

Manual



DGAC



Version 3 7 / 2023

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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 Runner XC 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.

## Symbols



Warnings and important notes - pay attention and read carefully



Additional information



Notes regarding environment protection



# IMPORTANT NOTES

- As owner of a Sol Paraglider you are responsible for all possible risks existing by using this equipment. The inappropriate and/or abusive use of your equipment increases this risks.
- It's not possible to transfer this responsibility of risks, using this equipment, to the producer, distributor or seller.
- A regular training, whenever possible, especially on the ground, is indispensable and necessary. A poor handling and control of the glider, especially on the ground, is one of the most frequent causes of accidents.
- Always be prepared to improve your skills. Attending special workshops will improve your skills and maintain your knowledge about materials and techniques, which always are developing, up to date.
- Only use a certified paramotor wing and reserve and use them within the described and certified limits. Remember, if you fly a paramotor wing outside the certified norms your insurance will not pay the damage. It is in your responsibility as a pilot to know what your insurance covers.
- Sol Paragliders is flying and testing every single paraglider produced, to assure our clients full quality and function of every glider. We recommend that every new or reviewed paraglider will be tested on the ground and flew from the training hill by his pilot.
- Never take off without helmet, hand-gloves and boots.
- Check all your equipment before each flight. Never take off with an inappropriate or damaged equipment.
- As pilot you only are allowed to use a paraglider in accordance to your skills and in accordance to the instruction level required in each country.
- Before each flight check your physical and mental state. Are you fit to fly?
- Before take off choose the right paramotor wing and environment, check the weather conditions, if you have any doubt - don't fly.
- Never fly during rain, snow, strong wind, turbulent conditions or if thunderstorm clouds are in the sky.
- If you are always flying with conscious - you'll be able to fly for many years your paramotor.



# Runner XC - THE PROJECT

The Runner XC is our new paramotor wing for experienced pilots looking for comfort and speed paired with engine and fuel economy on long distance flights.

Its performance is linked to speed gain and comfort on long flights. In thermal conditions, its stable behaviour provides safety combined with a good soaring.

The Runner XC is available in 7 sizes.

For long distance flights with comfort and fuel economy we recommend flying up to the middle of the weight range.

For pilots looking for more agility and speed over fuel consumption we recommend flying close to the indicated maximum weight.

The wing has a 3-4 line hybrid configuration since only such an arrangement allows full adjustment of profile geometry through trimmer operation.

## Recommendation

The Runner XC is the evolution of the Flexus and Auster GT and will fulfil the expectations of the most ambitious pilots with a minimum of 80 hours of experience.

## Certification

The Runner XC has a DGAC certification. The certification details are available on: [www.solparagliders.com.br](http://www.solparagliders.com.br).

## Special characteristics

Comfort - Security - Performance - Easy handling - Long life

## Accessories

Along with your paraglider you receive:



REF - 04364



REF - 04379



REF - 04330



REF - 04047



REF - 04311



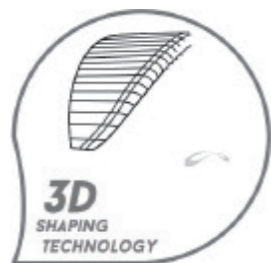
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### Tecnologias



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.



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



Is a hybrid system of risers and lines to guarantee stability, reduction in line consumption and a better load distribution on the canopy with significantly less deformation tendency over the time.



Adjustment system that generates more lift in flight.



Higher Project Aspect Ratio.



Dual Control.



Cross X battens strengthening the nose profile.



Greater lift (glide) due to optimization of the central area of the wing with less inclined profiles and a more homogeneous pressure distribution over the whole canopy wingspan resulting in gains of glide and speed.



New Air Foil design increases and keeps the internal pressure more estable and results in more performance in all speed range.



Is the hybrid utilization of various types of fabrics and lines. An optimised combination of durability and resistance with low deformation and less weight.



Cutting edge technology laser equipments prepare all molds and parts of the canopy.



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.



Load Distribution Tapes.



## Overview paraglider

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

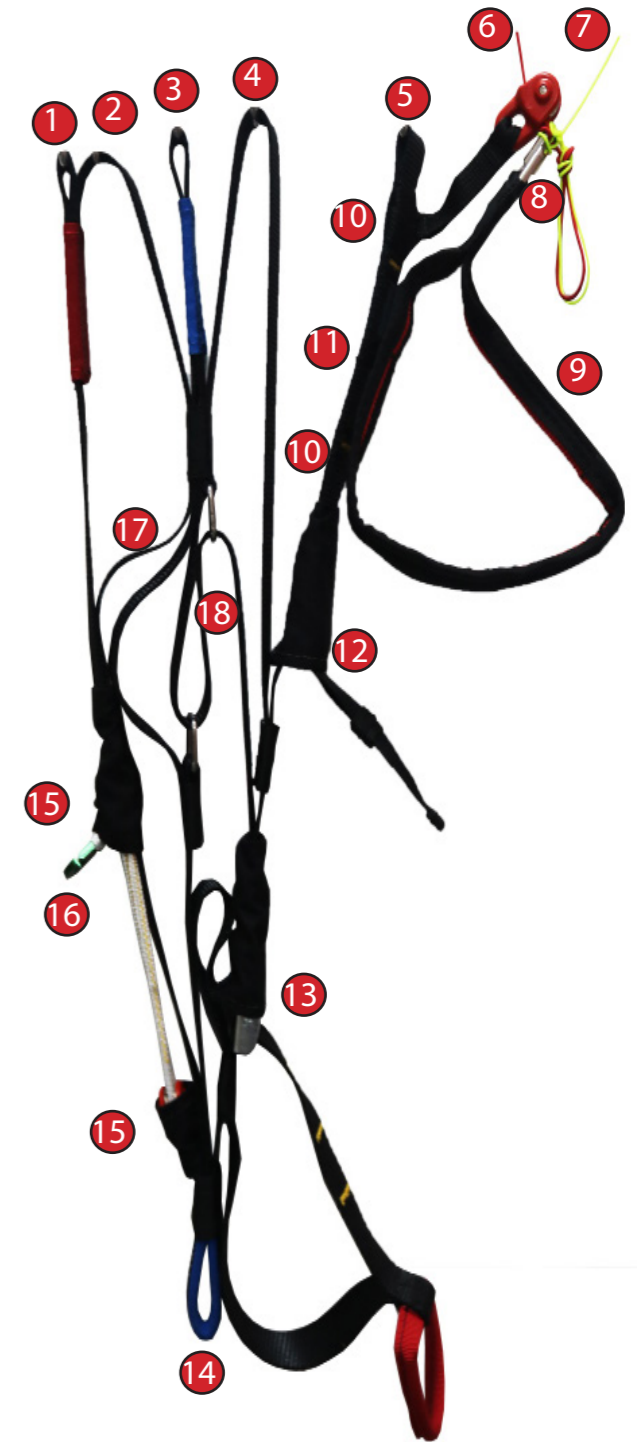


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## Overview risers

1. Riser A.
2. Riser A'.
3. Riser B.
4. Riser C.
5. Riser D.
6. Brake lines.
7. Auxiliary brake lines.
8. Toggle connection.
9. Toggle.
10. Toggle adjustment.
11. Magnetic button.
12. Flaps.
13. Trimmer.
14. Connection to harness.
15. Accelerator.
16. Accelerator connection.
17. Speed system.
18. Trimmer system.



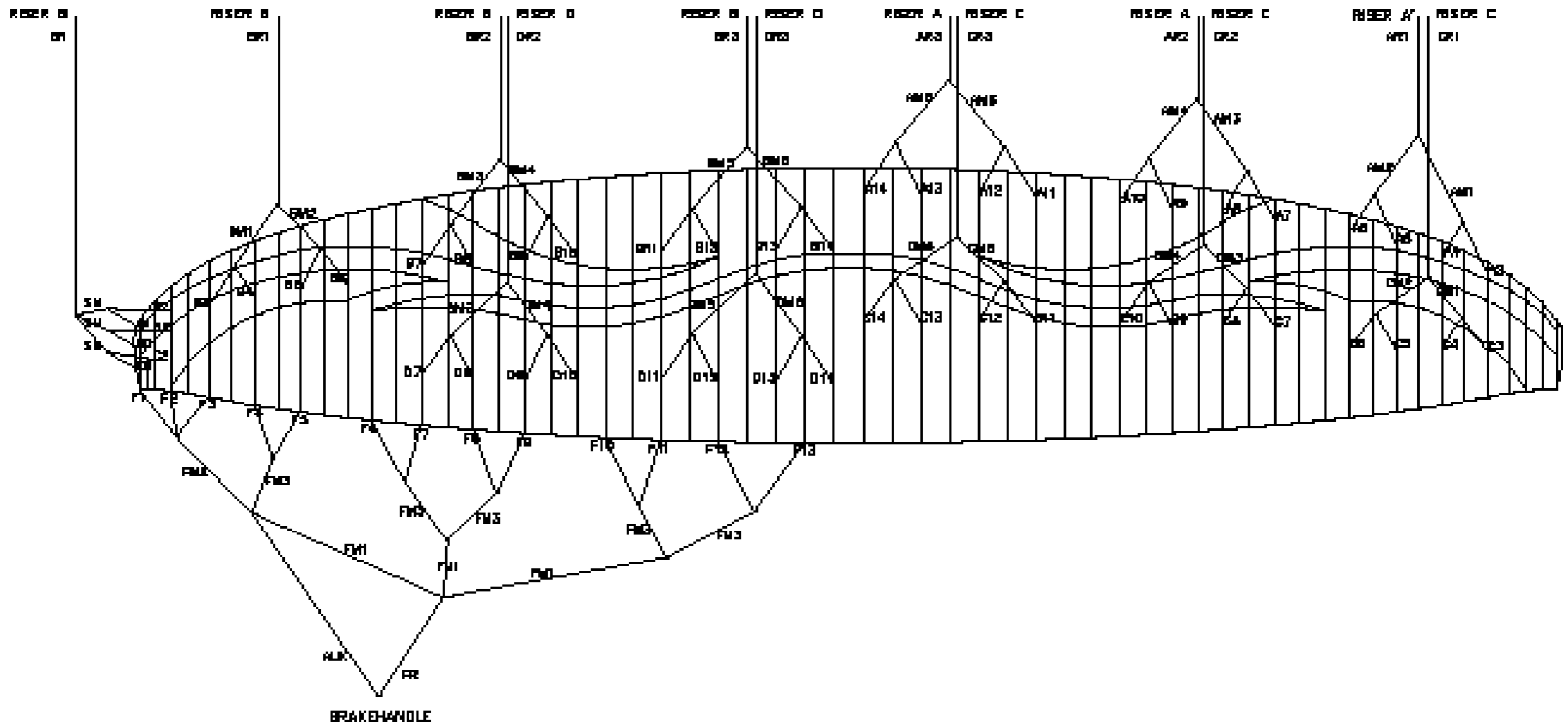
### Line plan

The suspension point design was developed for an ideal weight distribution and long life. During all consideration and calculation, security always is our first goal.. The used material mix for the lines of the Runner XC forms an ideal combination: long life with little deformation and aerodynamic drag.



Never and under no circumstances the line length can be altered!

# Runner XC



# THE PARAGLIDER - INFORMATION

## Take off weight

Each paraglider size is dedicated to a certain weight range, from a minimum take off weight to a maximum. The take off weight is the sum of the weight of:

1. The pilot.
2. Paramotor wing.
3. The paramotor with reserve.
4. All flight accessories.



It's not recommended to fly outside the weight range.

If your take off weight is between two weight ranges we suggest the following procedure:

- For a more accurate and dynamic handling or if you usually fly in the mountains and/or turbulent conditions, you should choose to fly in the upper weight range.
- For a better sink rate and if you usually fly above flat land and in light weather conditions, you should choose to fly in the lower weight range.



## Tow release take off

The Runner XC can be used for towed flight. The used equipment must be certified, the team handling the equipment must be licensed and you must have done a workshop learning this take off. Always use the special tow connection. The take off only should be done if the canopy is filled completely and steady above the pilots head.



## Tandem flight

The Runner XC was not designed and is not certified for tandem flight. SOL Paragliders doesn't recommend this type of flight.

# PREPARING FOR FLIGHT

## Laying out the paramotor wing

- Choose an easy training elevation with less inclination for the first flight, without obstacles and a day with easy weather conditions.
- Open your canopy and lay him down in shape of a horseshoe.
- Check fabric and lines, if there is any damage or fatigue caused by wear.
- Check if all quick links are closed.
- Identify, separate and organize all risers A, A', B, C, D and the brake lines.



It is extremely important that there are no entanglements and/or bunched lines present.

## Harness

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



If the distance is not within the range, the glider could have extreme, dangerous or abnormal reaction in flight.

### Connecting paraglider and harness

Without twisting the risers connect them with the carabiners of the harness. Check if they are connected and positioned in the right way without any twist. The A riser must be in front in flight direction.



Check if the carabiners are really locked and closed!

### Accelerator

The Runner XC risers are equipped with trimmer, flaps and speed system. It can be used in different configurations. It's very important pay attention for the best performance and safety that you wish.

Most of modern harness have pulleys for assembling the Foot Speed System. The line must be firmly attached to the stirrup. The other end of the line is fed through the harness' pulleys and comes out vertically, and must be firmly attached to the clip of the quick look.

In order to adjust the Speed System, we suggest that you connect the harness and the risers, suspended from the ground. Ask a friend to pull the risers (A) upwards. At this time, adjust the length right to the bar in such way to be easily reachable with your feet in flight and by stretching the legs, make sure to allow for a clear path to maximize the accelerator usage.



A	A'	B	C	D
45 cm	46,5 cm	48,5 cm	53 cm	58 cm

No Foot speed System - Open Trimmer - Open Flaps

Recommended for wind transitions



Measure without quick links



A	A'	B	C	D
45 cm	46,5 cm	48,5 cm	53 cm	55,5 cm

No Foot speed System - Open Trimmer - Closed Flaps



Measure without quick links



A	A'	B	C	D
45 cm	45 cm	45 cm	45 cm	43 cm

No Foot speed System - Closed Trimmer - Closed Flaps

Recommended for low flying or turbulent conditions



Measure without quick links



A	A'	B	C	D
45 cm	45 cm	45 cm	45 cm	45,5 cm

No Foot speed System - Closed Trimmer - Open Flaps

Recommended for downwind or scenic flight



Measure without quick links

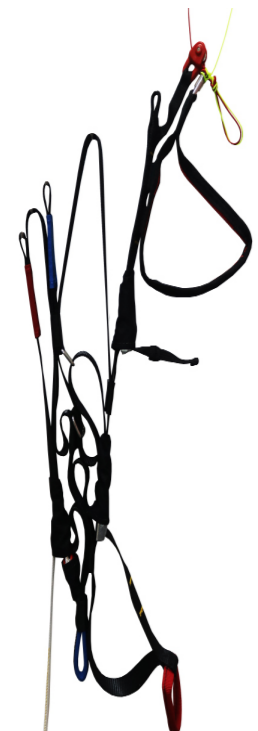


A	A'	B	C	D
34 cm	35,5 cm	37,5 cm	41 cm	43 cm

Foot speed System - Closed Trimmer - Closed Flaps



Measure without quick links



A	A'	B	C	D
34 cm	35,5 cm	37,5 cm	41 cm	45,5 cm

Foot speed System - Closed Trimmer - Open Flaps

Recommended for small wind or descendant area transitions



Measure without quick links



A	A'	B	C	D
34 cm	35,5 cm	37,5 cm	47,5 cm	55,5 cm

Foot speed System - Open Trimmer - Closed Flaps

Advised for short short runs  
Avoid using the brakes



Measure without quick links





A	A'	B	C	D
34 cm	35,5 cm	37,5 cm	47,5 cm	58 cm

Foot speed System - Open Trimmer - Open Flaps

Avoid using the brakes



Measure without quick links



Step 4. Undo the loop.



Step 5. Set to setting option.



Step 6. Open the loop.

### 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, the original adjustment which works with most of the power units on the market.the toggles by 10 cm.



Step 1. Open the toggle knot.



Step 2. Remove the toggle.



Step 3. Remove the line.



Step 7. Closed the loop.



Step 8. Pass the main line inside the pulley



Step 9. Close the node with the main and auxiliary line.

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.



# COMMANDS WITH REFLEX PROFILE

Paramotor wings are generally made with reflex profile (auto stable), the degree of stability is determined by each paramotor wing model.

This stability helps to get through small turbulences, so you can take better advantage of wing speed without having to act on the controls.

By following the profile commands and their tightness, without first time, the paramotor wing has a tendency to advance, then slowing down with the trimmer open, is practically unnoticeable with the trimmer closed.

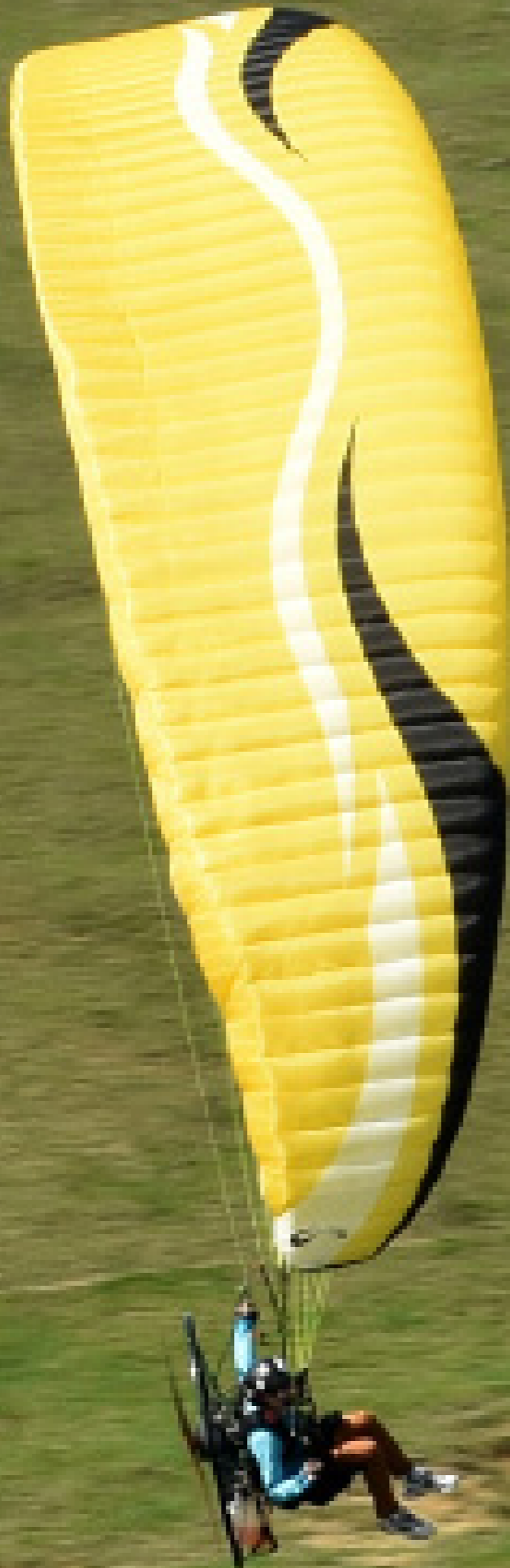
In stronger and turbulent flight conditions, closed trimmer flight is recommended to ensure better control of the paramotor wing.

## 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 2 (cm) open to improve the inflation, the start speed depends on brake use.

## 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.

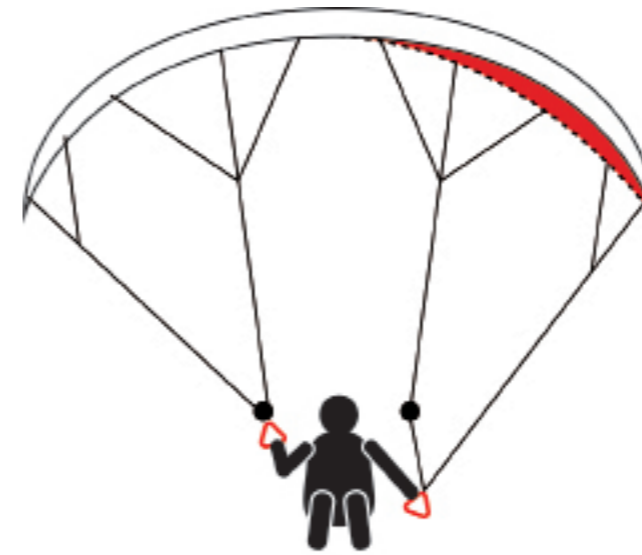
## Double command

The Runner XC 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.

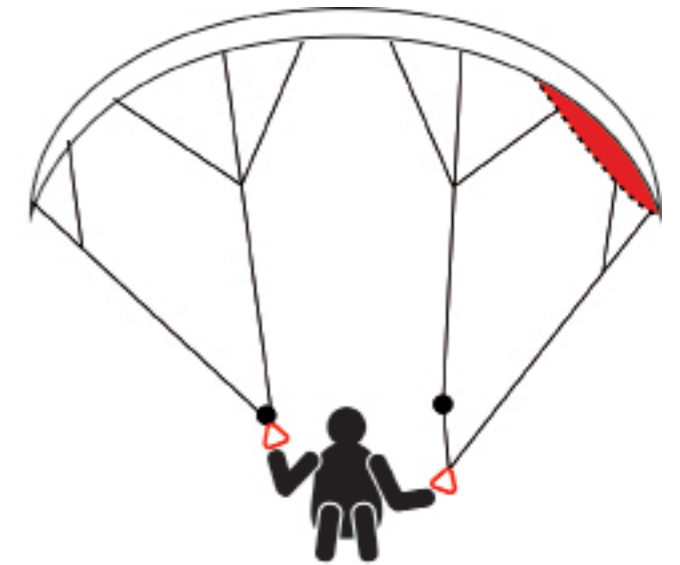
For more open bends, pull the bungs with your arm stretched out.

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

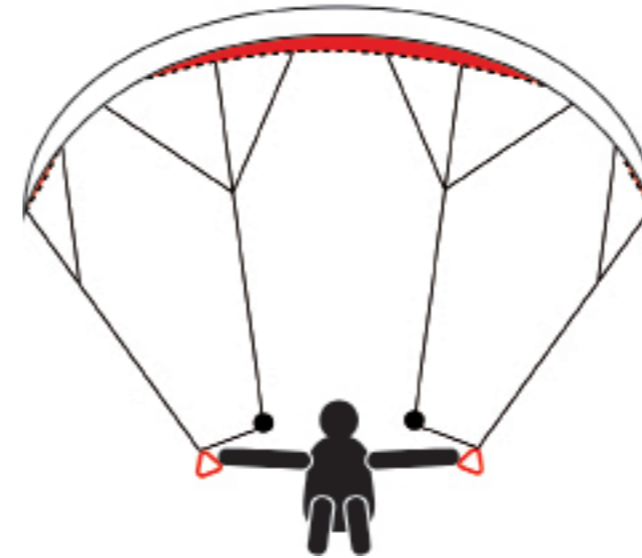
1. Brake lines.
2. Auxiliary brake lines.



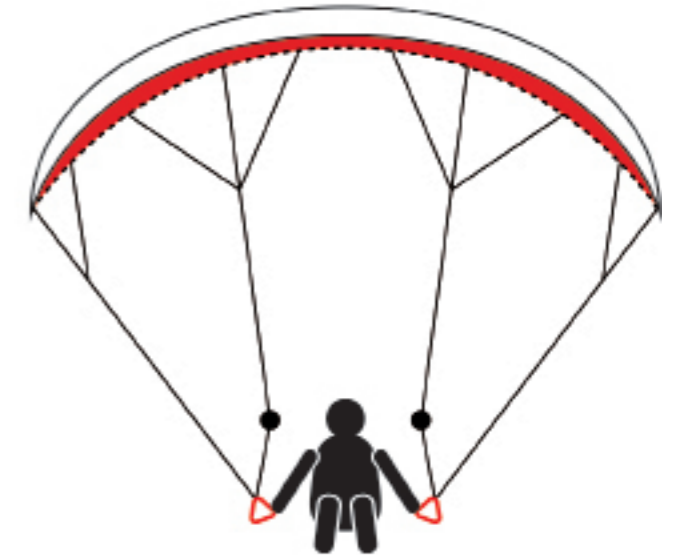
Normal turn - Pull one of the commands vertically downwards.



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 trimmer.

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

1. Flaps.



## FLIGHT

### Take Off Check List

- Helmet closed?
- Carabiners looked and closed?
- Harness all looks closed?
- Carabiner distance OK.?
- Risers A in hands?
- Brake lines free, toggles in hand?
- Pilot stays in the midst of the canopy?
- Take off area free?
- Paramotor wing and pilot lined up against the wind?
- Air space in take off direction free?

## Forward Take off

When ready to takeoff, the pilot must have risers (A) and the toggles in hand. The arms must be extended to the side, as if they are extensions of risers (A).

A decisive run allows a quick and stable inflation. After the initial inflation momentum, the pilot must keep the tension forward on risers (A), not pulling them downwards, until the canopy is above his head. At this point, the brakes must be carefully activated and the pilot must be prepared for possible directional changes.

A move to underneath the center of the paraglider 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. Only at this point, the pilot decides whether or not to takeoff.

When the paramotor wing is beginning to sustain the engine, apply carefully power.



## Reverse Take off

The preparation is the same as to forward take off. But this time you have to turn towards the canopy. During the turn lift the hand which is turning away from the paramotor wing with the risers above your head. Now you can inflate the glider with the red (A) risers. Push the risers up and let them go when the canopy is over your head. If necessary use the brakes gently. Turn out and begin the start run.

Attention: check to turn out to the right side. Example you turned with your left side to the glider you have to turn out with your left side to the paramotor wing. Otherwise you will have made a 360 degree turn and all your risers are twisted.

In case of strong wind it could be necessary to make some steps towards the canopy during inflation. This take off method can be used even with little wind.



## Takeoff with paratrike

For launching with a paratrike 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 paramotor wing is rising let the engine accelerate more and pull the paramotor wing up slowly. After visual check accelerate until you take off.



Sol Paragliders does not recommend using the engine force to inflate the paramotor wing.

## 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.

## Turns

The Runner XC is very sensitive, 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 braking 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 we recommend to release the outside brake in the given turn and pull a little more the brake on the inside of the turn. The paramotor wing glides best when no brakes are applied.

The pilot can use the double command to make more closed turns.



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

## Power induced oscillations

It is recommended to use the accelerator when flying against the wind or in zones with descending air. 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.

## Accelerated flight

It is recommended to use the accelerator when flying against the wind or in zones with descending air. 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.



- Exercise the use of the accelerator during calm conditions.
- Be cautious flying accelerated in difficult and turbulent conditions.
- Remember: The higher the speed the higher the descent rate.
- Check always on all accelerator parts for good function and signs of wear.

## Active flying

In turbulent conditions it is not recommended to fly the power glider with full speed, cause the Runner XC 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

Always choose a secure and clean landing side with lots of space, great distance to natural obstacles and is not under the influence of turbulent air.

- Leave trimmers 2 cm open to make landing easier.
- The final approach stage must be done in straight line upwind.
- Switch off the engine.
- With less than 30m above ground avoid steer turns, they may result in dangerous pendulous movements and the pilot could crash to the ground with high velocity.
- Before landing get up in your harness with the weight against the chest strap, especially in turbulent conditions.
- Fly with hands up, without brakes, until more or less 1m over ground. In turbulent conditions fly active until the end. Than apply slowly and progressively the brakes to reduce velocity until you can almost without speed land on the ground.
- Always adapt your landing on space, circumstances and wind.
- If the wind is strong and you feel it might be possible been dragged or uplifted after landing, pull symmetrically the B risers. This movement kills the glider fast and controlled and avoids a re-inflation or that the glider turns into a great sail. After killing the glider pull him back to you using the B risers.

## Landing with paratrike

The points earlier mentioned are valid, in principle.



For takeoff and landing with a trike you need a larger airstrip.

# FAST DESCENT MANEUVERS

The following maneuvers should be used only in emergency situations and need a special training for safety use. If possible attend a workshop to learn and practice these maneuvers.

These maneuvers are used by cloud entrance and in case of approaching thunderstorms.

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.



Remember: a good weather analysis before flight helps to avoid these maneuvers during flight.

## B-Stall

This maneuver provokes a parachute flight and as a result the paraglider is almost unable to be directed.

To initiate the maneuver get the (B) risers closely to the quick links and push them symmetrically and slowly downwards until the canopy profile is deformed. The glider stops to fly forward and descends vertically.

To end the maneuver let go symmetrically and at the same time of the B risers. The glider stops to sink and starts to fly forward again.

- All fast descent maneuvers are to be executed with the engine switched off or with motor idling.

- The trimmers need to be all closed.



- In the event risers (B) are pulled too quickly or too deeply, a horseshoe may occur towards the front. In order to regain normal flight, the pilot has to let go of the (B) risers and must apply the brakes lightly.

- In case the parachute flight continues, use the method described below in (parachute).

## Big ears



Sol Paragliders does not recommend doing ears with the XC Runner.

## Positive spiral

A positive spiral has a high sink rate. But the high acceleration, G-Force, impedes to fly this maneuver for a long time. The G-Force may cause that the pilot loses his consciousness and spirals until he crashes the ground. The same high energy is acting on the equipment and will shorten his endurance.

A positive spiral never should be exercised in turbulent conditions or strong lateral wind. Under strong wind conditions the pilot has to remember that the lateral drift could be enormous.

When the pilot activates just one brake, slowly and progressively, the paramotor wing inclines sideways in a sharp angle and enters in a steep and quick turn, which may become a positive spiral. During a spiral the rotation radius can be controlled by the force applied to the inside brake.

In order to come out of the spiral, the pilot must release the brake slowly and shift his weight lightly to the outside of the turn. A sudden exit may result in an exaggerated forward movement of the canopy, and cause a collapse. For this reason, on 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.

- All fast descent maneuvers are to be executed with the engine switched off or with motor idling.

- Never combine big ears with spirals. The canopy active area reduction plus the 'G' force may result in line and/or canopy damage.



- Leaving a fast spiral must be executed slowly and progressively.

- The maneuver requires high altitudes (at least 600 meter over ground) and is dangerous, due to high descent ratio the pilot can lose the altitude reference.

# EXTREME FLIGHT SITUATIONS

## Front-stall

Normally the paramotor wing 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.



In all extreme collapses remember: switch off the engine or with motor idling and don't apply power.



## 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 paramotor wing 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 paramotor wing 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.



In all extreme collapses remember: switch off the engine or with motor idling and don't apply power.



## Parachutal

This paramotor wing 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.

If the paramotor wing is wet or the regular inspections weren't made, the risk of a parachutal flight exists.



In all extreme collapses remember: switch off the engine or with motor idling and don't apply power.

## Full-stall

The Runner XC 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 paramotor wing 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.



In all extreme collapses remember: switch off the engine or with motor idling and don't apply power.

## Negative spiral

The Runner XC 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 paramotor wing turns 180°, in order to get the paramotor wing 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.



In all extreme collapses remember: switch off the engine or with motor idling and don't apply power.



## 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 paramotor wing is not to manage, release the reserve, whilst you are having height enough.



In all extreme collapses remember: switch off the engine or with motor idling and don't apply power.

## 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 C risers are much shorter than on the brake lines.



- In all extreme collapses remember: switch off the engine or with motor idling and don't apply power.

# PACKING YOUR PARAMOTOR WING

There are different ways who can help to extend the life of your paramotor wing. One way is to fold the paramotor wing right. It's most important to watch out for the reinforcements to maintain the take off characteristics and the performance. We are recommending the (Origami Method) and the use of a folding cover (see below). Together with your paramotor wing you get a traditional pack sack who also protects your paramotor wing. How to use it we describe after the (Origami Method).

## Origami - Method



Step 1: Open the folding cover and pull the partially in. The outside will look like a cabbage. This way you're avoiding that the glider drags over the ground during folding.

Step 2: Begin with the center of the trailing edge. Put one profile over the other. Each side separate.





Step 3: Now do it in the same way with the leading edge profiles. Put the reinforcements of top and bottom in the right way, don't close the cell openings and push out the fabric.

Step 4: Fold the paramotor wing like an accordion from both sides and close the folding cover. Watch out for the lines and fabric closing the zipper.



Step 5: At last fold the folding cover as shown in the photo. This method is very gentle to the more stiffer parts of the paramotor wing.

Traditional - Method



Step 1: Bundle up your paramotor wing in form of a cabbage. This way you're avoiding that the paramotor wing drags over the ground during folding.

Step 2: Begin with the center of the trailing edge. Put one profile over the other. Each side separate.



Step 3: Now do it in the same way with the leading edge profiles. Put the reinforcements of top and bottom in the right way, don't close the cell openings and push out the fabric.



Step 4: Fold the paramotor wing like an accordion from both sides and put one side over the other. Now all reinforcements are laying side-wise one above the other.



Step 5: Fold the sack as shown in the photo. This method is very gentle to the more stiffer parts of the paramotor wing.



Step 6: At last put the paramotor wing into the protection bag.

## Storing

Most part of the paramotor wing fabric is Nylon. As all other synthetic materials it suffers and deteriorates under the influence of ultraviolet radiation (UV). It loses its stiffness and gets more porous. Whenever it is possible avoid to submit your paramotor wing to the sun light, it has a high (UV) rate, especially in heights. It is recommended to store your paramotor wing very well whilst it not in use. It should be stored dry in a dry place, protected from (UV) rays, distant from chemical products. Avoid to store the paramotor wing in hot places like the trunk of a car.

## Back Pack

We recommend that you store your equipment in the back pack. That way it is easy to transport and protect. Your back pack was designed to be useful and comfort. Do it this way:



Step 1: Open your back pack and put your paramotor wing in.

Step 2: Store your helmet and accessories in the upper part of the back pack.



Step 3: Close all parts and pockets of the back pack.



## TIPS FOR CARE

- Over-stressing of individual lines, more than normal load in flight, should be avoided. An excessive deformation is irreversible and can't be undone. For the same reason avoid stepping on the lines, bending or folding them, especially the main lines.
- Always open the paramotor wing on clean ground, otherwise dirt could penetrate the fabric, shorten the lines or damage the canopy. Lines should not be entangled to objects during the phase of inflation, otherwise they could be deformed or damaged. Never step on the canopy, especially not on hard ground.
- Take offs and landings under strong wind conditions could force the paramotor wing to crash uncontrolled with high velocity on the ground, the crash could damage fabric and sewings.
- In case of a Line Over the brake lines could wear of or a main line could be cut by a brake line or crack by friction.
- Handling the paramotor wing on a earthy ground under strong wind conditions accelerates the aging process of your equipment.
- After a water or tree landing the paramotor wing must be sent for inspection to an authorized dealer's workshop.
- It must be avoided that sand, stones or snow enter in the cells, otherwise the weight on the trailing edge could brake the paramotor wing and cause a full-stall. Besides, the sharpened edges could damage the sail's fabric.
- After the landing be careful, avoid crashing the leading edge on the ground. Otherwise the material and sewings of the cell openings could be damaged.
- In case the paramotor wing gets in contact with salty water, he must be washed with sweet water and dry in the shadow. Never use tools to accelerate the drying process. Salty water could reduce the line resistance and increase the porosity of the fabric, even washed out with sweet water.
- After any kind of accident: the equipment must be sent for inspection to an authorized dealer's workshop or to the manufacturer.
- Keep up to the required inspection data, to assure that your equipment is always save for use and within the certification requirements.

## INSPECTION

Your paramotor wing has strictly to follow the required inspection intervals. The first inspection check is mandatory completing 24 months or 100 hours flights, whichever comes first.

After the first inspection any paramotor wing must be checked yearly or at each 100 hours flights, whichever comes first. In any of these inspections may occur that a shorter period for the next inspection will be defined (f. ex. 6 months or 50 hours flights).

Without performing the mandatory inspections, the paramotor wing loses its certification and the warranty becomes null and void.

After any kind of accident or a long period without use: sent the paramotor wing for inspection to an authorized dealer's workshop or to the manufacturer. It's for your own good.

Minor repairs (see below) you could do by yourself, but all other repairs must only be made by an authorized dealer's workshop or the manufacturer.

## REPAIRS

Repairs must only be made by an authorized dealer's workshop or to the manufacturer.

In case of minor repairs you are receiving with your paramotor wing a basic repair kit. It contains adhesive labels in case of minor tears and quick link sealing.

### FABRIC TEARS

Small tears up to 10 cm away from the line suspension points may be fixed by yourself. Beyond that the maintenance must be made by an authorized dealer's workshop or the manufacturer.

- Clean the spot where the adhesive label will be applied with a humid cloth.
- The adhesive label has to be at least 2,5 cm larger than the tear.
- Round the edges, otherwise the adhesive label could loosen after the application.
- Apply on both sides of the tear.

### LINE CRACK

In case of a line crack we recommend to contact your dealer, an authorized dealer's workshop or the manufacturer. After the repair test the paramotor wing on the ground and check if everything is alright.

### QUICK LINK SEALING

Along with your kit you're get sealing for the quick links. Don't leave your risers without them, because they avoid the movement of the screw nut, making it impossible to open.

## 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.

1. This warranty refers to materials and possible processing defects of the paraglider. The conditions below have to be considered carefully.
2. This warranty is valid for all paragliders from SOL with LTF/EN certification, rated for leisure use only. This warranty does not include paragliders used professionally (school, competitions, aerobatics, etc).
3. Due to the extreme use, competition and acro paragliders and gliders used professionally are not included in the SOL 3 years (300 flight hours) warranty. All paragliders used for competition or acro have a 1 year warrant for production errors.

### WARRANTY TERMS

1. A warranty registration has to be filled out correctly within 30 days after the purchase (you can find the registration here: [www.solparagliders.com.br/registro.php](http://www.solparagliders.com.br/registro.php)).
2. All flights must be logged providing information on date, place and length of flight.
3. The equipment must be kept and used 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 dealers workshops and must be properly documented.
5. Your paraglider has strictly to follow the required inspection intervals. The first inspection check is mandatory completing 24 months or 100 flights, whichever comes first. After the first inspection any wing must be checked yearly or at each 100 flights, whichever comes first. In any of these inspections may occur that a shorter period for the next inspection will be defined (f. ex. 6 months or 50 flights). Without performing the mandatory inspections, the paraglider loses its certification and the warranty becomes null and void.
6. The owner is responsible for all shipping expenses to and from the manufacturer.

7. In order to make a plea for repair or equipment exchange, which shall be decided and performed only by SOL Paragliders, the owner must send the paraglider to the manufacturer with the following documents:

- A copy of all inspection data and the log book (flight data)
- A copy of the warranty registration from SOL Paragliders

#### TIS 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 salt water.
3. Any damage caused as a result of errors during operation of the harness, incidents or emergency situations.
4. Any damage caused by inadequate operation of the paraglider.
5. A paraglider that may have been subjected of any alteration from the original design and without proper permission from SOL Paragliders.
6. Damages caused by inappropriate transport, storage or settings of the paraglider.
7. Damages caused by the use of not compatible components with the paraglider.
8. Damages caused by the use of inappropriate packaging for the transport.
9. Products without original identification label and serial number.
10. Handling the paraglider otherwise than to the instructions given in the owner's manual.



## ENVIRONMENT AND RECYCLING

Please be aware of our environment: don't toss your garbage into nature, respect the animals. Remember: nature is our paramotor wing engine. If your paramotor wing gets out of use remember it cannot be recycled. Please give it to your dealer or your flying-school, they should know how to handle it.

## OPERATION LIMITS

Based on LTF standard:

- Temperatures from -30oC to +70 oC during the storage should not interfere with the security during the use of the equipment.
- Temperatures from -30oC to +50 oC 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.

## 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 DATA

## Weight, measure and data

Model	150	165	180	195	210	225	240	
Cells	57	57	57	57	57	57	57	
Real Surface	15,03	16,5	18,0	19,5	21,1	22,5	24,1	m <sup>2</sup>
Real Span	9,48	9,9	10,4	10,8	11,2	11,6	12,0	m
Real A/R	6,0	6,0	6,0	6,0	6,0	6,0	6,0	
Projected Surface	13,02	14,3	15,6	16,9	18,2	19,5	20,9	m <sup>2</sup>
Projected Span	7,66	8,0	8,4	8,7	9,1	9,4	9,7	m
Projected A/R	4,5	4,5	4,5	4,5	4,5	4,5	4,5	
Height	607	635	661	686	711	734	757	cm
Profile max.	195	205	214	222	231	239	247	cm
Profile min.	49	51	54	56	58	60	62	cm
Paraglider weight	3,7	4,0	4,3	4,5	4,7	5,0	5,3	kg
Take off weight	70 - 120	70 - 130	80 - 130	80 - 140	90 - 150	100 - 160	110 - 170	Kg
Certification	DGAC	DGAC	DGAC	DGAC	DGAC	DGAC	DGAC	
Accelerator	11	11	11	11	11	11	11	cm
Risers	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	
Trimmer	13	13	13	13	13	13	13	cm
Other connected or adjustable parts	1	1	1	1	1	1	1	



## Parts and materials

Top	WTX 40 PU + Silicon 40 gr/sm - WTX 29 PU + Silicon 29 gr/sm
Bottom	WTX 40 PU + Silicon 40 gr/sm - WTX 29 PU + Silicon 29 gr/sm
Profiles/Diagonal tapes	Pro-Nyl High Tenacity Nylon rip-stop Hard finish 36 gr/sm
Reinforcements	Nylon Meada 2,5 mm / Nylon Maxfios Meada 1,6 - 2,0 mm
Reinforcements inside/outside	Cetim Polyester 25 mm
Loops	Fita Polyester / Polipropileno FRL0027 10 X 1.0 mm Ribana White
Sewing thread on canopy	Graal Polyester Filament Continuous 60 White
Sewing thread on risers	Dabond Polyester Filament Continuous 30 - 40 Black
Lines	Liros Dyneema PPSLS 0,76 - 1,05 - 1,25 - 1,58 / Cousin Vectran 0,6 - 0,9 - 1,0 - 1,2 / Cousin Technora 2,1
Quick Links	Ansung Precision 20 mm. 800 kg
Risers	Fita Poliéster Venus VII 19 mm Preta. 1.600 kg
Pulleys	Nylon Sol 12 mm Red / 16 mm ball bearing
Magnet clip	Ima de Neodimio N35 20 X 10 X 3 mm
Accelerator clip	Aluminum - ISR

## Lines

Model	PPSLS 65	PPSLS 125	PPSLS 180	PPSLS 260	12100	12240	16330	12470	988
Manufacturer	Liros GER	Liros GER	Liros GER	Liros GER	Cousin FRA	Cousin FRA	Cousin FRA	Cousin FRA	Cousin FRA
Number resistance test	LKT 0561	LKT 1630	LKT 1531	LKT 1529	LI 611.2018	LI 612.2018	LI 613.2018	LI 614.2018	LT 949
Diameter	0,76 mm	1,05 mm	1,25 mm	1,58 mm	0,6 mm	0,9 mm	1,0 mm	1,2 mm	2,1 mm
Material	Dyneema	Dyneema	Dyneema	Dyneema	Vectran	Vectran	Vectran	Vectran	Technora
Rope coating	Polyester	Polyester	Polyester	Polyester	No	No	No	No	Polyester
Resistance after bending	40 daN	121,4 daN	142,9 daN	182,3 daN	35,8 daN	96,2 daN	127,2 daN	186,6 daN	182,4 daN



Line lengths

Runner XC 150

	A	B	C	D	F
1	5387	5379	5407		5403
2	5436	5421	5439		5449
3	5646	5629	5646		5545
4	5706	5685	5712		5612
5	5777	5751	5786		5678
6	5856	5823	5864		5723
7	5894	5852	5887	5962	5731
8	5873	5826	5868	5952	5766
9	5885	5834	5879	5971	5833
10	5933	5879	5927	6021	5944
11	5963	5905	5954	6053	6000
12	5942	5881	5931	6033	6111
13	5964	5902	5952	6055	6323
14	6027	5967	6016	6117	



Measuring incl. risers and carabiners with 5 daN load  
Brake line measuring without riser

Runner XC 180

	A	B	C	D	F
1	5879	5872	5904		5917
2	5934	5917	5939		5968
3	6161	6143	6164		6071
4	6226	6203	6236		6145
5	6302	6274	6315		6215
6	6387	6351	6399		6262
7	6426	6380	6420	6502	6269
8	6401	6350	6396	6489	6305
9	6412	6357	6407	6507	6377
10	6463	6404	6456	6559	6493
11	6492	6429	6483	6590	6553
12	6466	6400	6455	6566	6672
13	6488	6420	6475	6587	6900
14	6555	6489	6543	6654	



Measuring incl. risers and carabiners with 5 daN load  
Brake line measuring without riser

Runner XC 165

	A	B	C	D	F
1	5636	5629	5659		5664
2	5688	5672	5692		5712
3	5908	5890	5909		5811
4	5970	5948	5978		5882
5	6043	6016	6054		5950
6	6125	6091	6135		5996
7	6164	6120	6157	6236	6003
8	6140	6091	6135	6224	6039
9	6152	6099	6147	6242	6109
10	6202	6145	6195	6294	6223
11	6231	6171	6222	6325	6280
12	6208	6144	6196	6303	6396
13	6229	6164	6217	6325	6615
14	6295	6231	6283	6389	



Measuring incl. risers and carabiners with 5 daN load  
Brake line measuring without riser

Runner XC 195

	A	B	C	D	F
1	6108	6101	6135		6157
2	6165	6149	6172		6211
3	6402	6383	6406		6318
4	6469	6445	6481		6393
5	6547	6518	6562		6465
6	6634	6597	6648		6513
7	6675	6627	6669	6755	6520
8	6648	6594	6643	6740	6557
9	6659	6601	6653	6757	6629
10	6710	6649	6703	6810	6751
11	6739	6673	6729	6841	6811
12	6711	6642	6699	6815	6934
13	6733	6662	6720	6836	7170
14	6802	6732	6789	6904	



Measuring incl. risers and carabiners with 5 daN load  
Brake line measuring without riser



Runner XC 210

	A	B	C	D	F
1	6336	6330	6365		6135
2	6396	6379	6404		6191
3	6637	6617	6644		6301
4	6706	6682	6721		6379
5	6787	6756	6805		6453
6	6877	6838	6894		6764
7	6918	6869	6913	7003	6770
8	6890	6834	6886	6986	6809
9	6900	6840	6895	7003	6883
10	6953	6889	6947	7058	7008
11	6981	6912	6972	7088	7070
12	6951	6879	6940	7059	7197
13	6972	6899	6960	7081	7440
14	7043	6971	7031	7150	



Measuring incl. risers and carabiners with 5 daN load  
Brake line measuring without riser

Runner XC 240

	A	B	C	D	F
1	6764	6759	6798		6843
2	6829	6811	6839		6904
3	7089	7068	7098		7021
4	7162	7136	7179		7103
5	7248	7215	7268		7181
6	7342	7301	7361		7232
7	7385	7332	7379	7476	7237
8	7353	7293	7348	7456	7276
9	7362	7298	7357	7472	7354
10	7417	7349	7409	7528	7485
11	7445	7372	7434	7558	7549
12	7411	7334	7398	7526	7684
13	7432	7354	7418	7547	7941
14	7506	7429	7492	7619	



Measuring incl. risers and carabiners with 5 daN load  
Brake line measuring without riser

Runner XC 225

	A	B	C	D	F
1	6548	6542	6579		6617
2	6610	6592	6619		6675
3	6862	6842	6870		6789
4	6933	6908	6949		6869
5	7017	6985	7035		6946
6	7109	7068	7126		6995
7	7150	7099	7145	7238	7000
8	7120	7063	7115	7219	7039
9	7130	7068	7124	7236	7116
10	7184	7118	7176	7291	7243
11	7212	7141	7201	7321	7306
12	7180	7106	7167	7291	7437
13	7201	7125	7187	7312	7687
14	7274	7199	7260	7383	



Measuring incl. risers and carabiners with 5 daN load  
Brake line measuring without riser

## Line lengths individually

## Runner XC 150

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
A1	Cousin vectran	12100	0,6	2	391
A2	Cousin vectran	12100	0,6	2	440
A3	Cousin vectran	12240	0,9	2	728
A4	Cousin vectran	12240	0,9	2	788
A5	Cousin vectran	12240	0,9	2	739
A6	Cousin vectran	12240	0,9	2	818
A7	Cousin vectran	16330	1,0	2	945
A8	Cousin vectran	16330	1,0	2	924
A9	Cousin vectran	16330	1,0	2	936
A10	Cousin vectran	16330	1,0	2	984
A11	Cousin vectran	16330	1,0	2	1094
A12	Cousin vectran	16330	1,0	2	1073
A13	Cousin vectran	16330	1,0	2	1095
A14	Cousin vectran	16330	1,0	2	1158
AM1	Cousin vectran	16330	1,0	2	830
AM2	Cousin vectran	16330	1,0	2	950
AM3	Cousin vectran	12470	1,2	2	1065
AM4	Cousin vectran	12470	1,2	2	1065
AM5	Cousin vectran	12470	1,2	2	1065
AM6	Cousin vectran	12470	1,2	2	1065
AR1	Liros PPSLS	125	1,05	2	3630
AR2	Liros PPSLS	260	1,58	2	3435
AR3	Liros PPSLS	260	1,58	2	3355
B1	Cousin vectran	12100	0,6	2	383
B2	Cousin vectran	12100	0,6	2	425
B3	Cousin vectran	12240	0,9	2	711
B4	Cousin vectran	12240	0,9	2	767
B5	Cousin vectran	12240	0,9	2	713
B6	Cousin vectran	12240	0,9	2	785
B7	Cousin vectran	16330	1,0	2	903
B8	Cousin vectran	16330	1,0	2	877
B9	Cousin vectran	16330	1,0	2	885
B10	Cousin vectran	16330	1,0	2	930
B11	Cousin vectran	16330	1,0	2	1036
B12	Cousin vectran	16330	1,0	2	1012
B13	Cousin vectran	16330	1,0	2	1033
B14	Cousin vectran	16330	1,0	2	1098
BM1	Cousin vectran	16330	1,0	2	830
BM2	Cousin vectran	16330	1,0	2	950
BM3	Cousin vectran	12470	1,2	2	1065
BM4	Cousin vectran	12470	1,2	2	1065
BM5	Cousin vectran	12470	1,2	2	1065
BM6	Cousin vectran	12470	1,2	2	1065
SM	Cousin vectran	12100	0,6	6	765
STB	Liros PPSLS	125	1,05	2	3775
BR1	Liros PPSLS	125	1,05	2	3630
BR2	Liros PPSLS	260	1,58	2	3435
BR3	Liros PPSLS	260	1,58	2	3355
C1	Cousin vectran	12100	0,6	2	411
C2	Cousin vectran	12100	0,6	2	443
C3	Cousin vectran	12240	0,9	2	730

## Runner XC 150

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
C4	Cousin vectran	12240	0,9	2	796
C5	Cousin vectran	12240	0,9	2	750
C6	Cousin vectran	12240	0,9	2	828
C7	Cousin vectran	12240	0,9	2	931
C8	Cousin vectran	12240	0,9	2	912
C9	Cousin vectran	12240	0,9	2	923
C10	Cousin vectran	12240	0,9	2	971
C11	Cousin vectran	12240	0,9	2	1078
C12	Cousin vectran	12240	0,9	2	1055
C13	Cousin vectran	12240	0,9	2	1076
C14	Cousin vectran	12240	0,9	2	1140
CM1	Cousin vectran	16330	1,0	2	830
CM2	Cousin vectran	16330	1,0	2	950
CM3	Cousin vectran	16330	1,0	2	1065
CM4	Cousin vectran	16330	1,0	2	1065
CM5	Cousin vectran	16330	1,0	2	1065
CM6	Cousin vectran	16330	1,0	2	1065
CR1	Liros PPSLS	125	1,05	2	3630
CR2	Liros PPSLS	180	1,25	2	3435
CR3	Liros PPSLS	180	1,25	2	3355
D7	Cousin vectran	12240	0,9	2	1006
D8	Cousin vectran	12240	0,9	2	996
D9	Cousin vectran	12240	0,9	2	1015
D10	Cousin vectran	12240	0,9	2	1065
D11	Cousin vectran	12240	0,9	2	1177
D12	Cousin vectran	12240	0,9	2	1157
D13	Cousin vectran	12240	0,9	2	1179
D14	Cousin vectran	12240	0,9	2	1241
DM3	Cousin vectran	16330	1,0	2	1065
DM4	Cousin vectran	16330	1,0	2	1065
DM5	Cousin vectran	16330	1,0	2	1065
DM6	Cousin vectran	16330	1,0	2	1065
DR2	Liros PPSLS	125	1,05	2	3435
DR3	Liros PPSLS	125	1,05	2	3355
F1	Cousin vectran	12100	0,6	2	531
F2	Cousin vectran	12100	0,6	2	577
F3	Cousin vectran	12100	0,6	2	673
F4	Cousin vectran	12100	0,6	2	440
F5	Cousin vectran	12100	0,6	2	506
F6	Cousin vectran	12100	0,6	2	551
F7	Cousin vectran	12100	0,6	2	559
F8	Cousin vectran	12100	0,6	2	594
F9	Cousin vectran	12100	0,6	2	661
F10	Cousin vectran	12100	0,6	2	772
F11	Cousin vectran	12100	0,6	2	828
F12	Cousin vectran	12100	0,6	2	939
F13	Cousin vectran	12100	0,6	2	1151
FM1	Liros PPSLS	65	0,76	4	1485
FM2	Cousin vectran	12100	0,6	2	1185
FM3	Cousin vectran	12100	0,6	10	1485
AUX	Liros PPSLS	125	1,05	2	3463
FR	Cousin / Technora	988	2,1	2	2245

## Runner XC 165

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
A1	Cousin vectran	12100	0,6	2	420
A2	Cousin vectran	12100	0,6	2	472
A3	Cousin vectran	12240	0,9	2	770
A4	Cousin vectran	12240	0,9	2	832
A5	Cousin vectran	12240	0,9	2	780
A6	Cousin vectran	12240	0,9	2	862
A7	Cousin vectran	16330	1,0	2	995
A8	Cousin vectran	16330	1,0	2	971
A9	Cousin vectran	16330	1,0	2	983
A10	Cousin vectran	16330	1,0	2	1033
A11	Cousin vectran	16330	1,0	2	1142
A12	Cousin vectran	16330	1,0	2	1119
A13	Cousin vectran	16330	1,0	2	1140
A14	Cousin vectran	16330	1,0	2	1206
AM1	Cousin vectran	16330	1,0	2	870
AM2	Cousin vectran	16330	1,0	2	995
AM3	Cousin vectran	12470	1,2	2	1120
AM4	Cousin vectran	12470	1,2	2	1120
AM5	Cousin vectran	12470	1,2	2	1120
AM6	Cousin vectran	12470	1,2	2	1120
AR1	Liros PPSLS	125	1,05	2	3810
AR2	Liros PPSLS	260	1,58	2	3600
AR3	Liros PPSLS	260	1,58	2	3520
B1	Cousin vectran	12100	0,6	2	413
B2	Cousin vectran	12100	0,6	2	456
B3	Cousin vectran	12240	0,9	2	752
B4	Cousin vectran	12240	0,9	2	810
B5	Cousin vectran	12240	0,9	2	753
B6	Cousin vectran	12240	0,9	2	828
B7	Cousin vectran	16330	1,0	2	951
B8	Cousin vectran	16330	1,0	2	922
B9	Cousin vectran	16330	1,0	2	930
B10	Cousin vectran	16330	1,0	2	976
B11	Cousin vectran	16330	1,0	2	1082
B12	Cousin vectran	16330	1,0	2	1055
B13	Cousin vectran	16330	1,0	2	1075
B14	Cousin vectran	16330	1,0	2	1142
BM1	Cousin vectran	16330	1,0	2	870
BM2	Cousin vectran	16330	1,0	2	995
BM3	Cousin vectran	12470	1,2	2	1120
BM4	Cousin vectran	12470	1,2	2	1120
BM5	Cousin vectran	12470	1,2	2	1120
BM6	Cousin vectran	12470	1,2	2	1120
SM	Cousin vectran	12100	0,6	6	800
STB	Liros PPSLS	125	1,05	2	3960
BR1	Liros PPSLS	125	1,05	2	3810
BR2	Liros PPSLS	260	1,58	2	3600
BR3	Liros PPSLS	260	1,58	2	3520
C1	Cousin vectran	12100	0,6	2	443
C2	Cousin vectran	12100	0,6	2	476
C3	Cousin vectran	12240	0,9	2	773

## Runner XC 165

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
C4	Cousin vectran	12240	0,9	2	842
C5	Cousin vectran	12240	0,9	2	793
C6	Cousin vectran	12240	0,9	2	874
C7	Cousin vectran	12240	0,9	2	981
C8	Cousin vectran	12240	0,9	2	959
C9	Cousin vectran	12240	0,9	2	971
C10	Cousin vectran	12240	0,9	2	1019
C11	Cousin vectran	12240	0,9	2	1126
C12	Cousin vectran	12240	0,9	2	1100
C13	Cousin vectran	12240	0,9	2	1121
C14	Cousin vectran	12240	0,9	2	1187
CM1	Cousin vectran	16330	1,0	2	870
CM2	Cousin vectran	16330	1,0	2	995
CM3	Cousin vectran	16330	1,0	2	1120
CM4	Cousin vectran	16330	1,0	2	1120
CM5	Cousin vectran	16330	1,0	2	1120
CM6	Cousin vectran	16330	1,0	2	1120
CR1	Liros PPSLS	125	1,05	2	3810
CR2	Liros PPSLS	180	1,25	2	3600
CR3	Liros PPSLS	180	1,25	2	3520
D7	Cousin vectran	12240	0,9	2	1060
D8	Cousin vectran	12240	0,9	2	1048
D9	Cousin vectran	12240	0,9	2	1066
D10	Cousin vectran	12240	0,9	2	1118
D11	Cousin vectran	12240	0,9	2	1229
D12	Cousin vectran	12240	0,9	2	1207
D13	Cousin vectran	12240	0,9	2	1229
D14	Cousin vectran	12240	0,9	2	1293
DM3	Cousin vectran	16330	1,0	2	1120
DM4	Cousin vectran	16330	1,0	2	1120
DM5	Cousin vectran	16330	1,0	2	1120
DM6	Cousin vectran	16330	1,0	2	1120
DR2	Liros PPSLS	125	1,05	2	3600
DR3	Liros PPSLS	125	1,05	2	3520
F1	Cousin vectran	12100	0,6	2	572
F2	Cousin vectran	12100	0,6	2	620
F3	Cousin vectran	12100	0,6	2	719
F4	Cousin vectran	12100	0,6	2	475
F5	Cousin vectran	12100	0,6	2	543
F6	Cousin vectran	12100	0,6	2	589
F7	Cousin vectran	12100	0,6	2	596
F8	Cousin vectran	12100	0,6	2	632
F9	Cousin vectran	12100	0,6	2	702
F10	Cousin vectran	12100	0,6	2	816
F11	Cousin vectran	12100	0,6	2	873
F12	Cousin vectran	12100	0,6	2	989
F13	Cousin vectran	12100	0,6	2	1208
FM1	Liros PPSLS	65	0,76	4	1555
FM2	Cousin vectran	12100	0,6	2	1240
FM3	Cousin vectran	12100	0,6	10	1555
AUX	Liros PPSLS	125	1,05	2	3625
FR	Cousin / Technora	988	2,1	2	2340

## Runner XC 180

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
A1	Cousin vectran	12100	0,6	2	448
A2	Cousin vectran	12100	0,6	2	503
A3	Cousin vectran	12240	0,9	2	818
A4	Cousin vectran	12240	0,9	2	883
A5	Cousin vectran	12240	0,9	2	824
A6	Cousin vectran	12240	0,9	2	909
A7	Cousin vectran	16330	1,0	2	1052
A8	Cousin vectran	16330	1,0	2	1027
A9	Cousin vectran	16330	1,0	2	1038
A10	Cousin vectran	16330	1,0	2	1089
A11	Cousin vectran	16330	1,0	2	1203
A12	Cousin vectran	16330	1,0	2	1177
A13	Cousin vectran	16330	1,0	2	1199
A14	Cousin vectran	16330	1,0	2	1266
AM1	Cousin vectran	16330	1,0	2	905
AM2	Cousin vectran	16330	1,0	2	1040
AM3	Cousin vectran	12470	1,2	2	1165
AM4	Cousin vectran	12470	1,2	2	1165
AM5	Cousin vectran	12470	1,2	2	1165
AM6	Cousin vectran	12470	1,2	2	1165
AR1	Liros PPSLS	125	1,05	2	3980
AR2	Liros PPSLS	260	1,58	2	3760
AR3	Liros PPSLS	260	1,58	2	3675
B1	Cousin vectran	12100	0,6	2	441
B2	Cousin vectran	12100	0,6	2	486
B3	Cousin vectran	12240	0,9	2	800
B4	Cousin vectran	12240	0,9	2	860
B5	Cousin vectran	12240	0,9	2	796
B6	Cousin vectran	12240	0,9	2	873
B7	Cousin vectran	16330	1,0	2	1006
B8	Cousin vectran	16330	1,0	2	976
B9	Cousin vectran	16330	1,0	2	983
B10	Cousin vectran	16330	1,0	2	1030
B11	Cousin vectran	16330	1,0	2	1140
B12	Cousin vectran	16330	1,0	2	1111
B13	Cousin vectran	16330	1,0	2	1131
B14	Cousin vectran	16330	1,0	2	1200
BM1	Cousin vectran	16330	1,0	2	905
BM2	Cousin vectran	16330	1,0	2	1040
BM3	Cousin vectran	12470	1,2	2	1165
BM4	Cousin vectran	12470	1,2	2	1165
BM5	Cousin vectran	12470	1,2	2	1165
BM6	Cousin vectran	12470	1,2	2	1165
SM	Cousin vectran	12100	0,6	6	840
STB	Liros PPSLS	125	1,05	2	4135
BR1	Liros PPSLS	125	1,05	2	3980
BR2	Liros PPSLS	260	1,58	2	3760
BR3	Liros PPSLS	260	1,58	2	3675
C1	Cousin vectran	12100	0,6	2	473
C2	Cousin vectran	12100	0,6	2	508
C3	Cousin vectran	12240	0,9	2	823

## Runner XC 180

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
C4	Cousin vectran	12240	0,9	2	895
C5	Cousin vectran	12240	0,9	2	839
C6	Cousin vectran	12240	0,9	2	923
C7	Cousin vectran	12240	0,9	2	1039
C8	Cousin vectran	12240	0,9	2	1015
C9	Cousin vectran	12240	0,9	2	1026
C10	Cousin vectran	12240	0,9	2	1075
C11	Cousin vectran	12240	0,9	2	1187
C12	Cousin vectran	12240	0,9	2	1159
C13	Cousin vectran	12240	0,9	2	1179
C14	Cousin vectran	12240	0,9	2	1247
CM1	Cousin vectran	16330	1,0	2	905
CM2	Cousin vectran	16330	1,0	2	1040
CM3	Cousin vectran	16330	1,0	2	1165
CM4	Cousin vectran	16330	1,0	2	1165
CM5	Cousin vectran	16330	1,0	2	1165
CM6	Cousin vectran	16330	1,0	2	1165
CR1	Liros PPSLS	125	1,05	2	3980
CR2	Liros PPSLS	180	1,25	2	3760
CR3	Liros PPSLS	180	1,25	2	3675
D7	Cousin vectran	12240	0,9	2	1121
D8	Cousin vectran	12240	0,9	2	1108
D9	Cousin vectran	12240	0,9	2	1126
D10	Cousin vectran	12240	0,9	2	1178
D11	Cousin vectran	12240	0,9	2	1294
D12	Cousin vectran	12240	0,9	2	1270
D13	Cousin vectran	12240	0,9	2	1291
D14	Cousin vectran	12240	0,9	2	1358
DM3	Cousin vectran	16330	1,0	2	1165
DM4	Cousin vectran	16330	1,0	2	1165
DM5	Cousin vectran	16330	1,0	2	1165
DM6	Cousin vectran	16330	1,0	2	1165
DR2	Liros PPSLS	125	1,05	2	3760
DR3	Liros PPSLS	125	1,05	2	3675
F1	Cousin vectran	12100	0,6	2	610
F2	Cousin vectran	12100	0,6	2	661
F3	Cousin vectran	12100	0,6	2	764
F4	Cousin vectran	12100	0,6	2	508
F5	Cousin vectran	12100	0,6	2	578
F6	Cousin vectran	12100	0,6	2	625
F7	Cousin vectran	12100	0,6	2	632
F8	Cousin vectran	12100	0,6	2	668
F9	Cousin vectran	12100	0,6	2	740
F10	Cousin vectran	12100	0,6	2	856
F11	Cousin vectran	12100	0,6	2	916
F12	Cousin vectran	12100	0,6	2	1035
F13	Cousin vectran	12100	0,6	2	1263
FM1	Liros PPSLS	65	0,76	4	1625
FM2	Cousin vectran	12100	0,6	2	1295
FM3	Cousin vectran	12100	0,6	10	1625
AUX	Liros PPSLS	125	1,05	2	3783
FR	Cousin / Technora	988	2,1	2	2430

## Runner XC 195

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
A1	Cousin vectran	12100	0,6	2	482
A2	Cousin vectran	12100	0,6	2	539
A3	Cousin vectran	12240	0,9	2	859
A4	Cousin vectran	12240	0,9	2	926
A5	Cousin vectran	12240	0,9	2	869
A6	Cousin vectran	12240	0,9	2	956
A7	Cousin vectran	16330	1,0	2	1096
A8	Cousin vectran	16330	1,0	2	1069
A9	Cousin vectran	16330	1,0	2	1080
A10	Cousin vectran	16330	1,0	2	1131
A11	Cousin vectran	16330	1,0	2	1250
A12	Cousin vectran	16330	1,0	2	1222
A13	Cousin vectran	16330	1,0	2	1244
A14	Cousin vectran	16330	1,0	2	1313
AM1	Cousin vectran	16330	1,0	2	945
AM2	Cousin vectran	16330	1,0	2	1080
AM3	Cousin vectran	12470	1,2	2	1215
AM4	Cousin vectran	12470	1,2	2	1215
AM5	Cousin vectran	12470	1,2	2	1215
AM6	Cousin vectran	12470	1,2	2	1215
AR1	Liros PPSLS	125	1,05	2	4140
AR2	Liros PPSLS	260	1,58	2	3915
AR3	Liros PPSLS	260	1,58	2	3815
B1	Cousin vectran	12100	0,6	2	475
B2	Cousin vectran	12100	0,6	2	523
B3	Cousin vectran	12240	0,9	2	840
B4	Cousin vectran	12240	0,9	2	902
B5	Cousin vectran	12240	0,9	2	840
B6	Cousin vectran	12240	0,9	2	919
B7	Cousin vectran	16330	1,0	2	1048
B8	Cousin vectran	16330	1,0	2	1015
B9	Cousin vectran	16330	1,0	2	1022
B10	Cousin vectran	16330	1,0	2	1070
B11	Cousin vectran	16330	1,0	2	1184
B12	Cousin vectran	16330	1,0	2	1153
B13	Cousin vectran	16330	1,0	2	1173
B14	Cousin vectran	16330	1,0	2	1243
BM1	Cousin vectran	16330	1,0	2	945
BM2	Cousin vectran	16330	1,0	2	1080
BM3	Cousin vectran	12470	1,2	2	1215
BM4	Cousin vectran	12470	1,2	2	1215
BM5	Cousin vectran	12470	1,2	2	1215
BM6	Cousin vectran	12470	1,2	2	1215
SM	Cousin vectran	12100	0,6	6	870
STB	Liros PPSLS	125	1,05	2	4300
BR1	Liros PPSLS	125	1,05	2	4140
BR2	Liros PPSLS	260	1,58	2	3915
BR3	Liros PPSLS	260	1,58	2	3815
C1	Cousin vectran	12100	0,6	2	509
C2	Cousin vectran	12100	0,6	2	546
C3	Cousin vectran	12240	0,9	2	865

## Runner XC 195

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
C4	Cousin vectran	12240	0,9	2	940
C5	Cousin vectran	12240	0,9	2	886
C6	Cousin vectran	12240	0,9	2	972
C7	Cousin vectran	12240	0,9	2	1083
C8	Cousin vectran	12240	0,9	2	1057
C9	Cousin vectran	12240	0,9	2	1067
C10	Cousin vectran	12240	0,9	2	1117
C11	Cousin vectran	12240	0,9	2	1233
C12	Cousin vectran	12240	0,9	2	1203
C13	Cousin vectran	12240	0,9	2	1224
C14	Cousin vectran	12240	0,9	2	1293
CM1	Cousin vectran	16330	1,0	2	945
CM2	Cousin vectran	16330	1,0	2	1080
CM3	Cousin vectran	16330	1,0	2	1215
CM4	Cousin vectran	16330	1,0	2	1215
CM5	Cousin vectran	16330	1,0	2	1215
CM6	Cousin vectran	16330	1,0	2	1215
CR1	Liros PPSLS	125	1,05	2	4140
CR2	Liros PPSLS	180	1,25	2	3915
CR3	Liros PPSLS	180	1,25	2	3815
D7	Cousin vectran	12240	0,9	2	1169
D8	Cousin vectran	12240	0,9	2	1154
D9	Cousin vectran	12240	0,9	2	1171
D10	Cousin vectran	12240	0,9	2	1224
D11	Cousin vectran	12240	0,9	2	1345
D12	Cousin vectran	12240	0,9	2	1319
D13	Cousin vectran	12240	0,9	2	1340
D14	Cousin vectran	12240	0,9	2	1408
DM3	Cousin vectran	16330	1,0	2	1215
DM4	Cousin vectran	16330	1,0	2	1215
DM5	Cousin vectran	16330	1,0	2	1215
DM6	Cousin vectran	16330	1,0	2	1215
DR2	Liros PPSLS	125	1,05	2	3915
DR3	Liros PPSLS	125	1,05	2	3815
F1	Cousin vectran	12100	0,6	2	640
F2	Cousin vectran	12100	0,6	2	694
F3	Cousin vectran	12100	0,6	2	801
F4	Cousin vectran	12100	0,6	2	536
F5	Cousin vectran	12100	0,6	2	608
F6	Cousin vectran	12100	0,6	2	656
F7	Cousin vectran	12100	0,6	2	663
F8	Cousin vectran	12100	0,6	2	700
F9	Cousin vectran	12100	0,6	2	772
F10	Cousin vectran	12100	0,6	2	894
F11	Cousin vectran	12100	0,6	2	954
F12	Cousin vectran	12100	0,6	2	1077
F13	Cousin vectran	12100	0,6	2	1313
FM1	Liros PPSLS	65	0,76	4	1690
FM2	Cousin vectran	12100	0,6	2	1350
FM3	Cousin vectran	12100	0,6	10	1690
AUX	Liros PPSLS	125	1,05	2	3936
FR	Cousin / Technora	988	2,1	2	2520

## Runner XC 210

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
A1	Cousin vectran	12100	0,6	2	507
A2	Cousin vectran	12100	0,6	2	567
A3	Cousin vectran	12240	0,9	2	904
A4	Cousin vectran	12240	0,9	2	973
A5	Cousin vectran	12240	0,9	2	914
A6	Cousin vectran	12240	0,9	2	1004
A7	Cousin vectran	16330	1,0	2	1144
A8	Cousin vectran	16330	1,0	2	1116
A9	Cousin vectran	16330	1,0	2	1126
A10	Cousin vectran	16330	1,0	2	1179
A11	Cousin vectran	16330	1,0	2	1307
A12	Cousin vectran	16330	1,0	2	1277
A13	Cousin vectran	16330	1,0	2	1298
A14	Cousin vectran	16330	1,0	2	1369
AM1	Cousin vectran	16330	1,0	2	980
AM2	Cousin vectran	16330	1,0	2	1120
AM3	Cousin vectran	12470	1,2	2	1260
AM4	Cousin vectran	12470	1,2	2	1260
AM5	Cousin vectran	12470	1,2	2	1260
AM6	Cousin vectran	12470	1,2	2	1260
AR1	Liros PPSLS	125	1,05	2	4300
AR2	Liros PPSLS	260	1,58	2	4070
AR3	Liros PPSLS	260	1,58	2	3970
B1	Cousin vectran	12100	0,6	2	501
B2	Cousin vectran	12100	0,6	2	550
B3	Cousin vectran	12240	0,9	2	884
B4	Cousin vectran	12240	0,9	2	949
B5	Cousin vectran	12240	0,9	2	883
B6	Cousin vectran	12240	0,9	2	965
B7	Cousin vectran	16330	1,0	2	1095
B8	Cousin vectran	16330	1,0	2	1060
B9	Cousin vectran	16330	1,0	2	1066
B10	Cousin vectran	16330	1,0	2	1115
B11	Cousin vectran	16330	1,0	2	1238
B12	Cousin vectran	16330	1,0	2	1205
B13	Cousin vectran	16330	1,0	2	1225
B14	Cousin vectran	16330	1,0	2	1297
BM1	Cousin vectran	16330	1,0	2	980
BM2	Cousin vectran	16330	1,0	2	1120
BM3	Cousin vectran	12470	1,2	2	1260
BM4	Cousin vectran	12470	1,2	2	1260
BM5	Cousin vectran	12470	1,2	2	1260
BM6	Cousin vectran	12470	1,2	2	1260
SM	Cousin vectran	12100	0,6	6	905
STB	Liros PPSLS	125	1,05	2	4470
BR1	Liros PPSLS	125	1,05	2	4300
BR2	Liros PPSLS	260	1,58	2	4070
BR3	Liros PPSLS	260	1,58	2	3970
C1	Cousin vectran	12100	0,6	2	536
C2	Cousin vectran	12100	0,6	2	575
C3	Cousin vectran	12240	0,9	2	912

## Runner XC 210

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
C4	Cousin vectran	12240	0,9	2	989
C5	Cousin vectran	12240	0,9	2	933
C6	Cousin vectran	12240	0,9	2	1022
C7	Cousin vectran	12240	0,9	2	1131
C8	Cousin vectran	12240	0,9	2	1104
C9	Cousin vectran	12240	0,9	2	1113
C10	Cousin vectran	12240	0,9	2	1165
C11	Cousin vectran	12240	0,9	2	1290
C12	Cousin vectran	12240	0,9	2	1258
C13	Cousin vectran	12240	0,9	2	1278
C14	Cousin vectran	12240	0,9	2	1349
CM1	Cousin vectran	16330	1,0	2	980
CM2	Cousin vectran	16330	1,0	2	1120
CM3	Cousin vectran	16330	1,0	2	1260
CM4	Cousin vectran	16330	1,0	2	1260
CM5	Cousin vectran	16330	1,0	2	1260
CM6	Cousin vectran	16330	1,0	2	1260
CR1	Liros PPSLS	125	1,05	2	4300
CR2	Liros PPSLS	180	1,25	2	4070
CR3	Liros PPSLS	180	1,25	2	3970
D7	Cousin vectran	12240	0,9	2	1221
D8	Cousin vectran	12240	0,9	2	1204
D9	Cousin vectran	12240	0,9	2	1221
D10	Cousin vectran	12240	0,9	2	1276
D11	Cousin vectran	12240	0,9	2	1406
D12	Cousin vectran	12240	0,9	2	1377
D13	Cousin vectran	12240	0,9	2	1399
D14	Cousin vectran	12240	0,9	2	1468
DM3	Cousin vectran	16330	1,0	2	1260
DM4	Cousin vectran	16330	1,0	2	1260
DM5	Cousin vectran	16330	1,0	2	1260
DM6	Cousin vectran	16330	1,0	2	1260
DR2	Liros PPSLS	125	1,05	2	4070
DR3	Liros PPSLS	125	1,05	2	3970
F1	Cousin vectran	12100	0,6	2	673
F2	Cousin vectran	12100	0,6	2	729
F3	Cousin vectran	12100	0,6	2	839
F4	Cousin vectran	12100	0,6	2	563
F5	Cousin vectran	12100	0,6	2	637
F6	Cousin vectran	12100	0,6	2	685
F7	Cousin vectran	12100	0,6	2	691
F8	Cousin vectran	12100	0,6	2	730
F9	Cousin vectran	12100	0,6	2	804
F10	Cousin vectran	12100	0,6	2	929
F11	Cousin vectran	12100	0,6	2	991
F12	Cousin vectran	12100	0,6	2	1118
F13	Cousin vectran	12100	0,6	2	1361
FM1	Liros PPSLS	65	0,76	4	1756
FM2	Cousin vectran	12100	0,6	2	1402
FM3	Cousin vectran	12100	0,6	10	1756
AUX	Liros PPSLS	125	1,05	2	4120
FR	Cousin / Technora	988	2,1	2	2640

## Runner XC 225

Name	Line reference	Diameter / mm	Number of lines	Length / mm
A1	Cousin vectran 12100	0,6	2	532
A2	Cousin vectran 12100	0,6	2	594
A3	Cousin vectran 12240	0,9	2	939
A4	Cousin vectran 12240	0,9	2	1010
A5	Cousin vectran 12240	0,9	2	949
A6	Cousin vectran 12240	0,9	2	1041
A7	Cousin vectran 16330	1,0	2	1191
A8	Cousin vectran 16330	1,0	2	1161
A9	Cousin vectran 16330	1,0	2	1171
A10	Cousin vectran 16330	1,0	2	1225
A11	Cousin vectran 16330	1,0	2	1348
A12	Cousin vectran 16330	1,0	2	1316
A13	Cousin vectran 16330	1,0	2	1337
A14	Cousin vectran 16330	1,0	2	1410
AM1	Cousin vectran 16330	1,0	2	1015
AM2	Cousin vectran 16330	1,0	2	1160
AM3	Cousin vectran 12470	1,2	2	1305
AM4	Cousin vectran 12470	1,2	2	1305
AM5	Cousin vectran 12470	1,2	2	1305
AM6	Cousin vectran 12470	1,2	2	1305
AR1	Liros PPSLS 125	1,05	2	4450
AR2	Liros PPSLS 260	1,58	2	4205
AR3	Liros PPSLS 260	1,58	2	4110
B1	Cousin vectran 12100	0,6	2	526
B2	Cousin vectran 12100	0,6	2	576
B3	Cousin vectran 12240	0,9	2	919
B4	Cousin vectran 12240	0,9	2	985
B5	Cousin vectran 12240	0,9	2	917
B6	Cousin vectran 12240	0,9	2	1000
B7	Cousin vectran 16330	1,0	2	1140
B8	Cousin vectran 16330	1,0	2	1104
B9	Cousin vectran 16330	1,0	2	1109
B10	Cousin vectran 16330	1,0	2	1159
B11	Cousin vectran 16330	1,0	2	1277
B12	Cousin vectran 16330	1,0	2	1242
B13	Cousin vectran 16330	1,0	2	1261
B14	Cousin vectran 16330	1,0	2	1335
BM1	Cousin vectran 16330	1,0	2	1015
BM2	Cousin vectran 16330	1,0	2	1160
BM3	Cousin vectran 12470	1,2	2	1305
BM4	Cousin vectran 12470	1,2	2	1305
BM5	Cousin vectran 12470	1,2	2	1305
BM6	Cousin vectran 12470	1,2	2	1305
SM	Cousin vectran 12100	0,6	6	940
STB	Liros PPSLS 125	1,05	2	4620
BR1	Liros PPSLS 125	1,05	2	4450
BR2	Liros PPSLS 260	1,58	2	4205
BR3	Liros PPSLS 260	1,58	2	4110
C1	Cousin vectran 12100	0,6	2	563
C2	Cousin vectran 12100	0,6	2	603
C3	Cousin vectran 12240	0,9	2	949

## Runner XC 225

Name	Line reference	Diameter / mm	Number of lines	Length / mm
C4	Cousin vectran 12240	0,9	2	1028
C5	Cousin vectran 12240	0,9	2	969
C6	Cousin vectran 12240	0,9	2	1060
C7	Cousin vectran 12240	0,9	2	1179
C8	Cousin vectran 12240	0,9	2	1149
C9	Cousin vectran 12240	0,9	2	1158
C10	Cousin vectran 12240	0,9	2	1210
C11	Cousin vectran 12240	0,9	2	1330
C12	Cousin vectran 12240	0,9	2	1296
C13	Cousin vectran 12240	0,9	2	1316
C14	Cousin vectran 12240	0,9	2	1389
CM1	Cousin vectran 16330	1,0	2	1015
CM2	Cousin vectran 16330	1,0	2	1160
CM3	Cousin vectran 16330	1,0	2	1305
CM4	Cousin vectran 16330	1,0	2	1305
CM5	Cousin vectran 16330	1,0	2	1305
CM6	Cousin vectran 16330	1,0	2	1305
CR1	Liros PPSLS 125	1,05	2	4450
CR2	Liros PPSLS 180	1,25	2	4205
CR3	Liros PPSLS 180	1,25	2	4110
D7	Cousin vectran 12240	0,9	2	1272
D8	Cousin vectran 12240	0,9	2	1253
D9	Cousin vectran 12240	0,9	2	1270
D10	Cousin vectran 12240	0,9	2	1325
D11	Cousin vectran 12240	0,9	2	1450
D12	Cousin vectran 12240	0,9	2	1420
D13	Cousin vectran 12240	0,9	2	1441
D14	Cousin vectran 12240	0,9	2	1512
DM3	Cousin vectran 16330	1,0	2	1305
DM4	Cousin vectran 16330	1,0	2	1305
DM5	Cousin vectran 16330	1,0	2	1305
DM6	Cousin vectran 16330	1,0	2	1305
DR2	Liros PPSLS 125	1,05	2	4205
DR3	Liros PPSLS 125	1,05	2	4110
F1	Cousin vectran 12100	0,6	2	700
F2	Cousin vectran 12100	0,6	2	758
F3	Cousin vectran 12100	0,6	2	872
F4	Cousin vectran 12100	0,6	2	582
F5	Cousin vectran 12100	0,6	2	659
F6	Cousin vectran 12100	0,6	2	708
F7	Cousin vectran 12100	0,6	2	713
F8	Cousin vectran 12100	0,6	2	752
F9	Cousin vectran 12100	0,6	2	829
F10	Cousin vectran 12100	0,6	2	956
F11	Cousin vectran 12100	0,6	2	1019
F12	Cousin vectran 12100	0,6	2	1150
F13	Cousin vectran 12100	0,6	2	1400
FM1	Liros PPSLS 65	0,76	4	1820
FM2	Cousin vectran 12100	0,6	2	1450
FM3	Cousin vectran 12100	0,6	10	1820
AUX	Liros PPSLS 125	1,05	2	4233
FR	Cousin / Technora 988	2,1	2	2690

## Runner XC 240

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
A1	Cousin vectran	12100	0,6	2	558
A2	Cousin vectran	12100	0,6	2	623
A3	Cousin vectran	12240	0,9	2	981
A4	Cousin vectran	12240	0,9	2	1054
A5	Cousin vectran	12240	0,9	2	990
A6	Cousin vectran	12240	0,9	2	1084
A7	Cousin vectran	16330	1,0	2	1236
A8	Cousin vectran	16330	1,0	2	1204
A9	Cousin vectran	16330	1,0	2	1213
A10	Cousin vectran	16330	1,0	2	1268
A11	Cousin vectran	16330	1,0	2	1396
A12	Cousin vectran	16330	1,0	2	1362
A13	Cousin vectran	16330	1,0	2	1383
A14	Cousin vectran	16330	1,0	2	1457
AM1	Cousin vectran	16330	1,0	2	1050
AM2	Cousin vectran	16330	1,0	2	1200
AM3	Cousin vectran	12470	1,2	2	1350
AM4	Cousin vectran	12470	1,2	2	1350
AM5	Cousin vectran	12470	1,2	2	1350
AM6	Cousin vectran	12470	1,2	2	1350
AR1	Liros PPSLS	125	1,05	2	4600
AR2	Liros PPSLS	260	1,58	2	4350
AR3	Liros PPSLS	260	1,58	2	4250
B1	Cousin vectran	12100	0,6	2	553
B2	Cousin vectran	12100	0,6	2	605
B3	Cousin vectran	12240	0,9	2	960
B4	Cousin vectran	12240	0,9	2	1028
B5	Cousin vectran	12240	0,9	2	957
B6	Cousin vectran	12240	0,9	2	1043
B7	Cousin vectran	16330	1,0	2	1183
B8	Cousin vectran	16330	1,0	2	1144
B9	Cousin vectran	16330	1,0	2	1149
B10	Cousin vectran	16330	1,0	2	1200
B11	Cousin vectran	16330	1,0	2	1323
B12	Cousin vectran	16330	1,0	2	1285
B13	Cousin vectran	16330	1,0	2	1305
B14	Cousin vectran	16330	1,0	2	1380
BM1	Cousin vectran	16330	1,0	2	1050
BM2	Cousin vectran	16330	1,0	2	1200
BM3	Cousin vectran	12470	1,2	2	1350
BM4	Cousin vectran	12470	1,2	2	1350
BM5	Cousin vectran	12470	1,2	2	1350
BM6	Cousin vectran	12470	1,2	2	1350
SM	Cousin vectran	12100	0,6	6	970
STB	Liros PPSLS	125	1,05	2	4780
BR1	Liros PPSLS	125	1,05	2	4600
BR2	Liros PPSLS	260	1,58	2	4350
BR3	Liros PPSLS	260	1,58	2	4250
C1	Cousin vectran	12100	0,6	2	592
C2	Cousin vectran	12100	0,6	2	633
C3	Cousin vectran	12240	0,9	2	992

## Runner XC 240

Name	Line reference	Diameter / mm	Number of lines	Length / mm	
C4	Cousin vectran	12240	0,9	2	1073
C5	Cousin vectran	12240	0,9	2	1012
C6	Cousin vectran	12240	0,9	2	1105
C7	Cousin vectran	12240	0,9	2	1223
C8	Cousin vectran	12240	0,9	2	1192
C9	Cousin vectran	12240	0,9	2	1201
C10	Cousin vectran	12240	0,9	2	1253
C11	Cousin vectran	12240	0,9	2	1378
C12	Cousin vectran	12240	0,9	2	1342
C13	Cousin vectran	12240	0,9	2	1362
C14	Cousin vectran	12240	0,9	2	1436
CM1	Cousin vectran	16330	1,0	2	1050
CM2	Cousin vectran	16330	1,0	2	1200
CM3	Cousin vectran	16330	1,0	2	1350
CM4	Cousin vectran	16330	1,0	2	1350
CM5	Cousin vectran	16330	1,0	2	1350
CM6	Cousin vectran	16330	1,0	2	1350
CR1	Liros PPSLS	125	1,05	2	4600
CR2	Liros PPSLS	180	1,25	2	4350
CR3	Liros PPSLS	180	1,25	2	4250
D7	Cousin vectran	12240	0,9	2	1320
D8	Cousin vectran	12240	0,9	2	1300
D9	Cousin vectran	12240	0,9	2	1316
D10	Cousin vectran	12240	0,9	2	1372
D11	Cousin vectran	12240	0,9	2	1502
D12	Cousin vectran	12240	0,9	2	1470
D13	Cousin vectran	12240	0,9	2	1491
D14	Cousin vectran	12240	0,9	2	1563
DM3	Cousin vectran	16330	1,0	2	1350
DM4	Cousin vectran	16330	1,0	2	1350
DM5	Cousin vectran	16330	1,0	2	1350
DM6	Cousin vectran	16330	1,0	2	1350
DR2	Liros PPSLS	125	1,05	2	4350
DR3	Liros PPSLS	125	1,05	2	4250
F1	Cousin vectran	12100	0,6	2	736
F2	Cousin vectran	12100	0,6	2	797
F3	Cousin vectran	12100	0,6	2	914
F4	Cousin vectran	12100	0,6	2	616
F5	Cousin vectran	12100	0,6	2	694
F6	Cousin vectran	12100	0,6	2	745
F7	Cousin vectran	12100	0,6	2	750
F8	Cousin vectran	12100	0,6	2	789
F9	Cousin vectran	12100	0,6	2	867
F10	Cousin vectran	12100	0,6	2	998
F11	Cousin vectran	12100	0,6	2	1062
F12	Cousin vectran	12100	0,6	2	1197
F13	Cousin vectran	12100	0,6	2	1454
FM1	Liros PPSLS	65	0,76	4	1880
FM2	Cousin vectran	12100	0,6	2	1500
FM3	Cousin vectran	12100	0,6	10	1880
AUX	Liros PPSLS	125	1,05	2	4370
FR	Cousin / Technora	988	2,1	2	2770





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