



skywalk

# TONIC

MANUAL/SERVICE

SERIALNR :



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## 1 INTRODUCTION

Congratulations on the purchase of your new skywalk TONIC! Thank you for your trust in skywalk paragliders. We are certain that you will enjoy every minute with your skywalk TONIC. We recommend that you read this handbook attentively so that you can feel comfortable with your new paraglider. The handbook will comprehensively inform you on the skywalk TONIC. This handbook also gives you tips for flying safely and with confidence, so that you can enjoy many hours in the sky with your TONIC. For helpful suggestions, questions or critic, please call or send us an e-mail. The skywalk Team is gladly at your disposal.

### THE SKYWALK TEAM



## 2 DESCRIPTION

The TONIC is a completely new development combining simple, safe but also dynamic flight performance with low weight, small packing dimensions and a pleasing glide ratio. The TONIC can be used for many purposes- hike & fly, dune soaring, freestyle- and thermal flying is possible as well. Yet you can continue to trust in the safety of certification.

In order to realize the compromise between low weight and durability, a new cloth from DOMINICO 20 DMF was implemented in combination with a simple construction.

Of course the TONIC is also equipped with the groundbreaking JET FLAP technology. JET FLAPs have consistently prevailed in the past few years and make it possible to land at low speeds with high safety potential, along with providing top climb performance.

### **PILOT SPECIFICATIONS**

Due to the high wing load, the TONIC demands a pilot with a high level of flying experience and solid active flying skills with other paragliders. In extreme flying situations, the TONIC has a high safety potential, also confirmed by the EN/LTF C certification. Still, you must be able to control the agility. If this is the case, the glider will provide a wide range of use and extremely high fun potential!

## 3 TECHNICAL DATA

Tonic EN/LTF :	B 56-80kg		B 65-100kg	
	C	C 81-105kg	C 105-114kg	
Size	14	16	18	
Cells	26	26	26	
Surface Area (flat)	16,79	19,00	21,35	
Flat Span:	8,37	8,91	9,44	
Flat Aspect Ratio	4,18	4,18	4,18	
Projected Area	14,24	16,12	18,11	
Projected Span	6,64	7,07	7,49	
Projected Aspect Ratio	3,10	3,10	3,10	
max. profil depth in cm	2,36	2,51	2,66	
min. profil depth in cm	0,84	0,90	0,95	
Average line length without risers in cm	4,80	5,10	5,41	
Leinenverbrauch in m	190	202	214	
Canopy weight kg	2,8	3,1	3,4	
Launch weight from – to in kg.	56-91	56-105	65-114	
Trimmer	yes	yes	yes	
Towing	yes	yes	yes	
Jet Flap Technologie	yes	yes	yes	
Motor certification with special risers	no	no	no	

### CAUTION:

THE IDENTIFICATION PLATE IS PRINTED ON THE INSIDE OF THE STABILO. THE NAME OF THE PILOT AND THE DATE OF FIRST FLIGHT MUST BE ENTERED HERE. THE TYPE INSPECTION TAG IS PRESSED INTO THE MIDDLE CELL ABOVE THE CHECKAIR STAMP. THE DATE OF THE INSPECTION MUST ALSO BE ENTERED. IF THIS LABEL IS MISSING, IT SHOULD BE ASSUMED THAT THE GLIDER IS AN UNINSPECTED PROTOTYPE.

## 4 LINE SYSTEM

Thanks to extensive testing, the lines of the TONIC have a very high level of strength with a very small diameter. Safety always remains a priority throughout our design and construction process. For this reason, we have implemented an elaborate combination of different Liros lines in the TONIC.

The skywalk TONIC is equipped with 3 A-, 3 B- as well as 3 C and 1 stabilo line. The top lines of the last cell together with the stabilo top lines attach to the main stabilo line, which lead directly to the B-riser.

The brake lines are not load bearing and lead from the trailing edge of the wing over the main brake line through the brake pulley on the C-riser to the brake handle. There is a mark on the main brake line where the brake handle is knotted. The brake line settings should not be changed, on the one hand to assure adequate brake travel in extreme flight situations and while landing and on the other hand to avoid constant braking. For better recognition, the A-lines and the A-riser are red and the stabilo line is red/yellow. The B-lines are yellow, the main brake line and the brake spider are orange and all other lines are blue. The line locks are triangular, a plastic insert prevents the looped-in lines from slipping as well as preventing accidental opening of the line locks.

The skywalk TONIC has 3 risers on each side.

- The A-lines lead directly to the A-riser.
- The B-lines and the Stabilo-Line lead to the B-riser.
- The C-lines lead to the C-riser.

## **IMPORTANT SAFETY WARNING:**

**FLYING A PARAGLIDER GENERALLY REQUIRES MAXIMUM CAUTION AT ALL TIMES. BE AWARE THAT AS A PARAGLIDING PILOT, YOU FLY AT YOUR OWN RISK. AS A PILOT YOU MUST GUARANTEE THE AIRWORTHINESS OF YOUR PARAGLIDER BEFORE EVERY SINGLE FLIGHT.**

### **The skywalk TONIC may not be flown:**

- outside of the minimum and maximum certified launch weight.
- with a motor, except if there is DULV- or motorglider association certification.
- in rainy, snowy and extremely turbulent weather conditions or high winds
- in fog or clouds (visual flight)
- with insufficient experience or training

Each pilot is responsible for their own safety and must ensure that their aircraft (paraglider) has been checked and serviced for its airworthiness before launching. You can only fly your skywalk TONIC with a valid flying license and in accordance with local rules and regulations.

The skywalk TONIC passed multiple quality control checks during production. More spot checks were performed before delivery to the dealer.

## 5 ACCELERATION SYSTEM

The skywalk TONIC can be equipped with a foot-operated speed system. The Speed System works on the A- and B-riser. Exact specifications can be found on the riser illustration.



Installing the accelerator equipment:

Most standard harnesses have pulleys attached for the speed system. The Speed system lines run from the front through the pulleys on the harness upwards and are knotted to the brummel hooks at the appropriate length.

A correct adjustment of the acceleration lines will assure that the foot bar can be reached easily with angled legs during flight. The entire speed range can be accessed by stretching out the legs. Prior to launch, the brummel hooks of the foot-operated accelerator and the speed system have

to be connected to the riser. Check that the speed system line runs freely.

Function: The pilot pushes on the speed system, thereby shortening the A- and B- risers. Illustration of accelerated risers - page 54.

The TONIC-Riser comes with a safety stitch on the trimmer loop.

To activate the trimmer, this seam must be removed including the additional black band. It is important to make sure that the red trimmer loop or other parts of the harness are not damaged.

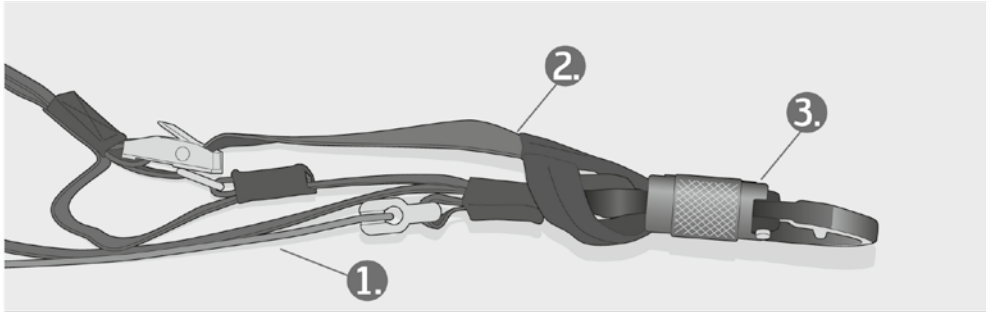
With unremoved safety stitch the LTF / EN certification is also given in not hung condition of the trimmer loop.

The trimmer loop can be hung in the main carabiners, so the pilot is within the DHV weight limits in the LTF / EN approved area.

If the trimmer loop is "not" hung in the main carabiners with removed safety stitching, the TONIC is not authorized by LTF / EN.



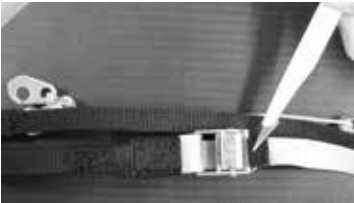
## Trimmer band with main suspension



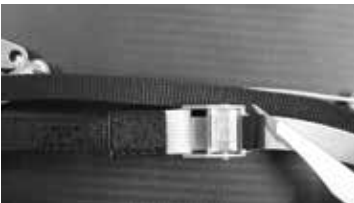
1. Main suspension
2. Trimmer band
3. Main Carabiners



Trimmer band with main suspension in the main carabiner. Once the trimmer loop is hung in the main carabiner, the license within the DHV weight limits in LTF / EN approval reappears.



Proper removal of the trimmer loop at the seam above the safety material.



Wrong removal of the safety seam. Risk of damage to the trimmer loop.

## 6 HARNESS

All EN- or LTF-certified harnesses from the harness group GH (harnesses without solid cross-bracing) are authorized for use with the skywalk TONIC.

### CAUTION:

**FULLY CROSS-BRACED HARNESSES INFLUENCE HANDLING DRASTICALLY AND DO NOT LEAD TO INCREASED SAFETY PERFORMANCE!**

## 7 FLIGHT TECHNIQUES AND PERFORMANCE

### Preflight check and maintenance:

It is important to check all paragliding equipment thoroughly before every flight to inspect for defects. Also check the paraglider after long flights and after long periods of storage.

### Check thoroughly:

- All seams of the harness, the seams of the rescue and risers
- All connecting parts, maillons and carabiners
- The brake-line knots on both sides and follow the brake lines to the top
- All the other lines from riser to canopy
- All the line attachment points at the canopy
- If the top or bottom sail has partial damage or wear and tear
- The ribs and crossports from inside

### Laying out the glider:

If you use your paraglider for the first time we recommend that you practice some inflations and try some simple flights at a training site. This way you are able to get used to the skywalk TONIC. Lay out the canopy so that the leading edge is slightly bowed and the middle of the canopy represents the highest point.

This way the A-lines are tensioned first in the middle during inflation, the paraglider inflates evenly which ensures an easier and direction-stable launch. Carefully separate the line levels and arrange the risers. If the risers are not twisted, the brake

lines will run freely through the eye to the trailing edge of the glider. All lines should run freely without knotting or twisting from the risers to the canopy. Only seldom will knotted lines release during flight! The brake lines lay directly on the ground, so pay special attention that they do not get caught during launch. No lines should lie underneath the canopy. Tangled lines can have disastrous consequences!

The TONIC is equipped with two additional loops, attached to the top sail in the area of the leading edge. To ensure that you have a secure hold of your wing before launching on snow or in steep areas, you can attach skywalk HOOKS or strips of cloth here. In order to guarantee a secure launch, you must determine that these attachments will release during the launch without requiring a lot of effort and will not effect the flight performance.

## **The Launch:**

The skywalk TONIC is very easy to launch. It has no tendency to get stuck and does not demand any special knowledge outside of the standard paragliding techniques. If you fly in the upper weight range, the speed of lift-off will be noticeably higher than that of a normal-sized wing.

The TONIC is also equipped with the innovative JET FLAP System. Air is conducted from the bottom sail (pressure area) and is blown out at the top sail (suction area). The connection is established by jet-shaped channels, which are located in the rear section of the wing. When increasing the angle-of-attack the danger of airflow interruption and subsequent stall is minimized. Results: the constant airflow even at great angles-of-attack delays the stall, the flyable minimum speed is lowered and the pilot has an increased angle of attack range. This is important, especially during launch and landing. Of course, having JET FLAPS is not an excuse for unrestrained use of the brakes, but the slow flight characteristics of the TONIC profit immensely. Otherwise, no special control of the JET FLAP System is required and flying with a wing equipped with JET FLAPs is exactly as usual.

## **Turning:**

The skywalk TONIC is very agile and reacts without delay to steering impulse. Generally, less steering impulse is required for the TONIC than with a normal-sized glider because of the smaller size. Because of the high wing load of the canopy at the upper end of the weight range, the TONIC reacts to even moderate brake input with signif-

icant curves and substantial altitude loss. It is a lot of fun to continue improving your flying abilities with the TONIC.

## **CAUTION:**

### **PULLING THE BRAKE LINES TOO FAR AND TOO FAST CAN CAUSE FULL STALL!**

You will recognize a one-sided stall by the high steering pressure and the slight backwards bend of the outer wing. In this phase, you must immediately back off the brake inside the curve.

### **Emergency Steering:**

If one brake line tears or releases from the brake handles, you will still have limited steering and landing capability of the skywalk TONIC with the help of the C-riser.

### **Active Flying:**

Active flying means flying in harmony with your paraglider. Anticipate the behaviour of your skywalk TONIC in flight, especially in turbulent and thermal conditions and react accordingly. In calm air necessary corrections will be minimal, but turbulence demands permanent attention and the use of brakes and weight shifting in the harness. Good pilots have instinctive reactions. It is important that you always have direct contact to the canopy by slight pressure on the brakes in order to feel the stored energy of the glider. This way you will recognize a loss of pressure in your canopy and subsequent collapse early and will be able to react in time. The TONIC is equipped with a turbulence-damping profile, which in combination with the high wing load provides a high resistance against collapses. Nevertheless, collapses are still possible if the pilot does not fly actively.

### **Accelerated Flying:**

A small effort is needed to operate the speed system. This can affect the sitting position in the harness. We therefore recommend an upright position in the harness. Adjust the harness accordingly, especially during your first few attempts at accelerated flying. We remind you to only fly in wind conditions that are flyable with the wing in a normal adjustment. To reach the maximum speed press the speed bar firmly until both pulleys on the A-risers touch each other. As soon as you operate the speed system, the angle of attack

will be reduced, the speed increases, but the paraglider becomes less stable and can collapse more easily. Therefore, always use the speed system with adequate altitude from the ground, obstacles and other aircraft. Collapses when accelerated are normally more impulsive and demand quicker reaction. Avoid brake line adjustments that are too short.

**NEVER ACCELERATE IN TURBULENT CONDITIONS!**  
**NEVER ACCELERATE NEAR THE GROUND!**  
**NEVER LET GO OF THE BRAKE HANDLES!**

In case the glider collapses you must immediately back off of the acceleration-system in order to stabilize and reopen your paraglider.

### **Landing:**

The skywalk TONIC can be landed easily but the pilot must adjust accordingly for the higher flight and landing speed. Make your final approach against the wind and let the glider slow down. Further reduce the speed by applying the brakes lightly and evenly. At about 1m above the ground you increase the angle of attack by slowing down more and eventually completely flare out the glider. When you have reached the minimal speed apply full brake. Use very carefully dosed braking in head winds. Once you are safely on the ground, bring the sail carefully into stall. Avoid a landing approach with steep alternate turns (danger of oscillation!).

### **Winchtowing:**

The skywalk TONIC is very suitable for towing. Make sure you climb from the ground at a flat angle.

→Pilot must be instructed in towing.

→Pilot must use a certified winch.

→Winch driver must have a towing instruction including sail planes.

Always steer carefully when towing, do not overbrake, the glider already flies at an increase in the angle of attack.

### **Motorized flight:**

Get informed about the current status of certification of motorized flight at your dealer, national distributor or directly through us. No certification existed at the time this handbook was published. (April 2014)

## 8 DESCENT TECHNIQUES

This handbook is not a textbook for learning how to paraglide.

According to the local rules and regulations, instruction and training must be carried out at a licensed flight instruction center. The following information will enable you to get the most out of your new skywalk TONIC.

### **Spiral dive:**

You can initiate the spiral dive by carefully increasing the pull on one of the brakes and simultaneously shifting your weight to the inside of the curve.

Because of the higher wing load, entering a spiral dive with the TONIC is simple. Bank and sink speed can be controlled by dosed pulling or release of the brake line on the inside of the curve. Gentle braking of the wing at the outer curve will prevent not only the collapse of the outer wing, but also control the sink speed. A spiral dive is the fastest way to lose altitude. This is an advantage and a disadvantage at the same time, since you must learn to control the sink rate.

The extreme altitude loss resulting from a spiral dive requires that you always maintain adequate safety distance. In order to avoid oscillation when exiting the spiral dive, you must slowly release the brake on the inside of the curve while maintaining pressure on the curve outer side brake.

The skywalk TONIC has no tendency to stable spiral. If it should not stop turning in unfavourable influences, then you must actively exit the spiral by shifting pilot weight to the outer side of the curve and brake more on the outer side. Braking on both sides will also bring the glider out of the spiral. However, you must be active on the brakes to react to the shooting forward of the canopy once exiting the steep spiral. Caution: the steering pressure is higher in a steep spiral than in normal flight.

### **B-line stall:**

The B-line stall was excluded from the certification by skywalk.

The TONIC is a very agile wing with high trim speed and altitude can be easily decreased by spirals, steep turns or big ears, in combination with use of the speed system, thus the B-stall is not a recommended method for effectively reducing altitude.

Besides that, the B-stall has a very negative effect on the durability of materials.

## **Big ears:**

In contrast to the spiral dive and B-stall, big ears result in an increase of forward speed in relation to the gliders sink rate. Big ears are used to avoid or exit dangerous areas horizontally in the desired direction.

## **CAUTION:**

**FLYING WITH BIG EARS CAN CAUSE STALL. THEREFORE, USE THE STEERING LINES WITH CAUTION AND IF YOUR GLIDER IS WET, DO NOT USE THIS METHOD TO DECREASE ALTITUDE QUICKLY.**



## **EXTREME FLIGHT MANEUVERS**

### **Asymmetric collapse:**

In strong turbulence, a collapse cannot be excluded. As a rule, the skywalk TONIC opens automatically. The rotation towards the collapsed wing section can be minimized by braking on the open side of the canopy. In case of a big collapse you will have to brake with caution in order to avoid a stall.

### **Front collapse:**

The paraglider will enter a collapse by a strong pull on the A-risers or from a very sudden strong downwind. The leading edge will fold along the whole length of the wing. Carefully dosed braking will reduce oscillation and simultaneously speed up the opening of the canopy. As a general rule, the skywalk TONIC will recover from the front tuck automatically.

## **CAUTION: DO NOT OVERBRAKE!**

### **The parachutal stall:**

The paraglider has no forward speed and simultaneously strongly increased sink rate. The Porous canopy fabric (excessive UV-degradation) or frequent towing (stretched A-lines) can result in an increased risk of parachutal stall. The pilot can recover from a stable stall by slightly pushing the A-risers forward at the maillons or by using the speed system. The skywalk TONIC normally exits the parachutal stall automatically.

## **CAUTION:**

**IF A PILOT HAS EXCESSIVELY SHORTENED THE MAIN BRAKE LINE FACTORY SETTING, THERE IS AN INCREASED RISK OF PARACHUTAL STALL. THUS, NEVER SHORTEN THE BRAKE LINES.**

## **CAUTION:**

**AS SOON AS THE BRAKES ARE USED DURING STALL, A PARAGLIDER WILL ENTER FULL STALL. BECAUSE OF OSCILLATION, A STABLE STALL SHOULD NOT BE EXITED CLOSE TO THE GROUND. INSTEAD, THE PILOT SHOULD STRAIGHTEN UP IN THE HARNESS AND PREPARE FOR A PARACHUTE LANDING FALL.**

### **Full stall:**

In order to full stall your paraglider, wrap both brake handles once and pull strongly and with equal pressure. The wing will steadily slow down, until the air flow separates completely. The canopy will suddenly tip back. Despite this violent reaction, keep holding the brakes down until the wing stabilizes. The skywalk TONIC flies backwards in full stall and usually forms a forward rosette. This rosette will form if the full stall is entered slowly. If the brakes are pulled down too quickly, forward rosette will not form.

To exit the full stall, the pilot must release the brake lines slowly and symmetrically upwards. (response time  $\rightarrow$  1 sec). The glider opens and surges forward to pick up speed. Braking symmetrically will prevent the TONIC from surging too far forward. If the pilot does not brake, the TONIC will surge forward dramatically and a front tuck may result.

## **CAUTION:**

**IF A FULL STALL IS EXITED TOO EARLY, TOO QUICKLY OR INCORRECTLY, THE CANOPY MAY SHOOT FORWARD DRASTICALLY**



## **Negative spins:**

A paraglider spins backwards if the airflow disconnects over one half of the wing. In the process, the canopy spins on a vertical axis and the rotation center is within the wing span. The inside wing flies backwards.

There are two reasons for the negative spin:

- One brake is pulled too far and too quickly (e.g. when entering a spiral dive)
- One brake is pulled too strongly while flying slowly (e.g. flying in thermals).
- The skywalk TONIC usually re-enters normal flight immediately after the brake is released without any great altitude loss.
- If the pilot inadvertently enters negative spin and exits it immediately, the skywalk TONIC will return to normal flight without any major sink. The brake which was pulled too far comes back until the airflow has contact again with the inner wing. Prolonged negative spin causes the canopy to shoot too far to one side. This can result in an impulsive collapse.

## **Wingover:**

Flying alternating left/right turns results in increased banking of the wing. During wingovers with a strong bank, the curve-outer wing will begin to unload. Increased banking should be avoided, since an eventual collapse can be very impulsive.

## **CAUTION:**

**FULL STALL, NEGATIVE SPIN AND WINGOVERS (ABOVE 90°) ARE ILLEGAL ACROBATIC FLIGHT MANOEUVERS AND ARE NOT PERMITTED IN NORMAL AIR TRAFFIC. EXITING INCORRECTLY OR OVERREACTING MAY HAVE DANGEROUS CONSEQUENCES INDEPENDENT OF THE TYPE OF PARAGLIDER!**

## 10 MATERIALS

The skywalk TONIC is manufactured from the highest-quality materials. skywalk has chosen the best possible combination of materials with respect to durability, performance and longevity. We know that durability is a deciding factor in customer satisfaction.

### Sail and Profile:

Top Sail:	Dominico 20 DMF
Bottom Sail	Dominico 20 DMF
Ribs and Bands:	Skytex 32

### Lines:

LIROS is the worlds leading producer of paragliding lines.

Top lines:	DSL 70
Middle lines:	PPSL 120
Main lines and Tip lines:	PPSL 200, PPSL 120, NTSL 160
Main brake lines:	DFLP 200/32

### Risers:

The risers are manufactured by Cousin Freres from 12,5 mm polyester webbing with Kevlar inserts. Stretch values, strength and stability of this webbing represent the highest quality on the market.

## 11 MAINTENANCE

With proper maintenance, your skywalk TONIC will remain in airworthy condition for several years. A well maintained paraglider lasts a lot longer than one which is packed carelessly after use. Your life depends on the condition of your glider when you are in the air.

Proper packing of your glider guarantees that your wing will remain at a consistently high quality level. Your skywalk TONIC has reinforcements constructed from flexible nylon rods in the leading edge. The Superflex material is very bend-resistant and does not require any special handling.

- Shake the canopy out gently to remove leaves, grass, sand, etc
- Sort the lines evenly and arrange them on the canopy.
- Make sure that your glider is in dry condition before packing.
- Lay the glider cell upon cell – from the middle of the glider outwards - from the second cell, so that the leading edge reinforcements lay neatly on top of one another.
- This gathering method naturally goes faster with two people, one at the leading edge and one at the leech, but with some practice you will be able to perform this task easily by yourself.
- Fold over the gathered cloth from the bottom up, pressing the air out as you go fold the complete cell over once towards the middle → repeat the same packing method on the other glider half.
- Now lay both sides on top of one another and make sure that the leading edge reinforcements lay neatly on top of one another. → Fold the cells from the bottom in the direction of the leading edge, the first fold should have approximately the length from hand to elbow.
- The leading edge can be folded inward once from the upper end, but this is not totally necessary. However, any air remaining inside the glider should be pressed out through the leading edge, and not through the material.
- Now place the compression band around the glider across the leading edge
- Place the entire glider into the inner pack sack. This protects the glider from being damaged by the zipper or other objects.
- Open the pack sack and lay the glider inside. The soft material here provides for good carrying comfort for your lower back.
- Now lay the harness with the seat board upwards onto the glider in the pack sack and (in most cases), close with the zipper.
- The top of the packsack offers enough space for storing helmet, overall, instruments, etc.

## **Storage:**

Store your paraglider in a dry location, protected from light and away from chemicals! Dampness is the natural enemy of all paragliders. Therefore, always make sure your paragliding equipment is dry before packing it away. A heated room is best for this purpose.

## **Cleaning:**

Your new skywalk TONIC is equipped with a new automatic drainage system, especially for getting rid of sand. Large accumulations of dirt can either be drained from the additional opening at the stabilo or from the opening on the leading edge.

Any kind of friction or washing will lead to the accelerated aging process of your glider. The sail cloth of the skywalk TONIC is maximally soil-resistant. If you still think that your paraglider needs to be cleaned, then use a soft and wet towel or sponge. Don't use any soap or detergents. Never use solvents.

## **Repair:**

All repairs must be carried out by the manufacturer or by an authorised skywalk Service Center. Amateur repairs can cause more harm than good.

## **12 DISPOSAL**

skywalk places high value on the environmental compatibility and quality control of our materials. If your glider should reach the point where it is no longer airworthy, please remove the metal parts. All other parts such as lines, cloth and risers can be brought to a waste disposal center. The metal parts can be brought to metal recycling. If you wish, you can send your glider on to us, and we will dispose of it in a responsible manner.

## **13 NATURE AND ECOLOGICAL COMPATIBILITY**

We have taken the first step towards ecological awareness with our motorless sport. Those who prefer to climb to the launch site make our sport even more ecologically compatible. We intend on continuing on an ecologically responsible course. When you are out enjoying our sport, this means specifically: clean up your trash, stay on marked trails and don't cause unnecessary noise. Please help to maintain the balance of nature and act with respect to plants and animals in their territory.

## **Material wear and tear:**

The skywalk TONIC is primarily constructed out of nylon cloth, which loses strength with UV-exposure and becomes permeable to air. Therefore, lay your glider out right before starting and pack it away as soon as possible after landing, to avoid unnecessary UV exposure.

## **Line Repair:**

The lines of the skywalk TONIC are made from Dyneema or Tecnora cores with a polyester cover. Avoid overloading single lines, since overstretching is irreversible. Continuous bending of the lines at the same spot decreases the strength, even if only slightly. All visible line damage, even if it is only damage to the line cover, requires replacement of the line. New lines should be ordered from the manufacturer or an authorized skywalk maintenance facility. Your flight school or dealer can help you with the line replacement. Before you replace the line, check the correct length by comparing with the same line from the other side of the glider. After replacing the line, a line check must be performed, preferably by laying the glider out on the ground.

## **General Tips:**

When laying out your paraglider, make sure that neither the canopy nor the lines become Dirty, as dirt particles in the fibres can damage the material and lines.

- If the lines get tangled on the ground during launch, they may overstretch or break
- Do not step on the lines and/or canopy.
- Make sure that no sand, stones or snow get inside the canopy as the extra weight collected in the trailing edge may slow down or even stall the glider.
- Sharp edges damage the canopy.
- Uncontrolled inflation attempts in strong winds may result in the glider impacting into the ground at high speed. This can cause rips, damage on lines and/or fabric.
- Make sure not to land your canopy leading edge first as this may cause permanent damage to this area of your paraglider.
- After landings in trees or on water you should check the length of the lines.
- After contact with salt water, thoroughly rinse the glider with fresh water!

## 14 2-YEAR-CHECK

skywalk stipulates a maintenance interval after 24 months. The 2-Year-Check should be carried out by the manufacturer or representative of manufacturer. Missing this deadline or if the check is carried out by a non-authorized company will result in the immediate loss of your skywalk TONIC model certification and all warranty and liability claims. We highly recommend that a skywalk-authorized center performs the 2-Year-Check, since performing the check yourself without the proper instruments and specific knowledge could lead to an insufficient check and thus the airworthiness of your glider cannot be guaranteed.

### **Changes to the paraglider:**

Your skywalk TONIC is determined to be within the regulated parameters of tolerance upon leaving production. These parameters are very narrow and must not be altered under any circumstances. Only this way can the optimum balance between performance, handling and safety be guaranteed!

### **CAUTION:**

**UNAUTHORISED CHANGES RESULT IN IMMEDIATE TERMINATION OF THE OPERATING LICENSE! ANY LIABILITY CLAIM TOWARDS THE MANUFACTURER AND ITS DEALERS WILL BE EXCLUDED!**

## 15 CERTIFICATION

The achievement of official certification is the final polish. The different certifications are the last hurdle in the development of a skywalk paraglider. The test flights are absolved only when the test team is completely happy with the glider. We point out that the certification results provide little information when it comes to flying the glider in thermically active and turbulent air. The glider classifications serve to inform solely with regard to the performance of a paraglider during extreme flight manoeuvres in stable air conditions. The extreme flight maneuvers provoked during the certification process should therefore be considered as individual factors in a complex interrelation and therefore should not be overrated.



## 16 CLOSING WORDS

Paragliding is a fascinating sport. With the skywalk TONIC, you have a glider in your hands which represents the very peak of glider technology today. This glider will bring you years of enjoyment when you treat it with care. Respect for the challenges and dangers of flying is a prerequisite for satisfying, enriching flights. Even the safest paraglider can be dangerous if you misjudge the weather information or your level of experience. Please be reminded that all airsports are potentially risky and that your safety largely depends upon your own level of awareness. We recommend that you respect the legal standards and always fly with care.

**ALL PILOTS FLY AT THEIR OWN RISK!**

**YOUR SKYWALK TEAM**

# SKYWALK

GmbH & Co. KG

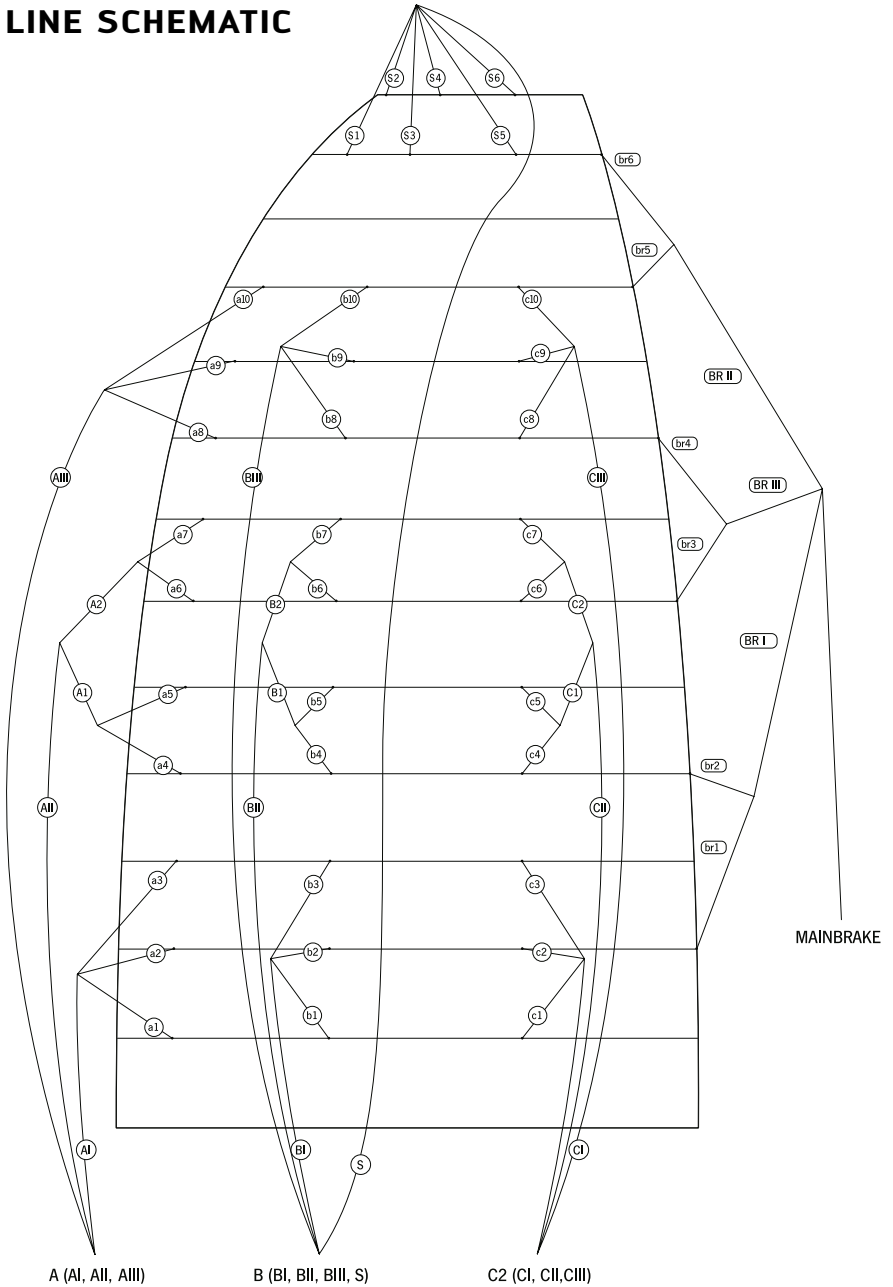
WINDECKSTR. 4  
83250 MARQUARTSTEIN  
GERMANY

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Fax: +49 (0) 8641 - 69 48 11

[www.skywalk.info](http://www.skywalk.info)  
[info@skywalk.info](mailto:info@skywalk.info)



## 17 LINE SCHEMATIC



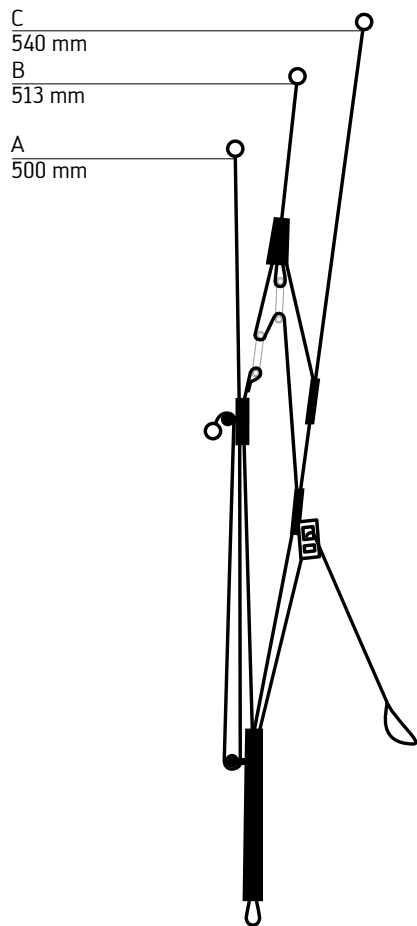
A (AI, AII, AIII)

B (BI, BII, BIII, S)

C2 (CI, CII, CIII)

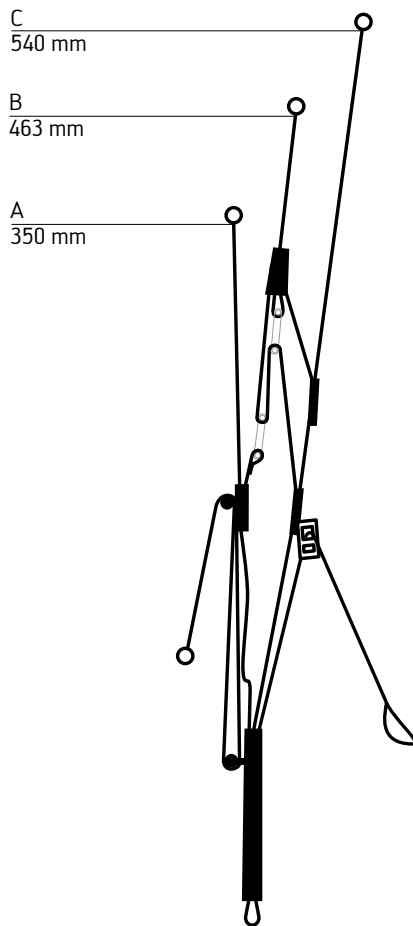
## 18 RISER

1. Riser with Trimmer (open)



Trimspeed

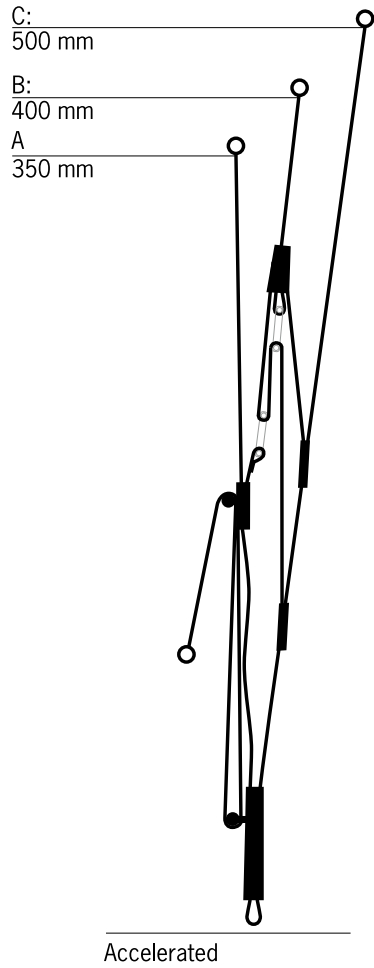
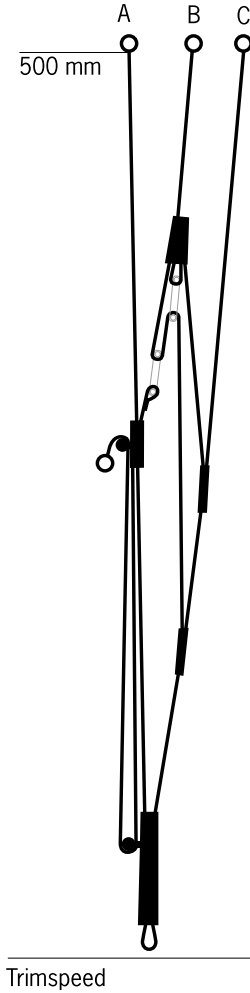
2. Riser with Trimmer open + accelerated



Accelerated

## 18 RISER

Without Trimmer



## NOTES

## NOTES



# SKYWALK 2+2 GARANTIE

skywalk bietet seinen Kunden für alle nach dem 01.07.2007 gekauften Gleitschirme eine über die gesetzlichen Gewährleistungsvorschriften hinausgehende skywalk 2 + 2 Garantie. Die skywalk 2+2 Garantie umfasst Fehler am Material oder Verarbeitungsfehler und gilt für alle zugelassenen, (DHV Gütesiegel oder CEN) privat genutzten Geräte. Professionell genutzte Schirme (z.B. Schulung oder gewerbliche Tandemschirme) sind von der Garantie ausgenommen. Kein Garantiefall liegt vor bei: normalem Verschleiß ungenügender Wartung, unsachgemäßer Lagerung, Behandlung oder Berührung mit Chemikalien aller Art bei Unfall oder Hindernisberührung unsachgemäßem Umgang mit dem Gleitschirm Zum Wirksamwerden der Garantie sendet der Kunde die skywalk Garantiekarte innerhalb von 14 Tagen nach dem Erwerb des Gleitschirms an skywalk zurück oder füllt das entsprechende Onlineformular auf der skywalk homepage aus. Im Schadensfall ist der Gleitschirm auf eigene Kosten mit einer Kopie des Kaufvertrages an skywalk zu senden. Garantieentscheidungen und Garantiereparaturen werden ausschließlich von skywalk selbst durchgeführt. Liegt ein Garantiefall vor, entscheidet skywalk über Reparatur, Teilaustausch oder Ersatz des Produkts (eventuell gegen Abzug Neu für Alt). Die Garantie gilt zunächst 2 Jahre ab dem Kaufdatum des Schirms. Wird der Gleitschirm bei skywalk selbst oder einem von skywalk autorisierten Checkbetrieb (aktuelle Liste unter [www.skywalk.org/dealer](http://www.skywalk.org/dealer)) bis 2 Jahre nach dem Kaufdatum einem qualifizierten 2 Jahrescheck nach den strengen skywalk Checkrichtlinien unterzogen, so verlängert sich die skywalk 2+2 Garantie um weitere 2 Jahre, also auf 4 Jahre. skywalk wird für jeden Einzelfall bestrebt sein, die für den Kunden optimale Lösung zu finden und daher auch ggf. im Kulanzweg noch weitergehende Leistungen bereitzustellen.

## Bitte auf [skywalk.org](http://skywalk.org) registrieren!

skywalk offre à ses clients une nouvelle garantie, Cette garantie est valide pour tout client ayant acheté un parapente après 01-07-2007 et prolonge la Garantie skywalk courante. Nous l'appelons la garantie 2+2 skywalk. Elle couvre les défauts de fabrication + mains d'oeuvre et est applicable à tout équipement privé portant lestampons ( DHL ou CEN ). Les ailes utilisées commercialement ( comme par exemple celles des écoles de parapente et celles des BiPlaceurs professionnels ), ne sont pas incluses et couvertes par cette garantie. Aucune demande de garantie ne sera valide pour: usure et vieillissement normaux du matériel, mauvais entretien ou rangement de la voile, son contact avec des produits chimiques quels qu'il soient, accident quelque'il soit, collision intentionnelle avec autrui ou tout comportement qui endommagerait l'aile afin d'essayer de faire fonctionner la garantie. Le propriétaire de la voile doit remplir et envoyer la carte de garantie sous quatorze (14 ) jours de la date d'achat de la marchandise chez skywalk, ou simplement remplir la formule de garantie par internet sur la page d'accueil du site skywalk. Au cas d'une garantie activée, il sera de la responsabilité du client d'expédier son aile à ses frais et d'inclure une copie du certificat d'achat. La décision de validité de couverture et réparations seront faites exclusivement par skywalk. Si la garantie est valide, skywalk s'occupera des réparations, changement de pièces, remplacements ( possible avec un rabais de prix de votre vieille voile vers une aile neuve ). La garantie est valable pour 2 ans à partir de la date d'achat de l'aile. Si un entretien de l'aile a été fait par skywalk ou un centre d'inspection agréé skywalk ( liste trouvée sous [www.skywalk.org/dealer](http://www.skywalk.org/dealer) et conformant aux informations précises de garantie des deux ans depuis la date d'achat, skywalk doublera la garantie initiale 2+2 pour une de 4 ans. skywalk fait toujours de son mieux afin d'aider chaque client et quand c'est possible, entreprendra des démarches supplémentaires pour l'en faire bénéficier afin de montrer son niveau d'appréciation. Pour prendre avantage enregistrez vous sur [www.skywalk.org](http://www.skywalk.org)

**Pour prendre avantage enregistrez vous sur [www.skywalk.org](http://www.skywalk.org)**

# **SKYWALK 2+2 GUARANTEE**

skywalk is offering its customers a brand new Guarantee. This Guarantee applies to all customers who have purchased a Glider after 01.07.2007, and further extends the current skywalk Guarantee. We are calling it the skywalk 2+2 Guarantee. The skywalk 2+2 Guarantee covers material or workmanship defects and applies to all authorized, (DHV seal of approval or CEN) privately used equipment. Professionally used gliders (for instance Flight Instruction School Gliders and commercially utilized Tandem gliders) are not included in the guarantee. No warranty claim is available for: Normal wear and tear insufficient maintenance, improper storage, treatment or handling with chemicals of any kind accidents or purposefully crashing into obstacles any behaviour which is purposefully damaging to the glider In order to activate the guarantee, the customer must send the completed skywalk Guarantee Card within 14 days back to skywalk, or simply complete the on-line formula on the skywalk homepage. In the case of damage the Glider should be sent to skywalk at the customers expense with a copy of the sales contract. Guarantee decisions and Guarantee repair will be carried out exclusively by skywalk. If a Guarantee is warranted, skywalk will carry out all decisions regarding repair, parts exchange or product replacement (possibly with discount- new for your old glider) The Guarantee is valid until 2 years after the date of purchase. If a complete Glider check is performed by skywalk or by a skywalk authorized check center (current listing under ([www.skywalk.org/dealer](http://www.skywalk.org/dealer)) according to rigorous skywalk guidelines within two years of purchase, then skywalk will extend the 2+2 Guarantee for two more years, so to speak, to a 4 year Guarantee. skywalk strives to find the optimal solution for each individual customer, and where applicable is prepared to undertake further actions as a gesture of goodwill to our customers.

**To take advantage of all the  
skywalk 2+2 Guarantee please  
register on [www.skywalk.org](http://www.skywalk.org)**