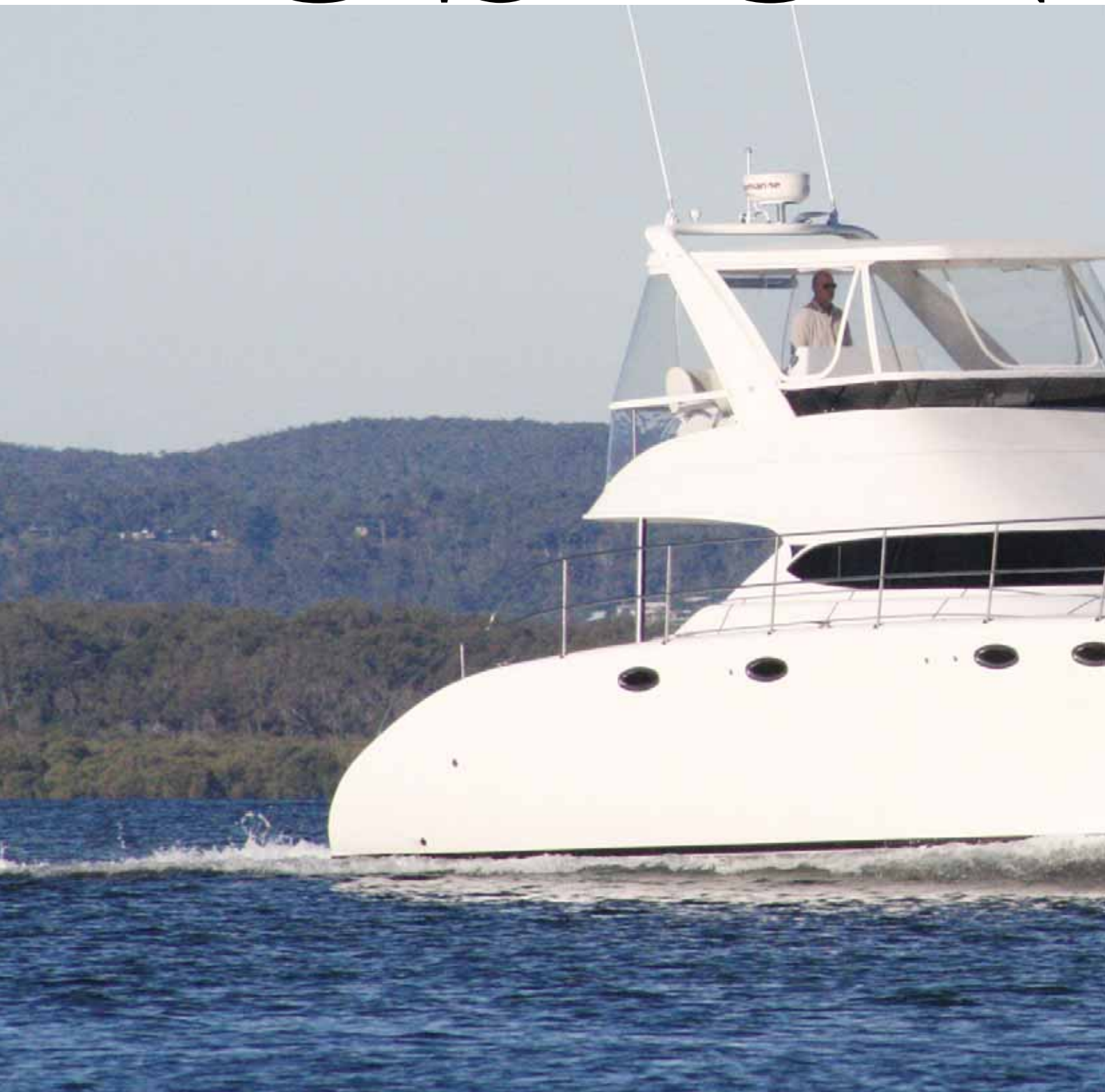
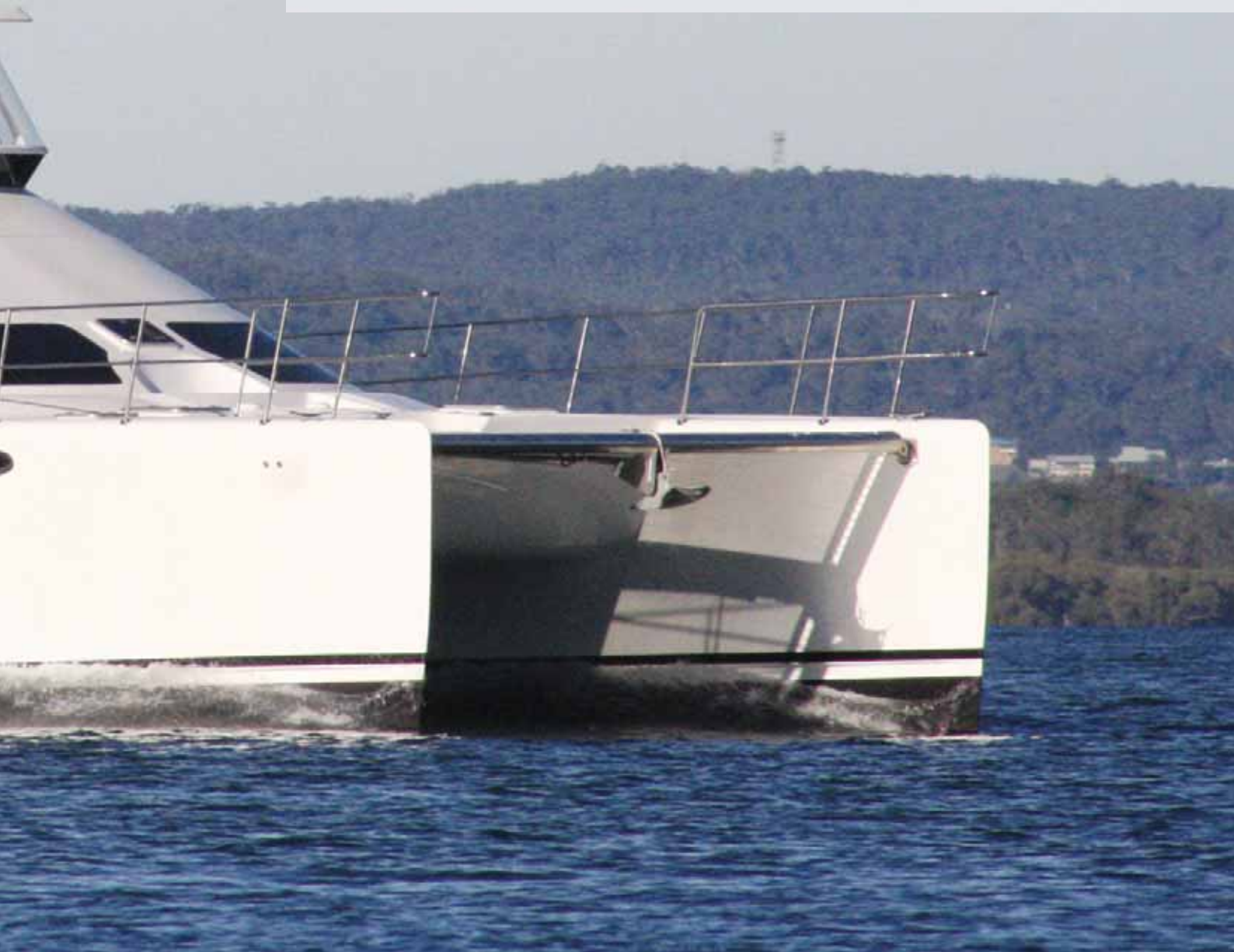
FUSION

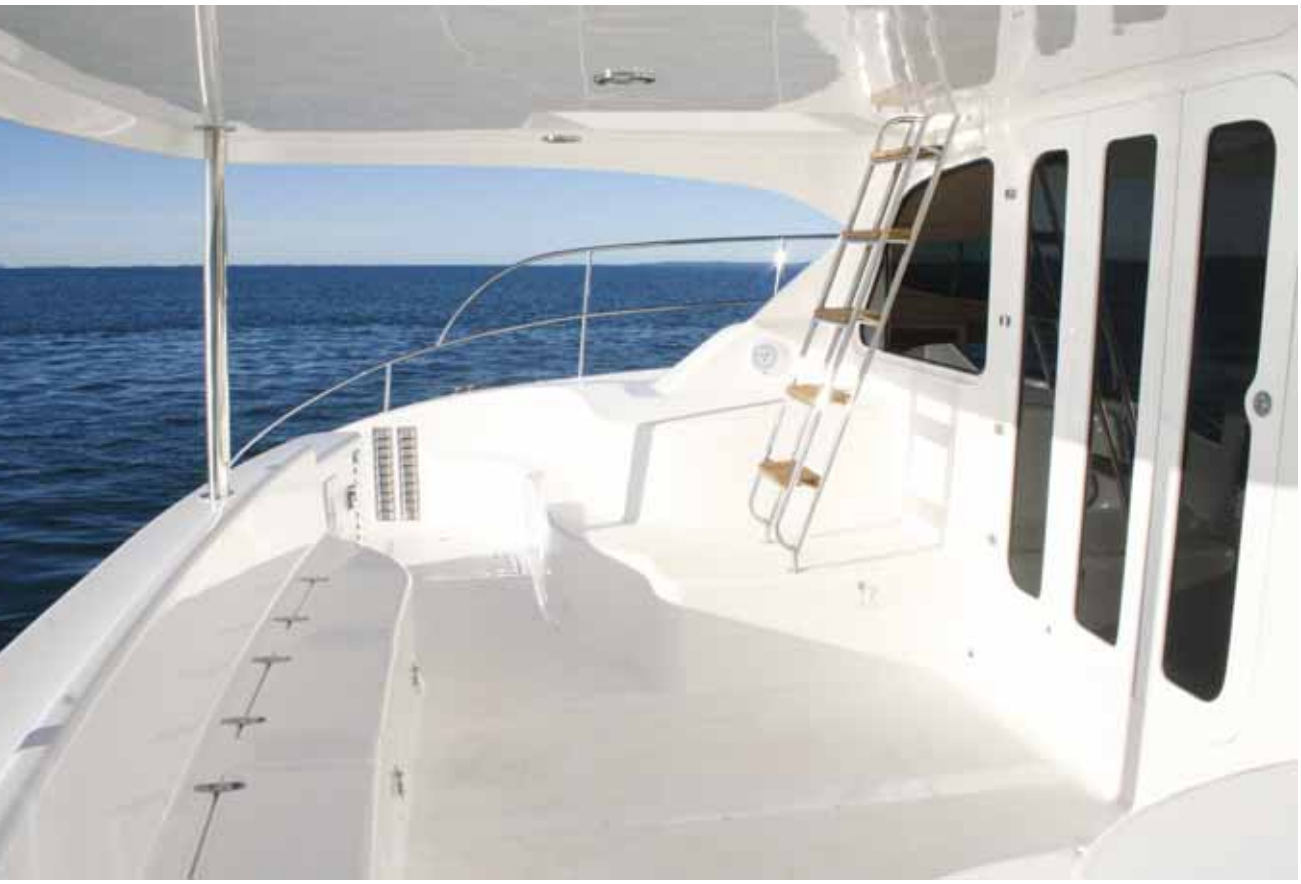


# of ideas

A very sporty and stylish profile – to match the impressive performance and handling characteristics of the Fusion 40 Powercat.



Fusion 40



The proposed injection of Flexi-teak will add the finishing touches to a practical cockpit layout.

Many will argue that the worst of the GFC is thankfully behind us and certainly to qualify that, marine industry client inquiry is 'happening' again. The problem is everyone now wants a bargain. Some buyers achieve their goal but for those who still cannot reach the cross-bar of budget constraints, there is however still a very viable alternative – the humble kit boat!

text and photos by Barry Tyler

THAT ABOVE STATEMENT sounds simplistically easy but the reality is even this option is often fraught with danger, an exercise in futility. As in any exercise there are designs and there are designs if you know what I mean, and that is certainly the first wee speed bump along the 'highway of purchase'. Then of course you have each designer or manufacturer's interpretation of what constitutes a kit-boat. A set of plans and a few roughly sawn frames does not in my mind, maketh a kit boat!

The problem therefore is to find a 'kit' manufacturer who one, has been around for a while, and two, who has a respect and reputation within the industry. Once you have jumped that second hurdle, you then need to establish just what you get with your kit. Some will supply the very basics and generally leave a hell of a lot to the imagination; those are invariably what I would consider to be the back-yard operators of this not insignificant industry, the ones whose clients end up with modified versions that quite frankly are aesthetically challenging monstrosities. Lemon is a word that springs to mind!

At the other end of the scale is what I call the one-stop-shop manufacturers, those who provide you with a clear and concise set of plans, all moulded panels or pre-cut parts and every last piece of fibreglass cloth, glues, fastenings, brackets, sandpaper and nut, bolt and screw required to build your very own kit-boat. Some even go as far as supplying appropriate accessories, mechanical components, windows and even engines, gearboxes and drive chains, but by and large they are in the minority – simply because it requires a lot more time, organisation, commitment and of course a lot more money.

By now you are probably getting the drift of what I am saying; there are two ways of building a kit boat, the cheap 'Do It Yourself' backyard project which ends in disaster either through lack of commitment, patience or money, and the other method that sees you opting to buy a full kit of parts, in effect ready to assemble.

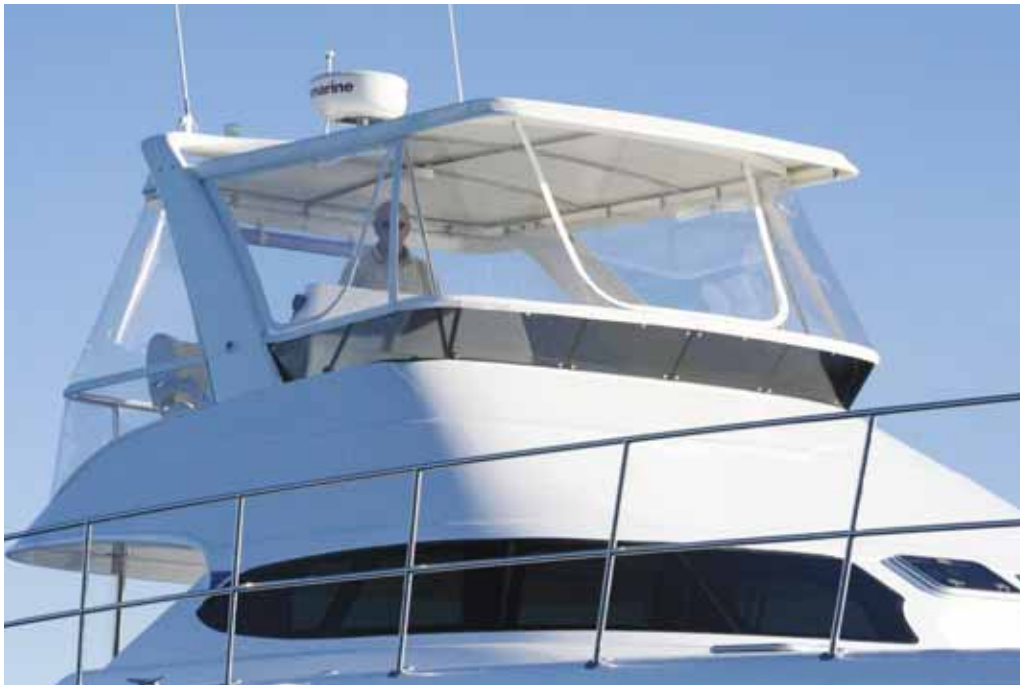
One such manufacturer who has taken this latter option to dizzy heights is Airlie Beach, Queensland-based Fusion Catamarans. They have introduced their one-stop-shop mentality not just to Australian boaters but also to a truly global audience for again they have thought long and hard about not only the design and manufacture of their kit componentry, but also the right way to present/market it.

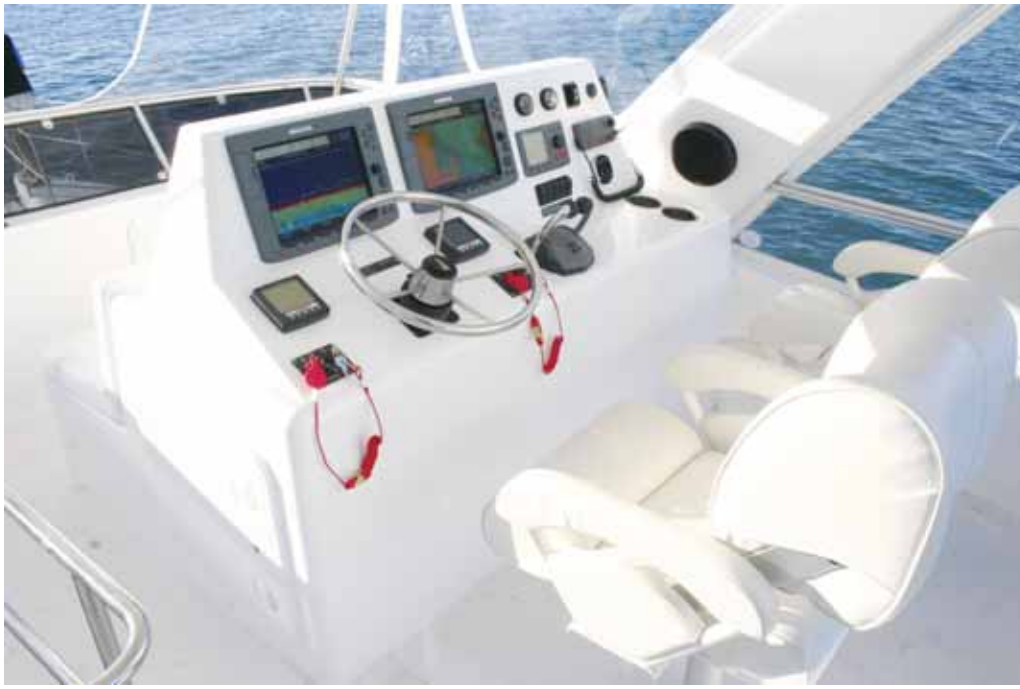
So much so that they have set up an ever-increasing global chain of not sales outlets, but plain old garden-variety boatbuilders who are able to either assemble the kits to whatever stage the owner prefers, or guide the owners through the process of assembling and finishing them off themselves.

These 'guides' can enter and leave the project at whatever stage the owner prefers, and invariably end up completing the interior woodwork which can be presented meagrely, or to grandiose proportions. A boatbuilder has the skills and the tools to ensure the finished product is of a perhaps higher standard than a home handyman might (predominantly) produce.

It is all up to the owner then, as to how far their budget will stretch, but at the end of the day the net result is the

The innovative fly bridge approach looked good, plus provided exceptional visibility. (below)
The helm station layout was practical, comprehensive and importantly – ergonomic! (bottom)





owner ends up with a significantly more cost-effective boating package that being a catamaran, is safer, more stable, more economical and a better all-round cruising boat. And, over the page companies such as Fusion Catamarans end up with their boats being built properly, looking good and most importantly – enjoying good re-sale potential. That latter aspect is just so important, for bad news about ugly (lemons) boats travels infinitely further and quicker than good news, about good boats.

Commencing with a clean slate and a few broad ideas from concept instigator, local Airlie Beach Boat Broker Jim Gard, Fusion Catamarans kicked off initially with a 40ft dedicated sailing version designed by renowned naval architects Garry Lidgard Naval Design Studio. The original mandate/commission was for a stylish design which lent itself well to the kit-boat concept yet was still light enough and sufficiently well 'engineered' so as to be a proven performer under sail.

The next step was a bonafide builder, as neither company owner Peter Schelling or CEO Jim Gard had the inclination or the expertise and knowledge to become directly involved with the manufacturing side. Enter into the equation one of Thailand's largest and most respected composite component manufacturers, Cobra Advanced Composites. They had the capacity to produce as and when required, the manufacturing expertise, and the space for the plethora of 'tooling' involved; in excess of 30 moulds in total, just for the judiciously designed 'meccano set' that is the bare hull and decks.

The rest of course is history for to date over 65 sailing vessels alone have been produced worldwide, using this well-engineered kit-boat technology. But as with anything that is manufactured there is an evolutionary process involved; as such the next move by the Airlie Beach-based company was to address the demand for a power-orientated version.

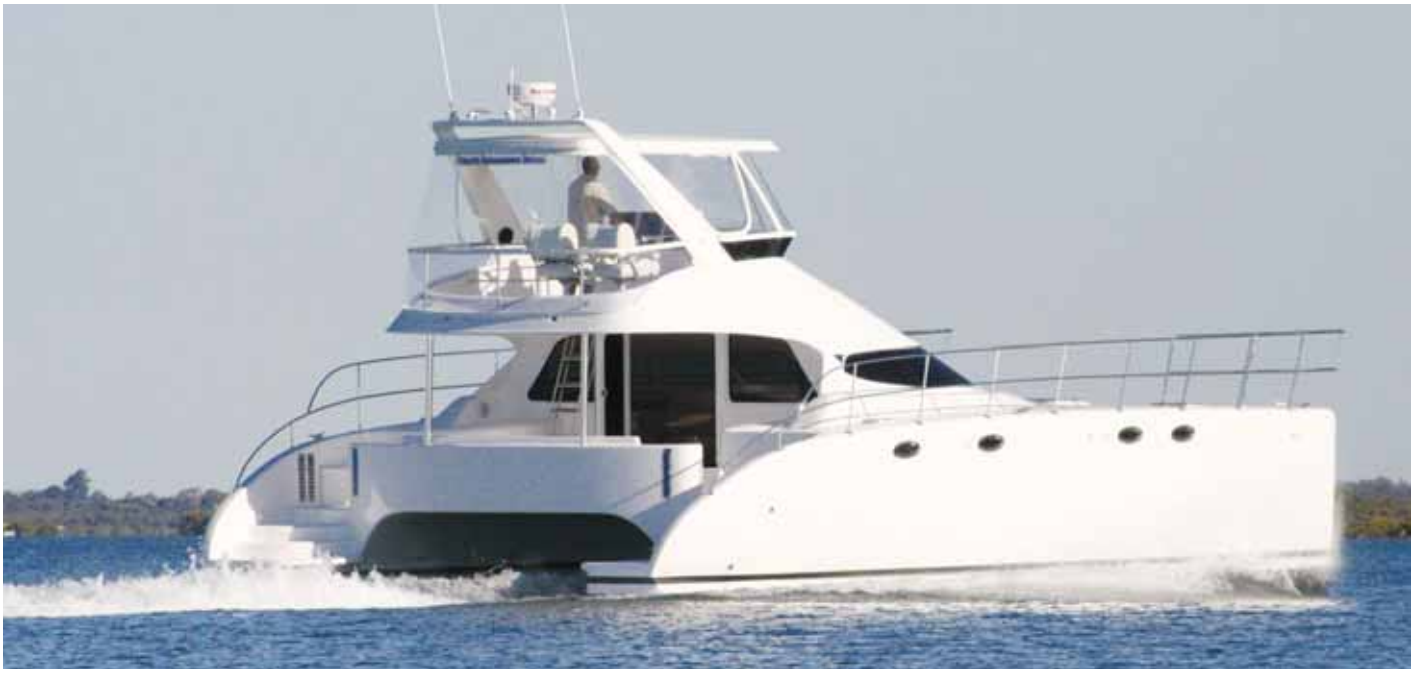
As was the case with the sailing version, Schelling and Gard left nothing to chance and commissioned one of the leading protagonists in power catamaran design, New Zealander Craig Loomes, to produce an underhull shape which would marry-up to their then current deck mould. "This is a dedicated power catamaran design," Gard explained, "We were not prepared to just remove the mast, extend the hull and fit larger engines, this had to be an economical and practical long-range cruiser, a proven performer just like our sailing version."

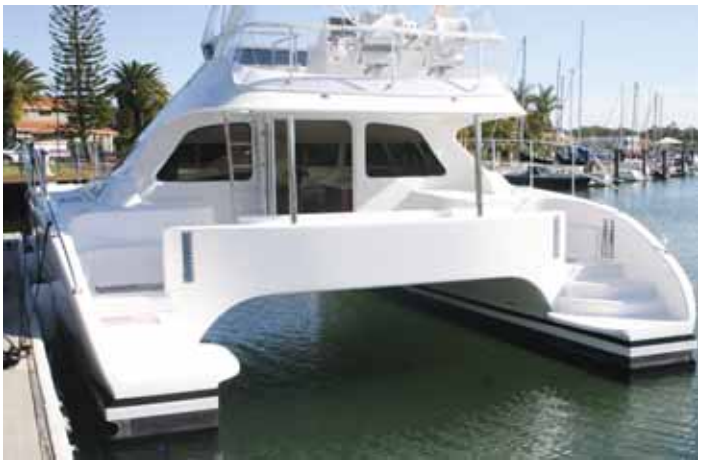
Remaining with the status quo in most areas of the sail version Loomes cast his magic spell on the flybridge and below the waterline, modifying the underhull shape and adding another 100mm of bridge-deck clearance – to be able to appropriately handle the power alternative. A pet trait of Loomes (this higher bridge deck), in a hypothetical stroke of the pen he removed the biggest negatives of the high-speed catamaran – lack of frontal buoyancy and attitude, and the noise and pressures emanating from the action of the sea against the

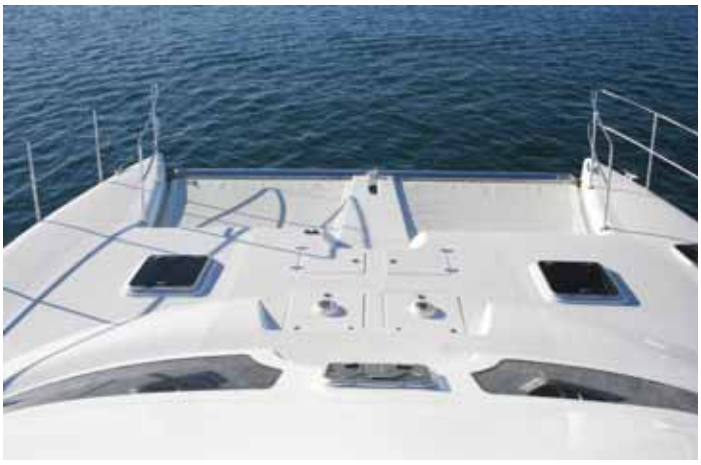
The hull exuded an air of efficiency at full speed – a slightly nose up attitude, minimal bow and stern wakes, and no overspray! (below)

A huge bridge-deck clearance, yet boarding access was not compromised. (bottom left)

The 'trampoline' bow was a welcome facet of this catamaran foredeck layout. (bottom right)







underside of the central tunnel or bridgedeck, between the two hulls.

Even before we stepped aboard our test boat, one could tell the Fusion Powercat was noticeably different, with its demonstrably higher bridge-deck the first prominent feature to stand out. Yet, there was still good access onto the aft boarding platforms courtesy of a semi-spiral set of steps each side, which led you up onto the actual cockpit level.

Still utilising the very practical 'layered' seating arrangement that was in fact the welcome trade-off for the additional accommodation provision below, the cockpit was roomy and very definitely still geared towards outdoor living. The aft lounge in front of the cockpit table spread right across the transom upright and of course the sailing-orientated seating levels provided the perfect platform for lazing around during the course of your trip. Especially appreciated was the fact this area was nicely encapsulated and therefore protected from the elements by these aft and side extremities, and the full overhead flybridge overhang.

While the naked eye couldn't identify the true extent of the underhull design changes, decidedly more obvious was the addition of the typically-Craig Loomes-designed flybridge which looked for all the world like it has been there from the outset. Aesthetically pleasing it was the perfect complement to the flowing lines of the hull and cabin top.

Perhaps slightly more compact in area due to the designer's efforts to keep the 'lines' in proportion, none the less this upper level was appropriate to a cruising situation. There was room for three guests on the 'bench' lounge in front of

the helm module and for the skipper and friend seated on the two Navigator skipper chairs, there was a feeling of pride seated behind a helm station that included Yanmar instrumentation and remotes, and a comprehensive Raymarine electronics package which included not one but 'two' Raymarine G-Series screens for the integrated E120 radar, GPS, plotter and depth sounder, a 218E VHF radio and the ST001 Autopilot.

Down below this flybridge level the saloon and living area of this Fusion powercat was a 'lifestyle' sight to behold and certainly one could immediately see and appreciate why this particular version cost an additional $250,000 for the fit-out package alone, for it included many innovative internal features, and copious quantities of very very impressive American Cherry woodwork! Modern contemporary was perhaps the best way to describe it.

While the saloon area of any catamaran is very much governed by the very concept and therefore parameters of the catamaran hull configuration there were so many subtle aspects the uninitiated would seemingly take for granted – that endeared me to this particular layout. First and foremost was the actual size of this room; most expansive and surely a most acceptable trade-off I concluded, for the relatively conservative (but certainly not cramped) cockpit size.

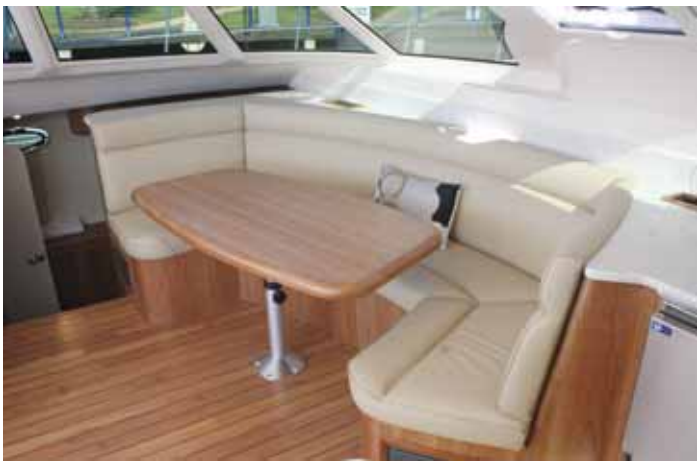
A light and bright area that was well ventilated courtesy of generous-sized forward-opening Lewmar hatches, the décor contrasts of wood, leather upholstery, padded panels and gelcoat – were most appealing. The L-shaped galley in this instance was upstairs and to starboard side, albeit with part of one wall or face removed so as to provide access to the steps to the starboard companionway and accommodation areas below. With a large amount of Corian bench-top area, everything about this galley spelled competence and ability to cope.

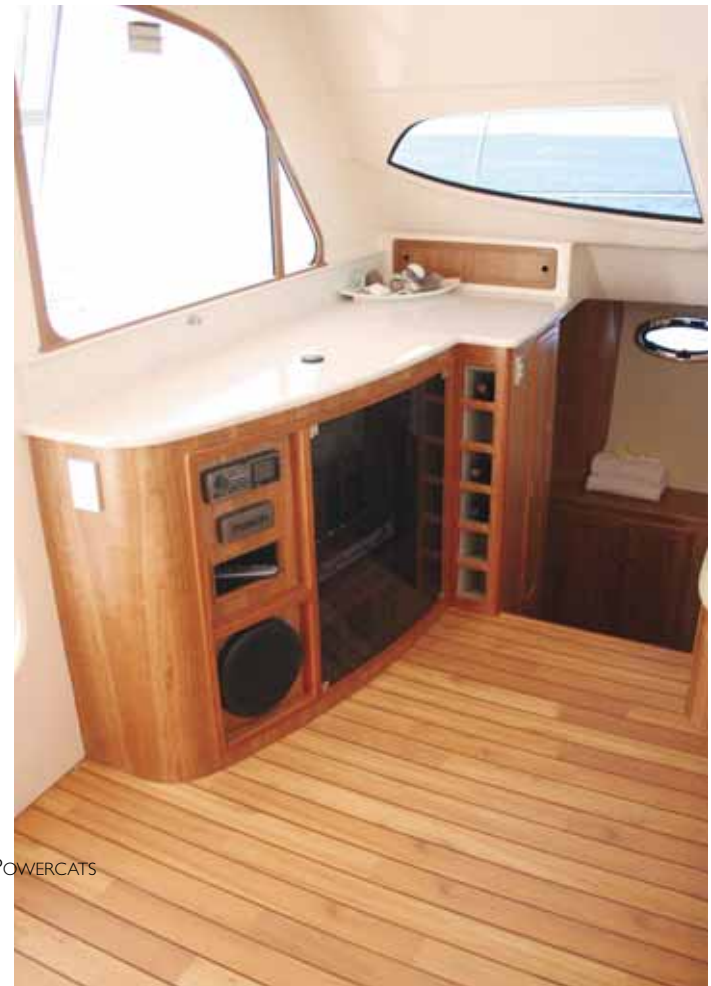
Features included the very visual stainless steel Frigo refrigerator and freezer drawers, a vertically elongated slide-out pantry, Smev gas oven, grille and four-burner hob, a double sink and generous cupboard storage. Included within the end face of this spacious galley module was a shallow upright liquor cabinet and adjacent to the main (extruded aluminium) saloon doorway, was a 240-Volt combo icemaker and refrigerator.

Standing at the saloon door and looking in, you saw little of this galley for the main focus of attention was surely on the plush wrap-around settee around a table which comfortably addressed the dining requirements of five adults. On the aft side of the portside access-way to the accommodation below, was the recessed and most impressive AC/DC switch panel within an entertainment module which was also home for the Fusion (no relation) stereo/CD/DVD player, wine rack and the obligatory electrically operated 19" Teac pop-up television within the Corian 'servery' top.

As in most catamaran configurations accommodation layouts are traditionally two, three or the four-cabin layout; in this instance very much maintaining the luxury theme, there were three cabins. The aft starboard cabin décor was as in all the bedrooms, a rich blend of American cherry bed frame and wall panelling, and plush vinyl headboard and overhead panels.

Of interest to me was the flooring material which, as in the case of the rest





The non-intrusive dining setting comfortably catered for five adults. (above right)

Hard to get enthused over an AC/DC switch panel, but this one was an absolute work of art! (right)

of the interior of the Fusion 40 also, was not teak and holly as I had first jumped to conclusion over. It was in fact a most durable non-slip timber look-alike vinyl material which is laid in strips the same way you would lay the original teak option.

Understandably this privatised (by a door) aft cabin was not quite as expansive in area as the forward cabins, but none the less it still included 'special' features such as a bedside seat, athwartships double berth, side porthole and overhead Lewmar hatch, hanging wardrobe, neat little reading lights and good drawer storage.

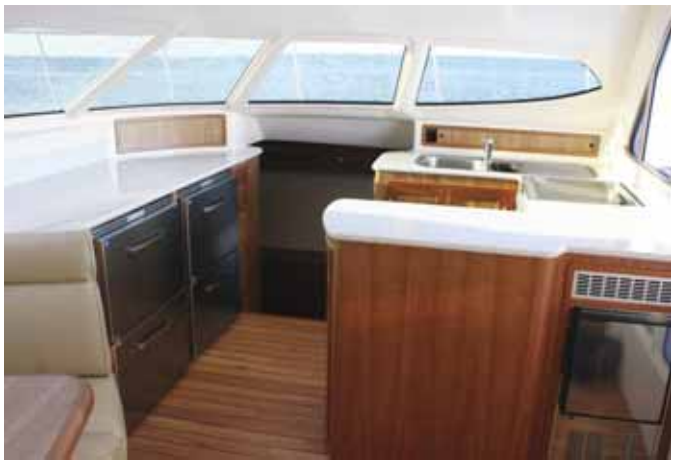
The forward cabins were 'mirrored' images, as regards layout, and only minimal difference with features, décor and presentation – to the casual observer they would be as 'good' as each other. The (slightly) additional space of these two cabins was well utilised with appointments such as the fore and aft berths, walk-in wardrobe, television, DVD, stereo, air-conditioning, yet more storage provision, and, an ensuite bathroom with separate shower and Tecma Quiet-flush electric macerator head.

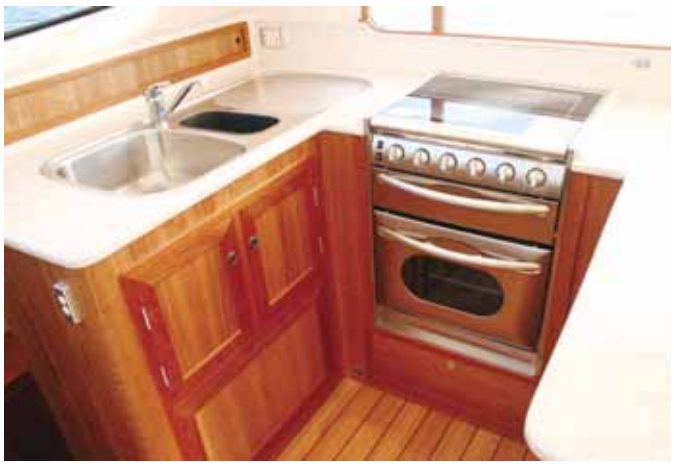
Storage abounded within the cabins, and in other areas I discovered also, for despite the fact the actual fore-deck proper was shorter owing to the inclusion of the trampoline bow, there was yet more wet storage (fenders, sheets, mooring lines, deck-wash) provided within four large centrally-located bow lockers.

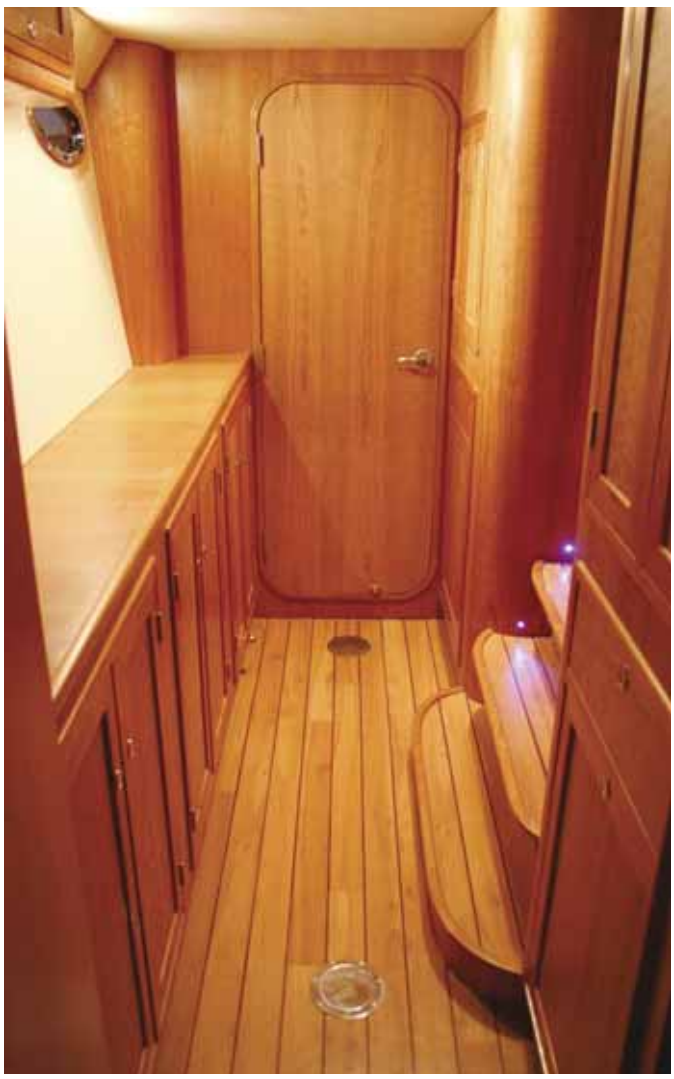
All of a sudden the 'trade-off' or sound reason for the slightly smaller sized bed rather than queen or king-size berths became patently obvious – this additional space was well utilised with water-proof and drained wet-lockers which served the two-fold purpose into the bargain, of providing inherent sound-proofing between the two forward cabins. The other realisation of course, was the absolutely flexibility of this design, from a layout perspective. With the almost obscene amount of volume involved within the parameters of this hull – the options were limited only to your imagination!

Performance personified

The performance attributes of the Fusion 40 really were quite staggering – in every aspect. Granted, the hull which was constructed of a composite of multi-axial cloths, foam cores and epoxy or vinylester resin-infusion, weighed in at a modest 9,000kg in a 'heavy ships' state. But to enjoy a top speed of 22kts at the maximum 3950rpm, courtesy of a 'meagre' pair of 160hp BMW-based, 4-cyl, 1995cc, 4BY160A Yanmar turbocharged diesel engines, surely spoke volumes for the complete package of hull, power and the engineering features addressed by renowned marine engineering company, Rogers and Lough.



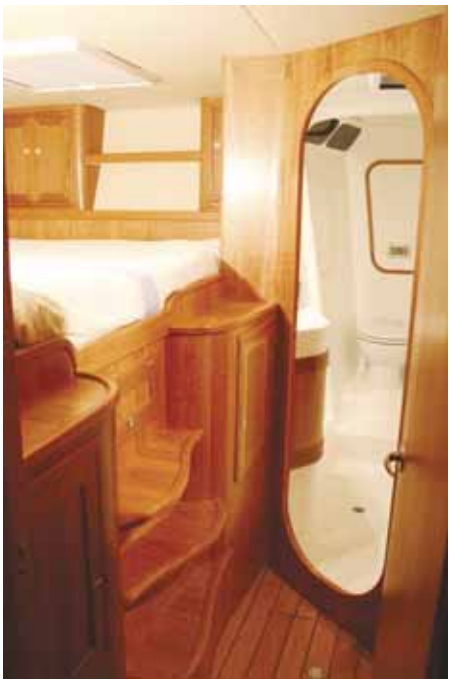


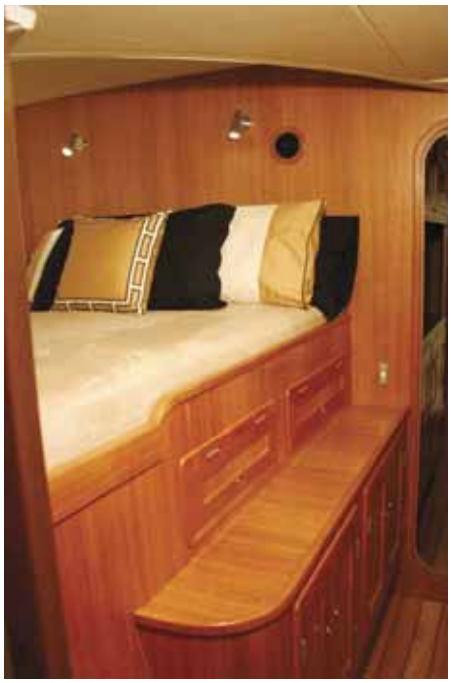


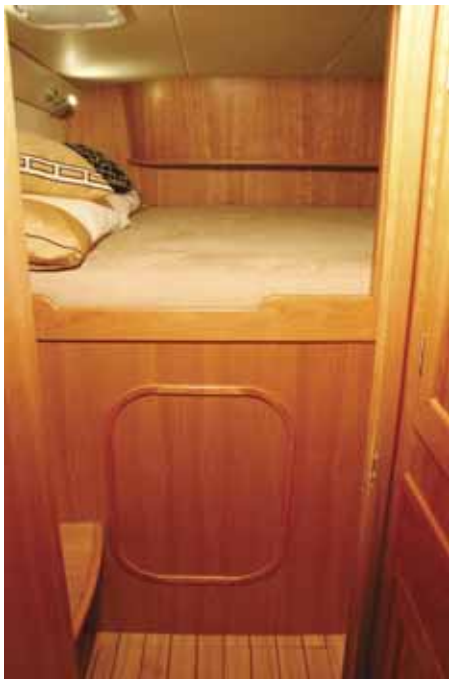
The galley dove-tailed nicely into the starboard side of the saloon with Brisbane Powercat's very pro-active way of approaching refrigeration requirements. (top right)

A well-spec'd galley; entirely appropriate to the demands of a long-range cruising situation. (centre right)

The hulls were deceptively wide, providing plenty of space for good storage. (right)







The forward cabins embraced the traditional fore and aft berth layout, albeit very tastefully presented. (above left)

The guest cabin forward, lacked little of the creature comforts of the so-called master stateroom on the other side of the wall. (above centre)

The aft cabin was surprisingly generous in size, and certainly specification. (above right)

Even more meritorious, driving through ZF631V 2.48:1 gearboxes and then Vee-drives and shafts to the 4-blade AB Compu Quad 19" D x 21"P propellers, a respectable and still very fuel efficient constant cruising speed of 15kts at 3000rpm, was able to be maintained. At the rate this particular Yanmar model uses fuel in that cruise mode of 15kts – under two litres per nautical mile (and 2.3LPNM at 16.5kts) - the 940-litre fuel payload would metaphorically speaking take you around the world on a tank-full of diesel. Well certainly Gold Coast to Sydney!

Further confirmation came during initial sea trials when the hull performed exactly

to designer Craig Loomes figures as regards weight, waterline and performance and handling capabilities and characteristics – exactly to the letter and number! And if you want to go even faster, a 'design speed' of just on 30kts can be attained with the twin 260hp Yanmar alternatives.

This Fusion rose to plane effortlessly but perhaps more graphically illustrating its efficiency properties – it glided to a halt when decelerating, rather than stopping dead in the ocean. Sadly there were no monster waves around on the day of our test but the way its 'destroyer-style' bow pierced then rode over the cruiser wakes we went looking for, suggested to me the age-old phenomenon of bashing and crashing through head seas would but for the most of severe conditions, be a phenomenon of the past with a hull design such as this!

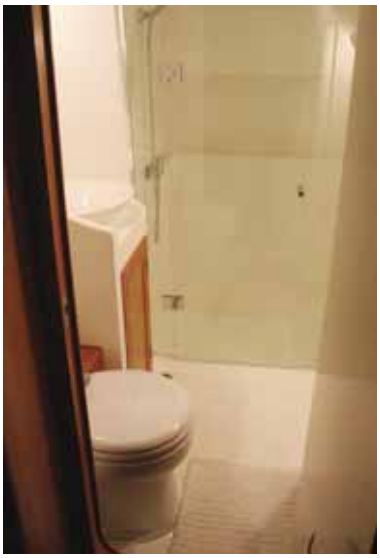
Conclusion

For me the Fusion 40 Powercat was a clever combination of volume and profile styling; very often the two do not go together! The mind wandered when one considered the absolute flexibility of the design and certainly in this instance it addressed well each and every facet of long-range cruising, it handled and performed well, and it was indecently miserly where fuel consumption was concerned.

Sure there were 'personal-choice' items I might have considered/chosen/added, such as larger for'ard berths, a cockpit table, dishwasher, water maker and/or laundry, but the bottom line was this beautifully built and presented boat graphically demonstrated what could be done with this design – albeit rather extravagantly.

As regards pricing, certainly this particular version with its 'Boeing 747' electronics package and $250K interior fit-out was at the very top end of the pricing scale for a 40ft catamaran (this one was the equivalent of a 60ft mono!), but at the other end of the scale a bare moulded kit costs just $170,000 for the power version and $128,000 for the sailing version. Alternatively again, if one decides to leave it to the experts a Fusion agent/builder will provide a turn-key drive-away sailing package for around $550K, and a power version for not a lot more.

Mmmmm, that must be the reason this branding and concept attracts so many buyers around the world!



The bathrooms featured separate shower and head and plenty of space.

SPECIFICATIONS:

Boat Design Name	Fusion 40 Powercat
Year Launched	2008
Designer	Craig Loomes / Garry Lidgard Naval Design
Interior CAD Design	Matthew Morgan
Builder	Brisbane Powercats
LOA	12.2m
Beam	7.2m
Draft	0.9m
Bridge Deck Clearance	0.960m
Displacement	9,000kg Heavy Ships
Max Speed	22 knots
Cruise Speed	15 knots
Construction	Resin-infused GRP and Core Composite
Fuel Capacity	940 litres
Water Capacity	600 litres
Engines	2 x 160hp 4-cyl 1995cc Yanmar 4BY160A Diesels
Gearboxes	ZF631V 2.48:1
Drive System	Vee-Drive to Shaft
Propellers	4-blade AB Compu Quad 19"D x 21"P
Generator	Onan 7kVA
Inverter	Mass Combi 12V/2000W-100A Mk II
Air Conditioning	CruiseAir 18,000btu
Windlass	Lewmar
Anchors	Manson 60lb Plough
Steering	Hydrive Hydraulic
Engine Controls	Yanmar
Lighting	Cantalupi / Aqualuma
Paint	Gelcoat
Paint (antifoul)	Wattyl HA120, with epoxy barrier
Hatches	Lewmar
Windscreens/windows	Alfab
Port-hole Hatches	Lewmar
Heads	Tecma
Veneer/Plywood	American Cherry
Internal Flooring	Kenbrock Timber Look Vinyl Flooring
Stainless Steel Work	Evolution Engineering (RQYS Complex, Manly, Brisbane)
Batteries	6 x 6V 225Ah House, 2 x 12V Start

Electronics

Autopilot	Raymarine ST6001
GPS/Plotter/Sounder	Raymarine E120 with G-Series Screens
VHF	Raymarine 218E
Radar	Raymarine 4kW 24nm
Entertainment Systems	Fusion / Panasonic
Instruments	Yanmar
Software	Raymarine NMEA Seatalk
Switch Panels	Wayne Love - WML Marine Electrics

Base Price Kit	AU$170,000
Price Base Production	AU$570,000

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