

**RRD**

# RRD **WH-FLIGHT ALU 85** HYDROFOIL & WINDFOIL BOARD

OWNERS' MANUAL AND ASSEMBLING INSTRUCTION



- ENGLISH MANUAL -

French, German, Spanish, Italian version online on:

[www.robortoriccidesigns.com](http://www.robortoriccidesigns.com)

# SAFETY

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## READ THIS MANUAL CAREFULLY BEFORE USING YOUR "RRD WH-FLIGHT ALU 85 HYDROFOIL" AND KEEP IT STORED FOR FUTURE READING

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RRD strongly recommends to follow windsurfing lessons in a specialized school before using a hydrofoil for the first time. The use of a hydrofoil involves inherent risks and can cause severe injuries or, sometimes fatal, accidents if misused.

To find your nearest school, please check online on the [www.robtoriccidesigns.com](http://www.robtoriccidesigns.com) website under the tab <schools> . When using a hydrofoil, you agree to take full responsibility for your own safety and those of others. This includes informing subsequent users/owners of your equipment of the risks and responsibilities involved. Before practicing, make sure that you are properly covered by an insurance for any damage or injuries caused to third parties while practicing windsurfing sports. Please refer to your national windsurfing body or federation to get more information on insurance and responsibilities.

Be aware that the design and construction of the hydrofoil involves sharp and stiff edges that could easily cause severe abrasions and/or cuts. It is very highly recommended to familiarize with the dimensions, weight, behaviour of the hydrofoil both assembled and unasssembled to the board while carrying it to the water and/or keeping it on the beach. Never leave the hydrofoil unattended on the beach. Any wind changes might cause the hydrofoil to move, fly away and cause severe damages to you and/or the others around the hydrofoil.

### SAFETY TIPS:

Constant care and caution remains the best way to avoid any problem but specialized equipment contributes to your own safety as well. Please keep in mind that wind and weather can be unpredictable and that no-one can be in full control of the hydrofoil at all times.



## • Rule N°1: YOUR PERSONAL SAFETY

It is strongly recommended to practice in the company of other users who could eventually call for assistance or help in case of emergency. You should never ride alone.

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## • Rule N°2: PERSONAL SAFETY EQUIPMENT

### **Helmet:**

It is strongly recommended to wear a helmet to protect you in case of a fall or any other unexpected situations.

### **Wetsuit :**

Choose a full-length wetsuit (water T° <19°C[66°F]) or a shorty (water T° >19°C[66°F]) depending on the water temperature. But be aware that you will use more energy when you are cold.

### **Impact vest :**

The impact vest can be a critical piece of equipment if you take a hard crash and will become a true asset if you ever have to swim back to the shore.

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## • Rule N°3: CHOOSE YOUR SPOT CAREFULLY

Choose your spot depending on your level :

The choice of a good spot is an essential decision for safe learning. To choose your place of practice, it is important to select a spot suited to the practice of hydrofoiling. Using a hydrofoil requires a deeper water depth than other windsurfing disciplines. Favor a spot without reefs or rocks and avoid overcrowded areas. Observe local laws and regulations regarding windsurfing and in the area you plan to use the equipment.

### **Wind direction :**

Don't ride in offshore wind. The wind can die at any moment or you could have an equipment failure. In offshore wind it is harder to swim back to shore, the wind and the current push you away from the beach.

It is not recommended to ride when the wind is directly on-shore, especially for beginners, as the wind will push the rider directly onto the beach. Choosing the wrong wind direction will make your learning harder. Always ride while the wind is side or side-on shore. These wind directions will let you go downwind while maintaining a safe position in case of an emergency.

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## • Rule N°4: KNOW THE WEATHER FORECAST

Be up-to-date with the local weather forecast, (apps, radio, web, harbor crew, local schools). What strength is the wind and from which direction? You must know how the speed of the wind and the direction are going to develop during the day. Because the hydrofoil enables you to ride even in marginal conditions, keep in mind the wind can quickly die completely. You should not ride during stormy weather. Also check on the tides schedule and the areas for rip currents.

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## • Rule N°5: HELP OUT OTHERS AND SHOW RESPECT

### **Help out others:**

Keep a constant eye on your surroundings, and pay attention to others. Do not hesitate to help out or go after a struggling windsurfer. But make sure you don't bring yourself in danger.

### **Respect bystanders :**

Never lend your equipment to a non windsurfer. The windsurfing board is dangerous when left unattended on the beach. Inform any people or spectators close to the windsurf board and hydrofoil that there might be an accident risk in case they collide with the board and /or the hydrofoil.

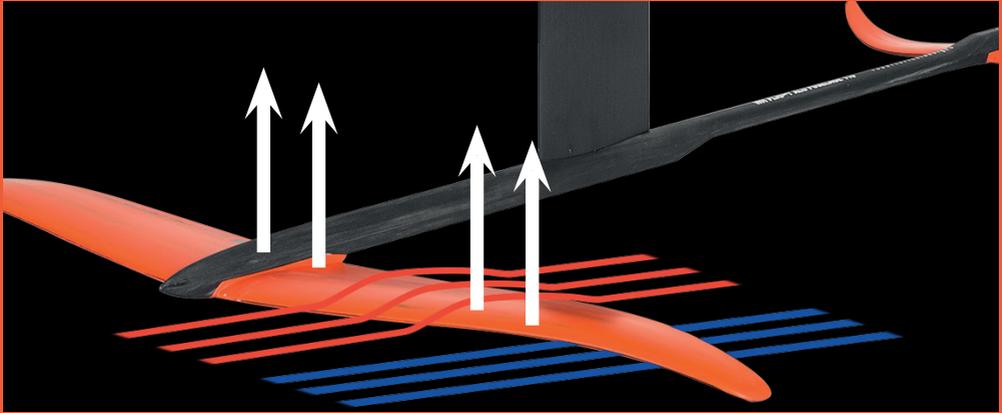
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# Before using your foil make sure you read this

## ! WARNING MESSAGE !

- Always familiarize yourself with all applicable federal, state and local laws, the waterways, the area, and the proper use of the equipment.
- Always read your owner's manual and understand your equipment before using it.
- Always inspect equipment before each use, including all components of your foil, your board and the connections between components and the board mount. Never use an equipment with missing, damaged or defective parts.
- Use caution when transporting your foil, both for the safety of yourself and others and for the longevity of your equipment.
- Always wear protective equipment appropriate for the environment and conditions in which you are using your foil and your foil board.
- Always use a helmet.
- Always use a State/Country Marine department approved boating vest and protective shoes.
- Always ride in control, away from hazards, and at speed appropriate for your ability. Do not foil in shallow water or near shore, pilings, docks, rafts, swimmers, other watercraft or other obstacles.
- Falling and the injuries or death that may result, are inherent risks in the sport.
- Do not operate any watercraft, windsurf, or foil under the influence of alcohol or drugs.
- The warnings and practices set forth above represent some common risks encountered by users.
- This list does not purport to cover all instances of risk or danger. Please use common sense and good judgment.
- GET TO KNOW THE RRD WIND-HYDROFOIL (WH-FLIGHT HYDROFOIL)

The front and rear wings of the hydrofoil work as lifting devices. The wings create a lifting force from the flow of water that travels across them at speed. This is the reason why they are built with a specific sectional profile:



The shape of the wings' profile shall not be modified, filled and sanded. Doing so would alter the balance and prevent the correct operation of the hydrofoil.

## **! WARNING MESSAGE !**

In order to guarantee the correct behavior and performances of the hydrofoil, the rear edge (trailing edge) of the wings must remain very thin, thereby making this part more fragile in case of impacts. During handling and use of the hydrofoil, the user should be particularly cautious with these sharp areas in order to avoid any risk of injury.



## USING THE RRD WH-FLIGHT HYDROFOIL

### On shore Handling :

The RRD windfoil should always be laid on its side when left on the ground, Never leave the windfoil (assembled with the board) standing up or upside down. It can easily fall on its side and get damaged.



When heading for the water, the windfoil should always be carried very carefully. Hold the board on its side or on your head like explained in the pictures, like this:



### Water handling:

Walk into the water while keeping your board and your sail. As soon as you are in the water walk deeper into it until reaching a water patch deep enough for the size of the foil.



# ! WARNING MESSAGE !

A safety margin is required as the board and foil will sink to some degree when the rider gets onto the board. To prevent any risk of collision with a reef or a shoal, it is strongly recommended to walk away from the shore while keeping very carefully the board at its side, until reaching deep enough water. Avoid getting into the water in wave conditions as it could make this procedure difficult and dangerous.

When heading back to the shore, it is necessary to get off the board at the same distance from the shore that had been required to start safely. Again, it is recommended to walk back to the shore keeping the board carefully on its side.

## **TO KEEP THE RRD WH-FLIGHT HYDROFOIL IN GOOD CONDITIONS: After every use, make sure you always:**

- Clean and rinse all the parts of the hydrofoil before storing them.
- Take apart the front and rear wing and fuselage from the mast.
- Protect the parts by storing them in their original packaging or using another appropriate protection.
- If chips, dents, or bumps appear following an impact, fill with epoxy resin or primer and sand until the local surface is smooth and clean. It is strongly recommended to let a professional handle these kinds of repairs.
- Make sure the surface of the blades remain smooth and clean. The windfoil works using a dynamic equilibrium and the flow around the wings can be very sensitive to any damages. Sudden stalling can happen if the surface condition of several parts are compromised. Stalling the foil can unsettle the rider and result in abrupt falls.

## **IMPORTANT NOTE**

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Our WH-flight ALU 85 hydrofoil is composed of Aluminium parts (Mast, Fuselage, Plate) and Hybrid Carbon parts (Front and Rear Wings) assembled together by stainless steel screws. The mast is assembled to the board using a dedicated plate with Tuttlebox inserts. In order to maintain the assembling and disassembling process and easy one to be performed and keep a long product lifetime we strongly recommend to follow this maintenance precautions:

After use, always disassemble the hydrofoil from the board, the wings from the fuselage and the fuselage from the mast and rinse the screw holes with fresh water.

In order to keep the Stainless steel screw holes properly maintained and free from oxidation, we strongly recommend the use of this product: Tef-Gel made by TIKAL, (corrosion eliminator GEL) that should always be spread around the female threaded holes in the stainless steel parts.

# WINDFOIL SCREW SET PROVIDED

**5X**

**3X**

**3X**

20mm

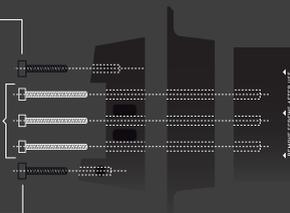
40mm

60mm



Depends on board type  
(screws not provided)

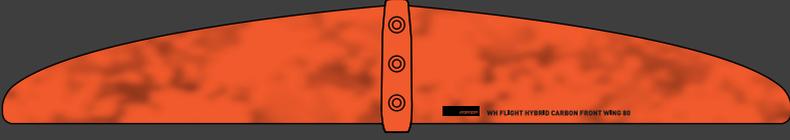
3x 60 mm



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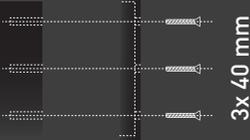
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WH FLIGHT HYBRID CARBON FRONT WING 88



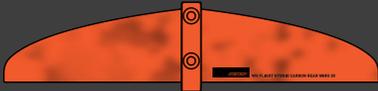
3x 20 mm



3x 40 mm



2x 20 mm



WH FLIGHT HYBRID CARBON REAR WING 88

## CORRECT POSITION FOR 4 DIFFERENT SCREW LENGTHS

WH FLIGHT ALU

# HYDROFOIL ASSEMBLING INSTRUCTIONS

In order to assemble your new WH-Flight Hydrofoil correctly please follow this instructions:

1) Join the mast to the plate. Then tighten the 3 X 60mm screws to secure the TuttleBox head to the plate and make sure that the screws are tightened properly.

2) Assemble the rear Wing with the 2x 20mm screws to the 2x fuselage holes. Make sure the fuselage rear wing screw holes are clean and free from sand or any debris that might cause friction and bad assembling fit. Fix the rear wing tightly to the fuselage making sure that the screws are properly aligned and they screw properly to the 2x fuselage stainless screw holes. Do not force the screws into the metal insert in the very beginning of the screwing process. Doing so might damage the thread of the metal insert and cause a bad alignment of the rear wing angle to the fuselage. A wrongly assembled rear wing onto the fuselage will cause a wrong lift force on to the hydrofoil and a wrong hydrofoil trim on the water. This might lead to a malfunctioning of the hydrofoil and damage the threaded screw holes.

3) Take the front Wing with the 3x 20mm and place it onto the fuselage. Align the front wing with the 3x fuselage holes. Make sure the fuselage front wing screw holes are clean and free from sand or any debris that might cause friction and bad assembling fit. Fix the front wing tightly to the fuselage making sure that the screws are properly aligned and they screw properly to the 3x fuselage stainless screw holes. Do not force the screws into the metal insert in the very beginning of the screwing process. Doing so might damage the thread of the metal insert and cause a bad alignment of the front wing angle to the fuselage. A wrongly assembled front wing onto the fuselage will cause a wrong lift force on to the hydrofoil and a wrong hydrofoil trim on the water. This might lead to a malfunctioning of the hydrofoil and damage the threaded screw holes.

4) Place your foilboard on top of its board bag with the hull facing upwards and insert the



1a



1b



2



3

Hydrofoil head into the finbox slot. Make sure the finbox is clean from sand or any other debris that might cause friction in inserting the mast head inside the box. Please use extra care when inserting or removing the mast from the foilboard. This is the moment when you can really damage your board.

5) Take the fuselage assembled with the rear and front wings, and assemble it to the aluminium mast fuselage head using the 3x 40mm screws. Make sure the fuselage box and mast fuselage head are clean and free from sand or any debris that might cause friction and bad assembling fit. Fix the fuselage tightly to the mast making sure that the screws are properly aligned and they screw properly to the mast stainless steel metal inserts. Do not force the screws into the metal insert in the very beginning of the screwing process. Doing so might damage the thread of the metal insert and a bad not aligned fit. A wrongly assembled fuselage might cause loss of performance and direction control might be hard or impossible.

6) Take the foilboard with the relative hydrofoil inserted inside the box and place it upside down with the deck facing upwards. Insert the two stainless steel screws and washers inside the box holes and firmly screw the mast head to the board. Make sure the mast has a very tight fit to the board finbox.

7) Your Hydrofoil is now ready to be used.

8) For the disassembling process, please proceed with the points 1-6 above in a backwards order.



# RRD Windfoil boards program

RRD firmly believe in the development of foilwindsurfing at all levels. We have developed a specific program to allow everyone to have access to foilwindsurfing without having to necessarily buy a dedicated board. You can finally go in the water with 7/8 knots and make the most of all light wind days in locations with marginal conditions.

That's why we have developed a specific new hydrofoil (the WH FLIGHT ALU 85) which is assembled with a dedicated plate with Tuttle head.

This Hydrofoil can fit on every type of board, there's no need to have a specific foil box. In fact the special plate has collar pushes onto the area around the fin box which avoid from box cracking. The WH FLIGHT ALU 85 can be used on every type of board.

All our foil, slalom and freeride boards allow you to have a great foiling experience at any level. The H-Fire 91, the X-Fire ltd V10, the Firestorm ltd and Wood V4 and the new Fireride ltd and Wood are specifically designed for both standard fin and hydrofoil.



H-FIRE 91



WOOD

X-FIRE V10



LTD

FIRESTORM V4



LTD

WOOD

FIRERIDE V1



LTD

WOOD

The H-fire 91 is our first dedicated windsurf foil board in collection.

The board is 236 x 91 cms of width, with a very wide tail and the deck shape for an easy and comfortable ride while in the air or in the water. Once the board is up and going it is so simple to go fast and keep the whole system in control.

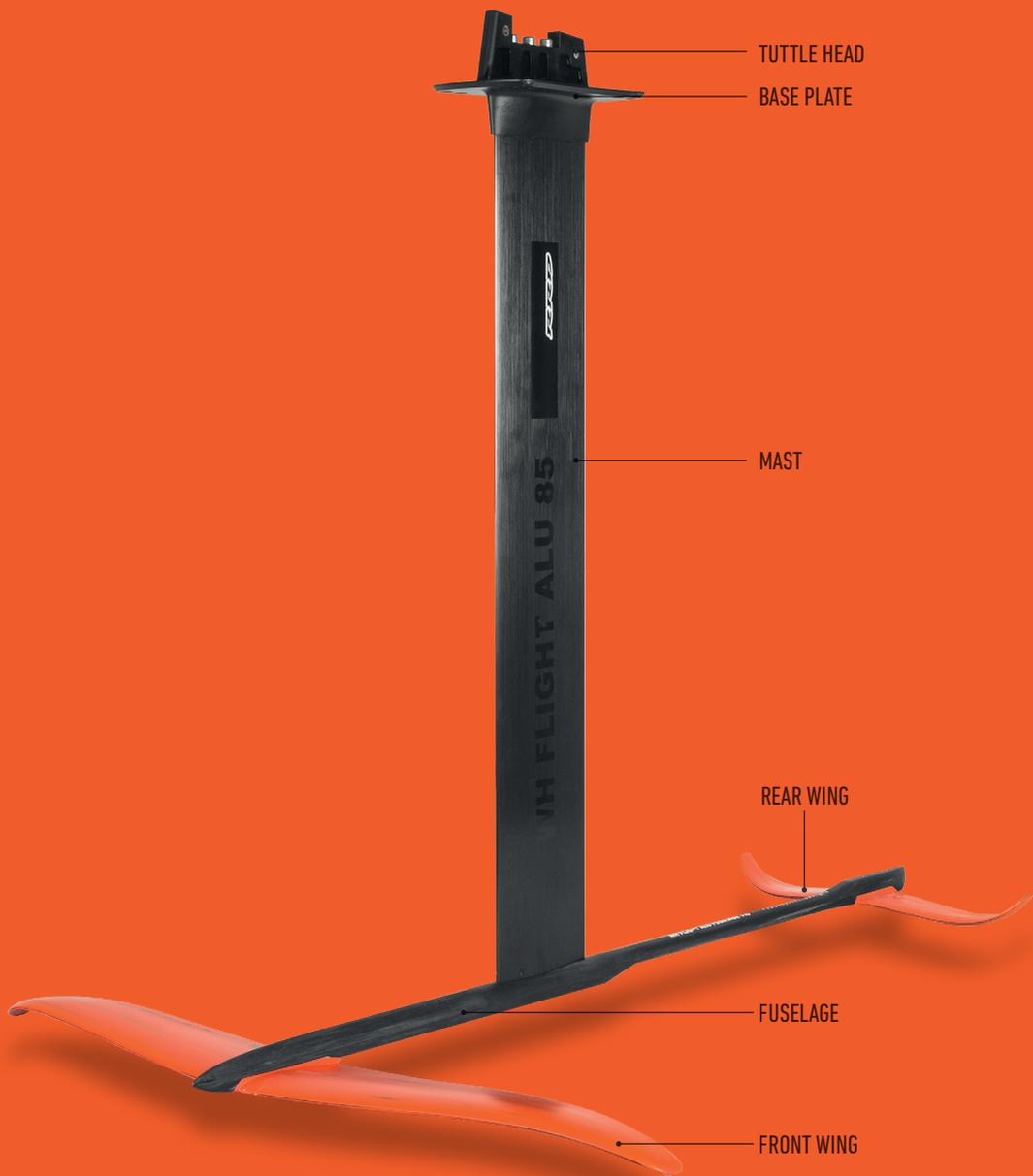
The 236 cms length will make your learning process an easy one and will become extra functional once you will try your first jibes. The board is very handy when foiling at high speed and when you need maximum control during touch downs.

# H-FIRE 91



**WOOD**  
236x91cm





TUTTLE HEAD

BASE PLATE

MAST

REAR WING

FUSELAGE

FRONT WING

**DISTRIBUTED BY:**

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