



Assembly Instructions DragonFoiler Amas

Congratulations on your DragonFoiler kit purchase.

Section 1 - Assemble Kit

Instructions on how to assemble the hulls and beam components.

Section 2 - Attachment & Rigging

Relates to the attachment of the foiling kit to the DF hull and rigging instructions.

Kit Material Information - Part ID

The kit is 3D printed from PET G CF carbon fibre filament which is extremely tough and has a 75- 80-degree centigrade heat tolerance.

The 12 mm beams are woven carbon fibre and the 10 mm beam inserts are pultruded unidirectional carbon fibre.

To assemble your kit you will need:

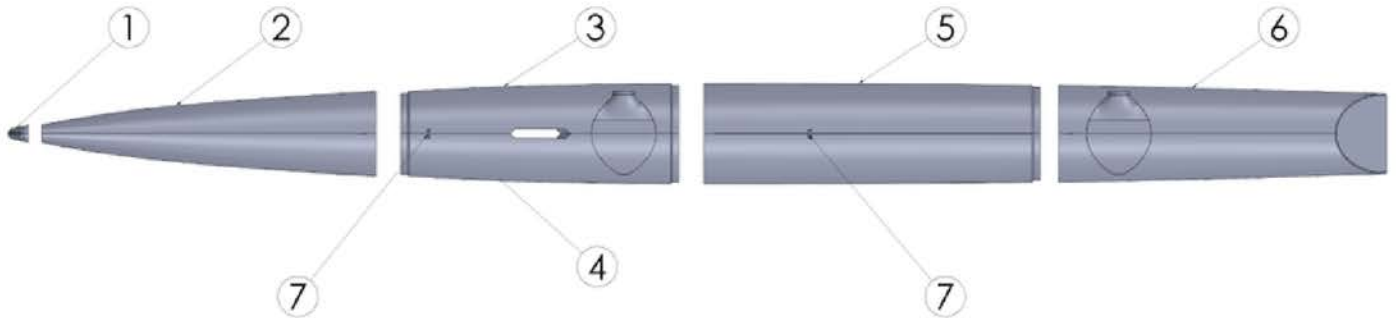
- A good quality CA super glue adhesive such as ZAP
- A roll of 18 – 25 mm wide masking tape



Section 1 - Assemble Hulls & Beams

Step 1 - Lay Out & Identify

Identify the parts as per the drawing and pictures following, please note that sections 3, 4 and the beam inserts are all pre-assembled. As both amas use the same sections, please identify your port and starboard sections 3-4 and 6 to ensure that the beam attachments are facing inboard.



Step 2 - Mask, Glue & Waterproof

Check that all four hull sections fit snugly together. Note it is important the centre line of each section matches up and that the sections are pushed firmly together.

Starting with sections 1 (the bow bumper) & 2 (the bow cone) then followed by 3 & 4, apply the masking tape to the edge of the rebate on sections 3 & 4 and to the outside aft edge of section 2.



Apply a thick layer of adhesive (read adhesive manufacturer's instructions) to the for'd section of the pre bonded parts 3 & 4 then slide the bow section 2 over sections 3 & 4 ensuring that the centre line is matched up.

Follow the same procedure and mask and glue section 3 & 4 to section 5. Once the adhesive has set then it is advisable to stand these first 4 hull sections on end bow down and fill with water to check for leaks before gluing the last section 6.

Note that section 2 bonding to 3 & 4 and 3 & 4 bonding to section 5 at the bottom of the hull are areas that can leak. Water leaks can be easily fixed by dripping some of the CA adhesive into the slot on the section intersection on the bottom.

Once section 6 has been bonded, your Port and Starboard Amas are completed.



Section 1 - Assemble Hulls & Beams Continued

Step 3 - Assemble the Beams

Assemble the carbon fibre beams using the 12 mm OD 310 mm tube insert and glue the 10 mm pultruded 200 mm length 105 mm into one end of the four beams.

Then glue the 160 mm length 85 mm into the other end of the beams.

As per picture following.



Note that the 95 mm end of the beam fits into the DF hull deck beam support and the 75 mm end slides into the pre bonded tube on the Amas all 4 beams are the same length.

Your Ama and beam assembly is now completed. If you wish you can wet sand and either clear coat or prime, fair and paint the Amas using either single or twin pack acrylic lacquer.

Section 2 - Attachment & Rigging

Step 5 - Attach Beam Supports to DF Hull

If you have purchased a pre-installed DF 95 kit from us with beam supports pre fitted and rudder post pre drilled to 4.0 mm then please then please skip this step.

Position

Position the assembled foiling kit on top of the DF 95 hull with the centre of the for'd beam support positioned on the keel/mast step moulding as per picture 1. The beam support should be **402 mm** aft of the bow to the outboard edge of the deck on each corner (measure the plastic hull only, do not include the bow bumper).

Mark & Mask

Mark the for'd beam position and mask of the area to be glued. Carefully sand the area to be glued using coarse sand paper and be sure to go through the paint so that the plastic is showing for maximum bond strength.

Glue

Using a CA super glue, such as ZAP, apply a coat of glue as per the manufacturer's instructions to both the hull and the underside of the beam support. Carefully position the beam support in position. Remove the masking tape and apply pressure to the beam support.

Assure Fully Bonded

Once the adhesive is set, continue as below. You will note that the for'd beam support extends 10 mm down onto the chamfer of the topside. It is important that you ensure this is fully bonded, as this provides additional support and stiffens the deck.

Repeat for aft beam

The aft beam support position is determined after the for'd beam support is attached. Repeat as above.

Assure perfectly square

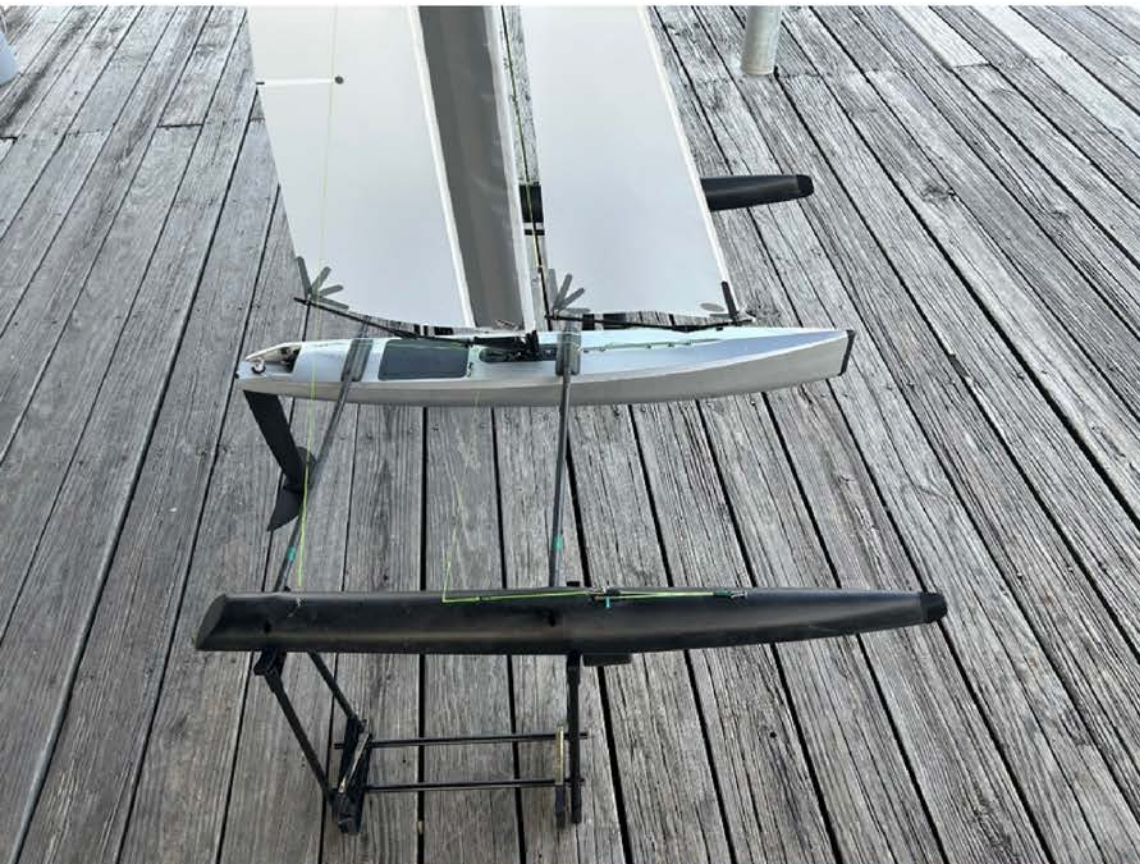
Be sure to get the beam supports square of the centreline across the hull and ensure they are not angled.



Section 2 - Attachment & Rigging

Step 6 - Hull Assembly

Slide the carbon cross beams into the beam holders on the DF 95 hull. The beams are a snug fit. It is recommended to wind a thin layer of electrical tape over the beams where they join to stop the cross beams from sliding out of the beam tube inserts on the hulls when sailing. See Red & Green tape in the following images.



Section 2 - Attachment & Rigging

Step 7 - Foils

Remove the plastic round tube from the top of the foil and slide the port and starboard foils into the foil cases, then slide the plastic tube back through the hole in the top of the foil to stop the foil falling back out of the foil case (note there is a spare length of this inside the kit).

Stretch the ford elastic over the top of the foil and locate this into the notch groove at the back of the foil this is located about 5 mm down from the foil top on the aft edge.

Attach the short bowsie clip to the ring fitting on the top of the foil, this is the fore and aft foil adjustment. Tension the bowsie and pull the top of the foil aft so that there is a 2mm gap between the aft edge of the foil and the and the back of the foil case.

Note that on the bottom of the hull the foil should be as far aft so that it sits against the back of the foil case. This is the initial foiling setting that will enable you to foil quickly.



Step 8 - Rudder

Using a 4.0 mm sharp drill bit carefully drill the rudder post in the DF hull out as the standard rudder has a small 2.7 mm shaft which is not strong enough to take the foiling rudder and wing.

Attach the tiller head fitting to the steering. Slide the rudder shaft through the hull inserts and up into the tiller head and tighten both the top screw and the aft screw, turn on the radio and check and adjust the rudder so that it is centred on the hull.

The wing will need to be screwed to the bottom of the rudder. This has been pre-drilled, tapped and is supplied with the screws and alum key.

The rudder has been pre-set at the correct angle of positive downward trim and needs no adjustment.





Section 2 - Attachment & Rigging

Step 9 - Assembling the Rig

If you have purchased the DF 95 RTR package I recommend that you follow the instructions in the enclosed Dragon Flyte instruction book and build the standard A rig before attempting to build the A + tall rig.

The side stay kit (components supplied) needs to be used on both the standard A and A + tall rig. When using the standard rig, the stays clip onto the forestay ring and onto the for'd stay position on the hulls (see picture).

You should always use side stay kit in trimaran mode. Failure to do so could result in the mast sump breaking.

The standard A rig supplied with the DF 95 RTR kit should be rigged and set up the same as the standard monohull kit including the back stay detail.

Step 10 - A + Tall Rig Assembly

This is the same as the standard A above with the following exception that you will need to glue the jib and main boom components and assemble the boom vang etc.

Be sure to follow the same process as the standard A rig and remember to attach the main sheet lead and retaining rubber ring etc before gluing the boom together.

The mast extension for the tall rig has been supplied at 285 mm with the joiner tube pre attached to the top section and the forestay attachment ring as pictured above.

NOTE do not glue the top mast extension into the standard A mast.



Section 2 - Attachment & Rigging

Assemble the mast head fitting and attach the backstay as per the standard A rig. Do not glue the mast head fitting into the mast extension. Make sure that this is a snug fit into the mast but is free to swivel as the sail is sheeted in and out when sailing.

Slide the long A mast and extension up inside the luff pocket and make sure that the forestay ring exits through pocket cut out.

Insert the mast head fitting after the mast has been fitted inside the luff pocket. Tie the top of the sail to the mast head fitting as per the above picture. Note that the head of the mainsail attaches in 2 positions on the luff pocket to the mast head fitting.

Attach the clew out haul and wind on some boom vang so the sail takes shape. To fit the luff pocket foam insert we recommend adding some soapy water to the kitchen sink and wetting the foam with water and soap to make it slide easily up inside the luff pocket.

When assembling the head of the jib you can use the additional clip supplied to make the jib easily removed from the rig (see picture) which can make the rig easier to transport or can rig the jib in the same way as the standard A above.

As per the standard A rig you must use the side stays and these attach to the aft foil adjustment chain plate.

The back stay should be set up as per the standard DF 95 A rig. Leach tension and mast bend is adjusted via the boom vang and the back stay.

Step 11 - A Few Tips Setting Up For Sailing

Remember to put the bungs supplied into the transom drain holes in the Amas and DF hull.

The multihull is by nature light and fast and in general performs better and is easier to sail with wider sheeting angles and more open mainsail leach than a monohull. Sail the boat at wider angles, avoid trying to pinch the boat to high when going upwind keep it a bit free and sailing fast it will foil faster get there quicker.

The standard foil position is 4-5 mm from the back of the case to the back of the foil. This position will give the boat higher lift in lighter breezes of 6 - 8 knots as you get the hang of sailing the boat it will go faster and be more responsive if you flatten the lift by allowing the top of the foil to move forward approximately 6-8 mm from the back of the case which automatically swings the bottom of the foil aft, you will need to experiment and get the feel for the best position to set the foils then mark the deck so you can repeat the position.

The boat will easily gybe on the foils and will tack very fast in a breeze, in the light airs it is often easier to gybe than tack.

Happy sailing,

Regards

Paul Goddard

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