



User Manual

# POWERSEAT LIGHT

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**Congratulations!**

Thank you for choosing the Powerseat Light 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 Light, thus increasing comfort and joy of each flight.

We wish you a lot of safe and enjoyable airtime!

**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

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

When designing this harness, we took into account suggestions of our test pilots, as well as those of paramotor manufacturers and regular users. The goal of this project was to create a very light PPG harness. We succeeded in achieving a weight of 2,35 kg in M size, which was possible due to extensive use of light and strong materials, like carbon fibre or Dyneema.

Powerseat Light is manufactured in three sizes: S, M and L. The harness is equipped as standard with ball-bearing Dudek Smart Pulleys. Optionally, Ronstan 20 and Ronstan 30 pulleys can be used instead. The harness has two pockets: one on the side and one under the seat plate. The rescue parachute is placed in the side container. The container and the side pocket are interchangeable.

Powerseat Light is meant for paramotors

with movable bars and low hangpoints. It can be used with and PPG-dedicated canopy unless its producer says otherwise. The adjustment range of the harness will fit all pilots. The harness straps system allows for effective control and full use of the paraglider's capabilities.

**Warning:** Due to the use of lightweight materials in the construction of the harness, it is more prone to damage and is not recommended for competition flights.





- 1 Hangpoint of the harness.
- 2 Upper frame hangpoint.
- 3 Lower frame hangpoint.
- 4 Connection of the lower shoulder straps end.
- 5 Carabiner loop.
- 6 Safety strap.



### Harness hangpoint

Connect to the paramotor bars as described by its manufacturer. Usually, metal shackles of proper strength are used.

### Upper frame hangpoint

Connect to the upper part of the frame as described by its manufacturer.



### Lower frame hangpoint

Connect to the vertical parts of the frame, taking care that the connection is not too short.



**Note:** too short connection here can lead to damaging the harness.

### Connecting the lower end of the shoulder straps

Connect them to the frame vertical parts in the lower area of the frame. Ideally, use dedicated points, given that the paramotor

manufacturer provided them.

### Carabiner loops

Put the carabiner loop on the frame bar and lock it with a rubber. Then you have a ready hangpoint to connect the harness to the paramotor.



### Safety straps

Put the blue end of the strap into a hangpoint of the harness, and the orange one into a carabiner.



Before installing the rescue chute in a side container, attach the V-riser to a connection strap. Use the o-rings to keep the straps in place on the metal quicklinks (Maillon Rapide C6 or C7). Tighten the quicklink with a wrench, so that it will not get loose. Finally, secure the connection by putting on a neoprene cover.



Install the release handle on the rescue chute bag.



**Note:** Use the central loop of the bag. Do not fix the handle to side loops.

Place the rescue parachute in the container, making sure that the v-strap protrudes from the container on the appropriate side.

Close the container starting with flaps 1 and 2. Use assisting lines and pins. Then close the #3 flap using proper pins of the release handle.

Insert the ends of the pins as well as tips of the release handle into their pockets.



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Close the pin cover with velcro, put inside the remaining material of the flaps and form the container.



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Fix the V-strap with velcro too, so it will not accidentally slip out of the container.



**Caution:** To avoid accidental opening of the rescue system, pins closing the container must be checked before each flight!

The rescue chute must be periodically aired and repacked according to its manual. The Powerseat Light harness will best accommodate light rescue chutes with a suitable surface's area, like Globe Light 135 manufactured by Dudek Paragliders. However, use of rescue parachutes by other manufacturers is possible too, as long as their dimensions when packed do not exceed those of the container.

**Side container's volume:**

	<b>S</b>	<b>M</b>	<b>L</b>
Min [cm3]	3900	4300	4600
Max [cm3]	4900	5400	5800

**Caution:** After each installation of rescue chute in a container, a compatibility test is necessary. In order to do that, hang the harness, equipped ready for flight. Seat down in the harness and assume your usual position in flight. Grab the container release handle and pull it to the side in a resolute effort, so that the parachute is completely out of the container. Still, do not throw it away, so that the bag remains closed. If the trial was successful, put the rescue back into the container.

If, however, the parachute could not be released properly, possible reasons may

include:

- Too big rescue chute compared to the container's dimensions (after airing and repacking the parachute is usually slightly bigger than a new one)
- Pulling the release handle not strong enough or in wrong direction (to the front, back or up instead of to the side)
- The length of pilot's arm can be a factor in this case. Especially small pilots can find it difficult to throw the chute away properly.
- Be aware that a cumulation of unfavorable circumstances, aggravated with G-forces in possible spiral may render opening the rescue chute difficult or outrightly impossible.

After installing the rescue chute, attach the container to the harness and connect the ends of the V-strap to the points on the shoulder straps, using two Maillon Rapide C6 quicklinks. Keep the tapes in place with rubber O-rings. Tighten the squares with a wrench to avoid unscrewing them accidentally. Place the V-strap in its tunnels and close them with velcro.



**Note:** The V-strap must be led outside of any other parts of the harness/paramotor.





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 **1**
  - pulleys on both sides of the seat **2**
  - pulleys at the backrest **3**
3. You can put a stopper on the line above these pulleys.





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.

**Note:** 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.





For a more smooth speed-system operation you can optionally use the Ronstan pulleys. The set contains:

- Ronstan 20 pulley  
2 pcs
- Ronstan 30 pulley  
2 pcs
- 80 mm Dyneema loop  
2 pcs
- 90 mm Dyneema loop  
2 pcs

Put your Ronstan pulleys where the standard Smart Pulleys were (after removing them). Use the Dyneema loops to fix the Ronstan 30s at the backrest, and the Ronstan 20s at the seat of the harness.



Attach risers of the canopy to carabiners, taking care that the risers are not twisted. If there is a speedbar present in your harness, attach it to the speed system on the risers as well.



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.

- 1 Shoulder straps
- 2 Side straps
- 3 Adjustment of the seat extension angle
- 4 Chest strap
- 5 Leg straps



**Shoulder 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.

**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.

**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.

**Chest strap**

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

**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.

Powerseat Light harness does not have a protector, nor an impact pad.

Powerseat Light features two side pockets and a bigger one under the seat. The side pocket is available during flight and you can store smaller items inside, such as keys, telephone, etc. It can be mounted on the left or right side, interchangeably with the side container.





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 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

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 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.



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

### **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.

**Note:** Waterlanding is extremely dangerous when still in harness. If you fly over the water frequently, get self-inflating rescue equipment. The paramotor engine is heavy and will sink quickly. If you do not unbuckle yourself before coming into contact with water, you will need to do so while submerged - and this, needless to say, can be hard. The risk of becoming entangled in lines and drowning is serious and very high.

**Tandem flights**

The Powerseat Light harness is not designed for tandem flights.

**Towing with the winch**

The Powerseat Light harness is not designed to be towed winch.



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



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.

**Note:** The Powerseat Light harness is approved for use for a period of 10 years from the production date.



Paragliding is an outdoor sport. We believe that our clients share our environmental awareness. Exercising paragliding you can easily contribute to environment preservation by following some simple rules. Make sure you are not harming nature in places where we can fly. Keep to marked paths, do not make excessive noise, do not leave any garbage and respect fragile balance of the nature.

#### **Recycling of used gear**

A harness is made out of synthetic materials, which need to be properly disposed of when worn out.

If you are not able to dispose of the paraglider properly, DUDEK Paragliders will do that for you. Just send your paraglider to the address given at the end of the manual, accompanied by a short note.

<b>Powerseat Light</b>	<b>S</b>	<b>M</b>	<b>L</b>
Pilot height [cm]	155-168	165-182	178-195
Seat width [cm]	39,00	39,00	39,00
Suspension height [cm]	35,50	38,00	41,50
Weight of the harness * [kg]	2,25	2,35	2,50
Load test 120kg	EN 1651/LTF91/09		
Certificate	EN/LTF		

\* Harness weight without carabiners

**Powerseat Light**

Risers

Polyester, 25 mm, 1700 daN, Polyester, 25 mm, 1000 daN, Dyneema 12 mm 1500 daN

Fabric

Cordura 5012 Ripstop, Poliamid 70 D

Buckles

AustiAlpin Cobra, Edelrid

**The whole set contains:**

- 1 x Powerseat Light harness, with a pocket under the seat
- 1 x carbon fibre seat plate as well as its extension
- 4 x Smart Pulley
- 1 x Rescue chute side container
- 1 x Release handle
- 1 x Side pocket

**Additional Equipment:**

- 2 x Main Carabiners connecting the harness to the paraglider
- 1 x V-strap
- 2 x Maillon Rapide C6 quicklink, connecting the V-riser to the harness
- 1 x Speed Bar with hooks

**Optional equipment:**

- 2 x Ronstan 30 pulleys with Dyneema loops fixing them to the harness
- 2 x Ronstan 20 pulleys with Dyneema loops fixing them to the harness

By purchasing our gear you've become an important part of Dudek Paragliders family!

Share your experiences with the entire community and stay current with new offers by joining our fanpages:



#### **Movies and pictures**

If you have interesting photos and films of your flying by all means send them to us, and we will share them with our entire community:

**[media@dudek.eu](mailto:media@dudek.eu)**

Do not forget to label everything you publish in social media with #dudekparagliders !

**Need any help?**

- Do you want to fly with us, but are not sure which paraglider should you choose?
- Are you already our pilot, but would like to know more details concerning your wing?
- Or maybe you seek advice in honing your skills?

Write us! Send an email to:

**[support@dudek.eu](mailto:support@dudek.eu)**

and our specialists will answer all your questions!

If you respect the rules of safe flying and proper harness care, you will enjoy many years of pleasant airtime on your Powerseat Light. Still, you must be aware of possible dangers and face them wisely.

You must accept the fact that all air sports are potentially dangerous and your actual safety depends solely on you. We insist that you fly safely, and this concerns both the weather choicesafety margin during all manoeuvres.

**Caution:** Flying the paragliders is always your own responsibility!

**Note:** 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.



Dudek Paragliders

ul. Centralna 2U  
86-031 Osielsko, Poland  
tel. (+48) 52 324 17 40

[www.dudek.eu](http://www.dudek.eu)  
[info@dudek.eu](mailto:info@dudek.eu)

