

Fabulous . . . Fusion 40

THE FUSION FACTOR

by Jo Djubal

There couldn't be a more exciting vision for the multi-hull home builder than the arrival of two forty foot containers carrying the precious cargo of a Fusion 40 kit set.

Perfectly fair, computer cut components coded for easy assembly, uncompromised state of the art workmanship and flawless design parameters underlining

the boats obvious and enduring value...A big red ribbon is all that's missing

But the Fusion 40 is more than a valuable asset. Here's a cat blending the finest of technology and impeccable design to create something truly awesome in the arena of new age kit forms. The boats pedigree lines and clever



Top: The large fibreglass and gelcoat panels aid in a simple and fast construction method.

Centre: A Fusion 40 is launched.

Bottom: Fully rigged and sailing Fusion 40, ghosting in light airs on Pittwater.



features are a collaboration between re-nowned Kiwi designer, Gary Lidgard and a team of dedicated multihull sailors. Not just 'weekend warriors', this panel of true enthusiasts brought over 50 years live aboard experience to the design table. Market research involved careful analysis of consumer needs based on broker statistics and owner builder case histories before plans were finalised and production tweaked.

This is a revolution in Australian kit forms. For the first time, a design has been computer generated, separated into components and the moulds then produced on a multi million dollar five axis router giving the molds an accuracy previously only seen in the car industry.'

Needless to say – besides being the bees knees in contemporary

I N N O V A T I O N

design, this is a very comfortable boat to live on and is a real pleasure to sail.

But perhaps the most dynamic and innovative Fusion Factor is the projects dedicated production team from "Composite Innovations Australia"

Doug Holliday and Ken Horton are pioneers in composite construction and infusion moulding with a long history of collective experience.

Doug and Ken have been involved with building everything from surfboards to planes, minehunters, trains and people movers just to mention a few.

Composite Innovations Australia was formed specifically to develop the modular infusion concept

you'll find simple overviews of the revolutionary build process, along with design details, specs and factory info.

The multihull industry of the 21st Century is in an explosive, exciting environment with a vibe that continues to ricochet between the traditional compromises of comfort, speed and economy. This boat comes the closest yet in bridging the gaps with its slick formula of excellence, comfort and ease of construction...

The Fusion 40 is a cool blend of everything desirable in a Millennium Multi – Innovation, Imagination and.... Infusion! The kit boats of your youth? Fire up to the Adults Only version and check out the Fusion 40

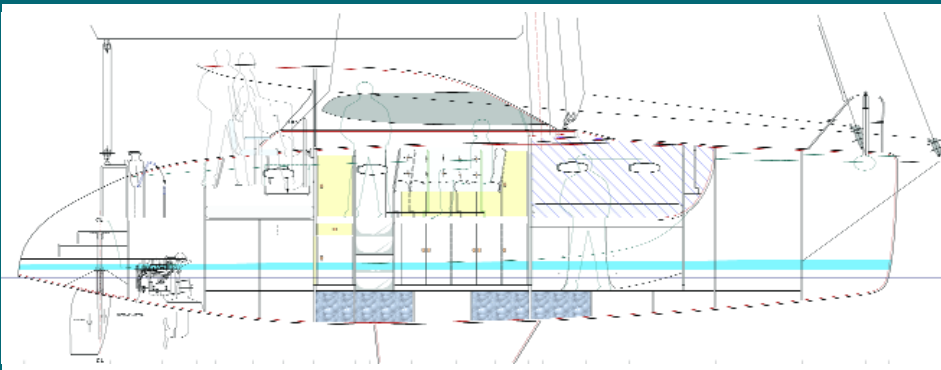
The Perfect all round Catamaran!

Design Brief:

The design brief was developed with nearly 50 years of hands on experience in racing, cruising and living aboard everything from a 54ft ketch through 5 multihulls of 32ft to 46ft. Also the owners and crews of multis were asked for likes and dislikes, together with indepth interviews with Marine Brokers to ascertain what constitutes a "floating" ASSET.

With all the information in hand it was time to start the design process, an expert in hydronamics and hull form was employed to develop the extremely important underwater lines, together with the high aspect fin keels and the modern rudder shapes.

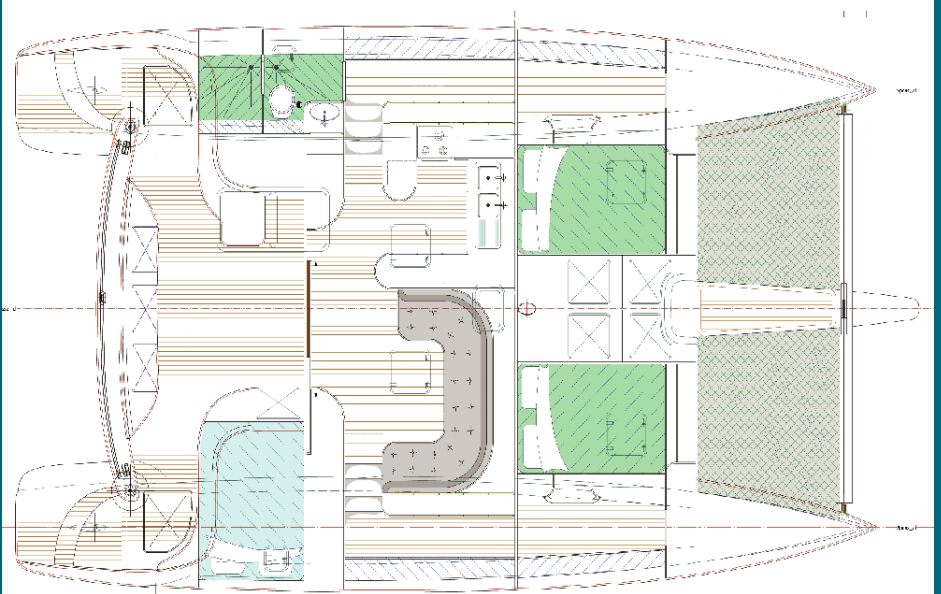
To maintain the marketing flexibility of the Fusion 40, it was necessary to produce the vessel in component pieces that would pack easily into 40 ft containers. So for the first time in Australia, the design was computer generated, separated into components, then the moulds were produced on a multi million dollar 5 axis router. This gives the molds a finish comparable to a motor car.



for Fusion Catamarans.

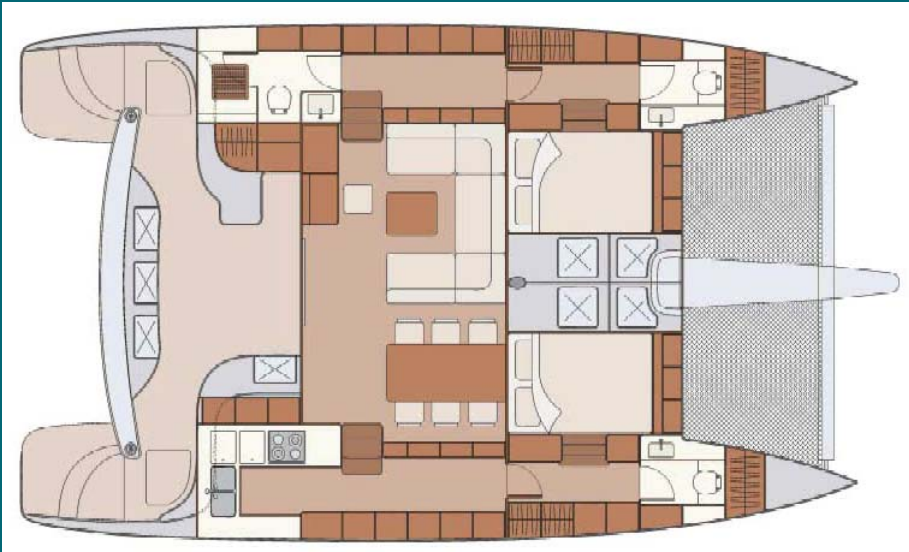
Resin Infusion was pioneered in Europe some years ago but the process is still in the experimental stage for the majority of production boat builders in Australia today. It seems everyone has the process on their agenda. Some are just tooling up or introducing the method on a small scale but nothing is comparable to the already refined level of development exemplified by the Fusion 40.

So innovative is the Fusion build concept that precise details of the process and resins utilised remain top secret, (For Your Eyes Only!!!) however, within the following few pages



There are 5 internal layout suggestions available for the Fusion 40, that should satisfy owners whether the end use is for Charter or Private

FLEXIBILITY



to bonding the components together. With the exception of the waterline join (Bonded plus Glass Taped both sides) all joins are made using "Advanced Adhesives" which offer exceptional strength, flexibility, durability and impact resistance, plus resistance to fuels and chemicals.

Construction Flexibility:

By producing this modern catamaran in modules, which in turn fit in containers, it has meant delivery throughout Australia is simple and it has opened the doors to worldwide marketing of the Fusion 40. The cost savings on overseas shipping is in excess of \$40,000.00.

Infusion Moulding:

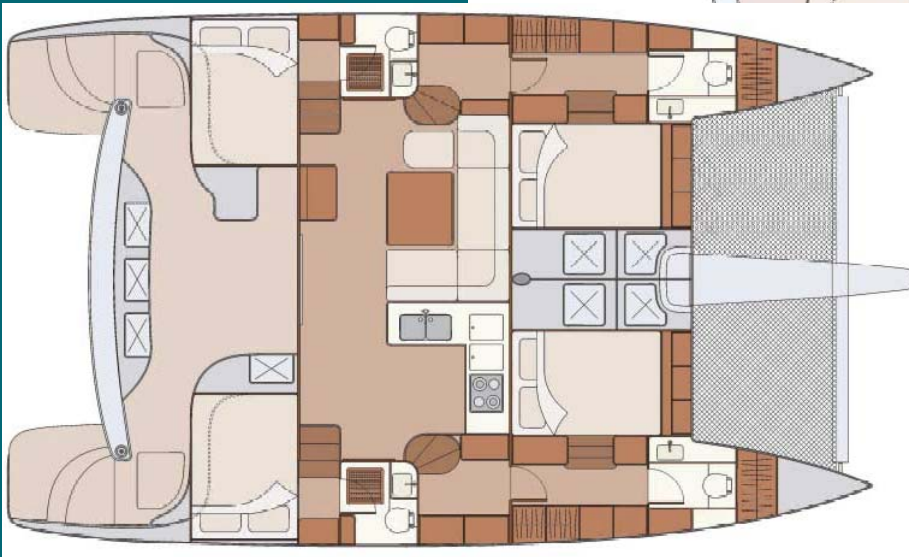
As the vessels are designed to meet or exceed the USL structural code, it was thought desirable to build the components using the Infusion moulding process, this develops not only a much stronger composite structure but a far lighter one. Infusion moulding is used throughout the Marine Industry today, but only in the building of one offs and super yachts.

Other benefits of this type of moulding is that it allows for custom layups, for example the "Fusion F401" has Kevlar layups in the underwater sections of the hulls, as the owner of this craft is



By producing a catamaran in sections also has great appeal to the professional boatbuilder as well as amateurs, as they can install mechanical and furniture items as they assemble, rather than working in confined spaces.

No longer are you dictated to, Fusion Catamaran Co. supplies the structural components along with the hull and deck sections but leaves the entire fitout and layout to the owner. This allows the builder to work with their preferred materials, and allows for personal preferences as to accommodation and functions. However Fusion Catamarans have a very comprehensive Multihull Construction Guide web site to support clients.



fitting dagger boards and this will allow worry free beaching.

Component Adhesion:

One of the greatest technological advances made by mankind during the last 100 years has been in the field of adhesives. No matter

whether it's the Space Shuttle, a new Jaguar motor car or an Ocean Racing Craft, the one thing in common is they are stuck together using adhesives.

Fusion Catamarans are utilizing the same forward thinking when it comes

By producing the supplied components in Foam/Glass, they are weather proof and even if your build project ran into years, there will be no deterioration, shrinkage,