

USER MANUAL

WAY

BEYOND REALITY

Lacy

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Welcome

Welcome to Way Gliders! Thank you for choosing Way and for giving us your trust.

We hope you will have unforgettable adventures in the air with our Lacy. Our goal is to offer you a maximum of pleasure on every flight.

It is the ideal partner for new pilots who want to improve with each flight. Experienced pilots will also benefit from its versatility, light weight and maximum passive safety.

This manual contains important information about the use of your paraglider. It also allows you to familiarize yourself with the main features of your new sail. It is strongly recommended to read this manual carefully before your first flight with the wing. Your Way: becoming a pilot! What matters is to fly

Only the regulatory authorities of the respective countries can determine the pilot's competence. The information contained in this manual is provided to warn you of unfavorable flight situations and potential hazards.

Serious or even irreversible injuries can be caused by improper use of the equipment. Only the pilot shall be responsible for any misuse of the equipment.

We wish you many unforgettable and safe flying hours.

The Way Gliders Team





The Lacy pilot

The Lacy wing is designed for a wide range of pilots. Beginner and experienced pilots will know how to use this glider without stress. It provides maximum safety while demonstrating superb performance. With the Lacy, you can enjoy hike and fly or vol-bivouac adventures. The sensations and pleasure felt with this sail are unlimited.

Certification

The Lacy meets all the requirements of the European standard in its category.

All sizes have successfully passed the load, impact and flight tests.

- During the load test, the sail successfully met the 8G tensile strength requirement.

- During the impact test, it was demonstrated that the sail is capable of withstanding 1000 daN on instant loading.

- The flight test resulted in an EN B/LFT A certification for all Lacy sizes.

Only paragliding regulatory authorities of the respective countries can determine the level and competence of the pilot.

The flight test report contains essential information to know how the Lacy wing reacts during each of the manoeuvres tested according to the EN standard.

Class A wing characteristics: Maximum passive safety and very forgiving flight characteristics. High resistance to normal flight exits.

In-flight behavior

The goal was to achieve maximum performance, minimize weight with excellent handling and real ease of use. It is a glider that transmits enough information in a comfortable way for the pilot to concentrate on the sensations.

It is a solid and stable wing with a smooth and efficient glide. The pilot must make little effort to make a precise turn. The Lacy is agile, easy to inflate even without wind. Take-offs are short and landings are soft.

In turbulent conditions, the sail remains stable and solid. Concerning the thermals, the sail penetrates perfectly in order to gradually rise.

The glider is light in flight and provides unforgettable sensations thanks to its surprising speed.



Technologies



Nitinol rods:

The evolution of the leading edges of Mylar paragliders with nylon strands has been a technological gap. The Way wings have already taken the next step by choosing rods made of Nitinol, a titanium-nickel alloy used in radiomodelling. The result: A leading edge that is always clean and tight even at low angles of incidence. This also improves the strength and durability of the structure. Although more expensive, we have opted for Nitinol to offer you the best free flight experience.



Leading edge in shark nose:

This technology dramatically improves the strength of the leading edge in the event of a sudden drop in incidence, delays closures and increases stability in accelerated flight. We have surpassed what was possible thanks to 3D imaging coupled with a more advanced knowledge than ever of mechanical resistance. The control of the sailmaking has been pushed to the next level.

The result is also more aesthetic, with a clean and taut leading edge in all circumstances.



Optimal use of the fabric's resistance:

We do not save on materials, nor on fabrics. On a Way wing, the tension is always in the direction of the fabric weft, and we avoid any diagonal tension to avoid any elasticity. The result: minimal deformation and maximum durability. Your Way wing will last longer.

Components

The delivery of the Lacy includes a series of important accessories for the correct use, transport and storage of your paraglider.

- A zippered compression bag to protect the wing during storage and transport. Our compression system allows the wing to be retracted into the smallest reversible harnesses.
- A compression strap that will compress the inner bag to reduce its volume and to save space.
- A repair kit including a sheet of Rispstop sticker in the same color as the sail.



Unpacking and assembly

In order to unpack your Lacy as efficiently as possible, it is recommended to unpack and connect your glider on a training hill, or on a flat surface without obstacles and without wind.

After taking the glider out of the backpack, open it and spread it out with the lines on the undersurface. You have to position the sail as if you were going to inflate it. It is important to check first of all that the sail has no anomalies. Untangle the lifts of the A,B,C risers, the brakes and the corresponding risers. Make sure there are no knots.

Connecting the harness

The Lacy's risers are color-coded:

- right riser: green
- left riser: red

This color code helps to avoid serious errors before takeoff.

Connect the risers to the central attachment points of the spreaders so that the risers and lines are properly ordered. Also make sure that the carabiners are perfectly attached and locked.

This sail can be used with all types of harnesses. Care must be taken when adjusting the lap strap as the distance between the links influences the stability and behavior of your wing.

The speed-bar

The speed-bar is a means of temporary acceleration by changing the flow over the profil. The speed system is already installed on the risers and cannot be modified as it conforms to the measurements and limits stipulated in its certifications.

A speed-system is included in the Lacy. Its maximum speed depends on the size of the wing. This speed system is activated when the pilot pushes the accelerator bar with his feet. (The speed- bar is not included). The speed system uses an action / reaction system. When the acceleration bar is pushed by the pilot, the Lacy accelerates. The speed can be adjusted by varying the pressure on this bar. Once the pressure on the bar is released, the wing returns to its base speed, to the neutral position. The pilot can put pressure on the bar whenever he wants throughout the flight. In the neutral position, the wing flies at the standard speed and has a minimum sink rate.

By using 1/3 acceleration, maximum fineness is achieved. However, when the pilot accelerates fully, the Lacy flies at maximum speed but the glide ratio is degraded.

When the accelerators are in neutral position (without a pressure on the speed-bar), the A, B and C risers are aligned. When the glider is fully accelerated, the difference between the A and C risers is 11 centimeters.

Inspection and inflation

Once you have checked everything and the weather conditions are suitable for a ground inflation session, inflate the Lacy as many times as necessary to get to know its behavior. It inflates very easily and gently. The pilot must make very little effort to make it inflate.

The A's should not be split over the entire inflation phase. It is better to accompany the natural rise of the wing.



Brake adjustment

According to the certification, the brake length is adjusted at the factory. Depending on the flying style, it is possible to adjust the length of the brakes. It is advisable to fly first of all a few times with the original length of brakes to get to know the behavior of the Lacy. If you want to change the length of your brakes, untie the knot, slide the line through the knot to the desired length, and then tighten the knot firmly. The two brake lines must be symmetrical. This adjustment should be made by an experienced person. Above all, this adjustment must not constantly slow down the sail. Chair and eight-knot knots are the most commonly used.

It is necessary to check that the brakes are not pulled when the accelerator is used, because when you accelerate, the trailing edge rises. It is necessary to keep in mind that when the sail is accelerated, moderate to strong actions on the brakes create a risk of frontal or asymmetric collapsing.

The first flight

Pre-flight planning is mandatory even before small flights. For your first flight with the Lacy wing, we recommend that you go to your usual site with an instructor to check the entire procedure.

Before taking off, it is necessary to carry out a visual inspection of all your equipment with the wing fully open and the lines correctly untangled and spread.

Be sure that the weather conditions are adapted to your level.

It is very easy to inflate the Lacy, and it doesn't require much effort. It is easy to control in strong winds. A wind of 25 to 30 km/h can be considered as a strong wind.

On landing, the Lacy allows a considerable margin of error. Shortly after landing, the sail should be folded as follows:

It must be folded in an accordion, with the edge reinforcements flat and the flexible rods stacked one above the other. The wing should not be bent too tightly to avoid damaging the fabric and to prolong the life of your glider.

In flight

First of all, it is important to know that the behavior and reaction of the wing can differ depending on the size and whether the load is minimal or maximal. It is recommended that the learning and reproduction of these manoeuvres is carried out under the supervision of a professional.

Flying in turbulence

Even in turbulent conditions, the sail absorbs all air movements and shows great stability thanks to its high degree of passive safety.

You should always take the necessary measures to control the sail to avoid collapsing it. However, you should not correct it too long because it could stall. It is necessary, at the right time, to restore the required speed each time. To practice this type of situation, it is recommended to be accompanied by an expert. As mentioned above, it is necessary to remember that the behavior and reactions of the sail may differ depending on whether the load is maximum or minimum. In any case, the pilot will have to know how to adapt the action he exerts on my controls according to the situations, in order to avoid over-steering.

In this section you will find all the information you need to know how the Lacy reacts to each of the manoeuvres tested:



- ▶ Despite the stability of the Lacy, **turbulence could close the sail asymmetrically**. This happens when the pilot does not anticipate an asymmetric under-incidence. The pilot feels a decrease in control pressure. In order to avoid collapsing, tension must be applied to the brake on the side that will close to increase the angle of incidence. In the event of closure, initially, the Lacy will react slowly and gently. To reopen the sail, the foot of the body must be moved to the side still open and the sail will reopen on its own normally. If it doesn't work, it is necessary to brake amply on the closed side and then give the hand back immediately. This movement can be repeated several times.
- ▶ The Lacy is very tolerant with changes in the incidence angle. Under turbulent conditions, a **symmetrical closure** could occur, when entering or leaving a thermal. A symmetrical front closure inflates itself, but the pilot can brake symmetrically and energetically. Then the pilot must release the brakes immediately to restore the glider to its optimal speed.
- ▶ A **negative spin** is out of the Lacy's range of behavior. But some actions of the pilot may be at the origin of this behavior. Trying to turn when the wing is flying at low speeds causes this incident. In this case, the relative wind on the profile must be restored. The pressure on the brakes must be gradually reduced so that the glider can regain speed. The expected reaction is a surge with a turn initiation of less than 360° before returning to normal flight.
- ▶ A **parachuting stall** is almost impossible with a Lacy. If the wing enters a parachuting phase, it stalls at the rear, becomes unstable, and there is a lack of brake pressure, although the profile appears to be fully inflated. In order to regain an air speed, the brake line tension must be released symmetrically and the A lines manually pushed. Then you have to move your body without pressing the brake lines.
- ▶ The **stall situation** is unlikely with the Lacy in normal flight. It is when you fly at very low speed, over-piloted in turbulent conditions that this incident can happen. To cause a complete stall, you must brake symmetrically so that the wing flies at its minimum speed, then you must continue to brake at 100% and keep your hands in this position. The sail will then tip backwards, and by a pendulum effect positions itself vertically above the pilot with a previous surge, the extent of which depends on how the manoeuvre has been carried out. When you enter a stall, raise the brakes to the intermediate point of the total brake travel. The wing will quickly drop forward and can reach a point below the pilot. It is then necessary to control this surge by a marked and effective delay. Brake pressure must be maintained until the wing returns to its normal flying position. To return to normal flight, the brakes must be released gradually and symmetrically so that the glider can regain speed in a surge. The wing will react so that it dives forward and at this point, it should not be over-piloted because it must regain speed to recover from the stall.
- ▶ A **cravat** may occur in the Lacy after an asymmetric collapse, when the tip of the wing is caught between the lines. This can quickly cause the wing to spin. The manoeuvres to be used are the same as those applied in the case of an asymmetric collapse. The heading must be controlled by applying tension on the opposite side and weight transfer. Then, you have to pull on the stabilo line (attached to the wing tip) to undo the cravat. If this doesn't work, it is recommended that the pilot proceeds to the nearest landing by controlling the direction through weight transfer and the use of the opposite brake of the tangled side.
- ▶ It is important to keep in mind that most flight incidents are caused by pilot errors. **Over-steering** leads to critical flight situations. The Lacy is designed to restore normal flight on its own. So you have to let it fly.

Accelerated flight

The Lacy will fly stably in all its speed ranges. Trims can be used in strong winds. When released, the sail profile is more and more sensitive to turbulence. They should not be released under turbulent conditions. In addition, the use of trimmers and brakes must be balanced.

It is advisable to trim again to increase the angle of incidence if the pilot feels a loss of pressure in the wing.

Untangling

It is necessary to check the lines before each flight to avoid knots.

If you have taken off with a knot, precautions should be taken to avoid any incident. You can try to find the tangled line and try to untie the knot by pulling it. Also avoid sudden braking when there is a knot as this can lead to a stall.



Losing altitude

It is necessary to know how to descend and lose altitude in several circumstances. The method of altitude loss depends on the flight situation. It is recommended to learn the different methods with the help of an expert pilot.

- ▶ A **first technique** of descent would be the "**big ears**" technique. With this manoeuvre, you reach -3 to -4 meters per second. The speed decreases from 3 to 5km/h.
 - ▶ On each riser, take the outermost line and pull them simultaneously outward and downward.
 - ▶ Keep the ears pulled outwards until you have lost the desired altitude.
 - ▶ To regain the correct speed and angle of incidence, accelerate again once the ears are pulled.
 - ▶ To inflate the wingtips, release the lines. If they do not inflate, pull one brake and then the other.
 - ▶ Care must be taken not to brake when doing the ear technique as this can cause a stall.

- ▶ A **second technique** of descent would be "**the B-line stall**". This is a manoeuvre during which you no longer have control over the sail because it stops flying and enters a parachuting phase.
 - ▶ Take the risers just below the links, then pull them down and keep them in that position. This manoeuvre requires a fairly high effort as it requires a lot of pulling to start deforming the profile. This traction must be maintained and the risers must not be released.
 - ▶ The vertical speed is -6 or even -8 meters per second.
 - ▶ To stop this manoeuvre, release both risers simultaneously in a fast and dry manner, then you will return to a normal flight.

- ▶ The **third height loss technique** is called "**360 degrees**". This manoeuvre is one of the most effective but requires a lot of training at high altitudes. The wing will experience a huge amount of descending and rotating speed, G-force, which can lead to a loss of orientation of the pilot. With this manoeuvre, the sail will gain speed and therefore Gs. You will have to learn to resist these Gs.
 - ▶ First press your weight on one side of the harness and then brake on the same side. If you wish, you can adjust the intensity of the turn by braking a little outside the turn. The glider can descend to -20 meters per second, which is the equivalent of 70 km/h in vertical speed!
 - ▶ To exit the manoeuvre, gradually release the inner brake of the turn. Brake briefly at the same time and press the weight outwards from the bend. This must be measured and stopped when the sail starts to come out of the turn. The sail may have pendulum movements and a lateral surge.



- ▶ A **last technique** would be the "**slow descent technique**". Perform this manoeuvre when you are in no hurry to get off. The goal is to locate the descending zones and to position oneself by turning as if in a thermal.
- ▶ Do not attempt to descend in turbulent conditions. The best way is to get away from the turbulence and look for areas where conditions are healthy, to land gently and safely.

Special methods

Towing is not a problem for the Lacy. The winching equipment must be used by expert pilots. The wing must be inflated in the same way as in a normal flight. Use the brakes to correct the flight path alignment. In order to avoid a stall, you must make corrections with a high degree of delicacy since the wing is subject to a slow airspeed.

As far as **acrobatic flight** is concerned, it is strongly discouraged to use this glider for this practice. This practice leads to centrifugal forces of 4 to 5 G. To learn these acrobatic manoeuvres, you should take courses above the water with the supervision of an expert. If you do this kind of practice, which leads to rapid wear and tear of the equipment, it is advisable to have the lines serviced every 6 months.



Care and maintenance

Careful maintenance of your equipment is necessary for a good performance.

A check is mandatory before each flight. It is necessary to be careful with your equipment.

An impact of the leading edge against a hard surface can damage the fabric and structure of the sail. The leading edge must be subject to precise and meticulous controls. In case of soiling, clean the fabric and lines with a damp cloth only with water. Do not use chemicals on the fabric. If the sail is wet, do not allow it to dry in sunlight, which can cause premature aging. The sail must be placed in a dry place. If there is an accumulation of sand in the wing, remove all the sand before folding it and putting it in its bag.

It is also important to store it properly. Store the sail in a dry and cool place, away from chemicals, oils and rodents. Do not leave it in the trunk of a car as the sail may heat up quickly.

For folding, it is necessary that the wing is correctly folded and packed. When you do not use the sail for a long time, it is best to store it loosely, without direct contact with the ground.

Like all sails, your Lacy must be regularly inspected in a control workshop every 100 hours of use or every two years.

Any minor repairs or modifications to your sail should be checked by professionals.

Guarantee

This equipment and all its components are guaranteed for 2 years for any manufacturing defect.

The warranty does not cover damage caused by misuse or abnormal use of the equipment.

Technical specifications

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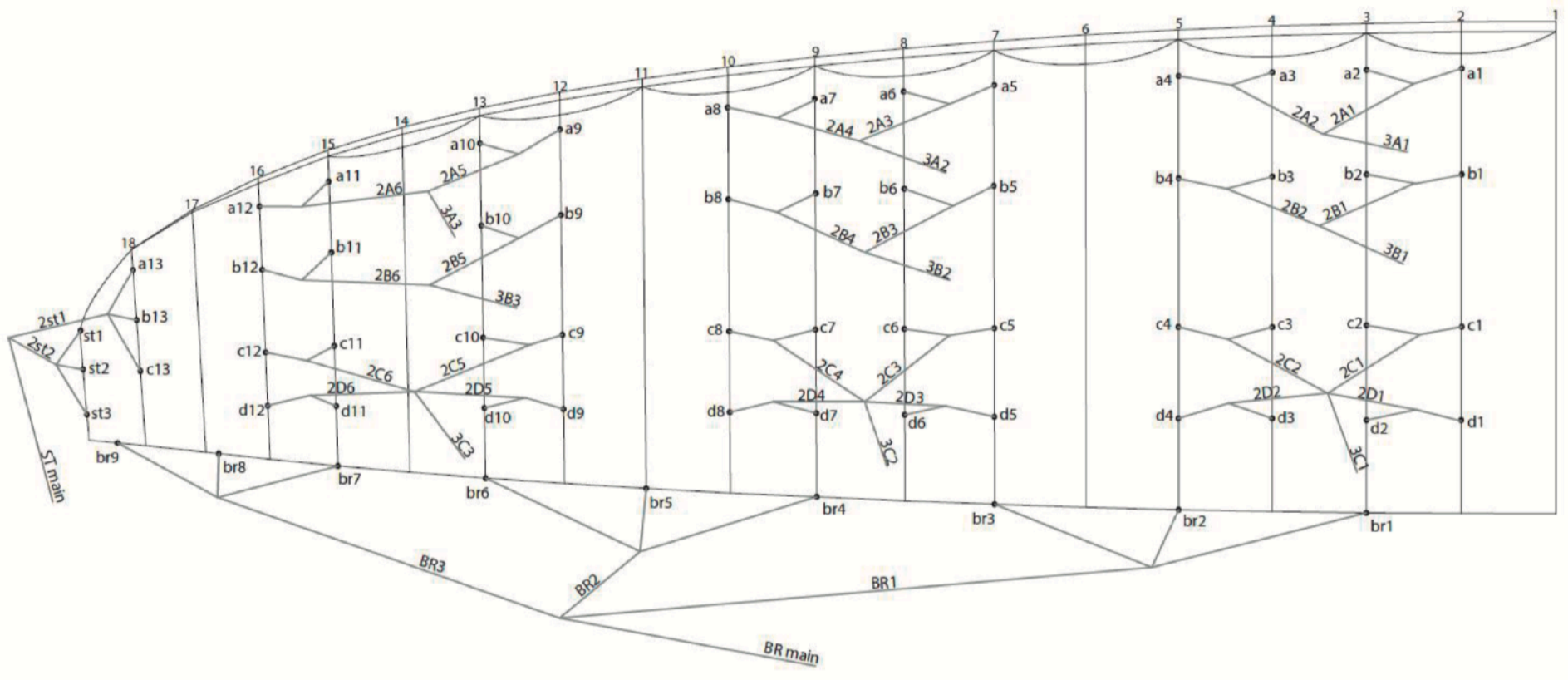
Lacy			22	24	26	28
Cells	Number		36	36	36	36
	Closed		8	8	8	8
	Box		27	27	27	27
Flat	Area	M2	22	24	26	28
	Span	M	10,44	10,90	11,35	11,77
	Aspect ratio		4,95	4,95	4,95	4,95
Projected	Area	M2	19,04	20,77	22,50	24,23
	Span	M	8,48	8,86	9,22	9,56
	Aspect ratio		3,78	3,78	3,78	3,78
Flattening		%	13	13	13	13
Cord	Maximum	M	2,55	2,67	2,78	2,88
	Minimum	M	0,66	0,69	0,72	0,75
	Average	M	2,11	2,20	2,29	2,38
Lines	Total meters	M	264	276	287	299
	Height	M	6,59	6,88	7,16	7,43
	Number		206	206	206	206
	Main		2 + 1/3/4	2 + 1/3/4	2 + 1/3/4	2 + 1/3/4
Risers	Number	3	A+A'/B/C	A+A'/B/C	A+A'/B/C	A+A'/B/C
	Trims		NO	NO	NO	NO
	Accelerator	M/M	110	110	110	110
	Split A'S		YES	YES	YES	YES
Total weight	Minimum	KG	45	60	75	90
In flight	Maximum	KG	73	80	95	115
Glider weight		KG	3,15	3,45	3,70	4,00
Certification		EN / LFT	A	A	A	A

Materials

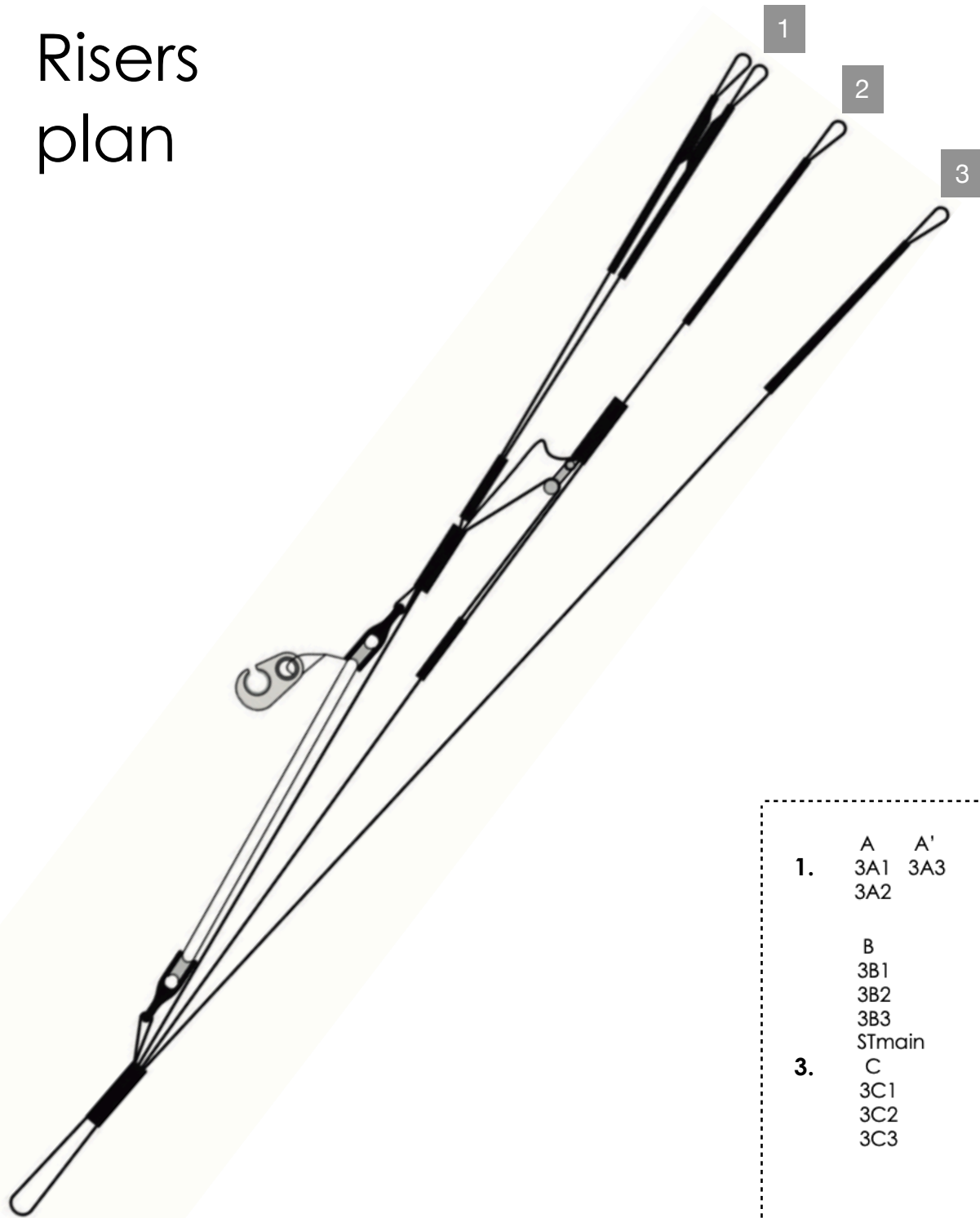
Canopy	Fabric code	Supplier
Upper surface	70032 E3W	PORCHER IND (FRANCE)
Bottom surface	70000 E3H	PORCHER IND (FRANCE)
Profiles	70000 E91	PORCHER IND (FRANCE)
Diagonals	70000 E91	PORCHER IND (FRANCE)
Loops	LKI - 10	KOLON IND (KOREA)
Reinforcement loops	W - 420	D-P (GERMANY)
Trailing edge reinforcement	MYLAR	D-P (GERMANY)
Ribs reinforcement	LTN - 0,8 STICK	SPORTWARE CO. (CHINA)
Thread	SERAFIL 60	AMAN (GERMANY)
Suspension lines	Fabric code	Supplier
Upper cascades	8000/ U -90	EDELRID (GERMANY)
Middle cascades	8000/ U -90	EDELRID (GERMANY)
Middle cascades	8000/ U - 130	EDELRID (GERMANY)
Main	TNL- 140	TEIJIM LIMITED (JAPAN)
Main	TNL - 220	TEIJIM LIMITED (JAPAN)
Main	TNL-280	TEIJIM LIMITED (JAPAN)
Main break	TNL- 280	TEIJIM LIMITED (JAPAN)
Thread	SERAFIL 60	AMAN (GERMANY)

Risers	Fabric code	Supplier
Material	3455	COUSIN (FRANCE)
Color indicator	PAD	TECNI SANGLES (FRANCE)
Thread	V138	COATS (ENGLAND)
IKS	12999	COUSIN (FRANCE)
Pulleys	PY - 1304 - 2	ANSUNG PRECISION (KOREA)

Suspension plan



Risers plan



- | | | |
|----|--------|-----|
| 1. | A | A' |
| | 3A1 | 3A3 |
| | 3A2 | |
| 3. | B | |
| | 3B1 | |
| | 3B2 | |
| | 3B3 | |
| | STmain | |
| 3. | C | |
| | 3C1 | |
| | 3C2 | |
| | 3C3 | |





W.A.Y.

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