

BEAMER 3

STAY IN CONTROL

#170 OWNER'S MANUAL

BEAMER 3 #170 / BEAMER 3 LIGHT #170
Reserve parachute

VERSION 1.0
VALID FROM 2020 MANUFACTURE
IN EFFECT: JUNE 2020



This manual must be read before you install the reserve!

This manual tells you how to use your reserve correctly. If you have any questions about using the reserve you should contact High Adventure direct for an answer.

If you need a professional to pack or repair your reserve please contact your dealer or High Adventure.

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SAFETY INFORMATION

This paraglider reserve must not be used for parachuting, free-falling or base jumping!

The user of this reserve system does so at his own risk. The manufacturer cannot be held responsible for any damage to persons or property that may arise from the use of this reserve system.

Deployment system warning: this parachute system has been tested and found compliant using the original manufacturer's inner container. Use of any other inner container may produce different results, including failures.

It is essential that this reserve parachute is correctly installed in the harness and a compatibility test then carried out for every new combination or after adding a harness protector (system volumes) by a suitably qualified person. Safe operation can only be guaranteed if the reserve has been installed correctly.

Any unauthorised modification to the rescue equipment or the deployment bag will result in the termination of the parachutes operating license and invalidation of the certification.

TECHNICAL DATA

| | Beamer 3 #170 | Beamer 3 light #170 |
|-----------------------------------|-------------------|---------------------|
| Area: | 58 m ² | 58 m ² |
| Weight: | 2660 g | 2200 g |
| Weight including inner container: | 2705 g | 2240 g |
| Volume: | 7310 ccm | 6054 ccm |
| No. of panels: | 18 | 18 |
| Min. Load: | 130 kg | 130 kg |
| Max. Load: | 170 kg | 170 kg |
| Inspection ID: | EP 280.2019 | EP 281.2019 |

FLYING, NATURE AND DISPOSAL

On the one hand, flying means experiencing a particular form of freedom. On the other, there is a requirement to follow laws and ethical ground rules. Please show respect to your fellow pilots, but also consider the interests of landowners (both take-off and landing), air law and your impact on the environment.

For the sake of our sport and our environment, we ask you to undertake paragliding in an environmentally friendly way. Avoid littering and scaring wildlife when flying too closely. Especially in winter, this stress can be life-threatening to animals.

Being considerate to the needs of animals is your contribution to the preservation of their habitat. At the same time, respectful behaviour also avoids conflict with other interest groups like landowners, whose income is reliant on healthy numbers of wild and domesticated animals.

The synthetic materials used in the construction of a parachute should be responsibly disposed of. When you wish to dispose of your glider, please return it to High Adventure or to your local High Adventure partner, where it will be dismantled into its individual components and properly disposed of.

THE BEAMER 3

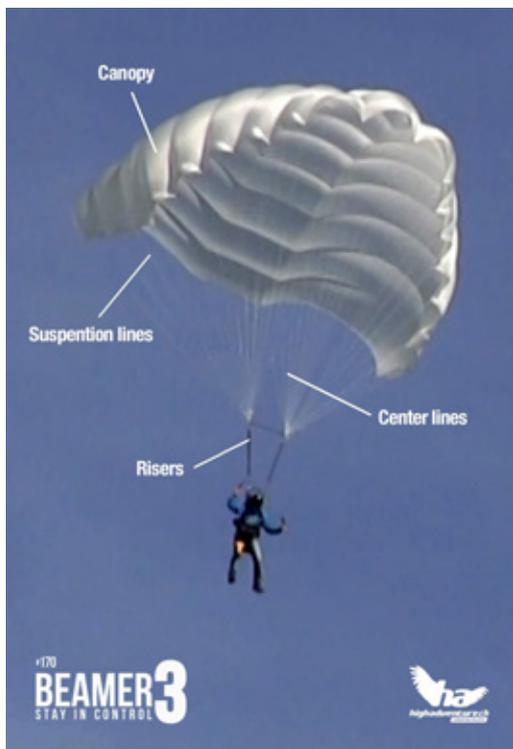
Safety through innovation: The Beamer 3 parachute distinguishes itself through innovative design, combined with high-quality materials. After deployment, the Beamer 3 impresses with rapid opening, immediate pendular damping and low sink rate. The Beamer 3 can be manoeuvred in the desired direction by pulling the right or left steering line.

Water-resistant materials: The Beamer 3 is one of the few parachutes to have passed both the EN descent rate tests, with subsequent water landing, with the same test chute. This means that after a water landing during an SIV course, there is no reason for concern about the parachute's operating functionality.

INTENDED PURPOSE

Manually deployed emergency parachute for solo and tandem paraglider pilots.

OVERALL ILLUSTRATION



OPERATING LIMITS

As stipulated by EN 12491, the rescue system may only be used up to a maximum speed of 32 m/s (115 km/h).

Certified operating life: the certified operational life of the parachute is 10 years, extended to 12 years after periodical inspections. Further details under packing and inspection intervals. Even if the parachute was never deployed, we recommend replacing the Beamer 3 after this period.

Caution: the certified life depends very much on the style of use and quality of care of your Beamer 3 (acro, test openings etc. can significantly reduce the reserve's life).

DOCUMENTS YOU SHOULD HAVE

- Owner's manual
- Repacking and check record

HOW TO USE THE RESERVE

In an emergency give the reserve handle a determined pull. This will open the outer container and release the inner container. Throw the inner container (the reserve is inside) far away with an energetic swinging action, letting go of the reserve handle at the same time (it is fixed to the inner container – its job is over)!

The inner container is designed so that the lines stretch out first, followed by the reserve canopy. This makes sure the canopy does not open too soon, and this minimises the risk of the reserve becoming tangled up with the paraglider, the pilot, or anything else nearby (e.g. another flying machine if there has been a collision etc). For a fast reserve opening the inner container needs enough speed after the pilot has thrown it. In general one can say: the faster the throwing speed the faster will the reserve pay out and open.

The reserve inner container opens after it has been thrown. The strong throw, and/or the available airflow, stretches out the lines, then the canopy, and the reserve will open.

When the reserve is fully open height above ground should first be assessed. If there is plenty of height available the possibility of disabling the paraglider should be considered so as to minimise the problem of paraglider and reserve scissoring (racing each other to the ground). If there's not enough height for this the pilot should concentrate on the ground coming up and prepare for touchdown. There are no introduction for special interest items.

CARE AND MAINTENANCE

The Beamer 3 has been designed for high loads and extreme demands. Especially long-lived materials have been chosen accordingly. To a great extent, however, the lifespan depends on the care and attention of the user and we recommend that the reserve is regularly inspected for signs of wear - and that if any damage is found the Beamer 3 should be immediately returned for repair to High Adventure, or a workshop authorised by High Adventure.

Pay special attention to the following advice:

- Do not leave the reserve out in the sun (UV radiation) unnecessarily.
- A wet or damp reserve should be completely unpacked and allowed to dry inside at room temperature, or outside in the shade.
- Do not expose a packed reserve to large temperature changes, and do make sure it gets enough air circulation in cars and building so that condensation does not form.
- Deal with the reserve carefully on the ground after an opening, or during SIV training.
- After contact with seawater the reserve must be thoroughly rinsed with fresh water.
- Only clean the reserve with fresh water, and a little neutral soap if required. Never use solvents.

Caution: Chemicals, cleaning agents, insects, stains etc. can affect the strength of the parts as much as physical abuse.

STORING

Do not store the reserve anywhere near oils, fats, acids and dyes. It should be stored in a well ventilated, dry space. Reserves that are not to be used for a long time should be stored unpacked.

PACKING AND INSPECTION INTERVALS

The reserve must be aired every 6 months and repacked in accordance with the packing instructions. This will ensure a reliable and fast opening every time. If the reserve gets wet, damp, or has been exposed to extreme heat it must be aired straight away and repacked.

Mandatory inspections by the manufacturer or an authorised service centre:

- After exposure to extreme conditions such as moisture, sand, water, intensive use in winter or an unfavourable combination of outer container and deployment bag
- If the reserve is thrown in an emergency or during SIV training
- First and from the fifth year of use (according to the year of construction) every 24 months (2 years)

This includes the [visual inspection](#) of all components for damage and wear.

IF DAMAGE IS FOUND

If damage is discovered during a check the reserve should be sent to High Adventure for repair. This applies to any damage where you cannot be certain that the reserve is still airworthy. Repairs must only be done by the manufacturer!

REPAIRS

Basically you are not allowed to repair a reserve yourself. The various seams and the lines are made with great precision. Only the manufacturer or an authorised service organisation may do repairs, using original materials.

PACKING AND INSTALLING INSTRUCTIONS

Before packing the reserve must be visually checked by the packer. Then the reserve should be aired in a humidity of 60 – 65 % for 24 hours. Packing should be done on a packing table if possible, or at least on a clean static-free surface.

Equipment needed for packing

- Line separator. Only the centre slot will be used.
- Several shot bags. The reserve is not tensioned from both ends: these are very useful – have enough.
- Elastic bands (must be new for every packing - original elastic bands are available from High Adventure)
- Packing tools for putting the reserve in the harness

We strongly recommend that a trained and qualified person does the packing.

Fixing to the harness

The Beamer 3 can be stowed in a front container or a harness reserve compartment.

The reserve risers marked "L" & "R" will be fixed on the relevant left and right (in the direction of flight) hand sides of the harness on the main carabiners (front container) or shoulder harness loops.



Pic. 1 Attachment on main carabiners



Pic. 2 Shoulder harness attachment

Note: The "L" & "R" markings on the reserve risers face rearwards relative to the direction of flight (similar to the paraglider riser attachment). The riser colours may be different, but the L and R indications apply.

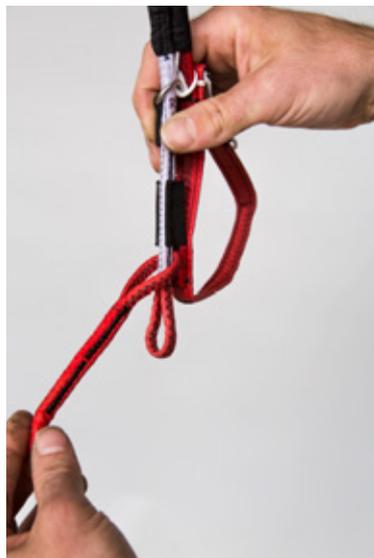
Brake handle position

Reserve riser extensions are needed for front container mounting to get the brake handles in the right position (See Pics 1 & 2). The riser extensions (optional accessory - Pic. 3) are looped through the ends of the risers and secured with O-rings (Pics. 4-11). This arrangement has been dynamically load tested.

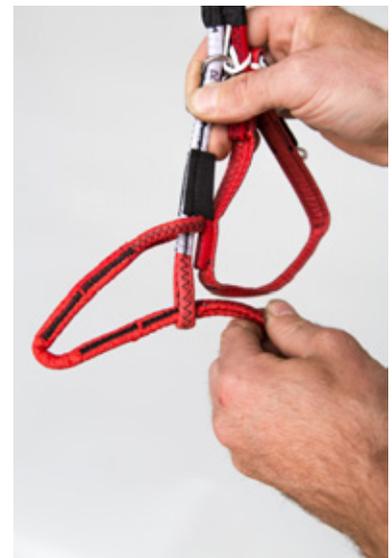


Pic. 3

Art. Nr. 000345 extensions for
Beamer 3 Dyneema risers &
Art. Nr. 000140 O-Ring 22mm



Pic. 4



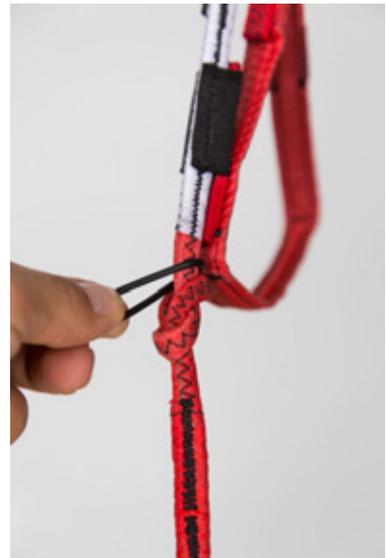
Pic. 5



Pic. 6



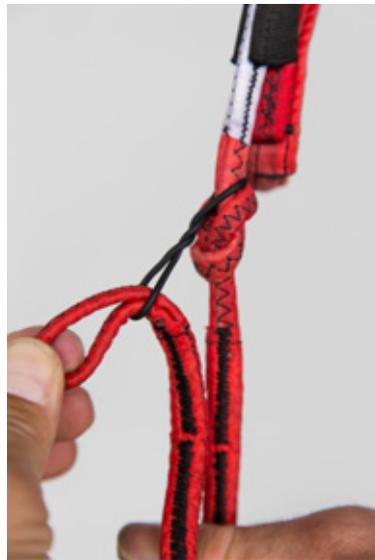
Pic. 7



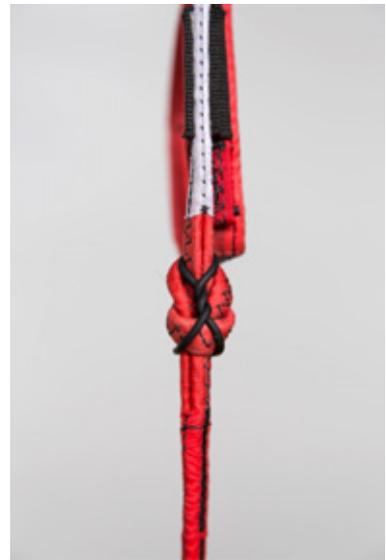
Pic. 8



Pic. 9 O-Ring 2 turns



Pic. 10



Pic. 11

Reserve/Harness connections

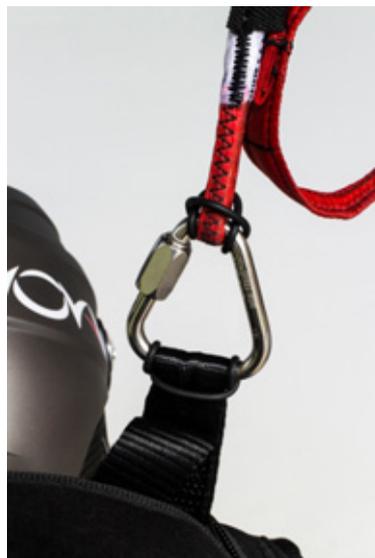
Pic. 12

Art. Nr. 000136 Maillon Rapide
 Ref. MRDI06.0 – Stainless (INOX)
 Art. Nr. 000140 O-Ring 22mm &
 Art. Nr. 000141 O-Ring 32mm

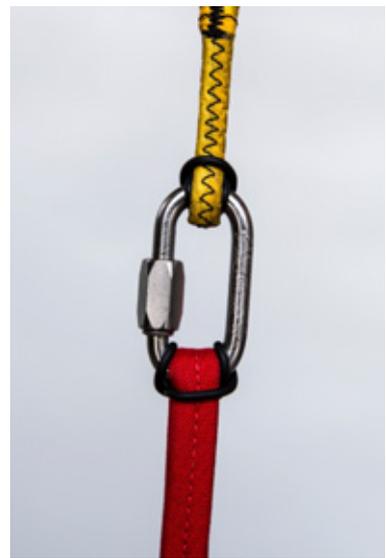
Pic. 13

Art. Nr. 000137 Maillon Rapide
 Ref. MRNI06.0 – Stainless (INOX)
 Art. Nr. 000140 O-Ring 22mm

Caution: Minimum safe load
 2,250kg per quicklink!



Pic. 12



Pic. 13



Preparing the braked opening configuration

Our pre-braking concept gives the Beamer 3 two flight phases. The canopy opens in its braked condition. This means that the Beamer 3 flies with very little forward speed at first. When the pilot takes the brake handles this braked position is released and the Beamer takes up its proper gliding flight.

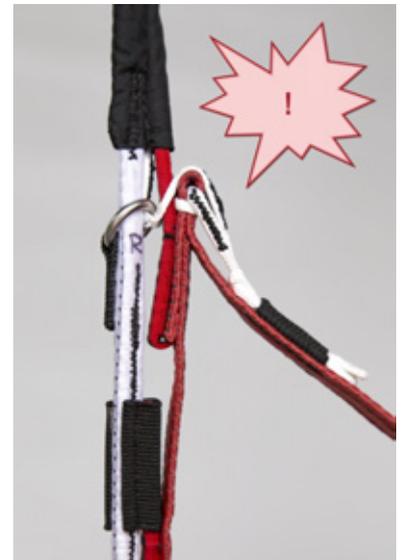
The braked opening setting must be set **before packing**. When the brake handles are fixed in their correct positions the brake lines are shortened on the Beamer 3 / Beamer 3 light by approx. 42 cm and around 25 cm on the Beamer 3 in small size. There is a loop in the brake line at this distance. The brake handle stick goes through this loop (Pic. 14).



Pic. 14



Pic. 15



Pic. 16 Stow the brake stick **outside** the metal ring!

Stow the extra length of brake line in the elastic loop on the brake handle (Pic. 16).

Laying out, untangling, checking the lines

Connect the reserve risers to the end of your packing surface or directly to the harness (Pic. 17) and stretch it out to its full length. The Beamer 3 should be lying similar to a paraglider pre-takeoff layout - (wing lying on its top surface). Separate the lines into their four groups (left wing lines, left middle lines, right middle lines, right wing lines) (Pic. 18). To check the lines, take the top line at each riser and run them up to the nose of the wing (High Adventure label), checking that they go all the way without crossing each other or tangling with other lines! (Pics. 20-22)!

Basic differences from packing a round centreline reserve

- The laid out canopy is not tensioned from both ends. Weights are a great help in keeping the job neat.
- There are no loops at the tops of the folded panels. Seams and lines must be pulled straight by hand.
- The folded panels do not naturally lie completely flat; careful wafting while tensioning seam at the top by hand will produce the best result, with extra material spread out inside the panels.

- The panels get smaller as the nose (top) is approached. Apart from the middle line (shortest) from the centre of the canopy base (trailing edge) all lines and seams will run inside the centre of the folded canopy.
- The final halving of each folded side is symmetrical – both sides are folded under. Then one side folds on top the other.

Separate the wing halves and flatten the panels between the middle lines

Lay the wing halves to the outside and stretch the material between the middle lines upwards into pockets (Pics. 23-27).



Pic. 17



Pic. 18



Pic. 19



Pic. 20



Pic. 21



Pic. 22



Pic. 23



Pic. 24



Pic. 25



Pic. 26



Pic. 27

Folding the wing halves

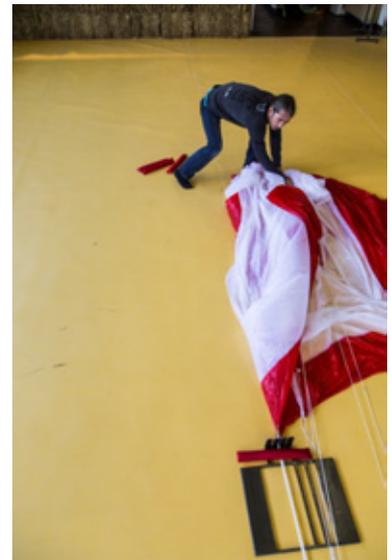
Lay a wing half on top of its opposite side and put its lines on the other side of the line separator, making sure that the middle lines are not disturbed (hold with weight).



Pic. 28



Pic. 29



Pic. 30



Pic. 31



Pic. 32 Go along the bottom edge from the middle line to the first line



Pic. 33 Put this line in the line separator (weight)



Pic. 34 Stretch out panel #1



Pic. 35 Seam on the centreline



Pic. 36 reduce the width of panel #1 with...



Pic. 37/38 ...with an S - 2 folds (for Beamer 3 small only halved)



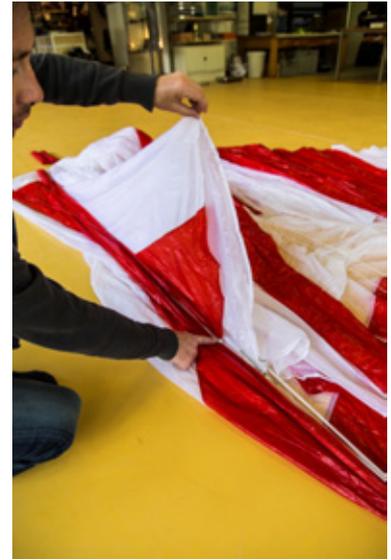
Pic. 39 Line #1 on the centreline!



Pic. 40 Follow the bottom edge of the second panel



Pic. 41 Put the panel #2 line in the line separator



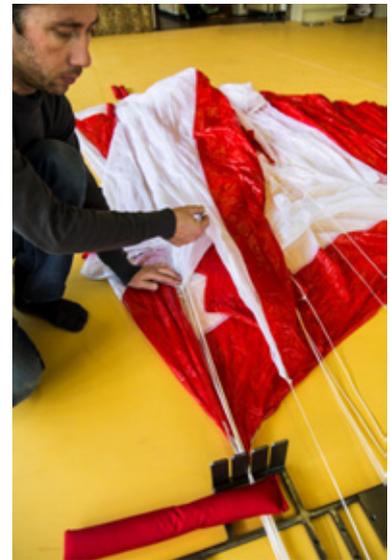
Pic. 42 Put the line attachment point on the middle lines and hold it there



Pic. 43



Pic. 44 Fold panel #2 in an S



Pic. 45 Bottom edge of the third panel



Pic. 46 Line for panel #3 in the line



Pic. 47 Stretch panel #3 to the



Pic. 48 Bottom edge of panel #4

separator



Pic. 49 Line #4 in the line separator



Pic. 52 Line in the separator



... as described for panels 3, 4 & 5

side; halve it with one fold.



Pic. 50 Lay panel #4 to the outside and halve it (one fold)



Pic. 53-55 Fold the remaining panels up to the nose...

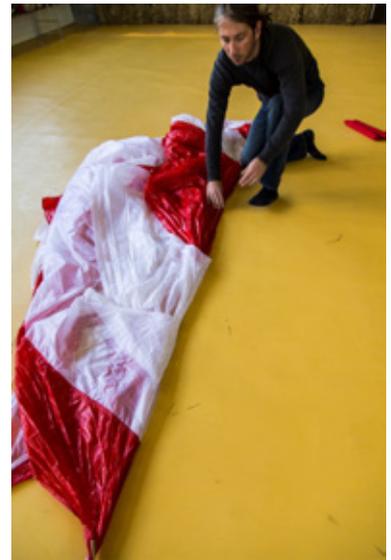


Pic. 56-57 Slide excess material back into the folded panels



Pic. 51 Bottom edge of panel #5





Pic. 58-60 Lay the opposite wing half (taking its lines over the separator) on the other side (on top of the first wing)



Pic. 61 Fold this wing exactly as the first side ...

Pic. 62 ...as far as the Beamer nose

Pic. 6634 Check that the lines have a free run ...



and straight

Pic. 64 ...to the base

Pic. 65 All the lines must lie along the centre of the wing



Pic. 66-67 Locating the lines



Pic. 68-69 Holding the lines (weight)



Pic. 70 Weighting down one wing half



Pic. 71 Halving the other wing half



Pic. 72



Pic. 73



Pic. 74



Pic. 75 The same for the other side



Pic. 76



Pic. 77



Pic. 78



Pic. 79



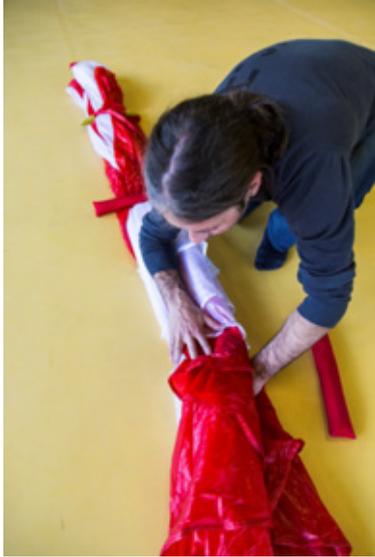
Pic. 80 Lay one half on the other



Pic. 81



Pic. 82



Pic. 83



Pic. 84



Pic. 85 Neat corners



Pic. 86



Pic. 87



Pic. 88



Pic. 89

Avoiding line overlooping

The following pictures show effective ways of avoiding overloops (overthrows).



Pic. 90-93
Secure the whole bundle in the bottom panel with an elastic band

Putting the canopy and the lines in the inner container



Pic. 94 Fold to length of container



Pic. 95



Pic. 96



Pic. 97



Pic. 98



Pic. 99



Pic. 100



Pic. 101 Take the harness off



Pic. 102



Pic. 103



Pic. 104



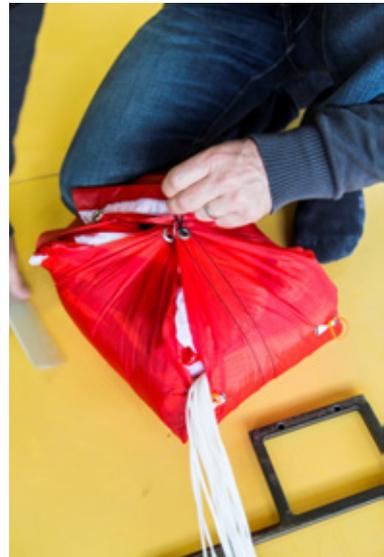
Pic. 105



Pic. 106



Pic. 107



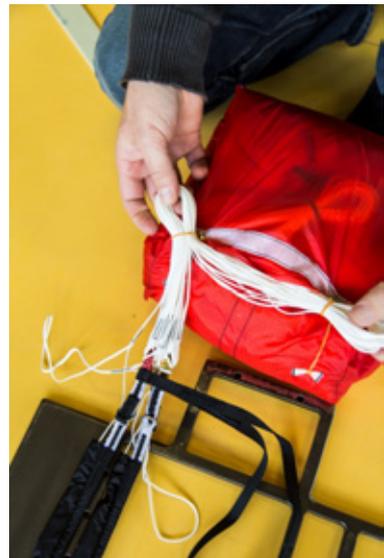
Pic. 108



Pic. 109



Pic. 110



Pic. 111



Pic. 112-115
Fold the interconnector in half twice and secure with an elastic band

Caution: The inner container is held closed by a loop in the lines, the tension exerted by the inner container bungee loop should not be too strong. This can be tested by picking the reserve up by its risers. The lines must free themselves from the bungee loop under the weight of the reserve alone.

INSTALLING IN A HARNESS RESERVE COMPARTMENT

Follow the instructions in your harness owner's manual.



Pic. 116-118

Caution: Velcro damages lines! **Wrap** the relevant lines in a piece of rubbish bag or glider fabric. This protection must not prevent or delay opening (DON'T fix it!)



FITTING IN THE HARNESS PARACHUTE RESERVE CONTAINER

When fitting the parachute in the harness/front container, make sure you follow the harness manufacturer's instructions. Perform a complete system compatibility test. This compatibility test must be undertaken by a suitably qualified person. Confirmation of the compatibility test must be noted in the parachute log book/manual.

PREFLIGHT CHECK

In addition to the normal preflight check (see paraglider/harness instruction manual) correct closure of the reserve compartment/front container as well as proper stowage of the reserve handle should be checked before every takeoff. If the reserve system connection/s, bridle or steerable risers could hang out after any flight (e.g. front container), the preflight check must include correct stowage of these connecting lines!