

420 Bow Protector for Teams Racing – by



Teams Racing by its very nature involves a lot of close counter manoeuvring proximity to each other. Being an inter school sport, it is fiercely competitive and accidents do happen!

The current bow pad design in use consists of un-attached, plain, layers of EVA foam with a stitched cover – a flat unit that is then strapped into place. It is cheap but with only 30mm thickness of foam it also ineffective in many collisions.

Often the pad has slipped out of position and the gunwale rail around the bow hits directly on the other boat. The impact point is also often below the pad. Even the point loading of a heavy impact through the bow pad will still result significant damage to a bow. When was the last time you looked under the bow pad after training? Choppy sea frequently cause these bow pads to come off during racing with no way for the sailors to put it back whilst racing.



Our prototype solution was a moulded bow protector pad that fits the boat down below the water line protecting the full length of the bow stem. Included is a moulded Vinylester infused fibreglass membrane



photo Susana Buckton



Developing on the original concept, we have now created moulds for the outside and inside of the pad so that a 100gm/m³ density (free rise) urethane foam is now poured into a mould. This method of manufacture has allowed additional fairing/padding depth to the profile of the bow stem and down low onto the keel line of the hull. It has also lowered the cost of manufacture. By restricting the rise of the foam we can create higher densities in specific parts of the bow pad where we feel a stiffer foam density is needed (eg below the waterline).

The fibreglass membrane is positioned at 1/3 the foam thickness from the hull on the sides and 1/5 to 1/7 the foam thickness on the bow stem. In creating a streamline bow shape - which differs markedly from the bulky bow pads currently in use, we have significantly increased the impact cushioning.

The urethane foam is self skinning in the mould. This enables a vinyl tinting spray (not a paint) to be applied to colour the bow pad. Colours available are Blue, Red, Black, Charcoal Gun Metal and Brown.

Dyneema strops are spliced through reinforced areas of the fibreglass membrane (to minimise chafing) and make for a stable, firm and streamlined fit against hull and bow the boat.

Successful sea trials were carried out during the 2016 College Teams Sailing Nationals and afterwards by the Bucklands Beach YC Sailing Academy. The pad stays in place in choppy conditions, no bows have been damaged in collisions and feedback from the sailors was that the pads were "fast".

Repairs to boats are costly to your finances, volunteer time, and often impact on your training time on the water. Many of the boats that the teams' race and train in, have suffered badly damaged bows in their life. This can now be properly avoided.

At a cost of just \$200 including GST, these Bow Protectors will pay for themselves the very first time two boats collide, avoiding damage to the bow of the boat and minimising damage to the other boat in a collision.

Contact Hamish and order a set for your fleet today!



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