

User manual

Nano SQ

v18.10.2024

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Congratulations!

Thank you for choosing the Nano SQ. We have done our best to present you with a highest quality product, fulfilling all safety requirements. Please read this manual carefully before using the harness for the first time.

Since Dudek Paragliders products are subject to constant improvements, minor differences are possible between the manual and actual product. Dudek Paragliders with holds rights to introduce such changes without individual notice.

Description

Our Nano SQ parachute is designed for solo flying. In case of serious paraglider malfunction rendering further flight impossible, our system reduces the sink rate and allows for safe landing.

Panels of the Nano SQ are cut by a CNC cutter to ensure pre-assembly precision and the right shape of panels. The canopy is made of cloth specifically engineered for this application. The cloth is treated with a material that prevents sticking, to facilitate smooth and rapid deployment. The cloth is also engineered to minimise shape distortion. These features, as well as the distinctive canopy design and the low permeability of the cloth results in a low sink rate.

The lines leading from the canopy are selected for their superior strength and resiliency which reduces opening shock, especially at high speeds. The Nano SQ canopy has a centre line. This design feature shortens the opening time and aids in stabilisation. The canopy lines are packed in loops and each.

Loop is secured with a rubber fitting. As the system is deployed, the loops are released one by one, thereby preventing tangling and facilitating a smooth and even deployment.

The reserve is packed in an inner container linked to deployment handle. The inner container is designed to open in any direction. The safety pins at the end of the handle secure the system within the outer container or harness, and prevent accidental openings. The handle is also reinforced for an easy grip, even when wearing gloves.

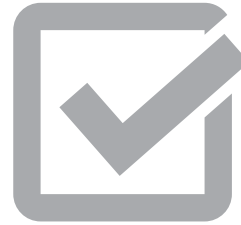
As an option, you can get at Dudek Paragliders the externally mounted container, its release handle and V-risers. It can be attached to the front or side of the harness, depending on your preferences and harness characteristics.

Rescue parachute is activated manually by releasing the handle, pulling the bag out of the container and throwing it out along the direction of the airflow (together with the handle).

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

Set cointains

- Parachute inside the inner container
- Parachute card
- USB drive with this manual.



Technical data

Nano SQ

| | |
|--------------------------------|----------------|
| Size: | 25 |
| Surface flat [m2] | 25 |
| Min. payload* [kg] | 50 |
| Max payload* [kg] | 100 |
| Sink rate at max payload [m/s] | 5.28 |
| Overall length [m] | 5.84 |
| Volume [cm ³] | 2800 |
| Weight of the rescue [g] | 988 |
| Certification | EN 12491 / LTF |

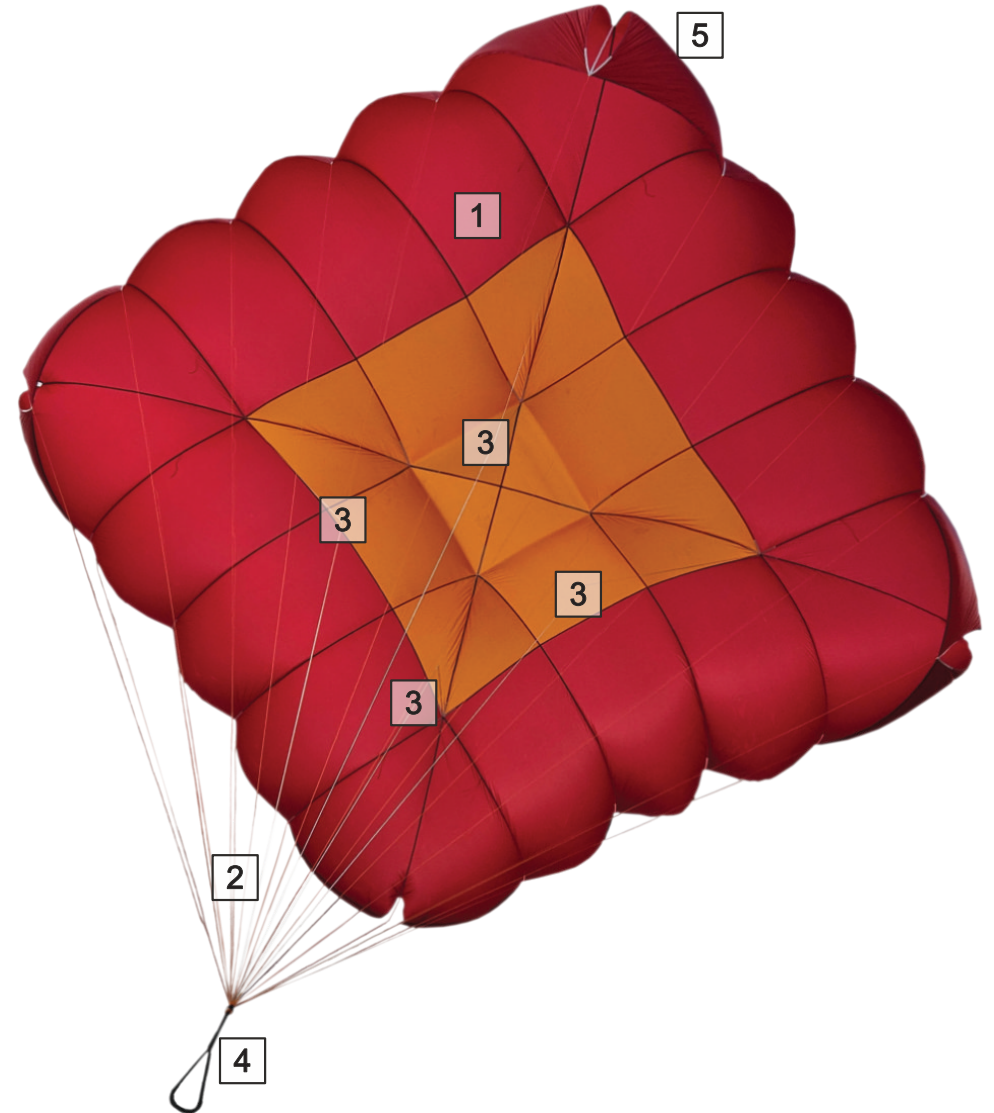
* Payload = Total take-off weight without weight of the paraglider

Materials

| Model | Nano SQ |
|--------|---------------------------------|
| Canopy | Dominico R1010-33C / R2020-44AC |
| Lines | Edelrid Pax 160 / Restrix 150 |
| Risers | Liros Dyneema line D-Pro 5 mm |

Construction

1. Canopy
2. Lines
3. Centre lines
4. Main risers
5. Packing loops (on the top side)



Operating limits

Nano SQ has been specially developed for use as a reserve parachute for paragliding PG and moto-paragliding PPG only. Usage for other flying sports such as base-jumping, parachuting etc. is therefore prohibited, for it was not designed for such alternative applications.

According to EN 12491:2001 Nano SQ reserve parachutes may only be used up to maximum speeds of 32m/s or 115 km/h.

Dudek Paragliders require a mandatory, one-year repacking interval for your parachute reserve. Shorter intervals than the one-year minimum

requirement, to more often air out and repack your rescue, helps to keep your rescue in good condition.

After a deployment, the reserve parachute must be inspected by the manufacturer or authorized maintenance personnel. The reserve parachute must be replaced after 10 years, even in the case where it has never been deployed or used.

Nano SQ parachute system has been tested and found compliant using their original manufacturer's inner container. Using any other inner container can produce different results, including failures.

Connect the reserve parachute to the harness

To connect the reserve parachute to the bridle, you must use a shackle with at least 2400 daN ultimate strength. The shackle has to be secured on both sides with rubber bands or O-rings by means of a Larks Head knot, with fixing tape or a neoprene jacket to protect against fraying and abrasion.

Direct connection between the main riser and the harness bridle is not recommended, as a wrongly installed knot or shock opening could significantly weaken the system depending on the configuration!

It is important to ensure that the connection is centred, that is, the two connecting lines leading to the shoulder straps are of the same length. If the harness does not have an integrated/ designated attachment points for the reserve chute on the shoulder straps, then the reserve chute connecting line can, alternatively, be attached to both main carabiners. If using the main carabiners, again ensure that the connection is centred (equidistant connecting lines).

Compatibility test

Nano SQ rescue system is appropriate for integrated reserve parachute containers or front mounted container. The very first installation of the reserve parachute into the harness should be carried out only by an expert or compatibility-testing authority. Please refer to the harness or the front container user's manual if available. This requirement is necessary to make sure that no unsuitable harnesses with integrated outer containers are used in combination with our reserve.

Please contact your flight school or Dudek Paragliders dealer to prepare for the initial installation. There you can find, in most cases, a certified compatibility tester.

Be careful with back protector manipulation in your harness when the rescue parachute is already installed. Depending on the design of the harness, protector positioning or the rescue parachute container may affect the ability to easily pull the rescue parachute out. After any changes it is absolutely essential to do a simulated deployment under a static swing, ensuring that the parachute release system operates correctly and the parachute comes out easily.

Pre-flight check and releasing the system

Before each flight, check all straps securing the rescue and the front container to the harness (where applicable). Ensure that the container is securely closed, and visually inspect that the safety pins are properly seated & secured and that there is no damage.

To deploy the rescue canopy:

1. Look at the deployment handle.
2. Grasp the deployment handle. Pull it free of the outer container or harness.
3. Using the deployment handle, throw the inner container forcefully into open air (AWAY from the paraglider canopy).

4. The force of the throw will separate the inner container and attached handle from the canopy.
5. The canopy – thanks to the central line – inflates quickly and easily.
6. The pilot should then collapse the main paraglider by pulling the “B” risers to stabilise the descent and prevent the paraglider from interfering with the reserve parachute.

As with all paraglider rescue systems, the deployment throw must be forceful enough to separate the inner container from the canopy.

Packing instruction

The following manual is aimed at pilots who are competent in folding modern square reserve parachutes. The manual itself cannot serve as a substitute of proper training in folding a parachute. The manufacturer can ensure the safety and reliability of the system only in cases where it was packed by a trained professional who followed a proper packing process.

Before the packing it is necessary thoroughly inspect it:

1. Before repacking, the reserve chute must be aired out, ideally for 12 hours in a cool, dry room.
2. The packing area must be large enough, clean, level and dry.
3. The reserve chute must be subjected to visual inspection and checked for damage to the canopy,

the lines, the suspension points, the main riser and the screw shackle.

4. Make sure that the parachute lines are completely disentangled and that both the lower line and the upper of the reef knot run freely from the risers to the canopy.

If you encounter any damage or contamination that may lead to system failure, it is necessary to get the system to the manufacturer. If you are at all uncertain, send the system to the manufacturer for inspection.

Proper packing of the canopy is essential for the reliability and safety of the system. Therefore, it is strongly recommended to have the system repacked only by an authorised and trained specialist or by the manufacturer.





Find 4 central loops and connect them by an aid line.





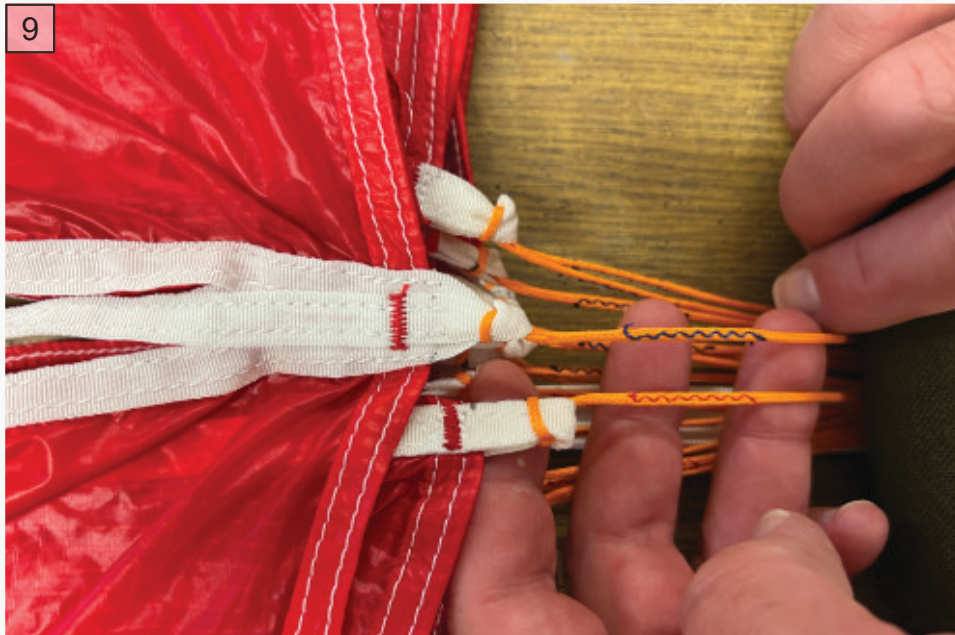
5 Find 20 top loops and connect them by second aid line.



6



One by one 10 panels



9

The first line is sewn with blue threads



10





15



Find center of the canopy.

16



Put it inside of the center.

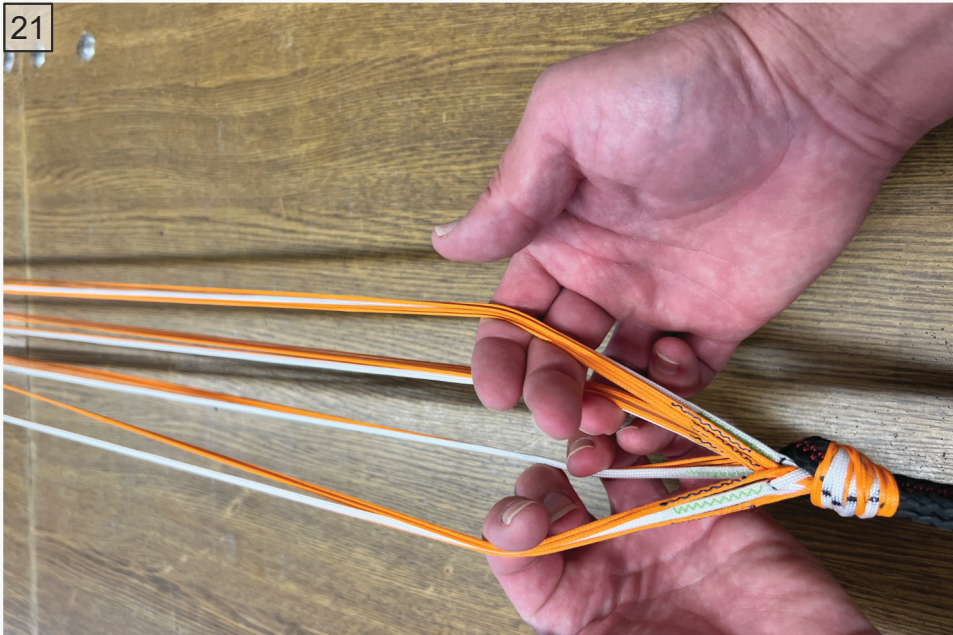




Panels 3 and 8 on each side should be placed from the inside by hand.



21



Lines checking, 4 groups.


22

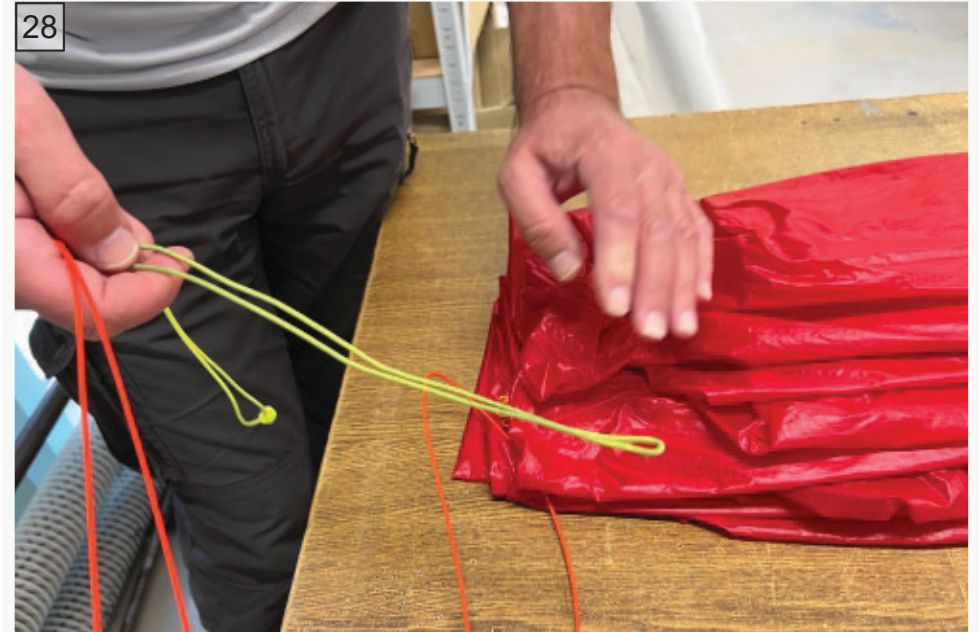






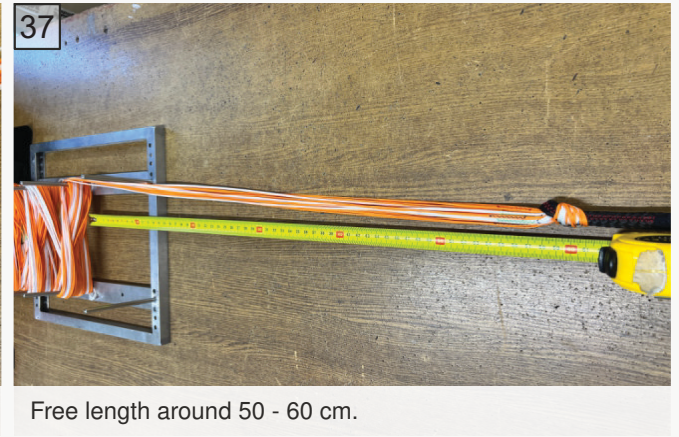
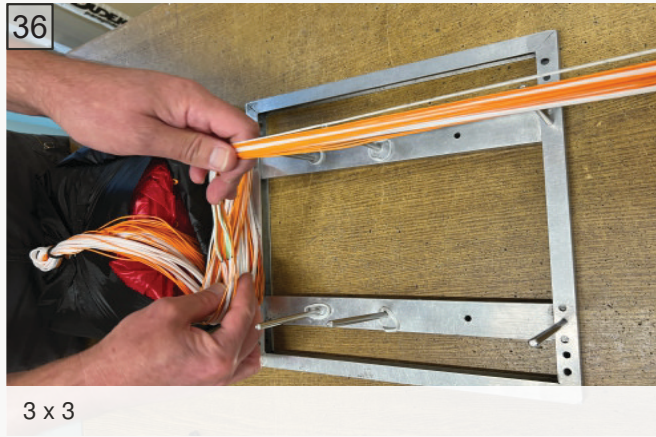


Double fold: 



Remove aid lines.







Twist the rubber cord for a correct lines retention.



Maintenance

The canopy is to be stored in a clean and dry area. Avoid prolonged exposure to direct sunlight. If it gets wet, dry the canopy and lines thoroughly and immediately to prevent damage caused by mould. Contamination by oils, or any other chemicals could significantly reduce the load stability of the lifesaving

system. The manufacturer must inspect contaminated canopies. The container can be cleaned (WITHOUT the canopy inside!) using water and a mild detergent followed by a thorough rinse and drying. Use only clean water without soap to clean the canopy and lines.

Guarantee

The reserves are guaranteed for 2 years against any production fault since the date of purchase.

The guarantee does not cover:

Damage that was caused by misuse, by neglecting the regular maintenance, or in case of overloading the reserve chute.

Repairs

All repairs must be carried by the manufacturer. Any unqualified repair might lead to a system failure.

Your Nano SQ reserve parachute consists of many high-quality, long-life components. When replacing parts (lines, risers, fabric panels, etc.), only original parts should be used.

In addition to the continued airworthiness of your reserve parachute, this is important for your safety as well.



Environmental care

How to take care of the environment

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 wherever you fly. Keep to marked paths, do not make excessive noise, do not leave any garbage and respect fragile balance of the environment.

Recycling of used gear

The product is made out of synthetic materials, which need to be properly disposed of when worn out. If you are not able to dispose of your gear properly, Dudek Paragliders will do that for you. Just send your product to the address given at the end of the manual, accompanied by a short note.



Join our community

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.

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!



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