# USER'S MANUAL
# ARTIK P

## ARTIK P

The adventurer

WELCOME

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

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

The legendary Artik design is now available in a lightweight version derived from and based on the best assets found in the previous models. For the XC, mountain or Hike&Fly pilots who want to explore new routes and need lightweight compact gear.

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

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

The **NIVIUK** Team.

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

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

info@niviuk.com www.niviuk.com

## USER'S MANUAL

Niviuk Gliders ARTIK P

This manual offers all the necessary information that will familiarize you with the main characteristics of your new paraglider. Although this manual informs you about your glider, it does not offer the instruction requirements necessary for you to be able to pilot this type of wing. Flying instruction can only be taught at a paragliding school recognized by the Flying Federation of your country.

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

Severe injuries to the pilot can be the consequence of the misuse of this equipment.

## SUMMARY



## 1. CHARACTERISTICS

### 1.1 WHO IS IT DESIGNED FOR?

The ARTIK P was designed for cross country, mountain or Hike&Fly pilots who want to explore new routes and need lightweight compact gear.

The ARTIK P is an EN C glider. Please, do not use it if you do not have enough experience to fly this wing category.

Description of EN C gliders main characteristics:

Moderate passive safety gliders with dynamic reactions in turbulence and mishandling. Glider recovery can require pilot intervention.

Description of the skills and experience required for EN C gliders:

To be flown only by pilots familiar with recovery techniques, active piloting, flying in turbulent conditions and able to handle this kind of demanding aircraft.

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

### 1.2 CERTIFICATION

The ARTIK P has successfully passed the European EN/LTF certification. This test was carried out in the Swiss Air-Turquoise laboratories in Switzerland. All the commercially available sizes passed every required test with excellent results and the ARTIK P received the EN C / LTF C certifications for all sizes.

The ARTIK P passed the essential load test of 8G's without experiencing any problems.

We recommend paying special attention to the flight test report made by the certification laboratory. The flight test report indicates all necessary information to know and how the new paraglider will react during each tested manoeuvre.

It is important to take understand that each size can have a different reaction with the same manoeuvre, and each wing size can behave differently depending on its all up weight.

Check the certification results and figures on the last pages of this manual or at www.niviuk.com

### 1.3 IN-FLIGHT BEHAVIOUR

With progressive, predictable and efficient handling the ARTIK P effectively reads the air mass rather easily, seeking out and coring thermals with efficiency and ease. It is an agile, light, predictable glider in all flying conditions, and behaving impeccably well in turbulence.

Niviuk developed the ARTIK P by adopting very defined guidelines: the objective was to seek utmost performance while minimizing gear weight and volume for easy transportation, harmonize sensations, facilitate piloting, and above all, maintain a very high wing safety level.

The glider profile was optimized to transmit maximum information in a very understandable and convenient way, helping the pilot focus on synchronizing feelings and technique.

The ARTIK P's profile is solid. No unwanted surprises with sudden up or down motions even when pushing the speed-bar full-out during acceleration. The glide remains high and stable. The turn is accurate, less physical and easy to activate without much needed amplitude. Each inflation is easily made, wind or not, and the glider has a great ability to takeoff from tight mountainous rough terrains. The landing is smooth and precise.

Flying the ARTIK P quickly becomes very intuitive, with plenty of nuances and clear references to the state of the air mass. The glider will react to pilot input effectively even in turbulent conditions, and remain solid.

The wing reads the air mass effectively and cores thermal progressively. Easy to control in all flying conditions, passive by nature, it will further the pleasure of soaring and convey a blissful sense of pure freedom

It is light in flight, easy to handle, well behaved in turbulence and has a surprising speed range added to a superb glide.

1.4 ASSEMBLY, MATERIALS

The ARTIK P has all the technological innovations used and found in other Niviuk gliders. The RAM, TNT, DRS, 3LT and IKS technologies are part of its design and greatly enhance its performance level.

RAM Air Intake (RAM).-The RAM Air Intake technology presents an internal positioning for the air intakes, providing optimal and constant internal pressure as well as improving laminar air flow on the intrados. As a result, a significant turbulent air buffering takes place at the leading edge for better consistency across the speed range, and hence increasing performance with maximum safety.

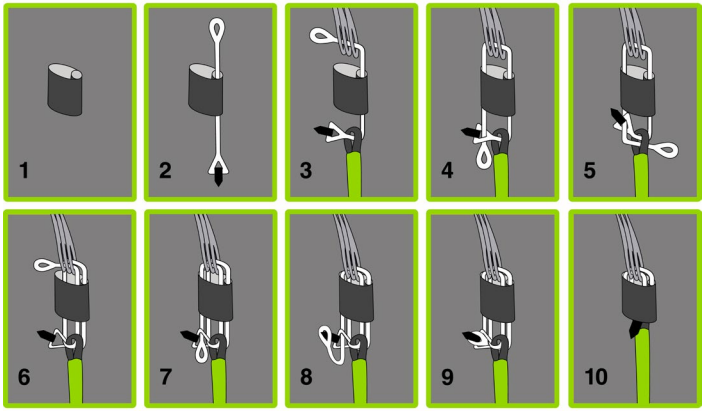
Drag Reduction Structure (DRS).-The trailing edge was reinforced with small ribs, flattening it and spreading the pressure out evenly for better air-flow and less parasitic drag on this important part of the glider. The addition of these ribs gives exceptional handling (increased efficient when turning), more control and precision.

3 Liner Technology (3LT).- Its powerful profile, a detailed internal architecture structure, and the use of high-tech strength materials make it possible to obtain a significant reduction of the combined suspension lines length, hence reducing the parasite drag amount and the weight of the glider to gain efficiency.

Interlock System (IKS).- The IKS (Interlock System) is an ultra-lightweight, high strength connecting system that aims to complement the light product range and replace the current systems based on the use of the maillons and/or carabiners. This new system is based on a secure connection using a simple Dyneema loop provided with a fixing and locking system, ensuring the complete efficiency and safety of the connection, and allowing the equipment to be ready at all times, either with or without load.

The IKS1000 is designed and dimensioned as a connection system between the risers and the lines. It has a breaking load of 1055 kg, which greatly exceeds that of the classic 3mm (550 kg) maillon, but with a much less weight. This feature makes it a key element in the entire range of P-Series (lightweight) wings, which are delivered with this technology as standard.

*Please note: the IKS1000 kg system was not designed nor certified to connect the risers to the harness and/or a rescue parachute to the harness. For that specific function, Niviuk developed the IKS3000. For more information visit [niviuk.com](niviuk.com)*




1. Locate the elastic sleeve's inner small diameter tube.

2. Push the IKS line through it.
3. Push now the IKS line through the lines and the riser. The reinforced end with the black tab should be located on the riser side.

4. Push the upper looped end downward through the elastic sleeve (not small diameter tube) and then through the reinforced loop end where the black tab is located.

5. Continue with the procedure in a counterclockwise motion by pushing the looped end through the riser.

6. Push the looped end first upward through the elastic sleeve (not small diameter tube) and through the lines again following the same pattern.

7. Push the looped end downward through the elastic sleeve (not small diameter tube) first, and then through the loop with the reinforced end (black tab) once more.

8. Push the reinforced end loop (black tab) through the looped end to secure them together.

9. Pull tight to secure the knot and connection.

10. Check the entire assembly.

The ARTIK P's line cascade layout uses Aramid Edelrid for the upper lines, and TNL Cousin for the middle and lower lines. This tested and proven layout combination is the same used with other Niviuk models.

The Aramid lines are not sheathed and thus more exposed to abrasive materials often found in mountainous terrains. This particularity demands a specific maintenance schedule as a result. A glider inspection must be conducted at a certified facility, to check the integrity of the trailing edge every 100 flying hours. In spite of using high quality technologically advanced materials, rigorous regular control must be performed before each flight.
The fabric used to manufacture the glider is light, resistant and durable and will not experience colour loss.

From Olivier's computer to fabric cutting, the operation is a zero tolerance process. An automated computer laser-cutting robotic arm creates each of the many sections needed to complete the wing assembly. This program also paints the guideline markers and numbers each individual fabric piece.

The lines are semi-automatically cut to length and all the sewing is completed under the supervision of our specialists. The jigsaw puzzle assembly is rendered easier using this method and minimizes the operation while making the quality control more efficient.

All Niviuk Gliders go through an extremely thorough and efficient final inspection. Every line is checked and measured once the final assembly is concluded. Each wing is then individually inflated for the

last visual check.

Each glider is packaged following specific maintenance instructions recommended by the fabric manufacturer.

Niviuk Gliders are made of first materials Information about the various materials used to manufacture the wing can be reviewed on the last pages of this manual.

### 1.5 ELEMENTS, COMPONENTS

The ARTIK P is delivered to its owner together with a series of components that, although not fundamental, do take an important part in the use, transport and storage of the paraglider:

- A rucksack
- A small fabric repair kit with self-adhesive ripstop nylon (matching the wing's colour scheme) and replacement maillon blockers.

## 2. UNPACKING AND ASSEMBLY

### 2.1 CHOOSE THE RIGHT LOCATION

We recommend unpacking and packing your wing on a school slope or a flat clear area, obstacle free and in low wind speed. Doing so will enable you to carry out all the recommended steps required to check and inflate the ARTIK P.

We recommend having professional supervision to conduct the entire procedure and have it done as it should be.

### 2.2 PROCEDURE

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

Check the condition of the fabric and the lines, making sure there are no abnormalities. Check for the maillons attaching the lines to the risers to be fully closed and locked. Identify and if necessary disentangle the lines from the A, B and C risers, the brake lines and the corresponding risers. The lines must be free of entanglements and/or knots.

### 2.3 ASSEMBLY OF THE HARNESS

Correctly connect the risers to the harness karabiners. The risers and lines cannot have any twists and must be in the right order. Check for the harness buckles to be securely locked.

### 2.4 TYPE OF HARNESS

The ARTIK P can be flown with most of the harnesses found on the market today, including the cocoon style models.

We strongly recommend adjusting the distance between the chest strap carabiners according to the settings used during the certification procedure. The distance will vary according to the size of the chosen harness model.

Incorrect chest strap adjustments can affect glider/harness behaviour and thus glider handling. Too wide a distance between the carabiners will provide greater feedback from the wing but less glider stability. Too narrow a distance will not bring as much feedback in addition to increasing the risk of experiencing a riser twist during a collapse.

In any case, it is appropriate to refer to the harness's instruction manual and the certification test report outlining the chest strap length adjustments used for these tests.

## 2.5 SPEED-BAR

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 ARTIK 4 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 install and adjust 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 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 wing is flying at standard speed and glide. With full speed-bar, the glider will fly at maximum speed but the glide will be worse.

- **Released speed-bar:** the A, B, C, D risers are aligned.
- **Full speed-bar:** the difference between the A - C risers is:
  Size 21 - 10.5cm
  Size 23 and 25 - 15cm
  Size 27 – 14cm

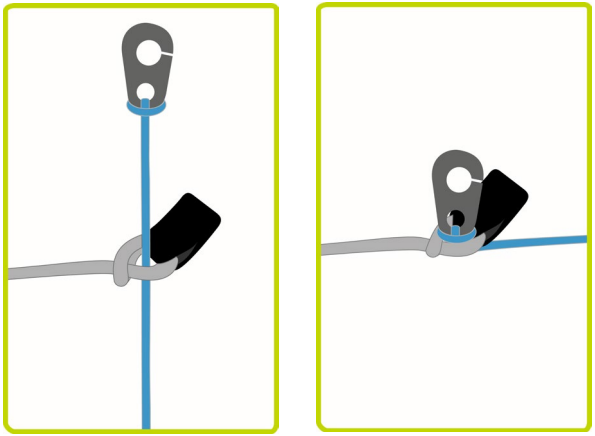
*PLEASE NOTE!*
*The use of the speed system results in changes to the speed but also the reactions of the wing. For more information, see the certification report.*

### 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 the pilot has chosen the type of speed-bar they prefer, they must install it. Some considerations:

- The pilot should use the type of speed-bar that they consider appropriate, depending on the type of harness, preferences, etc.
- This accessory is removable to facilitate its connection and / or disconnection to the risers as well as subsequent adjustment.
- It is important to follow the manufacturer’s instructions during the speed-bar installation. 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 safe connection system can be used.

1. Speed-bar connection using Brummel hooks.

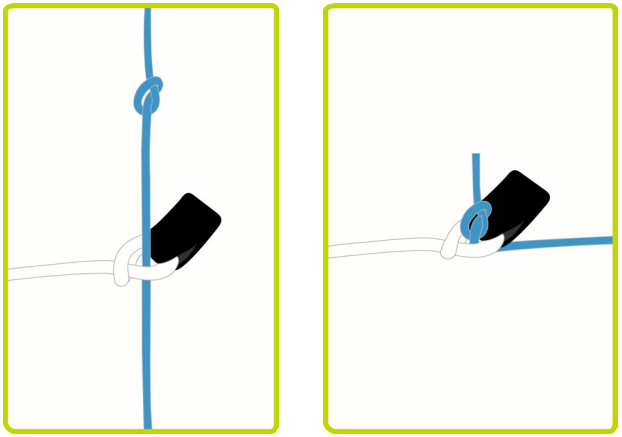


***Plume (P) models - please note***

*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.*

2. Speed-bar connection using a kite-style knotting system (without Brummel hooks).

1. We 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 located 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 cord to wear and pilots may need to replace them.

In all Niviuk gliders the speed system cords on the risers are completely removable and replaceable. The pilot can use the Brummel hooks, not use them, remove them, use another type of hook, 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

Once your gear has been checked and made sure that the weather conditions are favourable, inflate your ARTIK P as many times as necessary to become familiar with its behaviour. The ARTIK P inflates easily and smoothly. An over energetic inflation is not necessary to bring the wing overhead as it will climb gently with minimum pressure on the harness when moving forward. The inflation sequence can be made easier by using the A risers. Do not pull on them; just accompany the natural rising arcing movement of the wing. Once the wing has climbed overhead, simply apply the correct amount of brake pressure to keep the ARTIK P above you.

## 2.7 ADJUSTING THE BRAKES

The length of the main brake lines is adjusted at the factory to the length established during certification. However, the length can be changed to adapt to the pilot's own flying style. In any case, we recommend flying for a while using the default line factory settings before making any adjustment to them. It will enable you to become more familiar with the ARTIK P and its unique flying characteristics. If you then decide to change the length of the brake lines, untie the knot, slide the line through the brake link to the desired length, and strongly re-tie the knot. Qualified personnel should carry out this adjustment. You must ensure that this adjustment does not slow the glider down without pilot input. Both brake lines should be symmetrical and measure the same length. The most recommended knots are the clove hitch or bowline knot.

When changing the brakes length, it is necessary to check that they do not act when the accelerator is used. When accelerated, the glider rotates over the C risers, the trailing edge rises. The brake lines should be checked for proper adjustment, while taking this extra length into consideration.

# 3. THE FIRST FLIGHT

## 3.1 CHOOSE THE RIGHT PLACE

We recommend taking your first flight with your ARTIK P on a smooth slope (a school training hill) or at your usual flying area.

## 3.2 PREPARATION

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

## 3.3 FLIGHT PLAN

Make a flight plan before taking off to avoid possible flight problems later.

## 3.4 PRE-FLIGHT CHECK LIST

Once ready, and before taking off, make a last visual equipment inspection to ensure that all is in order and good to go. Make sure the weather conditions are suited for your flying skills.

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

Smoothly and progressively inflate the wing (chapter 2.6 INSPECTION AND WING INFLATION ON THE GROUND). The ARTIK P inflates easily and does not require excessive energy. No tendencies to overshoot, rendering the inflation sequence quite easy to achieve. Those characteristics enable the pilot to be in full control and gives him/her enough time to decide whether or not to transit into the running phase toward a successful takeoff.

Whenever the wind speed allows it, we recommend to do a reversed inflation. This technique enables the pilot to have a better view of the wing to make sure all is the way it should be before turning around and

running down the slope. The ARTIK P is especially easy to control in this configuration and higher wind speeds. However, wind speeds up to 25 to 30 km/h are considered strong and extra consideration should be given on whether or not to takeoff.
Pay particular attention to the wing layout on the ground. Choose an appropriate location for best wind direction. Display the paraglider symmetrically in a crescent-like shape facing upwind for a trouble free inflation before running and taking off.

### 3.6 LANDING

The ARTIK P has great landing abilities by turning its air speed into lift on demand using toggle impute, hence obtaining a fully controllable ground effect to reduce margin errors and improve safety upon landing. It will not be necessary to wrap the brake lines around your hands to get greater braking efficiency.

### 3.7 FOLDING INSTRUCTIONS

The ARTIK P has a complex leading and trailing edge, designed using a variety of different materials. For that reason, the use of a correct folding method is very important for extending the useful life of your paraglider. It should be folded in an accordion shape, with the leading edge reinforcements flat and positioned one atop the other. This method will keep the profile in good shape without altering its form or performance.

The wing should then be folded in three parts. It does not need to be tightly folded; doing so may damage the material and/or the lines.

The NKare Bag is an easy to use folding bag designed to assist you during the packing process. It can also be used as a surface base to protect the glider against damage.

## 4. IN FLIGHT

### 4.1 FLYING IN TURBULENCE

The ARTIK P has an excellent profile design made to withstand various weather conditions, hence enabling the pilot to take advantage of its stability for greater piloting efficiency. It reacts admirably in passive flight mode, thus offering a high level of safety in turbulent conditions. Nonetheless, the pilot always has to steer the wing and adapt his/her technique to the prevailing weather conditions as he/she is the ultimate safety factor.

We recommend active piloting, the timely necessary fine adjustments to keep the wing in control. The pilot should stop braking to regain the necessary air speed after a correction is made.

Do not maintain any correction using the toggles for longer than necessary or it would cause the wing to enter a dangerous flying configuration. Make prompt, precise yaw, pitch and roll adjustments when needed to re-establish normal air speed.

### 4.2 POSSIBLE CONFIGURATIONS

To become familiar with those manoeuvres, we recommend practicing within the environment of a competent outfit. The pilot will have to constantly adapt his toggle impute relative to the load carried by the wing, and avoid over-steering.

It is important to realize that from one size to another, behaviour can vary, even under the same size wing: depending on minimum or maximum loading, the wing's reaction can vary.

In the report, you will find all the necessary information explaining how your new wing reacts with each test manoeuvres.

Having this information available is crucial, and will help you better

understand how your wing will behave in real time flying situations to maximize your safety.

**Asymmetrical collapse**
In spite of the ARTIK P's profile stability, strong turbulent air may cause the wing to collapse asymmetrically if the pilot was unable to predict the glider's reactions in specific circumstances. When the wing is about to experience an asymmetric collapse the brake lines will transmit a loss of pressure to then be transferred to the pilot via the harness. To prevent the collapse from happening, pull the toggle corresponding to the compromised side of the wing. It will increase the incidence of the wing (angle of attack). If the collapse does happen the ARTIK P will not react violently, the turning tendency is gradual and easily controlled. Weight-shift toward the flying and opposite side of the collapse to keep the wing on flying straight while applying a light brake pressure to that side if necessary to slow it down. The collapsed side of the wing should then recover and reopen by itself. If it does not, then pull the brake line toggle of the collapsed side decisively and quickly all the way down before bringing it back up immediately. You may have to repeat this pumping action to provoke the re-opening of the deflated glider side. Do not over-brake and slow down the flying side of the wing (risk of a stall for having too high an angle of attack). Once the collapsed side reopens, re-centre your body under the wing to regain the default flying speed.

**Symmetrical collapse**
In normal flying conditions and due to the ARTIK P's design, asymmetrical collapses are unlikely to happen. The wing's profile has great buffering abilities to deal with extreme incidence changes. A symmetrical collapse may occur in strong turbulent conditions, entering or exiting powerful thermals or when lacking experience using the accelerator/speed-bar with untimely inadequate input. Symmetrical collapses usually re-inflate without the glider turning, but a symmetrically applied quick braking action with a quick deep pump 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 ARTIK P's normal flight behaviour. Certain circumstances however, may provoke this configuration such as trying to turn when flying at very low air speed deep in the brakes, and applying even more toggle pressure on one side). 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 re-accelerated side with a rotation not greater than 360° before returning to default air speed and a straight flight path trajectory.

**Parachutal stall**
A parachutal stall takes place when the wing remains fully inflated but loses forward motion to then drop vertically at an accelerated rate. Instability and a lack of pressure on the brake lines set in, although the canopy would appear to be correctly inflated. To regain normal air speed, release brake line tension symmetrically and push forward on the 'A' lines or weight-shift your body to any side WITHOUT PULLING ON THE BRAKE LINES.

**Deep stall**
The possibility of the ARTIK P falling into this configuration during normal flight is very unlikely. This could happen if you are flying at a very low speed, whilst oversteering during a number of manoeuvres and in turbulent conditions. The wing will enter a deep stall when reaching a point below minimum air speed by symmetrically pulling the brake lines. It is done by pulling the toggles all the way down and holding them in place. The glider will initially deflate and dive behind the pilot. Gravity will takeover with the pilot free falling for a second until the glider reposition itself overhead while rocking slightly, depending on how the manoeuvre was executed. When purposely initiating a stall, be positive and do not second guess the outcome for an instant. Do not release the brake lines when half way into the manoeuvre or it would cause the glider to violently surge forward with great energy in front of and passed the pilot. It is very important to apply

a symmetrical strong brake pull to limit the surge and bring the wing back up. Lessen the brake tension as the glider rises to the overhead default flying angle of attack.

If a symmetrical stall takes place, briefly and evenly pull the brake lines even if the wing is still ahead of you.

**Wing tangle**
A wing tangle may happen after an asymmetrical collapse, the end of the wing is trapped between the lines (known as a Cravat). This situation could rapidly cause the wing to spin on itself depending on the nature of the tangle. The corrective manoeuvres to use are the same as those applied in the case of an asymmetrical collapse: control the turn/spin by applying tension on the opposite brake and counterweight shift opposite to the turn. Then locate the line that reaches the stabiliser that is trapped between the other lines. This line has a different colour and belongs to the outer lines of the 'C' riser for sizes 23 and 25 and 'B' riser for sizes 21 and 27.

Pull on this line until it is tense as it should help undo the wing tangle.
If ineffective, fly down to the nearest possible landing spot, control the trajectory with both counterweight shifting and use of the brake opposite to the tangled side. Be cautious when attempting to undo a tangle while flying near a mountainside or other paragliders; a loss of control of the intended flight path might become jeopardized and a subsequent collision could happen as result.

**Over handling**
Most flying problems are caused by wrong pilot input, to then degenerate into a cascade of unwanted and unpredicted series incidents. The ARTIK P was designed to recover by itself in most cases. Do no not try to over correct it!

Generally speaking, the wing's reactions will be proportional to the type, amount and duration of input sent by the pilot to the wing. Bringing the glider back to a normal flight configuration as soon as possible is the priority.

## 4.3 USING THE ACCELERATOR

The profile of the ARTIK P was designed to fly stably throughout its entire speed range. It is useful to accelerate when flying in strong winds or in extreme descending air. 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 accelerator 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 flight speed after correcting the incidence.

It is NOT recommended to accelerate near to the mountainside or in very turbulent conditions. If necessary you will have to constantly adjust the movements and pressure on the accelerator whilst constantly adjusting the pressure applied to the brake lines. This balance is considered to be 'active piloting'.

The ARTIK P risers were designed without any adjustable, removable or variable device to prevent an incorrect use of the accelerator system.

## 4.4 FLYING WITHOUT BRAKE LINES

If, for any reason at all, the ARTIK P's brake lines become disabled in flight, piloting the wing with the 'C' risers and weight shifting will become necessary. The C-lines steer easily because they are not under much tension, however you will need to be careful and not handle them too heavily to cause a stall or negative turn. 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 will land with a higher ground speed.

## 4.5 KNOTS IN FLIGHT

The best way to avoid these knots and tangles is to thoroughly inspect the lines as part of a systematic Pre-flight Check. If a knot is spotted during the running phase, immediately abort the running phase 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 apply a slight brake pull to that side. Gently pulling the toggle line to see if the knot can be undone or try to locate the line with the knot. Try pulling the identified line to see if the knot can be undone. Beware of trying to clear a knotted line or untangle a line in flight. Do not pull too hard on the toggles for there will be an increased risk of stalling the wing or enter a negative turn.

Before trying to remove a knot, make sure there are no pilots flying nearby, and never try these attempts close to the mountainside. If the knot is too tight and cannot be removed, carefully and safely fly to the nearest landing zone.

## 5. LOSING ALTITUDE

Knowledge of different descent techniques is important and could be extremely useful to have. The most adequate descent method will vary depending on any particular situation.

We recommend learning these manoeuvres within a competent school environment.

### 5.1 EARS

Big ears is a moderate descent technique, achieving about –3 to –4 m/s and a ground speed reduction between 3 and 5 km/h. Effective piloting then becomes limited once the manoeuvre has been activated. The angle of incidence, and wing loading also increases. Push on the accelerator/speed-bar to restore the wing's initial air speed and the angle of attack.

To enter a 'Big Ears' configuration, simultaneously pull on '4A2' lines and simultaneously, smoothly pull them outward and downward. The wingtips will fold in. Let go of the lines to reopen the wing tips to a default configuration. If they do not re-inflate, gently pull on one of the brake lines and then on the opposite one. We recommend inflating the wing tips asymmetrically, not to alter the angle of incidence, especially if you are flying near the ground or flying in turbulence.

### 5.2 4B2 TECHNIQUE

On the new glider generation, using 'Big Ears' can create a high degree of parasitic turbulence which can create a significant loss of airspeed. When 'Big Ears' are applied to high aspect ratio wings the wing tips tend to 'flap' which also adds to the amount of unwanted turbulence.
This new rapid descent technique was first discovered by our Niviuk team Pilots in 2009 while flying a competition prototype wings, which because of its line plan and high aspect ratio would not allow 'Big Ears' to be applied. In fact, on 2 line wing profiles it has been often proven difficult to achieve.

For all these reasons, we advise the use of the 4B2 line descent technique. This technique ensures a rapid descent while maintaining forward air speed, and thus, eliminating the risk of a potential stall.

WHAT TO DO?

Locate the 4B2 lines on your risers and pull downward to initiate the 'Big Ears' configuration until both wingtips drop back slightly. The glider's air speed will diminish slightly, quickly stabilize and then increase. The wing will reach a descent rate of about 5-6m/s. Controlled turning of the wing can easily be maintained by body weight shifting in the harness, and exact same way you would with 'Big Ears'. We recommend the application of the accelerator/speed-bar whilst using this technique. To exit the manoeuvre release the lines as you would with 'Big Ears'. Control the pitch and the

wing will quickly adopt a normal flight configuration.

This new technique enables the pilot to have a comfortable and controllable rapid descent without the risk of experiencing a ‘Cravat’ or ‘Deep stall’.
We advise you to first try this technique in smooth conditions with sufficient AGL (Altitude above Ground Level).

### 5.3 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 handled below the maillons and symmetrically pulled down together (approx. 20-30 cm) and then held to this position. The initial phase is quite physical (high pull resistance) requiring a strong tug until the wing’s profile/cord deforms in an accordion-like shape. The initial pulling force will then be significantly lessened. Holding the B lines in the pulled down position will be necessary to maintain the configuration. The wing will then deform, its horizontal speed will drop to 0 km/h, and vertical descending speed increase to –6 to –8 m/s depending on the weather conditions and how the manoeuvre was 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 escape manoeuvre to do but remember that the wing will stop flying, will lose all forward horizontal speed, and its reactions will change quite a bit when compared to a normal flight configuration.

### 5.4 SPIRAL DIVE

This is a more effective way for 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 practice, a pilot will fully appreciate and understand it. Only practice at high altitude and with enough clearance.

To enter the manoeuvre, the pilot will need to synchronize a weight-shift with a gradual toggle pull toward the inside of the intended turn. The intensity of the rotation can be controlled by applying a slight brake line pull with the toggle located on the upper and opposite half side of the wing.

A paraglider flying at its maximum rotating speed can reach –20 m/s, equivalent 70 km/h vertical descending speed, and a stabilized spiral dive will reach from 15 m/s onwards.

These are the reasons why any pilot should become familiar with the manoeuvre and know how to properly exit it.

To exit this manoeuvre, the inner toggle (down side of the turn) must progressively be relaxed while momentarily applying tension to the outer toggle opposite to the turn. The pilot’s bodyweight must also lean towards the outside and opposite side of the turn at the same time. This exit needs to be carried out gradually and smoothly so to feel the ‘G-force’ and speed changes taking place.

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

Practice these movements at sufficient altitude and with moderation.

### 5.5 SLOW DESCENT TECHNIQUE

Glide normally when using this technique without straining the wing or pilot, searching for descending (catabatic) air to use turn as if in a thermal. Beware of danger zones and locate a suited LZ (Landing Zone) while descending. Safety comes first!

## 6. SPECIAL METHODS

### 6.1 TOWING

The ARTIK P does not experience any problem whilst being towed. Only qualified personnel should handle the qualified equipment to carry out this operation. The wing has to be inflated in the same way done with a normal takeoff mountain or ridge flight.

### 6.2 ACROBATIC FLIGHT

Although the ARTIK P has been tested by expert acrobatic pilots in extreme situations, it WAS NOT designed for acrobatic flying. We DO NOT RECOMMEND USING THIS GLIDER for aerobatic flying!!!

We consider acrobatic flights to be any form of piloting different than standard soaring 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. Forces as high as 4 to 5 G can be exerted on a paragliding wings during extreme manoeuvres.

Materials will wear more quickly than in normal flight. Gliders subjected to extreme manoeuvre techniques should be inspected every six months.

## 7. CARE AND MAINTENANCE

### 7.1 MAINTENANCE

Careful maintenance of your equipment will ensure continued performance.

The fabric and the lines do not need to be washed, if they become dirty, clean them with a soft damp cloth.
If your wing is wet from contact with salt water, immerse it in fresh water and dry it away from direct sunlight. Direct sunlight may damage the wing's materials and cause premature aging. After landing, do not leave the wing in the sun. Pack it properly and stow it away in its backpack.

If flying in a sandy environment, try to prevent the sand from entering through the cell openings. If sand is inside the wing, remove it before packing the wing away.

### 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 the gear inside a car trunk, as temperatures can climb up to 60ºC and damage it. Weight should not be laid atop the equipment.

If the flying gear is stored with organic material, such as leaves, grass or insects trapped inside the cells, the chemical reaction can cause irreparable damage. Empty the caissons before packing the glider away.

### 7.3 CHECKS AND CONTROLS

The ARTIK P must be periodically serviced. An inspection must be scheduled every 100 flying hours or every twenty four months whichever comes first (EN/LTF normative).

Always conduct a thorough pre-flight check before each takeoff.

In spite of providing much more benefits to the pilots, unheated lines need more care and calibration control than their counterparts. Each

minute line calibration variation has a directly effect on the performance of the wing. The ARTIK P mechanical and UV resistance are one of the highest on the market today for this type of line.

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

Why is it necessary?

By following the recommended controls at regular intervals, the glider will keep its original features for longer period of time. The location where the glider is flown, the climate area, temperature, humidity, wing load… all have various and different degrees of impact on the integrity of the wing. They are the reasons why the calibration includes takes these factors in consideration. Only qualified personnel should complete the inspection and repairs if necessary it. It is important not to modify your wing's suspension lines based on someone else's line settings, as your glider may not need adjustments.

7.4 REPAIRS

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

## 8. SAFETY AND RESPONSIBILITY

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

Wrong use of this equipment may cause severe injuries to the pilot, or even death. Manufacturers and dealers cannot be rendered responsible for your decisions or any act or accident that may result out of 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 guarantee against any manufacturing defect. The guarantee does not cover misuse of the equipment.

**DISCLAIMER:**
Paragliding is an activity requiring attention, specific knowledge and sound judgment. Beware! Learn your skills under the supervision and guidance of a certified school. Contract a personal insurance and become a licensed pilot. Be humble when evaluating your proficiency level in respect to weather conditions before deciding on whether or not to fly. Niviuk's liability coverage is for its product line only. Niviuk can not be rendered responsible for your own actions. Fly at your risk!

## 10. TECHNICAL DATA

### 10.1 TECHNICAL DATA

| **ARTIK P** | | | **21** | **23** | **25** | **27** |
|---|---|---|---|---|---|---|
| CELLS | NUMBER | | 63 | 63 | 63 | 63 |
| | CLOSED | | 10 | 10 | 10 | 10 |
| | BOX | | 23 | 23 | 23 | 23 |
| FLAT | AREA | $m^2$ | 21 | 23 | 24,5 | 26,5 |
| | SPAN | m | 11,32 | 11,85 | 12,23 | 12,71 |
| | ASPECT RATIO | | 6,1 | 6,1 | 6,1 | 6,1 |
| PROJECTED | AREA | $m^2$ | 17,8 | 19,5 | 20,77 | 22,46 |
| | SPAN | m | 9,01 | 9,43 | 9,73 | 10,12 |
| | ASPECT RATIO | | 4,6 | 4,6 | 4,6 | 4,6 |
| FLATTENING | | % | 15 | 15 | 15 | 15 |
| CORD | MAXIMUM | m | 2,28 | 2,4 | 2,47 | 2,56 |
| | MINIMUM | m | 0,53 | 0,55 | 0,57 | 0,59 |
| | AVERAGE | m | 1,85 | 1,94 | 2 | 2,08 |
| LINES | TOTAL METERS | m | 226 | 237 | 245 | 255 |
| | HEIGHT | m | 6,9 | 7,22 | 7,46 | 7,75 |
| | NUMBER | | 226 | 226 | 226 | 226 |
| | MAIN | | 2/3/2/ | 1/1/2/3 | 1/1/2/3 | 2/3/2/ |
| RISERS | NUMBER | 3/4 | A/B/C | A/A'/B/C | A/A'/B/C | A/B/C |
| | TRIMS | | NO | NO | NO | NO |
| | ACCELERATOR | m/m | 105 | 150 | 150 | 150 |
| TOTAL WEIGHT | MINIMUM | kg | 60 | 60 | 75 | 90 |
| IN FLIGHT | MAXIMUM | kg | 73 | 80 | 95 | 110 |
| GLIDER WEIGHT | | kg | 3,2 | 3,8 | 4,1 | 4,5 |
| CERTIFICATION | | EN/LTF | C | C | C | C |

## 10.2 MATERIALS DESCRIPTION

| CANOPY | FABRIC CODE | SUPPLIER |
|---|---|---|
| UPPER SURFACE FOR LEADING EDGE | 9017 E25 | PORCHER IND (FRANCE) |
| UPPER SURFACE FOR THE REST | 70000 E3H | PORCHER IND (FRANCE) |
| BOTTOM SURFACE | 70000 E3H | PORCHER IND (FRANCE) |
| RIBS | 70000 E91 | PORCHER IND (FRANCE) |
| DIAGONALS | 70000 E91 | PORCHER IND (FRANCE) |
| LOOPS | LKI - 10 | KOLON IND. (KOREA) |
| REINFORCEMENT LOOPS | SOFT DACRON | D-P (GERMANY) |
| TRAILING EDGE REINFORCEMENT | DACRON | D-P (GERMANY) |
| REINFORCEMENT RIBS | LTN-0.8 STICK | SPORTWARE CO. (CHINA) |
| THREAD | SERAFIL 60 | AMAN (GERMANY) |

| SUSPENSION LINES | FABRIC CODE | SUPPLIER |
|---|---|---|
| UPPER CASCADES | DC - 40 | LIROS GMHB (GERMANY) |
| UPPER CASCADES | DC - 60 | LIROS GMHB (GERMANY) |
| UPPER CASCADES | DC - 100 | LIROS GMHB (GERMANY) |
| UPPER CASCADES | 12100-50 | COUSIN (FRANCE) |
| MIDDLE CASCADES | DC - 40 | LIROS GMHB (GERMANY) |
| MIDDLE CASCADES | DC - 60 | LIROS GMHB (GERMANY) |
| MIDDLE CASCADES | DC - 100 | LIROS GMHB (GERMANY) |
| MIDDLE CASCADES | 12240-115 | COUSIN (FRANCE) |
| MIDDLE CASCADES | 12470-200 | COUSIN (FRANCE) |
| MIDDLE CASCADES | 16140-70 | COUSIN (FRANCE) |
| MIDDLE CASCADES | 16330-145 | COUSIN (FRANCE) |
| MIDDLE CASCADES | 12100-50 | COUSIN (FRANCE) |
| MIDDLE CASCADES | 12240-115 | COUSIN (FRANCE) |
| MAIN | 16560-240 | COUSIN (FRANCE) |
| MAIN | 12470-200 | COUSIN (FRANCE) |
| MAIN | 16140-70 | COUSIN (FRANCE) |
| MAIN | 12950-405 | COUSIN (FRANCE) |
| MAIN BREAK | TNL-280 | TEIJIM LIMITED (JAPAN) |
| THREAD | SERAFIL 60 | AMAN (GERMANY) |

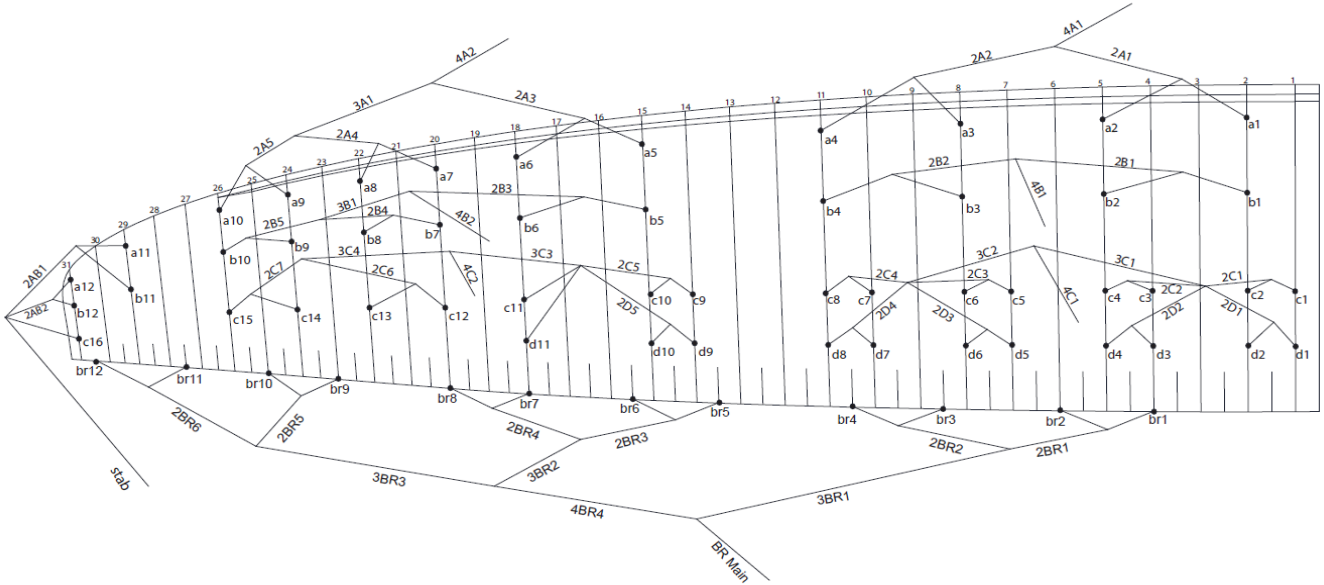
| RISERS | FABRIC CODE | SUPPLIER |
|---|---|---|
| MATERIAL | 10148 | LIROS GMHB (GERMANY) |
| COLOR INDICATOR | PAD | TECNI SANGLES (FRANCE) |
| THREAD | V138 | COATS (ENGLAND) |
| PULLEYS | RF25109 | RONSTAN (AUSTRALIA) |

## 10.3 RISERS PLAN

**SIZE 21-27**


**Size 23-25**

## 10.4 SUSPENSION PLAN



## 10.5 DIMENSIONS ARTIK P 21

LINES HEIGHT m/m

| | A | B | C | D | br |
|---|---|---|---|---|---|
| 1 | 6463 | 6374 | 6545 | 6630 | 7132 |
| 2 | 6327 | 6240 | 6446 | 6539 | 6857 |
| 3 | 6290 | 6205 | 6322 | 6425 | 6647 |
| 4 | 6285 | 6205 | 6306 | 6403 | 6647 |
| 5 | 6229 | 6151 | 6265 | 6361 | 6544 |
| 6 | 6078 | 6010 | 6251 | 6350 | 6414 |
| 7 | 6034 | 5974 | 6297 | 6389 | 6345 |
| 8 | 5967 | 5915 | 6343 | 6426 | 6385 |
| 9 | 5945 | 5896 | 6224 | 6300 | 6335 |
| 10 | 5959 | 5930 | 6151 | 6229 | 6306 |
| 11 | 5657 | 5622 | 6056 | 6135 | 6325 |
| 12 | 5526 | 5518 | 6044 | | 6401 |
| 13 | | | 6004 | | |
| 14 | | | 6025 | | |
| 15 | | | 6107 | | |
| 16 | | | 5570 | | |

RISERS LENGTH m/m

| | A | B | C | |
|---|---|---|---|---|
| | 470 | 470 | 470 | STANDARD |
| | 344 | 374 | 470 | ACCELERATED |
| | 126 | 96 | 0 | TRAVEL |

## 10.6 DIMENSIONS ARTIK P 23

LINES HEIGHT m/m

| | A | B | C | D | br |
|---|---|---|---|---|---|
| 1 | 6786 | 6693 | 6882 | 6973 | 7482 |
| 2 | 6645 | 6554 | 6780 | 6879 | 7195 |
| 3 | 6608 | 6520 | 6650 | 6760 | 6976 |
| 4 | 6605 | 6521 | 6629 | 6737 | 6977 |
| 5 | 6548 | 6466 | 6587 | 6690 | 6870 |
| 6 | 6390 | 6320 | 6573 | 6678 | 6735 |
| 7 | 6345 | 6282 | 6622 | 6720 | 6663 |
| 8 | 6275 | 6220 | 6670 | 6759 | 6706 |
| 9 | 6252 | 6201 | 6548 | 6639 | 6655 |
| 10 | 6267 | 6236 | 6472 | 6565 | 6624 |
| 11 | 5950 | 5913 | 6373 | 6456 | 6645 |
| 12 | 5813 | 5805 | 6360 | | 6757 |
| 13 | | | 6318 | | |
| 14 | | | 6340 | | |
| 15 | | | 6425 | | |
| 16 | | | 5858 | | |

RISERS LENGTH m/m

| | A | A’ | B | C | |
|---|---|---|---|---|---|
| | 470 | 470 | 470 | 470 | STANDARD |
| | 312 | 332 | 352 | 470 | ACCELERATED |
| | 158 | 138 | 118 | 0 | TRAVEL |

## 10.7 DIMENSIONS ARTIK P 25

LINES HEIGHT m/m

| | A | B | C | D | br |
|---|---|---|---|---|---|
| 1 | 7020 | 6923 | 7119 | 7219 | 7739 |
| 2 | 6875 | 6781 | 7013 | 7122 | 7443 |
| 3 | 6838 | 6747 | 6880 | 7000 | 7217 |
| 4 | 6836 | 6749 | 6858 | 6977 | 7218 |
| 5 | 6778 | 6694 | 6816 | 6928 | 7110 |
| 6 | 6616 | 6543 | 6802 | 6916 | 6970 |
| 7 | 6570 | 6505 | 6853 | 6960 | 6896 |
| 8 | 6497 | 6441 | 6903 | 7001 | 6941 |
| 9 | 6474 | 6421 | 6779 | 6868 | 6889 |
| 10 | 6489 | 6458 | 6700 | 6791 | 6857 |
| 11 | 6161 | 6123 | 6599 | 6680 | 6880 |
| 12 | 6020 | 6012 | 6584 | | 6981 |
| 13 | | | 6541 | | |
| 14 | | | 6563 | | |
| 15 | | | 6652 | | |
| 16 | | | 6067 | | |

RISERS LENGTH m/m

| | A | A' | B | C | |
|---|---|---|---|---|---|
| | 470 | 470 | 470 | 470 | STANDARD |
| | 312 | 332 | 357 | 470 | ACCELERATED |
| | 158 | 138 | 113 | 0 | TRAVEL |

## 10.8 DIMENSIONS ARTIK P 27

LINES HEIGHT m/m

| | A | B | C | D | br |
|---|---|---|---|---|---|
| 1 | 7330 | 7230 | 7433 | 7539 | 8089 |
| 2 | 7181 | 7083 | 7323 | 7438 | 7781 |
| 3 | 7144 | 7049 | 7186 | 7312 | 7547 |
| 4 | 7143 | 7053 | 7163 | 7288 | 7549 |
| 5 | 7084 | 7002 | 7120 | 7234 | 7437 |
| 6 | 6916 | 6846 | 7106 | 7221 | 7293 |
| 7 | 6868 | 6801 | 7160 | 7267 | 7216 |
| 8 | 6793 | 6735 | 7212 | 7310 | 7263 |
| 9 | 6769 | 6715 | 7086 | 7180 | 7210 |
| 10 | 6786 | 6753 | 7004 | 7100 | 7178 |
| 11 | 6444 | 6404 | 6898 | 6984 | 7201 |
| 12 | 6296 | 6288 | 6883 | | 7324 |
| 13 | | | 6838 | | |
| 14 | | | 6861 | | |
| 15 | | | 6953 | | |
| 16 | | | 6340 | | |

RISERS LENGTH m/m

| | A | B | C | |
|---|---|---|---|---|
| | 470 | 470 | 470 | STANDARD |
| | 312 | 352 | 470 | ACCELERATED |
| | 158 | 118 | 0 | TRAVEL |

## 10.9 CERTIFICATION SPECIMEN TEST

### ARTIK P 21

para-test.com
paragliding by air turquoise

Air Turquoise SA
Rte du Pré-au-Comte 8 | CH-1844 Villeneuve
tel. +41 21 965 65 65 | mobile +41 79 202 52 30
info@para-test.com

NIVIUK

Class: **C**

In accordance with EN standards 926-2:2013 & 926-1:2006: **PG_0927.2015**

Date of issue (DMY): **17. 04. 2015**

Manufacturer: **Niviuk Gliders / Air Games S.L.**

Model: **Artik P 21**

Serial number:

#### Configuration during flight tests

| **Paraglider** | | **Accessories** | |
|---|---|---|---|
| Maximum weight in flight (kg) | **73** | Range of speed system (cm) | **10.5** |
| Minimum weight in flight (kg) | **60** | Speed range using brakes (km/h) | **15** |
| Glider's weight (kg) | **3.2** | Range of trimmers (cm) | **0** |
| Number of risers | **3** | Total speed range with accessories (km/h) | **29** |
| Projected area (m2) | **17.8** | | |

| **Harness used for testing** (max weight) | | **Inspections** (whichever happens first) |
|---|---|---|
| Harness type | **ABS** | every 24 months or every 100 flying hours |
| Harness brand | **Flugsau** | Warning! Before use refer to user's manual |
| Harness model | **XX-Lite** | Person or company having presented the glider for testing: **None** |
| Harness to risers distance (cm) | **40** | |
| Distance between risers (cm) | **40** | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | A | B | C | A | A | A | A | A | B | A | A | A | C | A | A | A | A | A | B | B | A | 0 | |

### ARTIK P 23

para-test.com
paragliding by air turquoise

Air Turquoise SA
Rte du Pré-au-Comte 8 | CH-1844 Villeneuve
tel. +41 21 965 65 65 | mobile +41 79 202 52 30
info@para-test.com

NIVIUK

Class: **C**

In accordance with EN standards 926-2:2013 & 926-1:2006: **PG_0928.2015**

Date of issue (DMY): **17. 04. 2015**

Manufacturer: **Niviuk Gliders / Air Games S.L.**

Model: **Artik P 23**

Serial number:

#### Configuration during flight tests

| **Paraglider** | | **Accessories** | |
|---|---|---|---|
| Maximum weight in flight (kg) | **80** | Range of speed system (cm) | **14.5** |
| Minimum weight in flight (kg) | **60** | Speed range using brakes (km/h) | **15** |
| Glider's weight (kg) | **3.8** | Range of trimmers (cm) | **0** |
| Number of risers | **3** | Total speed range with accessories (km/h) | **31** |
| Projected area (m2) | **19.5** | | |

| **Harness used for testing** (max weight) | | **Inspections** (whichever happens first) |
|---|---|---|
| Harness type | **ABS** | every 24 months or every 100 flying hours |
| Harness brand | **Supair** | Warning! Before use refer to user's manual |
| Harness model | **Altiplume S** | 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 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | A | A | C | A | A | A | A | A | B | A | A | A | C | A | A | A | A | A | A | B | A | 0 | |

ARTIK P 25

para-test.com
paragliding by air turquoise

Air Turquoise SA
Rte du Pré-au-Comte 8 | CH-1844 Villeneuve
tel. +41 21 965 65 65 | mobile +41 79 202 52 30
info@para-test.com

NIVIUK

Class: **C**

In accordance with EN standards 926-2:2013 & 926-1:2006: **PG_0929.2015**

Date of issue (DMY): **17. 04. 2015**

Manufacturer: **Niviuk Gliders / Air Games S.L.**

Model: **Artik P 25**

Serial number:

## Configuration during flight tests

| **Paraglider** | | **Accessories** | |
|---|---|---|---|
| Maximum weight in flight (kg) | **95** | Range of speed system (cm) | **15** |
| Minimum weight in flight (kg) | **75** | Speed range using brakes (km/h) | **15** |
| Glider's weight (kg) | **4.1** | Range of trimmers (cm) | **0** |
| Number of risers | **3** | Total speed range with accessories (km/h) | **31** |
| Projected area (m2) | **20.77** | | |

| **Harness used for testing** (max weight) | | **Inspections** (whichever happens first) |
|---|---|---|
| Harness type | **ABS** | every 24 months or every 100 flying hours |
| Harness brand | **Flugsau** | Warning! Before use refer to user's manual |
| Harness model | **XX-Lite** | Person or company having presented the glider for testing: **None** |
| Harness to risers distance (cm) | **41** | |
| 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 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | A | B | A | A | A | A | A | A | B | A | A | A | C | A | A | A | A | A | B | B | A | 0 | |

ARTIK P 27

para-test.com
paragliding by air turquoise

Air Turquoise SA
Rte du Pré-au-Comte 8 | CH-1844 Villeneuve
tel. +41 21 965 65 65 | mobile +41 79 202 52 30
info@para-test.com

NIVIUK

Class: **C**

In accordance with EN standards 926-2:2013 & 926-1:2006: **PG_0930.2015**

Date of issue (DMY): **17. 04. 2015**

Manufacturer: **Niviuk Gliders / Air Games S.L.**

Model: **Artik P 27**

Serial number:

## Configuration during flight tests

| **Paraglider** | | **Accessories** | |
|---|---|---|---|
| Maximum weight in flight (kg) | **110** | Range of speed system (cm) | **14** |
| Minimum weight in flight (kg) | **90** | Speed range using brakes (km/h) | **15** |
| Glider's weight (kg) | **4.5** | Range of trimmers (cm) | **0** |
| Number of risers | **3** | Total speed range with accessories (km/h) | **31** |
| Projected area (m2) | **22.46** | | |

| **Harness used for testing** (max weight) | | **Inspections** (whichever happens first) |
|---|---|---|
| Harness type | **ABS** | every 24 months or every 100 flying hours |
| Harness brand | **Niviuk** | Warning! Before use refer to user's manual |
| Harness model | **Hamak XL** | Person or company having presented the glider for testing: **None** |
| Harness to risers distance (cm) | **44** | |
| Distance between risers (cm) | **48** | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | A | A | A | A | A | A | A | A | B | B | A | A | C | A | A | A | A | A | B | A | A | 0 | |


NIVIUK