

independence gliders for real pilots

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Owner's manual

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Harness Spider

With the Spider you got one of the most comfortable and most functional harnesses, which is available on the market at present. We thank you for the confidence, for buying the Spider harness.
Please read this operating instructions carefully and consider, that Independence can not be made liable for accidents and damage, which result from disregarding of the operating instructions.

Technical description:

- DHV certified back protector (P2)
- Passing-through shoulder belts for optimal comfort
- maximum pilot weight: 120 kg
- unloaded weight: 4.5 kg
- seat position in flight adjustable

Overview:



- a) Rescue system container
- b) Lateral chest-belt
- c) Safety device lateral chest belt
- d) Safe-T-System
- e) Fixing loop for leg-strap (optional)
- f) Main suspension
- g) Attachment for towing release
- h) Rings for speed-bar-line
- i) Rescue system release-handle



1. Adjustment possibilities:

Adjustment possibilities exist at the shoulder belts, the chest belt, the lateral chest belts and the leg loops. By the versatile adjusting possibilities of the Spider we recommend in any case that all adjustments are done in a simulator before the first flight to guarantee an optimal seat comfort.

Adjusting of the chest belt:

The chest belt is closed with the Click-Lock-buckles. If the chest belt is closed, also the falling out safety device (Safe-T-System) is closed. The Click-Lock-buckles must be closed audibly! The chest belt should not be tightened too closely. Unintentional opening of this buckle is not possible, because both buttons at it's side must be pressed at the same time to open.

Adjusting of the shoulder belts:

Please note that with correct adjusting the shoulder belts are felt with light pressure on the shoulders. With the shoulder belts you adjust the harness on the pilot's height, but also you adjust the seat position between sitting and lying.

Adjusting of the lateral chest belts:

Adjusting the lateral chest belts takes place as third step and offers on the one hand again the variation of the seat position between sitting and lying, on the other hand you adjust with the lateral chest belts the most comfortable seat position. During adjusting it should be paid attention to the fact that the body load is distributed evenly on shoulder belt and lateral chest belt. Please take care that the lateral chest belt is attached correctly to the main suspension's carabiners as shown at point c).

Adjusting of the leg loops:

When you put the harness on, please take care that the Click-Lock-buckles are closed correctly and audibly. The leg loops should be fastened tight but should leave still enough space, for the starting and landing phase, where the legs should have still some space to move.

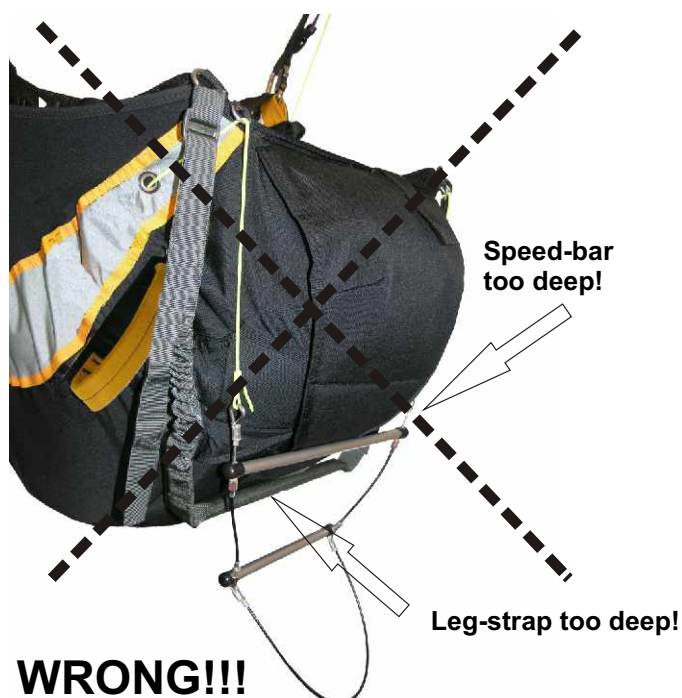
Attaching the speed-bar:

The speed-bar runs from the riser as follows: rear ring at the lateral cover, rear pulley-roll at the seatboard, frontal pulley-roll, frontal ring at the cover, small ring at the frontal edge of the seatboard.

You have to take care in any case, that the length of the speed-bar is adjusted so short, that the release of the rescue-system is not hindered in any way (see illustration). Out of this reason the length of the speed-bar-line have to be adjusted in a simulator before flight!

Attention: If you use an additional fixed leg-strap, you also have to take care, that the function of the rescue-system-container under the seatboard is not hindered in any way!

If not in use, both the speed-bar and the leg-strap can cause the problem that they can be blown behind the rescue-system-container, what makes a release of the rescue-system impossible!!



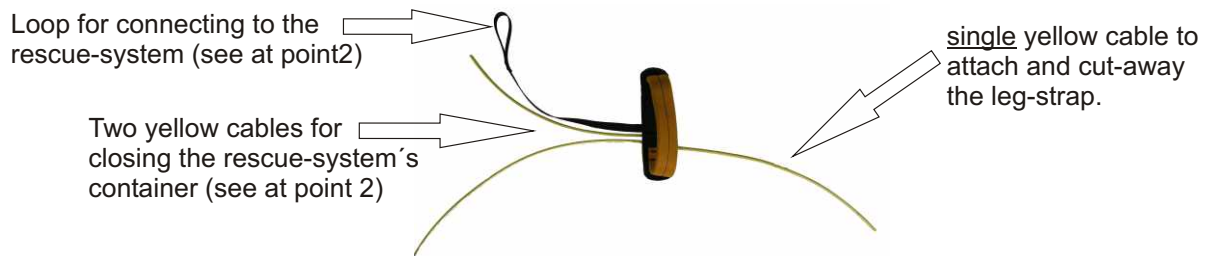
Attaching a fixed leg-strap with cut-away-system:

By attaching a leg-strap with a cut-away-system, a release of the rescue-parachute cuts off the connection of the legstrap automatically on one side. Thereby the rescue-parachute can be released correctly even if the length of the legstrap is adjusted long.

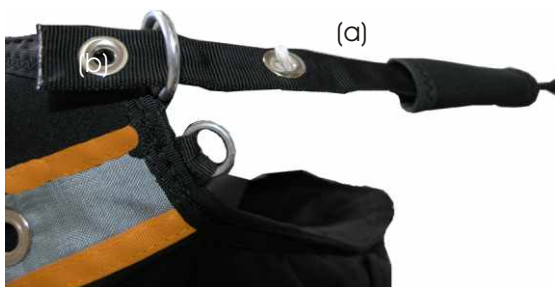
Attaching like follows:

First the rescue-system have to be built-in as mentioned under point 2.

Description rescue system release-handle:

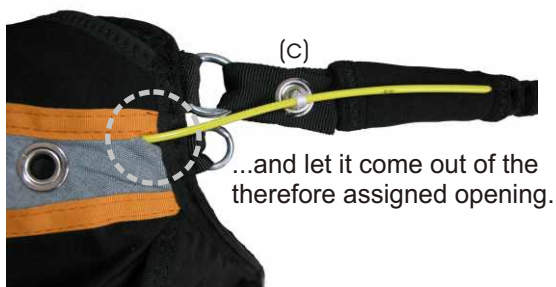


Now the separable side of the legstrap is put through the upper, bigger metalring on the right side at the frontal edge of the harness. The white loop runs first through the lower ring (a), and then through the upper ring (b) of the legstrap. Then it gets fixed with the single yellow cable (c).



This single yellow cable runs from the rescue-system's release-handle to the cut-away system of the legstrap inside of the harness, as you can see in the picture.

Finally the neopren-cover has to be put over the end of the cable, and the rescue-release-handle has to be attached as mentioned under point 2. (Built-in of the rescue-system).



If an additional speed-bar is used at the same time, you have to take care that both systems (the lag-strap and the speed-bar) are attached correctly and don't hinder each other in any way, to be sure that both are working properly.

Attention:

By using this cut-away-system another part is added to the release-mechanism of the rescue-system, which can hinder the release of the rescue-system, if it's not attached or maintained correctly. Out of this reason the function has to be checked in any case by a compatibility-check.

Furthermore the function of the cut-away-mechanism has to be checked before every flight!

This is especially important if you use the leg-strap and a speed-bar at the same time, because the speed-bar's line is running just a few centimeters below the release-cable of the leg-strap's cut-away mechanism.

2. Built-in of the rescue-system:



Enclosed handle have to be attached as short as possible at the inner container of the rescue-system.



Bridle of the rescue-system have to be connected with the bridle of the harness..



Put the bridle into the container. It must be between the inner-container and the harness. The connection to the handle must be also between the inner-container and the harness, as shown on the picture. That means it has to be on the inner side. So you can be sure that the rescue-system can be pulled out easily.



Close the container with two packing cords. First the lateral container flaps are closed. The connection of the handle runs between the splitted lateral flaps. You have to take care that the connection of the handle is not hindered in any way and is still long enough, so that you can be sure that the pull is coming first on the yellow closing-cable and not on the connection to the inner container.



Now close the frontal container flap, and fix it with the lower yellow closing-cables. Never ever put the long part of the cable through both loops!!!



Put the both ends of the handle in the two therefore assigned openings. Put in the flaps 1) and 2).



Finally, like already mentioned earlier in the text, you have to put the free single cable into the harness' channel...



...and let it come out of the small opening at the frontal edge of the harness.

Attention:

After every installation of a rescue-system in a harness there must be a test if the opening force is between 2 and 5 daN. If harness and rescue parachute are combined the first time a compatibility check have to be done by a authorized person!

Built-in of the back-protector:

It's just allowed to use the therefore assigned back-protector P2. To built the P2 in or out just open the lateral cover of the rescue-system-bridle. Now you see the zipper to the protector-bag.

By opening this zipper the protector P2 can be built in or out. You have to take care that the P2 is fixed against sliding around in it's bag. Therefore there are hook and loop fastener on the protector-bag and on the protector itself. In the back area of the harness, in elongation of the lateral chest-belts is a belt inside the harness under which the back-protector has to be put.

Tandem flights:

The Spider harness is suitable as a passenger's harness for biplace flights. It's not suitable as pilots harness, because the rescue container is too small for a biplace-reserve.

Towing:

The Spider harness is generally suitable for towing.

Mounting the towing device:

The towing device is mounted with suitable connecting links at the attachment points g) below the main suspension.

Note: The used connecting links must stand at least 150kp per side! If you are not sure about the mounting, an authorized person or the manufacturer should be consulted.

Life span, replacing time of construction units, repair hints:

The harness Spider was built for high loads and strong use. Accordingly, for the choice of the materials particularly high criteria were set. However the life span depends also on the treatment of the harness by the pilot, so we recommend to check the harness from time to time, if there are faulty or damaged parts, which should be replaced or repaired then.

Especially take care of defective seams, which should be immediately repaired by an authorized workshop. Further you have the possibility to send us the harness for checking.

In order to prevent problems with the harness we recommend:

- avoid handling with fire and sharp edged articles near your harness.
- avoid unnecessarily long sun effect, because ultraviolet radiation destroys the molecular structure of the material
- avoid the contact with seawater or acid liquids.

Maintenance and control:

The harness Spider is more or less maintenance-free. But regular control in short periods gives you the guarantee of an unrestricted function of your belt system. Take particularly care that the Click-Lock-buckles stay free of dirt. If needed you can oil the Click- Locks a little bit.

DHV-Certification:

Deutscher Hängegleiterverband e.V. im DAeC
DHV/OeAeC-Technikreferat
LBA-anerkannte Prüfstelle für Hängegleiter und Gleitsegel
Beauftragter der österreichischen Luftfahrtbehörde



Luftsportgeräte-Kennblatt Gleitsegel-Gurtzeug

Geräte-Kennblatt Nr.: DHV GS-03-0323-05 Ausgabe: 0 Datum: 26.09.2005

I. Musterprüfung

1. Gerätemuster: Spider
2. Hersteller: Fly market Flugsport-Zubehör GmbH & Co. KG
3. Datum der Musterprüfbescheinigung: 26.09.2005

II. Merkmale und Betriebsgrenzen

1. Gurtzeuggruppe: GH
2. Gerätegewicht (ohne Packsack kg): 5,2
3. Maximal zulässige Anhängelast (kg): 120
4. Integrierter Rettungsgeräte-Außencontainer: Ja
5. Gurtzeugprotector-Muster: Fly market Flugsport-Zubehör GmbH & Co. KG - P2
6. Sonstige Besonderheiten:

III. Betriebsanweisungen

Betriebsanweisung in der genehmigten Fassung vom 23.06.2005


Deutscher Hängegleiterverband e.V.
Marschner Straße 2, 83703 Garmisch