

EN

TAO USER MANUAL

Version: 04-2024

FLYSURFER

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01 RELEASE OF LIABILITY

Release of liability, claim waiver, assumption of risk

By assembling and/or using this FLYSURFER product, you agree that you have read and understood the entire FLYSURFER product manual, including all instructions and warnings contained in that user manual, prior to using the FLYSURFER product in any way. You additionally agree that you will ensure any additional or subsequent user of your FLYSURFER product will read and understand the entire FLYSURFER product user manual, including all instructions and warnings contained in that user manual, prior to allowing that person to use your FLYSURFER product.

Assumption of Risk

FLYSURFER product and any of its components involve certain risks, dangers, and hazards that can result in serious personal injury and death to both the user and to non-user third parties. In using this FLYSURFER product, you freely agree to assume and accept any and all known and unknown risks of injury and you and third parties while using this equipment. The risks inherent in this sport can be greatly reduced by abiding by the warning guidelines listed in this user manual and by using common sense.

Claim Waiver

Release and waiver of claims in consideration of the sale of the FLYSURFER product to you, you hereby agree to the fullest extent permitted by law, as follows:

To waive any and all claims, that you have or may in the future have against Skywalk GmbH & Co. KG and all related parties resulting from use of the FLYSURFER Product and any of its components. To release Skywalk GmbH & Co. KG and all related parties from any and all liability for any loss, damage, injury or expense that you or any users of your FLYSURFER product may suffer, or that your next of kin may suffer, as a result of the use of the FLYSURFER product, due to any cause whatsoever, including negligence or breach of contract on the part of Skywalk GmbH & Co. KG and all related parties in the design or manufacture of the FLYSURFER product and any of its components. In the event of your death or incapacity, all provisions contained herein shall be effective and binding upon your heirs, next of kin, executors, administrators, assigns, and representatives. Skywalk GmbH & Co. KG-related parties have not made and expressly deny any oral or written representations other than what is set forth herein and the FLYSURFER User's Manual.

If you have any questions (repair, replacement parts installation, tuning, etc.) the dealers you trust get faster help and correspondingly cheaper support (e.g. by saving shipping costs).

You can find all dealers in your area via our partner map:

<https://flysurfer.com/fs-partner/>

If you need further help, you can reach us at headquarters by phone or email.

E-Mail: support@flysurfer.com

Phone: +49 (0) 8641 6948 0

02 SAFETY NOTES

The detailed **online user manual must be read completely** before using the wing and must be strictly followed. **The following safety instructions and dangers do not claim to be complete.**

01. Windsurfing is a **potentially dangerous sport** that involves basic risks for the athlete and those in the vicinity. Improper use of this product **can lead to serious injuries or even death** for the user and third parties. Every user should have completed a **qualified briefing** on this product at a FLYSURFER kite school or a FLYSURFER dealer.
02. The user bears **sole responsibility** for himself and others when using this product. He must check all parts for condition and function before each use.
03. This product may only be equipped with **original spare parts** and may not be modified.
04. This product is designed for people weighing 50 to 95 kilograms. Outside of these limits, optimal functioning cannot be guaranteed.
05. Never practice the sport in unsuitable conditions such as storm fronts, thunderstorms, or offshore wind. Check the weather and wind carefully and choose the right wing size.
06. Check the area carefully for shallows, obstacles, currents, and prohibitions as well as rescue vehicles access. Always ask people who are knowledgeable about the area.
07. Always keep a safe distance from people and obstacles. Riding near power lines, busy roads, airports, abysses, etc. is extremely dangerous.
08. Make sure to be supervised to expect help if necessary. Never stray further from the shore than you can swim if necessary.
09. Improper use increases the risk of injury to you and bystanders. Body parts that get caught around the wing leash can cause serious cuts or burns.

02.01 Do not fly with a wing

A wing is not designed, tested, or licensed as an aircraft or flying device. The use of a wing as a flying device is illegal and not covered by insurance. **Flying with this product can lead to death!**

02.02 Protective measures

01. It is strongly recommended to wear a **helmet** to protect yourself from your board in case of a fall or any other unexpected situations.
02. A **life vest** can help with the water start. It might also be welcomed if you ever must swim back to the shore.
03. Choose a **board with enough volume** to float whilst standing up.
04. Choose a full-length **wetsuit** (water T° <19°C) or a shorty (water T° >19°C) depending on the water temperature. Be aware that you will use more energy when you are cold.

05. We recommend using a **board leash** to the ankle.

06. To enable riding with a **harness**, a rope can be tied to the attachment points between the soft handles. On the TAO RH a loop must be attached at the end (towards the center of the sturt) of the first rigid handle to enable riding with a harness.

Warning: *The leash can wind around limbs! Any inseparable connection to the wing or the board can be life-threatening and lead to serious injury or death!*

03 OVERVIEW OF THE WING

03.01 Description & rider requirements

The TAO has the best balance of floatation and agility. With little effort, it generates constant propulsion to transfer the most power to the hydrofoil. Thanks to the intuitive handling and the high level of safety, the wing allows beginners and professionals to get the maximum out of themselves constantly.

03.02 Features

1 Ergonomic Strut

Concave strut center equipped with three non-slip grips to increase endurance. Automatically guide the wing into a natural, comfortable position to prevent fatigue.

2 Free Flow Valve

Adapted SUP valve for quick air supply and air discharge. Protects the bladder with a special, flexible base plate. To ensure maximum rigidity, the Free Flow Valve is attached to the front tube and the center strut.

3 Harness Leash Attachment Points

There are attachment points on the strut to attach the connection to the trapezoid. A rope can be attached to the harness hook to drive the wing with less effort. Using a harness is recommended for advanced riders, and only in shallow water.

4 Foward-swept Wing

The center of lift is far forward due to the strong sweep. It facilitates pumping and acceleration in gusts and improves up-wind performance.

5 Wrist/Waist Leash Attachment Point

Connection point in the middle of the leading edge. Stabilizes the wing after letting go, can be used to fix it to the ground.

6 Advanced Wingtip-Twist

Wing tips are pulled back with an extra twist to compensate for strong gusts quickly. It prevents getting caught in the water and makes pumping easier.

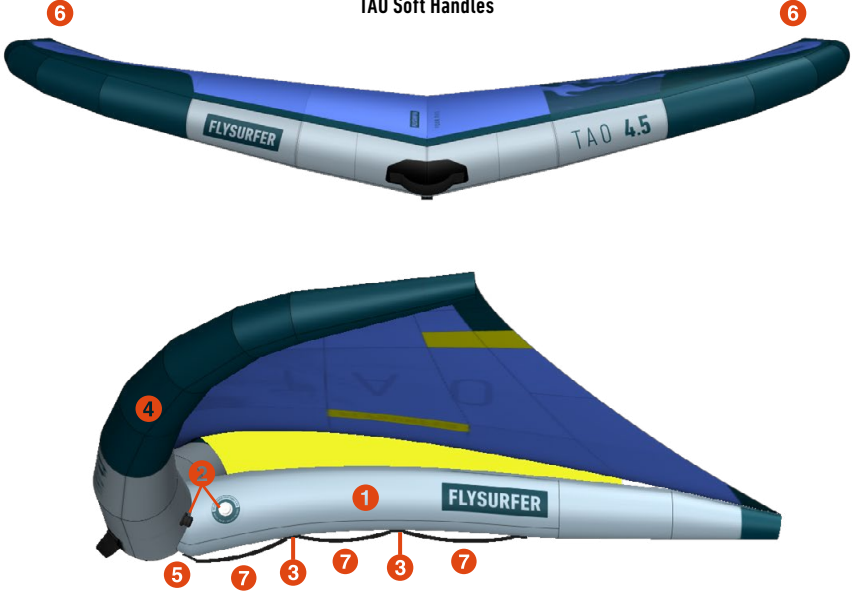
7 TAO SH Non-Slip Handles

Non-slip segmentation, oval cut and handles to keep the best control of the wing.

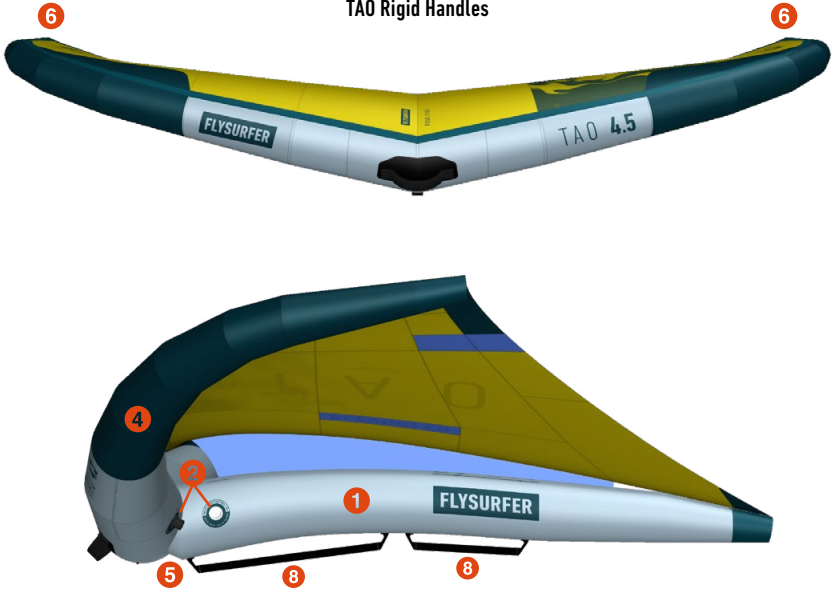
8 TAO RH Carbon Handles

Ergonomically shaped Carbon Handles covered by anti-slip EVA for outstanding grip to control your wing precisely.

TAO Soft Handles



TAO Rigid Handles



04 HANDLING



The wing has not been developed for use below -5 °C or 23 °F.



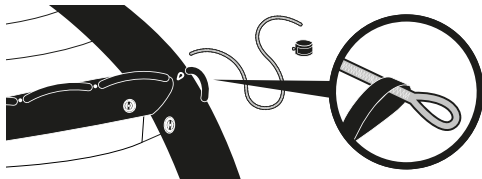
Always secure the wing! A wing that flies away can pose a great danger to anyone downwind.

04.01 Attaching the arm leash

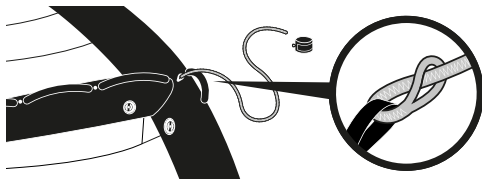
- 1 Disconnect the arm cuff from the leash.



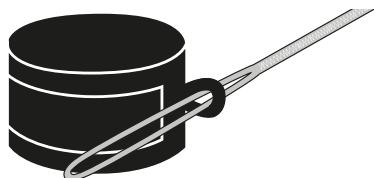
- 2 The connection point in the form of a black loop is located in the middle of the leading edge. Thread the leash with the thin end through the black loop.



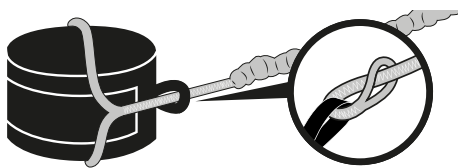
- 3 Thread the long end of the leash through the shorter end of the leash. Pull the leash tight.



- 4 Thread the long end of the leash through the black attachment point on the arm cuff.

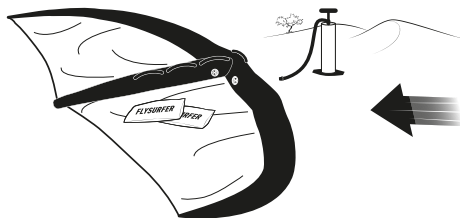


- 5 Put the loop of the leash over the arm cuff. Pull the leash tight.

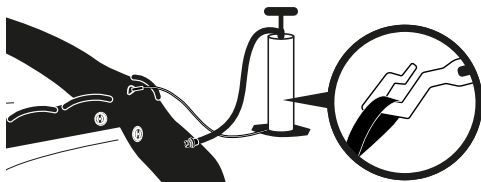


04.02 Inflating the wing

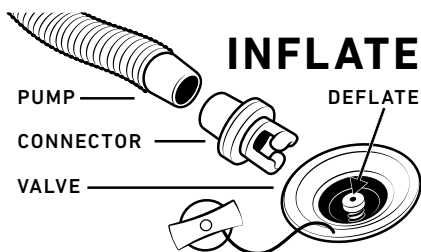
- 1 Spread the wing out on a surface without any hard or sharp objects. Place the wing with the leading edge in the wind. Weigh down the wing next to the strut with a suitable object (sand, board, etc.).



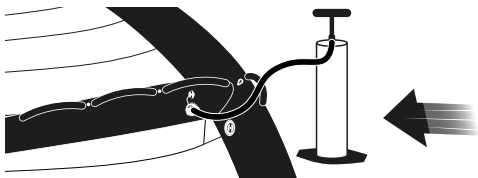
- 2 Connect the pump to the attachment point in the middle of the leading edge.



- 3 Before inflating, check that the free flow valve is closed. If not, press the pin - it should be visible. Insert the pump tubing with the appropriate adapter into the valve with a quarter turn.



- 4 The wing has two free flow valves. Inflate the wing until the strut and leading edge are full. Note the PSI guidelines next to the valve! Close the valve caps before going on the water.



To ensure the correct operation of the Free Flow valves in the long term, we recommend:

- ▶ Avoid getting sand in.
- ▶ Make sure there is no sand in the pump adapter before attaching it to the free flow valve.
- ▶ After air is completely purged, close the valve cap to protect the bladder from dirt or damage.

04.03 Secure

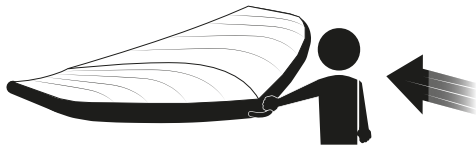
- 1 Flip the wing over so that the bottom side is on the ground and the leading edge faces the wind. Weigh down the wing with sand or a sufficiently heavy, blunt object on the sail.



The wing can also be attached to an object with the arm leash to secure it. Keep the leash short to prevent the wing from bouncing on the ground!

04.04 Carry

Hold the wing by the **handle at the front** of the leading edge so it can flag out in the wind. Move with the leading edge pointing windward to stay in control.

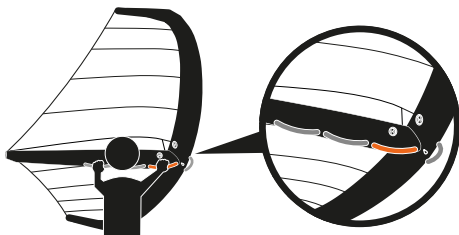


Recommendation for lighter winds:

*Hold the wing by the **front handle (first position)** of the strut so it can flag out in the wind. Move with the leading edge pointing windward to stay in control.*

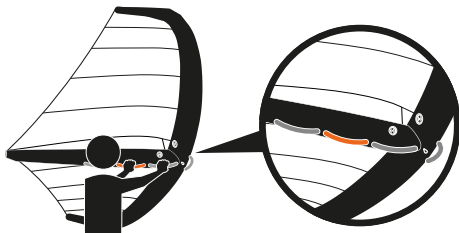
04.05 Handle positions

Grab the **first position** with your front arm (in riding direction) and use it to guide the wing. This position is used to regulate the angle to the wind and the force that acts on your arm.



If you move your hand towards the leading edge, you reduce the pressure on the arm. If you bend the arm strongly to pull the wing towards the body, the wing loses power.

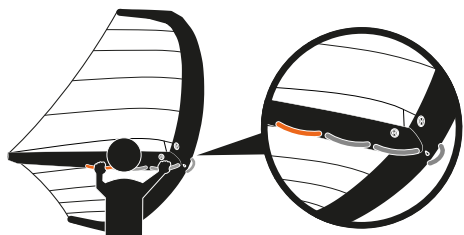
On the downwind course reach for the **middle handle** position with your backhand. This handle is not needed on any other course. It is also used to help to water start with small boards with a volume below the body weight.



The TAO RH doesn't have a center handle.

The wings force acts almost exclusively on this handle position. The use requires a lot of physical strength.

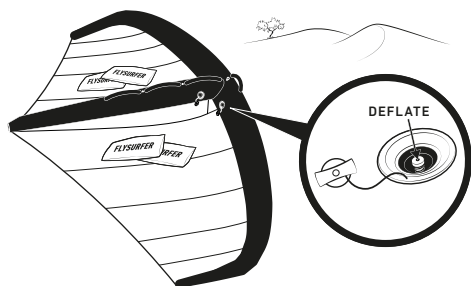
The **handle closest to the trailing edge** is used to regulate the force produced, depending on the angle or hand position.



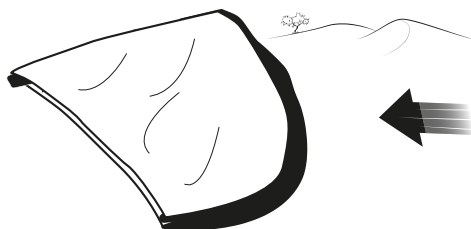
04.06 Pack up

Put the wing on the ground while packing it up. Incorrect handling can lead to the bladders slipping and significantly impair their function.

1 Deflate the wing using both free flow valves.



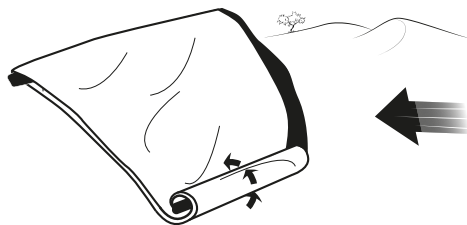
2 Before folding the wing, push most of the air out of the bladder. Place both wingtips on top of each other. Clean the handles to avoid damage before folding



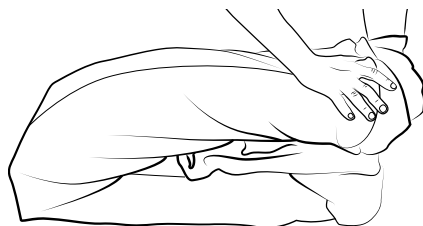
Don't remove the handles for packing. Only exchange them if they are damaged.

Tip: To reduce the pack size, a third of the strut can be folded towards the leading edge beforehand.

3 Roll the wing towards the center to push the remaining air out of the bladder



4 Fold the wing so that it can be easily stowed in the bag.



Ensure the handles align next to each other to store them efficiently in the bag.

05 WING CARE

FLYSURFER wings are durable and UV and saltwater resistant. With proper care, your wing may last even longer. Eventual color changes of the cloth can be caused by environmental causes, UV-exposure, mechanical strain as well as dirt. A color change has no influence on the flight characteristics whatsoever and is not covered by warranty.

Drying

If a wing is packed away wet and left for a long period of time it can develop ugly mildew spots, rust on the metal parts or color bleeding of the cloth. This does not affect how the wing performs, but will reduce the value of your wing. In extreme cases the wing may get mouldy. To dry, simply continue to fly the wing until the canopy is dry.

Rinsing

Rinse your wing from time to time with clear water, after using it in salt water, and leave it to dry in the shade. Do not use any detergents. The warranty will be void after the use of detergents on the cloth.

Check

Check all parts of the wing before each use. Especially parts that can wear out. Material failure on those parts can lead to further damages, or put the wingsurfer at risk.

Storage

We recommend a dry storage at plus degrees. Folding the wing should be avoided when storing. If folding / kinking is necessary, we recommend laying out the wing regularly during storage.

06 REPAIR

Before starting the repair, we recommend that you go to a place that is protected from sand, water and wind and has a clean surface. We recommend having the wing repaired by one of our professional partners (specialist shop, school, workshop) who work with original spare parts.

The included repair kit contains material to repair small damage (cracks, holes) in the bladder or sail.

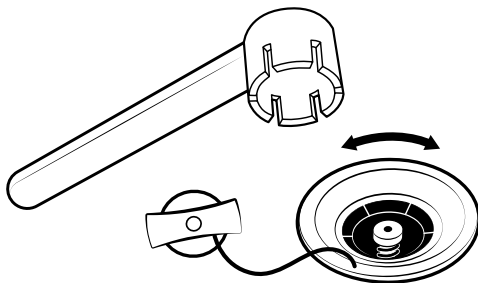
06.01 Cloth repair

In case you get a small tear (e.g. through contact with a sharp object) we have included a repair kit with your wing. The area that needs to be repaired must be clean, dry and grease-free. Temporary repairs are possible with spinnaker repair tape. It is recommended that you round off the edges of the repair tape. A repair manual is included with the binding agent.

Tip: When a tear is close to a seam (less than 5cm), we recommend using sewing to repair the damaged area.

06.02 Valve replacement

A special tool (key) is required to replace the valve. The free flow valve can be screwed out of the body with the key. The cap can easily be replaced and any damage to the pin or the metal spring repaired.

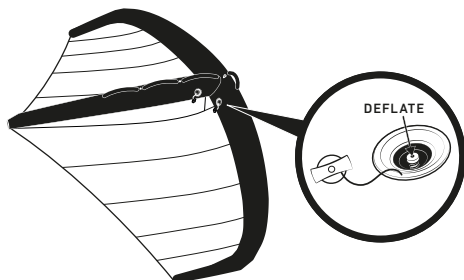


06.03 Bladder replacement or repair

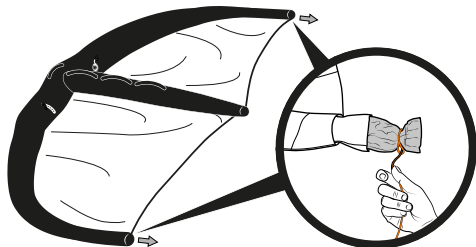
Bladder replacement or repair is a complex process and should be carried out by a specialist.

We recommend a second person to help.

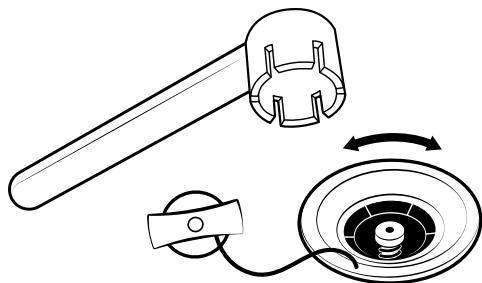
- ❶ Put the wing on the ground and deflate the air.



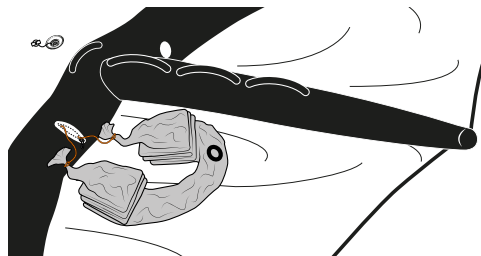
- ❷ Open the ends of the leading edge and attach a long line to each end of the bladder.



- ❸ Use the special tool (key) to screw the valve out of the body of the Leading Edge. Loosen the hook-and-loop fastener on the valve connection and press it into the tube.



- ❹ Open the zipper in the middle of the wing and pull the bladder out of the tube via this exit. The previously attached lines now run through the chamber of the leading edge.



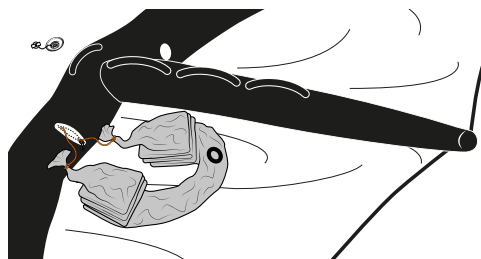
- ❺ After the bladder is completely extracted from the tube, the lines can be removed and attached to the center of the wing. The lines stay in the body of the leading edge so that the bladder can later be pulled through the tube again.

Visually check the bladder for leaks. If the visual inspection has not produced any result, partial areas can be checked with a sponge moistened with water.

Quick repairs can be carried out on small holes or small cracks (e.g. by a sharp object) with a **self-adhesive bladder plaster**. The area to be repaired must be clean, dry and free of grease. It is advisable to roughen the area to be covered around the hole or crack.

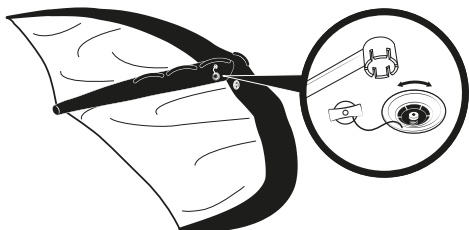
Check the airtightness of the bladder before it is pulled back into the tube.

- ❻ Place the bladder with the free flow valve in front of or on the wing. Attach the lines to the bladder ends.

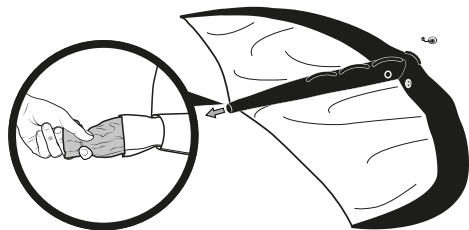


- ❼ Fold the bladder and use the lines to carefully pull it into the tube. Close the ends of the tube and the zipper.

8 Use the special tool (key) to unscrew the valve from the body of the strut. Separate the hook-and-loop fastener from the valve connection and press the valve into the tube.



9 Open the end of the strut and pull the bladder out through this opening.

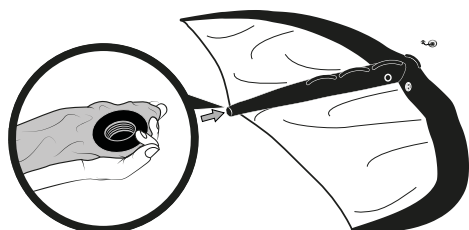


Visually check the bladder for leaks. If the visual inspection has not produced any result, partial areas can be checked with a sponge moistened with water.

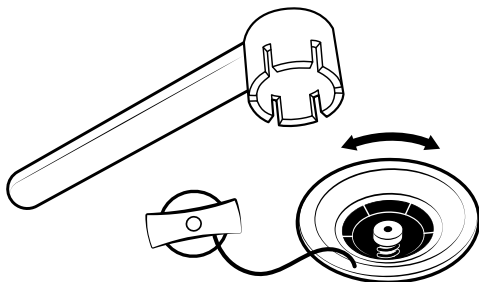
Quick repairs can be carried out on small holes or small cracks (e.g. by a sharp object) with a **self-adhesive bladder plaster**. The area to be repaired must be clean, dry and free of grease. It is advisable to roughen the area to be covered around the hole or crack.

Check the airtightness of the bladder before it is pulled back into the tube.

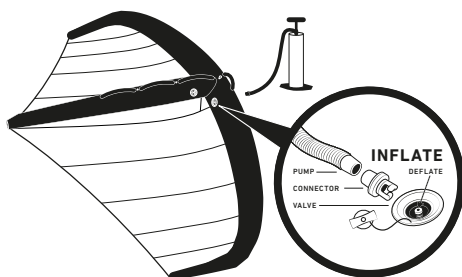
10 Grasp the bladder by the valve and insert it into the strut. Position the valve in place and align the bladder along the strut. Close the end of the strut.



11 Use the special tool (key) to screw the valves back into the leading edge and strut.



12 Inflate the wing softly and check its shape (avoid bubbles, warpage or large wrinkles), repeat the process several times.



Finally, the wing should be inflated for at least two hours according to PSI information.

06.04 Handle repair

TAO Soft Handles

If the soft handles are damaged, we recommend that they be repaired by a specialist. Small cuts on the surface can be sewn independently.

TAO Rigid Handles

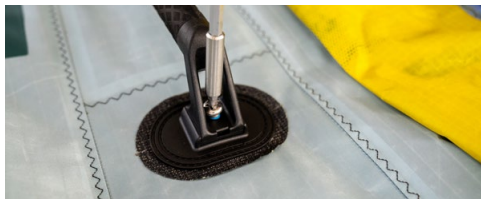
TAO Rigid Handles for replacement can be purchased from our FLYSURFER partner or at shop.flysurfer.com.

We recommend a professional repair in case of damage or breach of the handles.

❶ Remove the protection parts with a tool at the handle's end.



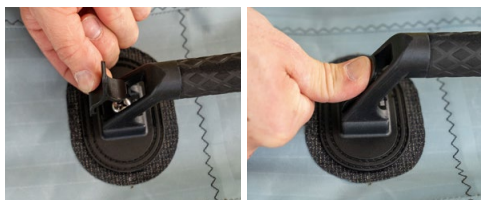
❷ Take the screws and align them precisely. Use the screwdriver and screw them in using your hands.



❸ Use a screwdriver to remove the screws. Store them securely.



❹ Click the protection parts into the open spaces of the handle. The screws are now protected.



Attention: The use of electric-powered tools can damage the wing!

Choose the fitting handle size according to this chart:

Wing Size	Strut Front Handle	Strut Back Handle
7.0	[XL] 520 mm	[M] 340 mm
6.2	[XL] 520 mm	[M] 340 mm
5.2	[XL] 520 mm	[M] 340 mm
4.5	[L] 420 mm	[M] 340 mm
4.0	[L] 420 mm	[M] 340 mm
3.5	[M] 340 mm	[S] 240 mm
3.0	[M] 340 mm	[S] 240 mm
2.5	[M] 340 mm	[S] 240 mm

❺ Set up the new handles on the reinforced patches of the strut.



FLYSURFER

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For further information please visit: www.flysurfer.com