

General Tips on building Timber Taipan 4.9's

This information was originally posted on the Formula 16 High Performance forum.

In reading the previous posts of this forum I've noted a few enquiries about building Taipan 4.9s from timber using the plans available from AHPC. I've been directly involved in building three T4.9's this way and thought I'd point out a few helping hints.

Firstly - congratulations on deciding to build with timber - I've had nothing but great times with my boat and have never given anything away to glass T4.9's. In fact it's worth knowing that in the cat rig division 13 of the 14 Australian National Titles contested have been won by timber boats.

The main reason for providing hints is that the plans have not been regularly updated since AHPC started building glass boats and so a few minor revisions have not been indicated on the plans.

What you will need (in addition to the plans and building materials etc)

A current copy of the class rules for checking dimensions

A set of measuring templates. These are difficult to get but I have emailed AHPC and suggested that they make sets available made from computer cut Kevlar or mylar which can be rolled up and mailed out. We found that some minor modifications were required to at least two bows after completion when they were measured so it is worth pressuring AHPC to provide these.

As a general comment I personally would not aim to modify the plans to strengthen or lighten the boat. The plans provide a boat which in my opinion are stiffer than glass platforms and very strong. In addition you will find that by being clean and careful about how you build that the finished boat should be within a kg of minimum weight so you don't have to go overboard.

The main things to look out for are as follows:

Beam pads / mounts

Both the front and rear beams have been increased in size since the prototype. This means that a wider slot is required in the hull for the rear beam. (measure beam before setting up beam pads)

No changes are required to the timber hull for the front beam because the beam pad is formed around the beam using resin. When forming the front beam mount wrap the beam in plastic tape and use it to mould the pads. Don't use plastic because it moves around and bags up giving a messy result.

Chainplates

The chainplates specified by the plans are too small and will stretch and deform under load. After one season we changed ours to 20mm x 3.5mm S/S which have been fine. Also don't drill the holes any larger than required by your preferred chainplate / shackle and don't drill the holes too near the ends.

Daggerboard Cases

The plans are based upon the first daggerboards which had a chord length of 13". Now days all boats use the smaller boards which are near minimum width (minimum 11.42" (290mm in the rules) - check and measure) [Jim Boyer suggests 12" for the cases- RFW] Therefore you don't need to make the cases quite as big as the plans (save weight / reduce water in cases when sailing)

We put the cases at the rear limit allowed by the rules to assist boat helm balance because we were intending to sail cat rig.

Dimensions

Generally we found that building to the plans provided a boat that measured. We did find that the rear beam was a couple of mm under the minimum limit from the bow because the hulls were not firmly in the front of the jig which is sometimes difficult to achieve so you may want to give yourself a couple of mm to spare.

Also you may wish to give some thought to the position of the main chainplates. We put ours at the forward-most position allowed by the rules because we were sailing cat rig. If I was sailing sloop rig I would recommend putting the chainplates as far back as allowed to provide more room for the crew and provide a wider stay base for the mast.

Beam and mast set-ups

I would strongly recommend talking to AHPC about putting together the front beam and mast because there have been many changes since the plans were drawn which have resulted in a much neater and easier set-up for both including some neat castings for inside the front beam.

Other Items

Before building the T 4.9's our group had built several timber catamarans and incorporated some of our own touches based on this experience. These included:

Building the main chainplates into the hulls like the glass boats. Be careful with this one as the loads on the T4.9 are much larger than your average 16ft boat.

Rounding the gunwales to the main and rear decks to provide greater comfort. Our boats have a more rounded gunwale than the glass boats, (approx 10mm radius)

We built-in a 10mm dia PVC pipe through the hulls just in front of the daggerboard cases and immediately below the gunwale timber with holes at each end through the hull skin which we run our trapeze shock cord through. This eliminates having a deadeye on the deck to skin yourself on if you like your trapeze lines mounted on the gunwale rather than on the trampoline.

Build-in the aluminium awning tracks for the trampoline like the glass boats. If interested I can draw the detail we used (now used on over 10 timber boats without failure)

The end result was a boat which was visually almost indistinguishable from a glass boat and which goes just as fast. (the boats from our group have won two of the last three Nationals and placed second in the other plus numerous State Titles)

Hope this is of assistance

Good Luck and Enjoy