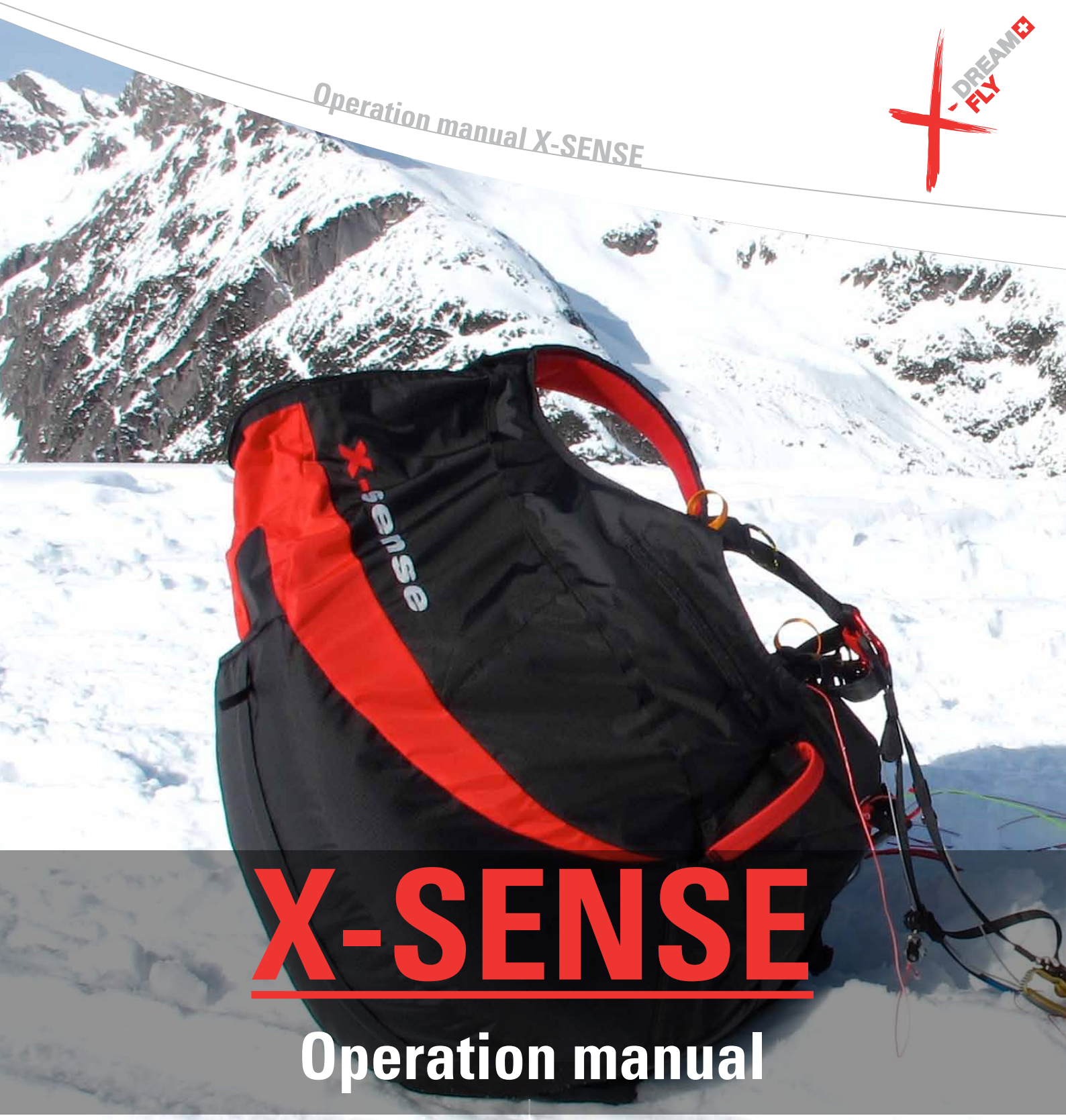

X-SENSE

Operation manual

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Content

1. Foreword

Dear customer,

Thank you for purchasing an X-dream Fly product. You have not only acquired one of the most modern and innovative paragliding harness, 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. For this reason our products are made of european material. This operating manual is an important part of the harness. We strongly recommend to read this document carefully. It contains instructions and important notes on safety, care and the necessary maintenance and check intervals. Thus you will get to know your device quickly
and comprehensively.

We wish you much success and joy dealing with your **X-SENSE HARNESS.**

Dani Loritz & Geri Roschmann

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

1.1. Introduction

Please pay special attention to the two paragraphs „Installation of the emergency parachute“ and „Adjusting the harness“.

Installation of the emergency parachute:

The rescue parachute is an instrument to save lives. It must be installed in a professional manner. If necessary it must be functional whether this happens in two days or in two years.

Adjusting the harness:

The harness is the link between the pilot and the paraglider providing the best performance and maximum comfort in flight. A bad harness that is well adjusted can let you fly well, but a good harness that is set badly can take you the joy of flying.

We are confident that the X-SENSE brings big comfort, more performance, fun and better flight control. We know that reading a manual is not a very exciting experience. However, please remember that this product is not just a bag pack or a tooth brush and that correct use of the harness helps reduce the risk of flying accidents. This manual contains all the information necessary to assemble, adjust, fly and store your harness. Thorough knowledge of your equipment will improve your personal safety and your level of flying.

1.2. Safety instructions

By the purchase of X-dream Fly equipment, you are responsible for being a certified paraglider pilot and you accept all risks inherent with paragliding activities including injury and death. Improper use or misuse of equipment greatly increases these risks. In no case shall X-dream Fly or X-dream Fly equipment resellers | dealers be held liable for personal or third party injuries or damages under any circumstances. If any aspect of the use of our equipment remains unclear please contact your local reseller or X-dream Fly directly.

2. General information

This harness consists of:

- harness
- seat board in honeycomb construction
- 2 hook in carabiner
- emergency parachute deployment handle
- rubber cable *(to hold speed bar in place, optionally applicable)*
- back protector *(2-part closed)*

2.1. Concept

Based on years of experience the X-SENSE offers new technological solutions. The construction enhance safety and flight pleasure, with criteria such as safety, lightness, comfort, controllability through weight shift and feedback. Thanks to the frame construction and its active control by the special belt geometry, it fulfills the requirements of numerous pilots and remains thereby very light and easy to transport. It is fully approved according to the LTF-EN protocol. The seat board is asymmetrically and made out of a honeycomb structure. The belts are designed as single straps and the chest belt as T-Lock system. This gives maximum safety against falling out. In the X-SENSE a pre-formed 18 cm thick 2-piece foam protector is installed. The rescue container is designed as a 6-sheet bottom container, the rescue handle can be mounted on the right or left side of the harness *(left or right hander)*. On the X-SENSE there are additional loops on the shoulder straps for the assembly of a steerable rescue device. It is also possible to install a rubber to hold the speed bar in place. For this purpose three rings *(one each close to the speed line pulley and one ring between the back part and the protector in the upper lumbar vertebra region)* are arranged in the harness.

2.2. Technical data

- EN & LTF Certification PH176.2016
- max. pilot weight 110 kg
- 18 cm foam protector
- leg-chest | hip and shoulder straps adjustable during flight
- ABS-system
- speed bar in place holder *(rubber)*
- 6-leaf bottom container
- rescue handle right and left possible *(right or left hander)*
- loops on the shoulder straps for fixng steerable rescues
- lanatomically shaped back part for optimum support
- maximum weight shift and excellent feedback
- asymmetrical shaped seat board in honeycomb construction
- drinking hose guide

max. distance between carabiners	56 cm
measurements seat board *(asymmetric)*	S - 33 x 34 cm M - 33 x 35,5 cm L - 33 x 37 cm
total weight X-SENSE including carabiner & protector	S - 4,2 kg M - 4,3 kg L - 4,4 kg
type protector	18 cm foam protector (2 piece closed)
EN | LTF Zulassung	PH 176.2016

1. RESCUE CONTAINER
2. RESCUE OPERATION
   left or right
3. CHEST BELT T-Lock System
4. LEG BELTS
5. LATERAL CHEST- WAIST BELT
6. MAIN SUSPENSION
7. ABS-SYSTEM
8. SHOULDER BELT
9. SUSPENSION rescue
   connection line right or left
10. PROTECTOR
11. SPEEDBAR and SPEEDBAR RUBBER
    (optional)
12. DEFLECTION PULLEY speedbar concealed
13. DEFLECTION RING accelerator returns
    rubber concealed
14. POCKETS

3. First use and rescue opening

The X-SENSE harness is equipped with a dorsal back protector and a pre-shaped honeycomb seat board which have already been installed at the manufacturer. However the rescue | reserve parachute must be installed by a qualified person before the first use. Only after this operation should the pilot adjust the harness for optimum comfort and pre-adjust the speed bar hanging in a simulator.

3.1. Rescue | reserve parachute

The rescue must be connected to the harness and the handle installed on the rescue container. There is no restriction of different rescue containers which can be installed in the X-SENSE harness.
ATTENTION to the max. volume!!!
Nevertheless, a compatibility test is absolutely essential in order to be able to ensure that a perfect opening by the pilot in all circumstances is possible.

3.1.2. Connecting the deployment handle to the deployment bag

The X-SENSE is supplied with the corresponding handle for the rescue device. Only this handle may be used. The handle can be mounted right or left. The black loop of the handle should be connected to the loop of the rescue container by pushing the loop through the container and then pulling the handle through its own loop. In order to accelerate the opening of the rescue parachute and to achieve the best possible opening from the harness container we always recommend to use the central loop on the rescue container. In this way a drawer effect is achieved if the pulling direction should lie transversely to the recommended direction of pull.

3.1.3. Connecting the reserve parachute to the harness

There are three different options to connect the emergency parachute to the harness.

First option:

The use of a screw lock carabiner with a min. breaking load of 2.400 daN. In this case the rescue | harness bridles should be fixed with an elastic band | rubber on both sides in order to prevent the load from entering laterally on the limbs of the carabiner.

Second option:

The bridle of the harness is connected to the riser of the rescue device. In doing so, the riser of the rescue device is looped through the strap of the V-line and the rescue device itself is once passed through the riser of the rescue. This results in a connection that must be tightened as much as possible in order to avoid great friction during a shock opening of the rescue.
ATTENTION: The resulting knot must lie exactly in the middle of each bridle!




Third (possibility) option:

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 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 1.200 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.

ATTENTION: In order to avoid a lateral load the bridles | risers must be attached to both shoulder straps one on each side.

3.1.4. Inserting the emergency parachute | rescue

Insert the emergency parachute into the container of the harness so that the handle remains visible to the outside. The loop | knob of the connecting line of the handle to the rescue container points downwards to the harness protector. Insert a thin line *(paraglider line)* into the loop of the first sheet to be closed. The handle is equipped with a short and a longer black sealed iron wire. The shorter one closes 2 sheets *(use also a thin line if necessary)* the longer wire closes the 6 main sheets. Follow the sequence shown in the figure | drawing. Lead the black wires through the white tabs, which you have previously traversed through the eyelets of the container sheets in the right sequence.

ATTENTION:
The one or even two lines you have used for that need to be removed now, otherwise the rescue container will not open properly. Pull out the line slowly to avoid damage to the loops due to excessive friction. At the end the handle can be additionally secured by the small Velcro.

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12.)

ATTENTION:
Each new combination by first assembly of the emergency parachute and the harness has to be checked by a qualifie person. For this, it is necessary that the pilot himself sit in the harness and try to trigger the rescue! The opening of the rescue must be possible easily in each normal flying position.

3.1.5. Opening / triggering the emergency rescue

It is important from time to time to feel | grab the position of the rescue handle in normal flight position so that the movement sequence is instinctive in an emergency. In some circumstances a gluing of the velcro may occur *(not open over a longer period of time)*, this may lead to an increased force expenditure during a rescue release. Therefore we recommend to open the velcro closure *(V-line and handle)* from time to time and close it again smoothly.

In case of a rescue opening the sequence of action is as follows:

- Build up maximum body tension to generate a targeted aggressive throw of the rescue device into the free airspace.
- Grab the rescue handle, pull it outwards *(preferably sideways of you and not upwards towards the head)* to release the rescue device from the harness container.
- Find a free space between the paraglider and yourself and throw the rescue parachute, which is still in its container, away from you *(release the handle at the climax of the litter)*.
- This sequence can take place in one or even two-part movement *(depending on the situation)*, but the intensity of the litter is important.
- After the rescue has opened properly the paraglider should be made unflyable. Pull a D-line, a brake line or open one or both of the Quick Out carabiner to make sure the paraglider does not collide with the rescue parachute.
- Shortly before landing take an upright position and use the „parachute landing technique" to reduce the risk of injury.

3.2. Harness adjustments

Your X-SENSE harness has various adjustment possibilities like on the shoulder straps, the chest strap, the lateral chest waist straps, the ABS system and the leg belt to find your own individual best position. Due to the versatile adjustment possibilities of the X-SENSE, we recommend to adjust the first basic settings even before the first flight in a simulator. We recommend to install the rescue canopy in advance for basic settings.

ATTENTION: The actual seat position in flight will always be more upright than in the simulator.
This is due to the pilot oscillates under | behind the glider during the flight.

The buckles are secured against unintentional opening. Both buttons of the buckles must be pressed simultaneously.

- adjust the harness only after installing the rescue system
- all adjustments need to made symmetrically on both sides
- every adjustment strap has to be tight

3.2.1. Chest belt

The chest strap is closed with the T-Lock system attached to one of the leg belts. When the chest strap is closed the T-Lock *(falling out safety device)* is also closed. The closing mechanism of the buckles must audibly click into place! The chest strap is adjusted in length by the clasp and should not be tightened too much.
We recommend that you use a wide chest belt distance in the X-SENSE harness and, if desired, to reduce | dampen the bodymovement and roll sensibility trough the ABS-system. This procedure and possibility to dampen the harness via the ABS-system and not as before by a tighten the chest strap reduces the danger of twists considerably.

3.2.2. Shoulder belt

Please note that with correct adjusting the shoulder belts are felt with light pressure on the shoulders. With the shoulder belts you adjust the harness on the pilot's height but also you adjust the seating position between upright and lying.

3.2.3. Lateral chest- waist belt

The adjustment of the lateral chest strap is synchronized with the shoulder strap and allows the variation of the sitting position from sitting to rather lying. On the other hand with this side straps the most comfortable sitting position can be found. Likewise, the angle of the seat board is affected of this adjustment as well. Take care that the body load is spread evenly on the shoulder strap and the chest strap during adjusting. The back of the harness should apply uniform pressure in the lower back, lumbar area up to the shoulder of the pilot. As soon as the pilot has contact with the harness on all area of his back its adjusted correctly. We recommend to make a round back instead of stretching it backwards as a basic setting. Only in this way its possible to generate maximum body movement, weight shift and best feedback. The buttocks should define the lowest point of the sitting position.

ATTENTION:
During the flight the upper arm length should fit between the harness carabiners and the pilot in normal relaxed flying position.

3.2.4. Leg belts

Usually the length of the leg belt is only set once *(except for winter with an additional garment layer)*. The buckles are located on the side of the seat board and are accessible from above. Please note that the length is neither too long or too short. If the length is too long it could be difficult getting into the harness after the take off.

3.2.5. ABS-system belt

This adjustment affects the flying performance. The looser it is the less stable the harness becomes and therefore its more sensitive to pilot movements and control by weight shift. Vice versa the tighter it is adjusted the more stable the harness becomes requiring more pronounced pilot movements in flight. If the ABS belt is open *(the belt has never tension during body movement and weight shifting during the flight)* the feedback transmitted from the glider via the harness to the pilot is maximum. The more the ABS-system is tightened the more stable gets the harness and it is absorbing the roll sensitivity and feedback. The X-SENSE is delivered on the factory side with an open ABS adjustment, which is suitable for most pilots. If you want to change the position do so carefully and make only small adjustments symmetrical left and right. The ABS belt adjustment is the only one on the X-SENSE harness which can not be done during the flight. However it is very easy to test this setting already in the simulator and feel the difference. We recommend to make changes in a maximum of 5mm increments as the ABS belt begins to work very effectively, as soon as it is tensioned.

3.2.6. Speedbar and speedbar rubber

You can see in the schematic description how the speedbar rope is running. The rope of the speedbar runs down from the risers to the pulley above the seatboard. The speedbar rope leaves the harness at the frontal edge of the seat board through the eyelet. Then the rope gets connected with the speedbar. The speedbar itself can be secured with the velcro below the seat board edge. The X-SENSE has 3 rings for mounting the speedbar rubber. Whether this rubber is installed or not is left to the pilot himself. Not like conventional solutions, the X-SENSE rubber runs over the entire back area trough three rings, resulting in a higher rubber length. This allows the rubber to be more tightly clamped and the efficiency and longevity is immensely increased.

ATTENTION:
The length of the speedbar line
(as well as the length of the rubber if fitted)
must be adjusted in the simulator before
first flight.

3.2.7. Drinking hose guide

In the back bag you find an extra compartment for the drinking bag | bottle *(up to 1,5 l).*
The drinking hose itself can be guided through the opening in the back area and trough the right shoulder strap.

4. Flying with the X-SENSE | operating

4.1. Pre-flight checks

For maximum safety use a complete and thorough sequence of pre-flight checks and use the same sequence of checks every flight.

Ensure that:

- outer shell of the protector and the entire belt system intact
- ensure that the two cheststrap buckles and the T-Lock system are fastened
  Take care in the case of ice, snow or sand!
- rescue container and release handle properly closed and mounted
- the bridle loops are correctly inserted into the karabiners
- all pockets and zips are closed
- the paraglider is correctly hooked to the harness and that both carabiners are locked closed by the respective locking mechanism
- the speedbar is correctly fitted to the paraglider

4.2. Maintenance | service life of the protector

The X-SENSE has a pattern-tested 2-piece protector made out of foam sewed in a nylon cover. Before each take off the protector should be checked if in right position and fully inflated. Especially at low temperatures and during long non-use of the harness *(if compressed during storage)* the protector may only fill up slow. In the case of a seat board landing the air in the foam protector is compressed and deflated to the outside via the seams. The resulting deceleration distributes the impact energy over a longer period of time and thus protects the spine from heavy loads. However even the best back protector is not a guarantee for the prevention of back injuries! For this reason the protector should not be used for regular unnecessary seat board landings! The best shock absorbers are still your own legs! In addition the efficiency of the protector is reduced with each use and the protective effect could reduced even if no visible damage can be detected. If visible damage occurs or the protector may be used as needed after a hard landing, then the harness must be returned to the dealer | workshop for inspection.

4.3. Pockets

The X-SENSE has a spacious back pocket and two pockets on the side. Both side pockets are located under the main carabiner close to the hip.

4.4. Towing

The X-SENSE is suitable for towing if the main carabiners are used as attachment points for the towing release. There are no separate attachment points to mount a towing release! Please check the towing release manual for a correct adaption to the harness.

4.5. Behavior in particular cases

During water and strong wind landings the pilot should disconnect himself as soon as possible from the paraglider | harness after landing. For that open the leg and chest buckles. We generally recommend to carry a webbing cutter! For tree landings, etc. the pilot should first secure himself against a possible crash and should wait for professional help. Contrary to above recommendations, it is possible that a different behavior as described is required. The variety of possible situations not allows an universal or general advise for the right behavior. The right behavior is a case-to-case decision in full responsibility of the pilot.

5. Maintenance

5.1. Lifetime and replacement of parts, repair advice

The X-SENSE is designed for high loads and stress. High demands were set in the choice of materials. The lifetime of the harness depends on a high degree of awareness and treatment of the pilot. We recommend to inspect the harness periodically for signs of wear. If necessary damaged components must be replaced. Damaged components may only be repaired by the manufacturer or an authorized workshop. Only original parts are to be used!
If the harness is dirty, clean it only with water. Avoid mechanical stress as brush and rub. Chemical cleaners will damage fabric and webbing.

5.2. Maintenance, inspection, periodic check

The X-SENSE is almost maintenance free but it requires a regular check for damage. Regular inspection gives you the guarantee of a full function of the harness. Take particularly care that no dirt gets into the mechanic of the buckles and that all moving parts of the buckle are running free and are not damaged. If needed you can oil the buckles a little bit. The maintenance of the protector is described separate. The harness must undergo at least after 24 months a complete check. The carabiner must be replaced according the carabiner manufacturer instructions, lately after 2.000 hours or 5 years. Only original carabiners are to be used! The periodic check must be documented.

5.3. Storage and transport

In order to prevent unnecessary weakening of the harness we recommend for storage and transport:

- avoid high temperatures *(for example: closed car in summer)*
- avoid dealing with fire, sharp objects and chemicals close the harness
- avoid unnecessary long exposure to sunlight as ultraviolet radiation destroys the molecular structure of the material
- avoid contact with salt water or acid liquids
- if the harness is not in use for a long time especially the back protector should not be stored compressed
- store the harness in a cool, dry place

5.4. Disposal

The materials used in a paragliding harness require proper disposal. Please return the worn out equipment to us. The equipment will be disposed properly by us.

5.5. Nature- and environment friendly behaviour

Actually it's self evident, but nevertheless mentioned particularly. Please do our nature near sport in a way which do not stress nature and environment! Please do not walk beside the marked ways, don't leave your litter, don't make unnecessary loud noises and respect the sensitive balance in the mountains.
Especially at the take off area we have to take care for the nature!