

# independence

## gliders for real pilots

www.independence-world.com

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### Owner's manual

20.06.2007

## Harness "Fusion" / "Fusion Easy"

With the Fusion/FusionEasy 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 Fusion/FusionEasy 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
- passing-through shoulder belts for optimal comfort
- maximum pilot weight: 120 kg
- unloaded weight: Fusion: 4,5kg / Fusion Easy: 4,2kg
- seat position in flight adjustable

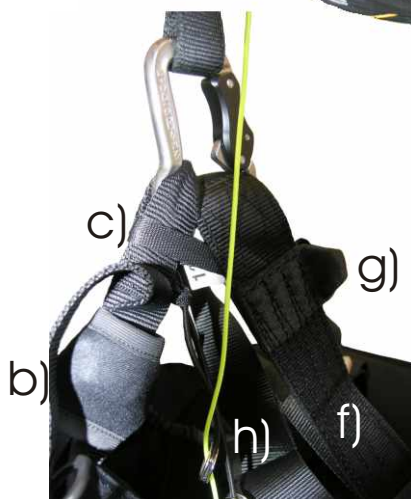
### Übersicht:

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

Model version "Fusion Easy":  
 (without integrated rescuesystem-container)



Model version "Fusion"



## 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 Fusion/FusionEasy we recommend in any case that all adjustments are done in a simulator before the first flight to guarantee an optimal seat comfort.

### Adjusting the chest belt:

The chest belt gets closed by the new PT-Lock-buckles. To open it you only have to push the central button. The advantages of the new PT-Lock-buckles are a very light weight and a very high stability.

If the chest belt is closed, also the falling out safety device (Safe-T-System) is closed. The PT-Lock-buckles must be closed audibly! The chest belt should not be tightened too closely. An unintentional opening of the chest belt is not possible.

### 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 (only at model version "Fusion"):

The line of the speed-bar runs from the risers as follows: Upper ring (at rubber-cord (h)), rear pulley-roll at the seatboard, lower ring (at rubber-cord (h)), frontal pulley-roll. At the frontal edge of the harness the line is running out of the harness for mounting the speed bar.

This sequence of mounting makes it possible that the speed-bar (if attached to the risers) is pulled backwards to the edge of the seatboard during take-off and when it's not activated.

The length of the speed-bar's line must be adjusted in a simulator before flight!!!

## Connection of the rescue parachute:

### Fusion / Fusion Easy:

The model version "Fusion Easy" does not have an integrated rescuesystem-container, but moreover it is identical to the "Fusion". External outer- and frontcontainers to equip the "Fusion Easy" with a rescue-system, are supplied by us as accessories.

The model version "Fusion" has an integrated rescuesystem-container. On the following pages you can see how the rescuesystem have to be built-in into the "Fusion":



Enclosed handle have to be attached asymmetrically at the lateral loop of the rescue-system's inner container.



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



...and put the bridle of the harness in the therefore assigned slit. Then turn the harness upside down, that makes it much easier to build in the rescue-system. Now put the bridle of the rescue-system into the rescue-system's container of the harness. After that place the rescue-system in the open container's flaps.



The connection of the handle to the inner container have to be placed like shown on the picture. It must be between rescue-system and harness and have to show to the handle's side of the harness. 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 cables and not on the connection to the inner container!



Close the container with two packing cords. First close the flaps 1) and 2).



Now close the flap 3), and put the yellow cables through the openings I and II as shown on the picture.



Close the flaps 4) and 5). Fix flap 5) already with the yellow cable and remove this packing cord! Finally close flap 6)...



...and fix it with the other yellow cable. Also remove this second packing cord! Check again that the connection between inner container and handle is long enough and a release of the rescue-system is not hindered in any way! Then close and fold the flaps A and B.



Place the handle on the little velcro and put the sides of the handle in the therefore assigned openings. Put in the flaps A and B. Therefore flap A have to be folded.

Finally secure the handle with a special thread.(see next point!).

### How to secure the pin

To avoid an unintentional opening the DHV prescribe to use a special thread to secure the handle. This defines a minimum opening force. This special thread must be put through the loop at the harness and the loop at the handle, and have to be fixed by a knot.

To secure the pin it is only allowed to use certified material because if the strength of this material is too high the safe operation of the rescue system is not guaranteed.

This thread is supplied by Fly market GmbH & Co. KG! **Do not use** other threads which may look the same!

### 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 is a Nylon cover inside the protector-bag, under which the protector have to be put. Furthermore, 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 "Fusion" / "Fusion Easy" harness is suitable as a passenger's harness for biplace flights. It's not suitable as pilot's harness, because the rescue container of the "Fusion" is too small for a biplace-reserve (The "Fusion Easy" has no integrated rescue-container!)

### Towing:

The "Fusion" / "Fusion Easy" harness is generally suitable for towing.

### Mounting the towing device:

Model version "Fusion": The towing device is mounted with suitable connecting links at the attachment points g) below the main suspension.

Model version "Fusion Easy": The "Fusion Easy" does not have special attachment points for the towing device. The towing device have to be attached at the main carabiners of the harness.

**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 Fusion/FusionEasy 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 Fusion/FusionEasy 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-03-0360-07* Ausgabe: 0 Datum:

#### I. Musterprüfung

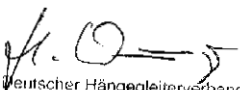
1. Gerätemuster: *Independence Fusion*
2. Hersteller: *Fly market Flugsport-Zubehör GmbH & Co. KG*
3. Datum der Musterprüfbescheinigung: *12.07.2007*

#### II. Merkmale und Betriebsgrenzen

1. Gurtzeuggruppe: *GH*
2. Gerätegewicht (ohne Packsack kg): *4,5*
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 20.06.2007*

  
Deutscher Hängegleiterverband e.V.  
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