



PATHFINDER PILOTHOUSE 52

| story **PETER BRADY**

The latest model in the Pathfinder 'M' range, the Pilothouse 52 is now under construction alongside the Offshore 45. Based on the styling and layout of the 58ft pilothouse power catamaran *Rehab* which was launched in 2014, this smaller version also incorporates a number of features from the West Coast 49 and the Offshore 45.

Our introduction to the owners Alan and Shirley Mercer was when they came to our workshop as friends of the owners of *Paradigm* while it was under construction and the design development of their boat really began when they came back for the launching. At that stage, they already owned an imported power catamaran in which they had undertaken a trip from their home on the Gold Coast to the Great Barrier Reef and based on that experience, were looking for something a little larger and more capable. They were keen to have a flybridge and having shown

a liking for *Rehab*'s styling, we starting work on developing a smaller version with an enclosed flybridge. We had a number of meetings with drawings going back and forwards and visited the Sanctuary Cove and Sydney boat shows together so Lorna and Shirley could discuss the interiors and finishes and as is usual with boat design, the boat slowly grew both in length and then in beam to accommodate everything they wanted. It was at this stage I also made the decision to develop a new bottom mould with increased hull beam and greater carrying capacity to meet Alan and Shirley's requirements, keep

a number of ratio's in proportion and have an eye to the future with new models. This may sound a bit radical, however the ability to create the parts of the boat we needed to meet each owner's requirement within a common building system was the main reason for originally developing the P.A.C.K. Boatbuilding System and then continuing its development in to its latest form in DECKIT. The next stage in the design and build process, and in many ways the most important, was that we arranged to meet them over on the west coast while they were visiting family and showed them over *Rehab*. This may seem a long way

to go to look at a boat, but the only way to really get a feeling for how the pilothouse concept works on a power cat and in particular on a boat as unique as *Rehab*, is to actually experience it. Once on board I was able to physically demonstrate to Alan and Shirley what parts of their boat would be larger or smaller and they were able to connect the drawings to the actual feel of the spaces which answered all those last little questions on details like visibility and ergonomics. It doesn't matter how much you draw either in 2D or 3D, there is nothing like actually experiencing the real thing to make clients feel comfortable about the decisions they are making, particularly on projects as large as this. There is also nothing like the confidence gained when you talk to an owner who has already clocked up 1,300 hours of engine time on their boat, including steaming it around the top end of Australia.



THE BOAT

Starting at the transom, the Pilothouse 52 will have a lifting duckboard with the same system developed for the 49, except the tender will be on the duckboard as a very simple way to launch it, negating the need for a davit or having to lift the tender up over the side with its potential to get out of control if the conditions are rough. The last five boats we have built have all had different tender lifting and stowage systems as each one has been tailored to the size and weight of the tender or tenders, plus the physical ability of the owners to handle the tender once it is out of the water. Every part of boat design is a trade-off in some way and whilst mounting the tender on the duckboard can get in the way a bit more when fishing and does have more effect on the trim of the boat, it does make the launching and retrieval very safe and simple.

The barbecue on this vessel will be located in the area behind the flybridge, so the aft beam can now be used to store a couple of kayaks. We find they are the most fun to have on any boat because they provide both exercise and the ability to explore along the edges of mangroves and reefs and are good for leisurely looking around other boats at anchor or in the marina.

Stepping up one step from the duckboard onto the 17sqm aft deck, on the starboard side is a large eutectic fridge-freezer and a breakfast bar that is serviced by a hopper window that swings up on gas struts from the galley. To port is a door to the deck toilet and a fishing rod locker and in the middle is a 5ft wide doorway that provides the open-plan feel between the galley and the aft deck. Once through the doorway, the large U shaped galley is to starboard and to port is a housekeeping locker with broom and vacuum storage as well as a bench top with extra fridge and freezer capacity underneath. To both port and starboard is a set of stairs that lead down to the middle cabins and their ensuites: they are similar in design to the Offshore 45,

but reversed, so that the bathrooms are aft of the bedroom rather than forward. The newly designed hulls for the 52 are wider, so there is more floor width in both the bedrooms and the bathrooms, allowing the clients to walk alongside both the two single bunks in the port cabin or the double in the starboard cabin when making the beds. Another interesting feature of the bathrooms is the watertight door in the aft wall of the shower I have designed to access the front of the engineroom. This door would only be used when conditions are too rough to open the deck hatches or when the front of the engines were being serviced, and in reality it is the ideal place for internal entry as you are already in the right place to wash up if you get oil on your hands.

Back in the galley area again, two steps take you up to the saloon where a writing desk is located to port alongside the stairs leading up to the enclosed flybridge, and

to starboard is a huge lounging area with coffee table and a comprehensive entertainment centre forward. Even when seated, guests will be able to see out virtually the whole 360° and the area behind the aft part of the lounge is open to the galley which is on the lower level, keeping the cook in the party and making it easy to pass snacks forward. To port forward is a bar, which again is part of the lounging area for entertaining and alongside this are the stairs to the owner's forward stateroom. The Pilothouse 52 is also wider than the smaller models in the range, so the owner's stateroom is even more spectacular in its size and comfort, with again a completely flat floor just like at home and full headroom throughout. Multi-level floors in bedrooms are potentially an accident waiting to happen when moving about in the dark, and sudden reductions in headroom or even gradual ones are

in the same class as they are the last thing you expect. Like most of us, the clients have troublesome knees, so making the vessel easy to get around and use was a critical part of the brief.

Back up into the saloon area, there are trawler style sliding doors on either side for easy access to the side decks: this is an important feature with the main helm located up in the fully enclosed flybridge, although there will be a set of remote controls in the saloon by the port door. The trawler doors are located just forward of the internal stairs to the flybridge, so it will be very quick and easy to come down the stairs and straight out the side door when docking. Again bucking fashion, the stairs to the flybridge are not open between the treads and have a low bar on their rails to prevent the possibility of someone slipping and having their legs go through the gaps. I know that no

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risers and a single supporting tube for the treads creates a more open feel, however to me, safety is the highest priority at sea. We already have so much light coming in, combined with the huge sense of space created by the cat's beam, so we don't need to resort to domestic architectural features to make the boat feel larger.

Once on the flybridge the visibility is as close to 360° as you can get with minimal framing and no tender behind to block your vision aft. Two helm chairs are located behind the central drive station with a large chart table and storage area in the dash to starboard. Aft of the stairs is an 'L' shaped lounge and to starboard is a fore and aft lounge that converts to a double day bed/skipper's bunk or extra accommodation if required. Out through the aft flybridge doors is another entertaining area with built in seating to port, a central dining table with loose seating and to starboard is the barbecue setup. Like *Rehab*, the Pilothouse 52 has multiple separate areas all capable of being used for different functions, but also all capable of being used at the same time. The aft deck is primarily designed for swimming, diving, and fishing and for more shaded and sheltered entertaining or dining. The saloon is set up for indoor entertaining and a relaxed space to watch TV or a movie. The helm station can comfortably accommodate everyone on board when undertaking longer passages which keeps every person involved

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in the journey and the area out the back of the flybridge is perfect for alfresco dining at anchor and it will be easy to keep an eye on all other boats around from this higher position without the uncomfortable roll that this height on a monohull would create. With a full width seat across the front of the lower cabin, there is also a huge area to enjoy when steaming or sun bathing, particularly for teenagers and as the vessel has bulwarks all-round, it will be very safe for the owner's two dogs and for children. The saloon and the flybridge have large overhangs on their tops as shade is critical in keeping the boats internal temperatures down, plus these overhangs allow the windows to be left open longer for ventilation in rainy conditions. Both deck and internal storage are huge, with the deck storage forward and the anchor winch housed under the front seat to save Alan and Shirley's knees when retrieving the anchor.

Now to the more technical parts: the Pilothouse 52 will be powered by 2 x 370hp Yanmar 6LYA-STP through Yanmar KMH 60A 2.43:1 reduction gearboxes and her top speed will be 26kts, with fuel consumption right through the range

very similar to *Rehab's* figures. The new bottom I have designed for the 52 is optimised for load carrying and therefore range, and has been developed with the small ferry and crayfishing boat market in mind. She will carry 4,000lt of fuel and 800lt of water backed up by a 210ltph watermaker, so the vessel has the capability of both long-range coastal cruising and trans-ocean cruising out into the Pacific basin. Having now experienced the superb electric system designed and supplied by ARRID for *Paradigm* we are now going to fit an enhanced version of that system to the 45, the 52 and even the 41 after that. Since launching, the owners of *Paradigm* have not plugged into shore power once nor started the gensets, running the boat exclusively on solar and the engine driven high efficiency alternators. Whilst monitoring the boats power use, they have also monitored the quality of the power available as shore power and found that around tea time in one marina, the voltage dropped to 190 volts as all the live-aboards arrived home and switched on their air-con units at the same time, the result of which could be damaging to sensitive electrical equipment. From these figures and with the three

next owner's agreement, we have commissioned ARRID to supply us a 24 volt alternator, solar, battery and inverter system based on *Paradigm's* that will have no permanent genset. With 2kw of solar input and a high efficiency at low rpm 200amp alternator on each engine feeding into two battery banks, each with its own inverter, we will be able to run the electrical system in such a way as that we will only need to run either engine as a genset for larger loads such as the air-con or the induction hob on the Offshore 45. The alternators are designed specifically for use on vehicles like ambulances and fire engines that have high power requirements whilst at idle or low rpm and are 80% efficient compared to virtually all other alternators which only have at best 50% efficiency, so we will be able to use the main engines as gensets when occasionally required. We are presently working with Yanmar to match the alternators power draw from the engine to the right rpm so the engine is correctly loaded for its function as a genset. The basis of the system is simple high quality components with the two Australian made Selectronic

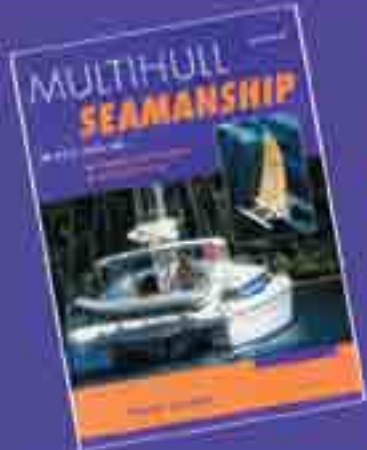
inverters at its heart. The cost of this system will be around the same as the installation of a genset and this cost even includes a 2kva Honda portable genset as an absolute last resort back-up to charge the batteries or run the fridges should all else fail. As Alan and Shirley's business is importing and distributing batteries, the system will be fitted with the latest development in Sentry Lithium-Iron Phosphate batteries: their ability to handle a deeper discharge and recharge along with a higher cycle life and the safety of the LiFePO4 chemistry perfectly suits the system, along with over 200kg of weight saving. I have researched and written about Lithium-Iron Phosphate batteries for a couple of years now, but they have been hard to sell to the public due to the massive cost difference between them and conventional batteries. It looks to me however that the new Sentry range will finally deliver both the technical requirements suitable for boats at a price that will allow more people to fit them.

There has been quite a bit of time and money spent over the last few years trying to develop electrical

systems that will power boats in 'quiet mode' for a few hours at speeds of around 6-7kts, however I believe this has been a bit of a detour down the wrong path as to date, the rewards have not been worth the cost. When you really want quiet is when you are at anchor and I believe this system will provide it, as well as saving the fuel used to run a genset and remove its future maintenance costs, plus provide more room in the engineroom. The large solar array on the roof will require no maintenance and help keep the flybridge cooler as it turns the sun's rays into power, not heat inside the boat.

The Pathfinder Pilothouse 52 will provide Alan and Shirley with all the amenities of their waterfront home as they head out on their next adventure in life cruising the Queensland coast and is ready and able to cruise far further afield in the future.

For further information please contact Peter Brady on 0400 557 568 or peter@pathfinderpowercats.com



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