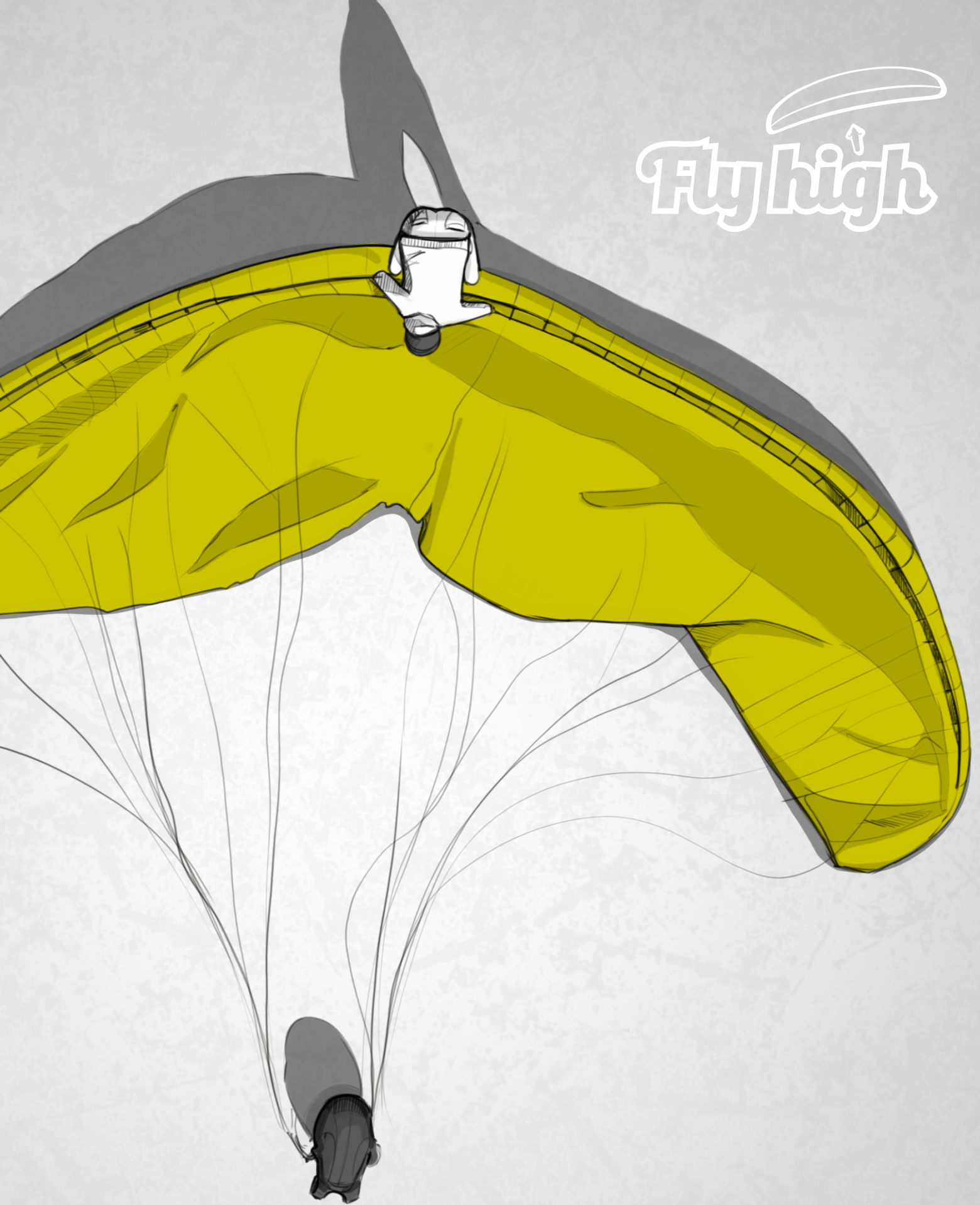


*Fly high*



# PARAGLIDING MANUAL



Co-funded by the  
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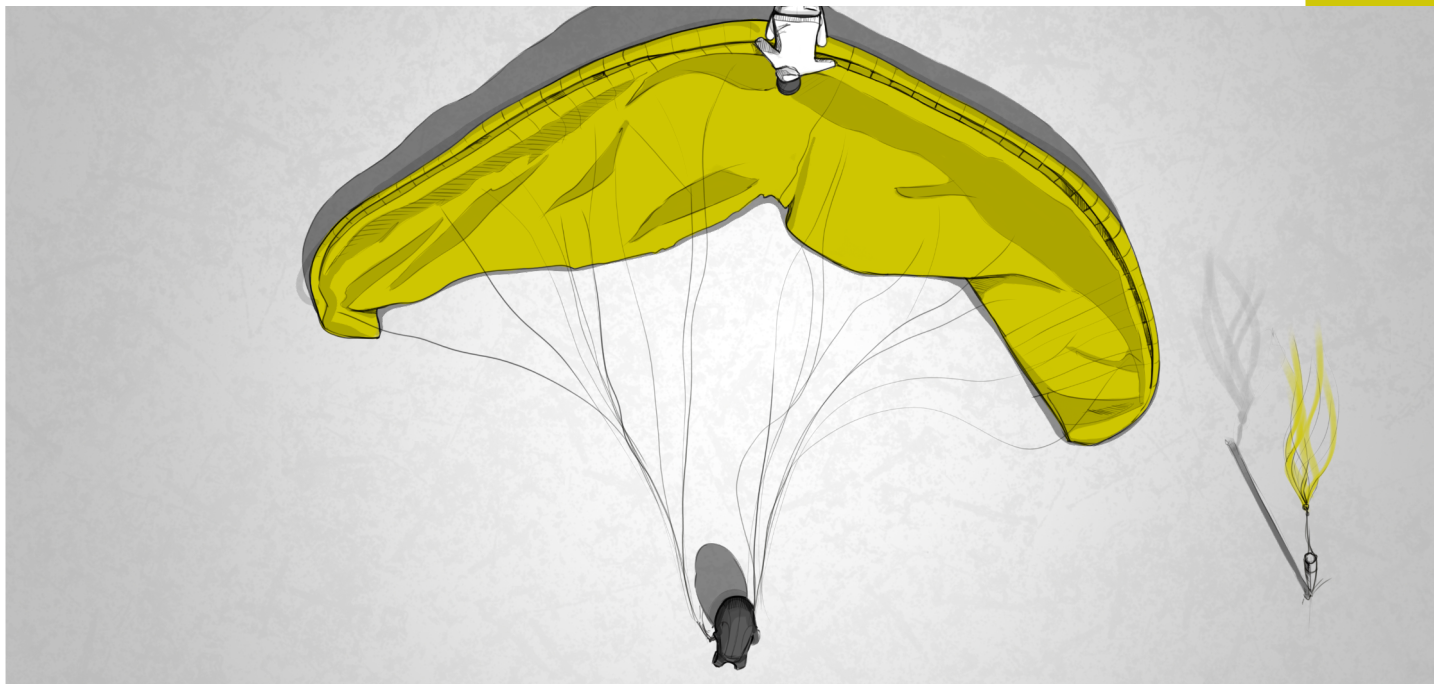
## Disclaimer

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Flying is dangerous. You are 100% responsible for your own piloting decisions.

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## 1. PREPARATION

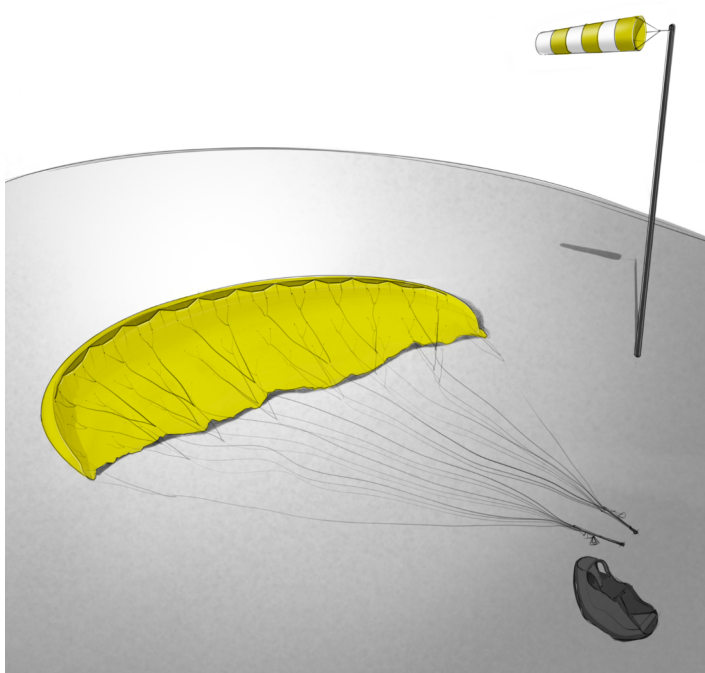
When you arrive to the start place, or practicing place, always find a clear and open place where you will assemble your paragliding set. Do not do it at the take-off place, nor in front of the other pilots so you are not rude and do not disturb others.

It is better to be on the safe side and put the helmet first. It is important to have certified for paragliding and comfortable helmet (correct size), so it does not bother you neither during preparation nor flying.

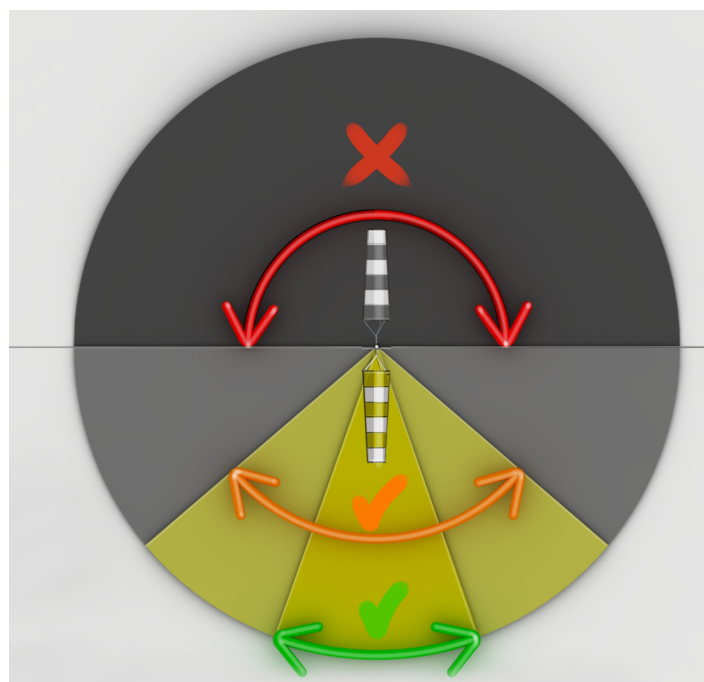
After opening the backpack and taking out the harness, wing and other equipment, put the backpack to the harness. Fold your backpack neatly, so it takes much less space. In order to protect the glider from UV violation, open only concertina or inner bag before you start checking the lines, practicing or flying.

If the wind is stronger than 5-6 m/s, do not open your glider fully but rather make the "mushroom" form from the glider, clear the wing tips and then open it with A and C (or D in older models) risers by forming the wall. In such manner you will avoid unpleasant and unnecessary glider movements or dragging caused by stronger wind.

Before attaching the carabiners to the glider, put the harness on yourself first. Always double check if you closed leg straps and buckles properly. If the buckles have some snow, dirt or sand on it, they may appear to be closed but actually are not. When attaching the risers, follow the logical order – risers are in the flying position, then the carabiners are in the flying position and then you pair them.

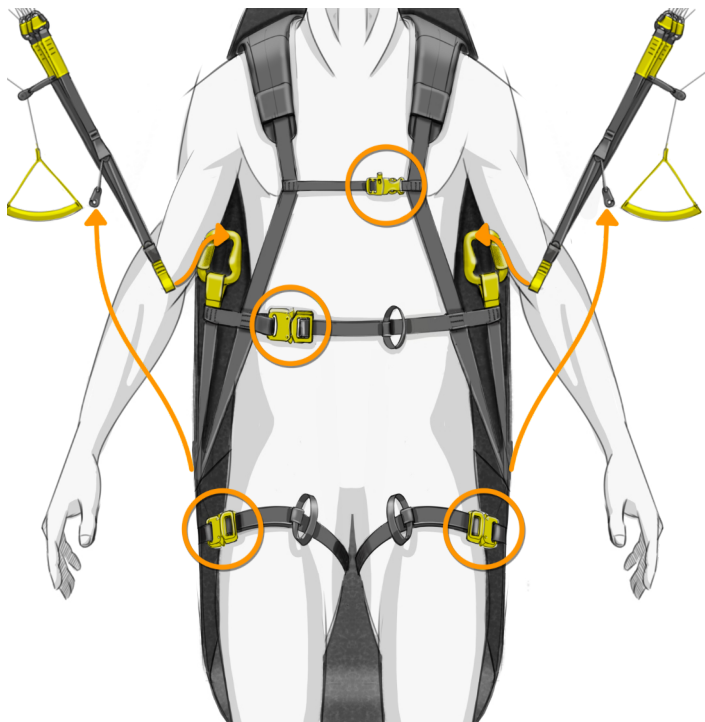


glider at launch

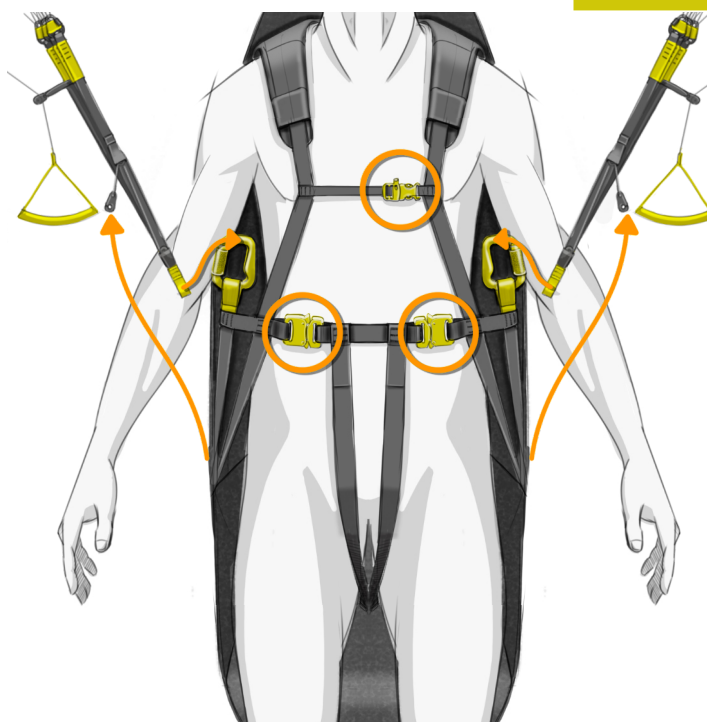


wind direction at launch





connection and check, classic harness



connection and check, cocoon harness

## Pre-flight safety check

### Step 1 - Canopy

- Open, without cravats
- Glider is placed towards the wind direction and symmetrically
- Glider has a banana or V-shape, and pilot is in the center

### Step 2 - Lines

- Lines run clean
- No knots or pieces between the lines
- Risers in good position (no twist)

### Step 3 - Harness and pilot

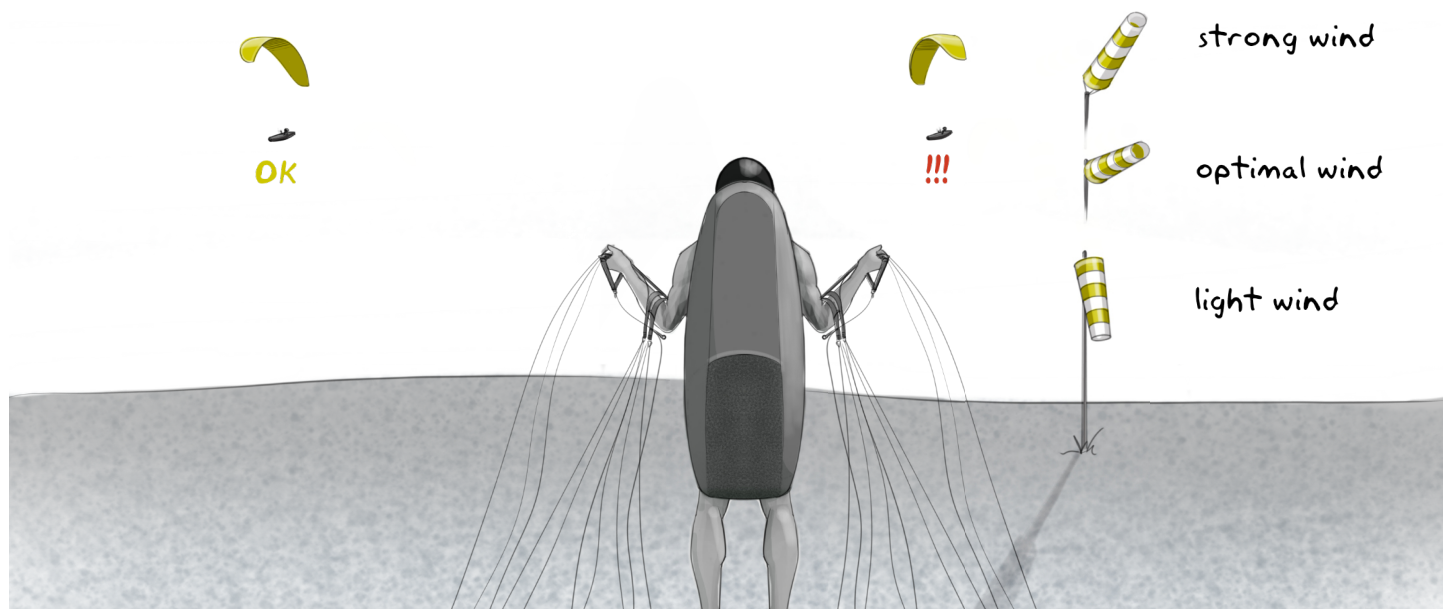
- Carabiners, buckles are closed
- Helmet is on your head and secured
- Radio and instruments are on

### Step 4 - Wind

- Check for wind direction, speed, gusts
- Check multiple sources: windsock, Tell-tale strings, grass, feel on face, etc.

### Step 5 - Airspace

- Airspace must be open for the whole duration of the take-off



OK

!!!

strong wind

optimal wind

light wind

wind and airspace around the takeoff



## 2. GROUND HANDLING

**Ground handling is the best practise to become a safer and confident pilot.**

It not only helps you to have more successful and safer launches, but also teaches a lot about your paraglider, and helps you to practise active flying.

### Conditions for ground handling

- Moderate or gentle wind condition, ideally between 4-5 m/s
- Free space, without obstacles
- No turbulences or gusty condition
- Proper equipment including helmet and harness with protection

**There are different approaches, all the techniques are useful, it's good to know them:**

- Ground handling for launching
- Ground handling for practice

### Ground handling for launching

This is a good practice for the most common reverse launch technique.

#### Step 1 - Build a wall

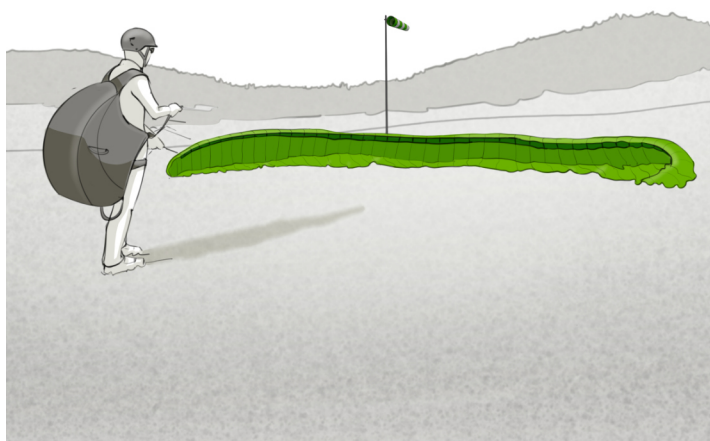
If the wind is more than 3-4 m/s, the easier way to open the canopy, to build the wall. It is possible with A-risers and brakes (or C risers in stronger winds >5 m/s). Opening the glider in such manner helps to check the canopy and wind direction.

#### Step 2 - Get ready

Take the brakes facing the glider - right brake should be in the right hand, and left brake in the left hand. Then grab the A-risers in right hand, and with the left hand take the right brake line above the pulley.

Glider should be facing wind direction, symmetrical, with the pilot in the center.

Always check and keep in mind the turning direction.

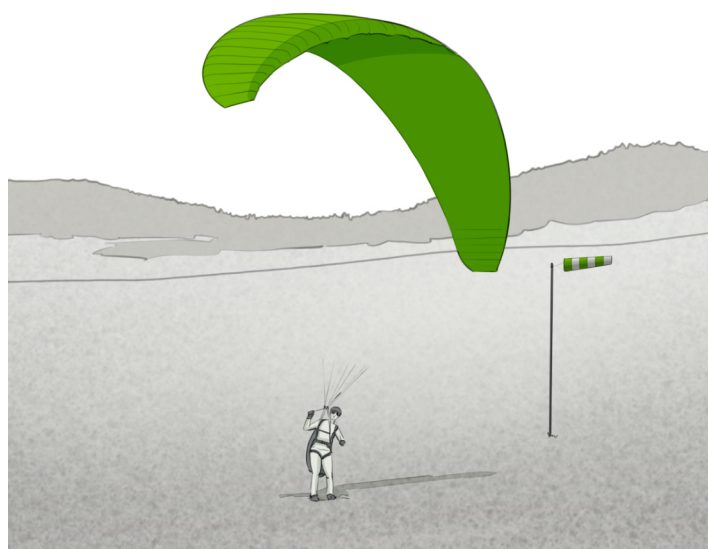


### Step 3 - Lift the canopy

Lift the canopy while guiding it up with the A-risers. A common mistake is to pull risers towards the body instead of lifting them upwards. If the canopy does not rise up straight, help the glider to recenter by breaking the side which is higher and moving under the center of the canopy. In such manner you will stabilize the glider above your head. Important – turn 180° only when the canopy is stable.

### Step 4 - Turn to starting direction

Only when you have a stable canopy above your head, you can turn to the starting (take-off) direction. It is important to keep the pressure in the glider, which usually means turning with stepping forward, and to control the glider with the breaks which are in your hands.



### Step 5 - Keep the glider overhead

Keep the glider above your head by feeling the glider moving through risers and brakes, but not by watching the canopy. Keep the pressure in the canopy. If pressure weakens, which means the glider goes forward, then pull the brakes till the glider pressurizes. If pressure is too strong, release the brakes a bit.

Also follow the glider, it will pull you towards the direction where you need to step.

## Ground handling for practice

It is very important to gain a good "feel" of your glider. It helps you to be a safer pilot by learning active flying. This method is not for launching (take-off), just and only for practise.

### Step 1- Build a wall

It is the same as in ground handling for launching.

### Step 2 - Get ready

Take the brakes in the left hand, then A-risers in the right hand.

### Step 3 - Lift the canopy

Lift the canopy using the same method as before (ground handling for launching), corrections should be made by the correct brake handle with letting go the other brake. The practice is to always find the brake handle, after it is dropped.



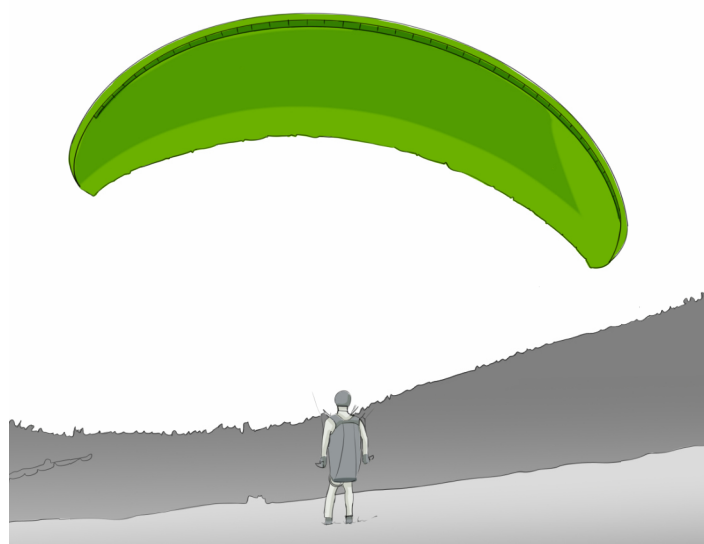
### Step 4 - Keep the glider overhead

When the glider is above your head, let go the A-risers and use brakes which are in both hands for control.

The primary goal is to keep the glider above your head, but a good practice is to move the glider to different places and sides observing how glider reacts and pulls you in that direction.

#### Important:

- Use bodyweight, it helps you to control the glider
- Pull brakes directly down next to your body, not sideways
- When the wind is strong, use the rear risers to control the canopy and if needed to "kill" the glider (release the power from the glider and put it back to the ground)



### Step 5 - Kill the glider

If you want to put down the glider, use a powerful and deep pull on both brakes till the canopy starts to fall. If you do not want to smash your glider to the ground, release the breaks a bit before the touchdown.

In strong winds (>5 m/s) it is better to use the rear riser.





### 3. FORWARD LAUNCH

#### Conditions:

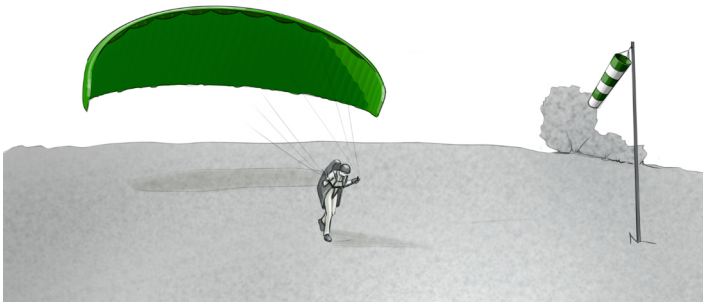
- Weak winds: no wind, weak wind (<math><4\text{ m/s}</math>)
- Good for towing, powered paragliding, steep slope

#### Step 1 - Preparation

Good preparation is one of the key elements for a successful forward launch, so it is worthy to lay the canopy on the ground well. The leading edge of the canopy should be facing the wind, the glider is placed on the ground symmetrically and in a banana or V-shape (natural arc or middle pulled out a bit) and the pilot is standing in the middle.

Hands of the pilot should be held on the sides around 3 and 9 o'clock.

After the safety check, you can start the launch.



#### Step 2 - Lift the canopy

For the forward start you always need some forward motion. It depends on the wind speed, sometimes it is enough to walk a few steps and sometimes you need to run as fast as a sprinter. Each glider has a speed - how fast they go up after initial pull. Try to find the good speed for your glider.

When you move forward, the air will fill in the glider. You can feel it through the risers. After that you should lift the arms a bit to help the glider to keep rising. Do not pull the risers which is a common mistake and leads to the collapse of the glider. Rather lift the risers upwards.

If the canopy starts to move to any of the sides, you should recenter it by moving under the middle of the canopy and pulling the brake of the glider of the side which is higher. When the canopy does not create resistance on the risers anymore, it means it is above the pilot.

Then it is necessary to stabilize the canopy and check if the canopy and the lines are clean, no tangles or foreign objects. It is a very important safety aspect.



#### Step 3 - Take-off

For the take-off you must have enough speed. This can be easily achieved by leaning forward on the chest straps and releasing the brakes completely. If you start running in such manner, enough speed can be gained to reach the take-off speed.



It is important that the canopy is above your head. If it moves to any of the sides, corrections should be made with brakes and moving under the center of the canopy.

When there is enough speed when taking-off, gentle pull on the brakes will help. It gives better angle of attack and you will take-off earlier.

After the safe height is achieved (at least 50m AGL), lean back, pull up the legs and sit in the harness.

## 4. REVERSE LAUNCH

### Conditions:

- Gentle, moderate or strong wind
- When you need a bit more control for the launch

Reverse launch is very similar to ground handling so you follow the same steps.



### Step 1 - Preparation

Take the right brake in the right hand and the left one in the left hand. Take the main A-risers in right hand, with two fingers from the left hand hook the right brake line above the pulley.

It is much easier to control the wing and take-off when the good wall from the glider has been built.



### Step 2 - Lifting and stabilizing

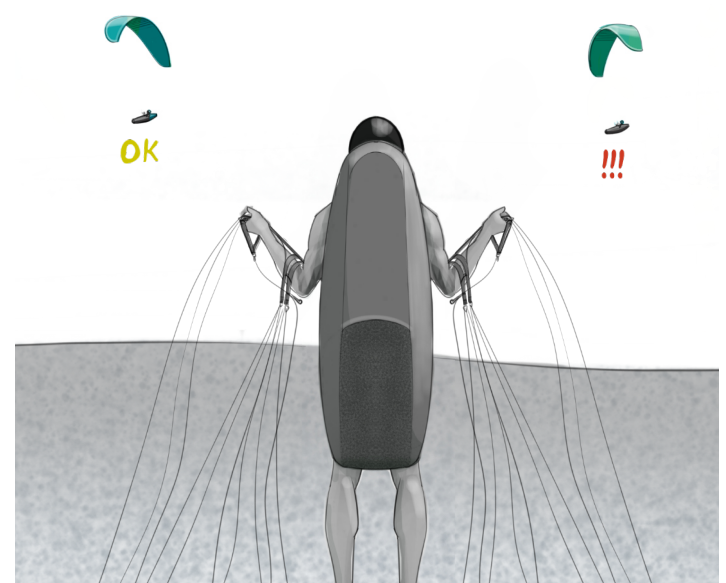
Lift the canopy through stepping backwards and lifting the A-risers in the direction of the helmet (and not pulling towards the body). If the canopy moves sideward, correct it with the proper braking, with the fingerhook or with the brake handle, and with stepping under the center. It's very important to stabilize the glider above the pilot, and only turn in flying direction, when it's in good position.

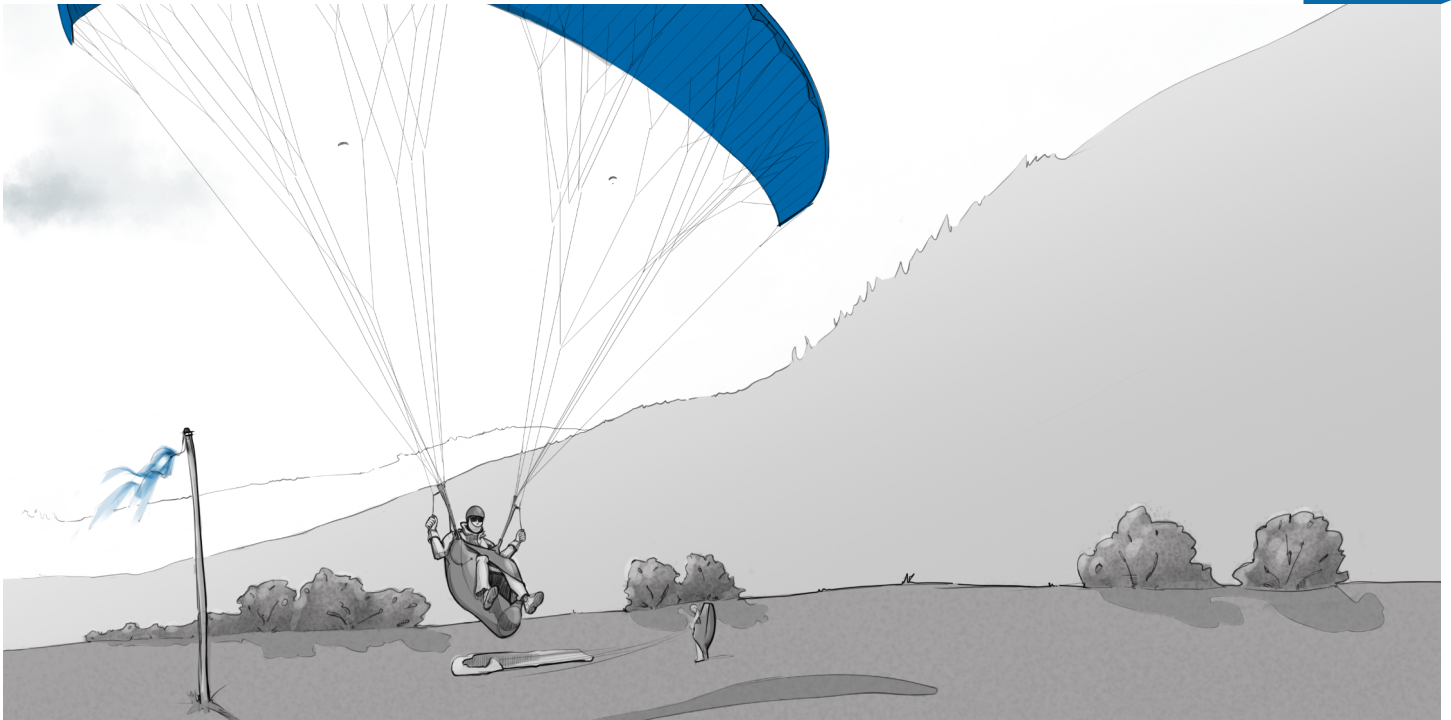
### Step 3 - Take-off

Use the same method as for the forward launch. You should accelerate, gain enough speed and then apply a little brakes for the take-off.

### Important:

Always watch out for the air traffic - not only before the start, but also when you start accelerating!





## 5. LANDING

Nobody ever stayed in the air forever, however there is a big difference if you land smoothly or crash into the ground. Therefore, landing is very important part of flying.



### Step 1 - Approach

Landing approach should start by losing height by making circles or "eight" figures. Depending on the landing area, the length of the final glide might differ, but it is advised to finish circling at the height of 10-20 meters and position yourself facing into wind for the final straight glide.

### Step 2 - Final glide

Final glide means flying straight facing into wind direction. You should "stand up" from the harness which is the safe position for landing.

There are two important aspects to consider when landing. The canopy must be stable above the head and you must have maximum trim speed. Speed is always important when flying, but especially for the landing.



### Step 3 - Swoop

You should apply a little break when you are above the ground 1-1.5 meters and flying almost maximum speed.

Depending on the glider and conditions, you need to pull the break lines 15-25 cm. This will cause the glider to lift a bit, converting kinetic energy to lift, so the glider will fly parallel with the ground, until the energy runs out.

#### Important:

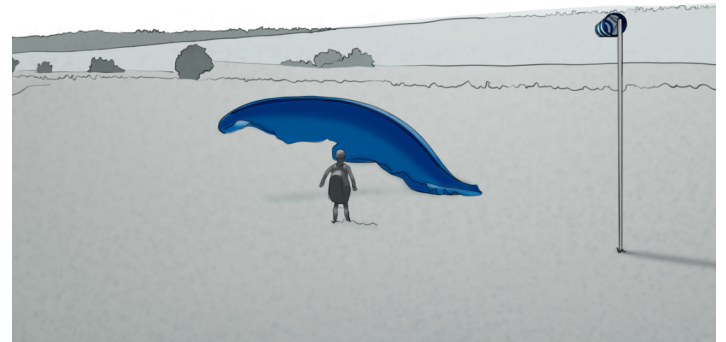
Braking too early which results in the glider not having enough speed for the flare.



#### Step 4 - Flare

When the energy runs out, you should pull the brakes as much as possible, which means pulling the brakes below the harness. This will cause the pilot to swing a bit forward, and then stall the glider.

If the timing was good, you will land on your 2 feet (standing position) or need to make only a few steps to stop.

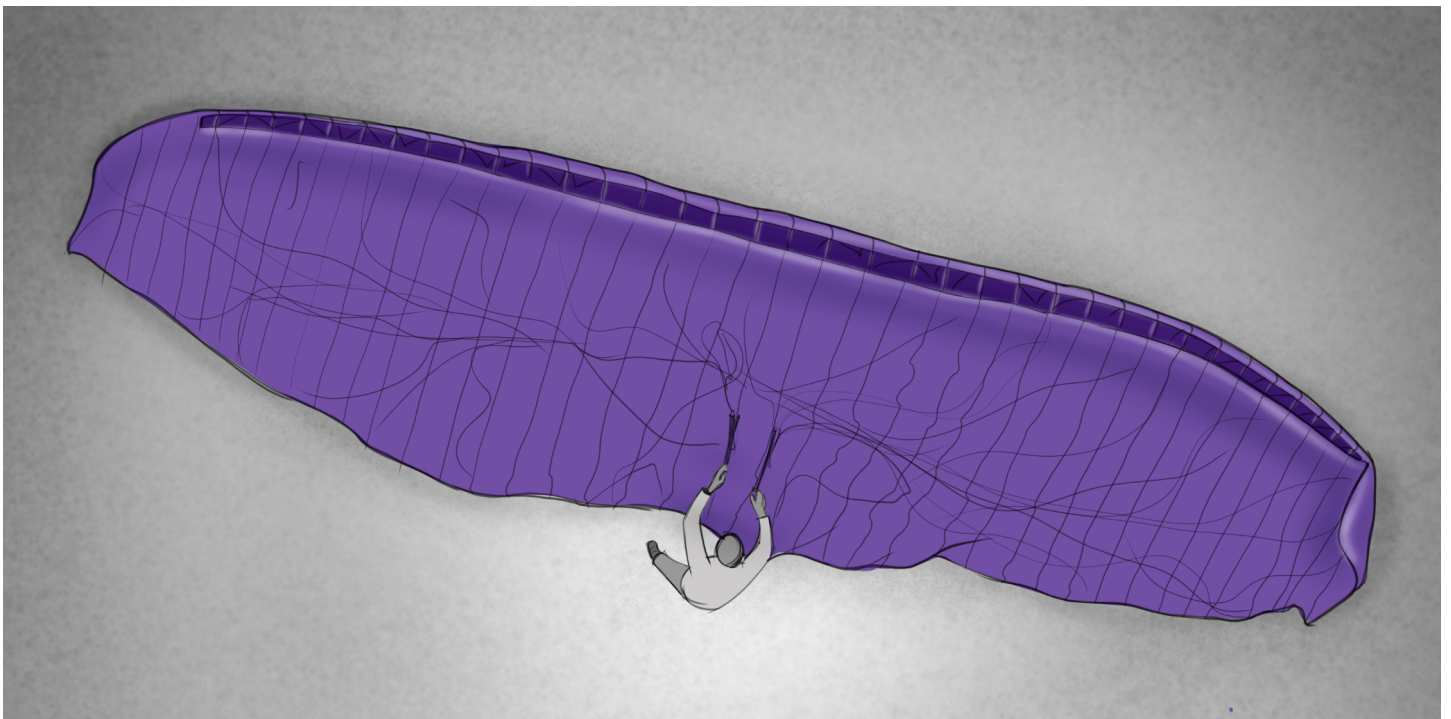


#### Step 5 - Finish

After the touchdown kill the glider by turning and moving towards it while applying full brakes. It is important to clear the landing area as fast as possible. Collect the glider, and walk out from the landing area.

This is a really important safety aspect, because you will not disturb other pilots in the landing and you will not be in danger to be hit by another pilot. Also, it shows that you landed safely.

If you stay in the landing spot, without collecting the glider, other pilots will think that you injured yourself and need help.



## 6. PACKING

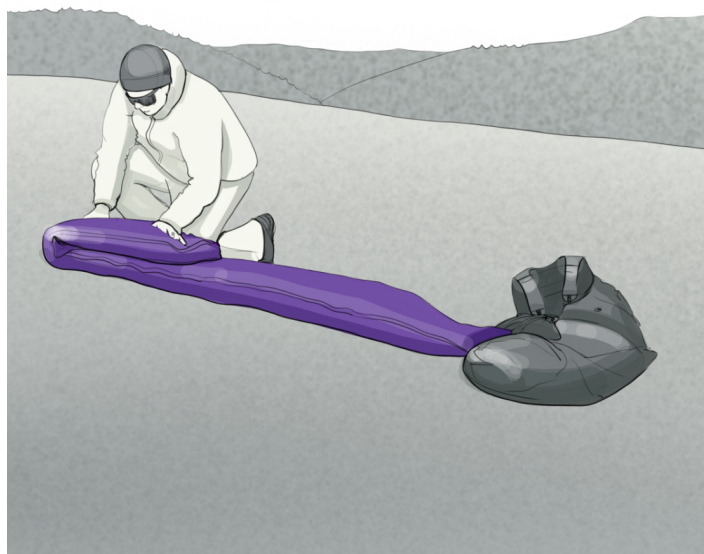
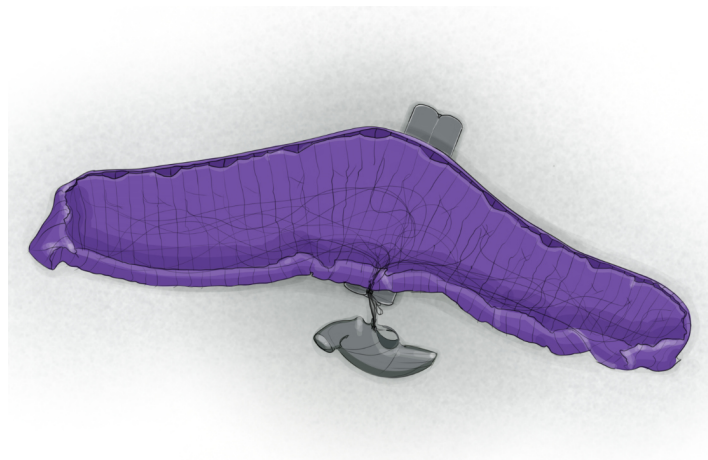
Packing is not the most entertaining activity on earth, but it is needed for the preservation of the glider. With a wrong packing method, the lifespan of a glider might shorten considerably.

A cell packing concertina bag is recommended, it makes the packing easier. The glider can be packed to the inner bag as well. Use the packing method which is recommended by the manufacturer.



## Step 1 - Preparation

First the pilot should find a nice, clean place. Lay down the concertina bag there and put the glider on it in "mushroom" form. We recommend not to detach the risers. This way of packing has extra safety benefits for next preparation and only takes a bit more effort.



## Step 2 - Pack the canopy

First, round up the cell walls together roughly and then neatly align each cell together, one by one. When it's done, secure them with a buckle. They should lay neatly together on each other.

Continue the packing with the trailing edge with a nice zigzag fold. Then close the pack with the buckles or the zippers depending on the model. Turn the bag sideways till the cell walls will be parallel with the ground.

Then fold the glider three or four times which fits better for the size of the backpack.

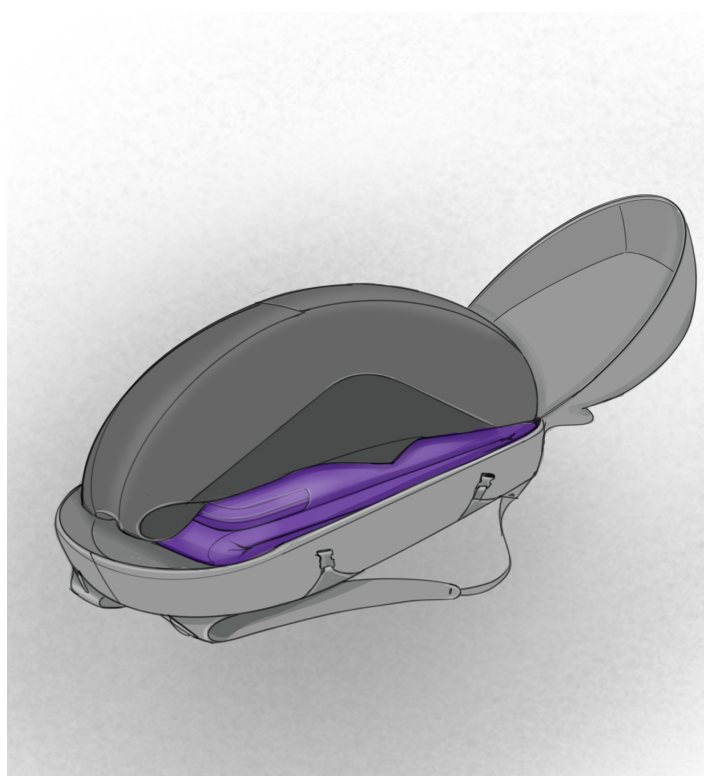


## Step 3 - Finish packing

The finishing part depends on your harness and backpack combo. A good and common way is to put the glider into the harness and put everything together into the backpack. The glider should be at the back and the harness after it. Usually the harness goes inside upside-down so the bottom part of the harness points upward.

On the top of the bag should be enough space for the helmet and clothes.

A proper folding is important for the glider longevity, and comfortable packing is important for your back.







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Obciansky Spolok  
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Keliauk Kad Keistum**

**For Erasmus+ Sports project Fly High.**

# ABOUT FLY HIGH

Fly High is a collaborative partnership project co-funded under Erasmus+ Sport action aimed at promoting paragliding as health-enhancing physical activity.

It gathers 7 partners from 5 countries with one common goal to promote paragliding and increase physical activity of people.

This manual, together with the tutorial videos produced during the project, have the goal of supporting beginners in paragliding and contribute to their safety.

During the duration of the project we have organized a number of activities to promote paragliding.

One example are the greatly successful open events organized in Hungary, Slovakia and Romania.

You can read more about the project at the project's [webpage](#)



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# Fly high TUTORIALS



## EPIISODE 1 PREPARATION



## EPIISODE 2 KITING



## EPIISODE 3 TAKE-OFF



## EPIISODE 4 LANDING



## EPIISODE 5 PACKING



# Fly high

OPEN EVENTS



**BUDAPEST  
HUNGARY**



**MIERCUREA CIUC  
ROMANIA**



**LUCENEC  
SLOVAKIA**