CABRIO

Manual Version 1.01 dated 29.08.2026



Congratulations!

Congratulations on choosing a PHI CABRIO harness!
The CABRIO is a modular all-round harness with a removable outer shell.
- fly with or without a seat board,
- with or without additional protectors,
- with the rescue handle on the right or left; an optional dual-rescue system is available as special equipment.
A double-ring Nitinol system ensures that the passive protector largely retains its shape.
It provides good protection without active inflation and regardless of the pilot's seating position.
Numerous adjustment options ensure a high level of individual comfort.

This manual contains important information on the use of your harness. We therefore recommend reading the following pages carefully before your first flight. If you have any questions or suggestions, please contact us at info@phi-air.com.

Further information about this and our other products can be found at phi-air.com.

PHI

The PHI brand stands for experience, competence and passion. The PHI team consists of experts and enthusiasts with extensive experience. First-class technical professionalism is our standard. Continuously pushing the boundaries is our goal.

The PHI CABRIO

To get an idea of what we needed, we analysed the harness market, examined reference products and asked dealers about pilots' needs. We learned that stability and modularity are important. Some pilots want to fly with a seat board but still want the high stability of a split-leg suspension. We therefore combined both techniques.

We therefore combined both techniques.
Since every body is individual, we implemented numerous adjustment options and offer a wide range of sizes: from XXS to XL.
During development, we recognised the advantage of a quick-pack rucksack such as our Accel and therefore moved away from a permanently attached rucksack. The CABRIO can optionally be combined with rucksacks of different sizes, turning it into a reversible harness.
Functionality was always our top priority: we wanted to ensure that pilots can easily extend and retract their "landing gear" = legs, and that the pilot's upright position is stable, ensuring a safe take-off and a stress-free landing approach with the "landing gear" extended. This is a weakness of many products and one of the strengths of the CABRIO.
Comfort naturally always plays a role. We therefore paid particular attention to the back and base geometry.
We are particularly proud to have achieved record-low protector values in passive mode - without active inflation!

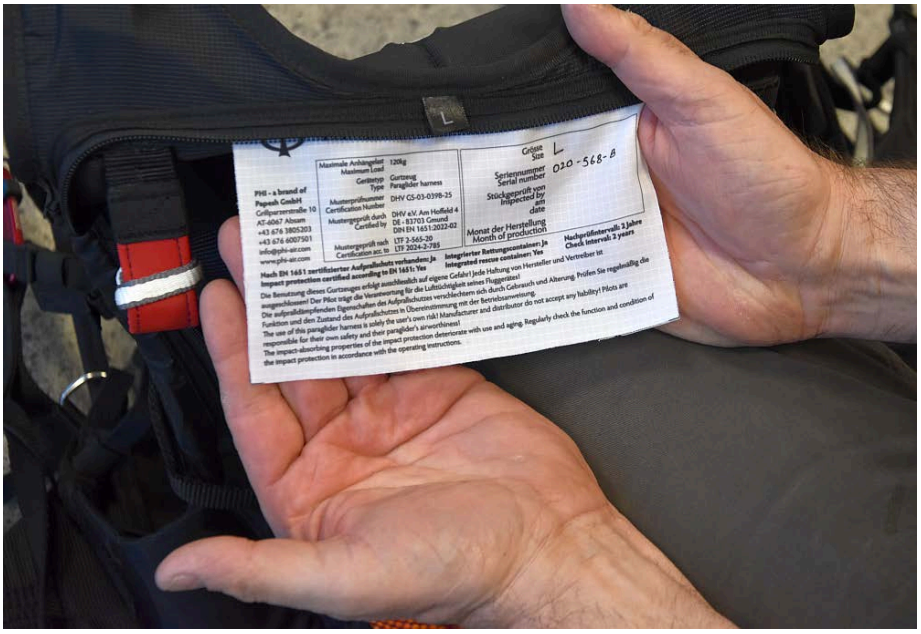
Scope of delivery

The PHI CABRIO is supplied with a standard rescue container and rescue handle.



Identification label

The identification label is located on the back section.



Size

CABRIO GRÖSSENTABELLE															
cm/kg	45	55	60	65	70	75	80	85	90	95	100	105	110	115	120
150	XXS	XXS	XXS	XS											
155	XXS	XS	XS	XS	S										
160	XS	XS	S	S	S	S	S/M								
165		S	S	S	S	M	M	M	M						
170		S	S	S	M	M	M	M	M						
175		S	S	M	M	M	M	M	M/L	M/L					
180			M	M	M	M	M	M	M/L	M/L					
185					M/L	M/L	L	L	L	L	L	L	L	L	XL
190						M/L	L	L	L	L	L	L	L	L	XL
195							L	L	L	L	L	L	L	XL	XL
200							L/XL	XL	XL	XL	XL	XL	XL	XL	XL
205							XL	XL	XL	XL	XL	XL	XL	XL	XL

Since every human body is individual, this table is only a rough guide.

WARNING!
The PHI CABRIO is approved only up to a maximum hook-in weight of 120kg!

Adjustment

The CABRIO offers numerous adjustment options. We have configured the adjustment buckles so that the settings around the seat area cannot, or can only barely, be changed in flight. We recommend making the basic adjustment on the ground, preferably while suspended in a simulator.
Only the shoulder buckle (1) should / can be adjusted in flight in order to achieve a reclined or upright seating position.
To loosen it, pull the rear red loop.



The CABRIO has 2 adjustment buckles (2 and 3) in the lateral rib area to provide back support with as little pressure as possible.
The seat-angle adjustment (4) determines how easily you can slide backwards on the seat board: after take-off, simply raise your knees slightly and you will slide backwards on the seat board into a comfortable seating position.
If you want the pilot to remain largely upright (e.g. during training on a practice slope), this buckle can be shortened.

The central adjustment (5) between the main carabiners can be used to adjust the agility of the CABRIO. A narrower setting reduces the tilting of the harness, which is already very stable against tilting.





WARNING!
Do not make basic adjustments to the harness in flight! In flight, you must concentrate fully on flying, not on the harness!
We recommend having the CABRIO adjusted by a competent specialist.

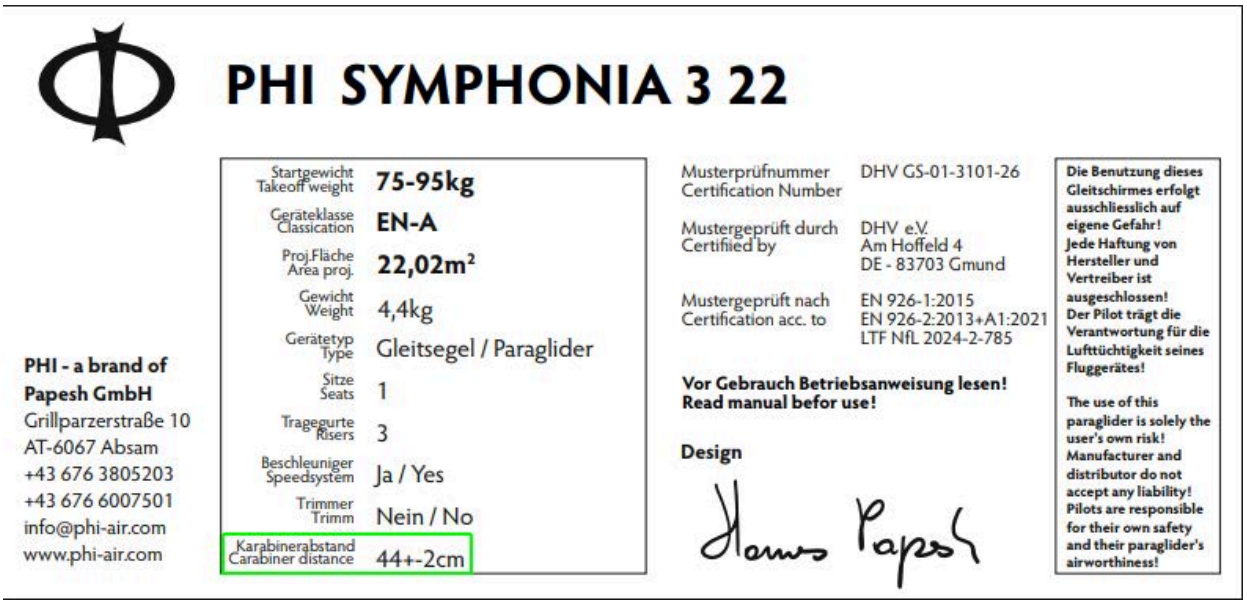
WARNING!
An asymmetrically adjusted harness will cause the paraglider to pull to one side! Always check the harness for symmetry before take-off!

Compatibility with the paraglider

The choice of harness has a significant influence on the flight behaviour of your paraglider. Some harnesses allow particularly effective weight shift, but also transmit turbulence to the pilot relatively undamped. Less agile harnesses do not allow extreme weight shift, but the pilot tilts less strongly to the side in turbulence.

A competent flying school can provide individual advice here.

The harness used for certification tests must comply with a defined geometry according to EN 926-2: distance between the main suspension points = width of the attachment points; see the paraglider identification label or the technical-data table.



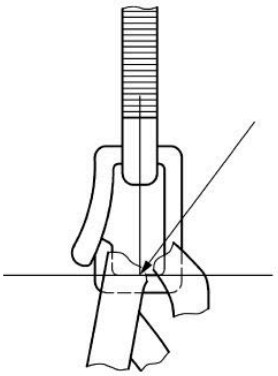


Figure 3 - Upper measuring point on harness

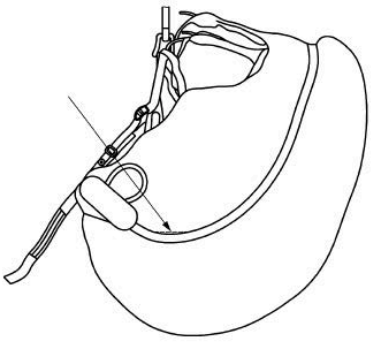


Figure 4 - Lower measuring point on harness

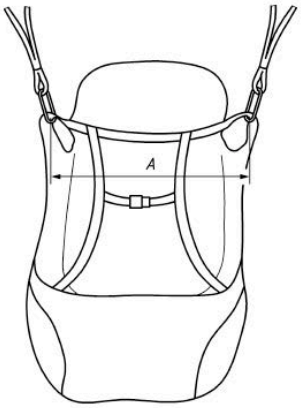


Figure 5 - Width of harness attachment points

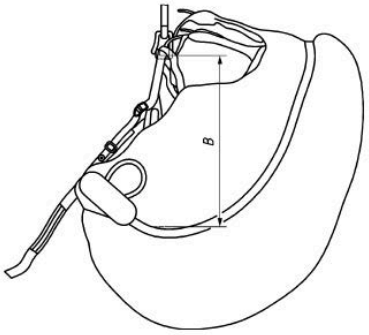


Figure 6 - Height of harness attachment points

Table 48 - Total weight in flight

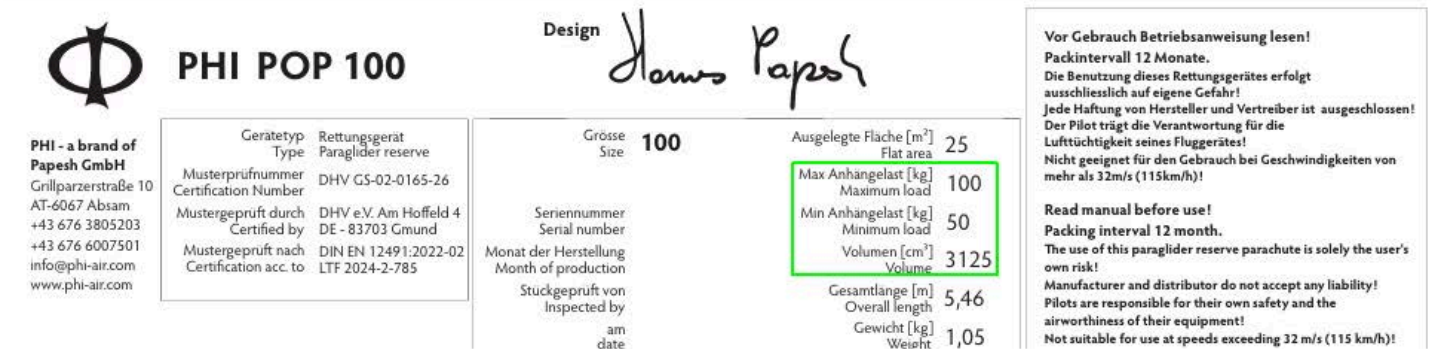
Total weight in flight (TWF)	< 80 kg	80 kg to 100 kg	> 100 kg
Width (measurement A in Figure 5)	(40 ± 2) cm	(44 ± 2) cm	(48 ± 2) cm
Height (measurement B in Figure 6)	(40 ± 1) cm	(42 ± 1) cm	(44 ± 1) cm

Installing the rescue system

WARNING!

Check the size and compatibility of the rescue system:

The maximum suspended load of the rescue system (see the rescue system identification label) must be higher than the pilot's take-off weight (pilot + equipment incl. paraglider).


PHI POP 100

Design Hans Papesh

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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
Seriennummer / Serial number	
Monat der Herstellung / Month of production	
Stückgeprüft von / Inspected by	
am / date	

Ausgelegte Fläche [m²] / Flat area	25
Max Anhängelast [kg] / Maximum load	100
Min Anhängelast [kg] / Minimum load	50
Volumen [cm³] / Volume	3125
Gesamtlänge [m] / Overall length	5,46
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 volume of the rescue system must be smaller than the volume of the rescue compartment: see CABRIO technical data.
If the rescue system volume specified by the manufacturer is smaller than the stated minimum volume, the supplied PHI JAMA container must be used so that the rescue system fills the rescue compartment properly.

CABRIO							
		XXS	XS	S	M	L	XL
	cm^3	1800	1800	2000	2235	2520	3000
	cm^3	3660	3660	4000	4470	5040	5950

WARNING!
In general, we recommend using the supplied PHI JAMA inner container: it has a low-friction surface and fills the rescue compartment well. Small inner containers can rotate inside the rescue compartment and become entangled in the connecting lines!

Connect the rescue handle

Size
min. rescue volume
max. rescue compartment volume

Pay attention to the best pulling direction! The rescue container must be removable from the harness directly and without resistance: see compatibility test (K-test).

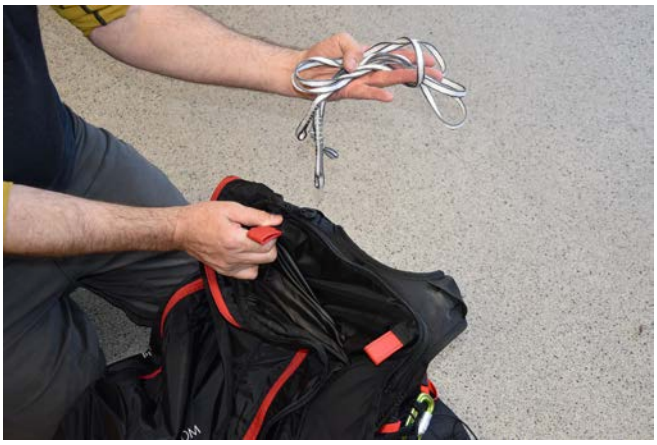
WARNING!
This function and compatibility test (K-test) must be repeated after every repacking, installation or modification!





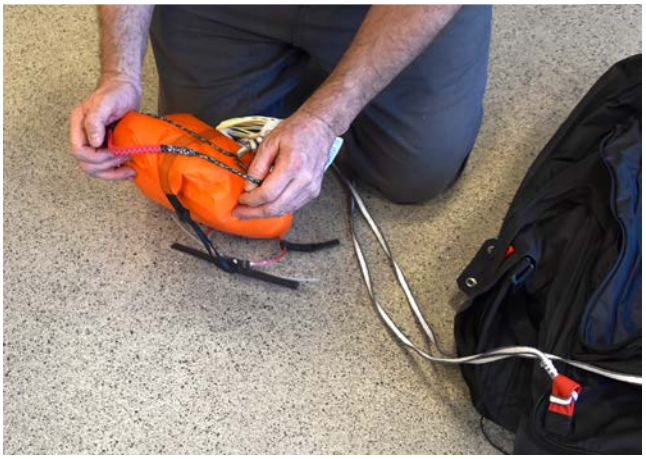
Loop the rescue connecting lines into the harness

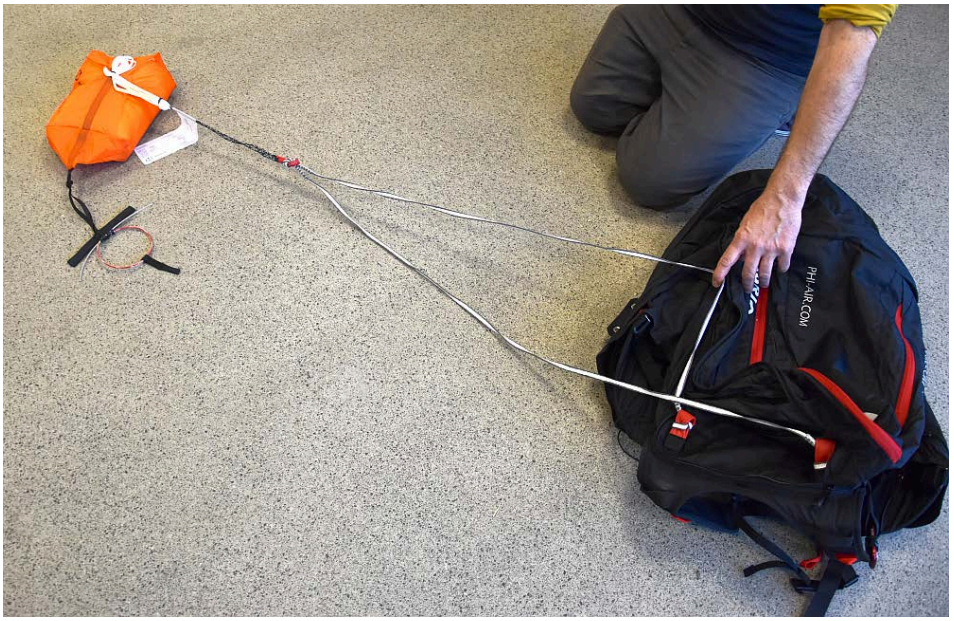
The rescue connecting lines are located in the back compartment of the CABRIO when delivered.
The suspension loops must be guided through the openings in the back section.
Make sure that the connection between the connecting line and suspension is correctly and securely looped!




Loop the harness rescue connecting lines into the rescue-system connecting line

Again, make sure that the connection is correctly and securely seated.





Stowing the rescue system in the CABRIO rescue compartment

Ensure correct orientation: the rescue handle and the fabric pyramid connected to it by a loop must point towards the opening of the rescue compartment. The opening of the inner container (with the loop of the rescue lines that keeps the inner container closed) must point DOWNWARDS.

WARNING!
The rescue connecting lines and their loops must be stowed spatially separated from the rescue handle in order to prevent blockage!




Closing the rescue compartment

Guide lines or nylon rods through the pin loops and close the rescue compartment forwards using the zip fastener.
Then remove the lines or nylon rods again!

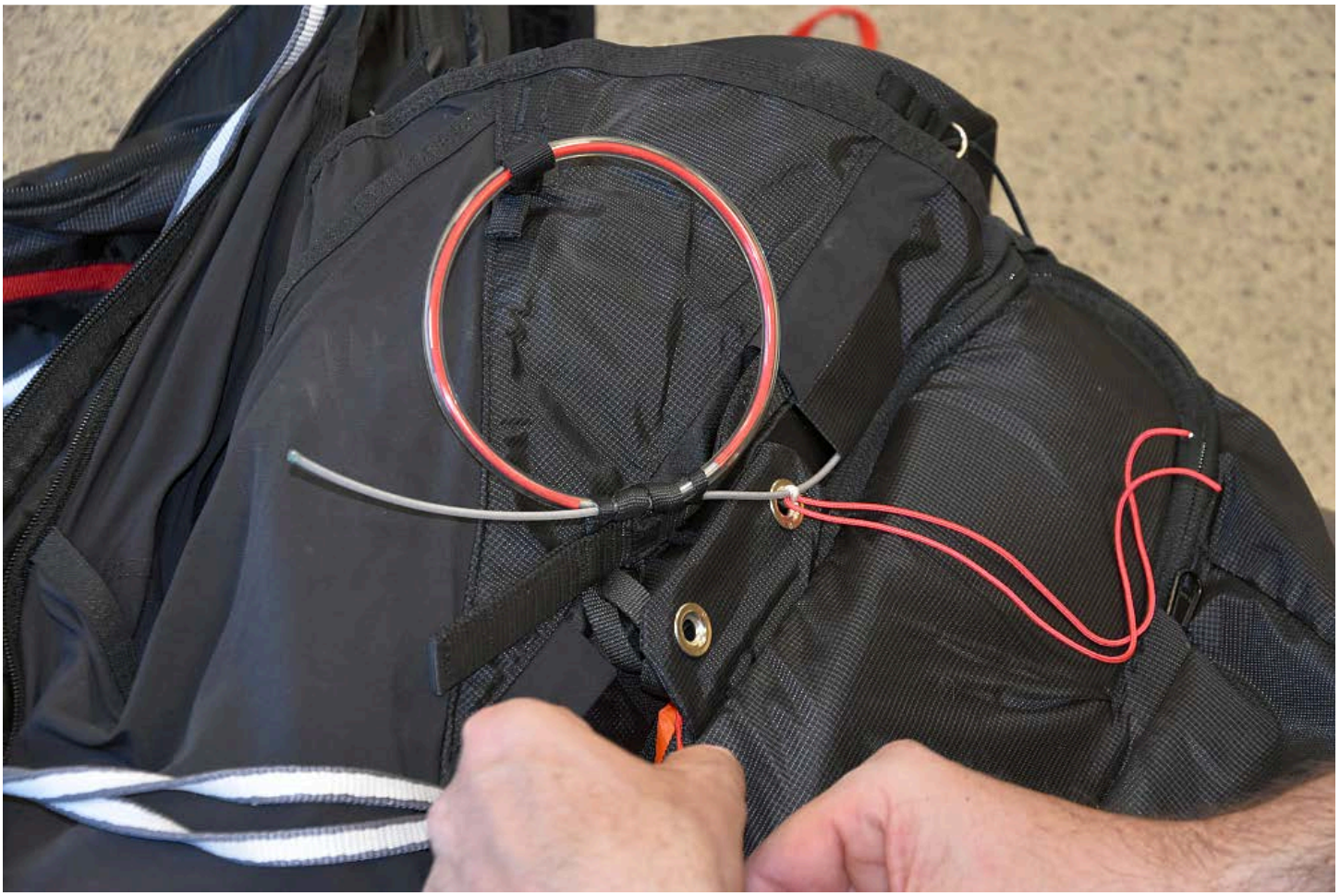



WARNING!
The zip fasteners of the rescue compartment must be fully closed and the sliders parked in the "garage"! The lines or nylon rods used for installation must be removed again!



Insert the rescue-handle pins into the pin loops

Guide the ends of the rescue-handle pins into the designated (lower) channel.



Close the connecting-line channel

Close the connecting-line channel upwards.



Finish installing the rescue handle

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



WARNING!
The rescue handle must release neither too easily nor with excessive force. A function test ensures that the rescue system works and gives you confidence.

Rescue-system function test

Optionally, a comprehensive function test of the rescue system can be carried out.
For this purpose, we recommend suspending yourself in a simulator or even a G-force trainer and deploying the rescue system while seated in the harness. The rescue container must be fully removable from the harness rescue compartment with a moderate pull on the rescue handle. A good, efficient throwing motion should be possible.

WARNING!
Before take-off, always check that the rescue system is in perfect condition: Are both pins secured? Are the zip fasteners of the rescue compartment fully closed and the sliders parked in the "garage"? Opening zip fasteners: a slider in front of the container opening can block it!

Optional protectors



The PHI CABRIO can be equipped with additional protectors in the back and side areas to provide particular protection for the spine and pelvis in addition to the impact protection (airbag) according to EN 1651:
Back protector in 2 different thicknesses / protection levels (1)
Pair of side protectors (2)

Removing the back section
The back protector is easier to install when the back section has been removed. It is connected to the seat section by 2 zip fasteners and 2 plastic clips (at the sides).
The side protectors are inserted on the left and right into pockets in the outer shell (accessible from the inside).





Installing the back protector

Fold the back protector slightly lengthwise (the wide section points downwards) and insert it into the designated pocket (mesh) on the back section of the CABRIO harness.







Installing the seat board

The CABRIO is delivered with the seat board installed. To remove it, we recommend unzipping the back section (at least at the top) or folding the back section slightly to the side.
When reinstalling it, make sure that the seat board is inserted into the correct pocket and that the hook-and-loop fastener is closed again.



Connecting the rucksack (CABRIO as a reversible harness)

There are 4 fabric loops in the back pocket of the CABRIO. These can be connected by plastic buckles to 4 loops in the CABRIO rucksack, turning the CABRIO into a reversible harness.





Installing the speed system

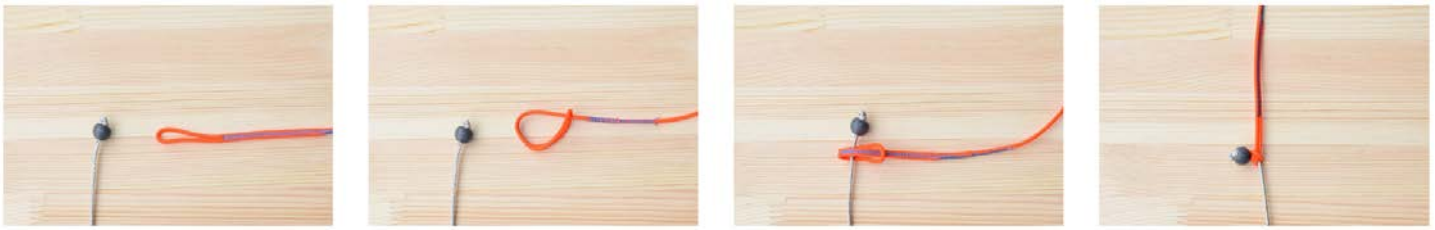
The CABRIO harness speed system runs in a straight and efficient path. It has a retraction mechanism which, in an emergency (deployment of the rescue system), ensures that the speed-bar pedal does not swing underneath the rescue container and block it. Make sure that, when not operated, the accelerator line has excess length and the risers are in their normal position: usually all the same length. With the legs extended, it should be possible to operate the maximum accelerator travel.

Correct length adjustment is important. If the setting is too short, there is a risk that the wing is permanently accelerated, which must be avoided in all cases. In addition, the accelerator pedal may become harder to reach.

If the setting is too long, it may no longer be possible to accelerate the wing to its maximum speed.

For the initial installation, we recommend setting the accelerator slightly too long so that the free travel can be assessed in flight. The accelerator can then be shortened by this free travel if necessary.

With the CABRIO, an optimum setting should make it possible to step into the accelerator pedal without using your hands.



The connection to the accelerator line can be made using Brummel hooks or another system (shown here looped around a ball), depending on the counterpart on the riser.

WARNING!
Do not adjust the speed system in flight; adjust it while suspended in a harness simulator! In flight, you must concentrate fully on flying, not on the harness!



WARNING!
When hooking in before take-off, as part of the pre-flight check, make sure that the accelerator line runs freely and does not rub anywhere!

CABRIO protector test

In the protector tests according to EN 1651, the CABRIO achieved new record values for airbag protectors:

15.5 g / 16.5 g (with / without installed rescue system).

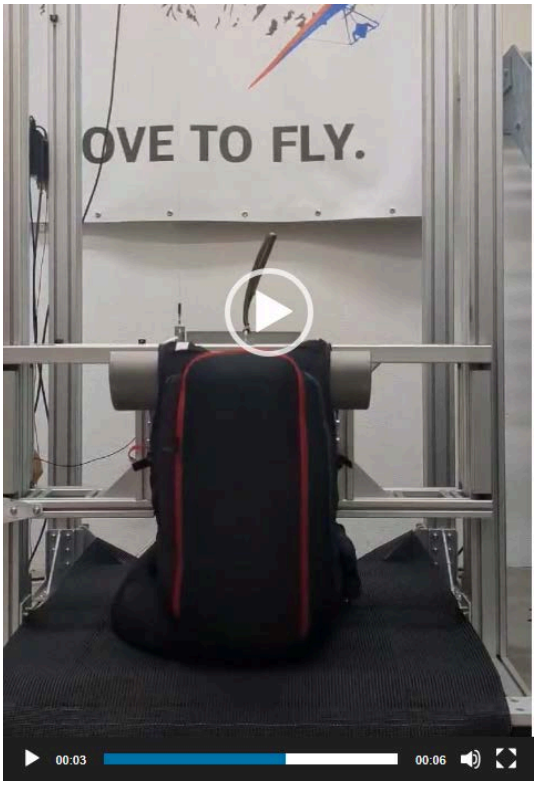
Unlike other certification tests, the CABRIO test was carried out without artificial, active ventilation!

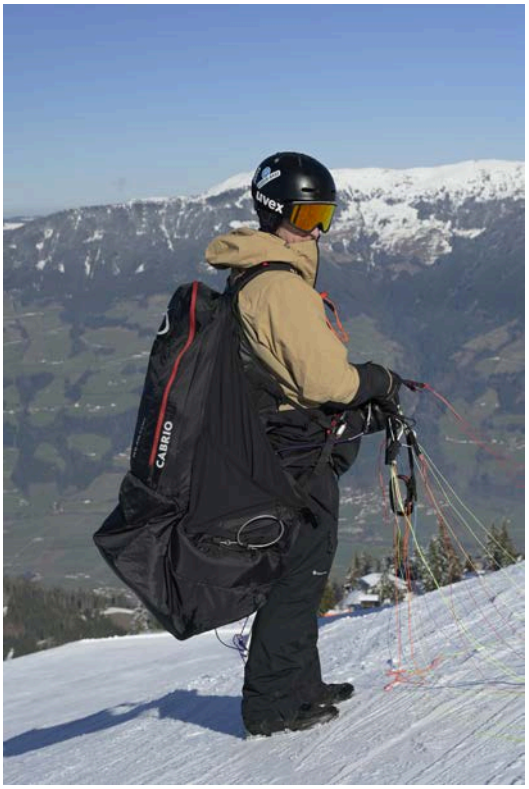
The protector was not inflated by a fan before impact!

The CABRIO double-ring Nitinol airbag is therefore a passive protector: the protector is functional even without active airflow.

This can reduce the risk of injury, particularly during take-off.

WARNING!
No protector can completely prevent injury!



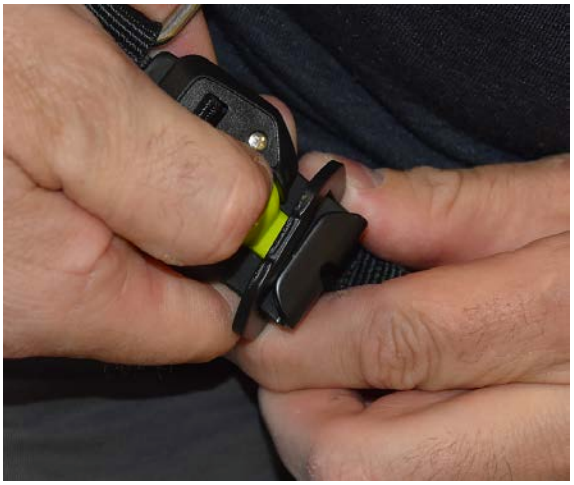


We designed the CABRIO protector so that it largely assumes its shape before take-off (without airflow) and has sufficient volume to provide good impact protection.

WARNING!
Make sure that the CABRIO protector has fully unfolded before take-off! No line or strap (e.g. camera attachment) may run underneath the harness if it could restrict the volume of the protector or interfere with the function of the rescue system!

Harness pre-flight check

Close the leg straps: the CABRIO leg-loop buckles are very secure due to their hook design and multi-action mechanism.



Close the chest connection.



Hook in the riser: close the main carabiner (connector) correctly. Check the orientation of the risers.

Connect the accelerator line (Brummel hooks).

Check the rescue handle and pins.

Protector fully unfolded and its function not restricted?

Before starting the take-off run, make sure that no lines can become caught on the rescue handle.

Winch towing

The PHI CABRIO is suitable for winch towing. The tow release must be attached to the main carabiners.

Training

The PHI CABRIO is an excellent training harness.
Thanks to CE certification as PPE/EPI Category II under Regulation (EU) 2016/425, the CABRIO is also suitable for use by an FFVL school in France.

Connectors
Only approved connectors (metal carabiners, quicklinks) may be used. Correct handling, orientation and locking, as well as inspection and replacement in accordance with the connector manufacturer's instructions, must be observed!

Care and maintenance

General handling information

With correct and careful handling, the harness will remain in technically perfect condition for many years, even with intensive use. During normal use, the following instructions should be observed:

Do not expose the harness unnecessarily to sunlight, for example by leaving it lying in the sun for a long time before take-off or after landing.

When packing, avoid unnecessarily sharp bending of the Nitinol rods in the protector wherever possible.

If the harness is wet or even just damp when packed, it must later be dried in a dry environment.

If the protector is subjected to an impact during landing or ground handling, it must be inspected by a specialist for possible damage.

Storage

Ideally, store the harness in a dry place protected from light. Permanent storage at very high temperatures (e.g. in a car in midsummer) should be avoided.

Cleaning

Only water and a soft cloth/sponge should be used to clean the harness (no solvents)!

Repair

Repairs should only be carried out by the manufacturer or by authorised service centres. If anything is unclear, please contact PHI directly: info@phi-air.com

Inspectio
n

The general inspection interval is two years, unless the inspector shortens the interval because the condition is borderline.

Commercially used harnesses (training, tandem flying) must in all cases be inspected annually. An annual inspection is also recommended for harnesses subjected to very high loads, e.g. more than 150 flight hours in two years, or when aerobatic manoeuvres are flown regularly. We also recommend an annual inspection if the harness is frequently flown in environments that place high stress on the material: very rocky areas, salt-laden air, or especially after contact with salt water.
In these cases, even more than otherwise, it is also the pilot's responsibility to inspect the harness regularly for damage.

Each inspection must be confirmed by the inspection stamp on the identification label. Failure to comply invalidates the certification.
For further information on the maintenance inspection, see the inspection instructions on the PHI website: Downloads: Check.
These are continuously updated according to the state of the art, experience and current knowledge.

Environmentally responsible behaviour

Finally, we would like to encourage everyone to practise our sport in a way that is as compatible as possible with nature and the landscape. In addition to obvious things such as not leaving litter behind, pilots should avoid frightening animals (birds of prey, wildlife) by flying close to them. Especially during the cold season, this stress can be life-threatening for animals.

Disposal

The plastic materials used in a paraglider harness require proper disposal. Please return worn-out equipment to PHI; we will dismantle and dispose of it.

PHI

PHI, a brand of Papesh GmbH
Grillparzerstrasse 10
6067 ABSAM
Austria

Technical data

CABRIO							
Size		**XXS**	**XS**	**S**	**M**	**L**	**XL**
Main protector		Self-inflating airbag with 2-ring Nitinol system					
Optional protectors		D3O Level 1 or 2					
Seat board width	cm	29	31	32	34	35	37
Seat board length	cm	25	27	28	30	31	33
max. hook-in weight	kg	120	120	120	120	120	120
Main suspension height	cm	39	39	39	41	43	44
Main suspension distance	cm	32-40	32-40	32-40	34-44	36-46	39-49
Rescue compartment volume	cm³	3660	3660	4000	4470	5040	5950
Weight, bare	kg	2,5	2,6	2,7	2,8	2,9	3,1
Weight with seat board	kg	2,8	2,9	3	3,1	3,2	3,4
additional with rucksack	kg	3,45	3,55	3,65	3,75	3,85	4,05
Weight with optional additional D3O protectors without rucksack (up to approx. 650g)							
D3O BP4 L1 back	kg	0,384	0,384	0,384	0,384	0,384	0,384
D3O BP4 L2 back	kg	0,492	0,492	0,492	0,492	0,492	0,492
D3O Diablo L2 hip: pair	kg	0,15	0,15	0,15	0,15	0,15	0,15
Complete weight Level 1	kg	3,334	3,434	3,534	3,634	3,734	3,934
Complete weight Level 2	kg	3,442	3,542	3,642	3,742	3,842	4,042