# KODE P

# User's manual





#### YOUR MOUNTAIN PARTNER

#### WELCOME

We wish to welcome you to our team and thank you for your trust in choosing a Niviuk wing.

We would like to share the enthusiasm with which we created this wing and the importance and care we took in the design and manufacture of this new model. All this in order to offer maximum pleasure on every flight with a Niviuk glider.

The Kode P is an accessible and light mountain wing to accompany you on your hike & fly adventures.

We are confident you will enjoy flying this wing and will soon discover the meaning of our motto:

"The importance of small details".

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

#### USER MANUAL

This manual provides 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 KODE P manual.

Misuse of this equipment could lead to severe or irreversible injuries to the pilot, even 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 Kode P is an accessible and light mountain wing to accompany you on your hike & fly adventures.

Enjoy pleasant and more progressive handling in the classic sizes (20, 22, 24, 26) and more direct and dynamic flying in the smaller sizes (16 and 18), which are more suitable for experienced hike & fly pilots.

Its versatility facilitates a multitude of adventures. The wing permits flying in thermals and strong winds without having to compromise on safety and comfort. In addition, its lightness and ease of take off on all types of terrain will enhance hike & fly adventures.

#### **1.2 CERTIFICATION**

The KODE P has been submitted for the European EN and LTF certification.

All certification tests were conducted by the Air Turquoise testing centre in Switzerland.

All sizes passed the load, shock and flight tests.

The wing passed the sustained load test with an 8G load factor.

It also passed the shock loading test with 800 daN of force.

The flight test resulted in the following certification for all KODE P sizes: EN A LTF A

Size 16 of the KODE P has been certified as: EN B LTF B If the wing is loaded above the maximum certified take off weight for sizes 16 and 18, the certification changes as follows:

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EN C
LTF C
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We recommend that only pilots who are familiar with gliders of this certification or above fly this paraglider.

Only the aeronautical authorities of respective countries can determine pilot competence.

We recommend pilots read the certification flight test report carefully, especially the comments of the test pilot. The report contains all the necessary information on how the paraglider reacts during each of the tested manoeuvres.

It is important to point out that the appropriate response to each adverse manoeuvre can vary from size to size; even within the same size at maximum or minimum load, the behaviour and reactions of the wing may vary.

-Description of flight characteristics of EN A paragliders: Paragliders with maximum passive safety and extremely forgiving flight characteristics. Gliders with good collapse resistance in normal flight.

-Description of the skills required by the pilot to fly an EN A wing: Designed for all pilots, including pilots under instruction.

-Description of flight characteristics of EN B paragliders: Paragliders with a high degree of passive safety and very forgiving flight characteristics. Gliders with high collapse resistance outside normal flight.

-Description of the skills required by the pilot to fly an EN B wing: Designed for all pilots, at any level of qualification.

-Description of flight characteristics of EN C paragliders:

Paragliders with moderate passive safety, potentially dynamic reactions to turbulence and pilot errors. The recovery to normal flight may require precise interventions by the pilot.

-Description of the skills required by the pilot to fly an EN C wing:

Designed for pilots familiar with recovery techniques, who fly actively and understand the implications of flying a paraglider with reduced passive safety.

For further information on the flight test and the corresponding certification number, please see the final pages of this manual or visit the product page download section at www.niviuk.com .

#### 1.3 IN-FLIGHT BEHAVIOUR

Niviuk developed this wing by adopting very specific goals: to improve performance, excellent handling and to facilitate more control for the pilot.

To increase performance while maintaining the highest level of safety. To ensure that the wing transmits the maximum feedback in an understandable and comfortable way so that the pilot can focus on piloting and enjoying the flight. And, with active piloting, make the most of all favourable conditions.

The glider is very solid in all aspects of flight. The glide is smooth, even when fully accelerated. When gliding, it has an excellent sink rate and the profile remains stable. Improved turn precision means handling is less physical. Inflating the wing is much easier and gentler, without overshooting.

Flying this wing is very intuitive, with clear, usable feedback about the surrounding airmass. It responds to the pilot's inputs effectively and even

in thermic and turbulent conditions, it remains stable and solid.

The KODE P flies efficiently. It enters thermals with sufficient speed to centre in the lift and climb progressively. The handling is progressive and effective for even more flying pleasure under a meticulously designed wing of extraordinary quality.

It is lightweight, even lighter in flight and easy to pilot, with outstanding turbulence buffering and an amazing range of speed for incredible glides.

#### 1.4 CONSTRUCTION, MATERIALS

The KODE P features all the technological innovations in design and construction used in our manufacturing facilities. It is built with the most careful selection of current materials, 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 more evolved and higher performance wings. In short, better and better gliders. It is in this context that we would like to introduce the technologies featured in this new model.

RAM Air Intake - this system is characterised by the arrangement of the air inlets, to ensure optimal maintenance of internal pressure. Thanks to this design, we were able to reduce their size, while maintaining the same air flow at all angles to improve laminar flow. Thus more consistency across the whole speed range and better performance without compromising on safety.

Titanium Technology (TNT) - 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. Structural Leading Edge (SLE) - provides more rigidity and stability along the span of leading edge but also allows full flexibility along the both the vertical and horizontal axis. A reduction in the amount of Mylar, in comparison to previous profiles, has resulted in less weight which makes it easier to inflate the wing.

3D Pattern Cut Optimization (3DP) - an optimised process to cut the fabric panels to ensure the perfect form of the leading edge. Creating separate panels for each of the sections at the front of the wing means the sail fabric is tauter and crease-free. During the cutting, the optimal orientation of the fabric section is selected, depending on its final location. If the fabric pattern is properly aligned with the axes of load, it suffers less deformation after repeated use, to the long-term benefit of the leading edge.

3D Leading Edge (3DL) - adding an extra reinforced seam to the leading edge helps to ensure more consistency and volume in the profile. This provides a more efficient 3D contour.

Interlock System (IKS) - is an ultralight connection system specially designed for mountain and lightweight equipment. With less weight than the traditional delta maillon it is nevertheless much stronger.

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 KODE P we use the same criteria, quality controls and manufacturing processes as in the rest of our range. From Olivier's computer to the finished cut piece of fabric, not even the minutest of error is permitted; the cutting of each of the assembly elements that make up the paraglider is carried out one by one, through rigorous and extremely meticulous work. The same meticulous system is used for the subsequent marking and numbering of each piece, thus avoiding possible errors in this very delicate process.

The jigsaw puzzle assembly method makes it easier to organise, saves

resources and provides excellent quality control. All Niviuk gliders go through an extremely rigorous and detailed final inspection. For example, the canopy is cut and assembled through an automated process that follows a very strict order where there is no margin for error. Finally each wing is individually inspected.

The same fabric has been used as in the rest of the range, ensuring its guaranteed lightness, strength and durability without fading. The main, mid and gallery lines are made from unsheathed Aramid. 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.

Once the final assembly of the canopy is concluded, every line is checked and measured.

Each glider is packed according to the most advanced material maintenance and conservation guidelines.

Niviuk gliders are made of premium materials that meet the requirements of performance, durability and certification that the current market demands.

Information about the various materials used can be viewed in the final pages of this manual.

#### 1.5 ELEMENTS/COMPONENTS

The KODE P is delivered with a series of accessories that will greatly assist in the maintenance of the paraglider:

- A Kargo bag. This bag is large enough to hold all equipment comfortably and with plenty of space.

- An inner bag to protect the wing during storage and transport.

- An adjustable compression strap to compress the inner bag and reduce its volume.

- A riser protector, which will prevent metal parts from coming into contact with the cloth during storage.

- A repair kit with self-adhesive Ripstop tape and spare O-rings to protect the maillons.

#### 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 assist in carrying out all the recommended steps required to check and inflate the KODE P.

We recommend that a qualified instructor or a local Niviuk dealer is present to supervise the entire procedure, as only they can address any doubts in a safe and professional way.

# 2.2 PROCEDURE

Take the glider 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 cloth and lines are undamaged and all maillons connecting the lines and risers are locked. Identify, and if necessary untangle, the A, B, C, and the brake lines and corresponding risers. Make sure that there are no knots.

# 2.3 CONNECTING THE HARNESS

The KODE P 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 the attachment points so that the risers and lines are correctly ordered and free of twists. Check that the IKS or carabiners are properly fastened and securely locked.

# 2.4 HARNESS TYPE

The KODE P can be flown with all current harness types. If the chosen harness has an adjustable chest strap, we recommend setting this to the distance recommended during certification, which will vary depending on the size of the harness. See the certification report.

Care should be taken with the chest strap setting, as the distance of the chest strap setting will affect the handling of the glider. If the chest strap is too wide, it allows greater feedback but this carries the risk of affecting the stability of the wing.

If the chest strap is set too tightly, the wing feels more solid, but there is a loss of feedback and a risk of twisting in the case of a violent asymmetric collapse.

# 2.5 CONNECTING THE SPEED-BAR

TThe speed-bar is a means of temporary acceleration by changing the airflow 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 during certification.

The KODE P includes a speed system with maximum travel depending on its size (see Full speed-bar). The speed system is engaged when the pilot pushes the speed-bar (not included as standard with this glider model) with their feet. The pilot must fit and install the speed-bar and connect it to the risers (see 2.5.1: Speed system assembly).

The speed system uses an action/reaction system. Released, the speedbar 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 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, C, -risers are aligned.

•Full speed-bar: the difference between the A - C-risers becomes:

Size 16 – 100 mm

Size 18 – 100 mm

Size 20 - 160 mm

Size 22 - 160 mm

Size 24 – 160 mm

Size 26 – 160 mm

### PLEASE NOTE

The use of the speed system results in changes to the speed but also the 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:

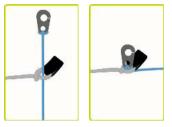
•The pilot should use the type of speed-bar they consider appropriate, depending on the type of harness, personal preferences, etc.

•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.

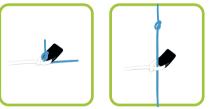
•The standard connection of the speed-bar to the speed system is via Brummel hooks, where two slots in the hooks are interlocked, making

their connection/disconnection easy. However, any connection system that is safe may be used.



Plume (P) models - please note

The P models were designed with the idea of saving weight across the entire equipment. To achieve this, Niviuk decided to deliver the wings without the classic Brummel hooks and opting for a kite-style knotting system. This system offers the same efficiency and safety as the classic Brummel hooks, but with much less weight.



1.Make a knot in the speed-bar cord and we pass this through the cord connections on the risers.

2.Apply tension to both sides until the knots are locked tightly in the riser connections.

The system or procedure for connecting the kite knot is exactly the same

as the Brummel hooks and can be used in other systems or connection elements.

#### 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 they may need to be replaced.

In all Niviuk gliders the speed system cords on the risers are completely removable and easily replaceable. The pilot 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 INSPECTION AND WING INFLATION ON THE GROUND

After a thorough pre-flight inspection and the weather conditions deemed favourable for flying, inflate your KODE P as many times as necessary to familiarise yourself with its behaviour. Inflating the KODE P 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.

#### 2.7 ADJUSTING THE BRAKES

The length of the main brake lines is adjusted at the factory and they conform to the length stipulated during certification. However, the length can be changed to adapt to the pilot's 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 KODE P. 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. 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.

# 3. THE FIRST FLIGHT

# 3.1 CHOOSING THE RIGHT LOCATION

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

#### 3.2 PREPARATION

Repeat the procedures detailed in chapter 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 TAKE OFF

Smoothly and progressively inflate the wing. The KODE P inflates easily and does not require additional input. The wing does not have the tendency to overfly the pilot. It is a straight forward exercise leaving enough time for the pilot to decide whether to accelerate and take off or not.

If the wind permits, we recommend a reverse launch, as this allows a better visual inspection of the wing during inflation. In "strong" winds, the KODE P is especially easy to control using this launch technique. Winds of 25 to 30 km/h are considered strong for paragliding.

Correctly setting up the wing on the ground before take off is vitally important. To ensure a clean launch, choose an appropriate location facing the wind. Position the paraglider in a crescent configuration to facilitate inflation.

#### 3.6 LANDING

The KODE P lands excellently, it converts the wing speed into lift at your demand, allowing an enormous margin of error. Wrapping the brake lines around your hand to get greater braking efficiency is not necessary.

#### 3.7 PACKING

The KODE P 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 the 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 without compromising its profile or performance. Ensure the reinforcements are not bent or folded. The wing should not be folded too tightly to avoid damage to the cloth and/or lines.

At Niviuk we have designed the NKare Bag, a bag designed to assist you with rapid packing which helps maintain the integrity of the leading edge and keeps its internal structures in perfect condition.

The NKare Bag guides you through the folding process, allowing you to concertina-pack the wing with each rod on top of the other and then fold the wing as required. This folding system ensures that both the fabric and the reinforcements of the internal structure are kept in perfect condition.

# 4. IN FLIGHT

We recommend that you read the certification test report. The report contains all the necessary information on how the KODE P reacts during each of the tested manoeuvres.

It is important to point out that the appropriate response to an adverse incidence can vary from size to size; even within the same size at maximum or minimum load the behaviour and reactions of the wing may vary.

Having the knowledge that the testing house provides through the test report is fundamental to learning how to deal with possible situations.

We recommend learning to fly this wing under the guidance of a qualified instructor.

4.1 FLYING IN TURBULENCE

The KODE P has an excellent profile to buffer turbulence. It is very stable in all conditions and has excellent passive flight reactions, which makes it very safe 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 reestablish the correct flying speed.

#### 4.2 POSSIBLE CONFIGURATIONS

We recommend learning to fly this wing under the guidance of a qualified instructor. The pilot must adapt their use of the brakes depending on the wing-loading and avoid over-steering.

It is important to point out that the appropriate response to an adverse incidence can vary from size to size; even within the same size at maximum or minimum load the behaviour and reactions of the wing may vary.

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 incidents in real flight, so you can deal with these situations as safely as possible.

Asymmetric collapse

In spite of the KODE P's profile stability, strong turbulent air may cause the wing to collapse asymmetrically, especially if the pilot is unable to fly actively and prevent the collapse. 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 corresponding to the affected side of the wing. It will increase the incidence of the wing (angle of attack). If the collapse does happen, the KODE P 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, then pull the brake handle on the collapsed side decisively and guickly all the way (100%) down. You may have to repeat this pumping action to force the re-opening of the deflated 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 the default flying speed.

#### Frontal collapse

Due to the KODE P'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 or when lacking experience using the speed-bar without adapting to the prevailing conditions. 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 KODE P'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 and angle of attack by progressively reducing the tension on the brake lines. The normal wing reaction will be to have a lateral surge on the reaccelerated side with a rotation not greater than 360° before returning to default air speed.

#### Parachutal stall

The possibility of entering or remaining in a parachutal stall have been eliminated from the KODE P .

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-risers or weight-shift your body to any side WITHOUT PULLING ON THE BRAKE LINES.

#### Deep Stall

The possibility of the KODE P stalling during normal flight is very unlikely. It could only happen if the pilot flies at a very low air speed, whilst oversteering or performing dangerous manoeuvres in turbulent air.

To induce 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%) down until the stall point is reached and held there for several seconds. The glider will first pitch rearward and then reposition itself overhead, rocking slightly, depending on how the manoeuvre was done.

When entering a stall, remain clear-headed and ease off the brake lines until reaching the half-way point of the total the brake travel. The wing will then surge violently forward and could reach a point below the pilot. It is most important to maintain brake pressure for a few seconds 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. In the same way as controlling 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 wingtip) trapped between the other lines. This line has a different colour and is located on the outside position of the B-riser.

Pull on this line until it is taught, as it should help undo 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 poor decisions or wrong pilot input, which then escalate 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 KODE P 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 overcontrol the wing. You have to allow the glider to re-establish normal flying speed and attitude after any type of incident

#### 4.3 ACCELERATED FLIGHT

The KODE P 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 angle of attack. Always remember to re-establish the correct air speed after any correction.

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 means active flying during accelerated flight.

#### 4.4 FLYING WITHOUT BRAKE LINES

If, for any reason at all, the KODE P's brake lines become disabled in flight, it will become necessary to pilot the wing with the C-risers and weight-shifting until landing. These risers steer easily because they are not under much tension, however you will need 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 during the landing approach, and the C-risers will have to be pulled symmetrically all the way down 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.

#### 4.5 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 of the wing 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. Beware of trying to clear or untangle a knotted 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.

# **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.

We recommend learning these maneuvers under the guidance of a qualified instructor.

#### 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 outermost line on each A-riser (line 4a1 in size 16 y 18 and specifically the A' line in sizes 20, 22, 24 and 26) 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. Let go of the lines to re-inflate the tips automatically. If they do not, try pulling one brake then the other. We recommend inflating the wingtips asymmetrically, without major change to the angle of attack, especially when flying near the ground or flying in turbulence.

#### 5.2 B-LINE STALL

When carrying out this manoeuvre, the wing stops flying, loses all horizontal speed and the pilot is no longer in control of the paraglider.

The airflow over the profile is interrupted and the wing enters a situation similar to parachuting.

To enter this manoeuvre, the B-risers are gripped below the maillons and symmetrically pulled down together (approx. 20-30 cm) and maintained in that position.

Initiating the manoeuvre is physically demanding because it can take some strength to pull the risers down until the wing is deformed. After this, the physical effort is less. Continue to hold the risers in position.

Once the wing is deformed, its horizontal speed will drop to 0 km/h; vertical descending speed increases to -6 to -8 m/s, depending on the conditions and how the manoeuvre is performed.

To exit the manoeuvre, simultaneously release both risers. The wing will then slightly surge forward and automatically return to normal flight. It is better to let go of the lines quickly rather than slowly.

This is an easy descent technique to perform, but remember that the wing will stop flying, will lose all forward horizontal speed, and its reactions will change markedly when compared to a normal flight configuration. 5.3 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 and to be able to perform the manoeuver safely.

To enter a spiral dive, 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 15 m/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 be released progressively while the pilot must also weight-shift and lean towards the opposite side. Stop when the wing begins to exit from the spiral.

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 may briefly oscillate and dive sideways, depending on how the manoeuvre was carried out.

Practise these manoeuvres at sufficient altitude and with moderation.

### 5.4 SLOW DESCENT TECHNIQUE

This technique allows a very gradual descent without straining the wing or taxing the pilot. Glide normally while searching for descending air and begin to turn as if climbing in a thermal, but with the intention to sink. Common sense has to be used to avoid dangerous areas of rotor when looking for descending air. Safety first!

### 6. SPECIAL METHODS

#### 6.1 TOWING

The KODE P 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 in the same way as during a normal hill take off.

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

#### 6.2 ACROBATIC FLIGHT

Although the KODE P was tested by expert acrobatic pilots in extreme situations, it was NOT designed for this type of flying. We do NOT recommend using this glider for aerobatics.

We consider extreme or acrobatic flights to be any form of piloting different than standard flights. Learning aerobatic/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. When performing extreme manoeuvres, you will subject both the glider and your body to centrifugal forces that can reach up to 4 or 5 g, wearing out the material much faster than with normal flight.

#### 7. CARE AND MAINTENANCE

7.1 MAINTENANCE

Careful maintenance of your equipment will ensure continued top performance. Independently of annual inspections, we advise active care of the equipment.

A pre-flight check is obligatory before each flight.

If you have any unforeseen incidents which may affect the areas where the equipment is most susceptible to damage, you should check and act accordingly.

At Niviuk we are firmly committed to make technology accessible to all pilots. For this reason all our wings are fitted with the latest innovations. Thanks to our innovative technologies, the wing has more safety and performance, but this means being more careful with the material.

A hard impact or dragging the leading edge against a hard surface can damage the sail cloth. All incidents involving the leading edge should be reviewed.

If a Nitinol rod is damaged, they are easily replaceable. 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 deterioration. Before launch or after landing, do not leave the wing exposed to the sun. Pack it and stow it away in its backpack.

If flying in a sandy environment, and sand has accumulated inside the wing, remove it before packing it away. The apertures at the wingtips facilitate easy removal of objects from the trailing edge.

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

Keep your equipment in the in a cool, dry place away from solvents, fuels or oils.

Do not leave the 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

#### Inspections

In accordance with its certification, the KODE P must be periodically serviced. An inspection must be scheduled every 100 flying hours or every two years, 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 KODE P.

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

Checking unsheathed lines

The KODE P is fitted with unsheathed lines whose durability is within the standards of unsheathed lines. Their strength is guaranteed and their resistance to UV is one of the highest in this type of lines.

#### 7.4 REPAIRS

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

Any repair 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:

#### https://niviuk.com/niviuk-service-form

Any modification of the glider made in an unauthorised 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 free-flying with a paraglider 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.

ANNEXES

10.1 TECHNICAL DATA 10.2 MATERIALS DESCRIPTION 10.3 RISER PLAN 10.4 LINE PLAN

# 10. ANNEXES

#### 10.1 TECHNICAL DATA

#### Kode P

			16	18	20	22	24	26
ZELLEN	ANZAHL		34	34	34	34	34	34
ATDEOKUNO.	FLÄCHE		4,75	4,75	4,75	4,75	4,75	4,75
STRECKUNG	PROJIZIERT		3,83	3,83	3,83	3,83	3,83	3,83
AUSGELEGT	FLÄCHE	M2	16	18	20	22	24	26,5
AUSGELEGT	PROJIZIERT	M2	14,35	16,05	17,61	19,37	21,13	23,33
SPANNWEITE	FLÄCHE	М	8,72	9,25	9,75	10,22	10,68	11,22
FLÄCHENTIEFE	МАХ	М	2,26	2,39	2,52	2,65	2,76	2,9
	TOTAL	Μ	218	231	243	255	267	281
LEINEN	STAMM		3/3/2	3/3/2	2+1/3/2	2+1/3/2	2+1/3/2	2+1/3/2
TRAGEGURTE	ANZAHL	3+1	A/B/C	A/B/C	A+A'/B/C	A+A'/B/C	A+A'/B/C	A+A'/B/C
	BESCHLEUNIGERWEG	MM	100	100	160	160	160	160
SCHIRMGEWICHT		KG	1,8	1,98	2,15	2,3	2,6	2,8
GEWICHTSBEREICH EN/LTF A		KG	-	50-70	60-85	65-90	70-95	90-115
GEWICHTSBEREICH EN/LTF B		KG	45-70	50-80	-	-	-	-
GEWICHTSBEREICH EN/LTF C		KG	70-90	70-100	-	-	-	-

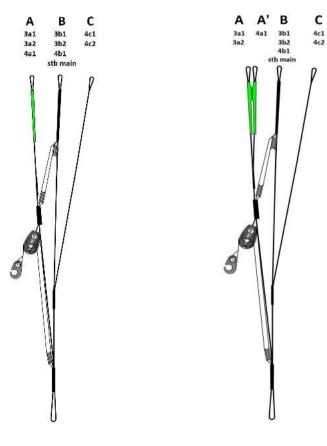
#### **10.2 MATERIALS DESCRIPTION**

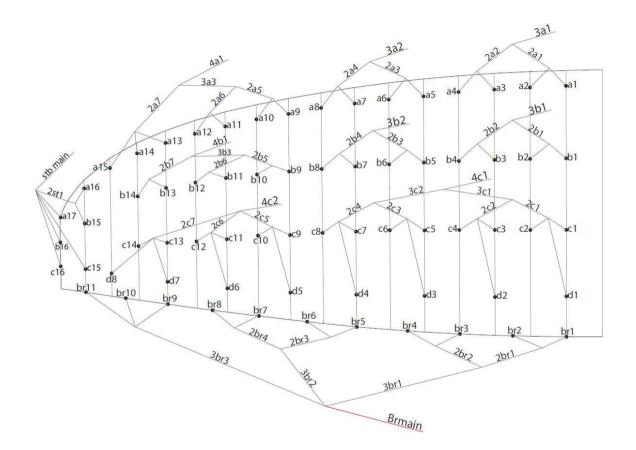
UPPER SURFACED20 / N10DOMINICO TEX CO (KOREA)BOTTOM SURFACEN10DOMINICO TEX CO (KOREA)PROFILES70000 E91PORCHER IND (FRANCE)2044 FMDOMINICO TEX CO (KOREA)DIAGONALS70000 E91PORCHER IND (FRANCE)TENSION BANDS2044 32 FMLOOPSLKI - 12KOLON IND. (KOREA)LOOPSLKI - 12REIFORCEMENT LOOPS30D STDOMINICO TEX CO (KOREA)TRAILING EDGE REIFOR- CEMENTMYLARD-P (GERMANY)SUSPENSION LINESFABRIC CODESUSPENSION LINESFABRIC CODESUSPENSION LINESFABRIC CODESUSPENSION LINESFABRIC CODESUSPENSION LINESFABRIC CODESUSPENSION LINESFABRIC CODESUPPLIERUPPER CASCADESA-8000/U 50EDELRID (GERMANY)UPPER CASCADESA-8000/U 70EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 70EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 130EDELRID (GERMANY)	CANOPY	FABRIC CODE	SUPPLIER
PROFILES70000 E91PORCHER IND (FRANCE)2044 FMDOMINICO TEX CO (KOREA)DIAGONALS70000 E91PORCHER IND (FRANCE)TENSION BANDS2044 32 FMLOOPSLKI - 12KOLON IND. (KOREA)LOOPSLKI - 12REIFORCEMENT LOOPS30D STDOMINICO TEX CO (KOREA)TRAILING EDGE REIFOR- CEMENTMYLARD-P (GERMANY)RIBS REIFORCEMNETLTN-0.5/0.8 STICKSUSPENSION LINESFABRIC CODESUSPENSION LINESFABRIC CODESUSPENSION LINESFABRIC CODESUSPENSION LINESFABRIC CODESUSPENSION LINESFABRIC CODESUPPLIERUPPER CASCADESA-8000/U 50EDELRID (GERMANY)UPPER CASCADESA-8000/U 70EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 90EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 130EDELRID (GERMANY)	UPPER SURFACE	D20 / N10	DOMINICO TEX CO (KOREA)
2044 FMDOMINICO TEX CO (KOREA)DIAGONALS70000 E91PORCHER IND (FRANCE)TENSION BANDS2044 32 FMDOMINICO TEX CO (KOREA)LOOPSLKI - 12KOLON IND. (KOREA)REIFORCEMENT LOOPS30D STDOMINICO TEX CO (KOREA)TRAILING EDGE REIFOR- CEMENTMYLARD-P (GERMANY)RIBS REIFORCEMNETLTN-0.5/0.8 STICKSPORTWARE CO.CHINATHREADSERAFIL 60AMAN (GERMANY)SUSPENSION LINESFABRIC CODESUPPLIERUPPER CASCADESDC - 60LIROS GMHB (GERMANY)UPPER CASCADESA-8000/U 50EDELRID (GERMANY)UPPER CASCADESA-8000/U 70EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 30EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 30EDELRID (GERMANY)	BOTTOM SURFACE	N10	DOMINICO TEX CO (KOREA)
DIAGONALS70000 E91PORCHER IND (FRANCE)TENSION BANDS2044 32 FMDOMINICO TEX CO (KOREA)LOOPSLKI - 12KOLON IND. (KOREA)REIFORCEMENT LOOPS30D STDOMINICO TEX CO (KOREA)TRAILING EDGE REIFOR- CEMENTMYLARD-P (GERMANY)RIBS REIFORCEMNETLTN-0.5/0.8 STICKSPORTWARE CO.CHINATHREADSERAFIL 60AMAN (GERMANY)SUSPENSION LINESFABRIC CODESUPPLIERUPPER CASCADESDC - 60LIROS GMHB (GERMANY)UPPER CASCADESA-8000/U 50EDELRID (GERMANY)UPPER CASCADESA-8000/U 70EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 70EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 130EDELRID (GERMANY)	PROFILES	70000 E91	PORCHER IND (FRANCE)
TENSION BANDS       2044 32 FM       DOMINICO TEX CO (KOREA)         LOOPS       LKI - 12       KOLON IND. (KOREA)         REIFORCEMENT LOOPS       30D ST       DOMINICO TEX CO (KOREA)         TRAILING EDGE REIFOR-       MYLAR       D-P (GERMANY)         RIBS REIFORCEMNET       LTN-0.5/0.8 STICK       SPORTWARE CO.CHINA         THREAD       SERAFIL 60       AMAN (GERMANY)         SUSPENSION LINES       FABRIC CODE       SUPPLIER         UPPER CASCADES       DC - 60       LIROS GMHB (GERMANY)         UPPER CASCADES       A-8000/U 50       EDELRID (GERMANY)         UPPER CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 30       EDELRID (GERMANY)		2044 FM	DOMINICO TEX CO (KOREA)
LOOPSLKI - 12KOLON IND. (KOREA)REIFORCEMENT LOOPS30D STDOMINICO TEX CO (KOREA)TRAILING EDGE REIFOR- CEMENTMYLARD-P (GERMANY)RIBS REIFORCEMNETLTN-0.5/0.8 STICKSPORTWARE CO.CHINATHREADSERAFIL 60AMAN (GERMANY)SUSPENSION LINESFABRIC CODESUPPLIERUPPER CASCADESDC - 60LIROS GMHB (GERMANY)UPPER CASCADESA-8000/U 50EDELRID (GERMANY)UPPER CASCADESA-8000/U 70EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 70EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 30EDELRID (GERMANY)MIDDLE CASCADESA-8000/U 130EDELRID (GERMANY)	DIAGONALS	70000 E91	PORCHER IND (FRANCE)
REIFORCEMENT LOOPS       30D ST       DOMINICO TEX CO (KOREA)         TRAILING EDGE REIFOR- CEMENT       MYLAR       D-P (GERMANY)         RIBS REIFORCEMNET       LTN-0.5/0.8 STICK       SPORTWARE CO.CHINA         THREAD       SERAFIL 60       AMAN (GERMANY)         SUSPENSION LINES       FABRIC CODE       SUPPLIER         UPPER CASCADES       DC - 60       LIROS GMHB (GERMANY)         UPPER CASCADES       A-8000/U 50       EDELRID (GERMANY)         UPPER CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 30       EDELRID (GERMANY)	TENSION BANDS	2044 32 FM	DOMINICO TEX CO (KOREA)
TRAILING EDGE REIFOR- CEMENT       MYLAR       D-P (GERMANY)         RIBS REIFORCEMNET       LTN-0.5/0.8 STICK       SPORTWARE CO.CHINA         THREAD       SERAFIL 60       AMAN (GERMANY)         SUSPENSION LINES       FABRIC CODE       SUPPLIER         UPPER CASCADES       DC - 60       LIROS GMHB (GERMANY)         UPPER CASCADES       A-8000/U 50       EDELRID (GERMANY)         UPPER CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 30       EDELRID (GERMANY)	LOOPS	LKI - 12	KOLON IND. (KOREA)
CEMENT         RIBS REIFORCEMNET       LTN-0.5/0.8 STICK       SPORTWARE CO.CHINA         THREAD       SERAFIL 60       AMAN (GERMANY)         SUSPENSION LINES       FABRIC CODE       SUPPLIER         UPPER CASCADES       DC - 60       LIROS GMHB (GERMANY)         UPPER CASCADES       A-8000/U 50       EDELRID (GERMANY)         UPPER CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 30       EDELRID (GERMANY)	REIFORCEMENT LOOPS	30D ST	DOMINICO TEX CO (KOREA)
THREAD       SERAFIL 60       AMAN (GERMANY)         SUSPENSION LINES       FABRIC CODE       SUPPLIER         UPPER CASCADES       DC - 60       LIROS GMHB (GERMANY)         UPPER CASCADES       A-8000/U 50       EDELRID (GERMANY)         UPPER CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 90       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 130       EDELRID (GERMANY)		MYLAR	D-P (GERMANY)
SUSPENSION LINES       FABRIC CODE       SUPPLIER         UPPER CASCADES       DC - 60       LIROS GMHB (GERMANY)         UPPER CASCADES       A-8000/U 50       EDELRID (GERMANY)         UPPER CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 30       EDELRID (GERMANY)	RIBS REIFORCEMNET	LTN-0.5/0.8 STICK	SPORTWARE CO.CHINA
UPPER CASCADES         DC - 60         LIROS GMHB (GERMANY)           UPPER CASCADES         A-8000/U 50         EDELRID (GERMANY)           UPPER CASCADES         A-8000/U 70         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 70         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 70         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 90         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 130         EDELRID (GERMANY)	THREAD	SERAFIL 60	AMAN (GERMANY)
UPPER CASCADES         DC - 60         LIROS GMHB (GERMANY)           UPPER CASCADES         A-8000/U 50         EDELRID (GERMANY)           UPPER CASCADES         A-8000/U 70         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 70         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 70         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 90         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 130         EDELRID (GERMANY)			
UPPER CASCADES         A-8000/U 50         EDELRID (GERMANY)           UPPER CASCADES         A-8000/U 70         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 70         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 70         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 90         EDELRID (GERMANY)           MIDDLE CASCADES         A-8000/U 130         EDELRID (GERMANY)	SUSPENSION LINES	FABRIC CODE	SUPPLIER
UPPER CASCADES     A-8000/U 70     EDELRID (GERMANY)       MIDDLE CASCADES     A-8000/U 70     EDELRID (GERMANY)       MIDDLE CASCADES     A-8000/U 90     EDELRID (GERMANY)       MIDDLE CASCADES     A-8000/U 130     EDELRID (GERMANY)	UPPER CASCADES	DC - 60	LIROS GMHB (GERMANY)
MIDDLE CASCADES       A-8000/U 70       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 90       EDELRID (GERMANY)         MIDDLE CASCADES       A-8000/U 130       EDELRID (GERMANY)	UPPER CASCADES	A-8000/U 50	EDELRID (GERMANY)
MIDDLE CASCADES     A-8000/U 90     EDELRID (GERMANY)       MIDDLE CASCADES     A-8000/U 130     EDELRID (GERMANY)	UPPER CASCADES	A-8000/U 70	EDELRID (GERMANY)
MIDDLE CASCADES A-8000/U 130 EDELRID (GERMANY)	MIDDLE CASCADES	A-8000/U 70	EDELRID (GERMANY)
	MIDDLE CASCADES	A-8000/U 90	EDELRID (GERMANY)
	MIDDLE CASCADES	A-8000/U 130	EDELRID (GERMANY)
MAIN A-8000/U 130 EDELRID (GERMANY)	MAIN	A-8000/U 130	EDELRID (GERMANY)
MAIN A-8000/U 190 EDELRID (GERMANY)	MAIN	A-8000/U 190	EDELRID (GERMANY)
MAIN A-8000/U 230 EDELRID (GERMANY)	MAIN	A-8000/U 230	EDELRID (GERMANY)
MAIN BREAK TARAX-200 EDELRID (GERMANY)	MAIN BREAK	TARAX-200	EDELRID (GERMANY)

RISERS	FABRIC CODE	SUPPLIER
MATERIAL	3455 / CSAR7	COUSIN (FRANCE)
COLOR INDICATOR	210D	TECNI SANGLES (FRANCE)
THREAD	V138	COATS (ENGLAND)
PULLEYS	RF25109	RONSTAN (AUSTRALIA)

16-18

20-22-24-26





#### 10.6 LINE LENGTHS KODE P SIZE 18

	А	В	С	D	BR	
1	5462	5372	5512	5619	5923	
2	5403	5315	5411	5479	5627	
3	5393	5308	5362	5497	5453	
4	5430	5348	5395	5556	5425	
5	5428	5350	5385	5546	5349	
6	5388	5314	5389	5440	5215	
7	5386	5315	5444	5371	5187	
8	5418	5351	5551	5347	5258	
9	5438	5368	5433		5206	
10	5364	5302	5391		5127	
11	5321	5265	5343		5046	
12	5306	5256	5322			
13	5260	5228	5296			
14	5215	5223	5283			
15	5219	5136	5215			
16	5169	5193	5254			
17	5171					

#### LINE LENGTHS mm

	А	В	С	D	BR
1	5794	5701	5849	5962	6266
2	5732	5642	5743	5815	5953
3	5722	5634	5691	5832	5768
4	5761	5677	5725	5891	5737
5	5758	5678	5713	5874	5654
6	5713	5637	5716	5754	5508
7	5709	5637	5772	5672	5473
8	5741	5672	5883	5637	5542
9	5759	5688	5754		5481
10	5677	5615	5707		5391
11	5628	5571	5651		5303
12	5607	5557	5624		
13	5553	5523	5592		
14	5501	5513	5574		
15	5501	5411	5492		
16	5445	5466	5527		
17	5443				

LINE LENGTHS mm

LINE LENGTHS mm	
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А	В	С	D	BR	
6076	5986	6148	6267	6639	1
6007	5918	6031	6098	6304	2
5987	5901	5967	6107	6093	3
6016	5932	5990	6154	6055	4
6025	5939	5983	6102	5947	5
5973	5891	5980	5969	5775	6
5960	5881	6029	5897	5723	7
5980	5904	6132	5887	5798	8
5987	5909	5976		5738	9
5893	5825	5919		5649	1
5838	5778	5859		5538	1
5822	5769	5837		6524	1:
5772	5742	5813		6550	1
5723	5738	5801		6643	1

		LINE	E LENGTHS mm		
	А	В	С	D	BR
1	6390	6289	6461	6586	7022
2	6319	6220	6340	6410	6671
3	6299	6203	6273	6410	6451
4	6331	6237	6298	6461	6412
5	6323	6233	6279	6405	6300
6	6270	6183	6277	6266	6120
7	6256	6174	6329	6191	6067
8	6278	6198	6438	6182	6146
9	6287	6205	6273		6084
10	6188	6117	6213		5992
11	6131	6068	6151		5876
12	6114	6059	6128		
13	6063	6031	6103		
14	6011	6027	6090		
15	6010	5895	6007		
16	5932	5897	5970		
17	5873				

#### 10.10 LINE LENGTHS KODE P SIZE 26

	А	В	С	D	BR	
1	6674	6568	6748	6879	7310	
2	6600	6497	6623	6697	6943	
3	6581	6480	6554	6699	6715	
4	6615	6517	6581	6754	6675	
5	6608	6514	6562	6697	6559	
6	6553	6462	6560	6552	6372	
7	6540	6453	6616	6474	6318	
8	6562	6480	6731	6466	6401	
9	6573	6488	6558		6337	
10	6471	6396	6496		6242	
11	6411	6345	6432		6123	
12	6394	6337	6408			
13	6340	6307	6382	-		
14	6287	6304	6369			
15	6285	6166	6282			
16	6203	6167	6243			
17	6142			-		

#### LINE LENGTHS mm

		LIN	NE LENGTHS mi	n		
	А	В	С	D	BR	
1	7013	6901	7092	7229	7700	
2	6937	6828	6961	7040	7316	
3	6917	6811	6890	7044	7077	
4	6955	6851	6919	7103	7036	
5	6948	6849	6900	7042	6916	
6	6891	6796	6899	6891	6720	
7	6878	6787	6959	6810	6664	
8	6902	6815	7080	6803	6753	
9	6915	6825	6897		6687	
10	6808	6729	6832		6587	
11	6746	6676	6765		6464	
12	6727	6667	6741			
13	6671	6636	6713			
14	6615	6633	6700			
15	6614	6488	6611			
16	6528	6489	6568			
17	6463					

#### **10.11 CERTIFICATION**

#### KODE P 16

AIR TUROUDISE SA | PARA-TEST.COM Route du Pré-au-Comb B + CH-I804 Villeneuve - + -/100219656565

Test aboratory for paragiders, paragider hameases and paragider reserve paraghulas



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Niviuk Gliders / Air Games S.L.

PG\_1835.2021

01.09.2021

Kode P 16

TOYOK416V1

#### Classification: **B**

In accordance with standards EN 926-1:2015, EN 926-2:2013 and NfL 2-565-20:

Date of issue (DMY):

Manufacturer: Model:

Serial number:

#### Configuration during flight tests

Paraglider		Accessories
Maximum weight in flight (kg)	70	Range of speed system (cm) 10
Minimum weight in flight (kg)	45	Speed range using brakes (km/h) 14
Glider's weight (kg)	1.8	Total speed range with accessories (km/h) 24
Number of risers	3	Range of trimmers (cm) 0
Projected area (m2)	14.35	
Harness used for testing (max weight)		Inspections (whichever happens first)
Harness type	ABS	Every 2 years or every 100 flight hours.
Harness brand	Advanc	Warning! Before use refer to user's manual
Harness model	Succes: M	4 Person or company having presented the glider for testing: None
Harness to risers distance (cm)	44	
Distance between risers (cm)	40	
1 2 3 4 5 6 7 8	9 10 1	1 12 13 14 15 16 17 18 19 20 21 22 23

**A A A A A A A A A A B A A A A** 

#### AIR TURQUCISE SA | PARA-TEST.COM Route du Pré lau Conte B • OHIE44 Viteneuvel • 44 (0(2) 965 65 65

Test loboratory for paragliders, paraglider harnesses and paraglider reserve parachylics



#### Classification: C

Distance between risers (cm)

In accordance with standards EN 926-1:2015, EN 926-2:2013 and NfL 2-565-20: Date of issue (DMY): Manufacturer: Model Serial number:

# 

PG 1835.2021 01.09.2021 Niviuk Gliders / Air Games S.L. Kode P 16 TOYOK416V1

#### Configuration during flight tests

Paraglider		Accessories	
Maximum weight in flight (kg)	90	Range of speed system (cm)	10
Minimum weight in flight (kg)	45	Speed range using brakes (km/h)	14
Glider's weight (kg)	1.8	Total speed range with accessories (km/h)	24
Number of risers	3	Range of trimmers (cm)	0
Projected area (m2)	14.35		
Harness used for testing (max weight)		Inspections (whichever happens first)	
Harness type	ABS	Every 2 years or every 100 flight hours.	
Harness brand	Advance	Warning! Before use refer to user's manual	
Harness model	Success 4 M	Person or company having presented the glider for testing: None	
Harness to risers distance (cm)	44		

44

#### 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

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#### 10.11 CERTIFICATION

#### KODE P 18

AIR TURQUOISE SA | PARA-TEST.COM Foute du Pre-du-Comp 8 + CH-IB/0 Victoria + +01000 SES 55 55

Tesi aboratony ku paragidara baragida hamessas

End paraulider reserva paradhulas



#### Classification: A

In accordance with standards EN 926-1:2015, EN 926-2:2013 and NfL 2-565-20:

Date of issue (DMY):

Manufacturer:	
Model:	
Serial number:	

#### Configuration during flight tests

Paraglider		Accessories	
Maximum weight in flight (kg)	70	Range of speed system (cm)	10
Minimum weight in flight (kg)	50	Speed range using brakes (km/h)	14
Glider's weight (kg)	2	Total speed range with accessories (km/h)	24
Number of risers	3	Range of trimmers (cm)	0
Projected area (m2)	16.05		
Harness used for testing (max weight)		Inspections (whichever happens first)	
Harness type	ABS	Every 2 years or every 100 flight hours.	
Harness brand	Flugsau	Warning! Before use refer to user's manual	
Harness model	X-Light M	Person or company having presented the glider for testing: None	
Harness to risers distance (cm)	40		
Distance between risers (cm)	40		

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PG_1857.2021
01.09.2021
Niviuk Gliders / Air Games S.L.
Kode P 18
KODE181

#### AIR TURQUOISE SA | PARA-TEST.COM Boute du Pre-au-Comme 8 + CH-964 Villemany 4 + 400021965 65 55

Test laboratury for paragiders, paragider homesses and paragider reserve paraditules



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24

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#### Classification: C

In accordance with standards EN 926-1:2015, EN 926-2:2013 and NfL 2-565-20: Date of issue (DMY): Manufacturer:

Model: Serial number:

#### Configuration during flight tests

#### 01.09.2021 Niviuk Gliders / Air Games S.L. Kode P 18 KODE181

PG\_1857.2021

#### Paraglider Accessories Maximum weight in flight (kg) 100 Range of speed system (cm) Minimum weight in flight (kg) 50 Speed range using brakes (km/h) Glider's weight (kg) 2 Total speed range with accessories (km/h) Number of risers Range of trimmers (cm) 3 Projected area (m2) 16.05 Harness used for testing (max weight) Inspections (whichever happens first) Harness type ABS Every 2 years or every 100 flight hours. Warning! Before use refer to user's manual Harness brand Flugsau Harness model X-Light M Person or company having presented the glider for testing: None Harness to risers distance (cm) 40 Distance between risers (cm) 46

#### 

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#### 10.11 ZERTIFIZIERUNG

#### KODE P 20

KODE P 22

AIR TUROLIDISE SA | PARA-TEST.COM Route du Rié-au-Contre 8 + DH-B/IA Villemeuwer + -Al (DIR) 965 65 65

Test laboratory for paragiliders, paragilider trainesses and paragilider reserve paragiliders



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Niviuk Gliders / Air Games S.L.

PG 1832.2021

01.09.2021

Kode P 20

KODE2011

#### Classification: A

In accordance with standards EN 926-1:2015. EN 926-2:2013 and NfL 2-565-20:

Date of issue (DMY):

Manufacturer: Model: Serial number:

#### Configuration during flight tests

Paraglider		Accessories
Maximum weight in flight (kg)	85	Range of speed system (cm)
Minimum weight in flight (kg)	60	Speed range using brakes (km/h)
Glider's weight (kg)	2.2	Total speed range with accessories (km/h)
Number of risers	3	Range of trimmers (cm)
Projected area (m2)	17.61	
Harness used for testing (max weight)		Inspections (whichever happens first)
Harness used for testing (max weight) Harness type	ABS	Inspections (whichever happens first) Every 2 years or every 100 flight hours.
	ABS Advance	
Harness type		Every 2 years or every 100 flight hours.
Harness type Harness brand	Advance Success 4	Every 2 years or every 100 flight hours. Warning! Before use refer to user's manual Person or company having presented the

#### 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

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AIR TUROLIDISE SA I PARA-TEST COM Route du Pré-au Conte 9 + CH-1844 Viteneuver + +41 QE2 955 65 65

Test laboratory for paragiders, paragider harnesses and paragider reserve parachutes



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Niviuk Gliders / Air Games S.L.

PG 1772.2021

01.09.2021

Kode P 22

TOYOK422V1

Accessories

#### Classification: A In accordance with standards EN 926-1:2015. EN 926-2:2013 and NfL 2-565-20: Date of issue (DMY): Manufacturer: Model:

44

44

#### Configuration during flight tests

#### Paraglider

Harness type

Harness brand

Harness model

Harness to risers distance (cm)

Distance between risers (cm)

Serial number:

Maximum weight in flight (kg)	90
Minimum weight in flight (kg)	65
Glider's weight (kg)	2.3
Number of risers	3
Projected area (m2)	19.37

#### Harness used for testing (max weight) Inspections (whichever happens first) ABS every 100 hours of use or every 24 months Supair Warning! Before use refer to user's manual Altiplume м

Person or company having presented the glider for testing: None

Range of speed system (cm)

Range of trimmers (cm)

Speed range using brakes (km/h)

Total speed range with accessories (km/h)

#### 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

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#### 10.11 ZERTIFIZIERUNG

#### KODE P 24

AIR TURQUOISE SA | PARA-TEST.COM Route du Pré-au-Comis 8 × CH-1844 VI ensuvel × -41 (018) 965 35 65

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Niviuk Gliders / Air Games S.L.

PG 1822.2021

01.09.2021

Kode P 24

TOYOK424V1

#### Classification: A

#### In accordance with standards EN 926-1:2015, EN 926-2:2013 and NfL 2-565-20:

Date of issue (DMY):

Manufacturer: Model:

Serial number:

#### Configuration during flight tests

Paraglider		Accessories	
Maximum weight in flight (kg)	95	Range of speed system (cm)	13
Minimum weight in flight (kg)	70	Speed range using brakes (km/h)	14
Glider's weight (kg)	2.6	Total speed range with accessories (km/h)	24
Number of risers	3	Range of trimmers (cm)	0
Projected area (m2)	21.13		
Harness used for testing (max weight)		Inspections (whichever happens first)	
Harness type	ABS	Every 2 years or every 100 flight hours.	
Harness brand	Supair	Warning! Before use refer to user's manual	
Harness model	Evo XC 3 M	Person or company having presented the glider for testing: None	
Harness to risers distance (cm)	44		
Distance between risers (cm)	44		

#### 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

# AIR TUROUDISE SA 1 PARA-TEST.COM

Route du Riéval - Comis B. A. ITH-IB44 Vilenzuval - A-40/0121925-65-65

Test laboratori i tor para ol dars, para o kier barnesses. and baragider reserve parachulas



Niviuk Gliders / Air Games S.L.

PG 1823.2021

01.09.2021

Kode P 26

KODE126

# Classification: A

KODE P 26

#### In accordance with standards EN 926-1:2015, EN 926-2:2013 and NfL 2-565-20: Date of issue (DMY): Manufacturer: Model:

Serial number:

#### Configuration during flight tests

#### Paraglider Accessories Maximum weight in flight (kg) 115 Range of speed system (cm) 13 90 14 Minimum weight in flight (kg) Speed range using brakes (km/h) Glider's weight (kg) 2.8 Total speed range with accessories (km/h) 24 Range of trimmers (cm) Number of risers 3 0 Projected area (m2) 23.33

#### Harness used for testing (max weight) Harness type ABS Harness brand Advance Success 4 Person or company having presented the Harness model Ň alider for testina: None Harness to risers distance (cm) 44 Distance between risers (cm) 48

# Inspections (whichever happens first) Every 2 years or every 100 flight hours. Warning! Before use refer to user's manual

#### 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

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