LACY 2 HF

WELCOME

We wish to welcome you to our team and thank you for the confidence that you have placed in a WAY Glider.

We would like to share with you the commitment, the passion and emotions of the WAY design team, which have resulted in the creation of the new LACY 2 HF. WAY are very proud of this new glider, a glider carefully designed to bring you maximum pleasure whilst allowing you learn and progress.

This is the user's manual that we recommend you to read in detail.

WAY GLIDERS (Rid'Air)
ZI-Chemin du Wegacker
68830 ODEREN

USER'S MANUAL

WAY Gliders LACY 2 HF

This manual offers all the necessary information that will familiarize you with the main characteristics of your new paraglider. Although this manual informs you about your glider, it does not offer the instruction requirements necessary for you to be able to pilot this type of wing. Flying instruction can only be taught at a paragliding school recognized by the Flying Federation of your country.

Nevertheless we remind you that it is important that you carefully read all the contents of the manual for your new LACY 2 HF.

Severe injuries to the pilot can be the consequence of the misuse of this equipment.

SUMMARY

1. CHARACTERISTICS

1.1 WHO IS IT DESIGNED FOR?

The LACY 2 HF has been designed for cross country pilots wanting to open the door to the world of cross country and for those pilots seeking to improve their performance in the Grand Touring Class without compromising safety.

1.2 CERTIFICATION

The LACY 2 HF has successfully achieved the European EN/LTF certification. This test was carried out in the Swiss Air-Turquoise laboratories in Switzerland.
All the commercially available sizes passed every required test with excellent results and the LACY 2 HF received EN A / LTF A certification for all sizes.

The LACY 2 HF passed the essential load test of 8g without experiencing any problems.

We recommend paying special attention on the flight test report made by the certification laboratory, and specially attention to the test pilot comments (Point 25 on the flight test report).
On the flight test report there is all necessary information to know how the new paraglider will react on each manoeuvre tested.
It is important to take into account that each size can have a different reaction on the same manoeuvre. Furthermore, the same size on maximum load o minimum load can experiment a different behaviour.

1.3 IN-FLIGHT BEHAVIOUR

With progressive, predictable and efficient handling the LACY 2 HF effectively reads the air mass, seeking out and coring thermals with efficiency and ease. The LACY 2 HF remains agile, light and predictable in all conditions of flight and behaves impeccably during turbulence.

1.4 ASSEMBLY, MATERIALS

The LACY 2 HF has all the technological innovations as used on other WAY gliders. Furthermore it is full of small details destined to enhance the pilots' comfort and to improve the performance of the SLE, RAM, DRS and 3 line profile.

The use of the SLE (Structured Leading Edge) allows reinforcement of the leading edge preventing any deformation during turbulence. The airflow is also vastly improved over the entire front span of the glider.

The RAM AIR INTAKE technology presents an internal positioning for the air entrance to allow an optimal maintenance of the internal pressure as well as an improving of the laminar flow on intrados. What's the result?
Gaining turbulent air absorption in the leading edge, more consistent at every speed and a better performance while assuring maximum security.

DRS.- The trailing edge has been reinforced with small ribs that make this part flatter in order to spread the pressure out evenly. It means better air-flow and less drag on this important part of the glider. The addition of these ribs gives exceptional handling (better and more efficient when turning) and more control and precision.

3LT.- Its powerful profile, a detailed internal architecture structure and the use of high-tech strength materials make possible a significant reduction of the total length of suspension lines in order to reduce the parasite resistance and the weight of the glider to gain efficiency.

Not a single millimetre of error is possible in the manufacturing process from Olivier's computer to the cutting of the fabric. An automatic process controlled by a laser-cutting program cuts each of the sections that compose the different parts of the wing. This program not only cuts the pieces of fabric but it also paints the guideline marks that will aid the assembly; it also numbers the separate pieces of material. All this is carried out before human handling of the pieces begins. So we eliminate possible and understandable errors that may occur during this delicate procedure.

The lines are semi-automatically manufactured and all the sewing is finished under the supervision of our specialists. The jigsaw puzzle of the assembly process is made easier using this method. We minimize the processes while making the quality control more efficient. All the different parts of the canopy are cut and assembled under the strict conditions induced by the automation of the whole process.
It is strongly recommended that all lines are thoroughly checked by the pilot prior to every flight and ultimately checked by a service centre or WAY dealer after every 100 hours of flight. We should not forget that we are using materials with great performance but that they need a rigorous check before every flight.

All WAY Gliders go through an extremely thorough and efficient final inspection.
Every single line of each glider is measured individually once the final assembly has concluded. Each wing is then individually inflated for the last visual revision.

Each glider is packaged following the maintenance and conservation instructions recommended for the advanced materials. WAY Gliders are made of first class materials as demanded by the performance, durability, and homologation requirements of the present-day market.

Information about construction materials is given on the last pages of this manual.

2. UNPACKING AND ASSEMBLY

2.1 CHOOSE THE RIGHT PLACE

We recommend that you unpack and assemble your wing on a schooling slope or a flat clear area without too much wind and free of obstacles. These conditions will allow you to carry out all the steps required for you to check and inflate the LACY 2 HF.

We recommend that an instructor or a retailer supervises the entire procedure as only they are competent to resolve any doubt in a safe and professional way.

2.2 PROCEDURE

Take the paraglider out of the rucksack, open it and spread it open with the lines on top of the underside, position the wing as if you were to inflate it. Check the condition of the fabric and the lines, making sure there are no abnormalities. Check the maillons, which attach the lines to the risers, are properly closed. Identify and if necessary disentangle the lines from A, B and C risers, the brake lines and the corresponding risers. Make sure that there are no ties or knots.

2.3 ASSEMBLY OF THE HARNESS

Correctly place the risers on the harness karabiners. The risers and lines should not have any twists and they should be in the right order. Check that the harness buckles are correctly locked.

2.4 TYPE OF HARNESS

The LACY 2 HF has been certified on EN A with a harness according to the following rules:

- 2. DV LuftGerPV §1, Nr. 7 c (LTF)
- European Standard EN1651
- European Standard EN12491

This certification allows it to be flown with most of the harnesses on the market, even the ones that use cocoon. We strongly recommend that you adjust the distance of the chest strap according the values used during certification. This varies according to the size of the chosen harness.

Small = 44 cm
Medium = 45 cm
Large = 46 cm

Incorrect adjustment can seriously affect the piloting of the glider. A distance, which is too wide between the karabiners, may provide more feedback but could affect the overall stability of the glider. A distance, which is too narrow between the karabiners, would provide less feedback but also increase any risk of developing a twist in during a large collapse.
Any change made to these specifications may affect the wing's performance and reactions. This would therefore effect the glider's configuration and would not conform to the homologation.

2.5 ASSEMBLY OF THE ACCELERATOR

The acceleration mechanism of the LACY 2 HF works when you push with your feet on the accelerator bar, this is supplied with the equipment. On delivery the accelerator bar has not yet been installed and it is recommended that it is fit by yourself before flight.

Most harnesses are equipped with a pre-installed acceleration system. When fitting any accelerator system ensure that all preinstalled items within the harness, such as roller pulleys are used correctly. After fitting, take into account that you will have to adjust the length of the accelerator lines for correct use. This will vary according to the length of the pilot's legs!

We recommend that you try the correct fitting of the acceleration system on equipment designed to do this, most paragliding schools have this sort of equipment.

2.6 INSPECTION AND WING INFLATION ON THE GROUND

Once you have checked all the equipment and made sure that the wind conditions are favourable, inflate your LACY 2 HF as many times as necessary in order to become acquainted with the wing's behaviour. The LACY 2 HF inflates easily and smoothly. An excess of energy is not necessary and the wing will inflate with minimum pressure on the harness when you move forward. This may be assisted by using the A lines. Do not pull on them; just accompany the natural rising movement of the wing. Once the wing is in the 12 o'clock position, simply apply correct pressure on the brake lines and the LACY 2 HF will sit over your head.

2.7 ADJUSTING THE BRAKES

The length of the main brake lines is adjusted at the factory to the length established during certification. However, the length can be changed to adapt to the pilot's flying style. Nevertheless, we recommend that you fly for a while with these, set at the original length. This will allow you to become accustomed to the LACY 2 HF and its unique flying behaviour. If you then decide to change the length of the brake lines, untie the knot, slide the line through the brake link to the desired length, and strongly re-tie the knot. Qualified personnel should carry out this adjustment. You must ensure that this adjustment does not slow down the glider without any pilot input. Both brake lines should be symmetrical and measure the same length. The most recommended knots are the clove hitch knot or bowline knot.

When changing the brakes length, it is necessary to check that they do not act when the accelerator is used. When we accelerate the glider rotates over the C riser and the trailing edge elevates. We must check that the brake is adjusted taking in consideration this extra length in acceleration.

3. THE FIRST FLIGHT

3.1 CHOOSE THE RIGHT PLACE

We recommend that the first flight with your LACY 2 HF is made on a smooth slope (a school slope) or in your usual flying area.

3.2 PREPARATION

Repeat the procedures detailed in chapter 2 UNPACKING AND ASSEMBLY in order to prepare your equipment.

3.3 FLIGHT PLAN

Draw out a flight plan before take-off in order to avoid possible flight errors.

3.4 PRE-FLIGHT CHECK LIST

Once you are ready, but before you take-off, carry out another equipment inspection. Ensure correct installation of all equipment and that all lines are free of hindrances or knots. Check that the weather conditions are suited for your flying skills.

3.5 WING INFLATION, CONTROL, AND TAKE-OFF

Smoothly and progressively inflate the wing (chapter 2.6 INSPECTION AND WING INFLATION ON THE GROUND). The LACY 2 HF inflates easily and does not require excessive energy. It does not tend to over-take you, so the wing inflation phase is carried out without anguish. These take off characteristics provide a perfect control phase and enough time for the pilot to decide whether to accelerate and take off.

Whenever the wind speed allows it, we recommend a reverse launch technique; this type of launch allows you to carry out a better visual check of the wing. The LACY 2 HF is especially easy to control in this position in strong winds. However, wind speeds up to 25 to 30 km/h are considered strong and extra consideration should be given to any thought of flight.

Preparation and positioning of the wing on the take-off is especially important. Choose a location which is appropriate for the direction of the wind. Position the paraglider as if it were part of a large circle, taking into account the shape of the canopy in flight. All this will assist in a trouble free take-off.

3.6 LANDING

The LACY 2 HF lands excellently, it transforms the wing speed into lift on the pilot's demand, allowing an enormous margin of error. You will not have to wrap the brake lines around your hand to get greater braking efficiency.

3.7 FOLDING INSTRUCTIONS

The LACY 2 HF has a complex leading and trailing edge, manufactured using a variety of different materials. For that reason, the use of a correct folding method is very important for extending the useful life of your paraglider. It should be folded like an accordion, with the leading edge reinforcements flat and the nylon sticks positioned one upon the other. This method will ensure that the profile remains in good shape without altering its form or its performance.

The wing should then be folded in three parts taking care of not bending or twisting the STE. The wing does not have to be tightly folded, if you do so it may damage the material and or the lines.

4. IN FLIGHT

4.1 FLYING IN TURBULENCE

The LACY 2 HF has an excellent profile to withstand the very different aero-logical conditions so allowing the best possible piloting and stability. It reacts admirably in passive flight, thus offering a high level of

safety in turbulent conditions. Nonetheless, the pilot always has to pilot according to the prevailing weather conditions, the pilot is the ultimate safety factor.

We recommend active piloting, making the necessary fine adjustments to keep the wing in control. He/she should stop braking to allow it to fly at the required wing speed after a correction is made.
Do not maintain any correction for longer than necessary (braked) this would cause the wing to enter into critical flying situation. Whenever necessary, control a situation, react to it and then re-establish the required speed.

4.2 POSSIBLE CONFIGURATIONS

We recommend that training to master these manoeuvres be carried out under the supervision of a competent school.

Asymmetric collapse

In spite of the stability of the profile of the LACY 2 HF, heavy turbulent conditions may cause part of the wing to collapse asymmetrically. This usually happens when the pilot has not foreseen this possible reaction of the wing. When the wing is about to experience an asymmetric collapse the brake lines and the harness will transmit a loss of pressure to the pilot. To prevent the collapse from happening, pull the brake line corresponding to the compromised side of the wing, this will increase the angle of incidence. If the collapse does happen the LACY 2 HF will not react violently, the turn tendency is very gradual and it is easily controlled. Lean your body towards the side that is still flying in order to counteract the turn and to maintain a straight course, if necessary slightly slow down the same side. The collapse will normally open by itself but if that does not happen, pull completely on the brake line on the side, which has collapsed (100%). Do this with a firm movement. You may have to repeat this operation to provoke the re-opening. Take care not to over-brake on the side that is still flying (turn control) and when the collapse has been solved; remember to let the wing recover its flying speed.

Symmetric collapse

In normal flying conditions the design of the LACY 2 HF ensures that a symmetric collapse is quite improbable. The profile of the wing has been designed to widely tolerate extreme changes in the angle of incidence. A symmetric collapse may occur in heavy turbulent conditions, on entry or exit of strong thermals or lack of adapting the use of the accelerator to the prevailing air conditions. Symmetrical collapses usually re-inflate without the glider turning but you can symmetrically apply the brake lines with a quick deep pump to quicken the re-inflation. Release the brake lines immediately to recover optimum flight speed.

Negative spin

This configuration is out of the normal flight behaviour of the LACY 2 HF. Certain circumstances however, may provoke this configuration such as trying to turn when the wing is flying at very low speed (while heavily braking). It is not easy to give any recommendations about this situation since it varies depending on the circumstances. Remember that you should restore the relative air speed over the wing. To achieve this, progressively reduce the pressure on the brake lines and let the wing gain speed. The normal reaction would be a lateral surge with a turn tendency no greater than 360º before restoring to normal flight conditions.

Parachutal stall

If it does happen, the feeling would be that the wing would not be advancing; you would feel a kind of instability and a lack of pressure on the brake lines, although the canopy would appear to be correctly inflated. The correct reaction would be to release the pressure on the brake lines and push the A lines forward or rather lean your body to any side WITHOUT PULLING ON THE BRAKE LINES.

Deep stall

The possibility of the LACY 2 HF falling into this configuration during normal flight is very unlikely. This could happen if you are flying at a very low speed, whilst over steering in a number of manoeuvres and in turbulent conditions. To provoke a deep stall you have to take the wing to minimum flight speed by symmetrically pulling the brake lines, when you reach this point, continue pulling until you reach 100% and then hold. The glider will first fall behind you and then situate itself above you, rocking slightly, depending on how the manoeuvre was carried out. When you start to provoke a stall, be positive and do not doubt an instant. Do not release the brake lines when half way through the manoeuvre. This would cause the glider to surge violently forward with great energy and may result in the wing below the pilot. It is very important that the pressure on the brake lines is maintained until the wing is well established vertical above.
To regain normal flight conditions, progressively and symmetrically release the brake lines, letting the speed be re-established. When the wing reaches the maximum advanced position ensure that the brakes are fully released. The wing will now surge forward, this is necessary so that air speed is completely restored over the wing. Do not over brake at this point because the wing needs to recover speed to quit the stall configuration. If you have to control a possible symmetrical front stall, briefly and symmetrically pull on the brake lines and let go even when the wing is still ahead of you.

Wing tangle

A wing tangle may happen after an asymmetric collapse, the end of the wing is trapped between the lines (Cravat). This situation could rapidly cause the wing to turn, although it depends on the nature of the tangle. The correction manoeuvres are the same as those applied in the case of an asymmetrical collapse, control the turn tendency by applying the opposite brake and lean your body against the turn. Then locate the line that reaches the stabiliser that is trapped between the other lines. This line has a different colour and belongs to the external lines of the B riser.

Pull on this line until it is tense, this should help to undo the wing tangle. If you cannot undo the tangle, fly to the nearest possible landing spot, control the flying course with your body movements and a little pressure on the opposite brake. Be careful when attempting to undo a tangle if you are flying near a mountainside or near to other paragliders, you may lose control of the flying course and a collision may occur.

Over handling

Most flying incidents are caused by incorrect actions of the pilot, which chained one after another creates abnormal flying configurations (a cascade of incidents). You must remember that over handling the wing will lead to critical levels of functioning. The LACY 2 HF is designed always to try to recover normal flight by itself, do not try to over handle it.

Generally speaking, the reactions of the wing, which follow over handling, are neither due to the input made or the intensity, but the length of time the pilot continues to over handle. You have to allow the profile to re-establish normal flight speed after any type of handling.

4.3 USING THE ACCELERATOR

The profile of the LACY 2 HF has been designed to fly stable through its entire speed range. It is useful to accelerate when flying in strong winds or in extreme descending air. When you accelerate the wing, the profile becomes more sensitive to possible turbulence and closer to a possible frontal collapse. If you feel a pressure loss, you should release the pressure on the accelerator and pull slightly on the brake lines to increase the angle of incidence. Remember that you have to re-establish the flight speed after correcting the incidence.
It is NOT recommended to accelerate near to the mountainside or in very turbulent conditions. If necessary you will have to constantly adjust the movements and pressure on the accelerator whilst constantly adjusting the pressure applied to the brake lines. This balance is considered to be “active piloting.”
The LACY 2 HF risers have been designed without any adjustable, removable or variable device to prevent and incorrect use of the accelerator system.

4.4 FLYING WITHOUT BRAKE LINES

If, for any reason at all, you cannot use the brake lines of your LACY 2 HF you will have to pilot the wing using the C-risers and your body weight to fly towards the nearest landing. The C-lines steer easily because they are not under pressure, however you have to be careful not to over handle them causing a stall or negative turn. To land you have to let the wing fly at full speed and before reaching the ground you will have to pull symmetrically on both the C-risers. This braking method is not as effective as using the brake lines so you will land at a higher speed.

4.5 KNOTS IN FLIGHT

The best way to avoid these knots and tangles is to inspect the lines before you inflate the wing for take-off. If you notice a knot before take-off, immediately stop running and do not take-off.
If you have taken-off with a knot you will have to correct the drift by leaning on the opposite side of the knot and apply the brake line on that side too. You can gently try to pull on the brake line to see if the knot becomes unfastened or try to identify the line with the knot in it. Try to pull the identified line to see if the knot undoes. Be very careful when trying to remove a knot. When there are knots in the lines or when they are tangled, do not pull too hard on the brake lines because there is an increased risk of the wing to stalling or negative turn being initiated

Before trying to remove a knot, make sure there are no pilots flying nearby and never try these manoeuvres near the mountainside. If the knot is too tight and you cannot remove it, carefully and safely fly to the nearest landing place.

5. LOSING HEIGHT

The knowledge of the different descent techniques is an important resource to use in certain situations. The most adequate descent method will depend on the particular situation.
We recommend that you learn to use these manoeuvres under the tuition of a competent school.

5.1 EARS

Big ears is a moderate descent technique, achieving about –3 or –4 m/s and a reduction in ground speed of between 3 and 5 km/h. Effective piloting then becomes limited. The angle of incidence and the surface wing load also increases. Push on the accelerator to restore the wing's horizontal speed and the angle of incidence.

To activate big ears outer line 3A3 on each A risers and simultaneously, smoothly pull them outward and downward. The wingtips will fold in. Let go of the lines and the big ears will re-inflate automatically. If they do not re-inflate, gently pull on one of the brake lines and then on the opposite one. We recommend that you re-inflate asymmetrically, not to alter the angle of incidence, more so if you are flying near the ground or flying in turbulence.

5.3 B-LINE STALL

When you carry out this manoeuvre, the wing stops flying, it loses all horizontal speed and you are not in control of the paraglider. The air circulation over the profile is interrupted and the wing enters into a situation similar to parachuting.

To carry out this manoeuvre you have to take the B-risers below the maillons and symmetrically pull both of them down (approx. 20-30 cms) and then hold this position. The initial phase is quite physical (hard resistance) which means that you will have to pull strongly until the profile of the wing is deformed, when this happens the required force will then significantly reduce. To maintain this manoeuvre you must continue to hold the B Lines in the pulled down position. The wing will then become deformed, horizontal speed drops to 0 km/h and vertical speed increases to –6 to –8 m/s depending on the conditions and how the manoeuvre has been performed.

To exit the manoeuvre, simultaneously release both risers, the wing will then slightly surge forward and then automatically return to normal flight. It is better to let go of the lines quickly rather than slowly. This is an easy manoeuvre but you must remember that the wing stops flying, it loses all horizontal movement and its reactions are very different compared to normal flight.

5.4 SPIRAL DIVE

This is a more effective way for rapidly losing height. You have to know that, the wing can gain a lot of vertical speed and rotation speed (G force). This can cause a loss of orientation and consciousness (blackouts). These are the reasons why it is best to carry out this manoeuvre gradually so your capacity to resist the G forces increases and you will learn to fully appreciate and understand the manoeuvre. Always practice this manoeuvre when flying at high altitude.
To start the manoeuvre, first lean your bodyweight and pull the brake line to the side to which you are leaning. You can regulate the intensity of the turn by applying a little outside brake.

A paraglider flying at its maximum turn speed can reach –20 m/s, equivalent 70 km/h vertical speed and stabilize in a spiral dive from 15 m/s onwards.

These are the reasons why you should be familiar with the manoeuvre and know how to carry out the exit methods.
To exit this manoeuvre you must progressively release the inside brake and also momentarily apply outside brake. Whilst doing this you must also lean your bodyweight towards the outside. This exit manoeuvre has to be carried out gradually and with smooth movements so you can feel the pressure and speed changes at the same time.
The after effect of the exit manoeuvre is that the glider will rock briefly with lateral surge, depending on how the manoeuvre has been carried out.
Practice these movements at sufficient altitude and with moderation.

5.5 SLOW DESCENT TECHNIQUE

Using this technique (do not hurry to descend) we will fly normally, without forcing neither the material nor the pilot. It means looking for descending air areas and turn as it was a thermal – in order to descend. We have to avoid danger areas when looking for descent zones. Safety is the most important thing.

6. SPECIAL METHODS

6.1 TOWING

The LACY 2 HF does not experience any problem whilst being towed. Only qualified personnel should handle the qualified equipment to carry out this operation. The wing has to be inflated in the same way as in normal flight.

6.2 ACROBATIC FLIGHT

Although the LACY 2 HF has been tested by expert acrobatic pilots in extreme situations, it HAS NOT been designed for acrobatic flight and we DO NOT RECOMMEND THE USE OF THIS GLIDER for that use. We consider acrobatic flight to be any form of piloting that is different to normal flight. To learn safely how to master acrobatic manoeuvres you should attend lessons, which are carried out and supervised by a qualified instructor over water. Extreme manoeuvres take you and your wing to centrifugal forces that can reach 4 to 5g.
Materials will wear more quickly than in normal flight. If you do practice extreme manoeuvres we recommend that you submit your wing to a line revision every six months.

7. CARE AND MAINTENANCE

7.1 MAINTENANCE

Careful maintenance of your equipment will ensure continued performance.
The fabric and the lines do not need to be washed, if they become dirty, clean them with a soft damp cloth.

If your wing gets wet with salty water, immerse it in fresh water and dry it away from direct sunlight. The sunlight may damage the materials of your wing and cause premature aging. Once you have landed, do not leave the wing in the sun, store it properly.

If you use your wing in a sandy area, try to avoid the sand from entering through the cell openings of the leading edge. If sand is inside the wing, remove it before folding.

If it gets wet of sea water, you should submerge it into fresh water and let it dry far away from the sun.

7.2 STORAGE

It is important that the wing is correctly folded when stored. Store your flying equipment in a cool, dry place away from solvents, fuels or oils. It is not advisable to store your flying equipment in the trunk of your car. Temperatures inside a car parked in the sunlight, can be very high. Inside a rucksack and in the sunlight temperatures can reach 60ºC. Weight should not be laid on top of the equipment.

If the flying gear is stored with organic material (such as leaves or insects) inside, the chemical reaction can cause irreparable damage.

7.3 CHECKS AND CONTROLS

You should ensure your LACY 2 HF is periodically serviced and checked at your local repair shop every 100 hours of use or every 24 months (whichever happens first). This is the only way to guarantee that your LACY 2 HF will continue to function properly and therefore continue fulfilling the homologation certificate results.

7.4 REPAIRS

If the wing is damaged, you can temporarily repair it by using the rip stop found in the repair kit, so long as no stitches are involved in the tear. Any other type of tear must be repaired in a specialized repair shop or by qualified personnel. Do not accept a home repair.

8. SAFETY AND RESPONSIBILITY

It is well known that paragliding is considered a high-risk sport, where safety depends on the person who is practising it.
Wrong use of this equipment may cause severe injuries to the pilot, even death. Manufacturers and dealers are not responsible for any act or accident that may be the result of practicing this sport.

You must not use this equipment if you are not trained. Do not take advice or accept any informal training from anyone who is not properly qualified as a flight instructor.

9. GUARANTEE

The entire equipment and components are covered by a 2-year guarantee against any manufacture fault. The guarantee does not cover misuse or abnormal use of the materials.

10. TECHNICAL DATA

10.1 TECHNICAL DATA

			22	24	26
CELLS	NUMBER		39	39	39
ASPECT RATIO	FLAT		4,75	4,75	4,75
AREA	FLAT	M2	22	24	26
	PROJECTED	M2	18,75	20,45	22,16
CORD	MAXIMUM	M	2,64	2,76	2,87
LINES	TOTAL	M	220	225	240
	MAIN		2+1/2/2	2+1/2/2	2+1/2/2
RISERS	NUMBER	3+1	A+A'/B/C	A+A'/B/C	A+A'/B/C
	ACCELERATOR	MM	130	130	130
TOTAL WEIGHT IN FLIGHT MIN-MAX		KG	45-75	60-80	75-95
GLIDER WEIGHT		KG	3,2	3,5	3,8
CERTIFICATION	FFVL/DHV		A	A	A

LACY 2 HF does not have trimmers.
There is not any other adjustable, removable or variable device.

10.2 MATERIALS DESCRIPTION

CANOPY	FABRIC CODE	SUPPLIER
UPPER SURFACE	2044 32 PS	DOMINICO (KOREA)
BOTTOM SURFACE	70000 E3H	PORCHER IND (France)
PROFILES	70000 E91 / 2044 32 FM	PORCHER IND (FRANCE)/DOMINICO (KOREA)
DIAGONALS	30DFM / 70000 E91 / 2044 32 FM	PORCHER IND (FRANCE)/DOMINICO (KOREA)
LOOPS	LKI - 11	KOLON IND. (KOREA)
REIFORCEMENT LOOPS	W-420	D-P (GERMANY)
TRAILING EDGE REIFORCEMENT	MYLAR	D-P (GERMANY)
RIBS REIFORCEMNET	LTN-0.91 STICK	SPORTWARE CO.CHINA
THREAD	SERAFIL 60	AMAN (GERMANY)

SUSPENSION LINES	FABRIC CODE	SUPPLIER
UPPER CASCADES	DC - 60	LIROS GMHB (GERMANY)
UPPER CASCADES	A-8001/U 60	EDELRID (GERMANY)
UPPER CASCADES	A-8001/U 70	EDELRID (GERMANY)
UPPER CASCADES	A-8001/U 130	EDELRID (GERMANY)
MIDDLE CASCADES	TNL - 88	TEIJIN LIMITED (JAPAN)
MIDDLE CASCADES	A-8001/U 70	EDELRID (GERMANY)
MIDDLE CASCADES	A-8001/U 90	EDELRID (GERMANY)
MIDDLE CASCADES	A-8001/U 130	EDELRID (GERMANY)
MAIN	TNL - 220	TEIJIN LIMITED (JAPAN)
MAIN	TNL - 280	TEIJIN LIMITED (JAPAN)
MAIN BREAK	TNL - 280	TEIJIN LIMITED (JAPAN)
THREAD	SERAFIL 60	AMAN (GERMANY)

RISERS	FABRIC CODE	SUPPLIER
MATERIAL	3455	COUSIN (FRANCE)
COLOR INDICATOR	210D	TECNI SANGLES (FRANCE)
THREAD	V138	COATS (ENGLAND)

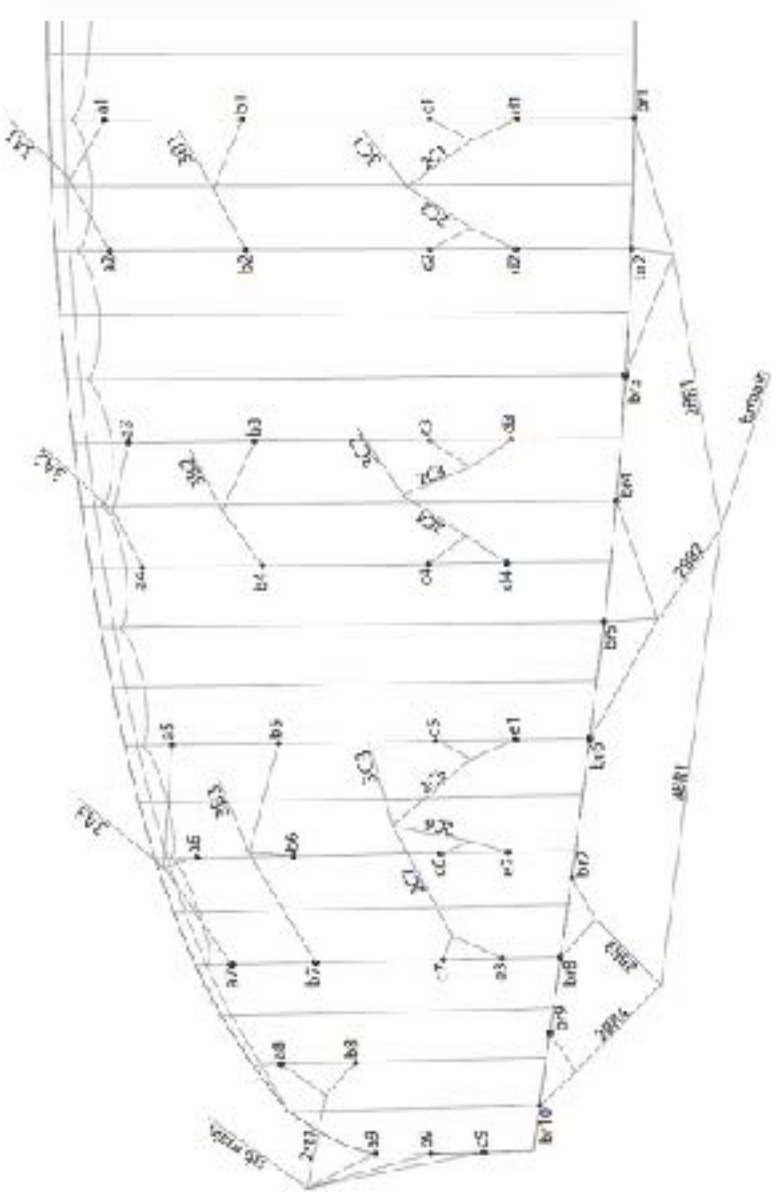
10.3 RISER ARRANGEMENT

Difference not more than +/- 5mm for the length laid down in the User's Manual.

RISERS LENGHT m/m

A	A'	B	C	
470	470	470	470	STANDARD
340	340	383	470	ACCELERATED

10.4 LINE PLAN



10.5 LINE DIMENSIONS LACY 2 HF

All lines are measured under the tension of 50[N] by the laboratory.
Difference not more than +/- 10mm from the User's Manual and reality.

LACY 2 HF-22 LINES HEIGHT+ RISERS
m/m

	A	B	C	D	br
1	6355	6256	6317	6430	6810
2	6323	6229	6293	6402	6487
3	6284	6192	6266	6375	6370
4	6251	6153	6238	6334	6219
5	6196	6123	6205	6312	6053
6	6092	6032	6101	6193	6061
7	6020	5988	6076	6145	6117
8	5845	5801	5715		5984
9	5621	5648			5840
10					5752

LACY 2 HF-24 LINES HEIGHT + RISERS
m/m

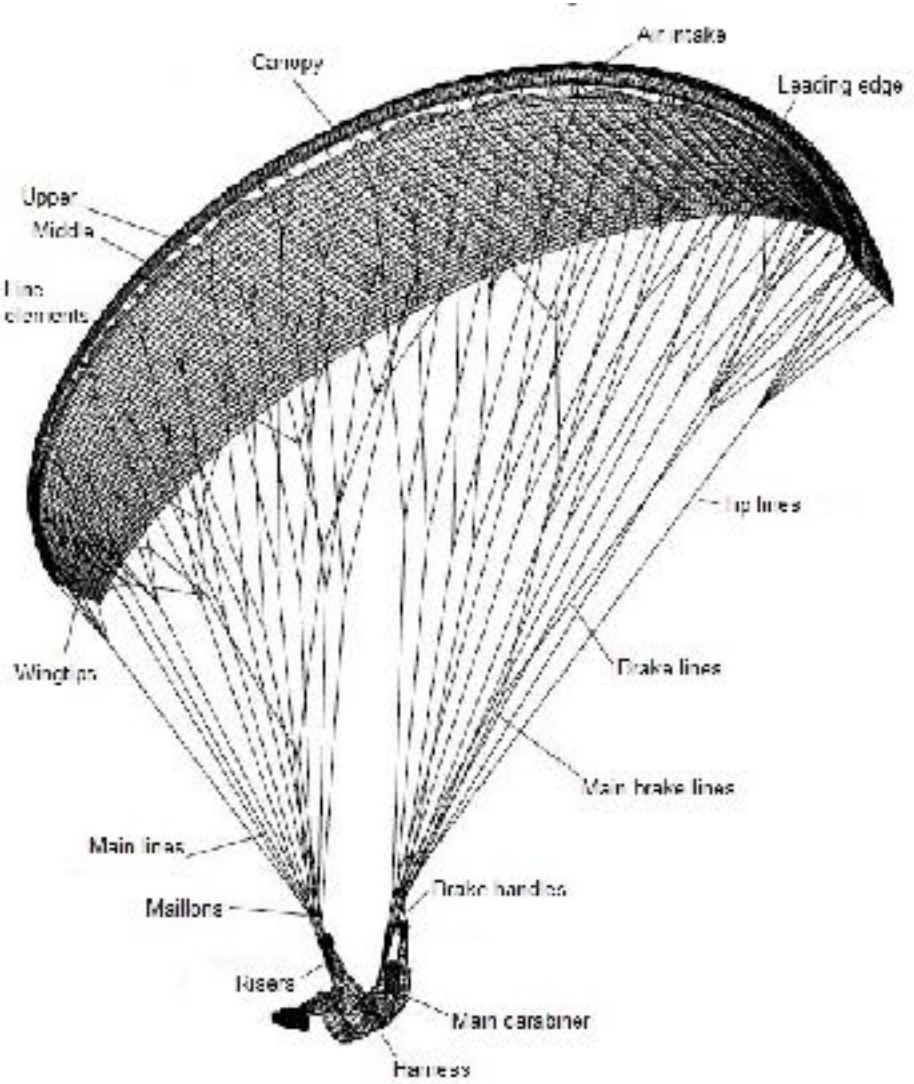
	A	B	C	D	br
1	6635	6535	6584	6698	7134
2	6604	6498	6563	6672	6803
3	6563	6466	6532	6636	6677
4	6533	6434	6504	6610	6524
5	6472	6396	6483	6592	6353
6	6358	6291	6375	6468	6366
7	6285	6245	6344	6417	6419
8	6106	6059	5967		6279
9	5870	5897			6132
10					6044

LACY 2 HF-26 LINES HEIGHT+RISERS m/ m

	A	B	C	D	br
1	6922	6814	6870	6988	7431
2	6893	6779	6836	6957	708
3	6855	6742	6810	6925	6941
4	6817	6710	6787	6890	6787
5	6752	6674	6762	6867	6611
6	6635	6570	6649	673	6625

7	6563	6520	6621	6686	6717
8	6376	6330	6236		6533
9	6133	6163			6398
10					6294

10.6 COMPONENTS FOR OPERATION


Canopy
Leading edge
Upper
Middle
Brake lines
Main brake lines
Main lines
Maillons
Risers
Main carabiner
Harness