X-TRIANGLE

Operation manual

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Content

1. Forword

Dear Customer,

thank you very much, that you have decided for a **X-TRIANGLE.** You have not only acquired one of the most modern and innovative rescue equipment, you also opted for a brand that is committed to the sustainable use of the earth's resources. The ecological balance of our products is our priority. As probably not much before we dealt with the development and construction of rescue equipment in general and dealt in particular with the Cross canopy and steerable rescue equipment. Dozens of prototypes, hundreds of test airdrops and measuring flights have enriched our experiences and sharpened insights.The product of this unique history is a unrivaled light steerable rescue equipment, such as the **X-TRIANGLE!**

The use of a rescue system is complex and it requires some practice to complete a successful rescue deployment. For this reason, I recommend intense workout for the use of the **X-TRIANGLE.** A perfect way for those who can learn only by themselves by repeating the exercises in the event of an emergency in the prevailing difficult condition and react correctly.

We naturally hope that the **X-TRIANGLE** must be used as little as possible. If nevertheless, the situation requires it, it should not be hesitated and the rescue device should be activate immediately. For this rare moments we have invested all our knowledge and our intelligence, so you can count completely on the reliability of the **X-TRIANGLE.**

We wish you much success and joy dealing with the **X-TRIANGLE!**

Dani Loritz and Geri Roschmann

Team X-dream Fly ...
... live your dream

2. Introduction

Safety instruction

The X-TRIANGLE is a parachute to be release by hand for paraglider pilots who are in an emergency situation. Due to their design characteristics it is not suitable for the free-fall! The parachute, the suspension lines and their connection are not designed for an abrupt opening, because the necessary shock absorbers are missing. An unauthorized use is prohibited. It is essential to ensure the proper installation of the X-TRIANGLE to the harness. In the direct connection, a compatibility test must be carried out by an entitled person, to exclude possible non-compatibility between the harness and rescue device. Only a correct mounted rescue equipment can function properly in case of an emergency and thus contribute to safety. In case of a release of the rescue device above water, for example, as part of safety training, should pay attention to the fact that a harness foam protector generates positive bouncy and can bring the pilots in the „head-down" position in water. There is also the risk that the foam protection soak water during a longer stay in the water and then pulls the pilot down.

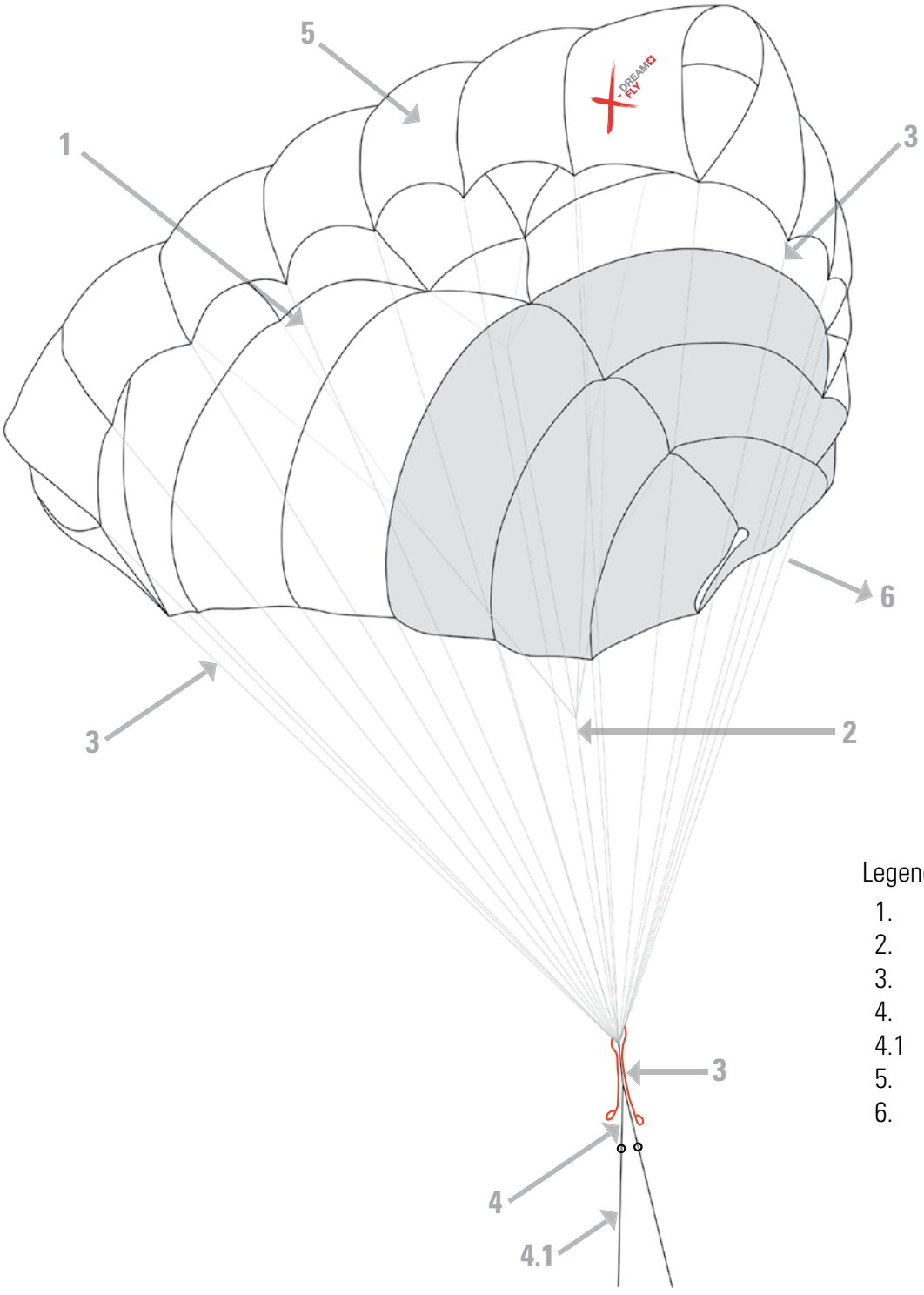
Intended Use

This rescue device has been developed and constructed exclusively for the paragliding sport.

3. Rescue canopy X-TRIANGLE

Through intensive research work we managed to develop a rescue system with maximum reliability, strength and fastest opening time at low sink rate. The X-TRIANGLE is easy to pack with a small packing size, low overall weight and a very high pendulum stability. Despite a high maximum weight load we could achieve a very low sink rate.
The X-TRIANGLE is suitable for any aspiring pilot and is for acro and XC-pilots the measure of things. The compact size ensures the compatibility with most harnesses. The new idea behind the X-TRIANGLE was to develop a steerable rescue with a vertical descent without any forward movement and no necessary pilot inputs on the rescue straight after the deployment. If the pilot wants, or the situation requires a control of the direction we got 2 brake-steering handles just above the connection loop which makes it easy to generate and steer a forward drive and stay so under control even in difficult conditions and wind. Especially in situations where pilots with a normal not steerable rescue can not avoid obstacles, the X-TRIANGLE shows their strength.

The construction



Legend:

1. sidelines
2. middlelines
3. steeringlines
4. riser

4.1 loop in riser prolongation

5. canopy
6. flight direction
   red (gray) corner

We use only the highest quality materials such as Liros lines, 6.6 nylon Fabric from Delcotex, thread from the german manufacturer Amann in order to achieve a unique product. All materials used are manufactured in Europe. Sophisticated and modern production methods after ISO 9001 guarantee the best quality and long life. Due to the low pack size the compatibility is guaranteed with most harnesses.

Specifications:

	X-TRIANGLE 100	X-TRIANGLE 125	X-TRIANGLE 160	X-TRIANGLE 220 Tandem
max. | min. load [kg]	100 | 50	125 | 65	160 | 90	220 | 110
number of panels	18	21	24	30
weight of parachute incl. riser [kg]	1,15	1,45	1,7	2,4
area [m²]	28,8	35,9	44,8	63,9
number of lines	18	21	24	30
number of centerlines	2 | 3 | 3	2 | 4 | 3	2 | 4 | 3	3 | 5 | 4
sinkrate max. load [m/s]	EN 5,47	EN 5,43	EN 5,42	-
certification	LTF | EN (Air Turquoise)	LTF | EN (Air Turquoise)	LTF | EN (Air Turquoise)	LTF | EN (Air Turquoise)
certification number	EP 159.2016	EP 160.2016	EP 197.2017	EP 203.2017
container size [cm]	L 24 | B 20 | H 10	L 26 | B 21 | H 11	L 28 | B 23 | H 12	L 29 | B 24 | H 14
container volume [cm³]	3.500 *(incl. lines)*	4.900 *(incl. lines)*	5.450 *(incl. lines)*	7.000 *(incl. lines)*
system lentgh [m]	4,4	5,3	5,9	7,3
max.area load [kg/m2]	3,47	3,48	3,57	3,44

Necessary documentation

- Operation manual
- Inspection record

Components of the delivery

- X-dream Fly X-TRIANGLE rescue
- X-dream Fly X-TRIANGLE inner container (4-leaf container)
- X-dream Fly X-TRIANGLE pack instructions (in the operations manual for free download)
- X-dream Fly X-TRIANGLE inspection record
- X-dream Fly X-TRIANGLE operation manual
  The operation manual is available for download at **www.x-dreamfly.ch**

Quality assurance

The X-dream Fly rescue devices go through a step by step control during the whole production. After every step, the product is accurately checked and only after a successful pass of the test the following step will be started. The fab- ric, the straps, lines and also the sewing machines are verified before use. Continuous quality controls of the produc- tion process ensure an error-free production. Each rescue unit is subjected to a strict final inspection before it leaves our factory.

Materials used

The materials used were selected very carefully and under the strictest quality standards. So we choose a rip-stop 20-dtex 6.6 nylon fabric from Delcotex. This meets the required strengths, convinced by good workmanship and promises a longer life. The main seams are including a webbing which enhance the strength of the canopy. The lines are made out of high-strength Dyneema for an enormous weight reduction. The middle lines are made of polyester. The connection of the lines to the canopy are also made out of dyneema|polyester and corresponds to the international parachute workmanship

The components

The X-TRIANGLE consists of 4 components:

- the canopy (triangle-canopy)
- the suspension lines (side and middle line)
- main riser incl. loop in riser
- inner container

Certification

The rescue device X-TRIANGLE by X-dream Fly are approved by the German airworthiness requirement LTF and EN-12491:2001. The approval is valid only in use with the original X-dream Fly 4-leaf inner container. When using a X-TRIANGLE in the context of a non-original inner container please note the corresponding release in the appendix of this manual.

Operational limits

X-TRIANGLE Certification LTF = 150 km|h = 41,6m|s.
According to EN 12491 rescue equipment is not suitable for use at speeds greater than 32 m|s or 115 km|h.

Every 12 months the X-TRIANGLE rescue equipment need to be repacked. It makes sense when you throw the rescue package for training on this occasion in a clean, dry space. Currently, there is no verification requirement for rescue equipment. However, we recommend every 24 months a review of the rescue system. After each case of a real emergency opening the X-TRIANGLE rescue device should be checked by the manufacturer.

Permissible operating time: 12 years in compliance with the pack intervals and storage regulations. An extension up to 15 years is possible after an inspection of the manufacturer.

4. Throwing the X-TRIANGLE

The reserve is very often literally the lifesaver the "Second Chance" for paraglider pilots. In the close flown air-space of many flying areas a collision should not be underestimated as a danger on good flying days. Collisions with other aircraft are one of the principal reasons to pull the parachute. Disturbance in the glider as cravats, which leave the glider in spirals, fast twisted rotation movements or line breaks which makes the steering of the glider impossible are other good reasons for throwing the reserve.

Deployment oft the rescue canopy

You grab the handle of the rescue and throw the canopy with a strong lively movement slightly backwards. The more hard the movement precipitates, the faster the lines stretches themselves and pulls the canopy out of the container.

After the opening

When the reserve opens (usually behind the pilot) the glider is momentarily unable to fly, any prior rotation stops immediately. The rescue rises above the pilot, the glider dives forward or sideways. Now you must immediately attempt to deform the glider strongly (B- or C-Stall, or pull one line in) that the glider disturbs the rescue in his movements as little as possible. If one does nothing at all, the glider rises above the pilot, the rescue shifts backwards and cannot carry properly. This can occur to the dreaded scissoring position (down plane) when the glider and the rescue are at an angle of 45° to each other. The rescue carries now only one part of the load, the rate of descent is dangerously high. Try to deflate the glider and don´t let it fly anymore (B- or C-Stall, pull one line in). If the paraglider flutters only like a flag upwards, the rescue canopy can carry widely undisturbed and freely of pendulum. One more option would be the use of Quick-Out carabiners. After the rescue opening and release of first one riser and after a short moment the second one it is possible to get rid of the glider. The pilot don´t need to stabilize the glider anymore and is able to concentrate fully on the rescue and the landing.

The scissors position

The X-TRIANGLE is extremely pendulum stabl. Nevertheless, the danger of a scissor position (down plane) should be reduced by stabilising or retraction the main glider. A scissor position increases the rate of descent and produce an oblique pilot position when landing and increases the risk of injury!

Disconnect the glider

To achieve a proper operation of a steerable rescue the rescue canopy should fly without any influence of the main glider above the pilot. A simple and effective way to achieve this situation are Quick-Out carabiners. This carabiners make it possible to disconnect one or even both riser of the glider. We recommend for this reason the use of Quick-Out carabiners. It is also important if using a speed system that this is separated during the release process as well.

The main glider should be only disconnected after the rescue canopy opens proper, inflates fully and fly well above the pilot. The separation of the two risers of the paraglider should never occur simultaneously. Separate first one side of the risers and if necessary the second one. It might be that one disconnected riser is enough to deform the glider to such an extent that he has no influence anymore on the rescue. If one side of the glider is disconnected the flight direction of the X-TRIANGLE carried on side which is separated. Even in unilateral separation the flight direction can be controlled with the handles of the X-TRIANGLE. An unilateral separation can make sense in certain circumstances, if you fly above forest or inaccessible areas you will not drop your glider. To achieve the maximum forward speed, maximum glide and best controllability of the X-TRIANGLE, the glider must be completely separated or pulled in. There is the danger that during installation or during the rescue deployment the rescue turns on its own axis. This has the consequence that the two risers get twisted. Twisted riser have no effect on the opening behavior. However, this may be restrict the controllability or make it even impossible. To untwist it is necessary to deform the glider or at least disconnect one side of the glider.

Flying with the X-TRIANGLE

The unique advantages of the X-TRIANGLE lies in the choice of doing nothing if the situation requires it and achieve a vertical sink rate or the ability of a controllable forward drive by an active engagement of the pilot. This option makes the X-TRIANGLE unique and can thus be used for really any pilots in all skill- and education levels. The brake handles on the X-TRIANGLE are attached with plastic sticks to a metal D-ring and a small line-loop on the riser. The X-TRIANGLE generates no forward drive directly after the opening and the vertical descent is even at maximum load lower then the required EN standard. On pilots request and if the situation requires it you can generate now a forward drive by pulling one or both brake handles and steer this forward motion. The red corner of the rescue points to the direction you fly.
IMPORTANT: Once the forward drive is applied by pulling the brake handles it cannot be removed. The use of the two brakes of the X-TRIANGLE can similarly determine the direction of flight of the rescue system such as a paraglider. The forward speed and thus the controllability of the X-TRIANGLE is marginal dependent on the load and how much influence the main glider has on the system. The X-TRIANGLE riser has a left and right side and should be connected so to the harness. The risers converges to one and therefore the pilot may twist sideways in the forward motion and is not positioned in the flight direction as the rescue. As orientation we recommend to visualize the red corner of the X-TRIANGLE. The control behavior of the X-TRIANGLE is a little different than that of a paraglider or rogallo rescue.
IMPORTANT: Visualize the red corner for the flying direction, for steering apply on one side brake input until the rescue start to turn and the red corner is pointing the direction you want to fly and wait shortly for the rescue turning and flying forward in this direction. The brake has a limit, thus the brake can not pulled to low. The turning performance of the X-TRIANGLE is attenuated as dub. Simultaneously pull of both steering lines resulted in a little slowdown of the forward drive. The X-TRIANGLE can not be stalled by pulling both steering lines. We recommend to study and train the use of the X-TRIANGLE in advance. If your rescue is mounted to your shoulders it can be difficult to turn your head, to orientate yourselves to the risers of the X-TRIANGLE. The position of brake handles must be felt. We recommend to grab the riser upper your shoulder and to follow the risers up till you reach the brake handles. In an emergency we seldom have much time and often is hectic and it is important that procedures are rehearsed and work blind.

Forward speed according situation paraglider

situation	sink	forward speed	steering
not disconnected (paraglider not deformed)	variable	0 - 3 km|h	difficult
one side disconnected	good | stable	4 - 7 km|h	good
both sides disconnected	very good | very stable	7 - 12 km|h	very good

Landing with the rescue device

Especially when triggered at low altitude the upright position in the harness is important. If you have a shoulder mount to the harness, it usually brings you in an upright position. It is essential to ensure that the glider doesn´t deform the rescue device just before the ground.

It is important to note the following when landing on the rescue:

- upright pilot position
- legs together and knees slightly bent
- be ready to roll over yourself

Potential errors and hazards

error in the deployment	rescue response | hazard	pilot reaction
release handle can not be achieved	rescue can not be triggered	compatibility-check after each complete new
closure on the outer container can not be opened	rescue can not be triggered	c-check after each complete new installation
inner container is not thrown away aggressively	rescue does not open or very delayed	strongly pull on the lines or riser of the rescue, pull second rescue

error in the deployment	rescue response | hazard	pilot reaction
no deformation of the paraglider	scissor position, strong commuting, uncontrolled impact	deform the gilder, get rid of the glider (Quick-Out)

error in the deployment	rescue response | hazard	pilot reaction
too much concentration on the glider, pilot forget the upright position	pendulum, uncontrolled landing	occupy upright pilot position, prepare for landing
during the landing legs not together, wrong pilot position	uncontrolled landing	Ouch !!!

5. Maintenance and inspection of the X-TRIANGLE

Before each packing the parachute must be inspected by a packer. Was the emergency parachute opened for an emergency case then the rescue must be subjected from the manufacturer.

Behaviour if damaged

If a check at the rescue system found some damage which affect the airworthiness of the device, the rescue equipment has to be send to the manufacturer for repair. This also applies to damages whose impact on the airworthiness of the system cannot be uniquely determined.

Storage

A rescue device exists to save the life of the owner. It needs careful maintenance and care. UV radiation, moisture and chemicals are the worst enemies of your X-TRIANGLE rescue device. Avoid unnecessary burdens and let your X-TRIANGLE never unnecessarily lying in the sun. The rescue equipment should be dried in clean, dry and dark rooms. Rescue packages that are no longer used should be stored loosely rolled in a bag.

Cleaning and drying

Dirty canopies and containers can be washed with clean clear water. Acids and mildew can affect the strength of the components. Such polluted parachutes have to be sent to the manufacturer for investigation and repaired if necessary.

Repairs

The manufacturer or authorized X-dream Fly partners must perform all repairs.

Correct disposal of the rescue equipment

As an environmentally conscious manufacturer of rescue equipment we pay great attention to produce our products eco social tolerated. The material we use in our products is evaluated according to environmental criteria and sub-ject to constant control. For the proper disposal the steel fittings should be separated at the metal disposal point. The canopy, the lines and straps can be disposed with household waste.

6. Attachment to the harness

Each new combination of harness and rescue has to be checked *(compatibility check)* after the first packing by the manufacturer of the harness or by a trained and appointed person. Deploying the rescue system has to be possible out from each flying position according with the requirements of the building regulation. It should be noted that the release force of 7daN is not exceeded. The X-TRIANGLE must be connected with a carabiner or by looping through the V-line to the harness.

ATTENTION: By looping trough *(pic 2)* or by using only one carabiner *(pic 1)* the X-TRIANGLE is not steerable. When using a connection carabiner the breaking load of the carabiner must have a min. of 2400 daN.

If the X-TRIANGLE is connected with two carabiners to the shoulder area or as a front container on two lateral attachment points *(usually the front container is mounted on the main carabiners)*, each individual carabiner need to have a strength of 1200 daN at least. By using a steerable rescue parachute with two connecting bridles | risers or another rescue device with two connecting bridles, the rescue is connected to the additional loops of the harness *(pic 3)* located near the padded shoulder straps. In this case the permanently installed nonrequired connecting bridle | V-line of the harness is to be folded together and fixed with elastic straps. It can be placed under the cover behind the neck of the pilot or be stored into the back part of the harness by looping it through the drinking-tube opening. For this connection, you need two screw lock carabiners with a breaking load of at least 1200 daN per carabiner. It has to be secured that the length of the connecting bridle | riser is sufficient to insert the rescue device into the rescue container provided for the harness.

image 1

image 2

image 3

7. Packing interval for the X-TRIANGLE

Before the rescue is repacked it must be subjected to a visual inspection by the packer. The reserve parachute must therefore be aired at a humidity of 60 - 65 % for min. 24 hours. The packing shall be done as possible on a packing table, but at least on a clean, anti static surface. The following photos are from a X-TRIANGLE.

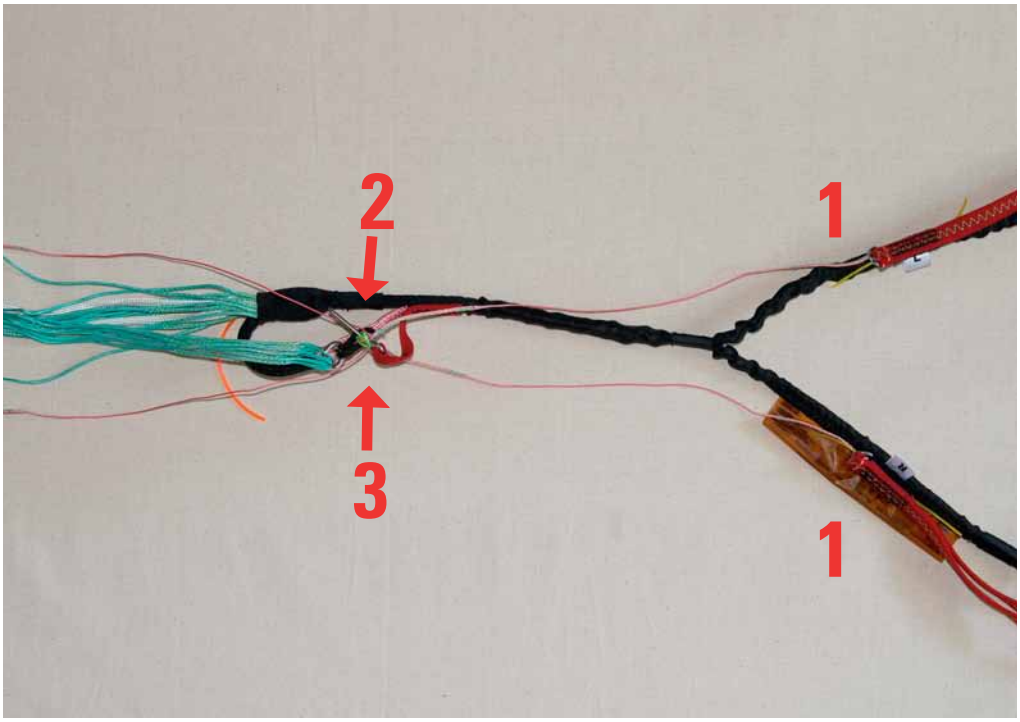
We remind you that you fly at your own risk.
This also applies to the use of this life-saving device.

8. Funktion & assembly for packing X-TRIANGLE

Assembly ring system

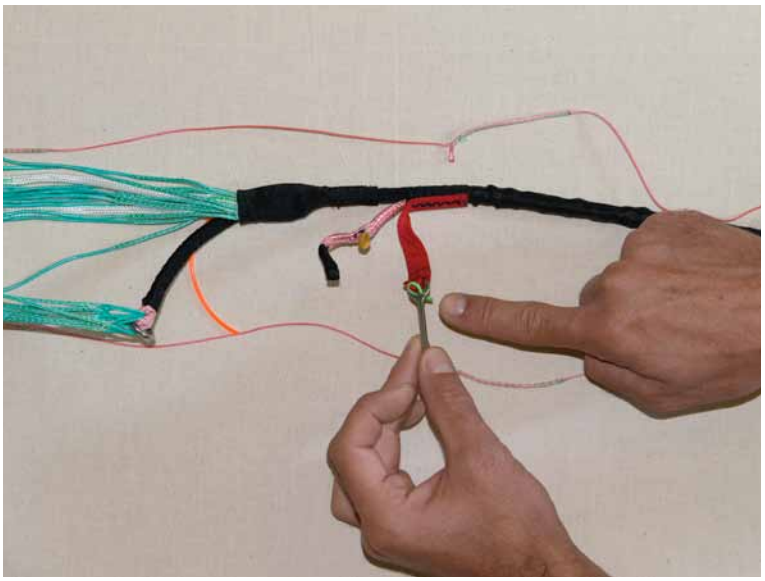
Situation of delivery *(opening without forward drive)*

1. brake handles mounted and fixed
2. ring system fixed through steel pin
3. spliced line loops on the brake lines looped into the steel pin *(IMPORTANT: both loops, 1x left and 1x right brake line)* to release and open the ring system and generate a forward drive.

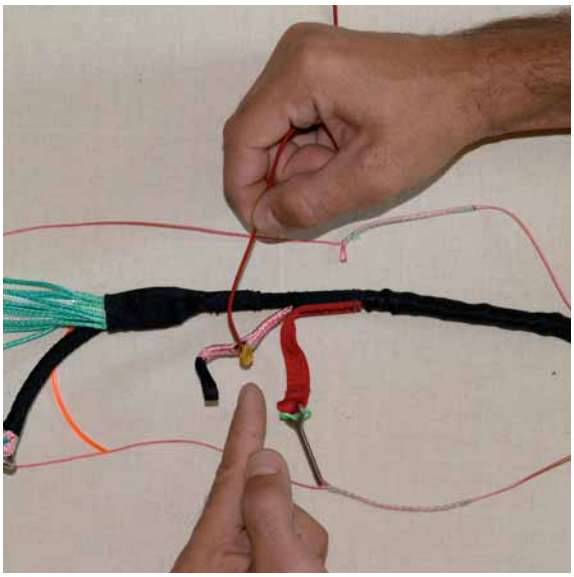


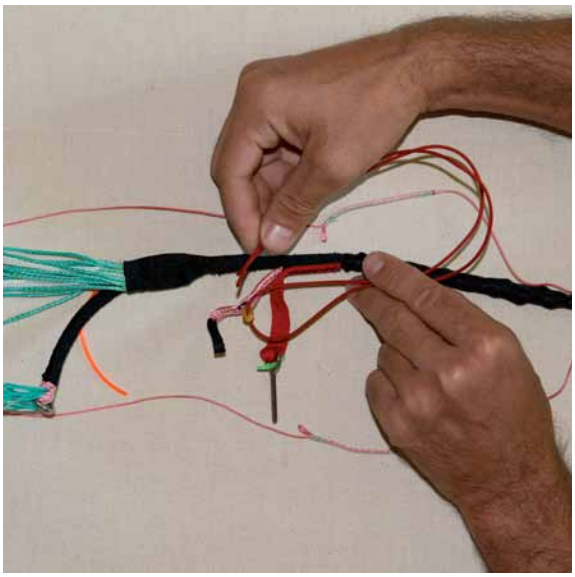
Assembly ring system for re-packing and after an opening

1.) Assembly of the rubber band on the steel pin for fixing them afer closing the ring system.

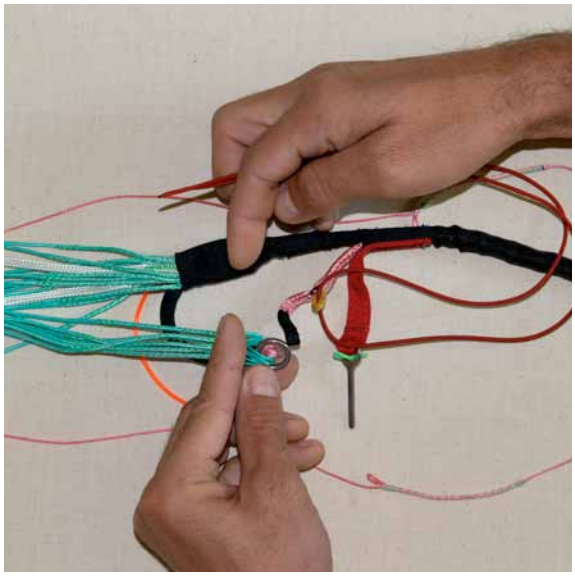


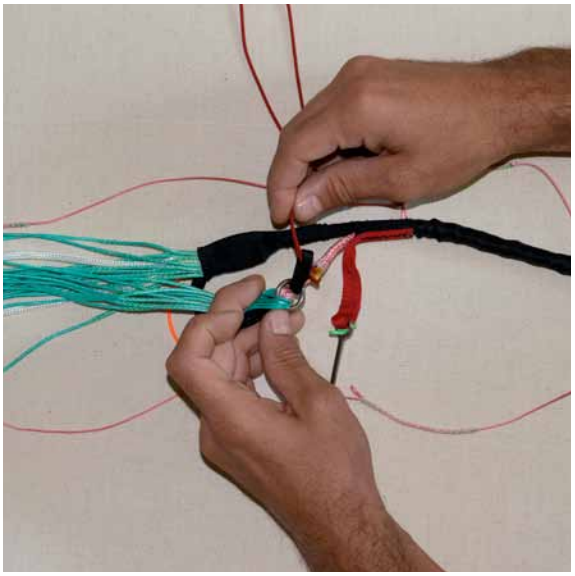
2.) Closing the ring system *(using a short line makes this procedure easier).*



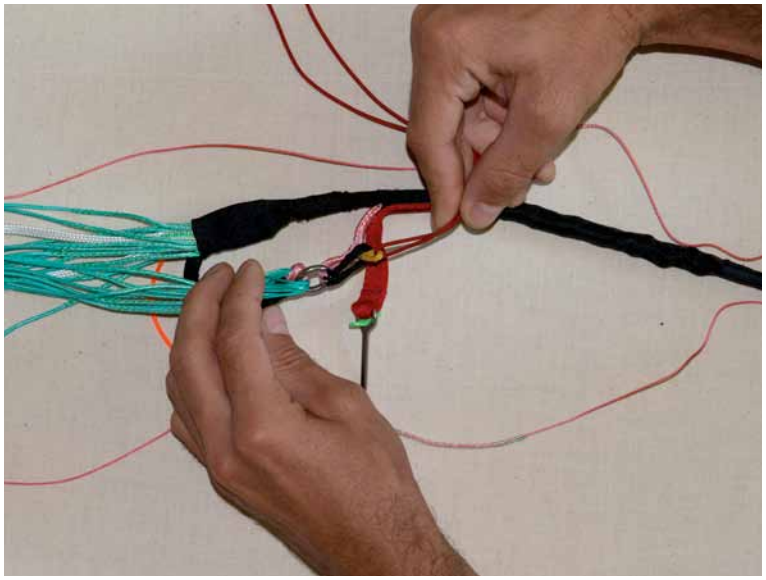


3.) Pass the black *(larger)* loop through the ring.



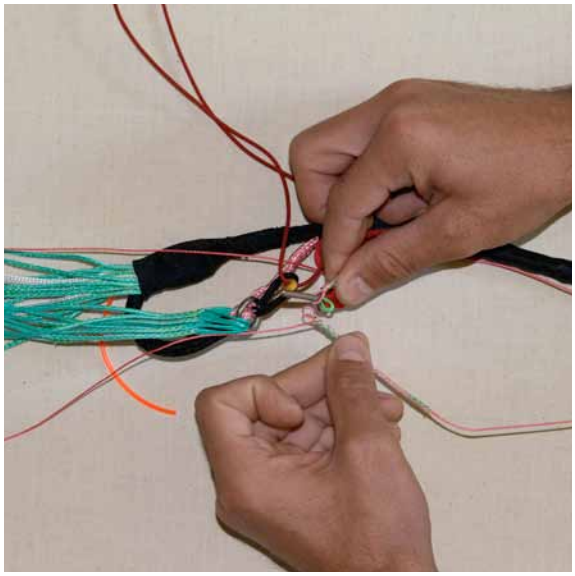


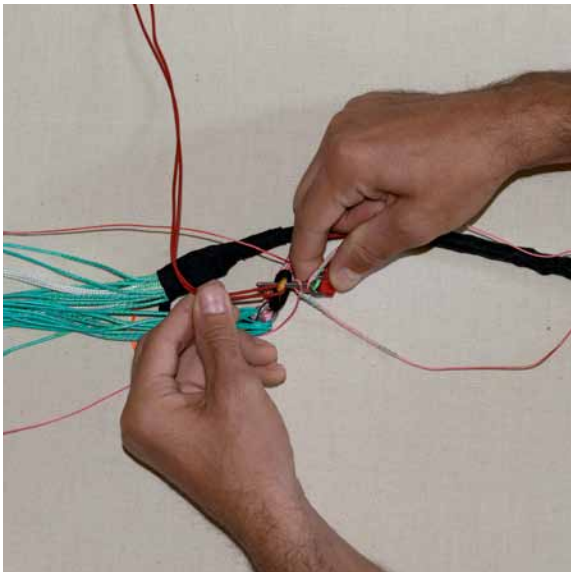
4.) Then the yellow *(smaller)* loop is looped through the black loop.

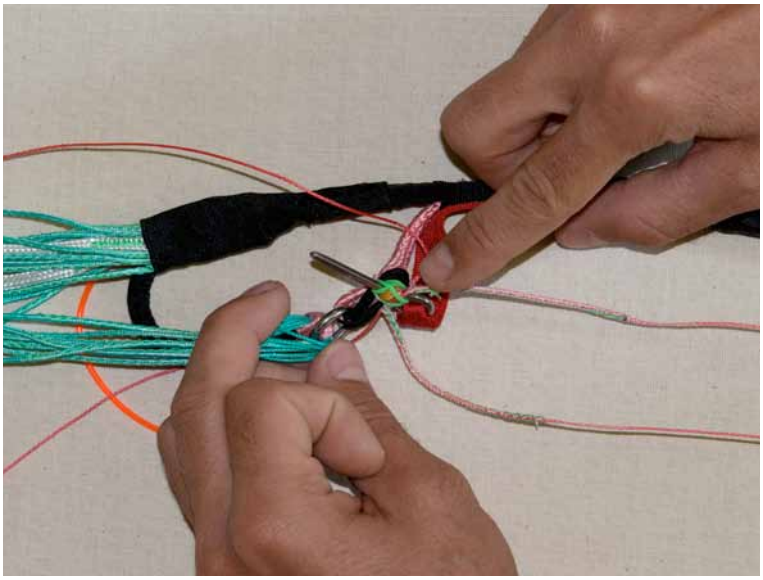


5.) The ring system is now almost ready assembled. It is now secured by means of a steel pin against unintentional opening.

IMPORTANT: Before you pass the steel pin through the smaller *(yellow)* loop you must first thread both loops of the brake lines *(one loop left and one loop on the right brake line)* into the pin. This is the only way to ensure that you can activate the ring system by pulling one or both brakes and thus forward drive can be generated.



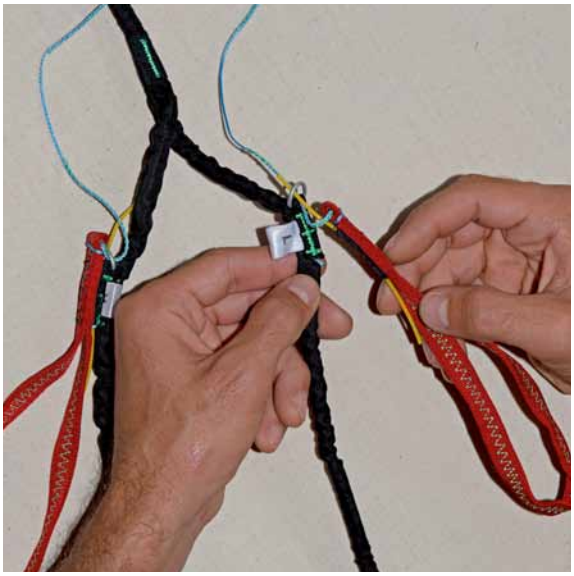


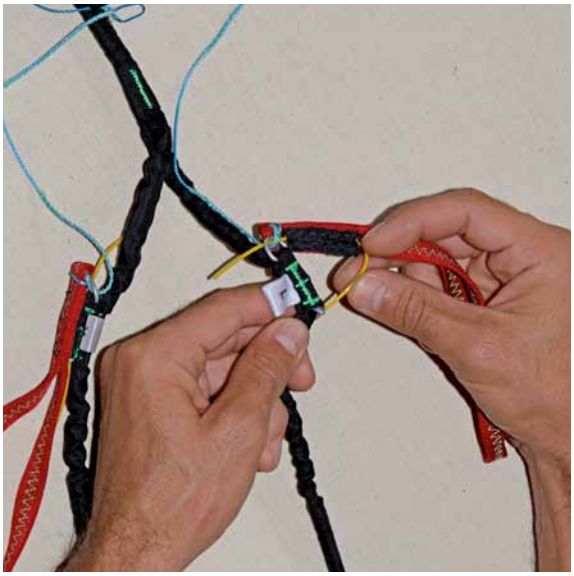


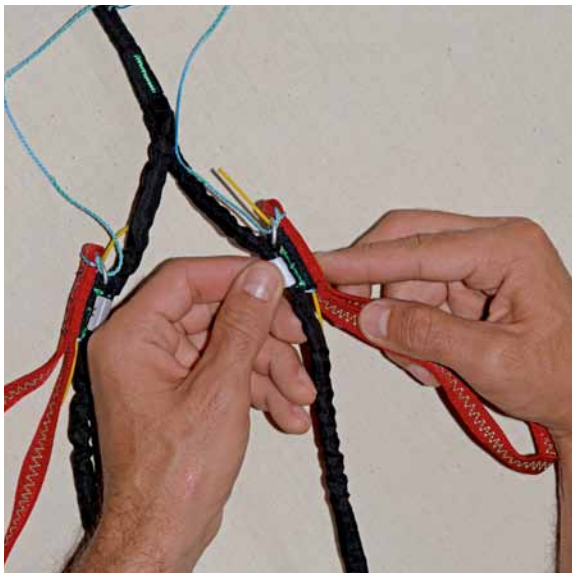
6.) Fully assembled ring system on the X-TRIANGLE.

Montage break handle

First the upper yellow plastik pin trough the metall D-ring, then the lower yellow plastic pin trough the small line loop.



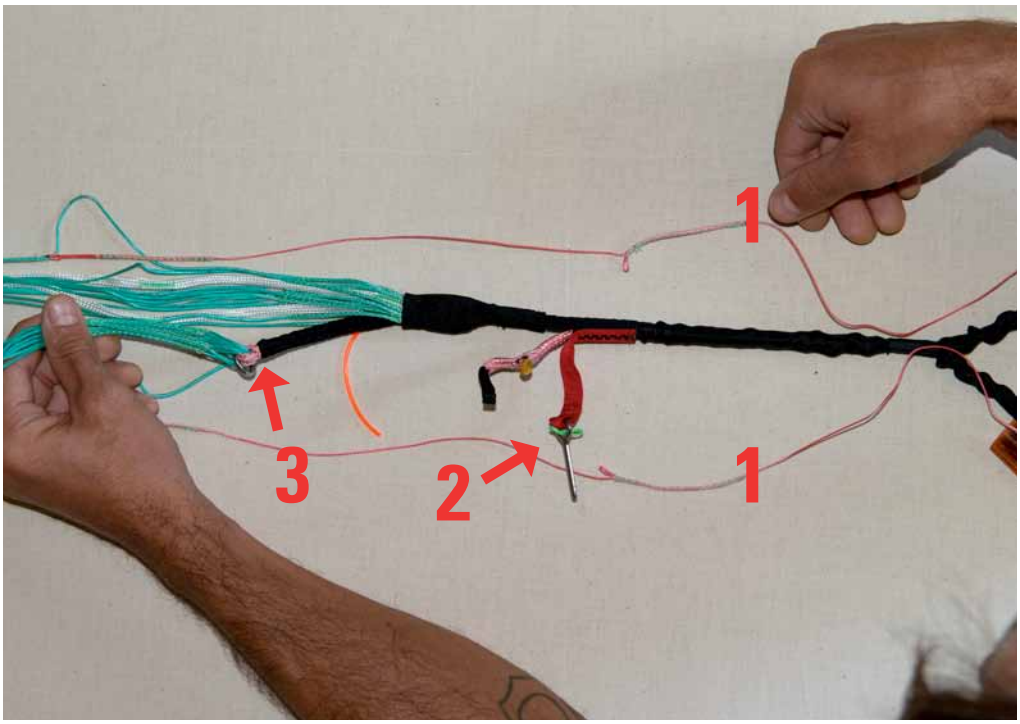




Forward drive

Situation forward drive

1. Brake handles are activated and pulled down.
2. The spliced loops on the brake line have pulled the steel pin out of the ring system and released the rear lines of the X-TRIANGLE.
3. Due the release of the ring system the X-TRIANGLE generate a forward drive into the direction of the red corner of the canopy. This forward motion can be controlled and steered with the brake handles.



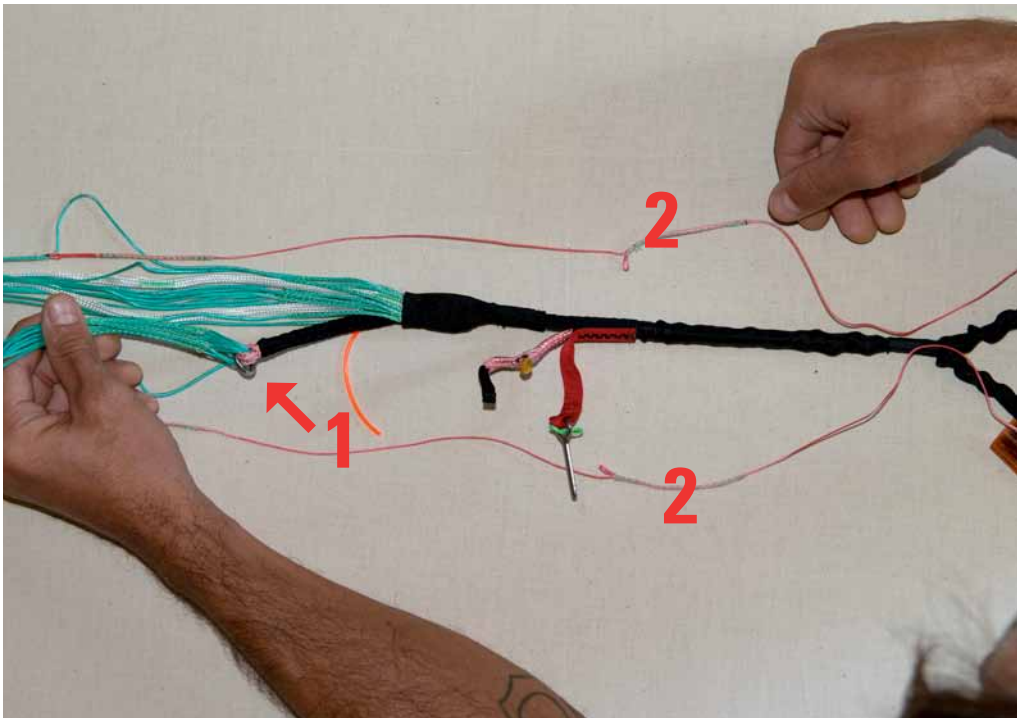
9. Packing manual X-TRIANGLE

Before you start to pack, the X-TRIANGLE should be checked for any damage to the canopy, the lines and the main riser. The lines should be checked for proper performance and to unravel if necessary.

Image 1

Overwiew riser and lines. Check the lines before packing the X-TRIANGLE

1. Lines to the back | rear side of the X-TRIANGLE. These are released by pulling the brakes and releasing the ring system.
2. Brake | steering lines right and left.



Before you start folding the canopy, you have to pre-mount the riser as described in point 8.

Image 2

Sort the canopy (fabric) that the red corner looks up *(flying direction)*. All lines are sorted correct without any knots or line overs.

Images 3 & 4

Take a line and mount all the packing loops on top of the canopy.

Images 5 & 6

In the lower corners of the panels *(at the line attachments)* are black and blue arrows printed. Search the panel without printed arrow and drop it to the left.

Image 7

Drop the panels with the blue arrows to the left side *(the arrows then get to the bottom of each panel).* Continue dropping the panels with the blue arrows to the left side till you reach the corner panel. Flatten and streak this corner panel to the outside as you can see in the pic. Make sure the line on this panel re-mains in the center of the base and is not pulled outward.

Image 8

Flatten and sort all panels nicely down to the base and to the top. Make sure that you put the excess fabric flat and pull it up, with one hand in the panel to sort the fabric nicely.

Image 9

Continue with sorting the panels till you come to the red corner. The left side *(blue arrows)* is now ready.

Images 10 & 11

Put now the right side of the X-TRIANGLE on the already sorted left until the black arrow appears.
Now the panels of the right side *(black arrows)* are sorted like on the left side.

Images 12 and 13

Continue as in the images 12 until 13.

Image 14

The canopy of the X-TRIANGLE is now sorted with the red corner up in front of you. Through the opening *(side slot)* the center lines are visible.

Image 15

Search all 9 center lines take them into your hand and roam freely from the base edge up to the top line attachments.

Image 16

Each center line should be pulled from the base up to the top. Pull the fabric up to the top of the inside of the rescue.

Image 17

The panels of the X-TRIANGLE are ready sorted to start with the S-turns to fold the X-TRIANGLE canopy on container width.

Images 18 & 19

On side gets folded upwards.

Images 20 & 21

The other side gets folded downward in a S-turn. *(final width)*
The X-TRIANGLE is now folded on container width and should be weighted down with sandbags to simplify the next process.

Images 22 & 23

The X-TRIANGLE will now be folded in S-turns for container length.
NOTE: The line at the top of the rescue *(packing loops line)* has the to be removed from the canopy.

Images 24 & 25

The now finished folded canopy *(final size of the container in length and width)* must be rotated 180 degrees.
The lines are now on top of the canopy pointing to the closure system of the deployment bag.

Images 26 to 28

The deployment bag will be closed now. Pull the black rubber band in correct order of leaf no. 1 up to leaf no. 4 through the eyelet.

Image 29

Fix the black rubber band with a line loop. This line loop on the black rubber band is made first, thereby the canopy is fixed into the container. This packing method ensures maximum throwing power. The lines released first, get stretched and opens the last line loop with the black rubber band, afterwards the canopy will be released from the container.

FALSCH

RICHTIG

Images 30 to 32

The lines are collected in S-folds so that it gives about 3 - 4 line bundles. Start from the riser side.



Images 33 & 34

The line bundles are stored into the line department in leaf no. 5 of the deployment bag.


Images 35 & 36

The lateral ears of the container can be inserted under the cloth of the canopy as shown in the picture.

Image 37

The cover sheet leaf no. 5 is now closed with the plastic stick, starting from the inside out.

Image 38

Pull the black rubber band from the inside out through the eyelet in leaf no. 5
(Take care that the lines remain in position on top of the eyelet of leaf no. 4).

Images 39 & 40

Pull the plastic stick through the black rubber band and slide back through the small hole.

Images 41 to 43

Store the line loop, the plastic stick and the flap of cover sheet 5 into the provided pocket.

Image 44

Final check and slight corrections. If necessary pull the lateral ears of the container inside under the fabric of the canopy.

Image 45

The X-TRIANGLE is now ready for installation to the harness or in the front container. The connection of the X-TRIANGLE to the harness has to be made following the recommendations of the harness manufacturer *(manual harness)*. Make sure that you mount the X-TRIANGLE proper and in the right way. There are three loops to connect the handle from the harness to the inner container from the X-TRIANGLE.

10. Appendix

Inspection records

Wartung/Packnachweis
Serien Nr.

Packing Advice/Inspection Book
Serial No.

Nr.: No.:	Datum: Date:	Tätigkeit: Activity:	Notöffnung: Emergency use:	Spezielles: Specials:	Packwart: Name:	Unterschrift: Signature:

Nachprüfung Datum: Inspection Date:	Beanstandung: Result:	Spezielles: Specials:	Prüfer: Inspector:	Unterschrift: Signature:

Version 05/18

We wish you continued great flights and many happy landings with the X-dream Fly product X-TRIANGLE.

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... live your dream

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Release

Release of X-dream Fly rescue equipment for external containers
(harnesses with integrated reserve container)
Current status 10|09|2016

1. Content

This release is valid for all X-dream Fly rescue equipment including X-ONE-series, X-CURVE-series, X-TRIANGLE-series and X-TWO-series in conjunction with non-original inner containers.

2. Risk

The compatibility of a harness with integrated | solid inner container to an external emergency equipment must be guaranteed by the manufacturer of the harness and is tested by internal tests with different bulky containers. The opening processes of the rescue device are dependent on the type and size of the inner container. There is the possibility that the rescue equipment have a slowed-down opening or not even open in use of a smaller inner container or inner container of other design. The original container of X-dream Fly have a separate line compartment for the S-loop line packages for a defined opening sequence. In a container without a separated line compartment the throwing power slows down by the early release of the entire rescue system. The X-dream Fly containers provide a maximum of throwing power and quality of defined opening. This ensures a faster opening. In addition, Dyneema lines are installed in most modern rescue equipment. These lines are coated with a polyurethane resin. In our rescue manu-facturing (at X-dream Fly) we take care that different materials are handled separately. It is possible that mini-mal parts of this coating are solved and get transferred on the fabric if the lines and the fabric are packed together. This can lead to bonding and thus a delayed opening. Similarly, a defined packing method is recommended which is not useful or possible in each inner container from other brands. Changes that differ from the original packing method or the packaging size can increase the opening time and reduce the opening quality.

3. Implementation and installation

The implementation and installation of a X-dream Fly rescue unit in the inner container of a third-party may be made only by trained personal by X-dream Fly. During the conversion and installation of the rescue the manual of the rescue as also of the harness - or inside container manufacturer - has to exist and the corresponding installation and pack instructions need to be followed. The conversion in the non original inner container is to note in the packing ID and signed by the pack manager.

4. Changes | Pack Interval | Opening Quality

We would like to point out that we pay much attention to a uniform development of our rescue systems. This refers to all system details and also includes the inner container. Who changes the inner container on our rescue equipment or remodels, change the quality of opening under certain circumstances. We definitely recommend a proper release during a compatibility-check. Take special care if the lines packed together with the canopy in the container and recheck the eventual problem explained in point 2. On the usual precautions (dry storage, no compact packing, no moisture in the system etc.) in the handling of harness, inner container and rescue device should be placed specialemphasis.

The operating manual as well as additional information can be found as download under www.x-dreamfly.ch

Bach, 23|08|2018

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