



Spirited **Eco** *sailing*

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ECOLOGICAL FRIENDLY boating is a hot topic at the moment and with good reason. Anyone with a conscience I'm sure would look at ways to reduce their effect on the environment wherever possible.

Choosing the right design can play an important role in a more environmentally friendly boat. The sailing efficiency is far more important than most people would expect. Having a boat that will sail efficiently and is light weight is a huge advantage as it will sail when other boats are forced to motor. Most 'pure hearted' sailors loathe to start the motor unless absolutely necessary,

Spirited One demonstrating how easily driven this design is.

possibly mainly because it's noisy, smelly and overall ruins the peaceful, tranquil environment most sailors live for but also because of the effect on the environment. With the rising cost of fuel this is another good reason to avoid motoring. If and when forced to motor because of lack of wind an efficient light weight design will require less horsepower therefore using less fuel with less exhaust emissions. The Spirited 380 design has proven to achieve very good sailing and motoring speeds even when loaded in cruising trim. The easily-driven characteristics demonstrated by this design make her a good example of an ecological cruising boat.

Spirited One is Spirited Designs' company 380 and is set up very simplistically for cruising. This in itself keeps the ecological footprint to a minimum when in use. The careful setting up of the boat is very important.

The choice of building material also has an impact on the environment from the time of material manufacture through to its use in the building phase. With most Spirited boats end-grain Balsa is the chosen material. Compared with producing foam and most other core materials it is much more environmentally friendly. It is plantation grown to begin with but to help further with the 'green' process this product is pressed in controlled conditions. The pre-laminated sheets called Duflex are used for most of the construction with all the computer-cutting also done in the factory minimising the traditionally dusty boatbuilding environment and keeping the mess also controlled.

The moulded Spirited components are also built using the environmentally friendly process of resin infusion. This process has now been well recognised throughout the world as the most effective way of controlling volatile emissions, while laminating. All end-grain Balsa products in the manufacture of Duflex composite panels and the core of the moulded sections of the Spirited models are plantation grown and farmed in cycles – an 'eco friendly' renewable natural resource.

Only epoxies are utilised for the Spirited moulded parts and all secondary bonding in the assembly process keeping



Example of new technology 'slim-line' solar panels.

the quantity of material used for this to a minimum because of superior structural properties. Also, epoxy has much lower emissions than most other resins, this is better for the user as well as the environment.

With this in mind, Spirited Designs is now developing the Spirited 380 'Eco' model. This boat will be fitted with cutting edge electric propulsion technology as well as other environmentally friendly on board systems wherever possible.

All systems have been 'hand picked' for this model with comprehensive custom work undertaken to integrate carefully with this design. Electric propulsion is nothing new but the technology is forever evolving with special thought put into equipment combinations and weight distribution. Unfortunately there is a marginal weight impact for the electric installation but the advantage is that other than the lightweight motors the other components can be placed wherever suitable (and practical). From a design point of view this is ideal because the positioning of the other heavy items can be kept central wherever possible and out of the ends to reduce pitching at sea.

The small electric motors couple to a standard sail drive leg and save over 100kgs in the engine compartments.

To date there are not many 'efficient' catamaran designs utilising this technology. This combination will create the ultimate 'green' cruising catamaran that will be genuinely environmentally friendly.

The first Spirited 380 'Eco' will be underway soon and hope to launch mid 09. Once this electrical package is trialed and tested Spirited Designs will provide this Spirited 'Eco' package as a kit to any of our builders who are interested in this installation.

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