



User manual

Run & Fly 2

V 01.02.2023

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Congratulations!

We are pleased to welcome you among the growing number of DUDEK PARAGLIDERS pilots. You've become a proud owner of a sport paraglider, designed according to recent trends among paramotor canopies.

Extensive development, application of the modern production methods and thorough testing resulted in a friendly behaving paraglider, offering the pilot a lot of fun combined with great performance.

We wish you many enjoyable and safe flying hours.

Please read this manual carefully and note following details:

- The purpose of this manual is to offer guidelines to the pilot using the

paraglider. By no means it is intended to be used as a training manual for this or any other paraglider.

- You may only fly a paraglider when qualified to do so or when undergoing training at an accredited school.
- Pilots are personally responsible for their own safety and their paraglider's airworthiness.
- The use of this paraglider is solely at the user's own risk! Neither the manufacturer nor dealer do accept any liabilities involved.
- This paraglider on delivery meets all the requirements of the EN 926-1 and 926-2 regulations or has an airworthiness certificate issued by the manufacturer. Any alterations to the paraglider will render its certification

invalid.

- Other documents concerning this paraglider can be found on attached pendrive or on our website www.dudek.eu.

Note: Dudek Paragliders warns that due to the constant process of development the actual paraglider may differ slightly from the one described in the manual. However, those differences cannot affect the basic design parameters: technical data, flight characteristics or strength. In case of any doubts contact us please.



Providing our pilots new values in such a radical concept as the first version of the revolutionary Run&Fly 2 was a real challenge for our team. Most of the design goals were based on the opinions of the predecessor's users. The main idea was to enhance the positive pilot's experiences by simplifying the operation of the paraglider as much as possible while maintaining the most important and valued features of Run&Fly-small package volume and low weight.

For whom the Run&Fly?

The Run&Fly is not a typical paragliding canopy: it has a single skin. Therefore it's lighter while displaying much stronger tendency to stay over head and recover from any surges than a regular paraglider. In this way, the Run&Fly 2 offers safe take-

offs, great maneuverability in flight and smooth landings. It is exceptionally light, so that you can carry the wing on your back during trail running or climbing sessions almost without noticing the load. It is so compact, that it fits in a 4-litre bag. The Run&Fly is perfect for trail running, hike&fly and necessary travelling, or just as a second wing you will always have with you (you can easily place it in your hand luggage while travelling by plane).

Design and purpose

The new method of calculating the canopy stresses proposed by the originator, JB Chandelier, helped minimizing the number of distortions occurring where panels made in 3to1 technology are connected. In this way, it was possible to slightly increase the perfection of flight, as well as the visual

qualities of the canopy.

The leading edge of the Run&Fly 2 is made with a double-impregnated Porcher Sport fabric, which is more resistant to increasing the porosity over time. Main ribs are made of more durable 32-gram hard-finish fabric.

Run&Fly 2 could not miss the latest product in the lines catalogue of the German company Edelrid-colourful, unsheathed lines of the A-8001 series. The colours of the lines depend on the row and height in the gallery where they are attached. It makes the ground operation easier. They are also better visible against the rocks, from which pilots of our single-skin often take off.

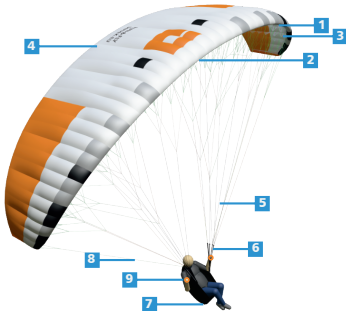
Significant improvements have been made to the risers. The basis is Dyneema lines without any steel or soft links. However, the lines are hidden in multifunctional covers.



- The operation of the risers is significantly simplified by combining the lines into two separate groups. The impression is similar to handling of the risers of a two liner wing.
- The risers are secured over their considerable length against external factors that can damage them, e.g. by contact with the hard part of the Velcro or branches.

In the new version of Run&Fly 2 it is possible to install an optional trimmer. A lightweight trimmer, which we have designed especially for Run&Fly 2, extends its speed range by +/- 2 km/h, which, depending on the wind conditions, may be beneficial.

Important: Run&Fly 2 belongs to the single-surface canopy class. There is fundamental difference between classic double skin and modern single skin canopies. All the launch, landing and steering techniques look a bit different. If you are an established paraglider pilot, you shouldn't have any problems with adapting to the wealth of new possibilities brought to you by the Run&Fly. However, this doesn't work both ways: if you started your paragliding experience with the single-skin gliders, be aware that you are not qualified to safely fly standard double-surface canopies.



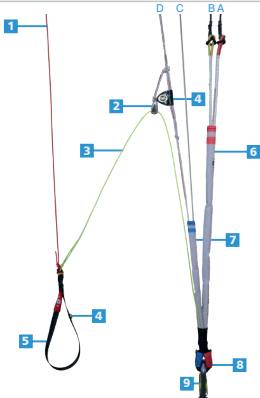
- 1 Inlets
- 2 Leading edge
- 3 Rib
- 4 Trailing edge
- 5 Suspension lines
- 6 Risers
- 7 Harness
- 8 Steering line
- 9 Brake handle

The **Run&Fly 2** is produced in new technology, utilizing capabilities of precise laser cutter. All stages of the production process take place as our Polish plant under close supervision of the designer himself thus ensuring highest European quality.

Careful selection of modern fabrics and design solutions brings about great strength and durability of the canopy.

All materials used come from marked production batches, and each production step can be verified down to identification of individual worker and controller.

- 1 Steering line
- 2 Guide of the D-Brake system line
- 3 FL line of the D-Brake system
- 4 Naps fasteners
- 5 Light brake handle
- 6 A-B risers cover
- 7 C-D risers cover
- 8 Hangpoint cover
- 9 Carabiner





The Run&Fly 2 features four-way, extremely light risers, equipped with:

- **DBS** (D Brake System) – additional steering lines, led through guides attached to D risers. The system is there to help obtain better flare and soft landing.
- **BEA** (Brake Elastic Attachment) – elastic parts fixing the brake handles to respective risers (instead of magnets).

Brake handles are attached to the steering lines at an optimal point, guaranteeing safe and effective action. This point is marked on the line with a black dot and this setting should not be altered. Attaching the handles above factory markings will cause constant braking of the paraglider, possibly cause of an accident. Overly loose setting

of the brake lines is not advised too, since the much lower load on the trailing edge lines can sometimes be dangerous too.

For quick and easy recognition in emergency, some of the risers are distinguished with coloured covers as follows:

- **A** - red (used for launching if necessary)
- **B** - yellow (used for B-stall).

For even easier identification, the risers are additionally marked by their covers:

- **A and B**: red stripes.
- **C and D**: blue stripes.



To make new steering handles, we choose light and soft tape. The fastening system bases on naps specially modified for this particular project. The toggle is more comfortable in use. Naps allow to connect it to risers quickly.

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Attaching the handles above factory markings will cause constant braking of the paraglider, possibly cause of an

accident. Overly loose setting of the brake lines is not advised too, since the much lower load on the trailing edge lines can sometimes be dangerous too.



Snap fastening the handle to the riser



In order to optimise parameters of the single shell paraglider canopy on landing approach we've created a dedicated D-Brake system. It is activated somewhere in half of the braking range, gradually pulling down the D-risers. Because of this, the wing airfoil is flattened in the rear area, generating additional lift needed for good flare and soft landing.





In the new version of Run&Fly 2 it is possible to install an optional trimmer. A lightweight trimmer, which we have designed especially for Run&Fly 2, extends its speed range by +/- 2 km/h, which, depending on the wind conditions, may be beneficial.

Note: Trimmers can be purchased separately. The serial wing has no trimmers applied due to the fact that:

- customers for whom Run&Fly is intended may not have sufficient experience of using trimmers in the past,
- in some extreme situations (if they occur), such as a side collapse or a front collapse, in the configuration with an open trim, the wing may behave more dynamically, and it may require the

pilot to react, e.g. by pulling the brakes.

How to adjust the trimmer in Run&Fly 2?

The trimmer operation in Run&Fly 2 is unique to the dyneema lines used. The dyneema line has no core, therefore it is possible to thread a cord through its center. When the line is slack, it slides easily through the tunnel. When under tension, the tunnel tightens, effectively blocking the inner cord. The trimmer is adjusted as follows:

- to release the trimmer: pull down the upper plastic trimmer bar to loosen the thread on the trimmer cord. The trimmer will release automatically.
- To close the trimmer: pull the lower plastic bar (attached to the end of the



trimmer cord) down as required.

Releasing it from your hand will cause the thread to tighten under its tension and to lock the trimmer.

- Setting the trimmer intermediate values: to set the trimmer to any intermediate position (eg neutral), first release it fully and then pull it back to the desired length. Adjusting the trimmer is shown on the next page.

Caution: Whenever you do adjust trim settings, always remember to do it symmetrically.



Releasing the trimmer: pull the top black bar down.



Closing the trimmer: pull the lower black bar down to the desired value.



Trimmer in neutral position: pull the trimmer until the points on the line are visible on both sides of the black bar.

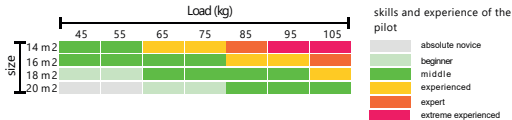
Operation

It's pilot responsibility to choose a canopy matching his skills.

Dudek Paragliders cannot take responsibility for a wrong choice, but we are always ready to advise you – just contact us.

Weight range

Each size of the Run&Fly 2 paraglider is dedicated for a corresponding pilot skill level. In this case a calculation of real take-off weight is necessary before using the size selection table, shown below:



For the Run&Fly, the generale rule of selection says: the better pilot skills, the bigger wing load is acceptable. With the wing load, the speed and agility (response to steering inputs) grow accordingly. The structural strength certificate of the Run&Fly 2 is valid up to 105 kg take-off weight. This mass cannot be exceeded.

Caution: Check your real take-off weight! Some pilots calculate their take-off weight by just summing up catalogue numbers, e.g.: harness 5 kg + canopy 6 kg + pilot 89 kg = ca. 100 kg. In reality your actual take-off weight can be umpteen kilograms more. Most often we forget the clothing, electronics, backpacks, sometimes even such basic things like fuel or rescue chute weight are omitted!



What harness?

You can use any certified harness which has its hangpoints at 40-45 centimeters from the seatplate. The width between carabiners should be somewhere between 40 cm and 45 cm. For the Run&Fly 2 we suggest using a light harness, for example Sit&Fly 260 with separate leg placing, as this increases stability and somewhat limits the amount of kinesthetic sensations affecting pilot's body.

Caution: Please note that any modification of seat/hang point distance changes the position of the brakes as related to pilot's body. You must remember that in each harness your steering range will be different.

Other systems

This paraglider has no other systems which can be adjusted, exchanged or removed.



Pre-flight check

Having chosen a place to launch accordingly to the terrain as well as wind speed and direction clear it of any obstacles that could damage your canopy or tangle in the lines.

After laying out your paraglider in a horseshoe directed against the wind following checks must be made:

- canopy, lines and risers condition. Do not launch if the slightest damage is noticed,
- the paraglider should be arranged so that the centre section A-lines will strain earlier than the outer ones. This ensures easy and symmetrical launch,
- the leading edge should stay taut and even,
- all lines and risers should be

separated. Make sure they are not tangled, and checked against catching anything. It is equally important to check the brake lines. They must be firmly attached to the brake handles and run freely through the pulleys to the trailing edge,

- it is very important to check that no lines are looped around the canopy. The so-called "line-over" may have disastrous consequences during take off,
- always put on and fasten your helmet before clipping in to the harness.

Attach the harness to the risers

- check main carabiners. They should be properly attached and their latches should be firmly closed and secured,

- make sure that the risers are attached to the appropriate carabiner and are not twisted. Two-color covers of the attachment points as well as specially marked left and right sides will help you to attach the risers correctly, as shown in the photos on the next page.

Side markings:

Pull down the flexible cover to confirm that the risers have been attached to the appropriate carabiners:

- **L** - blue color: left side
- **R** - red color: right side

Direction of flight:

As in the case of Run & Fly 1, attachment point covers have two-color markings that help to properly connect the wing to the harness, avoiding take-off with twisted risers. Make sure that the covers look as follows after locking the risers in the carabiners:

- **Front** - red: paraglider's leading edge and flight direction
- **Rear** - blue: paraglider trailing edge



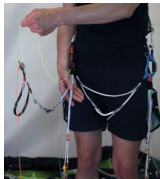
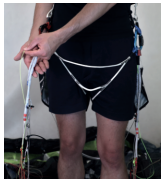
Direction of flight





How to properly grab the brakes?

The risers and the brake handles cannot be twisted. For the correct grip of the handles, take the yellow FL line as it is fixed to the carabiner. Move your hand along over the guide, until you grab the handle. While moving along the line you should not encounter any other line or riser, otherwise it would probably be twisted.



Classic (forward) launch

Should be used with little or no wind.

Facing the wind place the risers over your shoulders (A riser must lay on top).

Clip it into carabiners and lock them. Grip the brake handles. Due to its outstanding design, the Run&Fly 2 rises so fast and easy that pulling the A risers is not suggested. It can easily lead to a frontal collapse! The best way is to spread your hands a bit down and back, with slightly bent elbows. All risers are to be placed near the elbows.

With a soft pull check whether the A risers are the topmost and all the lines are cleared. For easier orientation the A risers have a red cover.

Then in fluid movement lean forward and run, until the canopy rises. Look up and try

to keep it directly over your head. Side drift is corrected best by moving yourself always under center of the canopy. In order to keep wing in the air the suspension lines must stay taut all the time, so in light winds you will have to run forward. With stronger winds you can control the wing while standing still.

When leaving the ground apply some brakes, then release it after gaining some distance from the ground. Keep your hands relaxed.

Reverse launch

May be used once the pilot feels confident enough, after groundhandling the canopy for a couple of hours.

After clipping the risers into carabiners as for the forward launch, turn back to face the wing, moving one riser group over your

head. As a consequence, you will have the risers crossed.

Unclip the brake handles from rear risers and grip it outside of the risers without crossing neither arms nor lines. In this way you steer the left side with you left hand and vice versa. Make sure that the wing inflates symmetrically and the lines are not tangled.

By taking a few steps back you will strain the risers and consequently get the canopy up. Dedicated pulling the A risers is not necessary. When rising, the canopy should stop over your head on itself without your intervention. To make sure you have full control, you can keep the brakes slightly strained.

When turning into wind, remember to turn the right way (hint: always do it the same direction) and to keep the lines strained at



all times. The turn itself should be quick and smooth. While turning you have to release the brake handles and grip them again facing forward, so that again the left one is in the left hand etc. Last check of the wing & free space to launch and off you go, running into wind with eventual light braking when taking off.

Caution: To get the canopy down in strong wind, pull the brakes down abruptly & forcefully to disrupt creating lift. You may also use the D risers by pulling them at least 25 cm down.



Turns

Turns on the Run&Fly 2 are dynamic, but exceptionally stable. The wing eagerly reacts to even smallest steering inputs. Handling is pleasant, and the steering forces grow linear with the pull. Adding some weight shift will make the paraglider turn really quick and tight.

The combined technique (weight shifting and brake input) is by far the most efficient method of turning. Turn radius is then determined by the amount of inside brake used and weight shift. Additional application a little outside brake after initiating the turn with maximum weight shift increases turn efficiency and the outboard wing's resistance to collapse (in turbulence, the edge of a thermal etc).

In case of necessary turning in confined area at slow speed (e.g. slope soaring), it is

recommended to steer the decelerated canopy by loosening the brake at the outside of the turn while applying just a little more brake on the inside.

Caution: when entering a turbulent area you should brake a little to put up the tension. It will allow you to react instantly in case of a problem. Too hard or too quick pulling of one brake can cause the wing to enter a spin.

Thermalling and soaring

Although the Run&Fly 2 was not designed with this in mind, thermal flying is well possible. During thermalling the wing will be intensively communicating to the pilot everything what's going on around. Still, perfect autostabilization will instantly bring the canopy back to its place over your head

when necessary.

When flying minimum sink is reached with brake pressure applied (about 10 cm).

In turbulent conditions the canopy should be flown with a small amount of brake applied. This improves overall stability by increasing the angle of attack of the canopy. The canopy should neither rock back nor surge forwards, but stay above the pilot. In order to achieve it, the pilot should accelerate the canopy by letting off the brakes when entering a thermal (according to its strength) and brake it on exiting. This is part of basic active flying that can spare you many potential collapses.

Hang flying is pure fun on the Run&Fly. You will stay afloat even at relatively low windspeed. Remember that in order to minimize the canopy weight we've resigned



on the speed system, so you don't have the usual margin of increased penetration in case of gusts in turbulent winds.

When soaring the slope, minimum height of 50 m above the ground is recommended for safety reasons. It is important to comply with air traffic rules, especially when many pilots share airspace close to the hill.

The avoidance manoeuvres often happen to be impossible in such conditions.



Landing

Just make sure that last turn into the wind is done with sufficient altitude. It is of highest importance to gain as much speed as possible on approach (by releasing the brakes to the max), so that you will have proper energy to flare and land softly.

At about 1 meter over ground flare out by gently braking both sides. The glider may climb again for a while gaining some height, if too much brake is used.

Caution: Too early braking will impair or completely negate potential for correct flaring and adversely affect its dynamic.

The final glide of the landing approach should be straight and smooth. Steep or alternating turns can result in a dangerous pendulum effect near the ground.



Flying with trimmers (optional)

The trimmers extend the speed range of the paraglider, which in case of Run&Fly 2 means +/- 2 km/h of the standard speed.

The idea behind the use of trimmers in Run&Fly 2 was to increase its usefulness in specific conditions where light, single-skin paragliders are often used, such as high mountains and difficult weather.

Decreasing speed by closing the trimmer can be useful when taking off in light or even tail wind. In this configuration, you can also use any lift encountered during the flight more effectively.

The standard speed of the Run&Fly 2 wing is obtained by closing / releasing the trimmers halfway through their range, up to the so-called the neutral value. The wing parameters are the most universal then,

equivalent to original setup without trimmers.

Fully releasing the trimmers can be especially useful. Additional speed gain increases your chances to fly in a situation where too strong wind would prevent the flight on a similar wing yet not equipped with trimmers. This applies to both take-off and the flight itself, when you could run a risk of being blown back to the lee side.

Another important advantage of flying with released trimmers is the increase in the overall stability of the wing, vastly improving your comfort when flying in turbulent conditions.

Important: Do not abuse flying with the trimmer fully opened. Loosening the trailing edge and occurring flutter can accelerate the wear of the paraglider fabric.

Opening the trimmer also helps in having a better flare during the landing. With a higher speed it is easier to put the pilot-paraglider system into the pendulum motion.

Note: The parameters closest to Run&Fly 1 are obtained on Run&Fly 2 by adjusting the mid range trimmers.

When and how to use the trimmers

1. Trimmer closed:

- flight in weak wind conditions or with wind blowing from behind,
- thermal flights.

2. Half-open trimmer:

- standard posture,



- universal parameters of the paraglider.

3. Trimmer fully released:

- launch in strong wind conditions,
- reducing the risk of being blown back leeward, eg. when flying in strong wind conditions, using dynamic lift or in valleys.

Safety of trimmer flying

Trimmers can positively affect the safety of flying the Run&Fly 2 by extending its range of use. Examples of such trimmer operation:

- Increasing the chances of a successful start and flight down when it seems to be a safer option than to give it up and walk down the mountain, or stay on top until

conditions improve, eg overnight.

- Reducing the risk of ending up on the lee side, eg. when flying in strong wind conditions, using dynamic lift or in valleys.

However, you should be aware that trimmers may also have a certain negative impact on the safety of paraglider operation, especially when it is used incorrectly, e.g.:

- Take-off with the trimmer fully released in zero wind conditions, which may result in a dangerous extending the take-off run beyond safe area.
- Flying in strong winds with the trimmer fully closed, which may, for example, increase the risk of being blown leeward.

- Asymmetric trim setting, which may cause the paraglider to turn during flight, surprising the unaware pilot.

During the flight in a trim configuration other than neutral (middle of the operating range), the wing's reaction to a collapse may be more dynamic, especially for a less experienced pilot, and will require fast pilot action on the brakes in order to return to normal flight.

Trimmers are also an additional element that requires basic technical checks. Flying with an incorrectly operating trimmer (e.g. damaged, worn) may result in the above-mentioned situations, which could be dangerous.

Important: Make sure that the trim settings are appropriate to the current flight phase and weather conditions.



Important: Trimmers are another element that comes to the pre-flight inspection!

Important: Although the risk of collapses on the Run&Fly 2 wing is small, the pilot should be aware of the possibly dynamic reaction of the wing, requiring action on the brakes.

Important: The trimmers must be always activated/deactivated symmetrically! In case of unsymmetrical trimmer release: correct flight direction with a brake, release the other trimmer (when altitude allows), or close the previously released trimmer.

Risers' lenght:

A - 496 mm

B - 496 mm

C - 1852 mm

D - 2195 mm



Trimmers closed

- Slowest speed



Trimmers in neutral position

- Universal parameters



Trimmers fully released

- Maximum speed





Winching

Run&Fly 2 has been successfully tested for foot launching by winch. First phase of the winch take-off is analogous to classic launch. After rising the canopy you will be taken off the ground, as the winch line gets loaded. Avoid large heading corrections in first stage of flight up to altitude of 50 meters.

During this stage do not sit deep in the harness in order to be ready for emergency landing in case of e.g. winch line break. Make sure that your brakes are fully released, so that angle of attack does not increase above safe level.

During all winch it is recommended to control the direction by weightshifting only. Steering lines should be used only for considerable heading corrections, but even then do not pull them too much in order to

avoid danger of stalling your wing. Adjust your heading regularly when winched, so no large corrections are necessary.

Remember there are several conditions to be met when winching:

- pilot should be properly trained for winching,
- the winch with all gear should be in good condition and specialized for paraglider winching,
- the winch operator must be properly trained in winching and servicing the gear,
- the wing must not be winched with forces exceeding 90 daN, and under any circumstances must not be towed by any vehicle not equipped properly or controlled by unskilled operator.

Important: While winching, the wing load is even greater than usual and the airsped is increased relatively to standard flight. Be aware that in this circumstances the wing is much more agile and sensitive, so be cautious on the brakes!

Note: If your paraglider is equipped with trimmers, put them in neutral or closed position for winching/towing.

Motoparagliding

The Run&Fly 2 paraglider was not designed with paramotoring in mind. Theoretically this should be possible, but you can find it very hard to stay within maximal allowed take-off weight limit.

Tandem flying

Run&Fly 2 is not certified for tandem flying.



Big Ears

The big ears can be induced by simultaneous pulling the outer A lines (red cover on the risers) by ca. 20-50 cm. While inducing big ears you should never let the brakes out of your hands. After tucking the tips in, the wing will continue to fly straight with increased sink rate (up to 5 m/s). You can steer the wing pretty efficiently by weight-shifting.

After releasing lines, the paraglider will usually open up on its own or you can assist it with a long stroke of the brakes, until the tips unfold.

B-stall

To enter a B-stall, simultaneously pull down both B-risers (yellow cover) by ca. 10-15 cm. The canopy will collapse across the entire span along its B-row, the airflow over

top surface will break and projected canopy surface will be decreased. Forward movement will be almost completely stopped.

Further pulling B-risers is not advised, as testes have shown it to increase wing instability. If the canopy forms a horseshoe, gently pull both brakes to recover.

To exit a B-stall, the risers should be released in a smooth and decisive manner.

On quick and symmetrical releasing B-lines the airflow will be reinstated and the wing will surge forward, returning to normal flight. The initial surge forward can be dynamic, but due to its inherent auto-stabilizing ability the wing does not require braking. The canopy will stop over your head.

Spiral dive

Run&Fly 2 is an agile paraglider, so entering spiral dive happens very quickly. Because of its stability the paraglider returns to normal flight as soon as the inner brake is released.

A spiral is characterised by reaching the highest sink rates possible.

Significant G-forces, however, make it difficult to sustain a spiral dive for a long time, as it can place high loads on both pilot and glider, to degree of losing consciousness by the pilot. Never do this manoeuvre in turbulence or at too high bank angles.

Control the dive and do not exceed 16 m/s sink. In case of the classic double-skin surface paragliders releasing the inner brake is sometimes not enough to exit the



spiral; is recommended then to aid this process by pulling the outer brake. On the contrary, strong auto-stabilizing tendency of the single-skin means that it is highly improbable to encounter such situation.

Caution: Never do spirals with big ears pulled. That's another example of concentrating whole load on reduced wing area, which - combined with high G manoeuvres - shifts the peak loads unnecessarily close to their maximum values.

Wing over

You make a standard wingover by performing a series of consecutive, alternating turns with increasing bank angle. Due to aforementioned autostabilizing of the Run&Fly, executing

classic wingovers is practically impossible.

Important: Forcing the wingovers by too strong, alternating brake inputs may end with an asymmetric stall!

Aerobatics

Run&Fly 2 was not designed to do any aerobatics.

Caution: All rapid descent techniques should be practiced in smooth air and only with sufficient altitude margin! Full stalls and spins are to be avoided as they are not recommended techniques of clearing dangerous situations. Irrespective of paraglider type they may lead to dangerous consequences!

Caution: By far the best technique is safe and correct flying, so that you will never need to descend rapidly!



Extreme manoeuvres

Caution: Extreme flying manoeuvres should only be carried out during safety training courses (instability training) under proper guidance!

Caution: Behaviour of the Run&Fly 2 is more dynamic than that of the classic double-skin paragliders. Still, exceptional traits of its design result in good auto-stabilization. Therefore the best way to fly it is to allow the wing find its own path, with minimal pilot inputs.

Important: If you fly with optional trimmers, you must be aware of the differences in behavior of the wing in dangerous situations depending on trimmer setting. Therefore please read all the information in this chapter carefully.

One sided collapse

Can happen in strong turbulence.

With collapses up to 50% pilot has a couple of seconds to react before the wing will enter rotation. Standard counter-steering is enough to keep the paraglider on course.

Under normal conditions the canopy will reinflate instantly and spontaneously.

Frontal collapse

Can happen in strong turbulence. Active piloting will usually prevent its occurrence.

Run&Fly 2 is a modern paraglider with significantly stiffened leading edge. Performed tests demonstrated an automatic refilling of the air tank on the leading edge as well as full reopening of the canopy; nevertheless, in some specific

turbulence it can happen that the air stream will keep the collapsed part in. That's why an instant pilot's reaction is advised – a measured braking at the right moment will greatly speed up the recovery.

Side and frontal collapse when flying with trimmers

When flying with the trimmers fully released, the wing becomes more resistant to side and front collapses. Still, if such a situation occurs, due to the increased speed the dynamics of the paraglider behavior will usually be greater and will require the pilot to react by vigorous yet not excessive pull on the brakes in order to stabilize the wing and return to normal flight.



Full stall and negative spin

Practically do not occur, may happen only as a result of serious neglect or intentional action of the pilot. You have to be careful when flying at very low speeds until fully familiar with brake operation.

The canopy recovers spontaneously in initial phase of stall, otherwise use standard procedures.

Deep stall

Under normal conditions does not occur. Due to its unique design traits, the Run&Fly 2 tends to instant restabilizing of the flight parameters in case of any disturbance. To get out of deep stall you have to fully release the brakes. The wing can dynamically return over head of the pilot, yet without diving in front of him - so do not

try to brake it in this phase.

If you are flying with optional trimmers, in case of deep (parachutal) stall release them completely at once.

Line over and cravatte

It is a modern wing which, in order to decrease drag has stiff leading edge. That's why it's always possible that after a tuck one of the stabilisers may tangle in the lines. Usually a couple of strong pulls on the brake is enough to solve the problem. If it doesn't work, try to clear the canopy by pulling the big ears or the stabilo line.

In case of any doubts you should seriously consider throwing the rescue chute.

Emergency steering

In case of any malfunction rendering normal steering impossible, you can safely steer and land the paraglider using the D-risers or stabilo lines.

Cleaning and storage

Specific design of the Run&Fly 2 may require a bit different packing than the classic double-skin canopies. It should be packed like that and properly stored specifically to retain its special traits.

How to pack Run & Fly 2

We recommend packing the wing as shown in the video and described below (scan or click the QR code):



- The wing can be folded rib to rib as an accordeon, or it can be broken into two halves by folding it from the stabilizer towards the center of the canopy.
- Transfer the risers to the center of the bundle thus formed.
- Fold the two halves together.
- Roll both ends of the bundle so that they meet in the middle. After folding, you can additionally fasten them with the compression tape attached to the wing.
- Put the wing into a dedicated transport bag. The size of the bag allows you to store the wing with light Sit & Fly 260 harness attached.

Never pack or store the glider when wet, as it significantly shortens life of the fabric. Remember that wing gets wet even when laying on a green grass in full sun, as the grass transpires.

Caution: Locking a wet paraglider in a car exposed to sun is absolutely unacceptable! Hot car interior acts like an oven and as tests have shown that color bleeding/transfer can happen even at 50 Celsius grade. The warranty does not cover such damages!

While drying, never expose your paraglider to direct sunlight operation. Store the paraglider in a dry place, away from chemicals and UV exposure. Ideal storage temperature for the paragliders is 5 to 25 Celsius.



Cleaning

Clean the paraglider with water and a soft sponge. Do not use any chemicals or alcohol, as these can permanently damage the fabric.

Deterioration - a few tips

The paraglider is made mainly of Nylon - a fabric which, like any other synthetic material, deteriorates through excessive exposure to UV rays that come with the sunlight.

Hence it is recommended to reduce UV exposure to a minimum by keeping the paraglider packed away when not in use. Even when packed in a bag, it should not remain in the sun for long.

Suspension lines in this paraglider consist of Technora inner core. Submitting them to

excessive bending and loading in flight should be avoided, as it can cause irreversible damage.

Please note that with frequent kiting on a field or a small hill your paraglider will deteriorate more quickly due to its repeated rising, falling and being dragged around.

Uncontrolled strong wind takeoffs or landings can result in the leading edge of the canopy hitting the ground hard, which may seriously damage the ribs, sewing and surface cloth (including coating damage).

Keep the paraglider clean, since getting dust in the lines and fabric will reduce their durability.

Be careful to keep snow, sand or stones from entering the cell openings: their weight can slow or even stall the glider, while sharp edges can damage the cloth.

Prevent lines from catching anything, as they can overstretch or tear. Never step on the lines.

Knots can chafe suspension and/or brake lines.

Check the length of your lines after tree or water landing, as they can stretch or shrink. The lines can be measured at the manufacturer or an authorised workshop.

After landing in water you should check the wing fabric as well, since waves can cause the fabric to distort in some areas.

When taking the wing out of the water, always do this by trailing edge. After a sea landing, rinse the paraglider with fresh water.

Since salt crystals can weaken the suspension lines even after rinsing in fresh water, you should replace the lines with



new ones immediately after contact with salt water.

Frequent flying near oceans and seas accelerates deterioration of the paraglider, as salt present in the sea breeze can make the lines stiffen and even break.

Repairs

Repairs should only be carried out by the manufacturer, authorised distributor or an authorised workshop. It is acceptable to fix minor cloth damage with self-adhesive patches included in the package.

Inspections

Full Inspection is recommended every 12 months or every 100 hours whatever comes first, if not advised otherwise by the inspecting person due to paraglider's condition.

A paraglider can be officially inspected only by the manufacturer or a dealer (authorised to do so).



We are aware that purchase of a new paraglider is a big expense for every pilot. That's why we guarantee quality of our products.

Warranty:

Dudek Paragliders guarantees free of charge repairs in case of damages caused by the material or production flaws:

- For the free-flying paragliders warranty covers 36 months (3 years) or 300 flight hours, whatever comes first. If the free-flying paraglider is used for powered flights, every hour flown is counted double (not concerning PPG paragliders).
- For the paramotor canopies (PPG) warranty covers 24 months (2 years) or 200 flight hours (whatever comes first).

- For the mountain wings (MPG), hike&fly, speedflying, schools or professional users warranty covers 18 months 1,5 year) or 150 flight hours (whatever comes first).

Warranty does not cover any of the following:

- canopy colour fading as well as bleeding caused by improper storage/transport,
- damage caused by chemicals or salt water,
- damage caused by improper use,
- damage caused in emergency situations,
- damage resulting from accidents (airborne or otherwise).

Warranty is only valid if:

- flight hours can be identified basing on properly kept logbook of the owner (and his possible predecessors) with marked PPG hours,
- the paraglider is used in accordance with the operating manual,
- the owner did not make any repairs by him/herself (excl. minor repairs with self-adhesive patches),
- the owner did not make any modifications,
- the paraglider can be unmistakably identified by data sheet/sticker,
- the paraglider has been properly inspected at all times.



Note: In case of damages caused by the material or production flaws please contact the dealer that sold you the gear. The dealer will determine further actions.

If you have bought the paraglider second-hand, ask previous owner for a copy of his logbook (covering entire use of the paraglider from the day of original purchase).

**Environmental care**

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 paraglider 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.

**The Dudek paraglider you bought should include following items:**

- transport bag (with your canopy inside)
- the paraglider itself (canopy, lines and risers)
- compression strap to keep the canopy together
- Pack&Hike 22 backpack
- pocket with paper work and repair wallet including:
 - piece of self-adhesive fabric (10 cm x 37.5 cm) for small repairs. Note that even small tears located in the vicinity of stitches are to be repaired by an authorised service only.
 - looped and stitched suspension

line (the longest of all lines in the paraglider) to be used as a temporary replacement. Do not cut it if you have to temporarily replace a shorter one, just tie it at the length needed.

- paraglider passport with entered date of purchase and valid technical inspection (please check the serial number with the sticker on wing tip).
- USB drive with this manual
- small gifts

Note: If the order includes an optional trimmer installed in our factory, we include replacement lines in case you wish to uninstall it in the future. Replacing the trimmers with lines brings Run & Fly 2 back

to standard settings. The lengths of the risers in this configuration correspond to lengths with the trimmers set to neutral position (middle of the range).



Run&Fly 2	14	16	18	20
Load certification EN:926-1	yes	yes	yes	yes
Number of cells	41	41	41	41
Surface area (flat) [m ²]	14,00	16,00	18,00	20,00
Surface area (projected) [m ²]	11,87	13,56	15,26	16,95
Span (flat) [m]	8,19	8,76	9,29	9,79
Span (projected) [m]	6,51	6,97	7,39	7,79
Aspect Ratio (flat)	4,80			
Aspect Ratio (projected)	3,58			
Speed [km/h]	Min=35; trym=37 ; max= 39 +-2			
Max. cord [mm]	2053,00	2195,00	2328,00	2454,00
Min. cord [mm]	728,00	778,00	825,00	870,00
Distance pilot to wing [m]	4,76	5,08	5,39	5,68
Total line length [m]	262,55	282,89	302,00	320,08
Total take-off weight [kg]	45 – 105	45 - 105	50 -105	60-105
Weight [kg]	0,94	1,04	1,13	1,20

**Run&Fly 2**

Lines	Edelrid 8001: 050; 070; 090, 130; 190 / Edelrid 7343-190
Fabric	Porcher: Classic 26 g/m ² ; Classic2 29 g/m ²
	Porcher: Hard 26 g/m ² ; Hard 32 g/m ²
Risers	Liros D-Pro: 3mm; Cousin: Dyneema 16650

* Detailed list of materials used for the manufacture can be found in service documents file on the page of a wing, available on our website www.dudek.eu.

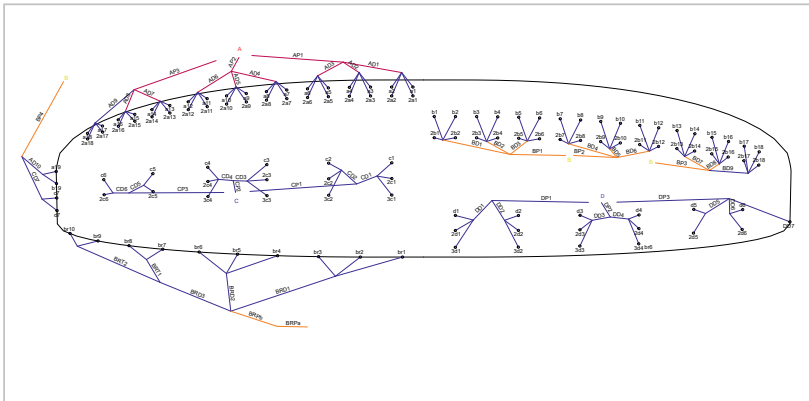


The rigging scheme itself is published on the next page, while tables of line lengths you will find in attachments to this manual.

Lengths are measured with a specialised, computer-operated device. All the lines before measurement are stretched with a steady 5 kg load. Thanks to abovementioned device and proper procedures, final tolerance of line lengths does not exceed +/- 10mm.

Note: Distances given below are to be understood as distances between connection points. When cutting a line for repair, 20 cm extra must be added, as at each end a 10 cm stitch is required to fix the loop. The only exception is the main steering line (BRP), which is looped only at the upper end, with at least 150 mm margin for fastening brake handle (this means for

this line extra 25 cm than in the table is needed).





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

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

and our specialists will answer all your questions!



If you respect the rules of safe flying and proper glider care, you will enjoy many years of pleasant airtime on your Run&Fly 2. 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!

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