LhotseX

Operating manual
and service booklet

Seriennummer:_____

AIRBORNE SENSATIONS since 1972

Version 1.1
Valid from 01/2025
Status: 04/ 2025

Table of contents

Important
Where necessary, we use the following words and symbols to draw attention to important issues:

WARNING!
These instructions draw attention to dangers that can lead to injury or death if ignored.

CAUTION!
These instructions draw attention to dangers that can lead to damage to the paraglider or to premature wear.

NOTE
This is a note that is considered helpful or additional information.

Welcome to UP

Congratulations on the purchase of your new UP Lhotse X. UP International is known worldwide for developing and manufacturing first-class paragliders - paragliders that focus on maximum safety, optimum performance and top quality. UP wings are designed and developed based on the demands our customers place on UP products. We are therefore open to all suggestions and ideas for improvement from you. With your suggestions and constructive criticism, you can play an active role in the continuous development process of our products. We want to be able to provide you with the latest technical innovations for your UP paraglider and information about the latest developments at UP at all times. However, we can only do this if your glider is registered with us after purchase. Product registration also guarantees you preferential treatment in all service matters in the unlikely event of any irregularities. You can register your UP Lhotse X online at:

http://www.up-paragliders.com/de/service/product-registration

If you have any questions, please contact your UP dealer or UP International directly:

UP International GmbH
Kreuzeckbahnstrasse 7
D-8267 Garmisch-Partenkirchen

info@up-paragliders.com

+49 (0)8821 73099-0

Have fun and enjoy your UP Lhotse X - Your UP International Team

Safety instructions

Please read this manual before your first flight with the UP Lhotse X. This will help you to familiarize yourself with your new wing more quickly. The manual provides you with information about all the important features and characteristics of the UP Lhotse X, but is not a substitute for attending a flying school. Please pay particular attention to the following points:

- At the time of delivery, this paraglider corresponds to the type tested in accordance with EN 926-1: 2015, EN 926-2:2013+A1:2021 and LTF NFL HG/GS 2-565-20. Any unauthorized modification beyond the permissible adjustment options will result in the invalidation of the operating license!
- The use of this paraglider is exclusively at your own risk. Any liability on the part of the manufacturer and distributor is excluded.

- Every pilot is responsible for their own safety and must also ensure that the glider hey are flying is checked for airworthiness before every take-off.
- We also assume that the pilot is in possession of the required certificate of competence and complies with the applicable legal regulations.

Nature and landscape-friendly behaviour

Paragliding is a very natural and environmentally friendly sport. For this reason, respectful treatment of the environment should be a matter of course for every (paraglider) athlete. When practicing our sport, care must be taken to protect nature and the landscape. We therefore ask you not to make noise, not to go off the marked hiking trails and not to leave any garbage behind in order to preserve the ecological balance of our nature for our children. Please inform yourself before each flight about the valid nature conservation regulations in the respective flight area or on the planned flight route in order not to unnecessarily annoy hunters, landscape conservation authorities and landowners.

Technical description

The UP Lhotse X was developed by UP International to meet the special requirements of a safe intermediate performance paraglider with excellent launch characteristics and a remarkable performance spectrum. Like all UP products, all materials used are of a high quality standard. To ensure a long service life, they are carefully selected and subjected to extensive testing before use. Further details of the design and dimensions, including the dimensions of the UP Lhotse X lines, can be found on the type approval certificate issued by the certification authority or in this manual. Any technical changes can be found in the appendix to this operating manual or on our website

Intended use

In accordance with LTF-HG/GS 2-565-20, the Lhotse X can be used as a "light aircraft" with an empty mass of less than 120 kg in the paraglider category

LTF and EN classification

The UP Lhotse X is classified in the final classification in EN 926-2:2013+A1:2021 / EN B.

Target group and recommended flying experience

Pilots who have regular flying experience and intermediate flying skills, with at least 20 to 30 flying hours per year.

Requirements in normal flight

The flight and control behaviour of paragliders in this class requires an advanced, precise and sensitive control technique due to shorter control travel, lower roll and pitch

damping and more dynamic turn handling. It also requires a largely automated active flying style.

Requirements in the event of malfunctions

The behaviour of the glider after malfunctions places increased demands on the pilot's skill and speed of reaction. The pilot should have sufficient practical knowledge to avoid and control the most common malfunctions, especially lateral and frontal collapses. If this experience is not sufficient, we recommend instruction on the respective glider type, preferably in a safety training course.

Requirements for rapid descent

Flight manoeuvres such as spiral dives or B-stalls place higher demands on the pilot due to the overall more demanding control characteristics. Good practical knowledge of these manoeuvres should be available. If this is not the case, special instruction on the respective glider type is recommended, ideally in a safety training course.

Suitability for training

The UP Lhotse X is **not** suitable for training.

Tandem and paramotor license

The UP Lhotse X is certified as a solo glider. Suspension is only provided for a harness. The UP Lhotse X is not certified as a paramotor glider. There are no trimmers on the risers.

Recommended weight range

The UP Lhotse X must be flown within the permitted take-off weight. This can be found under "Technical data UP Lhotse X". The weight refers to the take-off weight (pilot weight plus clothing, glider, harness equipment, etc.). The easiest way to determine your take-off weight is to stand on a scale with your rucksack and equipment.

UP International offers the UP Lhotse X in four different sizes, each optimized for the medium weight range. Each size can be flown within the approved weight range without any problems. To help you find the size that best suits your personal needs, here are a few practical tips.

Pilots who are within the middle third of the weight of a size are ideal when traveling. They should opt for this size. Within this weight range, they can center the thermals more closely and fly the Lhotse X with slightly less dynamics. This UP variant is particularly recommended for pilots from the lowlands.

Pilots who can choose between two sizes because they are either in the upper third of a smaller size or in the lower third of a larger size should proceed as follows: Experienced LTF/EN B pilots should assess for themselves how they prefer to travel, with a buffer upwards or loaded high.

Pilots who prefer a high wing loading should fly the UP Lhotse X in the upper weight range. This makes your Lhotse X slightly faster and more dynamic.

The UP Lhotse X reacts to weight changes with a slight increase or decrease in trim speed, with hardly any effect on glide performance. The size can therefore be selected to suit your personal flying style.

Operating limits

For the commissioning of the Lhotse X, compliance with the operating limits for the entire flight duration, including preparation and follow-up, must be ensured. These are exceeded as soon as one of the following points applies:

- Flying with an incorrect number of seats
- Failure to comply with the respective upper and lower weight limits of the starting weight
- Temperatures of more than -30° C or more than 50° C
- Flying in rain, snow, clouds or fog or with a wet canopy for any other reason
- Unauthorized modifications to the canopy, lines or risers
- Acrobatic flying and manoeuvres with more than 90° bank angle
- Wind speeds at the take-off site and expected wind speeds in flight that are higher than 2/3 of the achievable speed with the take-off weight intended for the flight
- Turbulent weather conditions that are expected to cause extreme flight conditions outside the flight conditions tested in the certification

Technical data of the UP Lhotse X

Size	XS	S	SM	M
Surface area flat [m²]	20,4	22,5	24,5	26,3
Surface area projected [m²]	17,4	19,2	20,9	22,4
Flat span [m]	10,7	11,2	11,7	12,2
Projected span [m]	8,7	9,1	10,1	9,1
Flat aspect ratio	5,6	5,6	5,6	5,6
Projected aspect ratio	3,7	3,7	4,7	3,7
Number of Chambers	51	51	51	51
Total line length incl. Brake [m]	238	250	261	270
Total # of lines incl.Brake	158	158	158	158
Glider weight [kg]	4	4,2	4,5	4,8
Takeoff weight [kg] with LTF/EN Category certified	60-78: B	70-90: B	80-103: B	90-115: B
maximum symmetrical steering travel at maximum weight [cm]	60	60	65	65
Accelerator travel [mm]	135	145	145	160
Number of risers (split A-risers)	3 + 1	3 + 1	3 + 1	3 + 1
Trimmer	no	no	no	no
Description		Intermediate		

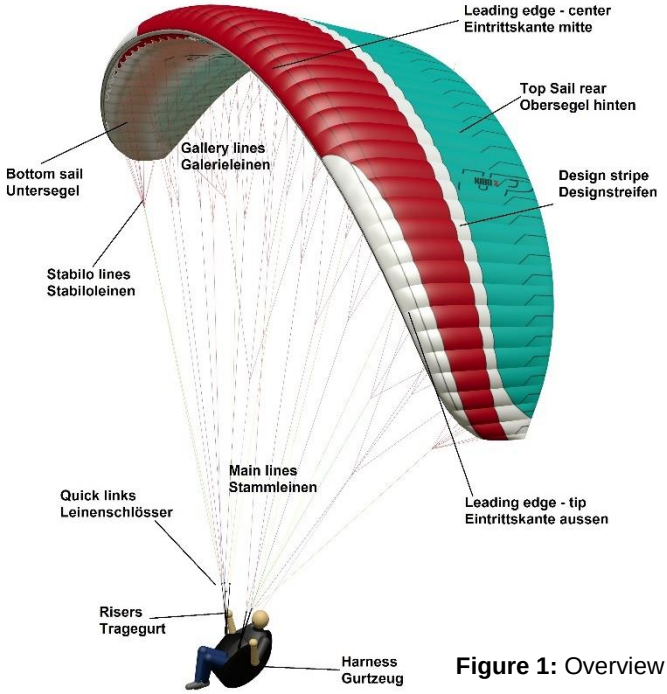


Figure 1: Overview

Construction

For the first time, the 2.5-line construction has been included in the popular LHOTSE series and now also offers pilots in the middle B segment the opportunity to enjoy such a powerful yet safe paraglider. The top speed and thermal characteristics, such as pitch stability, have been further improved. Also new are the HPR risers, which enable easy and efficient acceleration, and the option of C-steering. C-steering means controlling the wing by precisely optimizing the angle of attack, just as these systems work on 2-liner competition wings and our high-performance B- and C-gliders SUMMIT X, KANGRI X and TRANGO X.

Sail material

- Topsail front/ design stripe: Skytex 32 Universal
- Topsail rear / bottom sail: Skytex 27 Classic II
- Ribs/horizontal belts: Skytex 27 Hard Finish
-

Line material

The UP Lhotse X uses sheathed Dyneema® from Edelrid and Liros, as well as unsheathed aramid lines from Edelrid.

Lines

The lines of one half of the canopy are combined into three groups and the brake lines:

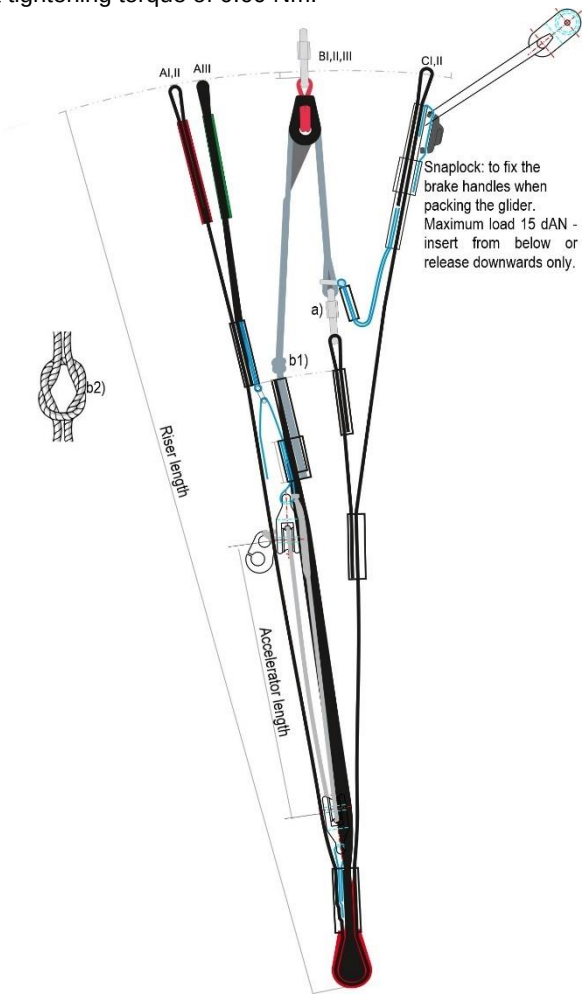
A-level: AI, AII, AIII
B level: BI, BII, BIII, STI
C-level: CI, CII
Brake lines: BRI

The individual brake lines are each connected to a main brake line. This main brake line is guided through a pulley on the C-riser. There is a marking on it at the height of which the brake handle is knotted. All main lines on one level are looped separately into quick links and connected to the risers. There are special line collectors in the quick links to prevent the lines from slipping.

Risers

The risers of the Lhotse X are supplied in different lengths for XS, S/SM and M. This improves the ergonomics of the different sizes and facilitates manoeuvres such as take-off, ear placement, B-stall, etc. in particular. It also optimizes the accelerator travel for different wing sizes. When the speed bar is activated, the length of the A- and B-risers is changed at the same time. The largest change in angle of attack is achieved when the front upper accelerator pulley of the riser meets the lower accelerator pulley. The BI,II,III risers made of Liros D-Pro 3mm can be replaced if they show signs of wear. To do this, open the line lock **(position a)**, open the anchor stitch on the riser **(position b1)** and attach the new line there with a "handshake loop" **(b2)**. Then feed it through

the Ronstan pulley and attach it to the line buckle (position **a).** Then screw the screw link tightly to with a tightening torque of 0.60 Nm.



Riser length [mm]	XS	XS accel.	S	S accel.	SM	SM accel.	M	M accel.
A I, II	495	380	515	390	515	390	540	400
A III	495	380	515	390	515	390	540	400
B I, II, III, STI	492	425,5	512	439,5	512	439,5	537	457
C I,II	497	497	517	517	517	517	542	542
Accelerator travel	135		145		145		160	

Figure 2: UP Lhotse X risers

Accessories

The UP Lhotse X is supplied with a CompressSmart and repair material. The manual is available to download from the UP homepage. Every UP Lhotse X is subjected to a precise routine test at the factory and checked for conformity with the test sample.

Before the first flight

CAUTION! The UP Lhotse X must be inflated on a flat field before the first flight and a complete pre-flight check must be carried out (visual check for damage, check the line locks). The first flight should be carried out by a flying school or an authorized person before the glider is delivered .

Settings

During its development process, the UP Lhotse X was adjusted by the test pilots and designers so that the series product has the optimum trim in terms of safety, handling and flight performance. Due to the high quality standard that UP International applies to all its products, all line and harness lengths are manufactured with the utmost precision. Each wing is fully measured and cataloged before delivery. The line lengths and riser settings of the UP Lhotse X are extremely precise and must not be altered under any circumstances!

WARNING! Any unauthorized modification to the glider will invalidate the operating license! Only the adjustment of the brake handle position allows individual modification.

Positioning the brake levers

The UP Lhotse X is delivered from the factory with a brake setting that offers optimum use for most pilots when flying. However, for very tall or short pilots and when using harnesses with high or low pilot suspension, it may be necessary to change the position of the brake handles.

If the brake setting is shortened, particular care must be taken to ensure that the UP Lhotse X is not slowed down by brake lines that are too short when trimming and accelerating. In addition to a deterioration in performance and take-off characteristics, safety problems can also occur if the brakes are shortened considerably. There should therefore always be a "free travel" of a few centimeters to prevent the glider from braking unintentionally. It should also be noted that the brake already causes a pulling force due to its air resistance. If the brake setting is extended, it must be ensured that the pilot is able to reach the stall point without winding the brakes in extreme flight situations and when landing. Changes to the brake travel should only ever be made in

small steps (3 to 4 centimeters) and should be checked on the practice slope. Make sure that the left and right brake lines are set symmetrically! An individually correctly adjusted brake is the prerequisite for active and fatigue-free flying. If you have any questions about your body size and harness in relation to the brake settings, these must always be clarified before making any changes. Please contact a UP dealer or UP International directly for personal advice.

To prevent unintentional release of the brake handles, it is essential to ensure that the brake line knot is correctly designed and securely fastened**.**

Caution! Loose or unsuitable brake line knots can lead to serious accidents due to the brake handles coming loose and the paraglider temporarily becoming uncontrollable!

Acceleration system

Correct attachment and adjustment of the speed system is an important prerequisite for later smooth use in flight. The length should therefore be individually adjusted and the cable routing checked before the first launch.

The connection between the foot accelerator and the riser is made using special Brummel hooks or screw carabiners. The speed bar itself usually consists of one or more steps, two cords and two Brummel hooks. Starting from the steps, the two cords are pulled through the eyelets and pulleys provided.

If you have any problems or questions regarding attachment and rope routing, you should contact the respective harness manufacturer.

Suitable harnesses

All tested and approved harnesses with a suspension point at around chest height are suitable for the UP Lhotse X. The lower the suspension point of the harness, the easier it is to steer the UP Lhotse X by shifting your weight.

The recommended carabiner distance depends on the pilot's weight:

<50kg: 38cm

50-80kg: 42cm

>80kg: 46cm

The harness should ensure that the UP Lhotse X can be accelerated to its maximum speed via the pulleys of the speed system (both Riley pulleys of the riser lie on top of each other).

It should also be noted that the relative braking distance changes with the height of the harness suspension. Please note that different harnesses can lead to different extreme flight behaviour (e.g. increased risk of twisting with recumbent harnesses). If you have any questions or doubts regarding the use of your harness with the UP Lhotse X, please contact a UP dealer or UP International directly. We will be happy to advise you.

Harness dimensions for certification

Harnesses with the following dimensions are used for the type test:

Total flight weight	**Width**: horizontal distance between the attachment points of the risers (measured from the center lines of the carabiners)	**Height**: normal distance from the attachment points of the risers (measured from the center lines of the carabiners) to the seat board surface
< 80 kg	40 +/- 2 cm	40 +/- 2 cm
80 - 100 kg	44 +/- 2 cm	42 +/- 2 cm
> 100 kg	48 +/- 2 cm	44 +/- 2 cm

Rescue

Carrying a suitable rescue parachute is not only required by law in most countries, it is absolutely vital for the safe operation of a paraglider. When selecting a rescue parachute, make sure that it is suitable and approved for the intended take-off weight.

The prescribed rescue system must be attached in accordance with the manufacturer's instructions. The reserve parachute bridle is normally passed over the pilot's back and hooked into the shoulder strap loops.

Field of application

The UP Lhotse X has been developed and tested exclusively for use as a paraglider for foot and winch launch. Any use other than the intended use is not permitted.

Aerobatics

The UP Lhotse X has not been built and tested for aerobatics. It is not suitable or approved for this purpose.

WARNING! Anyone performing aerobatics with the UP Lhotse X is putting their life in danger. Performing aerobatic manoeuvres can result in unpredictable flight attitudes as well as the risk of overloading the material and pilot!

Flight practice and flight safety

The following two chapters, Flight practice and Flight safety, describe basic aspects of paragliding. They serve to make this manual complete, but should be a matter of course for pilots who have decided to fly with a glider like the Lhotse X.

Flight practice

Pre-flight check

A thorough pre-flight check is necessary for every aircraft, including the UP Lhotse X. Please ensure that you carry out each check with the same care. The take-off check (five-point check) is necessary before every take-off. In order not to forget anything, it is advantageous to always do it in the same order.

1. The paraglider should be laid out in an arc so that when pulling up with the middle A-risers (red), the lines in the middle of the glider are tensioned slightly earlier than those at the wing tips. This ensures an easy and directionally stable take-off. When laying out the canopy, please pay attention to the wind direction so that both halves of the glider are filled symmetrically when pulling up into the wind and the canopy does not break out sideways.
2. Then carefully sort all lines and risers. Particular attention should be paid to the A-lines. They must run freely and without entanglement from the A-riser to the canopy. It is equally important that the brake lines are free and cannot get caught during take-off. Make sure that no lines run under the canopy. A line overthrow during take-off can have serious consequences.
3. Then make sure that all the straps on the harness are fastened. This should be checked from bottom to top in the same order by touching the respective buckles. Also check that the helmet is closed, the reserve parachute is attached (when using a front container) and the carabiners are secured.
4. Immediately before take-off you must check that the airspace is clear (including behind you).
5. The last step is to check the wind direction. If everything fits, you can take off.

Take-off phases

The Lhotse X is characterized by very good launch behaviour. Even a slight pull on the middle A-lines (AI, AII - risers, red) is enough for the canopy to inflate evenly and immediately rise above the pilot. The Lhotse X has no tendency to hang up during the inflation phase.

During the inflation phase, the pilot holds the middle A-risers (red) and the brake handles in his hands. A final check of the deployed wing is mandatory. The center of the Lhotse X canopy is indicated by the UP logo on the leading edge. Careful deployment of the canopy according to the wind direction and a take-off run in line with the center of the canopy make the inflation phase easier.

The canopy is filled with a consistent and even pull. The arms are held slightly bent in extension of the A-lines. As soon as the pull on the lines eases - the canopy is above you at this point - look up and make sure that the canopy is fully open above you. Depending on the initial impulse, wind strength and slope inclination, it may be necessary to brake the UP Lhotse X slightly at the apex.

Any directional corrections with the brakes should only be made when the canopy is already above you, otherwise the glider could fall back again if the brakes are applied too hard.

The final decision to take off is only made at the end of the control phase. During the acceleration and take-off phase, you take off from the ground at an appropriate speed, which can be supported by controlled use of the brakes depending on the take-off terrain. After a pendulum-free take-off and reaching the safety altitude, take a seat in your harness without letting go of the brake handles. If you cannot get into the upright sitting position without additional help, hand over the brake handles to one hand. Use your free hand to get into the desired sitting position.

Speed control

By means of brake lines

The Lhotse X has a very high speed range combined with great aerodynamic stability. The speed can be adjusted using the brake lines so that the optimum performance and safety can be selected for every flying situation.

The Lhotse X achieves its best glide speed in calm air when it is unbraked. If the brake lines are pulled up about 10 to 15 centimetres on both sides, the wing will sink as little as possible. If the pull on the brakes is increased further, the sink rate is no longer reduced, the steering forces increase noticeably and the pilot reaches the minimum speed.

CAUTION! Flying too slowly close to stall speed carries the risk of an unintentional stall or spin, so this speed range must be avoided at all costs.

By means of an acceleration system

The UP Lhotse X is equipped with a very efficient acceleration system that is activated by a foot stretcher. When activated, this speed system increases the speed very effectively by around 11 to 13 km/h. Using the speed system is very useful in some situations and should be part of an active flying style.

If the speed is increased to the maximum via the leg extension, you can fly out of downwind zones more quickly, achieve a better glide angle in headwinds or still arrive upwind. The action radius of the UP Lhotse X increases considerably when fully accelerated and noticeably increases the performance potential that can be achieved. When using the speed system, it is important to ensure that the speed system is deactivated immediately if an extreme flight situation occurs or that it is not activated in extreme flight situations. The advantage of using the speed system is that fluctuations in lift and the resulting collapse of the glider can be detected by sudden differences in pressure on the leg extensions. If the pilot senses that the back pressure is suddenly reduced, the speed must be immediately reduced to trim speed in order to avoid possible collapses in advance.

CAUTION! All extreme flight conditions (e.g. collapses) are more dynamic at higher speeds. For this reason, the speed system should be operated only a little or not at all in low ground clearance or very turbulent conditions.

Turning

By shifting weight, flat turns can be flown very well with minimal loss of altitude. A combined steering technique - weight shift and pulling the brake line inside the turn - is ideal for flying turns in any situation, whereby the radius of the turn is determined by the amount of brake line pulled. If it is necessary to turn the UP Lhotse X in a very tight space, it is advisable to control the pre-braked glider by releasing the outside brake line and pulling the inside brake line sensitively (opposite movement of the brake lines). From approx. 50 percent brake line pull on one side, the UP Lhotse X takes a clear sideways tilt and flies a fast and steep turn, which can be extended into a spiral dive (see chapter "Spiral dive").

C- riser control

When accelerated, the Lhotse X can also be steered by pulling down the soft handle on the C-riser. Make sure that you only pull until there is a noticeable increase in brake pressure. If for any reason it is no longer possible to fly the UP Lhotse X with the brake lines (e.g. loss of the brake handle due to loosening of the attachment knot), it can also be steered and landed using the C-lines. You should react carefully and sensitively. The stall occurs somewhat earlier when steering via the rear risers or the C-lines than when steering via the brake lines.

Landing

The UP Lhotse X is easy to land. From a straight, pendulum-free final approach into the wind, let the glider glide out at normal speed and then apply the brakes decisively and quickly at a height of about one meter above the ground. If there is a strong headwind, slow down accordingly. Landings out of steep turns and rapid turn changes before landing should be avoided due to the associated pendulum movements.

Winch towing

The UP Lhotse X has no special features for winch towing. To ensure safe and accident-free towing, the following points must be observed:

- Unless you are towing on your "home winch", where you know both the towing winch and the towing area as well as the way of towing, it is absolutely necessary to familiarize yourself with the local conditions. Every "guest" at an unfamiliar flying site will certainly be instructed by the local pilots.
- When launching, make sure that the canopy is completely over the pilot before giving the launch command. Any directional corrections with the brakes should only be made when the canopy is already above the pilot, as otherwise the glider may fall back again if the brakes are applied too hard, or the glider may be dragged away when not yet airworthy.

- Under no circumstances should the launch command be given before the glider is fully under control. Strong directional corrections during the take-off phase and before reaching the safety altitude must be avoided.
- Make sure you ascend at a flat angle from the start to the safety height.
- The UP Lhotse X must not be towed with a towline pull of more than 90 daN.
- All persons and equipment involved in winch operation must be in possession of the relevant prescribed certificates of competence or approvals in order to ensure safe towing operations. This applies to the pilot, towing device, towing pawl and winch operator, as well as all other equipment for which a special certificate of operational suitability is required.
-

Handle attachment for paraglider towing

The optimum towing point for the tow rope should be as close as possible to the system's center of gravity. In the case of a paraglider, the ideal pulling point is at the height of the riser attachments or directly on the risers. When using spreader bar pawls, the pawl/shackle distance should be sufficiently extended (cord or webbing) and the pawl must be secured with a hold-down rubber to prevent it from kicking back. The distance between the risers must not become narrower when using the ratchet attachment (risk of twisting)!

CAUTION! If towing with a chest container, it must be ensured before the first launch that the release of the reserve parachute is unhindered at all times. If this is not the case, you may only tow with a webbing release.

Flight safety

A development has taken place from the rectangular parachute to the low-drag high performance wing, which offers new flying possibilities, but at the same time demands a forward-looking and sensitive flying style from the pilot. Every wing, whether beginner or high performance, can collapse in turbulent conditions or if the pilot reacts incorrectly. This makes it all the more important to master the paraglider, have a feel for the controls and recognize natural processes.

Today, pilots can choose from a wide range of different types of UP wings. The main difference within the individual classes lies in the aerodynamic stability of the canopies. Beginner wings react less dynamically to disturbances and have a largely forgiving flight behaviour, while high performance wings only allow a very small margin for pilot error. Choosing the right glider is therefore crucial for flight safety. Pilots should therefore self-critically check their skills and level of knowledge before deciding on a glider.

Ground training is a safe and effective method of familiarizing yourself with your new paraglider. On a suitable meadow and in light to moderate winds, control impulses can be practiced very well and glider reactions can be observed. You can also practice

launching and flight manoeuvres (e.g. folding the outer wings or other minor malfunctions).

Before and during the flight, it is important to plan your route with foresight. Very little turbulence occurs suddenly, but has a causal origin. If you think about the day's weather conditions and the flying area in advance, you can avoid many dangers later on.

Flying in thermals and turbulent conditions

In turbulent air, the UP Lhotse X should be flown with a light brake line pull. This increases the angle of attack and thus the canopy stability. When flying into strong thermals or torn thermals, make sure that the canopy does not lag behind the pilot. This can be prevented by loosening the brake line when flying into the thermal to pick up some speed. Conversely, the paraglider must be slowed down if the canopy gets in front of the pilot by flying into a downwind area or flying out of a thermal.
Alternatively, experienced pilots can also use the C-risers to control the glider in thermals.
Flying faster is useful for crossing downwind zones. The UP Lhotse X has a very high stability due to its design. However, an active flying style in turbulent air, as described above, contributes to additional safety. A collapse and deformation of the canopy can be largely prevented by an active flying style on the part of the pilot.

Descent aids

All descent aids should be practiced in calm air and at a sufficient height in order to be able to use them effectively in extreme conditions! There are essentially three different ways of safely and controllably increasing your descent speed.

WARNING! All other flight maneuvers, such as full stalls and negative turns, should be avoided as descent aids, as they do not achieve higher sink rates and incorrect recovery can have dangerous consequences regardless of the glider type!

Steep spiral

The highest sink rates of over 15 m/s can be achieved using the spiral dive. However, it is advisable to approach the high sink rates slowly.

Initiating a spiral dive with the UP Lhotse X is simple and has already been described in the chapter "Turning". It is important that the transition from a turn to a spiral dive is flown slowly and steadily. If the brake lines are pulled too abruptly, there is a risk of spinning. In this case, the brakes must be released immediately so that the glider can pick up speed again.

The bank angle and sink rate are controlled by pulling and releasing the brake line on the inside of the turn. The brake on the outer wing can also be used to stabilize the canopy at very high sink rates.

The exit of the spiral dive is performed in the same way as the entry, slowly and steadily. The brake on the inside of the turn is released in a controlled manner. You

can support the exit by braking slightly on the outside of the turn. Excessive oscillation can be prevented by controlled and soft counter-braking.

As the sink rate increases, the outer wing of the Lhotse X deforms. This condition is intentional and improves safety in the spiral dive.

The pilot must know that high forces act on him and the material during a spiral dive with high sink rates.

WARNING! In spiral dives with high sink rates, very high forces can act on the pilot and material. The high centrifugal forces can cause the pilot to lose consciousness and lose control of the paraglider. This flight condition can have life-threatening consequences!

B-stall

The launch is made from unaccelerated straight flight by pulling the BI,II,III (gray Dyneema lines) about 10 centimeters down on the pulley. The pilot can keep the brakes in his hands. For the first few centimeters, a lot of force is required to pull out the B-risers. Once the airflow at the top of the profile is largely torn away, the glider enters a stall-like flight state without forward motion. By pulling the risers further, the surface area can be reduced and the sink rate increased. The sink rate reaches its maximum after approx. 10 cm. The risers should then not be pulled down any further, as otherwise the wing may become unstable or form a front rosette. If the B-risers have been pulled down too far, they must be released immediately so that the glider can return to a stable flying position and the B-stall can then be continued.
If you release the risers simultaneously, quickly and without using the brakes, the paraglider picks up speed again independently and goes into stationary gliding flight. It is normal for the canopy to pitch approx. 30-45 degrees in front of the pilot. The glider must not be braked during this phase! If the UP Lhotse X goes into a stall due to the B-risers being released too slowly, which is not normally the case, it will be terminated by a standard recovery (see the section on stalls in the description of extreme flight situations).

WARNING! An incorrectly executed B-stall can lead to dangerous flight conditions! Due to the special design of the Lhotse X, pilots should only practice this maneuver under supervision in a safety training course or generally choose other manoeuvres for rapid descent.

Big Ears

After preparing the speed system, the outermost A-lines (AIII risers) on both sides of the line lock are pulled down simultaneously by approx. 20 to 30 centimeters, causing the outer wings to collapse. Hold the brake handles together with the pulled down A-risers in your hand. After folding in the outer wings, the angle of attack of the Lhotse X should be reduced again using the speed bar. The wing remains fully controllable by shifting your weight and flies straight ahead at an increased sink rate (3-5 m/s depending on the number of folded cells and the use of the speed system). After releasing the A-lines, the pilot deactivates the speed system and the collapsed cells

open automatically. If this is not the case, the flight condition can be actively exited by applying the brakes alternately and gently. No extreme flight manoeuvres may be flown in this configuration!
If the UP Lhotse X is flown at the lower weight limit, the canopy can enter a deep stall if the outer wings are folded in over a very large area and the brakes are applied. If this happens, which is not normally the case, the stall is terminated by a standard recovery (see the chapter on stalls in the description of extreme flight attitudes).

Extreme flight maneuvers

Behaviour in extreme flight situations

Although the UP Lhotse X has very high aerodynamic stability, turbulence or pilot error can lead to an extreme flight situation. The best way to react calmly and correctly in such a situation is to attend a safety training course. Here you learn to master extreme flight situations under professional guidance.

Extreme flight manoeuvres should be performed in calm air, at sufficient altitude and only during safety training over water under professional guidance. We would like to point out once again that a reserve parachute is mandatory.

The extreme flight manoeuvres and flight conditions described in the following section can be caused either intentionally, by turbulence, or by pilot error. Any pilot who flies in turbulence or makes a mistake when controlling their paraglider can get into these flight conditions. All extreme flight manoeuvres and flight conditions described here are dangerous if they are performed without adequate knowledge, without sufficient safety altitude, or without appropriate instruction.

WARNING! Incorrect execution of the flight manoeuvres and flight conditions described here can be life-threatening!

Collapses

Asymmetrical collapse

The LHOTSE X belongs to the new generation of paragliders that, as well as having very good performance, also exhibit a high degree of stability. Wing tip collapses can almost always be prevented through active flying. Once an asymmetric collapse has occurred, the pilot aims to maintain flying direction through weight shift and careful application of brake input on the open side. If the open side is braked too much it may stall, and the wing will enter a spin – this is the classical recipe for cascading events (see the spin chapter). In rare instances a wingtip may catch in the lines during asymmetric collapses (see cravats here below).

Cravattes

During the extensive test phase of the Lhotse X, our test pilots were unable to detect any tendency to hang up. However, should a hang-up occur, the wing should be prevented from turning away IMMEDIATELY or the rotation should be slowed down . You can then pull on the specially marked stabilo line (orange) in an attempt to free the tangled end of the wing. Short braking impulses can also help to release the tangled wing tip.

Other manoeuvres to release hang-ups are the "full stall" or "short negative turning of the wing". However, these manoeuvres should only be practiced in a special safety training course.

WARNING: If you are unable to prevent the glider from spinning away, the rescue system must be activated IMMEDIATELY! Otherwise a very dangerous, uncontrolled spiral dive may occur. This flight condition can have life-threatening consequences - also for third parties!

Front stable

A negative angle of attack due to turbulence or the pilot pulling down the A-risers on both sides causes a frontal collapse of the leading edge. The UP Lhotse X normally ends a frontal stall quickly and automatically. Short, even, light symmetrical braking on both sides can support the re-opening. Braking too hard can lead to a stall.

Types of stall

A laminar and turbulent boundary layer zone is always created as the air flows around the paraglider. Extremely dangerous flight conditions can occur when the laminar boundary layer separates, causing practically the entire flow on the upper side of the wing to break off. This mainly occurs at large angles of attack of the wing. There are three different types of stall in paragliders.

CAUTION! Spins and full stalls are dangerous and sometimes unpredictable flight maneuvers. They should therefore not be flown intentionally. Rather, it is important to know the beginnings of a stall so that it can be prevented by the pilot's immediate reaction!

Deep Stall

The UP Lhotse X is not sensitive to stalls. It will automatically stop a possible stall caused by pulling the brake lines or the rear risers too hard, or if the B-stall is too slow, as soon as the brakes or the rear risers are released. Should the UP Lhotse X enter a stall due to a particular flight situation or configuration (e.g. too low take-off weight), this can be stopped by symmetrically pushing the A-risers forward on both sides. Flight exercises in which you intentionally approach a stall should only be carried out with sufficient safety altitude and always under professional guidance (safety training). If you think you have entered a stall, do not brake under any circumstances! This could result in a spin or a full stall.

Fullstall

Flying a full stall only makes sense for very experienced pilots. This is a complete stall. If the speed falls below the minimum speed, the airflow breaks off. Pilot and paraglider are accelerated backwards. Under no circumstances should the brakes be released in this situation, as a recovery will cause the canopy to shoot far forward. In extreme cases, the glider can accelerate to below the pilot and the pilot can then fall into the canopy. After tipping backwards, the canopy forms a rosette and the outer wings begin to flap. These flapping movements are transmitted to the pilot via the brakes. A great deal of force is required to keep the canopy in a stalled position.

Before releasing the full stall, the canopy must be stabilized. To recover, both brakes are then released slowly and symmetrically until the glider has pre-inflated over its entire span. During this phase, the glider will pitch slightly around its lateral axis. When the canopy is in front of the pilot, the remaining brake travel is released. If the canopy is released symmetrically, it will accelerate forward without collapsing. However, it must always be taken into account that the glider can collapse sideways or head-on if it is pushed forward too much.

The asymmetric recovery of the full stall carried out by test pilots is only used to check the glider and, like the full stall, should not be flown intentionally. Due to the dynamic forces involved, the reactions of the canopy during recovery are very demanding. An impulsive, large-scale collapse of the wing is possible.

CAUTION! When minimum speed is reached, this is indicated by a noticeable reduction in driving noise and an increase in steering forces. Up to this point, the glider can be started by simply releasing the brakes.

Spin

The spin (negative turn/vrille) is a one-sided stall and occurs when the pilot applies the brakes quickly and completely at high speed. Asymmetric braking close to the stall has the same effect. The wing turns quickly during a spin. The inner wing flies backwards. To stop the spin, both brakes must be opened. This allows the wing to regain speed. The canopy can shoot forward on one side and collapse sideways.

WARNING! Spins followed by folding the wing halves in on one side can lead to cravattes!

Wingover

Wingovers are induced by flying alternating turns; each time letting the pendulum effect increase the bank angle.

CAUTION! Due to its high manoeuvrability, the UP LHOTSE X achieves a high bank angle after just a few turns. We recommend approaching this manoeuvre slowly, as parts of the wing can collapse if the angle of attack is too high

Further information

Rain-induced deep stall

There are two reasons why flying with a wet wing increases the risk of deep stalling:
First reason: A paraglider flying in heavy rain will soon grow significantly heavier and thereby undergo changes in the centre of gravity and the angle of incidence. This may lead to deep stalls. Note that older wings will absorb more water than newer ones due to the coating on older wings being more permeable – this means that the critical mass may be reached sooner on older wings.
Second reason has to do with the actual rain drops on the top surface – if enough large rain drops form that the entire top surface is covered, but they don't join to either flow off or become a homogeneous mass, the surface may become so rugged that the airflow separates and the wing stalls.
This phenomenon has been observed on hang-gliders and gliders for years, but only recently have we discovered that paragliders may also be affected. It is more likely to happen with new wings where the cloth is still highly hydrophobic, and the drops thus do not penetrate but remain on the surface.
We know from computer simulations and practical tests that this is physically possible, but we also suspect that it occurs very seldom in real life flying.
In both cases the brake line travel becomes very short and even small input may suddenly induce an airflow separation; in some cases, even a gust or a sudden thermal may change the angle of incidence enough to cause the deep stall.
If you find yourself flying in unavoidable rain, we strongly recommend that you avoid any sudden movements or radical brake line input, that you do not pull Big Ears or B-stall, and that you steer clear of turbulence and avoid a deep flare on landing.

WARNING! Avoid flying in very humid air or in rain. A wet canopy may have very unpredictable flying characteristics, one of which is a radically increased risk of deep stall!

Advertising and adhesive sails

Before attaching advertising and adhesive sails, every pilot should make sure that there are no changes to the flight characteristics. If in doubt, adhesive sails should not be attached.

CAUTION! If the glider is covered with large, heavy or unsuitable adhesive sails (e.g. for advertising purposes), the operating license will expire. This will render your paraglider unairworthy.

Overload

Extreme flight manoeuvres such as steep spirals as well as acro and freestyle manoeuvres such as SAT or tumbling do not normally pose an acute risk to the structure of the UP Lhotse X. However, frequent overloading of the material accelerates the ageing process considerably. Gliders that are subjected to these manoeuvres above the normal level must be sent for inspection sooner.

Flying by the sea

If the glider is flown for long periods by the sea or in salty air, this will lead to premature ageing of the material. In this case, the glider should be sent for inspection at an early stage.

Care of the paraglider

How quickly a paraglider ages depends on how often and where it is flown, how many UV hours it accumulates and the care and attention with which it is treated. Below are some tips on how best to care for, maintain and store your paraglider.

Packing the paraglider

The Lhotse X is equipped with rods on the leading edge and upper sail. For this reason, only a cell pack sack such as the UP CompressSmart supplied should be used for packing. Alternatively, the Kangri X can also be packed in another cell pack sack such as the UP Parasleeve. It is best to watch the video on our homepage on how best to pack the glider in the UP CompressSmart.

Figure 4: UP CompressSmart (scope of delivery)

Paraglider cloth

To build our paragliders, we use a high-quality polyamide cloth with special protection for improved UV resistance and air impermeability. Prolonged UV exposure and

normal use reduce the strength of any paraglider cloth. Therefore, do not leave your glider in the sun unnecessarily, unpack it just before take-off and pack it up again immediately after landing. Even though modern paraglider fabrics are increasingly better protected against the effects of sunlight, UV radiation in particular is still one of the decisive factors in cloth ageing. First the colors fade, then the coating and the fibers begin to age.

During production of the UP Lhotse X, the coated side of the fabric is placed on the inside. This protects the coating, which is crucial for the fabric's properties, from mechanical damage. When choosing a launch site, however, you should still select a surface that is as free as possible from sharp-edged and protruding objects.

Do not step on the glider. Kicking weakens the fabric, especially on hard and stony ground. Pay attention to the behaviour of spectators at the launch site, especially children and dogs: Do not hesitate to draw attention to the sensitivity of the cloth.

Please make sure that there are no insects in the canopy when packing the paraglider. Some species produce acids during decomposition which can etch holes in the cloth. Grasshoppers bite through the material with their mouthparts and cause holes. They also secrete a dark, strongly staining sap. Scare the animals away before folding. Incidentally, insects are not particularly attracted to any particular color - even if this misconception is widespread.

If the paraglider has become damp or wet, it should be dried as quickly as possible in a well-ventilated place (but never in the sun!). If it remains damp when packed, this can lead to the formation of mildew and - especially in warm conditions - to the fibers decomposing!

A brand new sunshade is often heavily compressed on delivery. This compression is only for initial transportation. From the first use, the sunshade should not be packed too tightly. You should also not sit on a packing bag in which an glider is packed.

If the sunshade has come into contact with salt water, it should be rinsed thoroughly with fresh water (see chapter Cleaning).

Paraglider lines

The UP Lhotse X uses extremely high-quality Dyneema and Aramid lines.
Please note the following points when handling your paraglider lines:

- Check the lines regularly for damage
- Make sure that the surface of the lines is not chafed by friction
- Avoid unnecessary bending
- Do not knot the brake line on the brake handle unnecessarily. Every knot weakens the line.
- After overloading (e.g. tree landings, water landings or other extreme situations) all lines must be checked for strength and length and replaced if necessary. Send your glider directly to UP International or a UP Service Center for inspection

- If the flying behaviour changes, the length of the lines must be checked and, if necessary, re-looped or replaced. Send your glider directly to UP International or a UP Service Center for inspection

Storage and transportation

Even if your glider was completely dry when you packed it after the last flight of the season, you should remove it from the FlexBag if possible for longer periods of storage and spread the canopy out slightly in a clean, dry place protected from light. If you do not have a suitable space, avoid compressing the paraglider too much and open the FlexBag as wide as possible for ventilation. The UP quick pack bag is also suitable for this purpose. Also make sure that no animals, such as mice or cats, use the glider as a place to sleep during longer periods of storage. No chemical substances such as fuels should be stored in the immediate vicinity of the material. Petrol dissolves the fabric and can cause serious damage to your glider. Store the pack sack in the trunk as far away as possible from reserve canisters or oil containers. The permanent storage temperature must be between 10° and 25° C with a relative humidity of between 50 and 75%.

The UP Lhotse X should not be exposed to extreme heat (e.g. in the trunk of a parked car in summer). The heat will force any remaining moisture through the fabric, which can damage the coating. Especially in combination with moisture, high temperatures accelerate the hydrolysis process, which damages the fibers and coating. Do not store your sunshade near radiators or other heat sources. Heat-related changes to the material occur after a short time at temperatures as low as 60° Celsius.

Cleaning

To clean the UP Lhotse X, it is best to use lukewarm fresh water and a soft sponge. For more stubborn cases, we recommend using a mild detergent, which must then be rinsed carefully and thoroughly. Then leave your glider to dry in a shady and well-ventilated place.

CAUTION! Never use chemicals, brushes or hard sponges to clean the screen. They could damage the coating and strength of the fabric. This will cause the sail to become porous and lose its tear resistance.

Never put an glider in the washing machine: even without detergent, the mechanical stress would severely damage the fabric. Never immerse the canopy in a swimming pool either: The chlorinated water attacks the fabric. If you absolutely have to rinse your canopy, for example after landing in the sea, spray it inside and out with a gentle jet of water. Frequent rinsing accelerates the ageing process**!**

Inspection and repairs

Major repairs and inspections may only be carried out by UP International or a recognized service company. Failure to do so will invalidate the operating license. See also the Service section at: **www.up-paragliders.com**

UP International not only contributes its know-how to the development of paragliders and accessories, but also offers a range of services to ensure the safety of your paraglider. All services must be carried out at an authorized UP service center as recommended by UP International. In order for the warranty to remain valid for new UP wings, the conditions listed in the section "UP International Warranty" must be met. Current conditions can be found at www.up-paragliders.com *in the Service* section.

Maintenance and minor repairs

Adhesive sail

Small damages such as tears or small holes up to a size of 2 x 2 cm, which can be carried out without special equipment, may be carried out by the pilot himself. Each glider is supplied with adhesive tape for this purpose. The adhesive sail must protrude at least 2 cm over the damaged area on all sides. The adhesive sail must be applied on both sides; rounding off the corners can prevent it from coming off.

Airworthiness review

If one of the following conditions occurs, the Lhotse X must be checked for airworthiness:

- 2 years after the first routine test
- every further 2 years or earlier if prescribed by the UP Service Center
- after 150 flying hours

Of course, we are also happy to carry out the prescribed inspection earlier if you consider it necessary due to extreme use. You will receive the inspection instructions separately from this manual.

CAUTION! If you notice any changes in the flight behaviour of your Lhotse X, please have it checked immediately by UP or a UP Service Center

Professional competence

To ensure that your UP Lhotse X offers maximum functionality and safety at all times, you should entrust its maintenance and repair to UP International. Our service staff are fully trained to carry out any work on your wing professionally and correctly. UP International is also equipped with all the special tools and equipment required for quick and flawless repairs.

Airworthiness check

Thanks to its many years of experience in paragliding, UP International can guarantee a professional airworthiness check. The canopy including the "inner workings", the entire line system, the risers and all connecting parts are checked for damage of any

kind. Our service workshop is specially equipped to carry out precise airworthiness checks. In addition to specially developed suspension devices, calibrated and regularly maintained measuring equipment is used, which is essential for determining airworthiness. Our computer-aided laser measurement of the line system is the final step in recording the measured values.
In addition to the measured values obtained in this way, the assessment of the tester is decisive for the overall evaluation of the paraglider. This requires a high level of expertise and experience. Individual wings where the tester suspects a change in flight characteristics based on the data obtained are flown and checked by the UP test pilots. In this way, UP International can always guarantee high quality in the testing of paragliders. Only through a careful and professional airworthiness check can the certification regulations be complied with and the safety of the glider guaranteed. In your own interest, you should therefore only have your UP glider checked by the specialists of the UP Service Team or a recognized service company. You can find a list of these approved service centers in the *Service* section at
www.up-paragliders.com

ATTENTION: If your UP paraglider is not serviced and checked by an approved service company or UP International GmbH, its operating license will expire!

Original parts

Your UP sunshade consists of many high-quality components with a long service life. When replacing parts (lines, risers, cloth panels etc.), only original parts may be used. In addition to maintaining the airworthiness of your paraglider, this is also very important for your safety. The following spare parts can be ordered from your dealer or directly from UP International GmbH:

- Complete risers or their individual components such as Brummel hooks, snaplocks, line locks, O-rings, brake handles
- Single lines according to line plan
- Cloth material
- Adhesive sail

Delivery service

Before your UP glider left the workshop, all the work carried out was checked again and carefully tested. In addition, a comprehensive inspection was carried out by the UP service team or a recognized service company before the glider was delivered to ensure that your Lhotse X complies with UP International standards and the type-approved device.

UP guarantee

The voluntary, internationally valid UP guarantee covers material- and manufacturing defects for all EN and LTF-tested paragliders and is valid for a period of 2 years from the delivery date of the new paraglider. The international UP guarantee includes reimbursement of the costs for required spare parts and the working time incurred in connection with the replacement or repair of the defective parts, provided that UP International has recognized a material or manufacturing defect as such. The international UP guarantee does not cover paragliders that have been involved in an accident or that have been rebuilt or modified. The guarantee does not cover parts that have to be replaced due to normal wear and tear. In addition, changes in the color of the fabric material used and damage caused by solvents, chemicals, fuels, sand and/or salt water as well as by improper handling of the paraglider and by force majeure are excluded from the guarantee. UP reserves the right to decide how the manufacturing or material defect is to be remedied (supply of spare parts, repair or equivalent replacement).

In Germany, Austria and Switzerland, the voluntary UP guarantee is extended to 36 months if the first check is carried out directly by UP International or our Swiss service company (see UP homepage). In addition to this voluntary guarantee, the statutory warranty of the country in which the paraglider was purchased also applies. The use of statutory rights in the event of defects is free of charge and is not restricted by this voluntary guarantee. UP International does not accept any liability or compensation beyond the obligations mentioned above. However, a goodwill arrangement is possible.

The guarantee is valid under the following conditions

- The glider was used within the permissible operating limits according to the manual and cared for and maintained in accordance with the applicable specifications issued by UP International. This includes, in particular, careful drying, cleaning and storage.
- The glider was only used within the applicable guidelines. All applicable approval regulations were complied with.
- All flights carried out must be fully documented using the flight log, including the respective flight duration and the flight area.
- Only UP original spare parts were used and inspections, replacements and/or repairs were carried out exclusively by UP International or by approved maintenance companies and properly documented.
- The voluntary guarantee is only granted to the first owner of the glider for exclusively private use.
- The glider was registered within 14 days of delivery at: http://www.up-paragliders.com/de/service/product-registration
- The defect is reported in writing to the guarantor UP Paragliders immediately after it occurs or is discovered by the customer. If a defect occurs within one year of the delivery date of the paraglider, the customer must prove that the defect is due to a material and/or manufacturing defect. To do so, use the form currently available

for download on the website www.up-paragliders.com. Address of the guarantor: UP International GmbH Kreuzeckbahnstraße 7 D-82467 Garmisch-Partenkirchen info@up-paragliders.com

Inspection of new devices

According to Section 1 (5) LuftGerPV, the owner can inspect his device himself or commission a third party, such as the manufacturer/importer, to carry out the inspection.

UP International requires a briefing for an independent inspection. Instruction is given by arrangement directly at UP International and is only valid for the corresponding device sample. The inspection instructions will be handed over to the owner after the instruction.

If the owner inspects his device himself or commissions a third party to carry out the inspection, it must be ensured under all circumstances that the specifications of UP International regarding the inspection are observed. The operating license expires if the inspection is carried out incorrectly or incompletely.

You can find current regulations in the *Service* section under
www.up-paragliders.com

Sending in the UP screen and other UP products

Please use the form that you can download from our website to send us your return. If you live outside Germany, please use our service telephone to find out about the nearest UP Service Center in your area.

UP International GmbH
Kreuzeckbahnstrasse 7
D-8267 Garmisch-Partenkirchen

E-mail: info@up-paragliders.com
Phone: +9 (0) 88 21-7 30 99-0
Fax: +9 (0) 88 21-7 30 99-16

Waste disposal

Despite careful material selection, even the best product only has a limited service life. The plastic material used in a paraglider requires proper disposal. Please have your paraglider disposed of properly. You can also send it back to us for disposal.

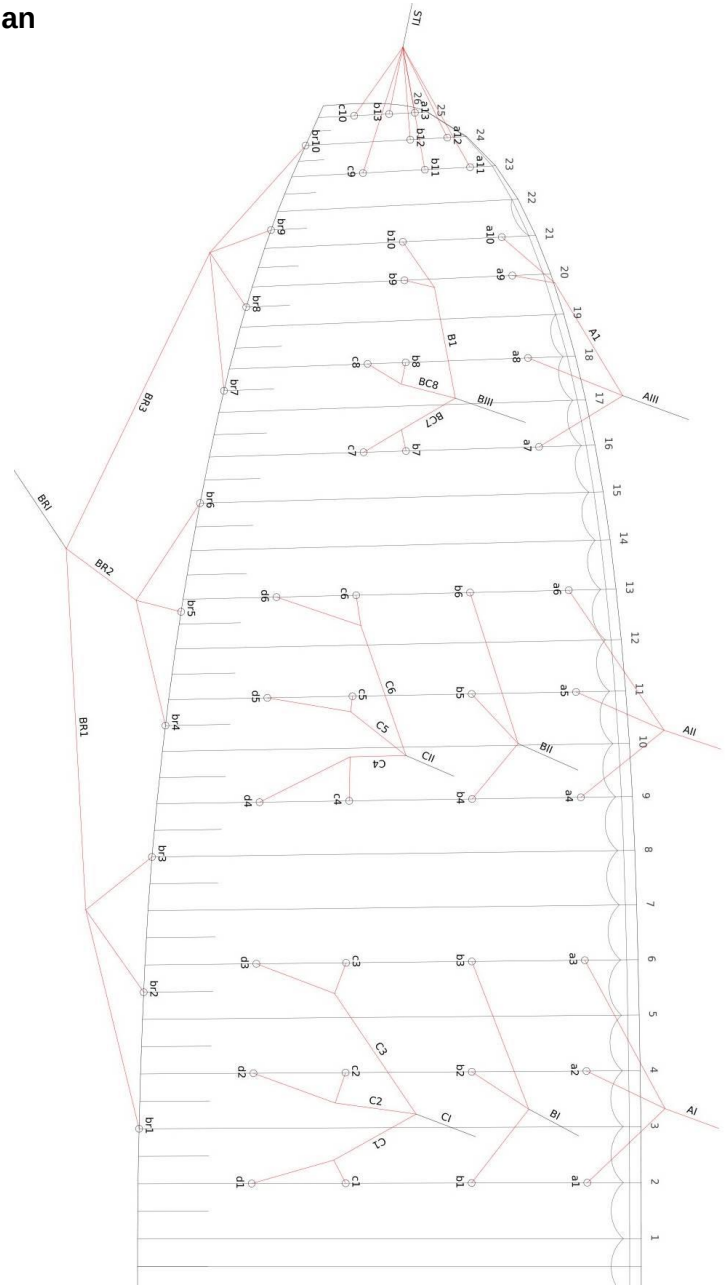
Closing words

We at UP wish you lots of fun and wonderful, accident-free flights with your UP Lhotse X.

See you UP in the sky - Your UP-International team

Appendix

Line plan



Line lengths

Line	Lhotse X M	Lhotse X SM	Lhotse X S	Lhotse X XS
	lines including risers			
a1	7643	7355	7088	6727
a2	7562	7274	7011	6655
a3	7562	7275	7011	6654
a4	7500	7213	6946	6589
a5	7417	7132	6869	6517
a6	7437	7151	6889	6535
a7	7330	7049	6789	6440
a8	7215	6937	6683	6339
a9	7168	6893	6640	6300
a10	7166	6893	6639	6298
a11	6899	6638	6396	6062
a12	6837	6578	6337	6008
a13	6795	6539	6301	5973
b1	7556	7272	7007	6651
b2	7472	7192	6929	6578
b3	7483	7200	6940	6584
b4	7436	7155	6892	6537
b5	7362	7082	6823	6471
b6	7382	7102	6840	6488
b7	7284	7001	6745	6398
b8	7167	6889	6636	6293
b9	7149	6877	6623	6282
b10	7144	6875	6621	6283
b11	6891	6630	6388	6055
b12	6852	6593	6353	6023
b13	6845	6588	6349	6020
c1	7582	7290	7024	6675
c2	7491	7205	6944	6599
c3	7518	7230	6968	6621
c4	7486	7199	6937	6589
c5	7407	7123	6863	6520
c6	7441	7156	6896	6551
c7	7349	7071	6811	6463

Line	Lhotse X M	Lhotse X SM	Lhotse X S	Lhotse X XS
c8	7232	6955	6699	6355
c9	6971	6709	6465	6128
c10	6922	6664	6420	6088
d1	7728	7437	7165	6807
d2	7645	7353	7082	6731
d3	7662	7369	7100	6746
d4	7630	7337	7067	6714
d5	7536	7247	6980	6630
d6	7552	7264	6996	6645
	brakes including BTS			
br1	7841	7568	7257	6908
br2	7501	7238	6938	6603
br3	7345	7086	6791	6461
br4	7223	6968	6676	6350
br5	7079	6827	6540	6218
br6	7077	6824	6535	6212
br7	6990	6739	6454	6133
br8	6912	6663	6380	6062
br9	6872	6623	6341	6023
br10	6921	6670	6385	6066

Single line lengths Lhotse X M

Line	Length	Loop length	Material	Color	Loop on Quicklink
a1	2310	140	DC120	Red	
a2	2229	140	DC120	Red	
a3	2233	140	DC120	Red	
a4	2096	140	DC120	Red	
a5	2015	140	DC120	Red	
a6	2036	140	DC120	Red	
a7	1731	140	8000U-090	Red	
a8	1615	140	8000U-090	Red	
a9	275	140	8000U-070	Red	
a10	271	140	8000U-070	Red	
a11	962	140	8000U-070	Red	
a12	899	140	8000U-070	Red	
a13	857	140	8000U-070	Red	
AI	4780	260	8001-230	Magenta	+
AII	4850	260	8001-230	Magenta	+
A1	1295	140	8000U-090	Red	
AIII	5050	260	8000U-130	Red	+
b1	2224	140	DC120	Blue	
b2	2145	140	DC120	Blue	
b3	2156	140	DC120	Blue	
b4	2036	140	DC120	Blue	
b5	1962	140	DC120	Blue	
b6	1984	140	DC120	Blue	
b7	431	140	8001-070	Blue	
b8	313	140	8001-070	Blue	
b9	226	140	8001-070	Blue	
b10	222	140	8001-070	Blue	
b11	952	140	8001-070	Blue	
b12	912	140	8001-050	Blue	
b13	907	140	8001-050	Blue	
BI	4780	260	8001-230	Blue	+
BII	4850	260	8001-230	Blue	+
BC7	1250	140	8001-090	Blue	

Line	Length	Loop length	Material	Color	Loop on Quicklink
BC8	1250	140	8001-090	Blue	
B1	1320	140	8001-090	Blue	
BIII	5050	260	8001-130	Blue	+
c1	993	140	8001-090	Orange	
c2	948	140	8001-090	Orange	
c3	967	140	8001-090	Orange	
c4	919	140	8001-090	Orange	
c5	877	140	8001-090	Orange	
c6	897	140	8001-090	Orange	
c7	496	140	8001-070	Orange	
c8	377	140	8001-050	Orange	
c9	1028	140	8001-050	Orange	
c10	982	140	8001-050	Orange	
C1	969	140	8001-130	Orange	
C2	930	140	8001-130	Orange	
C3	938	140	8001-130	Orange	
C4	883	140	8001-130	Orange	
C5	846	140	8001-130	Orange	
C6	861	140	8001-130	Orange	
CI	5070	260	8000U-230	Natural	+
CII	5140	260	8000U-230	Natural	+
d1	1145	140	8001-070	Orange	
d2	1099	140	8001-070	Orange	
d3	1110	140	8001-070	Orange	
d4	1060	140	8001-070	Orange	
d5	1004	140	8001-070	Orange	
d6	1006	140	8001-070	Orange	
br1	2352	140	8001-050	Orange	
br2	2012	140	8001-050	Orange	
br3	1856	140	8001-050	Orange	
br4	1734	140	8001-050	Orange	
br5	1595	140	8001-050	Orange	
br6	1603	140	8001-050	Orange	
br7	1516	140	8001-050	Orange	
br8	1443	140	8001-050	Orange	

Line	Length	Loop length	Material	Color	Loop on Quicklink
br9	1408	140	8001-050	Orange	
br10	1457	140	8001-050	Orange	
BR1	2700	140	8001-090	Orange	
BR2	2700	140	8001-090	Orange	
BR3	2675	140	8001-070	Orange	
BRI	2729	300	989/1,9	Red	
STI	4599	140	8001-090	Blue	
STI-0	800	260	7950-150	Citro	

Single line lengths Lhotse X SM

Line	Length	Loop length	Material	Color	Loop on Quicklink
a1	2310	140	DC120	Red	
a2	2229	140	DC120	Red	
a3	2233	140	DC120	Red	
a4	2096	140	DC120	Red	
a5	2015	140	DC120	Red	
a6	2036	140	DC120	Red	
a7	1731	140	8000U-090	Red	
a8	1615	140	8000U-090	Red	
a9	275	140	8000U-070	Red	
a10	271	140	8000U-070	Red	
a11	962	140	8000U-070	Red	
a12	899	140	8000U-070	Red	
a13	857	140	8000U-070	Red	
AI	4780	260	8001-230	Magenta	+
AII	4850	260	8001-230	Magenta	+
A1	1295	140	8000U-090	Red	
AIII	5050	260	8000U-130	Red	+
b1	2224	140	DC120	Blue	
b2	2145	140	DC120	Blue	
b3	2156	140	DC120	Blue	
b4	2036	140	DC120	Blue	
b5	1962	140	DC120	Blue	
b6	1984	140	DC120	Blue	
b7	431	140	8001-070	Blue	
b8	313	140	8001-070	Blue	
b9	226	140	8001-070	Blue	
b10	222	140	8001-070	Blue	
b11	952	140	8001-070	Blue	
b12	912	140	8001-050	Blue	
b13	907	140	8001-050	Blue	
BI	4780	260	8001-230	Blue	+
BII	4850	260	8001-230	Blue	+
BC7	1250	140	8001-090	Blue	
BC8	1250	140	8001-090	Blue	

Line	Length	Loop length	Material	Color	Loop on Quicklink
B1	1320	140	8001-090	Blue	
BIII	5050	260	8001-130	Blue	+
c1	993	140	8001-090	Orange	
c2	948	140	8001-090	Orange	
c3	967	140	8001-090	Orange	
c4	919	140	8001-090	Orange	
c5	877	140	8001-090	Orange	
c6	897	140	8001-090	Orange	
c7	496	140	8001-070	Orange	
c8	377	140	8001-050	Orange	
c9	1028	140	8001-050	Orange	
c10	982	140	8001-050	Orange	
C1	969	140	8001-130	Orange	
C2	930	140	8001-130	Orange	
C3	938	140	8001-130	Orange	
C4	883	140	8001-130	Orange	
C5	846	140	8001-130	Orange	
C6	861	140	8001-130	Orange	
CI	5070	260	8000U-230	Natural	+
CII	5140	260	8000U-230	Natural	+
d1	1145	140	8001-070	Orange	
d2	1099	140	8001-070	Orange	
d3	1110	140	8001-070	Orange	
d4	1060	140	8001-070	Orange	
d5	1004	140	8001-070	Orange	
d6	1006	140	8001-070	Orange	
br1	2352	140	8001-050	Orange	
br2	2012	140	8001-050	Orange	
br3	1856	140	8001-050	Orange	
br4	1734	140	8001-050	Orange	
br5	1595	140	8001-050	Orange	
br6	1603	140	8001-050	Orange	
br7	1516	140	8001-050	Orange	
br8	1443	140	8001-050	Orange	
br9	1408	140	8001-050	Orange	

Line	Length	Loop length	Material	Color	Loop on Quicklink
br10	1457	140	8001-050	Orange	
BR1	2700	140	8001-090	Orange	
BR2	2700	140	8001-090	Orange	
BR3	2675	140	8001-070	Orange	
BRI	2729	300	989/1,9	Red	
STI	4599	140	8001-090	Blue	
STI-0	800	260	7950-150	Citro	

Single line lengths Lhotse X S

Line	Length	Loop length	Material	Color	Loop on Quicklink
a1	2310	140	DC120	Red	
a2	2229	140	DC120	Red	
a3	2233	140	DC120	Red	
a4	2096	140	DC120	Red	
a5	2015	140	DC120	Red	
a6	2036	140	DC120	Red	
a7	1731	140	8000U-090	Red	
a8	1615	140	8000U-090	Red	
a9	275	140	8000U-070	Red	
a10	271	140	8000U-070	Red	
a11	962	140	8000U-070	Red	
a12	899	140	8000U-070	Red	
a13	857	140	8000U-070	Red	
AI	4780	260	8001-230	Magenta	+
AII	4850	260	8001-230	Magenta	+
A1	1295	140	8000U-090	Red	
AIII	5050	260	8000U-130	Red	+
b1	2224	140	DC120	Blue	
b2	2145	140	DC120	Blue	
b3	2156	140	DC120	Blue	
b4	2036	140	DC120	Blue	
b5	1962	140	DC120	Blue	
b6	1984	140	DC120	Blue	
b7	431	140	8001-070	Blue	
b8	313	140	8001-070	Blue	
b9	226	140	8001-070	Blue	
b10	222	140	8001-070	Blue	
b11	952	140	8001-070	Blue	
b12	912	140	8001-050	Blue	
b13	907	140	8001-050	Blue	
BI	4780	260	8001-230	Blue	+
BII	4850	260	8001-230	Blue	+
BC7	1250	140	8001-090	Blue	
BC8	1250	140	8001-090	Blue	

Line	Length	Loop length	Material	Color	Loop on Quicklink
B1	1320	140	8001-090	Blue	
BIII	5050	260	8001-130	Blue	+
c1	993	140	8001-090	Orange	
c2	948	140	8001-090	Orange	
c3	967	140	8001-090	Orange	
c4	919	140	8001-090	Orange	
c5	877	140	8001-090	Orange	
c6	897	140	8001-090	Orange	
c7	496	140	8001-070	Orange	
c8	377	140	8001-050	Orange	
c9	1028	140	8001-050	Orange	
c10	982	140	8001-050	Orange	
C1	969	140	8001-130	Orange	
C2	930	140	8001-130	Orange	
C3	938	140	8001-130	Orange	
C4	883	140	8001-130	Orange	
C5	846	140	8001-130	Orange	
C6	861	140	8001-130	Orange	
CI	5070	260	8000U-230	Natural	+
CII	5140	260	8000U-230	Natural	+
d1	1145	140	8001-070	Orange	
d2	1099	140	8001-070	Orange	
d3	1110	140	8001-070	Orange	
d4	1060	140	8001-070	Orange	
d5	1004	140	8001-070	Orange	
d6	1006	140	8001-070	Orange	
br1	2352	140	8001-050	Orange	
br2	2012	140	8001-050	Orange	
br3	1856	140	8001-050	Orange	
br4	1734	140	8001-050	Orange	
br5	1595	140	8001-050	Orange	
br6	1603	140	8001-050	Orange	
br7	1516	140	8001-050	Orange	
br8	1443	140	8001-050	Orange	
br9	1408	140	8001-050	Orange	

Line	Length	Loop length	Material	Color	Loop on Quicklink
br10	1457	140	8001-050	Orange	
BR1	2700	140	8001-090	Orange	
BR2	2700	140	8001-090	Orange	
BR3	2675	140	8001-070	Orange	
BRI	2729	300	989/1,9	Red	
STI	4599	140	8001-090	Blue	+
STI-0	800	260	7950-150	Citro	

Single line lengths Lhotse X XS

Line	Length	Loop length	Material	Color	Loop on Quicklink
a1	2009	140	DC120	Red	
a2	1935	140	DC120	Red	
a3	1936	140	DC120	Red	
a4	1811	140	DC120	Red	
a5	1737	140	DC120	Red	
a6	1755	140	DC120	Red	
a7	1486	140	8000U-090	Red	
a8	1383	140	8000U-090	Red	
a9	207	140	8000U-070	Red	
a10	207	140	8000U-070	Red	
a11	801	140	8000U-070	Red	
a12	747	140	8000U-070	Red	
a13	711	140	8000U-070	Red	
AI	4208	260	8001-230	Magenta	+
AII	4269	260	8001-230	Magenta	+
A1	1140	140	8000U-090	Red	
AIII	4445	260	8000U-130	Red	+
b1	1936	140	DC120	Blue	
b2	1863	140	DC120	Blue	
b3	1871	140	DC120	Blue	
b4	1764	140	DC120	Blue	
b5	1695	140	DC120	Blue	
b6	1714	140	DC120	Blue	
b7	343	140	8001-070	Blue	
b8	236	140	8001-070	Blue	
b9	163	140	8001-070	Blue	
b10	165	140	8001-070	Blue	
b11	794	140	8001-070	Blue	
b12	761	140	8001-050	Blue	
b13	761	140	8001-050	Blue	
BI	4208	260	8001-230	Blue	+
BII	4269	260	8001-230	Blue	+
BC7	1100	140	8001-090	Blue	
BC8	1100	140	8001-090	Blue	

Line	Length	Loop length	Material	Color	Loop on Quicklink
B1	1165	140	8001-090	Blue	
BIII	4445	260	8001-130	Blue	+
c1	859	140	8001-090	Orange	
c2	816	140	8001-090	Orange	
c3	832	140	8001-090	Orange	
c4	790	140	8001-090	Orange	
c5	750	140	8001-090	Orange	
c6	768	140	8001-090	Orange	
c7	404	140	8001-070	Orange	
c8	299	140	8001-050	Orange	
c9	864	140	8001-050	Orange	
c10	829	140	8001-050	Orange	
C1	853	140	8001-130	Orange	
C2	818	140	8001-130	Orange	
C3	825	140	8001-130	Orange	
C4	777	140	8001-130	Orange	
C5	744	140	8001-130	Orange	
C6	758	140	8001-130	Orange	
CI	4463	260	8000U-230	Natural	+
CII	4524	260	8000U-230	Natural	+
d1	989	140	8001-070	Orange	
d2	945	140	8001-070	Orange	
d3	955	140	8001-070	Orange	
d4	911	140	8001-070	Orange	
d5	860	140	8001-070	Orange	
d6	862	140	8001-070	Orange	
br1	2070	140	8001-050	Orange	
br2	1765	140	8001-050	Orange	
br3	1623	140	8001-050	Orange	
br4	1512	140	8001-050	Orange	
br5	1385	140	8001-050	Orange	
br6	1389	140	8001-050	Orange	
br7	1307	140	8001-050	Orange	
br8	1241	140	8001-050	Orange	
br9	1207	140	8001-050	Orange	

Line	Length	Loop length	Material	Color	Loop on Quicklink
br10	1250	140	8001-050	Orange	
BR1	2376	140	8001-090	Orange	
BR2	2376	140	8001-090	Orange	
BR3	2354	140	8001-070	Orange	
BRI	2402	300	989/1,9	Red	
STI	3957	140	8001-090	Blue	+
STI-0	800	260	7950-150	Citro	

Service booklet

Shield and pilot data

Model: **Lhotse X**

Size: XS ❒ S❒ ❒ SM ❒ M ❒ L

Serial number: _____

Color: _____

Purchase date: _____

First flight: _____

Dealer's stamp and signature

Pilot (1st holder)

First name: _____

Surname: _____

Street: _____

Place of residence: _____

ZIP CODE: _____

Country: _____

Phone: _____

Fax: _____

Email: _____

Pilot (2nd holder)

First name:_____

Surname:_____

Street: _____

Place of residence: _____

ZIP CODE:_____

Country:_____

Phone:_____

Fax: _____

Email:_____

Pilot (3rd holder)

First name:_____

Surname:_____

Street: _____

Place of residence: _____

ZIP CODE:_____

Country:_____

Phone:_____

Fax: _____

Email:_____

Please make sure that your UP Service Center stamps and signs after each inspection.

Service 1

Executed on _____

Type of service

Order no.
Stamp

Service 2

Executed on _____

Type of service

Order no.
Stamp

Service 3

Executed on _____

Type of service

Order no.
Stamp

Please make sure that your UP Service Center stamps and signs after each inspection.

Service 4

Executed on _____

Type of service

Order no.
Stamp

Service 5

Executed on _____

Type of service

Order no.
Stamp

Service 6

Executed on _____

Type of service

Order no.
Stamp