

# **OWNERS MANUAL PACKING INSTRUCTIONS PARAGLIDER EMERGENCY SYSTEM B-SAFE 120**

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### **(1) GENERAL DESCRIPTION**

The PRO-DESIGN emergency system B-SAFE 120 was developed exclusively for paragliding. Under no circumstances should it be used for any other purposes such as skydiving. Deployments should only be done if the paraglider collapses irrecoverably.

### **(2) FITTING THE SYSTEM TO THE HARNESS**

#### GENERAL WARNING !

If you pull one bridle fast through the loop of another bridle, the bridle will melt. Looping the bridle of the B-SAFE 120 through the 'reserve bridle' of the harness will have the same effect if the knot can slide and will lead to a total failure.

Instead of looping the bridle you can also connect it with a safety carabiner of adequate strength.

#### STANDARD HARNESSES (old type without reserve container)

The (optional) outer container should be attached with the Velcro's to the harness either on the left or on the right hand side main strap. Take care to have the Velcro's properly attached so as to guarantee a firm binding between the outer container and the harness when deploying the reserve. The deployment handle should be within easy reach when sitting in the harness, whatever your position. The bridle should be looped through the 'reserve bridle' of the harness in a way, that the knot cannot slide. In case there is no 'reserve bridle' connect the bridle to one of the main carabiners on the harness. Always check that the carabiners are both locked. Do not hook the bridle into the gate side of the carabiner!

#### COMFORT/INTEGRAL HARNESSES

Most of these harnesses are fitted with a reserve container on the side or in the back. Usually this container is suitable for the B-SAFE 120 reserve system and replace the original outer container. To be certain about the suitability please contact your dealer or PRO-DESIGN. It is important to use the correct deployment handle which is normally supplied with the harness. Exchange the handle on the inner container with the one supplied with your harness. The bridle should be looped through the 'reserve bridle' of the harness in a way, that the knot cannot slide.

### **(3) DEPLOYMENT AND OPERATION**

#### DEPLOYMENT

The reserve fitted to the right hand side of the harness should be released with the right hand (on comfort/integral harnesses, the deployment handle is on the right side only). The reserve fitted to the left side should be released with the left hand (on comfort/integral harnesses, the deployment handle is on the left side only). The inner bag, or deployment bag, should be firmly pulled from the outer container and thrown into free air. As the suspension lines become tight, the deployment bag will fall away and the reserve will open.

#### OPENING

After the reserve inflates the pilot should usually pull in the rear lines of the paraglider to deflate the paraglider.

#### DECENT

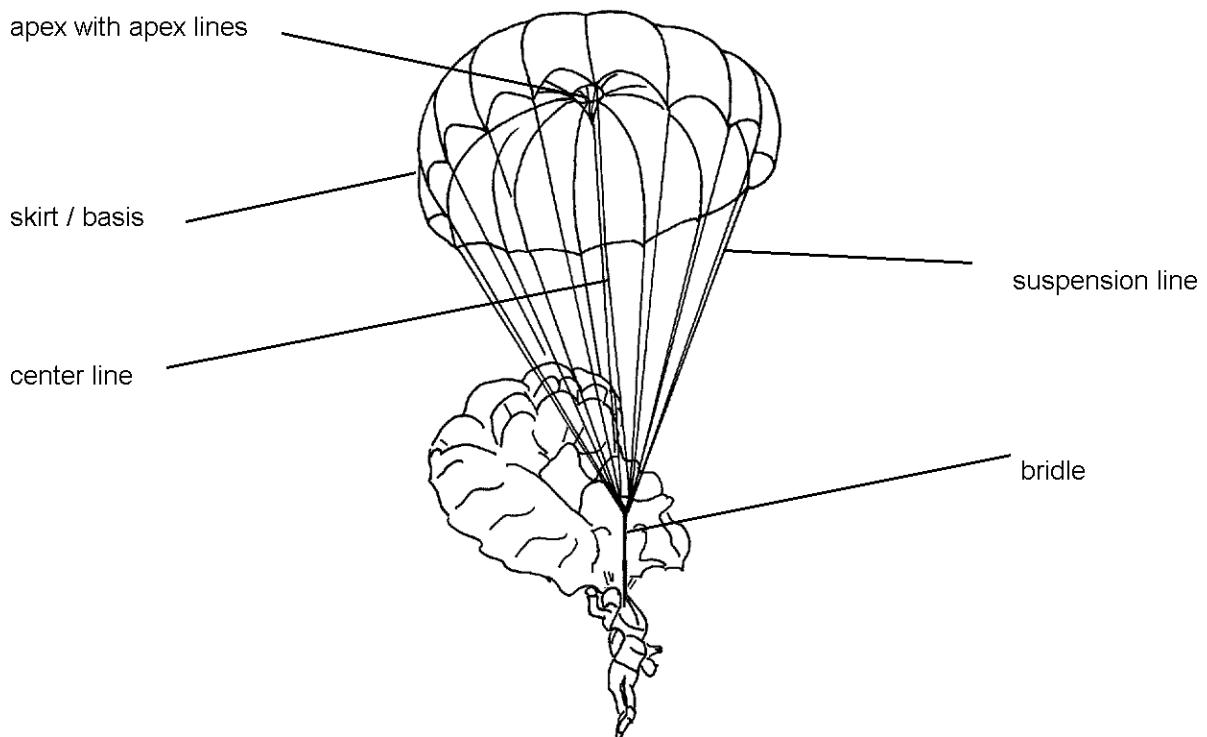
The goal is to keep the reserve on top of you in a stable position. There are two problems :

- Side slip : The paraglider develops too much force. This would result in side slipping of the reserve thereby substantially increasing the rate of decent. Pull in more of the paraglider to reduce the force of the paraglider and in doing so bring the reserve on top of you.
- Pendulum motion : The paraglider doesn't develop enough force to dampen the pendulum motion. This pendulum motion is created by turbulence or a humid reserve and will substantially increase the rate of decent. Therefore you shouldn't completely pull in the paraglider.

## REFERENCES

We would like to point out, that due to the high risk of paragliding, the manufacturer and the distributor of the B-SAFE 120 emergency system do not accept any liability or responsibility for accidents, loss and any direct or indirect damage which may occur with the use of the emergency system. The B-SAFE 120 emergency system should be viewed as a last chance to reduce your sink rate in case of main canopy failure. The reserve is a last chance and not a guarantee for safe landing. This reserve should only be used in emergencies, or during properly supervised safety courses over water, not for recreational purposes. **DO NOT MODIFY OR CHANGE THE DESIGN**, as any changes or modifications to this system may result in incorrect or defective operation.

### (4) DIAGRAM



### (5) DESCRIPTION OF THE EMERGENCY SYSTEM

#### TECHNICAL DATA

Paraglider emergency system B-SAFE 120  
 Manufacturer: PRO-DESIGN  
 Lärchenweg 33

6161 Natters  
Austria  
Weight: 2,4 kgs  
Surface: 34 sqm  
Sink rate: 6.8 m/sec with 112 kg load  
Material: Nylon fabric, low porosity, reinforced with tape,  
Polyamid suspension lines.  
Certification: DHV

## STRUCTURE

The canopy consists of 16 panels, 16 suspension lines, 1 center line, 1 bridle. A nylon inner container with deployment handle and (optional) outer container.

## USAGE LIMITATIONS

Permissible usage: 10 years (with proper storage and maintenance)  
max. packing intervals: 4 month  
min. recommended load: 70 kgs  
max. recommended load: 100 kgs  
max. permissible load: 100 kgs

## REQUIRED DOCUMENTS

Owners manual, packing-instructions and checklist.

## (6) PACKING INSTRUCTIONS

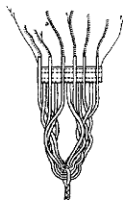
### DESCRIPTION

Packing should be carried out on a flat, dry area (ground or large table). Make sure the canopy is completely dry and then proceed as follows:

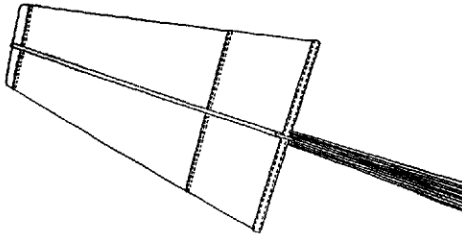
### DRAWINGS WITH EXPLANATIONS

## (6) PACKING INSTRUCTION

- 1) Fix suspension lines/risers to a solid point somewhere (hook on wall);
- 2) Tighten suspension lines as well as center lines.
- 3) Check apex lines for symmetry.



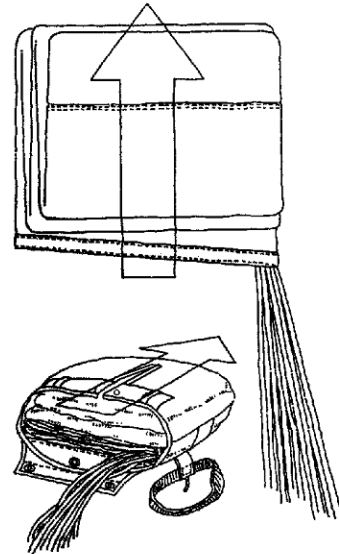
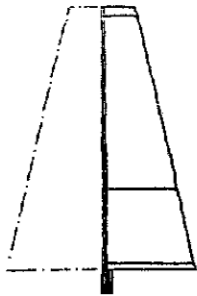
- 4) Fold panels with pulled apex i.e. suspension lines and center lines must always being tight whilst folding the panels. Make sure no panel is inside another ! Start folding panels #9/#10 from the left side of the skirt. Fold the 8 panels over each other. Then fold the panels on the opposite side - also 8 panels in total. When all panels are correctly folded , panel #1 will be on top.



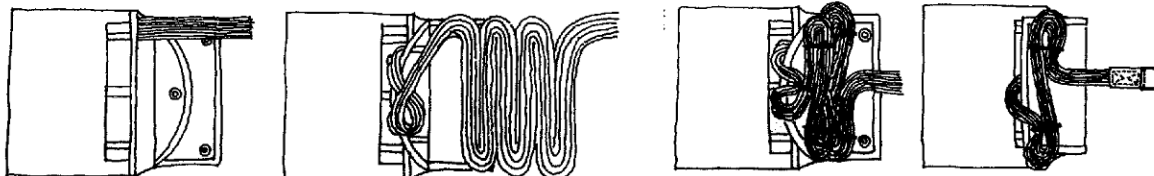
5) Disentangle suspension lines as well as center line. Check center line is running free all the way to the apex.

6) Fold the whole canopy lengthwise into half. Fold canopy again in half lengthwise. To fit the canopy should have same width as the inner container. Now fold canopy in S-folds. The size of S-folds should be the same as that of the inner container.

After folding, the apex is on top.



7) Put canopy into the inner container. The middle rubber of the inner container to be guided through grommet of split flap of the opposite side. Close first flap of inner container by guiding through the same middle rubber. Then put one loop of the suspension lines through this particular rubber to keep the flap closed. Fold suspension lines into 8-folds, making two bundles. Put the two bundles between first and second flap of inner container. Fix ends of bundles with rubber bands, but not too tight! Close second/main flap of inner container by guiding the other two rubbers left and right through each particular grommet and fix flap by looping suspension lines through rubbers. It does not matter which side comes first to close. Distance of suspension lines from end of bridle to first grommet of main flap of inner container should be approx. 10 cm (= 4").



8) Put inner container in the outer container.

For the original optional outer container it works like this. Lay outer container flat on the ground with all the flaps open and lay down inner container with deployment handle side up. Close side flaps - bridle should come out between left flap and top flap of outer container - by guiding little loops of side flap through the appropriate grommets of the opposite flap and fixing upper loop with pin of deployment handle. The bridle of deployment handle should come out between the two grommets. Now close the bottom flap by also guiding the bottom little loop of side flap through the grommet on the bottom flap. Fix loop with appropriate pin of the deployment handle. Close top flap by going through the deployment handle and fixing it on the Velcro of bottom flap.

9) Make a note of packing date as well as the result of checking in the packing booklet.

## **(7) INSTRUCTIONS FOR MAINTENANCE AND SERVICE**

### GENERAL INSTRUCTIONS

To insure safe operation, the system needs proper maintenance and care. When storing, prevent the B\_SAFE 120 reserve from extreme temperatures and humidity. A humid or wet canopy needs re-packing. Exposures to UV-rays will lead to a reduction of strength and deterioration of the fabrics. If necessary clean only with plain water, do not use detergents or solvents. Look for a clean flat place when packing the canopy - the floor or a suitable table - make sure you do not to pack any dirt or foreign elements into the canopy. This could damage the system or lead to a malfunction. After a deployment, we recommend to have the system checked by the manufacturer or dealer.

### REPAIRS

Parts subject to wear f.e. the bridle have to be checked periodically. Even if only slightly damaged they have to be replaced. Repairs are best done by the manufacturer.

### INTERVALS FOR PACKING AND CHECKS

We recommend to have the reserve system re-packed and checked every 4 months. If you do not regularly check and repack your safety system, slow opening or even deployment failure may result.

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PACKING- AND CHECKING BOOKLET

**RESERVE SYSTEM**

**B-SAFE 120**



Type: B-SAFE 120  
Manufacturer: PRO-DESIGN  
Lärchenweg 33  
A-6161 Natters, Austria  
Date of manufacture: .....  
Serial number: .....  
Certification number: .....  
Recommended max. load: 100 kgs  
Max. permissible load: 100 kgs

SUMMARY OF PACKING- AND CHECKING PERIODS

DATE	WORK DONE	DEPLOYMENTS	RESULTS	SIGNATURE

It is recommended to have the reserve system re-packed and checked every 4 months. If you do not follow this advice, slow opening or even failure of the operation may result.



CHECKS

NUMBER	WORK DONE	RESULTS	NEXT CHECK	DATE, SIGNATURE
1	First general check			

To be re-checked every two years.

Changes reserved.

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