

**OWNERS MANUAL  
PACKING INSTRUCTIONS  
PARAGLIDER RESCUE SYSTEM  
B-SAFE BI**  
(Tandem rescue system)

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## **(1) GENERAL DESCRIPTION**

The PRO-DESIGN rescue system B-SAFE BI 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 BI 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 carbine 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 must be within easy reach when sitting in the harness, regardless 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 carabines on the harness. Always check that the carabines are both locked. Do not hook the bridle into the gate side of the carbine!

### **COMFORT/INTEGRAL HARNESSES, TANDEM HARNESSES**

Most of these harnesses (new generation) are fitted with a reserve container on the side, in the back or underneath the seat. Usually these containers are suitable for the B-SAFE BI reserve system given the right volume/size. Tandem harnesses are usually equipped with the correct size of rescue containers 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. Fit the handle supplied with your harness to the inner container. The bridle should be looped through the 'reserve bridle' of the harness in a way, that the knot cannot slide. When using rescue system for your tandem equipment it is advisable to connect both bridles with the tandem spreader webbing at the intended places with suitable rapid links or carabines. Check for this reason with the owners manual of your tandem glider.

### **COMPATIBILITY**

**IMPORTANT!** Each new combination of rescue system and harness/outer container has to be tested after the first packaging directly by the manufacturer of the harness/the rescue system or by an authorized person (distributor, flight instructor) for proper operation. Deployment of the rescue system must be possible from any position in flight and according to the DHV standards.

## **(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 with rescue container on the side or under the seat) 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 with rescue container on the side or under the seat), 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 descent. 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 descent. Therefore you shouldn't completely pull in the paraglider.

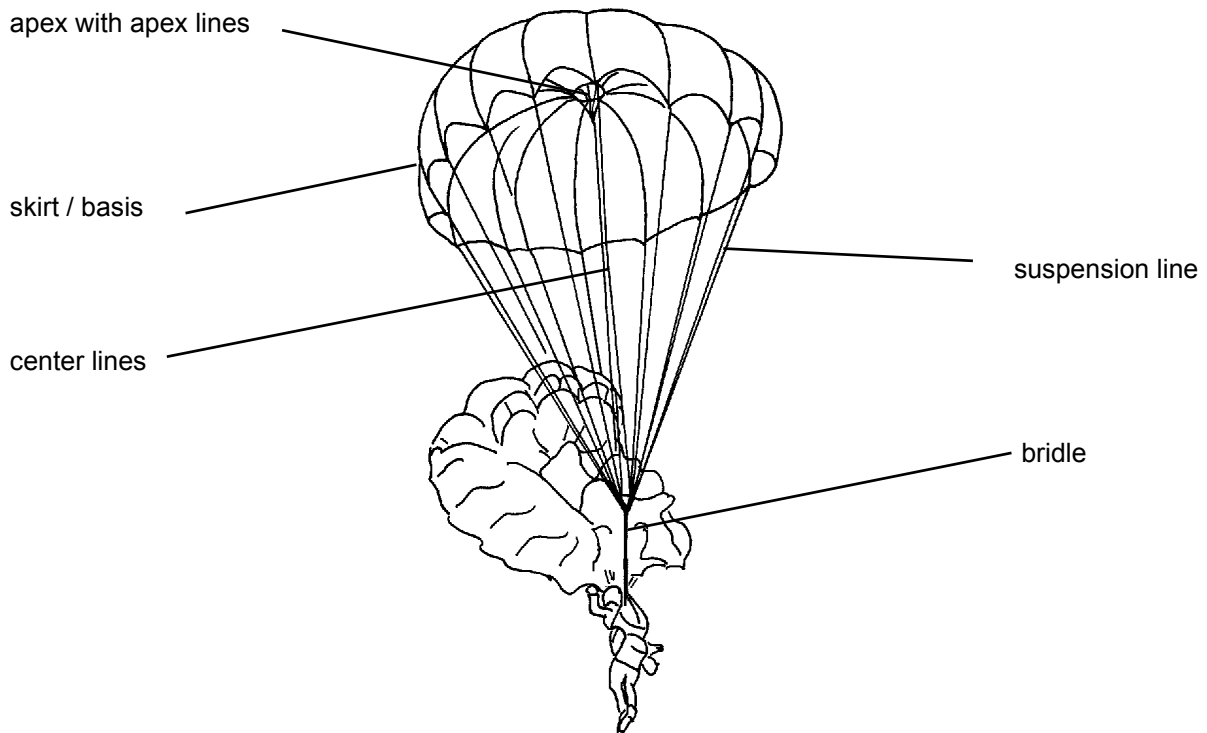
## LANDING

Do not try to land in an upright position: An appropriate landing (legs together, easily bended - landing roll) - reduces the danger of injury at the touch down substantially. When tandem flying please instruct your passenger before launch as well as for the behavior in case of emergency.

## REFERENCES

We would like to point out, that due to the high risk of paragliding, the manufacturer and the distributor of the B-SAFE BI safety 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 safety system. The B-SAFE BI safety system should be viewed as a last chance to reduce the sink rate of the paraglider with pilot/passenger in case of main canopy failure. The reserve is a last chance in case of emergency and does not guarantee a 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 SAFETY SYSTEM

### TECHNICAL DATA

Paraglider rescue system B-SAFE BI  
 Manufacturer: PRO-DESIGN  
 Lärchenweg 33  
 6161 Natters  
 Austria  
 Weight: 4,2 kgs  
 Surface: 68 sqm  
 Sink rate: 6.8 m/sec with 220 kg load  
 Material: Nylon fabric, low porosity, reinforced with tape,  
 Polyamid suspension lines.  
 Certification: DHV

### STRUCTURE

The canopy consists of 36 panels, 36 suspension lines, 2 center lines, 1 bridle (divided). A nylon inner container with container release canopy, 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:	120 kgs
max. recommended load:	220 kgs
max. permissible load:	220 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:

- 1) Disentangle canopy and lines and lay out on the table/ground.
- 2) Pull in the apex (=lines and center lines same tight) and put a line through all the apex fixing loops. Knot up that line and fix to a hook or similar on table or ground (or: another person is holding tight/assisting).
- 3) On the side of the basis bring same tension to all lines and start folding the canopy, i.e. pull out panels one after the other and fold aside. Be sure no panel is inwards another panel.
- 4) Then fold panels on the apex side, pull out one after the other and fold aside.
- 5) Check that all panels are pulled out/folded properly.
- 6) Lay down folded canopy on one side (keep canopy spanned when you lay it down) on the table/ground.
- 7) Remove the line from the apex fixing loops.
- 8) Lay out canopy the way that each side left and right there are 11 panels symmetrically, the panel stamped with #1 is on top.
- 9) Check suspension lines and center lines for free running and disentanglement, lay left and right line bundles as well as center lines separately.
- 10) Lift top panel(s) to see underneath and check free running of center lines to apex.
- 11) Fold canopy into thirds, first fold one side –
- 12) – and then the other side. Fold canopy the way that it has all it's length the same width.

- 13) Lay down inner container opened aside the basis. Fold canopy in S-folds.
- 14) S-fold canopy the way that it has same length and width as layout size of inner container.
- 15) Turn canopy upside down and put in inner container so that basis and line attachments are up.
- 16) 8-fold suspension lines in three bundles.
- 17) Fix rubber rings to ends of line bundles.
- 18) Lay line bundles on top of canopy into the inner container.
- 19) Close flaps of inner container. Start with the flap where the rubber closing loop is attached, then close the opposite flap. Then close the other two flaps. Always put the rubber closing loop through the eyelets.
- 20) After all flaps are closed put a line loop through the rubber closing loop.
- 21) Finished packed reserve canopy.
- 22) Inner container with two attachment loops, one for fixing the container release canopy and the other one for fixing the rescue handle (part of the harness supply). Positions can be changed upon demand.



## **(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 BI 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 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 BI**



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Type: B-SAFE BI  
Manufacturer: PRO-DESIGN  
Lärchenweg 33  
A-6161 Natters, Austria

Date of manufacture: .....  
Serial number: .....  
Certification number: .....  
Recommended max. load: 220 kgs  
Max. permissible load: 220 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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