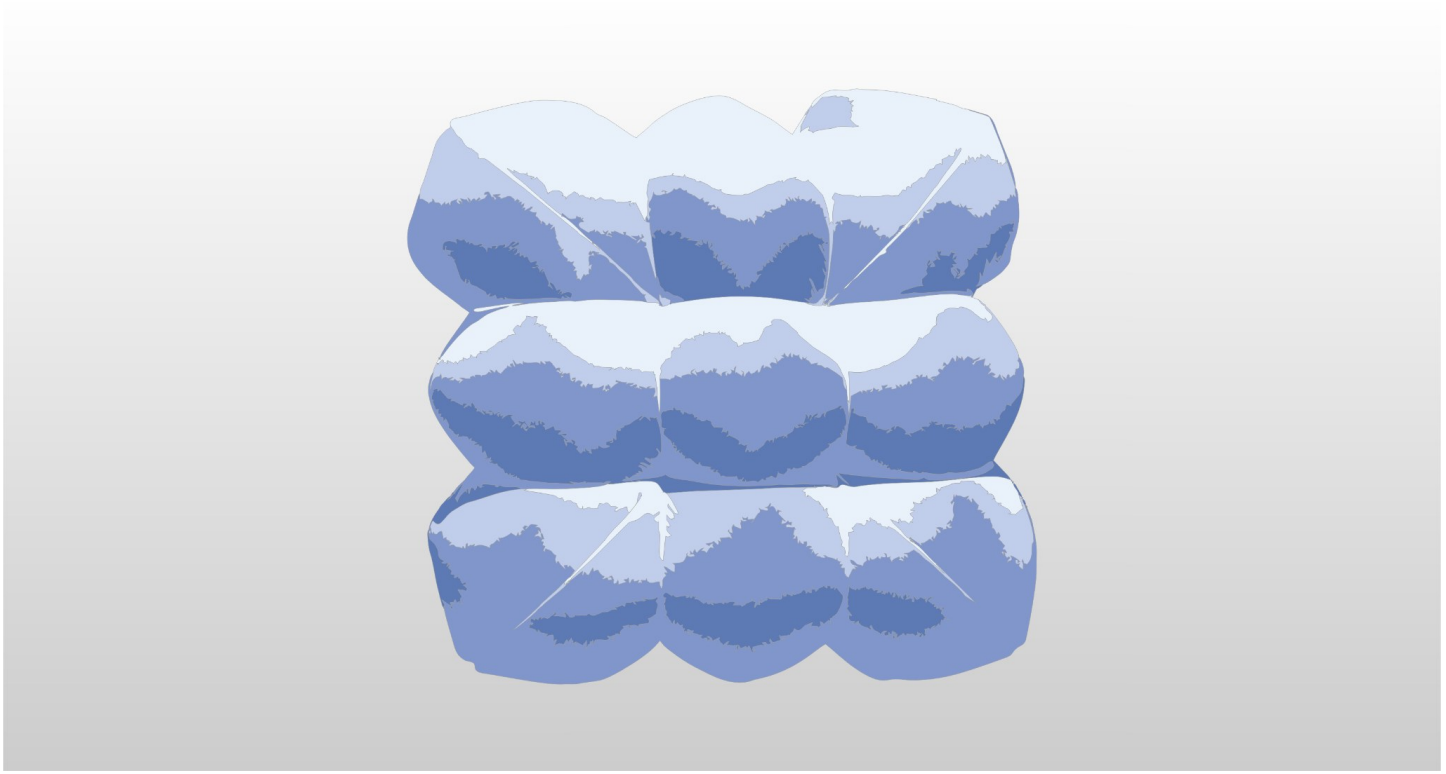
POP

Manual Version 1.0 dated 30 September 2026



Congratulations!

Congratulations on choosing a PHI POP paragliding reserve parachute!
The POP is a highly efficient, very strong paragliding reserve parachute that introduces several new approaches.
It offers excellent opening behaviour, straightforward packing and very robust fabric.

Further information about this and our other products is available at phi-air.com.



PHI

The PHI brand stands for experience, expertise and passion. The PHI team consists of experts and enthusiasts with extensive experience. We strive for outstanding technical professionalism. Our goal is to keep pushing the boundaries.

The PHI POP

We wanted to further reduce the complexity of a paragliding reserve parachute. With the POP, we have developed a remarkably simple system: eight lines run over the canopy, providing very high strength because no transition from line to webbing is needed. Similarly, the four corner lines each connect directly to the canopy with both ends.
Using Dyneema for the lines and webbing makes the POP very light. The double-coated 29 g/m² fabric from MJ has proved highly resistant to the effects of water. This makes the POP a reliable standard reserve parachute, also well suited to safety training involving water landings, as it largely retains its performance (sink rate) after contact with water.

Scope of delivery and identification label

The PHI POP is supplied in a standard deployment bag. The type, size, serial number and other details on the identification label are visible through the transparent cover:

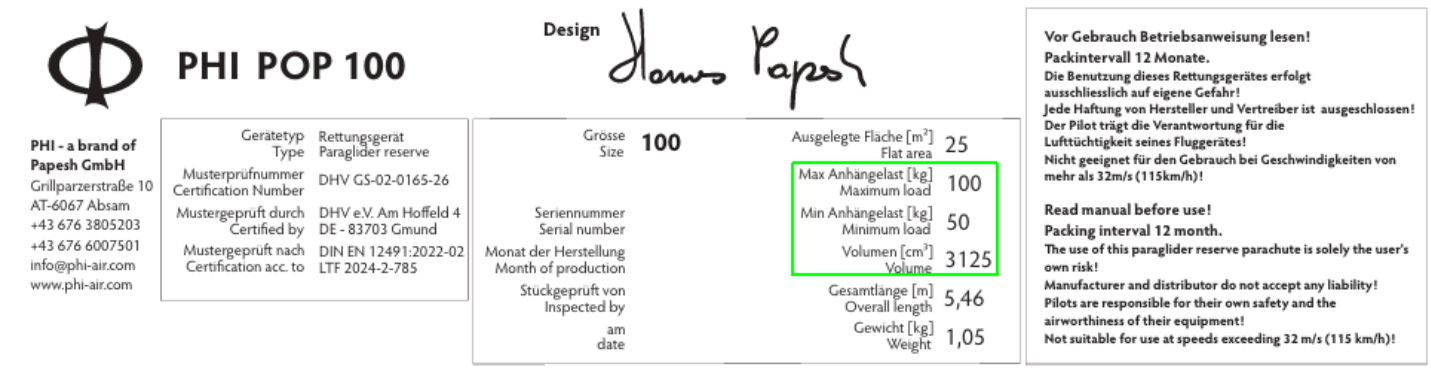


Sizes and technical data

POP reserve					
Maximum load	kg	80	100	120	140
Flat area	m²	20	25	30	35
Weight	g	865	1048	1242	1440
Volume	cm³	2500	3125	3750	4350

Checking reserve size and compatibility

The reserve parachute's maximum suspended load (see its identification label) must exceed the pilot's take-off weight (pilot plus all equipment, including the paraglider).



PHI POP 100

Design Hans Papesch

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Gerätetyp / Type	Rettungsgerät / Paraglider reserve
Musterprüfnummer / Certification Number	DHV GS-02-0165-26
Mustergeprüft durch / Certified by	DHV e.V. Am Hoffeld 4 DE - 83703 Gmund
Mustergeprüft nach / Certification acc. to	DIN EN 12491:2022-02 LTF 2024-2-785

Grösse / Size	100	Ausgelegte Fläche [m²] / Flat area	25
		Max Anhängelast [kg] / Maximum load	100
Seriennummer / Serial number		Min Anhängelast [kg] / Minimum load	50
Monat der Herstellung / Month of production		Volumen [cm³] / Volume	3125
Stückgeprüft von / Inspected by		Gesamtlänge [m] / Overall length	5,46
am / date		Gewicht [kg] / Weight	1,05

Vor Gebrauch Betriebsanweisung lesen!
Packintervall 12 Monate.
Die Benutzung dieses Rettungsgerätes erfolgt ausschliesslich auf eigene Gefahr!
Jede Haftung von Hersteller und Vertreiber ist ausgeschlossen!
Der Pilot trägt die Verantwortung für die Lufttüchtigkeit seines Fluggerätes!
Nicht geeignet für den Gebrauch bei Geschwindigkeiten von mehr als 32m/s (115km/h)!

Read manual before use!
Packing interval 12 month.
The use of this paraglider reserve parachute is solely the user's own risk!
Manufacturer and distributor do not accept any liability!
Pilots are responsible for their own safety and the airworthiness of their equipment!
Not suitable for use at speeds exceeding 32 m/s (115 km/h)!

The reserve volume must be smaller than the volume of the reserve compartment: see the CABRIO technical data.
If the reserve volume specified by its manufacturer is below the stated minimum volume, the supplied PHI JAMA deployment bag must be used to ensure that the reserve fills the compartment properly.

CABRIO							
Size		XXS	XS	S	M	L	XL
Min. reserve volume	cm^3	1800	1800	2000	2235	2520	3000
Max. compartment volume	cm^3	3660	3660	4000	4470	5040	5950

Warning!
We generally recommend using the supplied PHI JAMA deployment bag: its surface has low friction and it fills the reserve compartment well.
Small deployment bags can rotate inside the compartment and become entangled in the bridles!
Some harnesses require their own deployment bags; the PHI POP is also suitable for these. Full responsibility for checking compatibility and safe operation rests with the qualified specialist carrying out the check.

Packing and installing the PHI POP

Packing

The small number of panels and lines makes the POP reserve relatively easy to pack.
Packing the POP requires rubber bands suitable for reserve parachutes!
We recommend synthetic rubber bands, for example those from Rainbow Loom: https://www.rainbow-loom.ch.

We recommend a flexible attachment at one end (a fixed point with an elastic cord to secure the reserve bridle) and a fixed point at the other end (to secure the packing loops). A packing table makes the work easier, as do a packing board with line-stowing pegs and weight bags.

Warning!
A paragliding reserve parachute must only be packed by a competent reserve parachute packer!

Packing loops



The POP packing loops are numbered from 1 to 8.
The left (RED) and right (BLACK) sides are distinguished.
Thread a cord through all the packing loops in the correct order.
Secure this cord.



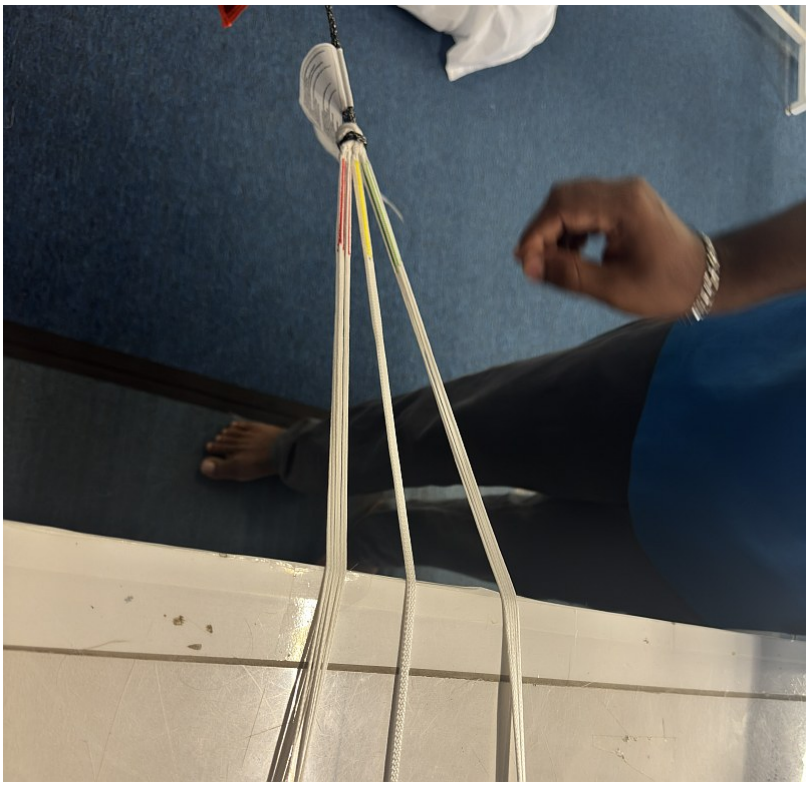
Centre line

Ideally, secure the centre line with an elastic attachment:



Separating the lines

Separate the lines into LEFT (RED) and RIGHT (GREEN); the centre line remains in the middle.



Laying out the panels

Lay out the panels on one side neatly and smooth them flat.
Make sure the lower edge is properly aligned.







Lay out the other side.



Both sides neatly laid out:



Warning!
Once the panels on both sides are neatly laid out, make sure the centre lines run cleanly and freely. Tension on the centre line pulls the middle of the canopy down slightly into the centre of the panels. Ensure that this area is also folded neatly.

Folding the panels inward

Fold the laid-out panels inward on both sides to one third of their width.

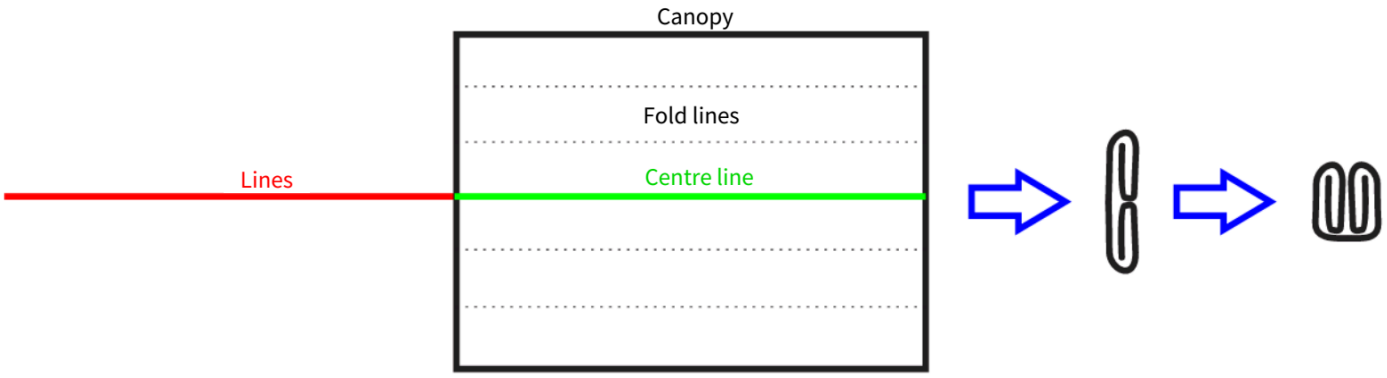
This means folding them over twice.





Placing the two sides on top of each other





Estimate the length of the deployment bag to determine the fold length.







Making the S-folds

Make one S-fold upwards:




Release the packing loops and place a second S-fold on top. The lines will then emerge from the middle of the folded bundle.





Placing the reserve in the deployment bag



Warning!
Check the orientation of the packed reserve in the deployment bag: the lines must be on the side opposite the deployment-handle attachment loop.

Closing the sides of the deployment bag

Close the deployment bag at the sides.



Warning!
Remove the cord securing the packing loops!

Temporarily close the top of the deployment bag (the deployment-handle side).



Stowing the lines

Prepare the packing board and its line-stowing pegs, with rubber bands on the pegs.
The line stows must be as wide as the deployment bag.
The number of wraps per stow depends on the reserve size (line length).
We recommend making three stows.
Leave approximately 25 cm of line unstowed.

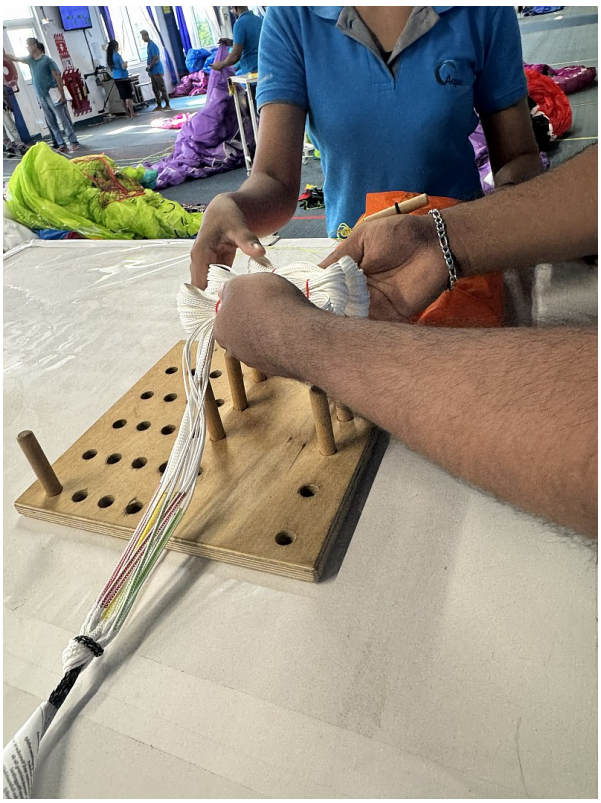




Pull the rubber bands over the line stows.



Remove the line stows from the board and place them in the deployment bag.





Warning!
The loops at the ends of the line stows must remain free. Make sure the lines cannot snag as they extend and can release from the stows without resistance.

Securing the deployment bag closure

Secure the deployment bag with a loop formed from the remaining unstowed lines.





Warning!
The elastic closure loop of the deployment bag must be under only slight tension so that the line loop securing it releases easily. It must not be possible to lift the deployment bag and reserve by the reserve bridle without the closure opening!

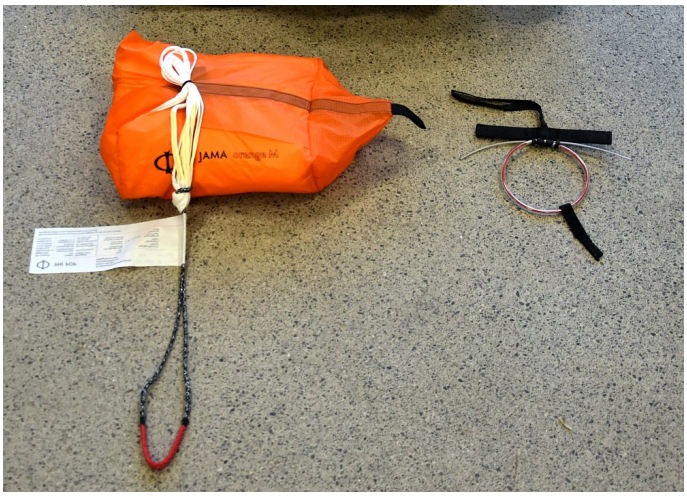
Installing the POP reserve in the harness

The reserve parachute must be installed by a qualified specialist!
The following shows the POP reserve being installed in a PHI CABRIO harness. This procedure is an example. Other harnesses require different procedures.

Attaching the deployment handle

Pay attention to the best direction of pull! The deployment bag must be able to be pulled directly out of the harness without resistance: see the compatibility check (K-test).

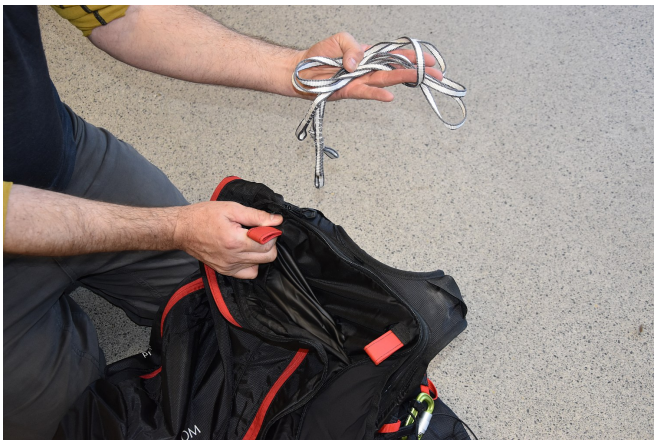
Warning!
This functional and compatibility check (K-test) must be repeated after every repack, installation or modification!





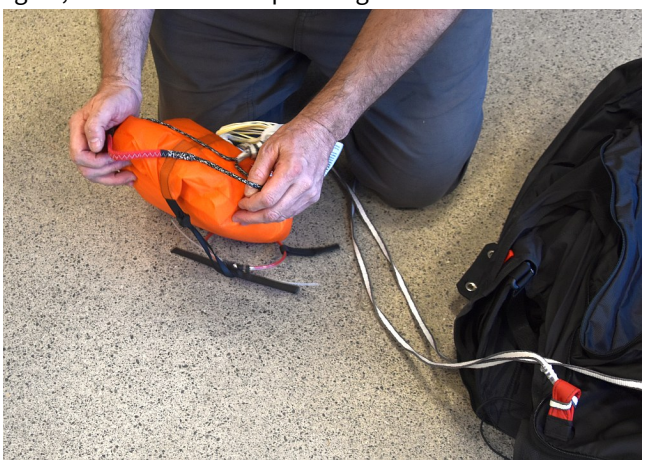
Attaching the reserve bridles to the harness

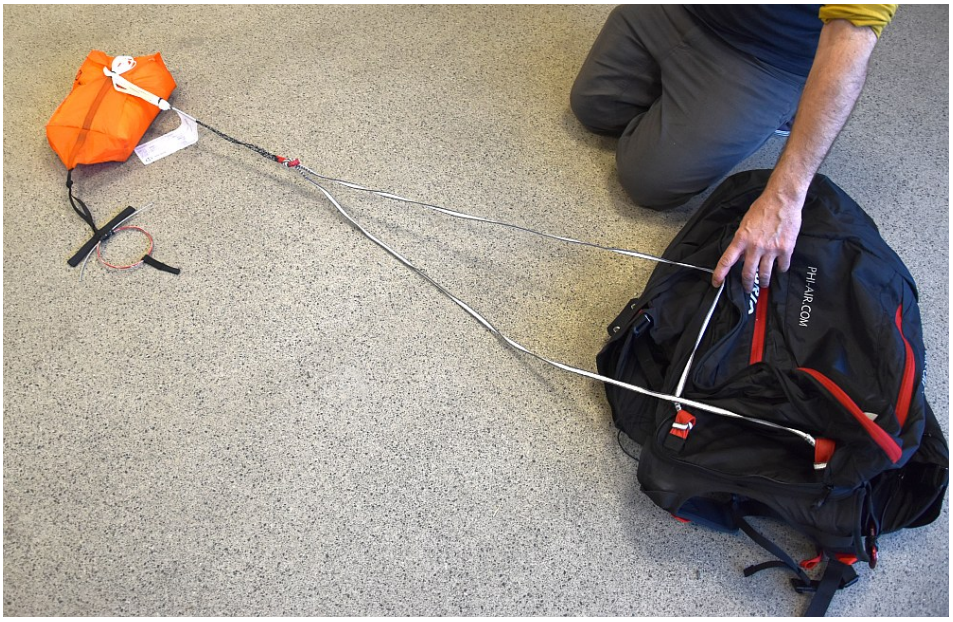
As supplied, the reserve bridles are in the CABRIO's rear compartment.
Pass the attachment loops through the openings in the back panel.
Make sure the loop-through connection between each bridle and its attachment point is correct and secure!




Connecting the harness bridles to the reserve bridle

Again, make sure the loop-through connection is correct and secure.





Placing the reserve in the CABRIO reserve compartment

Make sure the orientation is correct: the deployment handle and the fabric pyramid attached to it by a loop must face the opening of the reserve compartment. The deployment bag opening, with the loop of reserve lines that holds it closed, must face DOWNWARDS.

Warning!
The reserve bridles and their loops must be stowed separately from the deployment handle to prevent any obstruction!




Closing the reserve compartment

Insert cords or nylon rods into the pin loops and close the reserve-compartment zips towards the front.
Then remove the cords or nylon rods!

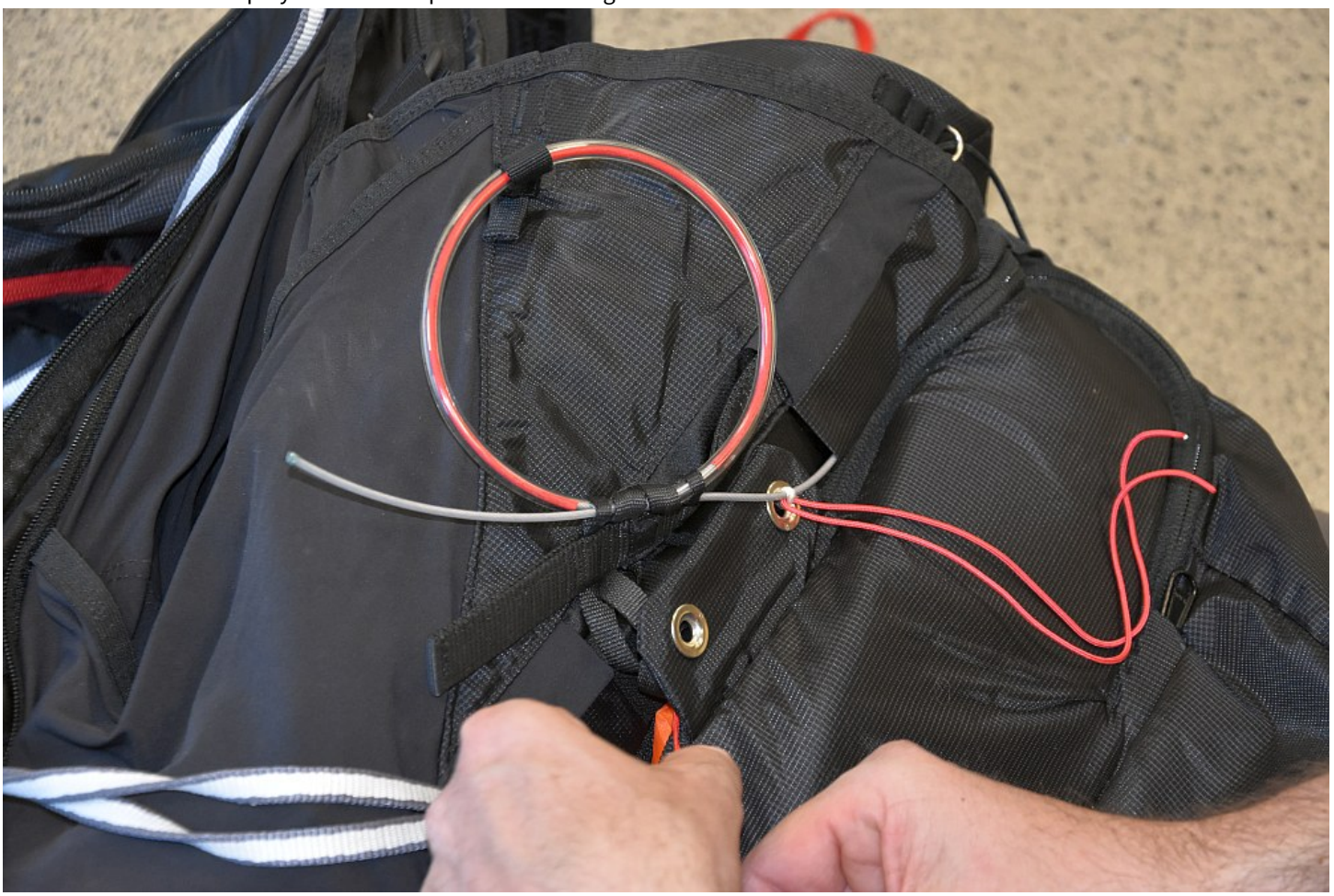



Warning!
The reserve-compartment zips must be fully closed and the sliders parked in their zip garages!
The cords or nylon rods used for installation must be removed!



Inserting the deployment-handle pins into the pin loops

Insert the ends of the deployment-handle pins into the designated lower channel.



Closing the bridle channel

Close the bridle channel upwards.



Completing the deployment-handle installation

Stow the second side of the deployment-handle pin and secure the handle in the correct position.



Warning!
The deployment handle must release neither too easily nor with excessive force.
A functional test confirms that the reserve system works and gives you confidence.

Additional reserve-system test in a simulator

In addition to the essential K-test, an optional comprehensive functional test of the reserve system can be carried out in a simulator.
For this, we recommend suspending yourself in a simulator or even a G-force trainer and deploying the reserve while seated in the harness. It must be possible to pull the deployment bag completely out of the harness reserve compartment with a moderate pull on the deployment handle. An effective throwing movement should be possible.

Warning!
Always check that the reserve system is in perfect working order before take-off:
Are both pins secured?
Are the reserve-compartment zips fully closed and the sliders parked in their zip garages?
An opening zip can leave a slider in front of the compartment opening and block it!

Connectors

Use only approved connectors (metal carabiners or quick links), as required by the particular harness. In the PHI CABRIO, the bridles can be connected directly by looping them through.
Follow the connector manufacturer's instructions for correct handling, orientation, locking, inspection and replacement!

Operation

The PHI POP opens very reliably and quickly. We recommend pulling firmly outwards on the deployment handle, extracting the deployment bag from the harness in one continuous movement and, depending on the situation, usually throwing it diagonally backwards. Release the handle immediately. The original PHI POP deployment bag (PHI JAMA) is designed to open immediately: after only a short throw, the bag opens and the unfolding reserve can catch air, slow down and inflate.

The PHI POP has a very low tendency to oscillate. It descends with a slight forward glide. Its relatively airtight fabric allows a good sink rate to be achieved with a relatively small area.

The sink rate of paragliding reserve parachutes is measured with the main wing disconnected.
After the reserve has opened, we recommend disconnecting the main wing or pulling it in and holding it in a bundle.

The PHI POP is not steerable.

Warning!
An open, uncontrolled main wing can interfere with the reserve parachute! A downplane configuration between the reserve and main wing usually causes a significantly higher sink rate.
The sink rate is also higher at high altitude because of the lower air density!

The technique for throwing a reserve, including choosing the direction to suit the situation and controlling the main wing, is taught in safety training. PHI strongly recommends attending safety training regularly!

Care and maintenance

General handling advice

With correct and careful handling, your reserve parachute will remain in good technical condition for many years, even with intensive use. During normal use, observe the following:

Do not expose the reserve to sunlight unnecessarily, for example by laying it out in the sun after a water landing. It is better to lay it out in the shade, preferably away from grass, where it could absorb moisture again.

The PHI POP's double silicone-coated fabric is largely resistant to the effects of water and largely retains its airtightness even after immersion.

Warning!
After a salt-water landing, rinse the reserve thoroughly in fresh water before drying it to remove all salt! Salt residues are hygroscopic: they can attract moisture and cause the canopy surfaces to stick together. A reserve that sticks together may open late or not at all!
Contact with chemicals can permanently damage the material! If this occurs, take the reserve out of service!

Storage

Ideally, store the reserve in a dry place protected from light. Avoid prolonged storage at very high temperatures, for example in a car in midsummer.

Repairs

Repairing a reserve parachute is a critical matter: always contact the manufacturer first (info@phi-air.com).

Repacking interval

The general repacking interval is one year.
Record the packing date, findings, parts used, anything unusual and other relevant details on the identification label!

Warning!
After contact with moisture, sand, dirt, chemicals, syrup or similar substances, the reserve must always be cleaned and repacked!

Service life

The PHI POP's very robust materials give it a service life of 15 years from first use (installation in a harness), provided it is handled carefully.
If the specialist carrying out the annual repack finds premature wear or ageing, the service life must be reduced at that specialist's discretion.

Warning!
If the reserve packer has any doubts about the strength or operation of the PHI POP, contact the manufacturer for advice: info@phi-air.com.

Respecting nature and the landscape

Finally, we ask you to practise our sport with as little impact on nature and the landscape as possible. As well as obvious measures such as taking your litter home, avoid disturbing animals, including birds of prey and wildlife, by flying too close to them. Particularly in the colder months, this stress can be life-threatening for animals.

Disposal

The synthetic materials used in a reserve parachute require proper disposal. Please return retired equipment to PHI: we will dismantle and dispose of it.

PHI

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