

MANUAL

EFFECT^{XT}

PARAMOTOR WING

EFFECT^{XT}



SUMMARY

WELCOME TO SOL TEAM!.....6

USER’S MANUAL.....7

EFFECT XT - THE PROJECT.....8

TECHNICAL DESCRIPTION..... 10

OVERVIEW GLIDER12

TRIMMER AND SPEED SYSTEM14

EFFECT XT - Brake Toggles16

10cm16

10cm16

EFFECT XT - SPEED SYSTEM17

 Duo speed system..... 17

EFFECT XT - Flight18

 First Flight 18

 Takeoff Pre-flight Checklist..... 19

 Takeoff with paramotor 19

 Forward Takeoff 19

 Reverse Takeoff..... 20

 Takeoff with trike 20

 Climbing..... 20

 Performance 21

 Turns 21

 Using commands and reflex profile reaction 21

 With open trimmer..... 22

 With closed trimmer..... 22

 Start 22

 Using the brakes 22

DOUBLE COMMAND.....22

 Double commands..... 23

 Flaps 23

 Accelerated Flight 24

 Flight in turbulent conditions 24

 Landing with paramotor 25

 Landing with Trike..... 25

EFFECT XT - Fast descent maneuvers.....25

 Ears 26

 Positive Spiral..... 26

 B-stoll 26

EFFECT XT - Behavior in extreme maneuvers and collapses.....26

 Power induced Oscillations..... 27

 Lateral Asymmetric Closing..... 27

 Line-Over 27

 Frontal Symmetric Closing 28

 Parachutal 28

 Full Stall AND Negative Turns..... 28

 Emergency Flying..... 28

EFFECT XT - Up-keep and care.....29

 Storage..... 29

 Backpack 29

 Folding your paraglider..... 29

 Cleaning 31

 Maintains and inspection 31

 Pulleys..... 31

EFFECT XT - Repairs32

 Tears..... 32

 Line breakage..... 33

 Sealing 33

EFFECT XT - replacing the Trimmer strap.....33

Maintain of the power engine33

EFFECT XT - Nature and environment and Out of use.....34

EFFECT XT - Warranty34

 Warranty Terms 34

 Warranty Pre-requisites 34

 This warranty does not cover 35

Golden Rules.....36

final words37

 Technical Data 38

 Materials and limits of use 40

 Parts List and Material 40

 Lines..... 40

 line layout 42

 Flight Log..... 44

 Inspection 45



WELCOME TO SOL TEAM!

You have just acquired a high quality product, manufactured under one of the most demanding industry standards worldwide, we believe this project will allow that you learn a lot in paraglider flight.

We trust your paraglider **Effect XT** will bring you many great life memories you will cherish forever and you could understand our work's Philosophy, safety, performance, ease of operation and innovation.

We would like you to read this manual carefully and thoroughly. In it, you will find important information about using your new equipment.

In the event you should have any questions about its usage or should you wish to be updated on the latest news at **SOL**, we remain at your disposal:

Thank you for selecting a **SOL PARAGLIDERS**.

SOL Team!

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USER'S MANUAL

This power glider meets at the time of delivery the requirements of the DGAC certification!

The manufacturer and its representatives are not liable and therefore not responsible for any misuse nor mishandling of this equipment. It is a basic assumption that the pilot is certified to fly this power glider. This manual offers information about your power glider. It is not a training manual.

It is an assumption that the pilot respects the law and order of aviation and that his skills are up to the challenge of this particular equipment!

Every pilot is responsible for the maintenance and assessment of equipment usability.

Comes with the glider:

Along with your product, you are getting an accessory kit:

- Big deluxe backpack;
- Internal protection bag ;
- Risers' protection sack;
- User's Manual;
- Easy Check;
- Compression strap;
- Basic Repair Kit;
- Cap;
- Windsock.



EFFECT XT - THE PROJECT

The new paramotor Effect XT was designed for adventure-loving pilots.

No matter if the day is promising for long distance XC flights, for freeride or for the classic FAI competition categories, this wing has been developed for all kinds of challenge.

With the Effect XT, Sol Paragliders increases its Paramotorwing portfolio and creates a XT-Series (extended technology), means the application and fine-tuning of the technologies on the market maintaining comfort and safety.

This merging of the latest technologies enables the introduction of new control techniques, new materials, and enhancement of performance and safety.

And SOL didn't forget the main thing: safety and easy handling. All controls are close to the pilot, different coloured and easy to handle. All inputs are executed as usual, without the need of additional movements. They can be carried out together in accordance to the respective necessities or corresponding to the weather conditions

For your safety and comfort during flight we did a lot of thinking. For this reason we are showing you some more important details of the Effect XT which you might like.

- The Effect XT comes with a new construction technology. The weight, volume and drag was reduced (Vectran competition lines).
- 53 cells, 8 of them closed;
- Dual control- enables and make it easy to perform open flat turns or closer turns;
- Risers- precise and easy handling of trimmer, speed system and handles;
- Take-off- easy to launch in short space and with small engine load;
- Landing- Great flare characteristics allowing soft landings when stalling;
- Collapses- Full Reflex technology, very resistant to collapses;
- Speed- Increased speed due to Full Reflex technology;
- Trimmers for acceleration and braking.



TECHNICAL DESCRIPTION

The Effect XT combines our performance technology with security.



HPAR - High Project Aspect Ratio: higher A/R in each class.



Full Hybrid Tecnology: is the hybrid utilization of 2 types of fabrics and lines. An optimised combination of durability and resistance with low deformation and less weight.



LCT - Laser Cut Technology: Panels, profiles and parts cutting with Laser equipment.



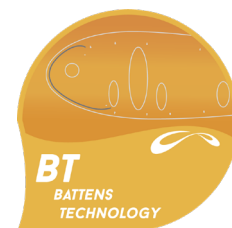
HTM - High Tech Materials – highest technology materials guarantee durability - Technora Lines, Diax Laminates, Inox Hardware, Polyester of High Tenacity.



PBP - Pressure Booster Profile: New design to increase and maintain inner pressure. More performance along all velocity.



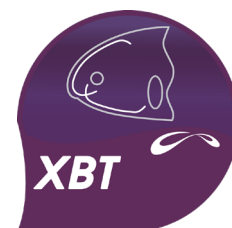
Mini Ribs: Profiles between the cells of the trailing edge, which improve performance and handling.



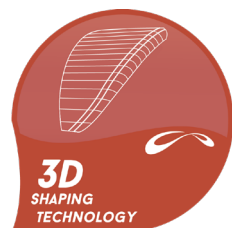
Battens Technology: Flexible nylon Battens



BOW Tech: Greater lift in the same sail area and better pressure distribution across wingspan glider.



X Battens: Cross X battens strengthening the nose profile.



3D Shaping: Our double 3D Shaping is a three dimensions modeling technology that reduces wrinkles and imperfections on the leading edge construction, improving the overall aerodynamic performance.



SMSR: SOL Maxi Stable Reflex: Reflex profile with great stability and suspension. The reflex profile relocates the weight distribution to the front of the profile. This let the power glider fly in front of the pilot angle, creating speed, stability and safety in turbulence.



2D Steering System: Dual Control

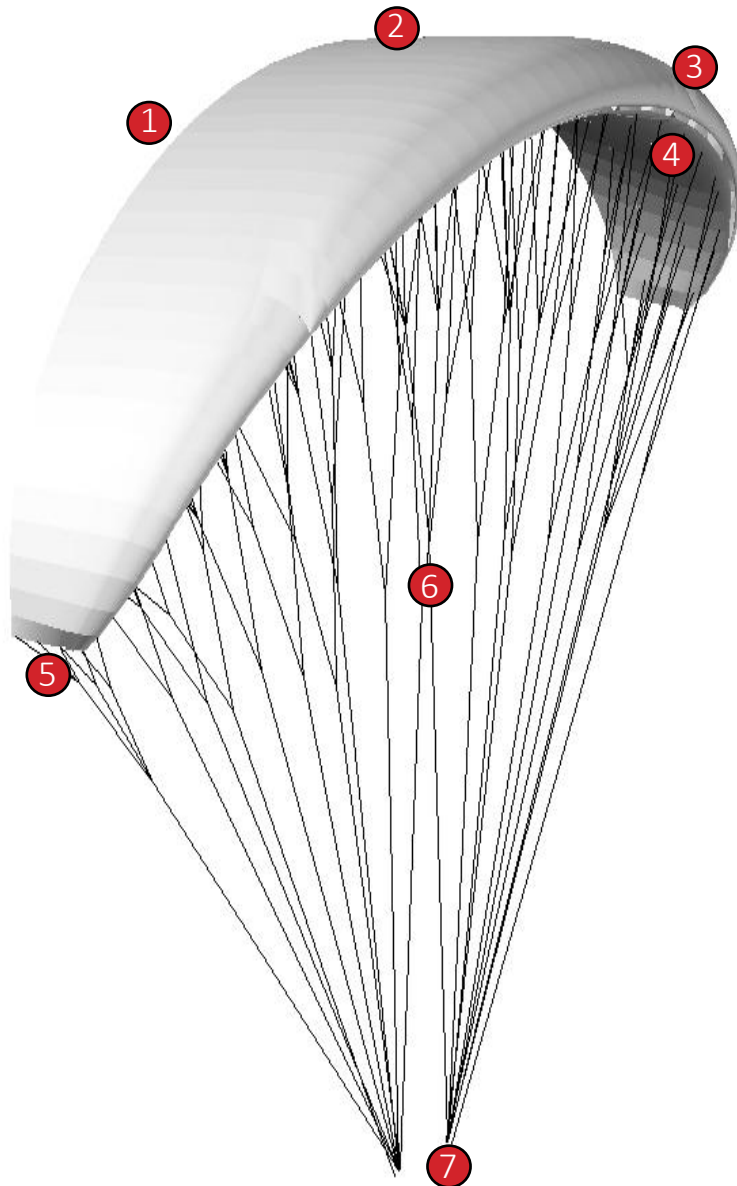


LDT: Load Distribution Tapes: Load Distribution Tapes



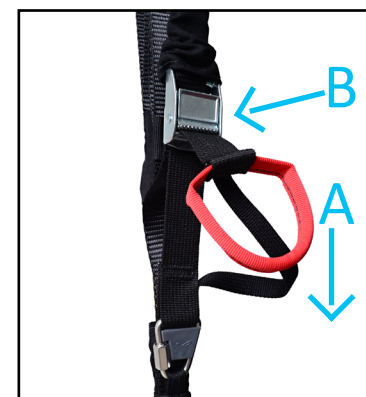
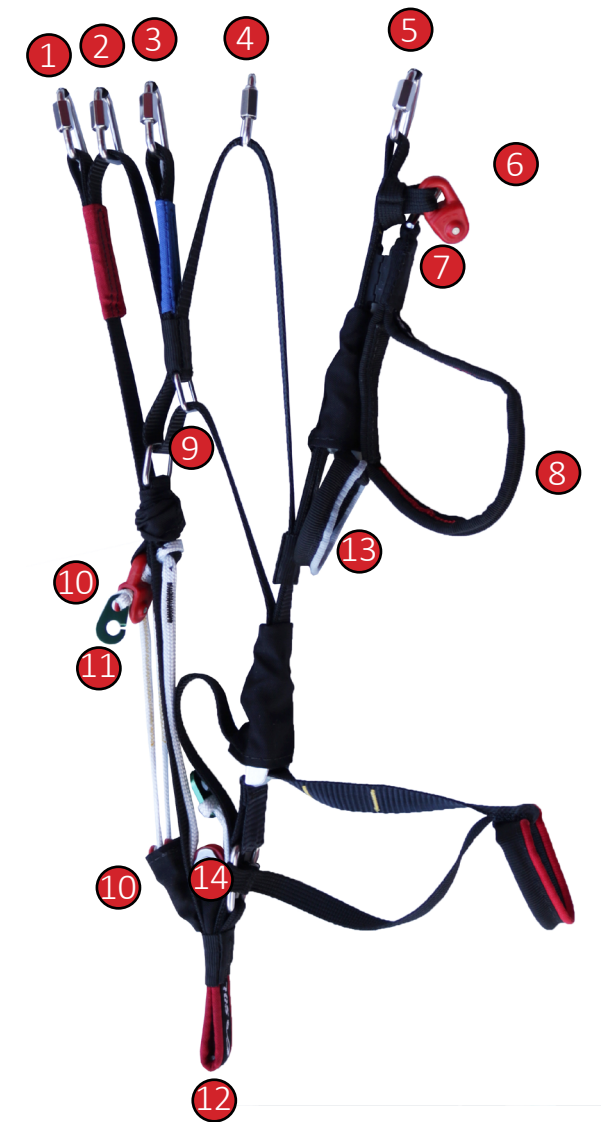
OVERVIEW GLIDER

1. Trailing edge
2. Top
3. Leading edge
4. Bottom
5. Stabilo
6. Lines
7. Risers



RISERS

1. Riser A
2. Riser A'
3. Riser B
4. Riser C
5. Riser D
6. Brake lines
7. Toggle connection
8. Toggle
9. Speed system
10. Accelerator
11. Accelerator connection
12. Connection to harness
13. Flaps
14. Duo speed system



Trimmer - Pulling down the red handle (A) the trimmer will be closed and pressing in the middle of trimmer (B) you will be releasing.



TRIMMER AND SPEED SYSTEM

The **Effect XT** risers are equipped with trimmer and speed system. It can be used in 4 different configurations. It's very important pay attention for the best performance and safety that you wish.



Trimmer - Neutral Point: Best glide and bigger passive safety, all risers stay aligned.

A	A'	B	C	D
450mm	450mm	450mm	450mm	450mm



Flaps: Bigger plane and still with good passive safety.

A	A'	B	C	D
450mm	450mm	450mm	450mm	400mm



Speed System activated: More speed, less passive safety and hard controls, misalignment in A, A1, B and C.

A	A'	B	C	D
330mm	385mm	400mm	425mm	450mm



Trimmer and Speed System activated: Maximum speed, minimum passive safety and hard controls, misalignment in A, A1, B, C and D.

A	A'	B	C	D
330mm	385mm	400mm	475mm	570mm



Trimmer - Trimmer activated: More Speed, less passive safety and harder controls, misalignment in A, A1, B, C and D.

A	A'	B	C	D
450mm	465mm	480mm	515mm	570mm



Warning

- The use of the trimmer simultaneously with the accelerator makes your power glider more vulnerable for closings. We recommend not to use both in turbulence.
- In case of closing the reaction of the power glider could be aggressive if the pilot is using the trimmer or the accelerator or both. Avoid using them with little space over ground.

EFFECT XT - BRAKE TOGGLES

In case you switch do another power unit it might be that you have to readjust the lengths of the brake lines. This adjustment can easy be made on the riser, in the figure number 5 is the original adjustment which works with most of the power units on the market. Number 9 readjusts the toggles by 10 cm.

2- Brake handle with height adjustment (factory setting)

4- Brake handle with height adjustment

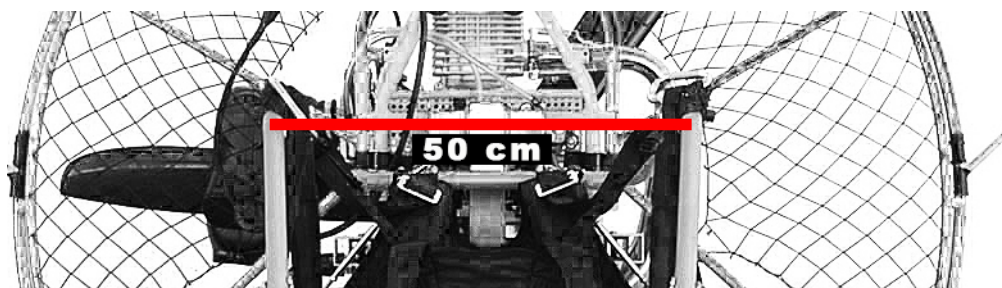


Warning

- In case of changing the pulley position from 2 to 4 don't forget to readjust the brake line on the toggle by 10 cm.
- Confirm that both sides are symmetric.
- Make the necessary readjustments and fill the glider on the ground to make sure that the brakes are working fine before flying with your power glider.

DISTANCE BETWEEN CARABINERS

The regulated distance between the large clips (adjustable at the chest) is 50cm for the **Effect XT**. Variations of more than 5 cm above these ones will alter the fundamental characteristics of the canopy and are potentially dangerous.



EFFECT XT - SPEED SYSTEM

The majority of the latest harnesses have pulleys for assembling the Foot Speed System. Please read the manual of your power unit carefully, all information about the correct installation you will find there.

Warning

- If the equipment mounting is wrong and permits a different shortening than indicated, an accident could be the result!
- Remember that when using the speed system, the angle of attack decreases which may result in the collapse of the paraglider, consequently, the use of the speed system close to the ground should be avoided. We do not recommend the use of the speed system in turbulent conditions.
- Never use the speed system in extreme maneuvers.
- In the event the canopy collapses, release the stirrup immediately and make the appropriate corrections.
- Never let go of the toggles!

DUO SPEED SYSTEM

In order to accelerate the operation of the trimmers and the foot accelerator, a system was created that allows simultaneous activation of both types of speed increase.

The Duo Speed System is not active, the activation of the system follows the order of the images below:



Not active



Active

Warning

- To install the Duo Speed System it is necessary to release the trimmers and flap.
- An improperly mounted system that allows different shortening can lead to an accident!
- Remember that when using the accelerator the angle of attack decreases, causing the wing of the paramotor to collapse, therefore using the accelerator near the ground must be avoided. We recommend not to use the accelerator under turbulent conditions.
- Never use the system in extreme maneuvers.
- If the canopy collapses, immediately release the foot accelerator and make the necessary corrections.
- Never drop the brake handle.

EFFECT XT - FLIGHT

FIRST FLIGHT

A careful First Flight is necessary with every power glider, the Effect XT is no exception. This flight must take place on a practice hill. After unpacking the power glider and laying out it in a horseshoe shape position, the following steps must be taken:

- The paramotor wing must be laid out in such a way that, when tension is applied to risers 'A', the canopy center should be extended before the extremities. This allows for an easy takeoff with good directional stability.
- Special attention must be taken to the wind's direction upon the lifting of the canopy, so that the two halves are inflated symmetrically.
- All lines must be organized and completely free of any entanglements. Special attention must also be given to the lines 'A', which must be free right from the risers 'A' (with the red mark) to the canopy.
- Same priority and care must be given to the brake lines, which must also be completely free and without any possibility of entanglement on any obstacle during takeoff.
- All lines should be checked and all the risers in appropriate order. When the risers are aligned and not twisted, the brake lines will be free from the pulleys (on the rear risers) to the canopy's rear edge.
- It is extremely important that no entanglements nor bunched lines are present. Any line going under the canopy or tie may result in disastrous consequences.
- Before and after each flight the lines, risers and canopy must be checked for any possible damage.
- In case there is any damage present, as insignificant as it may be, the canopy should not be flown!

Warning

- It is not advisable to fly the **Effect XT** in rainy days or with a wet paramotor wing, since the in-flight maneuvers become more sensitive and a reserve deployment may occur upon exiting a B-Stoll or in the event of excessive usage of breaks.

TAKEOFF PRE-FLIGHT CHECKLIST

Do Not Forget

- Make sure reserve is OK! Opening device and pins activated?
- Helmet?
- Carabiners closed?
- Harness – Connected all Locks closed?
- 'A' risers in hands?
- Untangled brakes in hand?
- Are you in the center of the canopy?
- Takeoff path is clear?
- Paraglider and pilot aligned with the wind?
- Airspace ahead of takeoff area is clear?
- Distance between carabiners is correct?

TAKEOFF WITH PARAMOTOR

Forward Takeoff

It's very easy to fly the **Effect XT**. When ready to takeoff, the pilot must take risers 'A' together with the toggles. In order to differentiate between the lines, line 'A' and risers 'A' inclusive are marked with a different color.

Before takeoff, a last check is required to ensure all the equipment is laid out properly. The arms must be extended to the side, as if they are extensions of risers 'A'. A decisive run allows for a quick and stable inflation.

Canopy overtakes are not common. After the initial inflation momentum, the pilot must keep the tension forward on risers 'A' (pushing them ahead, and not pulling them downwards), until the canopy is above your head.

At this point, the brakes must be carefully activated, ensuring room for the possibility of directional changes. A move to underneath the center of the power glider is the best method for corrections, provided there is room for it. The pilot glances at last upwards to ensure the canopy is properly located above, completely unobstructed and inflated. At this point, the pilot decides whether or not to takeoff. When the glider is beginning to sustain the engine, apply carefully power.

Warning

- If you apply power before the canopy is properly located above and before the glider is sustaining the engine you are at risk that the engine is pushing you forward to the ground. Injuries could be consequences. Always apply power carefully at the moment the canopy is properly located above you.



Reverse Takeoff

A reverse take-off is possible, but we strongly recommend to exercise it several times without your engine. Normally take off is done by holding in one hand riser A and a toggle brake and in the other hand the other brake toggle, the accelerator and the other riser A. The moment to inflate the canopy is when the wind diminishes, prepare yourself to take eventually some steps backwards to set the canopy straight ahead you. Take care of not confusing the risers or crossing the commands!

You really have to dominate this technic before trying it for real with your power engine running at your back. We suggest again: practice it at your instruction side several times.

TAKEOFF WITH TRIKE

For launching with a trike you need a long flat runway. A second person could be helpful. This helper could push your trike to inflate the canopy whilst engine idling. If the glider is rising let the engine accelerate more and pull the glider up slowly. After visual check accelerate until you take off.

Warning

- We are advising not to fill up the canopy with the power of the engine.

CLIMBING

Avoid a take-off with full throttle, the canopy is in a position a little behind the paramotor, the overdue on the commands during take-off could eventually cause a stall or worse an accident.

Avoid unnecessary risks and always fly with a speed reserve.

Depending on the power unit geometry, it is possible that during the flight you will notice a propeller torque (known as P-factor). It will try to turn you around, so counter-steer with a brake and trimmer set. Open the trimmer of the right side if the canopy is turning right and open the trimmer of the left side if the canopy is turning left.

PERFORMANCE

The **Effect XT** in its normal flight, performs better with the hands lifted, applying 50 cm the canopy enters safely the minimum speed range. In order to accelerate, use the speed stirrup and trimmer.

Warning

Avoid rough accelerating in horizontal flight, it could cause the glider to swing. Slow down your speed and stabilize the glider by pulling the brakes slightly. With smooth acceleration and light braking you avoid this effect.

TURNS

The Effect XT has very precise commands, responding instantly to turn commands. Leveled turns can be achieved with the shifting of weight on the risers with minimum altitude loss.

A combination of weight shifting and breaking technique is the most efficient way of executing turns in any situation. The given brake utilized determines the radius of turns.

By activating the brakes on the outside edge of the turns, as well as applying maximum weight shifting on the risers, the efficiency and resistance to collapse in turbulences (at the edge of thermals) is increased.

In case it becomes necessary to perform turns in a constrained space with the Effect XT, we recommend you to release the outside brake in the given turn and pull a little more the brake on the inside of the turn.

Warning

- By pulling either brake too strongly or suddenly, there is a danger of creating a negative spiral!

USING COMMANDS AND REFLEX PROFILE REACTION

Normally paraglider (without engine) pilots are using constantly the commands (active flight). That's necessary, cause the profile for this flight category is different from a paramotor. The reflex profile of a paramotor is very different (self-stability). Consequently, the constant command use, flying a paramotor with reflex profile, will weaken the canopy. The pilot must attend to some ground rules:

- Flying in days with turbulent conditions, the commands should be used rarely, the trimmer should be closed, the use of the accelerator and classic flying should be reduced. This way the canopy and self-stability can work freely.



With open trimmer

More speed, brakes are heavier, less passive security in case of collapse.

With closed trimmer

Less speed, brakes are easier, more passive security in case of collapse.

Start

Have the trimmer slightly open to improve the inflation, the start speed depends on brake use and not the aperture of the trimmer.

Using the brakes

Without using the brakes:

More stability because of the reflex profile, more speed.

With 10% brakes:

More sustention, less stability, less speed. "CG backs off a little", profile more unstable cause the use of the brakes are causing deformation of the canopy.

With 50% brakes:

Used in heavy turbulence for reducing speed, increasing the attack angle to avoid an eventual collapse. Used during start to decrease speed and to start within reduced space.

DOUBLE COMMAND

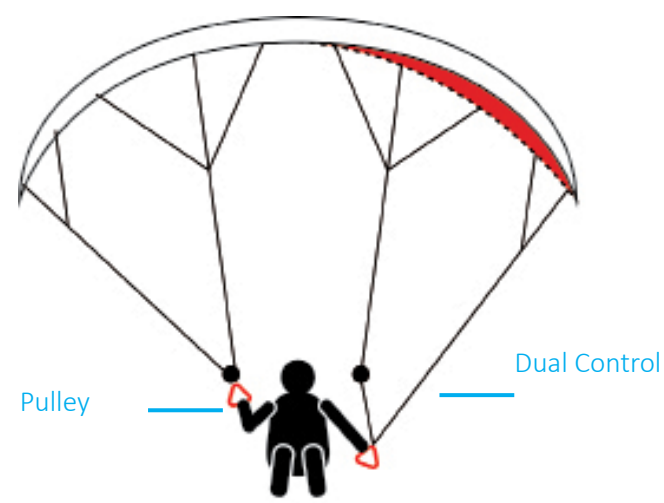
The EFFECT XT has an auxiliary command, this double command is used to make curves more open or closed in all conditions of use, regardless of the position of the trimmer

For more open bends, pull the bungs with your arm stretched out.

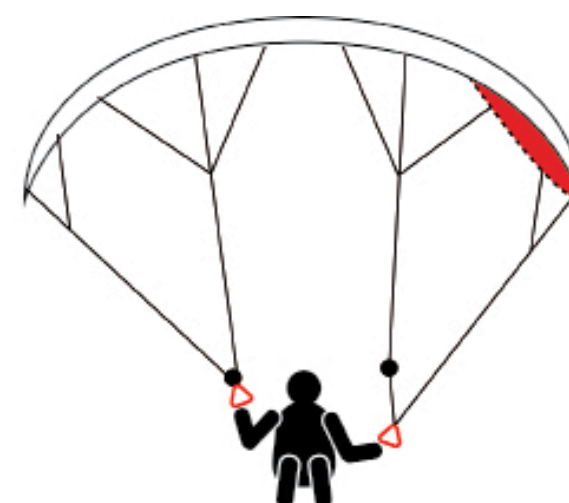
For more closed bends, pull the bung close to the body.



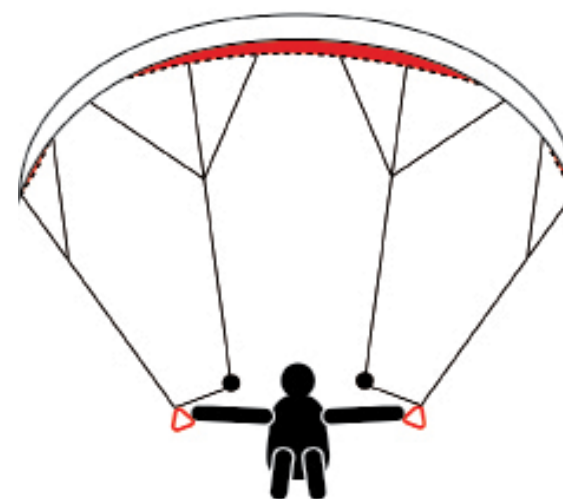
Double commands



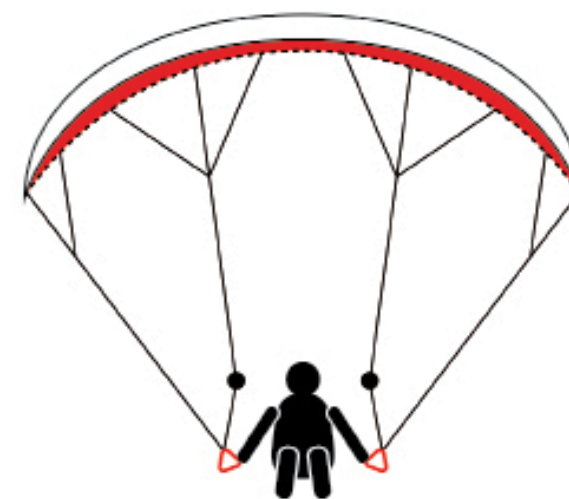
Normal turn - Pull one of the commands vertically downwards.



Closed turn – Pull one of the commands downwards close to your body.



Intense speed reduction
Recommended for landings and starts.
Pull the two commands horizontally downwards to the side.



Normal speed reduction
Pull the two commands vertically downwards.

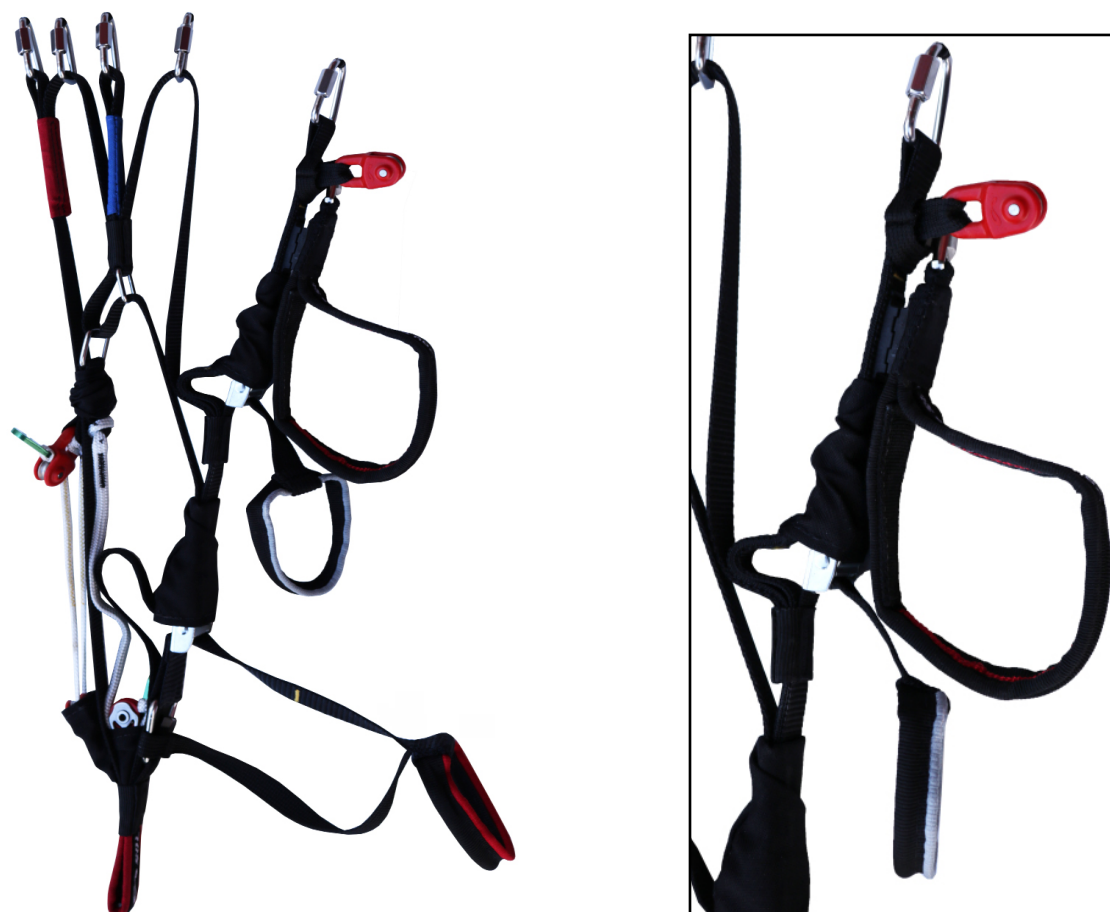
Flaps

Used for the best glide on slow and efficient flights for thermal flights. Performance Flap is part of one of the devices that assist the pilot in on-the-go testing. Identified with a smaller sideboard and ribbons of distinct colors (gray) is easy and light to use.

Triggering makes the brakes lighter and increases the sensitivity of the controls.

Atenção

- It does not make sense to use the performance flaps acting on any acceleration system (duo speed system / foot accelerator / speed trimmer).



ACCELERATED FLIGHT

It is recommended to use the accelerator when flying against the wind or in descending current zones. Due to a decreased angle of attack, the canopy may collapse easier than when set at the normal position. The pilot must remember that the higher the speed, the more dynamic the collapse response or symmetric closing will be.

FLIGHT IN TURBULENT CONDITIONS

In turbulent conditions it is not recommended to fly the power glider with full speed, cause the **Effect XT** is than more sensitive to deformation and closing. The pilot must remember that the higher the speed, the more dynamic the collapse response or symmetric closing will be.

LANDING WITH PARAMOTOR

It's very easy to land with the **Effect XT**. Before landing switch off the engine. The final approach stage must be done in straight line upwind. During this final glide, the power glider must be decelerated slowly and at about 1 m from the ground the pilot must stall the canopy, according to the conditions.

With a strong nose wind, the pilot should break only slightly or eventually don't even brake at all, and utilizing just the risers 'D' to de-inflate and overcome the canopy after the landing. By breaking during a landing in strong wind conditions, you may expose the canopy to the wind, which could lead to the pilot being dragged backwards.

The final approach must be done always in a straight line. Sharp and alternating turns may produce a dangerous pendulum movement close to the ground.

Warning

- We strongly recommend never to land with a working engine. Always switch off the power first.

LANDING WITH TRIKE

The points earlier mentioned are valid, in principle, but during landing with a trike don't turn off the engine let the unit in idle. The main advantage of this procedure is of course the possibility of going around with the wing again (repeating the approach) if anything goes wrong. Right before touching the ground use the throttle lightly to smoothen the landing. Then turn off the engine to avoid that the canopy hits the propeller.

Warning

- Remember for launching and landing with Trike you need more space.

EFFECT XT - FAST DESCENT MANEUVERS

Warning

- All fast descent maneuvers are to be executed with the engine switched off or with motor idling.
- All fast descent maneuvers must be executed in light conditions and at sufficient altitude, so that they can be performed as necessary under extreme flying conditions.
- 'Full Stalls' and negative spirals must be avoided, regardless of the power glider being flown. Incorrect recoveries and exits can result in disastrous consequences.
- The best flight technique is to fly safely and correctly. This way you will never need to descend rapidly!



EARS

It's not possible to do ears with Effect XT.

POSITIVE SPIRAL

When the pilot activates just one brake, slowly and progressively, the **Effect XT** inclines sideways in a sharp angle and enters a steep and quick turn, which may become a positive spiral.

During a spiral the rotation radius can be controlled by the greatest or smallest force applied to the inside brake. In order to come out of it, the pilot must release the brake slowly and shift his/her weight lightly to the outside of the turn. A sudden exit may result in an exaggerated momentum forward of the canopy, and collapsing it. For this reason, on exiting the last turn, the inside brake of a given turn must be softly applied again.

In case the canopy collapses during this process, the spiral must be counter-acted, as the active canopy area will be reduced.

Spirals carry a high rate of descent. Therefore high accelerations (G) make it impossible to hold them for an extended period of time. The spiral force may cause the pilot to faint and to lose flying controls, and crash. Furthermore, they will exert a lot of force and affect the pilot and equipment alike.

The pilot should never exercise this maneuver in turbulences or with wide lateral angles. In windy conditions, the pilot must be aware of oscillations during the maneuver.

Warning

- Exiting of any spiral at great speeds must be piloted.
- This maneuver requires high altitudes (at least 600 meter over ground) and is dangerous due high descent ratio pilot can lose the altitude reference. Never do this maneuver without sufficient experience.

B-STOLL

We don't recommend B-stoll for the **Effect XT**

EFFECT XT - BEHAVIOR IN EXTREME MANEUVERS AND COLLAPSES

Warning

- In all extreme maneuvers and collapses remember: switch off the engine or with motor idling and don't apply power.
- Extreme maneuvers must be executed under the supervision of a qualified instructor, on safe courses and with the entire infrastructure available for above ground and water flying!
- All maneuvers must be executed with closed trimmer.

POWER INDUCED OSCILLATIONS

Depending on the power unit geometry, it is possible that during the flight you will notice a propeller torque (known as P-factor). It will try to turn you around, so counter-steer with a brake and trimmer set. Open the trimmer of the right side if the canopy is turning right and open the trimmer of the left side if the canopy is turning left.

LATERAL ASYMMETRIC CLOSING

Like any other canopy, a negative angle of attack will result in a closing. In order to maintain directional control upon a lateral asymmetric closing, the brakes must be applied on the open side.

In case of a major closing, the amount of braking must be well graduated, in such way to avoid the airflow displacement (stall) on the open section of the canopy.

To facilitate the canopy re-inflation during a collapse, the steps above must be followed in conjunction with a long and slow brake pumping action (2 seconds) with the toggle on the closed side. The shifting of weight on the opposite side riser of the closing will also assist with the re-inflation and increase safety, requiring less brake action and keeping away from the stall point.

In case the pilot does not compensate with the brakes, the **Effect XT** in most situations will inflate by itself even in major asymmetric collapses. The **Effect XT** can make a complete turn and in the event it does not open on its own, without action, the power glider will begin a positive spiral.

The pilot must lightly apply the brake on the external side to stop a spiral and at the same time shift his/her weight on the same side until the canopy is stabilized. Exactly at this stage of pendulum effect under the canopy, it is important that the pilot controls carefully the amount of force applied on the brakes, and often it is needed to decrease the force.

Once a straight flight is achieved, the closed side can be re-inflated by the pumping action.

Warning

- If the pilot does not actively terminate the spiral, it will continue all the way to the ground!
- If the trimmer or accelerator are used collapses can happen more easily. In case of a collapse they must return to the neutral point.

LINE-OVER

In the eventuality of lines going over the canopy during flight, the pilot must take the following steps:

- Try to maintain a straight flight: Shift the weight to the open side of the power glider and assist with a light brake tension on the open side.
- To re-open: Pull the stabilizer line on the closed side (first line of riser 'B' of a different color) until the line entanglement is cleared.



- If the line-over is serious, if it's not possible to maintain a stable flight (spiral) and if there is sufficient altitude (>400 m), there is a chance of resolving this mal-function by executing a 'Full Stall'. In case the above maneuver does not solve the problem, or if the altitude is not sufficient, the pilot can activate the emergency parachute (reserve).

Warning

- Line-overs are generally the result of poor preparation before takeoff, collapses during acrobatics or lateral asymmetric closings.
- Switch of the engine or keep the motor idling.

FRONTAL SYMMETRIC CLOSING

Risers 'A' and 'A1' are tightly pulled until a complete closing of the Leading edge is achieved, then quickly release the risers until it is closed. The pilot should not hold the risers after the closing. Special attention must be given to ensure enough altitude is available.

The **Effect XT**, on most instances, recovers on its own from a frontal asymmetric closing. In turbulent conditions, a head butt may occur, which must be overcome by accurate brake control.

PARACHUTAL

The **Effect XT** does not have parachutal stall tendencies and recovers on its own from an intentional parachutal stall induced by braking commands. In the event of a parachutal stall upon coming out of a B-Stall, it is enough just to pull the risers 'A' downwards or the accelerator, thus reducing the angle of attack, therefore reorganizing the air flow contact to the canopy.

FULL STALL AND NEGATIVE TURNS

Full Stall and negative turns happen only if the pilot is deliberately wanting them or in case of great negligence. The pilot should know very close the usable brake length to avoid accidents.

Warning

- Extreme maneuvers should be executed only with supervision from a qualified instructor, within a special security seminary who offers all the necessary infrastructure above water!

EMERGENCY FLYING

In case braking controls are impossible, the canopy can be driven by utilizing risers 'C' and eventually land. Pay close attention to the length of the command, which should be shorter than braking commands.

Warning

- Switch of the engine or keep the motor idling.

EFFECT XT - UP-KEEP AND CARE

- A good maintenance extends the life of your **Effect XT** for many years to come.

STORAGE

It is highly recommended to leave the paraglider stored away and well protected when it's not being used in a dry place, protected from UV light and away from chemical products.

BACKPACK

Your backpack was designed with comfort and practicality in mind. It's format allows for good content distribution. Shoulder straps and back support are padded so that comfort is not compromised during walks.

To facilitate the small volumes handling, the top contains two pockets of different sizes.

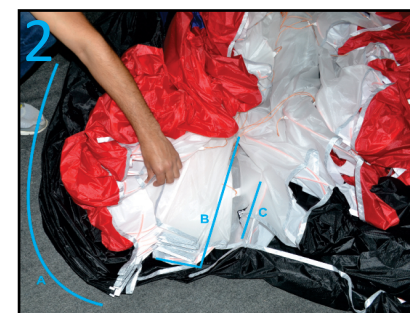
FOLDING YOUR PARAGLIDER

There are various facts that could help to increase the life of your paraglider. One of them is the way how to fold your equipment. To take care of the battens folding the paraglider is essential to maintain the starting and flight characteristics of your paraglider. We recommend to fold the canopy using the origami folding technic and our origami folding bag. With your paraglider comes a traditional bag to store and protect your equipment. Storing it in there is a good beginning to protect the canopy.

Steps to fold the canopy:



Step 1. Open the canopy completely on the ground and fold him in form of a accordion, though you avoid dragging him over the ground.



Step 2. Initiate the folding at the center, placing profile over profile always taking care of the battens (forming the curve of the profile (A). To liberate space for the battens, manage the bottom surface.





Step 3. After folding the battens turn both sides to the center (C), handle the profile of the center to shape the form of the others.



Step 4. Organize the canopy in form of o accordion of both sides and then put one side up the other. Now all battens should be positioned lateral.



Step 5. Open your origami folding bag and localize the cushioned area, there you have to put the battens. After closing the bag fold the part with the battens to the middle, this way they are double protected.



Step 5a. If you use the traditional bag, follow the steps 1 to 4. After this fold the canopy with the battens inside. This way you protect them. Normally the paraglider occupies the whole bag without great compression.

CLEANING

Cleaning must be performed only when it is absolutely necessary. We recommend the use of water only with a smooth sponge or cloth. Do not use any chemical product, since it will damage the material permanently.

MAINTAINS AND INSPECTION

The first inspection check is mandatory completing 1 year or 100 flights, whichever comes first. After the first inspection any wing has to be checked after 6 months or at each 50 flights, whichever comes first. In any of these inspections may occur that a shorter period of time for the next inspection will be defined (f. ex. 4 months or 30 flights). It is of utmost importance to follow these guidelines. Without performing the mandatory inspections, the power glider loses its certification and the respective SOL warranty becomes null and void.

PULLEYS

It is important you keep pulleys lubricated because in case they do not work may consume the speedy handle or axle, apply paraffin or lubricant spray, read carefully about the lubricant to avoid spots and fabric consume.

Do not apply on the sewing lines.

Warning

- When buying the lubricant make sure that this product do not attack the material properties. This may affect the fabric and lines resistance.

RECOMMENDATIONS FOR A LONG LIFE

- The **Effect XT** fabric is made mainly out of Nylon, which like any other synthetic material is sensitive to UV light radiation, causing it to decompose, losing its mechanical resistance, and thus increasing its porosity. For this reason, the unnecessary exposure to sun light, which carries a high UV radiation level in high altitudes must be avoided. It is highly recommended to leave the power glider stored away and well protected when it's not being used.
- The Fllexus lines are made of a aramide (technora), with a Polyester cover. Individual line overloads beyond the normal range in flight must be avoided, because an excessive deformation of the line is irreversible, and becoming permanent. The same way, folding and creasing the lines must be avoided, specially the main lines. Never step over the lines or canopy, above all on hard surface. The canopy must be opened only on a clean surface area, since dirty can penetrate in the canopy's fiber, shorten the lines or spoiling the fabric. The lines must be kept from any entanglements on takeoff to prevent excessive deformation.



- Avoid storing the power glider for long periods in areas with high humidity or heat, this causes premature aging of the materials. Keep away sand, stones or snow from entering the canopy cells because any weight on the trailing edge slows the canopy down, possibly creating a stall, furthermore, sharp corners may cut the fabric.
- During takeoffs and landings in windy conditions, a run-away canopy may hit the ground strongly and the shock may rupture the material. Em caso de emaranhamento as linhas de freio podem esfolar ou uma linha principal pode vir a ser cortada por uma linha de freio, rompendo devido a fricção.
- In case of line entanglement the brake lines may peel-off or a main line may get cut by a brake line, due to friction.
- The manipulation of the paraglider during ground takeoff, or a lot of wind speed up the aging process of your equipment.
- After a tree or water landing, the lines must be checked and tested.
- On landing, avoid letting the Leading Edge fall forward and downward towards the ground because this may damage the materials that form the front of the paraglider and/or rip the sewn areas.
- In case of salt-water contact, the paraglider must be soaked and washed with fresh water. Salt water might decrease the lines' resistance even if soaked with fresh water. The lines must be changed after contact with salt water.
- Never dry the paraglider directly under the sun. This must be done in a shaded area.
- After an accident send the paraglider for inspection to the manufacturer or distributor.

EFFECT XT - REPAIRS

- Always check your equipment after an incident or in case the canopy has been stored for a long time. Repairs must be performed only by the manufacturer, distributor or authorized personnel.
- Minor repairs could be handled by yourself, although we recommend that repairs should be performed by the manufacturer or authorized personnel. They have the necessary materials and tools to maintain your power glider.
- Replace materials only with the originals. Using any other the power glider will lose his warranty.

TEARS

Along with your kit you get small adhesives for repair. Small tears up to 10 cm away from the line points may be fixed by you. Beyond that we advise you the maintenance be made by the manufacturer or by the registered workshop.

- Clean the spot where the adhesive will be applied with a humid cloth.
- It must be at least 2,5 cm more of the adhesive than the tear.
- Make the edges rounded to avoid to unglue after is glue.
- Apply on both sides of the tear.

LINE BREAKAGE

Along with your kit you get a 1.1 thickness line to make a little repair. When you repair we advise you to sew the unsowed point after you check the measure. Do not knot because it may diminish up to 80 % of the line resistance.

SEALING

Along with your kit you get sealing for the carabines. Do not leave your risers without them because they avoid the movement of the screw nut making it impossible their opening.

EFFECT XT - REPLACING THE TRIMMER STRAP

The trimmer tab may be damaged after hours and hours of use. The riser of the Effect XT permits an easy change of the tab.



MAINTAIN OF THE POWER ENGINE

To manage and maintain your engine and components read the manual of your provider carefully.

Warning

- Oil and gasoline are harmful to the structure and components of the power glider.



EFFECT XT - NATURE AND ENVIRONMENT AND OUT OF USE

Please fly in accordance to preserve nature and environment. If your power glider gets out of use remember it cannot be recycled. Please give it to your distributor or your flying-school, they should know how handle it.

EFFECT XT - WARRANTY

Every power glider manufactured has a Warranty of 1 year or 100 Hours of Flight, whichever comes first.

WARRANTY TERMS

1. This warranty is defined as repair or substitution of the defective power glider parts determined by the producer.
2. This warranty does not include power gliders rated for professional use (school, competitions, aerobatics, etc).

WARRANTY PRE-REQUISITES

1. A three-copied filled-out form: One copy to be sent to SOL Powergliders within 30 days after purchase; one copy to the sales person and one copy to the purchaser.
2. All flights must be logged providing information on date, place and length of flight.
3. The equipment must be kept in accordance with the instructions provided in this manual. All the storage, folding, cleaning and care instructions must be carefully taken.
4. Maintenance and inspections can only be performed by the manufacturer or authorized shop and must be properly documented.
5. The first inspection check is mandatory completing 1 year or 100 flights, whichever comes first. After the first inspection any wing has to be checked after 6 months or at each 50 flights, whichever comes first. In any of these inspections may occur that a shorter period of time for the next inspection will be defined. It is of utmost importance to follow these guidelines. Without performing the mandatory inspections, the power glider loses its certification and the respective SOL warranty becomes null and void.
6. The final decision on exchanging or repairing the equipment will be decided by SOL Paragliders.
7. All shipping and handling expenses are paid by the owner.
8. The corresponding equipment has to be sent to SOL Paragliders in the following way:
 - a) Accompanied by a copy of all inspections and a log of all flights.
 - b) Accompanied by a copy of the SOL Paragliders warranty form.

THIS WARRANTY DOES NOT COVER

1. Any alterations on original fabric colors, lines and risers.
2. Any damage caused by chemical products, sand, friction, cleaning products or
3. salt water.
4. Any damage caused as a result of errors during operation of the Power glider, incidents or emergency situations.
5. Any damage caused by inadequate operation of the Power glider.
6. Power gliders that may have been subjected of any alteration from the original design and without proper permission from SOL Power gliders.
7. Damages caused by inappropriate transport, storage or settings of the power glider.
8. Damages caused by the use of not compatible components with the power glider.
9. Damages caused by the use of inappropriate packaging for the transport.
10. Power gliders without original identification label and serial number.
11. Handling inadequately to the instructions given in the owner's manual.



GOLDEN RULES

1. Never place your engine downwind of your wing.
2. Check, check and re-check the fuel system for leaks.
3. Have you enough fuel to get you there? Better too much than too little!
4. Check for any loose articles that could trail or fall into the propeller while flying and fasten them securely.
5. If you spot a problem, no matter how small, deal with it NOW !
6. Always put on and fasten your helmet before clipping in to the harness.
7. Always carry out full pre-flight checks before launching. Try to control the glider on the ground facing forwards so as to keep the lines out of the prop. You should only turn to face the glider to avoid falling backwards onto the motor.
8. Don't fly into danger- over water, trees, power lines etc. where an engine failure will leave you in trouble.
9. Try not to fly into the turbulence of your own wake or that of others, especially at low altitude.
10. Avoid flying in turbulence which is caused by your own engine.
11. It is unwise to fly hands-off below about 100m.
12. Never rely on the engine: it may cut out at any moment. Always fly as if it will, so fly the wing – NOT the motor.
13. Always give attention to the sound of your engine. If hearing something different, land and check.
14. Fly in conformity of our capacity and don't trust yourself too much.
15. Remember, not everyone enjoys your engine noise.
16. Care must be taken when flying near livestock.
17. Warm up the engine before connecting the wing.
18. Always use gloves.
19. Fly with glasses to avoid insects or other objects hitting your eyes.
20. Check the helices connection.

FINAL WORDS

Safety is the major theme of our sport. In order to fly safely, pilots must train, study, practice and be alert to the dangers around us. In order to achieve excellent safety levels, we must fly regularly as much as possible, don't go beyond our limitations and avoid exposing ourselves to unnecessary dangers. Learning to fly is a slow process and takes years, so don't pressure yourself. If conditions are not favorable, keep your equipment stored away.

Don't overestimate your skills and be honest with yourself. Every year we see many accidents which in most cases could be prevented with a minor adjustment.

We are a part of the community in which we live: friends, family and even people we don't necessarily know worry about us. Our obligation towards this community is to keep ourselves healthy and that at each landing we will be one landing happier than before. We fly so that we can feel more alive.

We wish you good and safe flights with your new paraglider.

SOL Paragliders Team !!



TECHNICAL FEATURES

TECHNICAL DATA

PORTUGUÊS	ENGLISH	FRANÇAIS	DEUTSCH	XXS	XS	S	M	L	XL	Unid.
Zoom	Zoom	Zoom	Zoom	0,81	0,84	0,865	0,91	0,955	1	
Células	Cells	Cellules	Anzahl Zellen	53	53	53	53	53	53	
Envergadura Projet.	Projected Span	Envergure projetée	Spannweite Projiziert	7,82	8,11	8,35	8,78	9,22	9,65	m
Área Projetada	Projected Surface	Surface projetée	Projizierte Fläche	14,45	15,54	16,48	18,24	20,09	22,03	m²
Alongamento Proj.	Projected A/R	Allongement projetée	Streckung Projiziert	4,23	4,23	4,23	4,23	4,23	4,23	
Envergadura Real	Real wingspan	Envergure Réelle	Spannweite Ausgelegt	9,72	10,08	10,38	10,92	11,46	12,00	m
Área Real	Real Surface	Surface Réelle	Fläche Ausgelegt	17,12	18,42	19,53	21,61	23,80	26,10	m²
Alongamento Real	REAL A/R	Allongement Réelle	Streckung Ausgelegt	5,52	5,52	5,52	5,52	5,52	5,52	
Diâmetro das Linhas	Line Diameter	Diamètre suspente	Leinendurchmesser	0.6 - 0.7 - 0.9 - 1.0- 1.1 - 1.2 - 1.6						mm
Altura	Height	Suspentage	Leinenlänge	623	644	662	694	726	758	cm
Perfil Máximo	Maximum Profile	Profil Max.	Maximale Profiltiefe	216,27	224	231	243	255	267	cm
Perfil Mínimo	Minimum Profile	Profil min.	Minimale Profiltiefe	62	64	66	69	73	76	cm
Peso da Vela	Weight	Poids	Gewicht	4	4,2	4,4	4,9	5,5	6	kg
Peso de Decolagem*	Take off Weight*	Poids total volant*	Startgewicht*	60-105	70-120	80-135	100-150	115-165	135-180	kg
Afundamento min.	Sink Rate Minimum	Taux de chute mini.	Minimale Sinkrate	1,1	1,1	1,1	1,1	1,1	1,1	m/s
Velocidade min.**	Minimum Speed**	Vitesse mini.**	Minimale Geschw.**	25+/-1	25+/-1	25+/-1	25+/-1	25+/-1	25+/-1	km/h
Velocidade**	Trim Speed**	Vitesse **	Geschwindigkeit**	47+/-2	47+/-2	47+/-2	47+/-2	47+/-2	47+/-2	km/h
Velocidade max.**	Maximum Speed**	Avec Accélérateud**	Mit Beschleuniger**	66+/-2	66+/-2	66+/-2	66+/-2	66+/-2	66+/-2	km/h
Planeio	Glide	Finesse	Gleitzahl	9	9	9	9	9	9	m/s
Assentos	Places	Seat	Plätze	1	1	1	1	1	1	
Certificação	Certification	Certification	Certification	(DGAC)	(DGAC)	(DGAC)	(DGAC)	(DGAC)	(DGAC)	

* Take Off Weight: Pilot , Glider, Harness, Paramotor and equipment ** Performance depends on pilot position and aerodynamic form of the harness.

The identification and information tag is found at the center of the wingtip.



MATERIALS AND LIMITS OF USE

Avoid storing the power glider for long periods in areas with high humidity, heat or extreme cold, this causes premature aging of the materials and could influence the flight characteristics of your glider.

Based on LTF standard:

- Temperatures from -30°C to +70 °C during the storage should not interfere with the security during the use of the equipment.
- Temperatures from -30°C to +50 °C and oscillation of the relative air humidity between 25% and 100% during use should not interfere with the security.
- Remember, you have acquired a high quality product which has been produced with carefully chosen materials. Think carefully about the storage and handling of your power glider.
- The permission of use expires with -30° C.

PARTS LIST AND MATERIAL

All components are high standard and were chosen for a long life of your equipment.

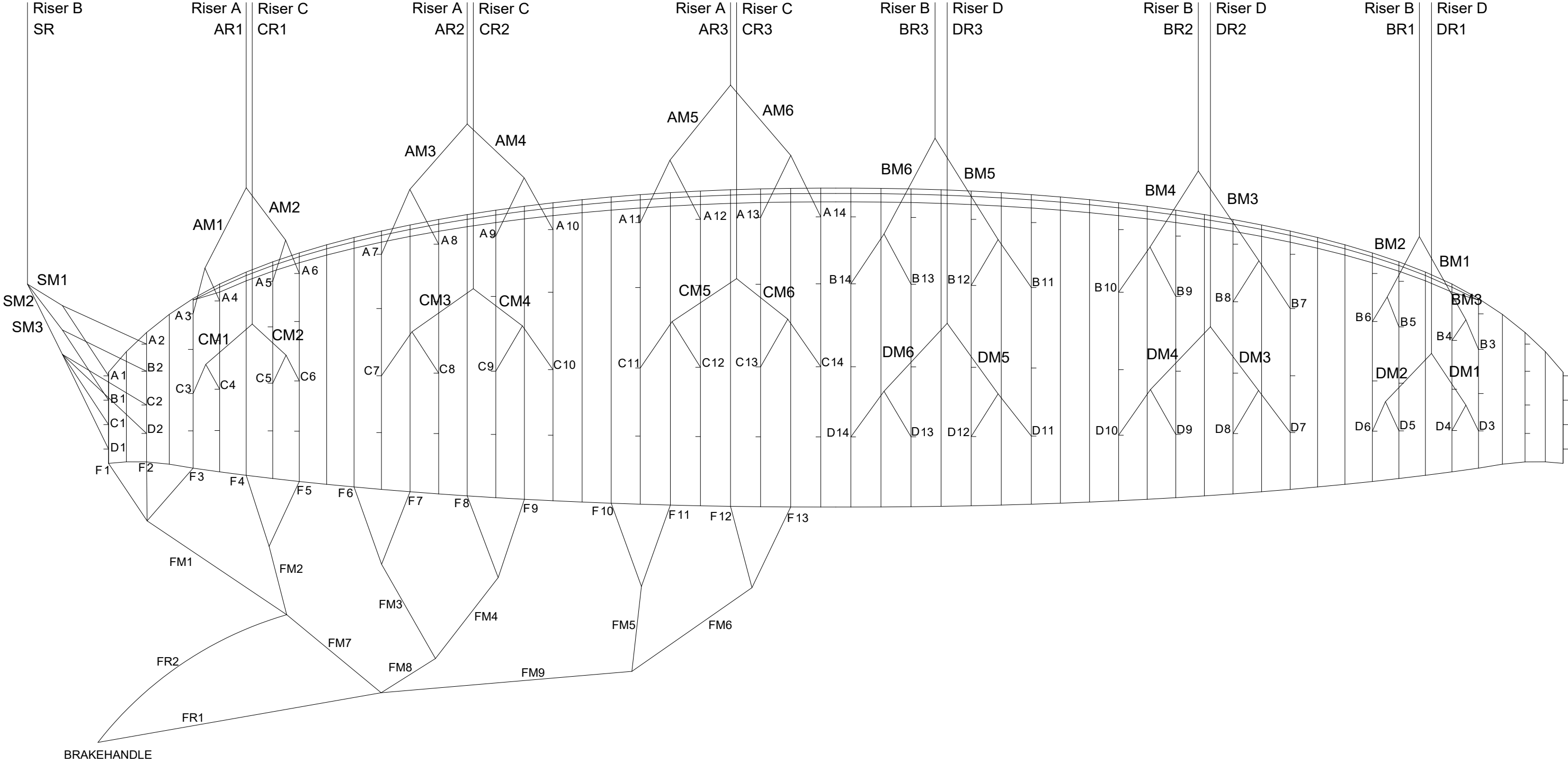
PORTUGUÊS	ENGLISH	DEUTSCH	
Extradorso	Top	Obersegel	Wtx40 / Wtx29 PU+Silicon Coating 40- 29 gr/sm
Intradorso	Bottom	Untersegel	Wtx29 Pu+Silicon Coating 29 gr/sm
Perfis/Reforços diagonais	Profiles/Diagonal Bands	Profile/Diagonalbänder	Pro-Nyl High Tenacity / Nylon Rip-Stop Hard finish 42- 36 gr/sm
Reforços	Reinforcements	Verstärkungen	Nylon Battens (Profile front)
Linhas	Lines	Leinen	PPSLS Liros 0,7 mm, 1,1 mm, 1,2 mm, 1,6 mm - Cousin Vectran 0,6 mm, 0,9 mm, 1,0 mm 1,2 mm
Tirantes	Risers	Gurte	Premium 19 x 2,0 mm flat multi Bl. 1.600 kg
Mosquetinhos	Carabiners	Karabiner	Ansung Precision 19 mm Bl 600 kg
Roldanas	Pulleys	Rollen	ISR / Sol PL14

LINES

The lines are made of technora and polyester. They are known for its high grade of resistance and low stretching overtime.

Tipo de Linha	Type of Line	PPSLS 260	PPSLS 180	PPSLS 125	PPSLS 65	12100 Vectran	12240 Vectran	16330 Vectran	12470 Vectran
Fabricante de linhas	Line manufacturer	Liros	Liros	Liros	Liros	Cousin FR	Cousin FR	Cousin FR	Cousin FR
No. do teste de resistência	Test number of line bending	LKT 1529	LKT 1531	LKT 1630	LKT 0561	Eapr LKT 561	Eapr LKT 560	Eapr LKT 559	Eapr LKT 558
	Required strength untreated	178,1 daN	150 daN	124,9 daN	-	43,7 daN	107,5 daN	118,1 daN	165,0 daN
Diâmetro	Diameter	1,6 mm	1,2 mm	1,1 mm	0,7 mm	0,6 mm	0,9 mm	1,0 mm	1,2 mm
Material do Núcleo	Material Core	Dyneema	Dyneema	Dyneema	Dyneema	Vectran	Vectran	Vectran	Vectran
Material revestimento	Material Cladding	Polyester	Polyester	Polyester	Polyester	-	-	-	-
Resistência das Linhas	Line Strength bended	182,3 daN	142,9 daN	121,40 daN	40 daN	27,9 daN	57,5 daN	85,7 daN	128,9 daN





Size:	
Serial Number:	
Date of purchase:	
Purchased from:	

[illegible]

Owner:	
Address:	
Phone:	
Date:	
E-mail:	

Item	Condition
Cells	
Dacron re-enforcements	
Top	
Bottom	
Leading Edge	
Tabs	
Upper A-Lines	
Upper B-Lines	
Upper C-Lines	
Midle A- Lines	
Midle B- Lines	
Midle C- Lines	
A-Main-Lines	
B-Main-Lines	
C-Main-Lines	
Stabilizers' Lines	
Brake-Lines	
Internal Cell Walls	
Cross Ports	
Maillon Rapides	
Toggles	
Risers	
Porosity	
Observations	





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