



Low hangpoint PPG harness

# User manual



Please read this manual carefully before your first flight.

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paragliders

# Congratulations !

Thank you for choosing the Powerseat Comfort harness. We have done our best to present you with highest quality product, fulfilling all safety requirements and offering maximum functionality.

Please read this manual carefully before using the harness for the first time. This will help you utilize all features provided by the Powerseat Comfort, thus increasing comfort and joy of each flight.

We wish you a lot of safe and enjoyable airtime!

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## 1. Safety

Paragliding is a potentially hazardous sport. When flying a paraglider you have to accept risks of injury and/or even death. Incompetent or improper use of the harness may increase those risks. In case of any doubts please ask your dealer or manufacturer.

**Dudek Paragliders do not bear any responsibility for damages or injuries resulting from paragliding activities.**

## 2. Description

When working on the harness we took into consideration all suggestions - those of the test pilots, regular users and paramotor manufacturers. Our main task was to keep high comfort of operation without increasing weight. Powerseat Comfort is designer for both novice and experienced PPG pilots. It can be used for both high and low highpoints harnesses. It is suitable for any powered paraglider (if the manufacturer will not indicate otherwise). Wide adjustment range allows the harness to fit any pilot's needs. Strap system offers safety and stability, yet leaves plenty of space for starting run, effective steering and full exercise of the glider's capabilities. Harness is ready for using the speedsystem.



### 3. Additional equipment

Carabiners PowerSeat Comfort is sold without carabiners.



Cockpit. If you are going to use the cockpit, the rescue chute should be placed on right or left side of the harness.



Frontcontainer. Allows for fixing the rescue chute in front.



Side container Allows for fixing the rescue chute on side.



V-strap, trapeze and rectangle closed quicklinks. Necessary to attach the rescue chute with the harness. If the rescue chute is to be connected to the V-strap without a metal quicklink, then the two closed rectangles will be enough (to connect the V-strap to the harness).



Speedbar. Speedbar is necessary to operate the speedsystem.



#### 4. Installing the rescue chute.

The rescue chute installed beforehand within front- or other container must be connected to the V-strap. Two methods are acceptable: with a metal connector (rectangular quicklink C6 or C7) or without it. Both methods are pictured below.

With metal connector





Without metal connector Leading the rescue chute connecting strap through the loop of the V-strap.



Both ends of the V-strap must be connected with closed C6 rectangles to red cloth covered points on the harness as shown below.



The ends of the V-strap must be secured with elastic O-rings. Trapezoids connecting V-strap to the harness must be tightened with a wrench, so they won't get loose due to e.g. vibration. Rest of the V-strap must be placed in tunnels on the back of the harness. Side tunnels are placed on both sides of the harness. Thus the V-strap can be led on left or right side, according to needs.



The V-strap must be led outside all parts of the paramotor and harness.

V-strap tunnels

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## 5. Speedbar

Pushing the speedbar increases your airspeed. PowerSeat Light originally is not equipped with a speedbar, it must be purchased as additional equipment. The installation and adjustment of a speedbar must be executed as follows:

1. Attach lines to the speedbar (if not assembled already)
2. Place the lines in the harness, leading them consecutively through:
  - metal rings (placed under the seat plate front edge)
  - Duroll pulleys on both sides of the seat plate
  - Smart Pulleys on the risers place a stopper on the line above the rings
3. Fix the adjustable speedsystem hooks to the lines' ends.



Smart Pulley on the riser

Duroll pulley on side of the seat plate

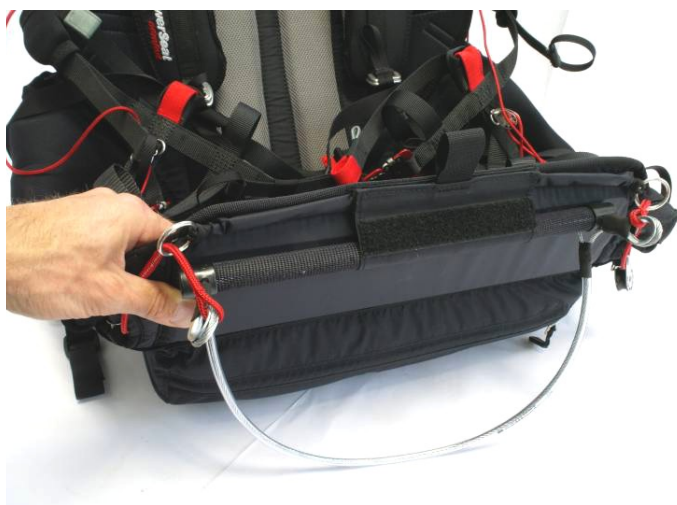
Metal ring under seat plate front edge

The speedbar must be adjusted so that pulleys on the risers get together when the bar is fully depressed. Assembly must be checked in flight in smooth conditions on safe altitude. When necessary adjust the lines' length after landing.



**Speedsystem lines cannot be too short. When the speedbar is not depressed in flight, lines should be slightly slack.**

On the front of the seat plate there is a receptacle for the speedbar. It's there to hold the speedbar in place during take-off.



## 6. Cockpit

The cockpit should be installed with original straps coming in the set. Since the harness has no additional points to fix the frontcontainer, straps must be attached to the riser above the chest strap. It is possible to use a cockpit of another manufacturer. In such case it should be installed according to its accompanying manual.



## 7. Frontcontainer

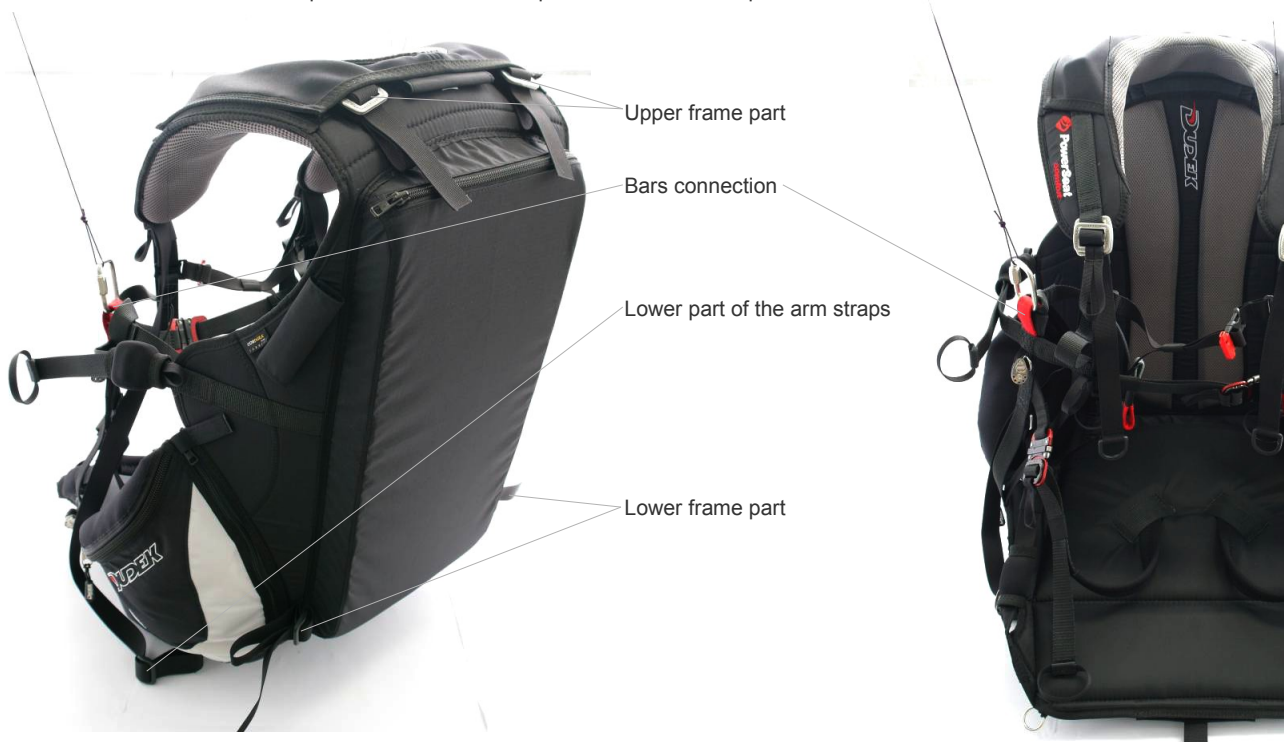
The frontcontainer should be installed with original straps coming in the set. Since the harness has no additional points to fix the frontcontainer, straps must be attached to the riser above the chest strap. It is possible to use the frontcontainer of another manufacturer.. In such case it should be installed according to its accompanying manual.





## 8. Harness/paramotor assembly

Harness should be fixed to the paramotor frame in four places marked on the pictures.



### Upper frame part

Attach the harness to the upper frame part in places designed by the paramotor manufacturer. Adjust it so that it is connected as tight as possible.



### Lower frame part

Attach the harness to vertical frame tubes as shown





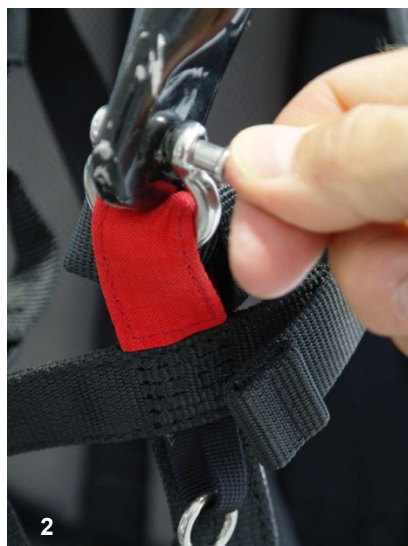
### Lower part of the arm straps

Attach the harness to the lower frame part in places provided by the paramotor manufacturer.



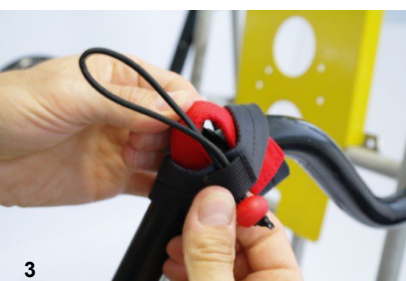
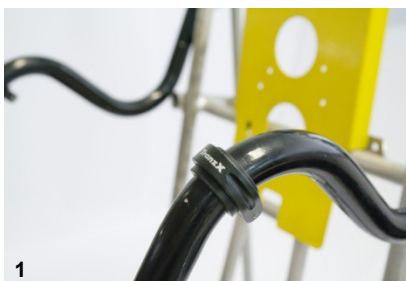
### Bars connection

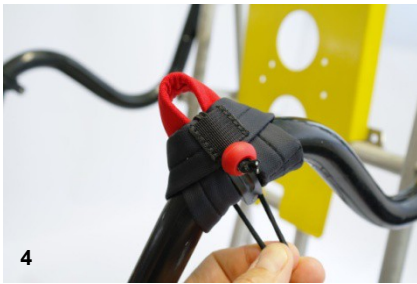
Connect the bars to the hangpoints with shackles or any other method designed by paramotor manufacturer.



## 9. Harness/paraglider connection

In order to connect harness to risers of the paraglider place on the bars a loop to host the carabiner (supplied with the harness).





Place the carabiners in those newly created hangpoints, then add safety straps (marked with red cloth) in the carabiners.



Safety strap

Carabiner

Carabiner loop

Safety strap





## 10. Harness adjustment

Correct adjustment of the harness has considerable effect on comfort and safety of operation. The picture below shows points to be adjusted before first flight. It is necessary to hang somewhere the paramotor with attached harness in order to try it out and conduct initial adjustment. After first flights further adjustments will be inevitable, as exact adjustment can turn impossible without working paramotor.



### 10.1 Arm straps

Their length must be adjusted so that it is possible to stand straight with the paramotor on the back. In general they should be set short as possible. In flight the straps remain slack and it is advised against tightening them.

### 10.2 Side straps

Low bars make possible to separate pilot's body from the paramotor's frame. Their length must be chosen so that pilot's back will not touch the frame. Such setting will render paramotor's vibration less irksome.

### 10.3 Seat plate extension angle

This adjustment will position the seat plate extension plank in most comfortable angle. During launch and landing the extension plank will shift together with the seat plate, thus not requiring any additional tuning.

### 10.4 Chest strap

Keeps the pilot safely in the harness. Its length must fit the paramotor bars width.

### 10.5 Leg straps

Keep the pilot safely in the harness. Their length must be chosen so that pre-flight movements and starting run will not be hindered. However, too long straps will complicate sitting in the harness after launch.

## 11. Pockets

Powerseat Comfort features two side pockets and a bigger one under the seat. Side pockets are accessible in flight and you can place there smaller objects like keys, phone etc.



## 12. Before flight

Before each flight a close inspection of the harness is necessary. For your own safety check if:

- the harness has no visible damages
- rescue chute container is properly closed and secured with pins.
- release handle of the rescue chute is properly fixed and formed (in transport the handle can be deformed, so you have to reconfigure it as easy to grab)
- leg and chest straps are closed
- arm and side straps keep their settings
- all pockets are zipped close
- main carabiners (harness/paraglider) are closed, secured and in good condition
- speedbar is connected to paraglider's speedsystem

## 13. Using the rescue chute

Rescue chute should be used as final means when it's the only way to get the paraglider out of dangerous situation. Using the rescue chute when the paraglider is rotating is dangerous. As long as the altitude margin lasts you have to partially or completely stop the rotation.

In order to use the rescue grab the release handle and with quick move detach it from the harness, throwing it with the rescue chute as a far possible away from the rotation (if present). After opening of the chute collapse the paraglider, pulling rear rows of the suspension lines. For landing adapt position as for parachuting landing fall, that is keep your legs together and slightly bent in knees.

## 14. Landing

Before landing slide out of the harness and assume proper position. Landing when sitting is unacceptable and highly dangerous. Risk of damage to your spine is very high. Land always on your feet, with a few steps when necessary.

## 15. Waterlanding

Waterlanding can be dangerous due to risk of drowning. If landing in water is inevitable, unlock leg and chest straps a couple of meters above water. Slide out of the harness shortly before entering water to avoid tangling in lines or other parts of the paraglider.

## 16. Tandem flying

Powerseat Comfort was not designed for tandem flying and it is not advisable to use this harness for passenger..

## 17. Clearing and storing the harness

All materials for the harness were carefully selected for their quality and durability. Keeping the harness in good order and condition will grant you satisfying operation for a long time. The harness is best cleaned with a wet sponge, maybe a bit of soap. Do not use detergents or solvents. If there is a lot of mud, use the brush first before wet cleaning.

In case of completely soaked harness (e.g. after water landing) dry it in a well aired place, away from direct sun operation.

Soaked rescue chute always has to be completely removed from the harness, dried and packed again by a licensed person.

In case of a long-time storage keep it either in the backpack or loose, but in any case in a well ventilated room, away from sun rays.

Unfortunately certain discoloration of some harness parts is unavoidable over time and this is yet another reason for not exposing it to the sun more than necessary.



## 18. Operation and repairs

Periodic control of the harness will keep it in good shape for a long time.

After each use of rescue chute thoroughly check entire harness for damages, paying particular attention to straps and seams.

Aluminium carabiners are to be replaced each 5 years or 300 hours airtime. Scratched or damaged carabiners cannot be used anymore and have to be replaced at once.

Using damaged harness is out of the question. In case of any doubts please contact your dealer or manufacturer and/or send it to a workshop for closer inspection.

## 19. Technical data

Size	Suspension height cm	Seat width cm	Pilot height cm	Max. pilot weight kg	Weight of the harness *
S/M	38,5	39	160-175	100	3,00
L/XL	40	39	170-195	100	3,20

\* Harness weight without carabiners

- Cloth Cordura 5012 Ripstop, Nylon
- Side straps Polyamide, Polyester
- Buckles Sup'Air, AustriAlpin
- Plastic parts ITW Nexus

Harness is offered without carabiners and speedbar.

Since Dudek Paragliders products are subject to constant improvements, some minor differences are possible between pictures in manual and actual products. Dudek Paragliders reserve rights to introduce such changes without individual notice



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