

So what is an assembly model?

In the case of the existing mast, all the alloy comes from Fletcher Aluminium in Hamilton NZ. We tried UK and Canadian base extruders but the NZ alloy was deemed superior and many years ago we standardised on NZ alloy, of a very specific grade and a very specific temper.

It is bought in “fitches” or billets, 500kgs to a tonne at a time and is anodised on site.

Fletchers are very very good at extruding alloy and do it very well and have served the class well, but that’s all they do. If we wish to value add, in NZ, then we have to out-source.

You have to remember that the amounts of alloy we order are very small in the scheme of things, so to bring in, say a milling facility to the Fletcher compound is simply not going to happen.

Therefore we buy the tube, as just that, bare tubes, cut to a convenient length, normal 2 x the finished length and shipped in that form. All the value adding happens in 95% of the cases WRT the 29er mast in Newcastle UK.

WRT the carbon mast, we are sleeve-ing it differently in that instead of using a slip or a cannon joint, where one section slides inside the other and is held with bolts, the outer surfaces land on each other and we use an internal sleeve to transition the structural integrity. It’s one of the reasons the carbon rig will last a lot longer than the existing alloy rig. In the case of the 29er mast, we neck down the mandrel so that the sleeve is integral to the entire structure. This saves weight and cost plus adds huge structural integrity. But to do this, we have to put the tube on a lathe or a mill. Once you put it on a mill, it’s a very small step, both in terms of effort and cost, to not only mill the sleeve so it fits the other section perfectly, but for a very small additional cost we can have every other hole or slot milled at the same time.

So by the time the FRP tube leaves CST, there is no need for additional jigs, there is no additional cutting & we have even streamlined the application of the plastic track. Even the use of the plastic track aids to the assembly model, in that you can fiddle it as much as you like but after one day in the sun, it will make no difference.

In the UK where Ovington makes so many masts, the big difference will be that it takes about ½ the time to make a mast. In just about anywhere outside the Ovington facility, even as close as Eckenfelder or Milan, the assembly model allows the price of the mast in those places to be less than it otherwise would be, if it was imported from the UK.

In places like Shanghai, Brazil or Cape Town the difference will be most marked, as you can offset significant duties and you will pay less tax and you will be able to use local labour at local labour rates and still produce a world class mast. Other places like the USA/Canada/Hong Kong/Singapore where there is an existing mast making culture, it simply makes supply far less complicated.

Yes, we can do some of this with the alloy system, we can’t do all of it and it will increase the price of the alloy mast 5-10%. Principally because we have to out-source.