot. A rucksack can reach temperatures up to 60°C.

Weight should not be laid on top of the equipment. It is very important to pack the wing correctly before storage.

In case of long-term storage, it is advisable, if possible, that the wing is not compressed and it should be stored loosely without direct contact with the ground. Humidity and heating can have an adverse effect on the equipment.

### 7.3 CHECKS AND INSPECTIONS

Following certification guidelines, you should check your QUBIK 2 periodically, every 24 months or every 100 hours of flight time, whichever comes first.

We strongly recommend that any repairs should be done in a specialist repair shop by qualified personnel.

This will guarantee the airworthiness and continued certification of your QUBIK 2.

A thorough pre-flight check must be performed before every flight.

To maintain the wing's standard performance, it is necessary to keep the trim constantly adjusted. Generally speaking, line lengths change as the glider is used. For this reason, we recommend a trim check after approximately the first 30 hours of flight. The hours or actions to be taken to repair the lines may vary for each glider, depending on the conditions of each flying area, climatic conditions, temperature, humidity, type of terrain, wing loading, etc.

Thanks to the experience acquired and the thorough inspections that our R&D team carry out on our gliders, we have the necessary information to be able to know the real behaviour of the lines. With this knowledge we can keep our gliders in the optimum condition for more flights without any loss of performance due to use.

A wing must never be adjusted according to the parameters of another wing of the same type. Each adjustment must be unique for each wing in question, as a result of an analysis carried out by specialised and authorised personnel.

The line length adjustments may never exceed 1% of the length allowed by the certification.

### 7.4 REPAIRS

In the case of small tears, you can temporarily repair these by using the Ripstop tape included in the repair kit, as long as no stitching is required to mend the fabric.

Any other tears or repairs should be done in a specialist repair shop by qualified personnel.

Damaged lines must be repaired or exchanged immediately.

Please refer to the line plan at the end of this manual. We recommend any inspection or repair is performed by a Niviuk professional in our [official workshop](#).

Any modification of the glider made in an external workshop will invalidate the guarantee of the product. Niviuk cannot be held responsible for any issues or damage resulting from modifications or repairs carried out by unqualified professionals or who are not approved by the manufacturer.

## 8. SAFETY AND RESPONSIBILITY

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

Incorrect use of this equipment may cause severe, life-changing injuries to the pilot, or even death. Manufacturers and dealers cannot be held responsible for your decisions, actions or accidents that may result from participating in this sport.

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

## 9. GUARANTEE

The equipment and components are covered by a 2-year warranty against any manufacturing defect.

The warranty does not cover misuse of the equipment.

Any modification of the paraglider or its components invalidates the guarantee and its certification.

If you notice any defects in your harness, please contact Niviuk immediately for a more thorough inspection.



# ANNEXES

# 10. ANNEXES

## 10.1 Technical specifications

		21	23	25	27
<b>Cells</b>	Number	55	55	55	55
<b>Aspect ratio</b>	Flat	5,5	5,5	5,5	5,5
	Projected	4,32	4,32	4,32	4,32
<b>Area</b>	Flat	m2 21	23	25,5	27,5
	Projected	m2 18,27	20,01	22,19	23,93
<b>Span</b>	Flat	m 10,75	11,25	11,84	12,30
<b>Chord</b>	Max	m 2,41	2,52	2,66	2,76
<b>Lines</b>	Total	m 269	282	298	310
	Main	2+1/4/1+2	2+1/4/1+2	2+1/4/1+2	2+1/4/1+2
<b>Risers</b>	Number	3+2	A+A'/B/C'+C	A+A'/B/C'+C	A+A'/B/C'+C
	Speed-bar	mm 100	100	100	100
	Trimmers	mm 150	150	150	150
<b>Glider weight</b>	kg	4,76	5,00	5,46	5,74
<b>Total weight in flight</b>	Min-Max	kg 70-120	80-140	100-160	110-179
<b>Identification/Certification</b>		DGAC/EN 926-1	DGAC/EN 926-1	DGAC/EN 926-1	DGAC/EN 926-1

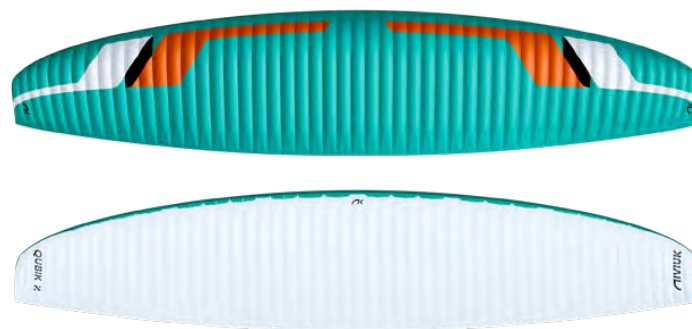
The total weight of the wing may differ ±2% due to variations in the weight of the fabric supplied by the manufacturers.



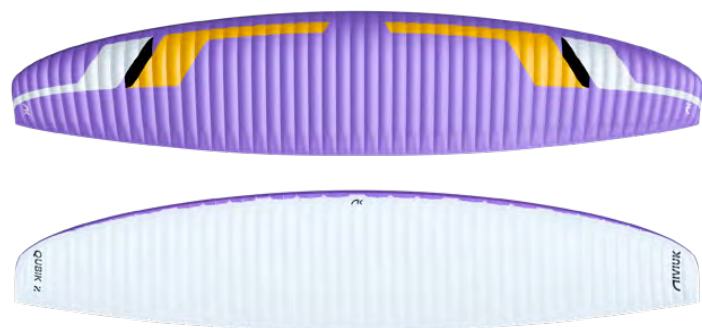
## 10.2 Colours



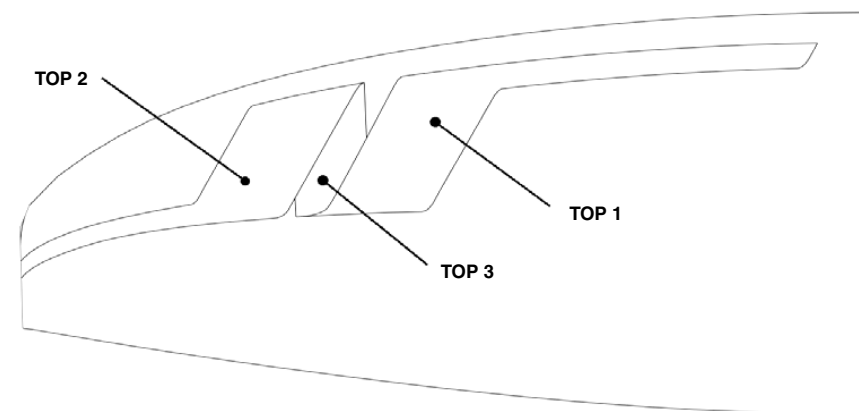
<b>JASPE</b>	<b>UPPER</b>	DARK BRICK	<b>LOWER</b>	WHITE
	<b>TOP 1</b>	WHITE		
	<b>TOP 2</b>	ROYAL BLUE		
	<b>TOP 3</b>	BLACK		



<b>MOTMOT</b>	<b>UPPER</b>	SPECTRA GREEN	<b>LOWER</b>	WHITE
	<b>TOP 1</b>	DARK BRICK		
	<b>TOP 2</b>	WHITE		
	<b>TOP 3</b>	BLACK		



<b>RUBI</b>	<b>UPPER</b>	PURPLE	<b>LOWER</b>	WHITE
	<b>TOP 1</b>	GOLD		
	<b>TOP 2</b>	WHITE		
	<b>TOP 3</b>	BLACK		



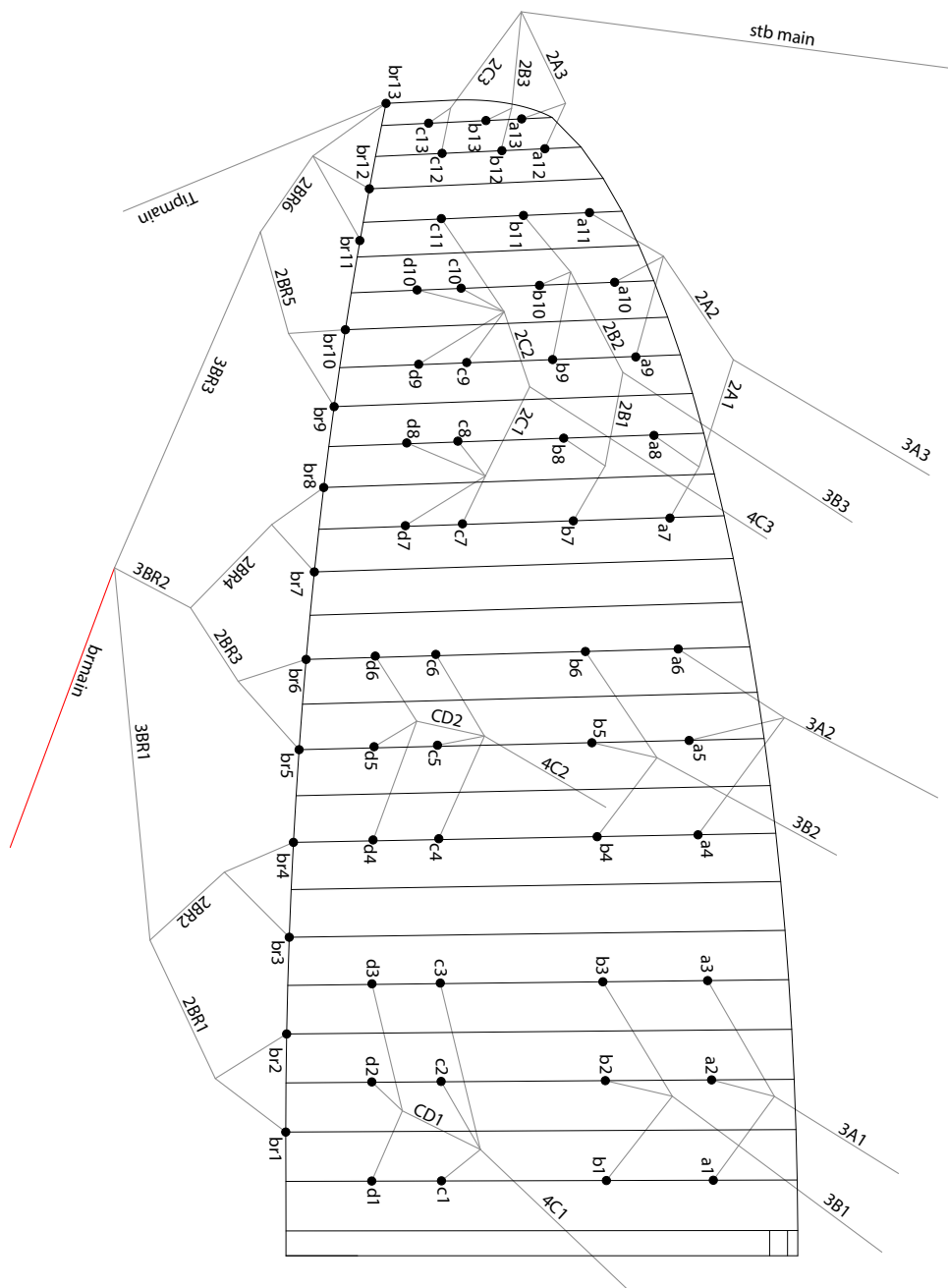
## 10.3 Materials

CANOPY	FABRIC CODE	SUPPLIER
UPPER SURFACE	HYPERAIRTEX-36	DOMINICO TEX CO (KOREA)
BOTTOM SURFACE	HYPERAIRTEX-36	DOMINICO TEX CO (KOREA)
PROFILES	HYPERAIRTEX-41	DOMINICO TEX CO (KOREA)
DIAGONALS	HYPERAIRTEX-41	DOMINICO TEX CO (KOREA)
LOOPS	LKI - 10	KOLON IND. (KOREA)
REINFORCEMENT LOOPS	W-420	D-P (GERMANY)
TRAILING EDGE REINFORCEMENT	MYLAR	D-P (GERMANY)
RIBS REINFORCEMENT	LTN-0.8 STICK	SPORTWARE CO.CHINA
THREAD	SERAFIL 60	AMAN (GERMANY)
THREAD	SERAFIL 60	AMAN (GERMANY)

SUSPENSION LINES	FABRIC CODE	SUPPLIER
UPPER CASCADES	MATRIX - 80	EDELRID (GERMANY)
UPPER CASCADES	PPSL - 120	LIROS GMHB (GERMANY)
MIDDLE CASCADES	MATRIX - 80	EDELRID (GERMANY)
MIDDLE CASCADES	PPSL - 120	LIROS GMHB (GERMANY)
MAIN	PPSL - 120	LIROS GMHB (GERMANY)
MAIN	TNL - 220	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 280	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 400	TEIJIM LIMITED (JAPAN)
MAIN BREAK	TARAX - 200	EDELRID (GERMANY)
THREAD	SERAFIL 60	AMAN (GERMANY)

RISERS	FABRIC CODE	SUPPLIER
MATERIAL	WD103	COUSIN (FRANCE)
COLOR INDICATOR	PAD	TECNI SANGLES (FRANCE)
THREAD	V138	COATS (ENGLAND)
MAILLONS	MRI4	ANSUNG PRECISION (KOREA)
PULLEYS	ID018041	RONSTAN (AUSTRALIA)

## 10.4 Line replacement



### LINE REPLACEMENT

The use of new high performance materials in modern wings is now common. The advantages of using these materials in terms of performance are widely acknowledged as part of our sport's evolution. However, along with those technological advances come additional responsibilities which cannot be avoided. As a result, line inspection and replacement must be carried out more frequently. That increased frequency appears to be encouraging some pilots to try to perform line replacement themselves.

**WE STRONGLY RECOMMEND ANY LINE REPLACEMENT IS PERFORMED BY AN AUTHORISED SPECIALIST ONLY.**

Ultimately, if the pilot decides to perform any line replacement without professional oversight they therefore assume all responsibility. In this case, these guidelines will have to be followed.

#### BEFORE REMOVING ANY LINES, CHECK:

- That the line plan is correct according to the glider model and size.
- That the line kit is complete and correct. Never assume but always check each individual line for the correct specification.

#### AFTER CONFIRMING THAT ALL LINES ARE CORRECT:

- Fit the new line(s) WITHOUT removing the label.
- Once replaced, measure each line length to confirm the correct measurement.
- Inflate the wing to check for any irregularities.
- The line labels may then be removed but NOT BEFORE completion of the line replacement.

*Niviuk strongly recommends for any line replacement to be carried out by an authorised professional only, and will not accept responsibility for any damage or injury caused as a result of incorrect re-assembly.*

# 10.5 Riser plan

A	A'	B	C'	C
3A1	3A3	3B1	4C3	4C1
3A2		3B2		4C2
		3B3		
		Stab		









**QUBIK 2 - 27**

ref.	mat.	kg	color	mm
<b>A</b>				
a1	PPSL	120	YELLOW	2159
a2	PPSL	120	YELLOW	2086
a3	PPSL	120	YELLOW	2106
a4	PPSL	120	YELLOW	1999
a5	PPSL	120	YELLOW	1957
a6	PPSL	120	YELLOW	1998
a7	MATRIX	80	BLUE	1260
a8	MATRIX	80	BLUE	1171
a9	MATRIX	80	BLUE	1198
a10	MATRIX	80	BLUE	1142
a11	MATRIX	80	BLUE	1165
a12	MATRIX	80	RED	356
a13	MATRIX	80	RED	285

2A1	PPSL	120	YELLOW	1200
2A2	PPSL	120	YELLOW	1128
2A3	MATRIX	80	RED	1008

3A1	TNL	400	GREEN	4790
3A2	TNL	280	GREEN	4847
3A3	TNL	280	GREEN	4355

ref.	mat.	kg	color	mm
<b>B</b>				
b1	PPSL	120	BLUE	2132
b2	PPSL	120	BLUE	2063
b3	PPSL	120	BLUE	2087
b4	PPSL	120	BLUE	1959
b5	PPSL	120	BLUE	1927
b6	PPSL	120	BLUE	1981
b7	MATRIX	80	BLUE	1172
b8	MATRIX	80	BLUE	1092
b9	MATRIX	80	BLUE	1116
b10	MATRIX	80	BLUE	1072
b11	MATRIX	80	BLUE	1.106
b12	MATRIX	80	RED	312
b13	MATRIX	80	RED	261

2B1	PPSL	120	BLUE	1.115
2B2	PPSL	120	BLUE	1057
2B3	MATRIX	80	BLUE	1021

3B1	TNL	400	BLUE	4700
3B2	TNL	280	BLUE	4786
3B3	TNL	220	BLUE	4478

STB MAIN	PPSL	120	RED	5033
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ref.	mat.	kg	color	mm
<b>C</b>				
c1	MATRIX	80	BLUE	1818
c2	MATRIX	80	BLUE	1739
c3	MATRIX	80	BLUE	1774
c4	MATRIX	80	BLUE	1657
c5	MATRIX	80	BLUE	1621
c6	MATRIX	80	BLUE	1695
c7	MATRIX	80	BLUE	856
c8	MATRIX	80	BLUE	755
c9	MATRIX	80	BLUE	767
c10	MATRIX	80	BLUE	763
c11	MATRIX	80	BLUE	878
c12	MATRIX	80	RED	300
c13	MATRIX	80	RED	271

2C1	PPSL	120	BLUE	797
2C2	PPSL	120	BLUE	751
2C3	MATRIX	80	RED	1105
CD1	PPSL	120	BLUE	265
CD2	PPSL	120	BLUE	247

4C1	TNL	280	BLUE	5062
4C2	TNL	220	BLUE	5134
4C3	TNL	220	BLUE	5200

ref.	mat.	kg	color	mm
<b>D</b>				
d1	MATRIX	80	BLUE	1634
d2	MATRIX	80	BLUE	1546
d3	MATRIX	80	BLUE	1592
d4	MATRIX	80	BLUE	1485
d5	MATRIX	80	BLUE	1441
d6	MATRIX	80	BLUE	1527
d7	MATRIX	80	BLUE	916
d8	MATRIX	80	BLUE	815
d9	MATRIX	80	BLUE	825
d10	MATRIX	80	BLUE	819

ref.	mat.	kg	color	mm
<b>BRAKE</b>				
br1	MATRIX	80	RED	882
br2	MATRIX	80	RED	561
br3	MATRIX	80	RED	575
br4	MATRIX	80	RED	539
br5	MATRIX	80	RED	904
br6	MATRIX	80	RED	773
br7	MATRIX	80	RED	791
br8	MATRIX	80	RED	824
br9	MATRIX	80	RED	754
br10	MATRIX	80	RED	633
br11	MATRIX	80	RED	745
br12	MATRIX	80	RED	707
br13	MATRIX	80	RED	701

2BR1	MATRIX	80	RED	760
2BR2	MATRIX	80	RED	493
2BR3	MATRIX	80	RED	905
2BR4	MATRIX	80	RED	828
2BR5	MATRIX	80	RED	884
2BR6	MATRIX	80	RED	691

3BR1	MATRIX	80	RED	2989
3BR2	MATRIX	80	RED	2037
3BR3	MATRIX	80	RED	1922

BRTIPMAIN	PPSL	120	RED	6544	
				KNOT POINT:	6344

BRMAIN	TARAX	200	RED	3839	
				KNOT POINT 1:	3559
				KNOT POINT 2:	3639

## 10.7 Total line length

### QUBIK 2 - 21

LINES HEIGHT + RISER MM

	A	B	C	D	br	tip
1	6011	5907	5949	6010	7088	5535
2	5943	5843	5876	5930	6805	
3	5956	5860	5903	5966	6580	
4	5906	5819	5859	5916	6546	
5	5867	5788	5824	5875	6389	
6	5900	5833	5887	5947	6272	
7	5861	5819	5900	5952	6218	
8	5782	5748	5810	5863	6245	
9	5740	5715	5777	5828	6131	
10	5691	5676	5772	5822	6025	
11	5710	5705	5873		5954	
12	5497	5469	5534		5921	
13	5435	5426	5509		5895	

RISERS LENGHT MM

	A	B	C	
	480	480	480	STANDARD
	480	530	630	TRIMMER OPENED
	380	463	630	ACCELERATED

### QUBIK 2 - 23

LINES HEIGHT + RISER MM

	A	B	C	D	br	tip
1	6312	6205	6249	6313	7438	5800
2	6244	6139	6174	6231	7142	
3	6259	6158	6203	6270	6908	
4	6209	6117	6158	6218	6873	
5	6169	6086	6123	6176	6710	
6	6205	6133	6189	6253	6589	
7	6165	6120	6204	6259	6535	
8	6082	6046	6111	6166	6564	
9	6039	6012	6077	6130	6444	
10	5988	5972	6073	6124	6334	
11	6008	6002	6178		6259	
12	5785	5756	5823		6224	
13	5719	5710	5797		6205	

RISERS LENGHT MM

	A	B	C	
	480	480	480	STANDARD
	480	530	630	TRIMMER OPENED
	380	463	630	ACCELERATED

### QUBIK 2 - 25

LINES HEIGHT + RISER MM

	A	B	C	D	br	tip
1	6672	6559	6606	6674	7853	6115
2	6601	6492	6528	6589	7543	
3	6619	6513	6561	6632	7299	
4	6568	6471	6516	6580	7264	
5	6528	6440	6481	6537	7094	
6	6567	6491	6551	6618	6967	
7	6526	6480	6567	6625	6910	
8	6440	6402	6470	6527	6942	
9	6395	6367	6434	6490	6815	
10	6341	6325	6430	6484	6699	
11	6364	6357	6541		6621	
12	6128	6097	6167		6584	
13	6059	6049	6139		6573	

RISERS LENGHT MM

	A	B	C	
	480	480	480	STANDARD
	480	530	630	TRIMMER OPENED
	380	463	630	ACCELERATED

## QUBIK 2 - 27

LINES HEIGHT + RISER MM

	A	B	C	D	br	tip
1	6947	6830	6878	6950	8172	6356
2	6874	6761	6799	6862	7851	
3	6894	6785	6834	6908	7598	
4	6844	6743	6789	6855	7562	
5	6802	6711	6753	6811	7387	
6	6843	6765	6827	6897	7256	
7	6804	6754	6846	6906	7197	
8	6715	6674	6745	6805	7230	
9	6668	6638	6708	6766	7101	
10	6612	6594	6704	6760	6980	
11	6635	6628	6819		6898	
12	6390	6359	6431		6860	
13	6319	6308	6402		6854	

RISERS LENGHT MM

A	B	C	
480	480	480	STANDARD
480	530	630	TRIMMER OPENED
380	463	630	ACCELERATED

## 10.8 Minimum strength of suspension lines

LINE REFERENCE	SIZE			
	21	23	25	27
<b>TNL-220</b>	80	93	106	119
<b>TNL-280</b>	100	116	133	149
<b>TNL-400</b>	120	140	160	179
<b>PPSL-120</b>	60	70	80	90
<b>Matrix-80</b>	39	46	52	58

Minimum resistance values in daN

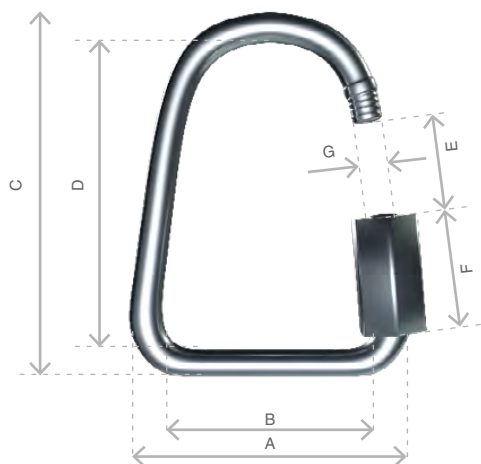
Based on the original experimental resistance values of each suspension line material obtained in certification tests, a correction factor is applied depending on the material and its aging, resulting in the reference values shown in the table.

## 10.9 Maillon

### DESCRIPTION MAILLON

<b>MAILLON</b>	DELTA
<b>CODE</b>	MRI4
<b>MATERIAL</b>	STAINLESS STEEL
<b>SIZE</b>	4,3 mm
<b>WEIGHT</b>	12 g/piece
<b>QUANTITY</b>	8 piece
<b>INSERTS</b>	2 GREEN / 6 BLACK

### TECHNICAL SPECIFICATIONS



<b>DIMENSIONS</b>	mm
<b>A</b>	28
<b>B</b>	20
<b>C</b>	38
<b>D</b>	30
<b>E</b>	4
<b>F</b>	11
<b>G</b>	4
<b>LOAD</b>	KG
<b>WORKING LIMIT</b>	150
<b>BREAKING</b>	750

### DESCRIPTION MAILLON

#### MATERIAL

AISI 304 STAINLESS STEEL

STANDARD

CLOSING APPLIED BY MANUAL & ENTIRE SCREWING OF THE NUT TO  
GUARANTEE THE HIGHEST SAFETY (NO THREAD SHOULD BE OBVIOUS)

SYSTEMATIC CONTROL OF MAILLON QUICK-LINKS BEFORE EVERY FLIGHT

# 10.10 Certification

**MINISTÈRE  
CHARGÉ  
DES TRANSPORTS**

Liberté  
Égalité  
Fraternité



## FICHE D'IDENTIFICATION ULM

(à joindre à la carte d'identification)

a	b	c	d	e	f	Rév n°
B	1	0	1	S	F	0
				4	3	7
				9	E	-

a) Construction en série : B – autres cas A  
b) Monoplace : 1 - Biplace : 2  
c) 01 : paramoteur

d) Code de l'autorité aéronautique  
e) Numéro d'ordre  
f) Utilisation : Loisir : L - Activité particulière : T - Loisir et activité particulière : E

Modèle	<b>QUBIK 2 - 21</b>
Constructeur	<b>NIVIUK GLIDERS / AIR GAMES S.L.</b>
Adresse du constructeur	<b>Carrer del Ter, 6 nave D 17165 LA CELLERA DE TER - GIRONA - ESPAGNE</b>

Activités particulières	n/a		
Equipements autorisés	n/a		
Masse minimale	Masse maximale (MMD)	Résistance minimale d'ancrage	
<b>70 kg</b>	<b>120 kg</b>	<b>1000 daN</b>	
Voilure			
Fabricant	Modèle	Surface à plat	
<b>Niviuk Gliders / Air Games SL</b>	<b>QUBIK 2</b>	<b>21 m²</b>	
Autres limitations	<b>Puissance maximale 27 kW</b>		
Réf. manuel d'utilisation	<b>Manuel Qubik 2</b>		
Réf. manuel d'entretien	<b>Manuel Qubik 2</b>		

Document établi le : **3 novembre 2025**  
(annule et remplace toute version précédente)  
Pour le Ministre chargé de l'Aviation civile,

A renseigner par le constructeur de l'ULM de série ou par un représentant dûment habilité

Numéro de série de l'ULM : ..... A : ..... le : .....  
Aéronef livré en kit :  oui\*  non (si l'assemblage a été réalisé sous la responsabilité du constructeur, cocher « non »)  
Nom, prénom du signataire : .....

Je certifie que l'ULM est conforme aux éléments descriptifs de cette fiche et aux conditions techniques applicables, sauf mention contraire ci-dessous.

Signature et cachet de l'entreprise : .....

Cette attestation porte sur l'état de l'ULM :  
 à la date de signature  à la date du : .....

Remarques/exceptions éventuelles :  
.....  
.....

(\* Si l'ULM a été livré en kit, l'attestation du constructeur porte sur les éléments du kit livré et les instructions d'assemblage fournies par lui ; la conformité finale de l'aéronef suppose que l'aéronef soit correctement assemblé, sous la responsabilité du demandeur de la carte d'identification, à partir de ces éléments et de ces instructions.

**MINISTÈRE  
CHARGÉ  
DES TRANSPORTS**

Liberté  
Égalité  
Fraternité



## FICHE D'IDENTIFICATION ULM

(à joindre à la carte d'identification)

a	b	c	d	e	f	Rév n°
B	1	0	1	S	F	0
				4	3	8
				0	E	-

a) Construction en série : B – autres cas A  
b) Monoplace : 1 - Biplace : 2  
c) 01 : paramoteur

d) Code de l'autorité aéronautique  
e) Numéro d'ordre  
f) Utilisation : Loisir : L - Activité particulière : T - Loisir et activité particulière : E

Modèle	<b>QUBIK 2 - 23</b>
Constructeur	<b>NIVIUK GLIDERS / AIR GAMES S.L.</b>
Adresse du constructeur	<b>Carrer del Ter, 6 nave D 17165 LA CELLERA DE TER - GIRONA - ESPAGNE</b>

Activités particulières	n/a		
Equipements autorisés	n/a		
Masse minimale	Masse maximale (MMD)	Résistance minimale d'ancrage	
<b>80 kg</b>	<b>140 kg</b>	<b>1000 daN</b>	
Voilure			
Fabricant	Modèle	Surface à plat	
<b>Niviuk Gliders / Air Games SL</b>	<b>QUBIK 2</b>	<b>23 m²</b>	
Autres limitations	<b>Puissance maximale 27 kW</b>		
Réf. manuel d'utilisation	<b>Manuel Qubik 2</b>		
Réf. manuel d'entretien	<b>Manuel Qubik 2</b>		

Document établi le : **3 novembre 2025**  
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Pour le Ministre chargé de l'Aviation civile,

A renseigner par le constructeur de l'ULM de série ou par un représentant dûment habilité

Numéro de série de l'ULM : ..... A : ..... le : .....  
Aéronef livré en kit :  oui\*  non (si l'assemblage a été réalisé sous la responsabilité du constructeur, cocher « non »)  
Nom, prénom du signataire : .....

Je certifie que l'ULM est conforme aux éléments descriptifs de cette fiche et aux conditions techniques applicables, sauf mention contraire ci-dessous.

Signature et cachet de l'entreprise : .....

Cette attestation porte sur l'état de l'ULM :  
 à la date de signature  à la date du : .....

Remarques/exceptions éventuelles :  
.....  
.....

(\* Si l'ULM a été livré en kit, l'attestation du constructeur porte sur les éléments du kit livré et les instructions d'assemblage fournies par lui ; la conformité finale de l'aéronef suppose que l'aéronef soit correctement assemblé, sous la responsabilité du demandeur de la carte d'identification, à partir de ces éléments et de ces instructions.

**FICHE D'IDENTIFICATION ULM**

(à joindre à la carte d'identification)

a	b	c	d	e	f	Rév n°
B	1	0	1	S	F	0
				4	3	8
				1	E	-

a) Construction en série : B – autres cas A  
b) Monoplace : 1 - Biplace : 2  
c) 01 : paramoteur

d) Code de l'autorité aéronautique  
e) Numéro d'ordre  
f) Utilisation : Loisir : L - Activité particulière : T - Loisir et activité particulière : E

Modèle	<b>QUBIK 2 - 25</b>
Constructeur	<b>NIVIUK GLIDERS / AIR GAMES S.L.</b>
Adresse du constructeur	<b>Carrer del Ter, 6 nave D 17165 LA CELLERA DE TER - GIRONA - ESPAGNE</b>

Activités particulières	n/a		
Equipements autorisés	n/a		
Masse minimale	Masse maximale (MMD)	Résistance minimale d'ancrage	
<b>100 kg</b>	<b>160 kg</b>	<b>1000 daN</b>	
Voilure			
Fabricant	Modèle	Surface à plat	
<b>Niviuk Gliders / Air Games SL</b>	<b>QUBIK 2</b>	<b>25,50 m²</b>	
Autres limitations	<b>Puissance maximale 27 kW</b>		
Réf. manuel d'utilisation	<b>Manuel Qubik 2</b>		
Réf. manuel d'entretien	<b>Manuel Qubik 2</b>		

Document établi le : **3 novembre 2025**  
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Pour le Ministre chargé de l'Aviation civile,

A renseigner par le constructeur de l'ULM de série ou par un représentant dûment habilité

Numéro de série de l'ULM : ..... A : ..... le : .....  
Aéronef livré en kit :  oui\*  non (si l'assemblage a été réalisé sous la responsabilité du constructeur, cocher « non »)  
Nom, prénom du signataire : .....

Je certifie que l'ULM est conforme aux éléments descriptifs de cette fiche et aux conditions techniques applicables, sauf mention contraire ci-dessous.  
Signature et cachet de l'entreprise : .....

Cette attestation porte sur l'état de l'ULM :  
 à la date de signature  à la date du : .....

Remarques/exceptions éventuelles :  
.....  
.....

(\* Si l'ULM a été livré en kit, l'attestation du constructeur porte sur les éléments du kit livré et les instructions d'assemblage fournies par lui ; la conformité finale de l'aéronef suppose que l'aéronef soit correctement assemblé, sous la responsabilité du demandeur de la carte d'identification, à partir de ces éléments et de ces instructions.

**FICHE D'IDENTIFICATION ULM**

(à joindre à la carte d'identification)

a	b	c	d	e	f	Rév n°
B	1	0	1	S	F	0
				4	3	8
				2	E	-

a) Construction en série : B – autres cas A  
b) Monoplace : 1 - Biplace : 2  
c) 01 : paramoteur

d) Code de l'autorité aéronautique  
e) Numéro d'ordre  
f) Utilisation : Loisir : L - Activité particulière : T - Loisir et activité particulière : E

Modèle	<b>QUBIK 2 - 27</b>
Constructeur	<b>NIVIUK GLIDERS / AIR GAMES S.L.</b>
Adresse du constructeur	<b>Carrer del Ter, 6 nave D 17165 LA CELLERA DE TER - GIRONA - ESPAGNE</b>

Activités particulières	n/a		
Equipements autorisés	n/a		
Masse minimale	Masse maximale (MMD)	Résistance minimale d'ancrage	
<b>110 kg</b>	<b>179 kg</b>	<b>1000 daN</b>	
Voilure			
Fabricant	Modèle	Surface à plat	
<b>Niviuk Gliders / Air Games SL</b>	<b>QUBIK 2</b>	<b>27,50 m²</b>	
Autres limitations	<b>Puissance maximale 27 kW</b>		
Réf. manuel d'utilisation	<b>Manuel Qubik 2</b>		
Réf. manuel d'entretien	<b>Manuel Qubik 2</b>		

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Aéronef livré en kit :  oui\*  non (si l'assemblage a été réalisé sous la responsabilité du constructeur, cocher « non »)  
Nom, prénom du signataire : .....

Je certifie que l'ULM est conforme aux éléments descriptifs de cette fiche et aux conditions techniques applicables, sauf mention contraire ci-dessous.  
Signature et cachet de l'entreprise : .....

Cette attestation porte sur l'état de l'ULM :  
 à la date de signature  à la date du : .....

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.....  
.....

(\* Si l'ULM a été livré en kit, l'attestation du constructeur porte sur les éléments du kit livré et les instructions d'assemblage fournies par lui ; la conformité finale de l'aéronef suppose que l'aéronef soit correctement assemblé, sous la responsabilité du demandeur de la carte d'identification, à partir de ces éléments et de ces instructions.



**Niviuk Paragliders**

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