

Farr 400 – Pretty purposeful – Part I

Hull number 8 of the acclaimed Farr 400 was recently delivered to Australian yachting icon, Matt Allen ahead of the 2012 Helly Hansen Sydney Harbour Regatta this coming weekend. This is important, for Matt has been an active member of the Farr 40 clan, competes regularly in Asia and has his former Volvo 70 for serious ocean work, so his choices of weapon are always closely scrutinised.

by John Curnow on 4 Mar 2012



Quick journey uphill. - Farr 400 John Curnow

Now it has been said that the Farr 400 is not a pretty vessel and that her nose is a little 'wrong'. In the flesh this is not necessarily so, and at any rate it is like saying exactly that of Barbara Streisand, all the while missing the fact that she has one of the greatest voices the world has ever had the pleasure of hearing.

Whilst name dropping, it also important to mention BMW, for they are the masters of the nomenclature not exactly reflecting what is under the bonnet. In the USA, 320i actually meant 318i for a long time. More recently, 3.5d was the badge applied to the twin-turbo 3.0l Diesel. Equally, the Farr 400 is not 40 feet long – more like 38.5 in reality. As it turns out, '400' is a lot closer to her bare hull weight, which is just on 400kg.

So seeing as it is all about names so far, another reason to be on board and going for a sail, was that legend sailor and Farr 400 Project Consultant, Dee Smith, had come to Australia for the maiden sails of the latest iteration of Matt's very famous vessels, all of which have been named, Ichi Ban.

Dee is very proud of his involvement in the Farr 400 (F400) and the improvements that has brought to the vessel and her burgeoning class. This latter point is so important as to be imbued in the ethos of the boats, virtually as much as the infused resin is into their hulls.

The F400 is about recognising that the IRC measurement system has failed to allow a fast and fun 40 something to do well out on the track. 'TP's and mini maxi are killing it out there.



[Off the breeze the hull form transforms every ounce of power in to speed. - Farr 400 © John Curnow](#)

'A One Design principal means there is no political agenda contained inside the measurement system', said Dee. 'The F400 reminds me of the Santa Cruz style boats I used to know back then, except these go upwind well because there's structure and stability. They're good all round boats, which will plane easily from 13knots plus of breeze, go quickly in light airs, are well balanced through all heel angles and fit in a box, so ship easily and cheaply.'

'The core design ethos of F400 is to deliver a boat with a lot of sail area, great power and inherent low mass.'



[Full volume for'ard ensures bow gets up and you fly forward. - Farr 400 © John Curnow](#)

'Going downhill in 25 to 30knots, you start going through waves unless you have the full bow - you go down and into the wave. This boat pops up, jumps over it and keeps going!'

The very proud and broad stem is part of all of that, along with maximum length afforded to get in a standard flat rack for shipping. Similarly it's been given maximum width and it could not be any taller. 'Train, crane, box rule has set the parameters. Because of the relatively narrow beam, stability is provided by the long foil and heavy bulb, which in itself is quite long, flat and low', said Dee.

In fact the box 'rule' has been more important than just providing ease of shipping. This boat ticks a lot of boxes, as well. From design to construction, spars and deck layout, this boat is engineered to perform.

Even the foil is a welded steel box, which is stronger and lighter than the

more traditional iron bar. It has a composite fairing over it. The fin and bulb are 2200kg and the whole boat comes in at 3800kg. 'Narrow beam makes it easier to get through waves and having a large stern section combined with a large nose means it is balanced, so when heeled it does not turn in on itself and completely change the balance. You still have to sail it and it does require you to be in charge, but the secret is that it is balanced', commented Dee, with a certain knowing smile.

Having a significant sail area (102m² uphill) means you'll have to know the wardrobe inside out and be looking for a reef early. 'Yes, but it is simple', said Dee. 'The overlaps, deck hardware locations are all simple, too. You might start at 4 degrees in flat-water, light airs, but you're out to 7s and 8s+ very quickly and all adjustments and trim can be made from weather rail. Similarly, the kite hoist and douse are all done from the grinder if you so choose.'

There are a few boats now appearing with really good or even over-specified winches and the F400 is certainly one of these, which is a great and confidence-building thing.

You notice it all over the vessel, but it was very clear with the runner winches and when you consider you're putting up to four tonne into the forestay, you kind of appreciate it even more. You do certainly note that it is all designed to keep the crew on the rail for as long as possible.

Nothing could signify that more than the offset nav station and companionway set up. Quite simply, this is very clever. For'ard hatches have been like that for a while, so why not the rest of it. If a kite gets snagged during a hoist, it is a lot easier to run below when you do not have to dodge the person running the pit. With the F400 they're still over on the windward side.



[Stack them at the back on the windward rail - we're off! - Farr 400 © John Curnow](#)

Dee said, 'With the added benefit of now having sailed in Key West and San Francisco in a breeze, we know that if you go around the windward mark and the kite does go in the water, you can grind it out, which would never happen if it was hand over hand.'

Similarly, at the bottom mark, the higher freeboard means if you let it all go, it is less likely to go into the water, as you have a better angle of attack at it. If you do damage it, it could be a few legs before you get it back together, so this could be really handy.'

What you're seeing here is the benefit of the investment in Dee's knowledge. One purpose of the One Design aspect of the project is to get all crews of different calibres around the track without breaking people or gear. The vessel is strong enough and easy enough to sail to allow all to improve.

Key West was the first opportunity for the F400 to be used as One Design class. There were five boats present and four crews had never raced on them. Two of the vessels had been used before, but not with the crews who racing them, one crew had been on board previously and the other two vessels were completely new.



[Coming to get you - You won't see it for long before the Farr 400 flies by. - Farr 400 © John Curnow](#)

'Mostly there was just 10 seconds between first and last. The boat will tell you when it is not going as it should. Unlike a poorly balanced craft, you do not get a situation where one crew work it out, take off and make a huge gain on the opposition, accordingly. These are easier to keep going on pace as they are balanced', said Dee.

Now a lot of this close proximity to each other has to be a result of the builder's ability to deliver such uniformity. Premier Composites in Dubai are to be praised for this. Being infused carbon, only a set amount of resin

gets in to the hulls and they are all within three kilograms of each other. Both the hull and the deck are something like 400kg each.

Interestingly, the bulbs are milled in-house from 'new', clean antimony-lead and they are within a very impressive one kilo of each other. They have two pockets of about 10kg in them, which allows for the correct centring of their mass on the bottom of the foil.

Equally, Southern Spars deliver the rigs to within one kilo of the next and the EC6 carbon, standing rigging is yet another piece of the overall program. Perhaps this almost unbelievable achievement with consistency is why the figures will be placed online as a mark of the class' ability to deliver on its stringent OD rules.

Any differences will be in the extras and not standard gear, as each F400 will be delivered ex-factory to within 10 to 15kg of the next. It is things like this that will remove 'dock talk' about craft and eliminate owners spending the purchase price again looking for any advantage.

Says Dee 'If you cannot police it, why be a One Design class, but we can and we'll be tough on it. We've removed the chequebook-racing element. You'll step into a high tech boat and race against others in an equal environment. Those doing well will continue to do so and we'll help build the others up.

'The low barrier to entry is a crucial aspect to the growth plans for the class.'

'Already you can see this being applied, with the increased allowance of up to nine crew, so as to ensure newer owner/drivers can have on board the extra hands they'd like, in order to get the job done.

At this point, having learned of the methodology deployed in the construction of the Farr 400, it might be a good time to let the stars prepare backstage and return in a day or so for a sail on the pretty purposeful F400 in Part 2.

This coming weekend you will see the Farr 400 IchiBan sailing against the McConaghy One built MC38 The Cone of Silence at the Helly Hansen Sydney Harbour Regatta



[Very large downhill sail area of 235m2. - Farr 400 © John Curnow](#)



[Large area and head of the working sails. - Farr 400 © John Curnow](#)



[Very distinctive stem and bow section of the Farr 400. - Farr 400 © John Curnow](#)



[Farr 400 bobbing around itching to go at the CYCA pond. - Farr 400 © John Curnow](#)



[Quick to accelerate and get planing in around 13 knots of breeze.](#) - Farr 400 © John Farr 400 website