

HERCULES 380

You can fly



PARAGLIDERS
www.solparagliders.com.br



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WELCOME TO THE SOL TEAM

You have just acquired a high-quality product, manufactured under one of the most demanding industry standards worldwide.

We are certain that this equipment will allow you to learn, increase and amplify your knowledge and technique during your flights.

We hope your paraglider Hercules 380 will provide you with many nice flights and that you're experiencing moments that will last forever in your memory. This way our philosophy will prove right: security, performance, easy handling and innovation.

Please, read this manual carefully. All necessary information you'll need for your new equipment is right here.

In case of questions or doubts regarding your paraglider or in case you simply are interested in our new products - we are at your disposal.

Thank you very much for choosing SOL PARAGLIDERS.

INTRODUCTION

SOL has a complete and modern line of accessories and wings of Paratrike, ranging from school to middleman.

As we spend a lot of time in the air, whether testing our products, flying for pleasure or breaking local and world records, nothing more coherent

than to take advantage of this time to develop and test our Paratrike wing, seeking innovations in safety, pilotage and comfort.

As with all SOL products, the materials used are carefully chosen, ensuring high durability and a high level of safety. All Paratrike SOL wings are made in their own factory.

The HERCULES 380 is an intermediate Paratrike wing, designed specifically for use on the Paratrike flight, intended for qualified pilots. In this manual you will find information for the correct use and use of your equipment.



Warning

Read the manual and its instructions carefully:

- The flight in this equipment will be carried out under own risk;
- The manufacturer and the sellers do not assume responsibility for the misuse of this equipment
- It is a basic premise that the pilot is enabled to fly from Paratrike;
- Each individual is responsible for maintaining and evaluating the usability of their equipment;
- This manual is not a flight instruction manual with Paratrike. It is assumed that each pilot has a valid handbook and has been instructed by a licensed school. This manual provides the basic information for using the equipment;
- Each pilot is expected to respect the laws and rules relating to Paratrike flight and that his experience and ability correspond to that equipment;
- The HERCULES 380 is designed for this type of advanced pilot:

Pilot Beginner	0 % - Not recommended
Piloto Casual	0 % - Not recommended
Piloto Paratrike	100 %
Pilot Paratrike Tandem	100 %

WING OF PARATRIKE

The HERCULES 380 is a paramotor wing developed for the use of one- or two-seat trikes. It achieved and put the good levels of safety, speed, plan and ease of handling within the category.

It is a fast, high-performance wing for experienced pilots who want to enjoy a simple flight or even the longest flights.



Features

The HERCULES 380 canopy was given extra attention by the development team who received numerous suggestions from SOL dealers around the world. Look at the results:

Braces - resized and reinforced for ease of handling, uncomplicating the use of trimmer, throttle and controls.

Take-off - easy inflating in short space facilitating the use of engine power.

Landing - Prolonged solo effect, facilitating stopping time (stall).

Collapses - Use of reflex technology, reducing the possibility of collapses.

THE PROJECT

The HERCULES 380 combines our technologies for performance, safety and durability:



HPAR - High Project Aspect Ratio:



LCT - Laser Cut Technology:



HTM - High Tech Materials:



PBP - Pressure Booster Profile:



Full Hybrid Technology:



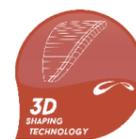
Mini Ribs:



SMSR - SOL Maxi Stable Reflex:



BT – Batten Technology:



3D Shaping:

HERCULES 380 - TECHNICAL DATA

		38	Unid.
Zoom	Zoom	1	
Células	Cells	42	
Envergadura Projet.	Projected Wingspan	11,53	m
Área Projetada	Projected Surface	33,43	m ²
Alongamento Proj.	Projected A/R	3,97	
Envergadura Real	Real Wingspan	14,20	m
Área Real	Real Surface	38,36	m ²
Alongamento Real	Real A/R	5,26	
Diâmetro das Linhas	Line Diameter	1,0 - 1,2 - 1,5 - 2,1 - 2,5	mm
Altura	Height	883	cm
Perfil Máximo	Maximum Profile	3,32	cm
Perfil Mínimo	Minimum Profile	0,98	cm
Peso da Vela	Weight	8,8	kg
Peso de Decolagem*	Take off Weight*	180/380	kg
		396/836	lbl
Afundamento min.	Sink Rate Minimum	1,4	m/s
Velocidade min.**	Minimum Speed**	32+-1	km/h
Velocidade**	Trim Speed**	52+-1	km/h
Velocidade max.**	Maximum Speed**	65+-1	km/h
Planeio	Glide	8	m/s
Assentos	Places	2	
Certificação	Certification	DGAC	

- * Weight: Trike + Pilot + Paraglider + harness + Equipment
- ** The performance depends on the pilot position and the aerodynamic shape of his tricycle.
- The takeoff weight changes the speed range.**

MATERIALS

- **Top / Bottom:** Wtx40 PU+Silicon Coating 40 gr/m2
- **Profiles/Diagonal tapes:** Pro-Nyl High Tenacity - Nylon Rip-Stop Hard finish Strong 58gr/m2
- **Reinforcements:** 2,5 mm Nylontab (Profile front)
- **Lines:** Cousin Technora 2,5 / 2,1 / 1,5 / 1,0 mm
- **Risers:** Premium 24 x 2,4 mm Flat Multi 1600kg
- **Quick Links:** Ansung Precision 22 mm BI 800 kg
- **Pulleys:** SOL PL14

All of these components are of high quality and have been selected for the longest life of your equipment.

OPERATION LIMITS

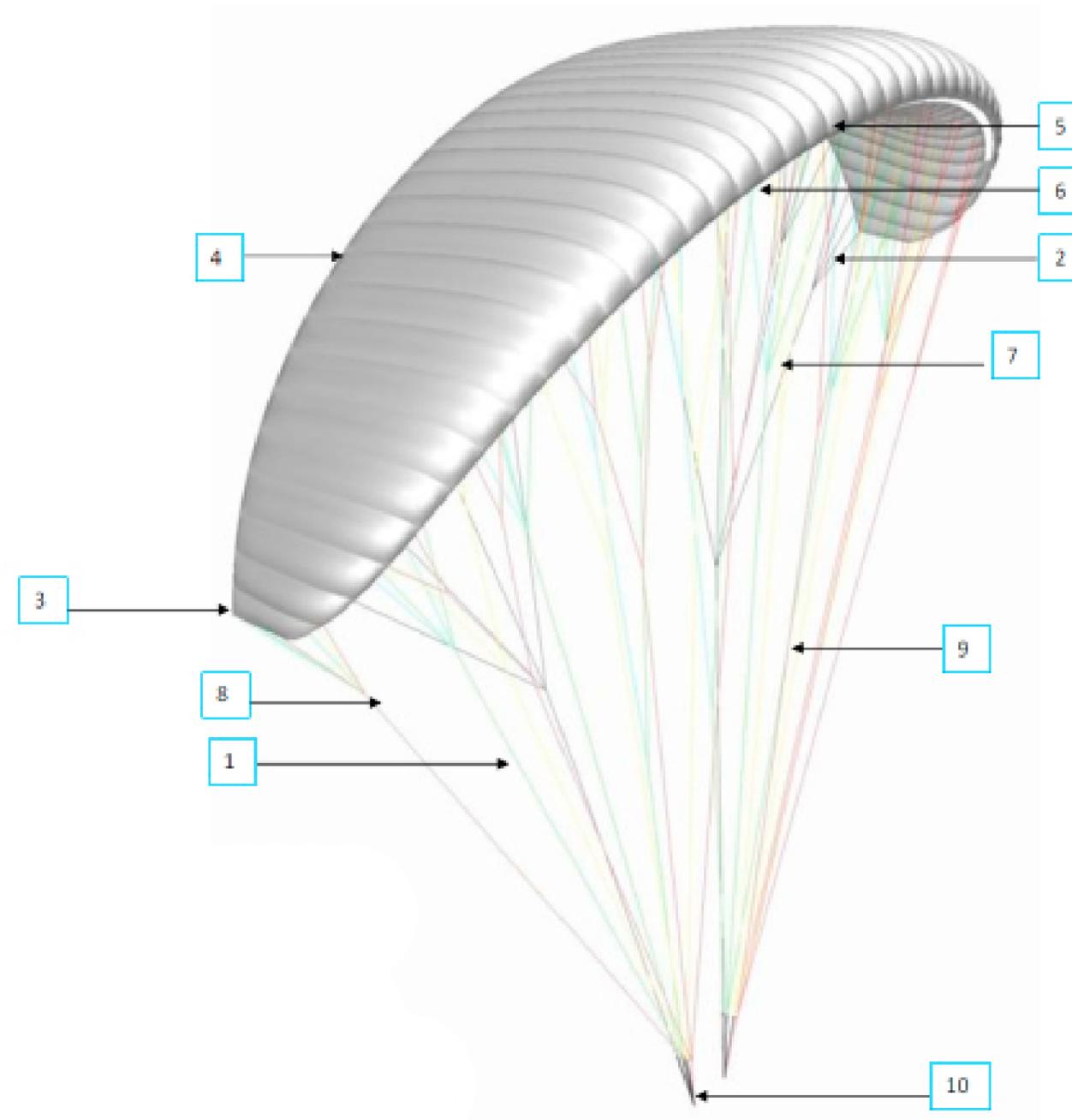
Based on LTF standard:

Temperatures between -30 degree till +70 degree of Celsius during the storage shouldn't influence the use and security.

Temperatures between -30 degree till +50 degree of Celsius and a variation of humidity between 25% and 100% during the use shouldn't influence the use and security.

Remember: Your product is a high quality product and was made out of carefully chosen materials. Store your equipment carefully and keep up the maintenance. The operating temperature limit is below -30° C.

OVERVIEW PARAGLIDER

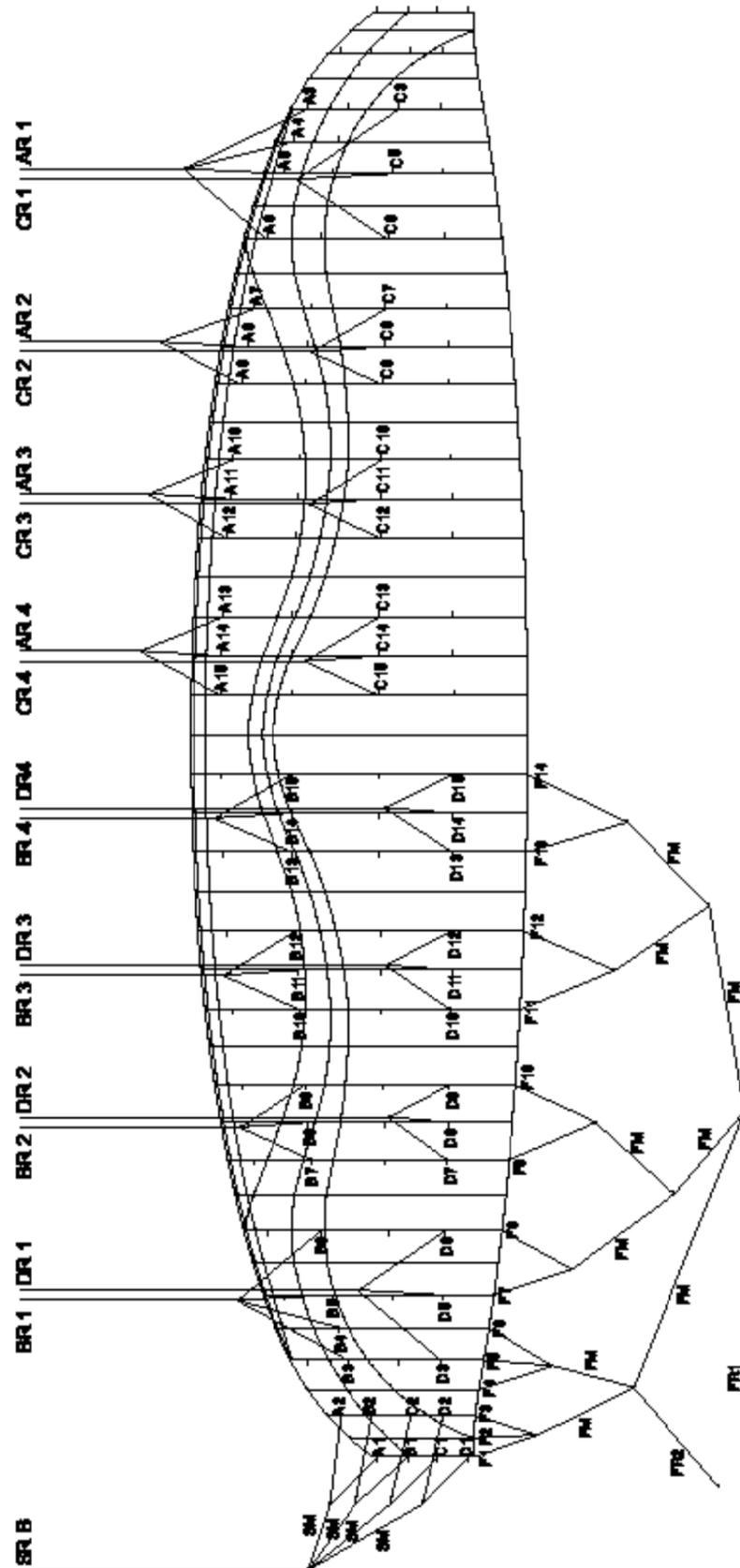


1 - Brak lines
2 - Top lines
3 - Stabilizer
4 - Trailing edge
5 - Tag

6 - Leading edge
7 - Medium lines
8 - Stabilizer lines
9 - Main lines
10 - Risers



HERCULES



LINE SUSPENSION SYSTEM

The main lines of the HERCULES 380 consist of a beige Technora core of high tensile strength and low deformation, covered by a colored polyester mantle, the main and brake lines are individual lines, with ties sewn at both ends.

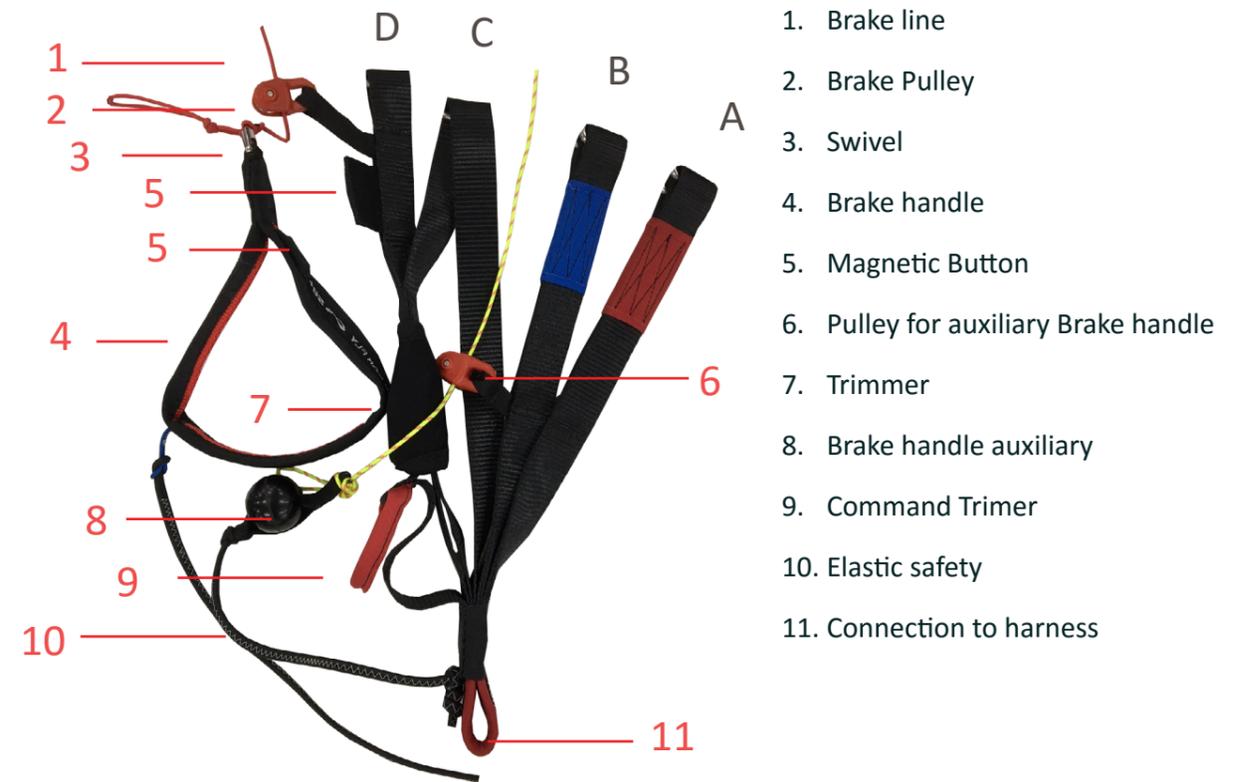
The top lines (connected to the in bottom) and the main lines, which are connected to the Quick Links, are distinguished in the set, which, in turn, connect the main lines to the Risers. The lines of the stabilizers are connected to the same Quick Links of Riser B. The lines of the brakes leave the trailing edge through the master line and connect to the bungs, passing through a pulley attached to the Riser D.

The lines of the brakes are differentiated from the others to facilitate the preparation of the take-off. The Quick Links are triangular, made of stainless steel.

In the master lines of the brakes there is a mark and the correct adjustment point, at which point the Brakehandle are fastened. This adjustment should not be changed.

RISERS HÉRCULES 380

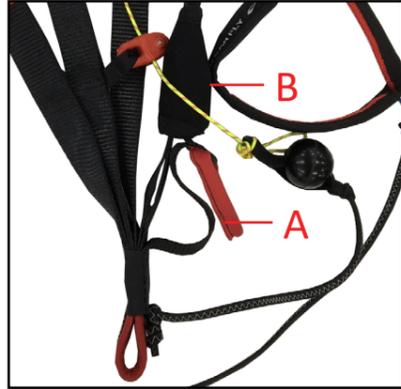
The HERCULES 380 has trimmer and 4 Risers on each side: Riser A, B, C and D.



AUXILIARY COMMAND

The HERCULES 380 has an auxiliary control, this item helps to perform small steering corrections when the trimmer is released, or to execute more closed turns by activating the break handle with the auxiliary control when the trimmers are closed, resulting in lighter controls.

TRIMER



Pulling the red trigger (A) down you will be closing the trimmer and pressing the black trigger (B) you will be releasing the trimmer.

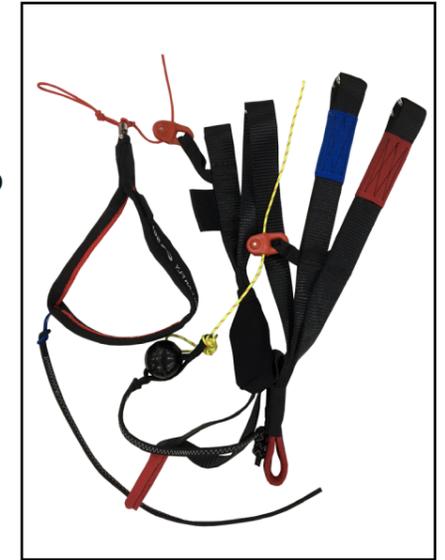


With the trimmer released the Risers A and B are aligned and C and D are misaligned, increasing the speed and resulting in heavier controls. This position is ideal for takeoffs and Cross country.

	A	B	C	D
OPEN	40 cm	40 cm	41,5 cm	43 cm

With the trimmer closed the Risers A and B are aligned and C and D are misaligned, decreasing the speed and resulting in light controls.

	A	B	C	D
CLOSED	40 cm	40 cm	38 cm	36 cm

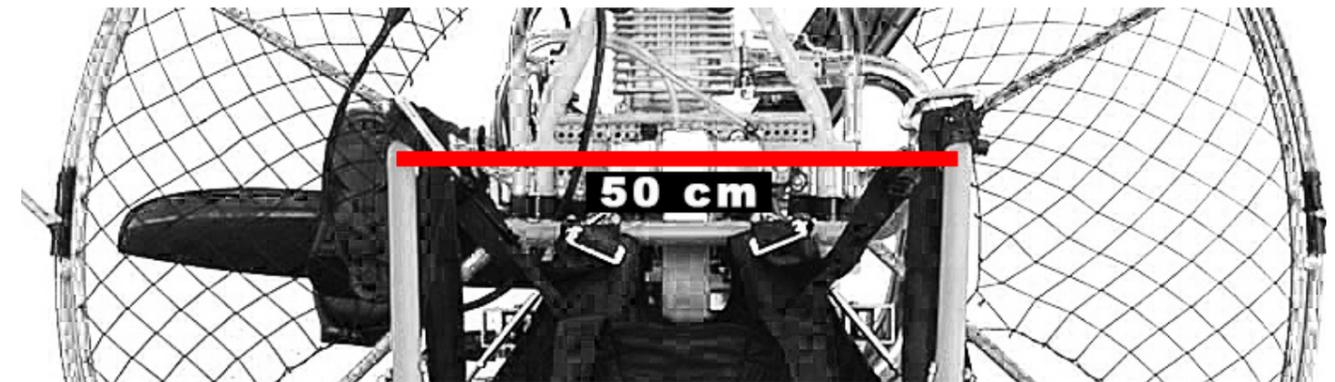


Warning

- Trimmer activation makes the wing more vulnerable to collapse, reactions can be aggressive. Avoid use at low height. Never drop the brake handle!
- In case of rainfall during the flight we suggest opening the trimmer fully and landing as soon as possible;
- It is not advisable to fly with the HERCULES 380 on rainy days or with the wet Paratrike wing, as the paraglider becomes more sensitive and a parachute may occur.

DISTANCE BETWEEN CARABINERS

The regulated distance between the large clips (adjustable at the chest) is 50cm for the Hercules 380. Variations of more than 5 cm above these ones will alter the fundamental characteristics of the canopy and are potentially dangerous.

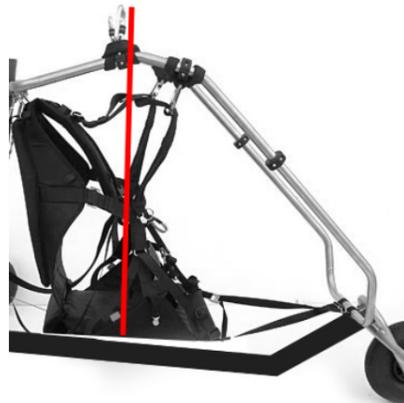


CONNECTING PARAGLIDER IN TRIKE



Warning

Depending on the type of structure of the trike there may be a change in the lengths of the command leaving shorter or longer, the place where the paraglider is connected defines these changes.



FLIGHT

FIRST FLIGHT

A careful First Flight is necessary with every power glider, the HERCULES 380 is no exception. This flight must take place on a practice hill. After unpacking the power glider and laying out 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 Hercules 380 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

- 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 HERCULES 380

It is easy to take off with the HERCULES 380. The pilot, ready to take off, must hold only the controls (Brake Handle), before the inflation is mandatory a last look of control on the extended equipment, done that it begins slowly its takeoff giving rotation to the engine progressively up to approximately 50% of its capacity by bringing the canopy over its head, with the possibility of eventual correction in the direction.

Make sure the paraglider is over your head and stabilized. At this point the pilot decides to take off or not. If the sail starts to prop up the Paratrike increase the engine speed causing its speed to increase and consequently the take off to take place.



Warning

- At takeoff time the engine acceleration may vary depending on the wind.
- With wind at the takeoff is easier using less takeoff area and engine power.
- It is extremely important to avoid lateral oscillations of the paraglider at the time of takeoff as the Paratrike may tip over.
- Avoid taking off with maximum acceleration, the Paraglider is in a later position in relation to the trike, an excess of command during take-off can occur a stall, occasionally an accident or a break during the first few meters can bring complications.
- For a takeoff and landing with a Paratrike you need a larger landing strip.



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 hercules 380 has its best performance with closed trimers

Turns

The Hercules 380 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.

If it is necessary to make curves with the HERCULES 380 in a small space, it is recommended to pull the curve control assistant together and pull the brake further on the inner side.



Warning

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

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 Hercules 380 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.

Active flying

For best performance during your flight, it is important to be always sensitive to what your canopy is trying to communicate. The key elements of active flying are: controlling the canopy advancement and the canopy pressure. If you apply gently the brakes (about +- 15cm) you are getting a good feedback about the canopy pressure, which can alter easily in turbulent air. You can feel it very well on the brakes. The general idea: keep the pressure constant.

Avoid flying excessively with the brakes on, cause you might brake to the point of stopping the canopy from flying. Always consider your aerodynamic speed. Your movements can be symmetric or asymmetric and both or one brake can be applied. This corrections control your flight and reduce the risk of collapses. We suggest that you practice on the ground. Canopy advancement and pressure loss can be simulated well on the ground.



Warning

- No pilot and no paramotor wing are immune to collapses however active flight will lessen tendencies to collapses.



LANDING WITH HÉRCULES 380

It's very easy to land with the Hercules 380. 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. Com vento forte contrário o piloto deve frear muito levemente ou eventualmente nem frear, acionar os freios num pouso com vento forte pode deixar a vela totalmente exposta ao vento, com consequente arrastamento do Paratrike para trás, fique atento para esta situação.

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

- For a takeoff and landing with a Paratrike you need a larger landing strip.

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!

POSITIVE SPIRAL

The Sol Paragliders do not recommend the use of spirals with the Hercules 380, because the G force is very aggressive for the construction of the equipment.

BEHAVIOR IN EXTREME MANEUVERS AND COLLAPSES



Warning

- During all extreme maneuvers or incidents stop the engine or keep it at low speed and using the trimmer closed.
- Extreme maneuvers must be performed under the supervision of a qualified instructor, only in safety courses, with all infrastructure and at the water!

Lateral closing

Active flying almost ever avoids lateral closing. If lateral closing happens the canopy folds predictable and progressively from the tip to the center. This corresponds a collapse of 50% or more and results in a slight tendency for a turn. The glider can be held on course using the brake on the open side.

Normally the paraglider opens on his own. If the collapse happens during accelerated flight the canopy has a more dynamic reaction, but even than the turn can be controlled without problems.

To facilitate the closed side to fill the pilot has to pull down slowly (ca. 2 seconds) the brake on the closed side and let go again (pump). Shifting the weight to the open side helps to re-inflate the sail and increases security, cause the brake has to be used less and this avoids a full-stall.

Without action, the paraglider 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 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 spiral is not actively terminated by the pilot, it will continue to the ground!



Line over

If the tip of the wing is trapped in lines it could cause a positive spiral, which is difficult to control. To get out of this situation, first stabilize your wing and get him into normal flight. In other words control direction. Then pump on the side of the Line Over. During this procedure lean on the opposite side, otherwise there is a risk to turn or increase the spiral.

You also may try to pull the stabilo lines SR, the outer lines on the blue riser B, to free the canopy. Watch out for the brake to avoid a stall on the clean side.

If the Line Over is big and all the counter action does not help and the glider is not to manage, release the reserve, whilst you are having height enough.

Warning

- Ties usually happen in the poor preparation of the equipment in the takeoff, collapses in acrobatics or lateral asymmetric closures.

Front-stall

Normally the paraglider opens on his own after a front-stall. In turbulent conditions it may happen that the canopy make a fast movement forward, in order to avoid another front-stall it is necessary to apply the brakes precisely.

Caution: If the brake lines are applied too much the glider could get into a full-stall.

Warning

- Turn the engine off or leave it at low speed.

Parachutal

This paraglider does not have parachutal flight tendencies and recovers on its own from an intentional parachutal flight induced by braking commands. In case of a parachutal flight after an extreme situation loose the brakes and use the accelerator. Before using the brakes again make sure that the glider flies normally..

Warning

- If the glider is wet or the regular inspections weren't made, the risk of a parachutal flight exists.
- Turn the engine off or leave it at low speed.

Full Stall

Warning

The Hercules 380 has a long way on the brakes before he enters a full-stall. A full-stall happens if the brakes are pulled symmetrically and excessively downwards. Normally the glider starts to fly backwards and deforms to a horseshoe, the opening on the front.

Before terminating the canopy must be stabilized. Afterwards both brake lines have to be loosened symmetrically and slowly, to avoid that the canopy kicks forward.

Negative spiral

The hercules 380 has a long way on the brakes and difficulties to enter in a negative spiral. But if one of the brakes is extremely pulled downwards it can happen.

The side with the brake pulled down enters in a stall, while the other side maintains open. In this case the brake must be loosened at once, before the glider turns 180°, in order to get the glider back to normal flight. Depending on the situation in which the brake is loosened, the canopy can react quite dynamic and kick forward provoking a collapse.

Warning

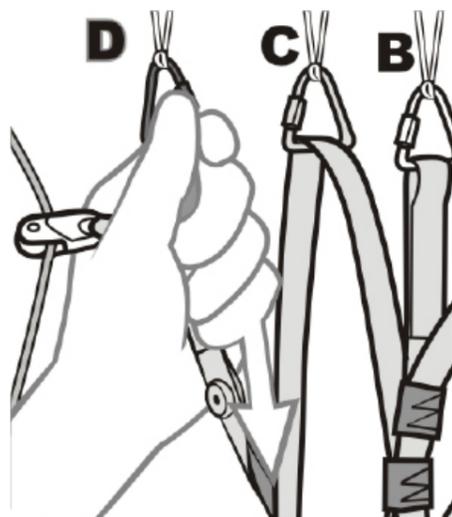
- Turn the engine off or leave it at low speed.

Emergency flying

In case of a brake line crack or the brake line is trapped or anything else happened and doesn't allow to use the brakes, use the D risers and weight shifting to steer the glider. Land on the nearest possible side. This situation could happen in case of poor maintenance of the equipment or an extreme flight situation



Attention: the steering commands on D risers are much shorter than on the brake lines.



Warning

- Turn the engine off or leave it at low speed.

Wingover

Warning

- A curve with lateral slope greater than 60° is considered acrobatics.
- The Hercules 380 is not designed for acrobatics. The Sol Paragliders does not recommend this type of maneuver.

Orelhas e B Stall

Warning

- The Sol Paragliders does not recommend this type of maneuver.

HERCULES 380 - UP-KEEP AND CARE

Warning

- A good maintenance extends the life of your **Hercules 380** 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

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

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

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

3 - After folding the battens turn both sides to the center, handle the profile of the center to shape the form of the others.

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.

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.

6 - 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 **HERCUOLES 380** 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 HERCULES 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 esfoliar 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.



Warning

- Your HERCULES 380 has been designed and tested to have the best performance safely.
- Any modification made to your paraglider may invalidate the approval. For these reasons we recommend that you do not change anything from your paraglider.

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

Juntamente com seu kit você esta recebendo lacres para os mosquetinhos, não deixe seu tirante sem estes pois eles evitam o movimento da porca, impossibilitando sua abertura.

Maintain of power engine

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



Warning

- Lubricants and gasoline affect the structure of paramotor wing components.

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.

Warranty

Every paramotor paraglider has a Warranty of 1 Year or 100 Hours of Flight, whichever comes first. Our development technology, through the utilization of quality materials and the adoption of new manufacturing processes, allows us to offer you, our client this added bonus. This warranty is defined as repair or substitution of the defective equipment parts determined by the producer

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

- 1º) You must fill-out form ([Fill the form here](#)) within 30 days after purchase;
- 2º) All flights must be logged providing information on date, place and length of flight;
- 3º) 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;
- 4º) Maintenance and inspections can only be performed by the manufacturer or authorized shop and must be properly documented;
- 5º) The annual inspection is compulsory, or at each time it completes 100 flights in less than one year (whichever comes first). Without these inspections the certification and respective warranty shall be deemed invalid;
- 6º) The owner is responsible for all shipping expenses to and from the manufacturer;
- 7º) In order to make a plea for repair or equipment exchange, or equipment repair, which shall be decided and performed only SOL Paragliders, the owner must send the manufacturer the following:
 - a) The Paraglider in question, and copies of all previous inspections and flight registry;
 - b) Filled-out Warranty [Registration Form](#) SOL Paragliders.

This warranty does not cover

1. 1º) Any alterations on original fabric colors, lines and risers;
2. 2º) Any damage caused by chemical products, sand, friction, cleaning products or salt water;
3. 3º) Any damage caused as a result of errors during operation of the product, incidents or emergency situations;
4. 4º) Any damage caused by inadequate operation of the product;
5. 5º) Products that may have been subjected of any alteration from the original design and without proper permission from SOL Paragliders.
6. 6º) Damages caused by inappropriate transport, storage or settings of the product.
7. 7º) Damages caused by the use of not compatible components with the product.
8. 8º) Damages caused by the use of inappropriate packaging for the transport.
9. 9º) Products without original identification label and serial number.
10. 10º) 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 to 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 !!

HERCULES³⁸⁰

You can fly



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