

# THE PATHFINDER 'M' SERIES:

## the Pathfinder 41 Sedan

I story **PETER BRADY**

The 41 Sedan is currently the smallest in the Pathfinder 'M' range and has been developed as a very capable long-range coastal cruiser, utilising the more minimal sedan styling and structure to keep costs down.

At 41.5ft (12.3m) the 41 Sedan reflects the large number of boats we have designed and built around this size and therefore the experience gained in getting the most out of them. The owners have chosen a more expansive set up for two couples rather than going for the maximum number of berths and the internal layout features a spacious bedroom on each side with a queen sized bed and plenty of storage, plus a large en-suite aft of each bedroom. This layout will be familiar to those used to more modern power and sailing catamarans with the beds placed athwartships at bridgedeck level, but with enough room on each side to allow for someone to get in or out of bed without disturbing the other person. The higher and therefore wider floors are made

possible by the raised topsides, which provides more floor space and the height difference between the floor and the bed is also reduced. Locating the en-suites aft of the cabins has created a very large and open bathroom for a boat of this size being 8ft long (2.4m) with a separate shower area, complete with glass door.

The owners wanted an open plan and minimalist saloon-galley-drive station area like the Offshore 45, so there is no deck level bathroom, which creates 360° from the helm, galley or settee. 15 x 15ft (4.5 x 4.5m) is large by any power boat standards with the open plan layout making this area appear even more spacious, providing excellent flow through ventilation and making docking the boat so much easier as

all four corners are visible from the helm.

The drive station layout we developed for the West Coaster 49 worked extremely well both when docking and at sea, so we have used it again on the Offshore 45 and the 41 Sedan. With widely spaced counter rotating props in combination with an underwater profile balanced to the above waterline windage, my power cats will not only sit passively where you place them, but they will also turn in just over their own length. I seldom touch the wheel when docking one of these vessels and hardly ever rev the engines above idle as the easily driven hulls and large props move the boat instantaneously and controllably. You can literally stand behind the engine controls and just



**Testing of the bonding and modular building system developed for the Pathfinder ‘M’ range has not only been by standard engineering tests for tensile and flexural strengths, it has been on a practical full sized level as large components were lifted and moved around.**



**TOP:** The cabin, side decks and saloon floor being lifted into position.  
**ABOVE:** The hull being lifted out of the mould by the bulkheads with their new bonding system then moved into the other shed.

move them in and out of gear when docking, so having the ability to walk straight to the engine controls provides a feeling of confidence that has to be experienced to be appreciated. When at sea, the engine controls are just to the right of the person sitting behind the wheel and can be easily reached to make minor adjustments to the boats speed or in an emergency, as can the person seated in the other helm seat to their left. The two helm chairs can rotate and it is simple to turn and talk to someone in the galley or on the settee whilst steaming: this feature also allows them to double as extra seating when entertaining guests. The owners have even requested a drop down seat both sides of the helm seats facing forward, so guests can have the same view when steaming on longer passages. These sorts of details may seem minor, but they make a huge difference to how well a boat operates at sea and how relaxing and therefore enjoyable the time on-board is for everyone.

Aft of the helm station a large well equipped galley is located to port, and to starboard is an aft facing settee that can double as an extra berth with its back cushion removed: again this is one of those small details that make a large contribution to how the boat operates. Being able to nap on passages within sight and hearing of the helmsperson provides a level of comfort in terms of being able to get a quick second opinion of developing weather patterns or navigation issues, through to just being able to grab a toilet break or having a cup of coffee or snack. The settee is aft facing at the owners request to fit with their inside-outside entertaining philosophy, however it could be forward facing to create a different type of internal ambience.

If additional sleeping accommodation is needed, then an alternative layout with another bedroom instead of the guests en-suite is available, with a deck toilet and shower located in the corner of the saloon behind the settee. This arrangement would take a small quadrant from the 360° helm visibility, but as it is on the opposite side to the helm, this would be minimised. Every boat layout is a set

of trade-offs in how features affect each other, the trick is to make the trade-offs as minimal as possible while still giving the client what they want.

In keeping with the open plan feeling, three sliding doors make the transition from indoors to the aft deck almost seamless, opening out the settee to the 18.5 x 8ft (5.5 x 2.4m) aft deck and converting the galley bench in to a breakfast bar or servery. It is these large uncluttered and shaded aft decks that really define the Australian heritage of my designs and are one of the greatest points of difference between my boats and the imports. Having the ability to move a large free standing outdoor table and chairs to where it suits in regards to the weather when dining or entertaining is one of the best features of a power catamaran as it makes the greatest use of this large area, yet can be shifted out of the way when gearing up for other activities such as fishing or diving.

As with all other models in the Pathfinder ‘M’ range, the 41 Sedan is moulded with infused composites using a combination of our multi-dimensional hull mould and the DECKIT modular construction system for the decks and cabin. The prototype Offshore 45 has gone together very neatly using the DECKIT system with new tools and jigs now developed. The joins have completed the documented engineering tests required for the NSCV Commercial Code and these joins have also undergone some very practical tests when large pre-assembled sections were lifted into place or in the case of our bulkhead bonding system, when the hull was lifted out of the mould. Being able to offer a large degree of customisation while still retaining production boatbuilding techniques and a gel coat finish has been the holy grail of boatbuilding for quite some time, and with necessity being the mother of invention, I am confident that we have achieved it.

The Pathfinder 41 Sedan uses the double flooring arrangement pioneered on *Rehab* as have all the boats in the Pathfinder ‘M’ range to date with the fuel tanks and batteries mounted up on the bridgedeck level. It works extremely well with our new construction techniques, creating a series of box girders through the wingdeck, increasing the vessels torsional rigidity and providing very predictable panel engineering for the highest loaded area of a power catamaran, the wingdeck. This arrangement also improves seakeeping and ride by concentrating all the loads in the middle of the boat as well as opening out the accommodation in the middle section of the hulls. Yes, it requires slightly higher topsides, however this also provides more headroom in the hulls and a drier deck, so the trade-off is worthwhile and compared to our earlier flybridge boats of the same length the Sedan 41 actually has less overall windage. The higher cockpit floor creates greater room in

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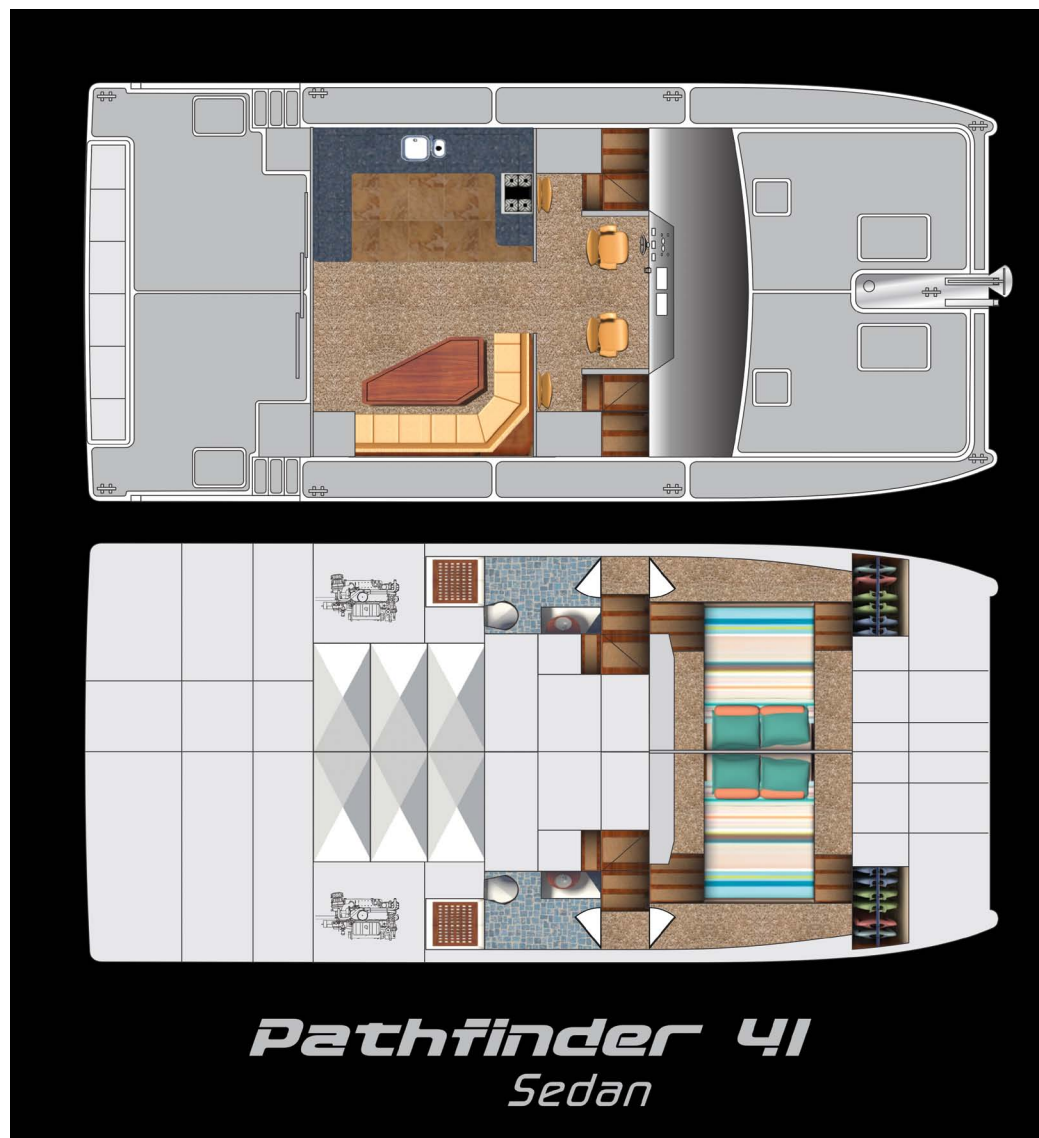
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the engine rooms and in particular, height over the top of the engines, which reduces their operating temperature and makes maintenance a lot easier. While we are on the subject of enginerooms, even this smallest vessel in the Pathfinder 'M' range has enginerooms nearly 13ft (4m) long and 4ft (1.2m) high, so mounting equipment like watermakers, dive compressors, and refrigeration or air-conditioning equipment is simple and uncluttered. These large enginerooms will have even more space now that we have replaced the gen-set with our latest domestic power system based on solar, high efficiency DC alternators and Lithium Ion batteries.

Powered by a pair of 240hp Yanmar 4LHA-STP's fitted with 2.43:1 reduction gearboxes, the 41 Sedan will have a top speed of 22kts and will cruise economically at 16-17kts using 44-48 litres per hour combined. We have fitted dozens of these Yanmar engines to our power cats over the last 20 years and their reputation as a simple, reliable and robust engine is well deserved. They still have a better blend of power to weight ratio and high torque than more modern engines, without having to resort to complex features such as overhead cams and rail injection.

The 41 Sedan has 1,800L of standard fuel tank capacity and will be able to complete the legs from the owner's home port in Lakes Entrance to Sydney, Sydney to Brisbane or Brisbane to MacKay on their way to their other base in Darwin @ 16-17kts non-stop with fuel to spare. This ability will allow the owners to bypass tricky bars or time consuming trips into port to refuel, as well as allowing them to more than double their range at displacement speed



while still retaining the ability to stay ahead of detrimental weather patterns with their good sprint speed. Plenty of safe storage area in the enginerooms would also make it very easy to set up auxiliary tanks or bladders, so the high cruising speed could be maintained on the longer legs around Australia's top end.

This combination of high cruise speed, range and proven seaworthiness is unique in a power boat – either multihull or monohull of this size and is the reason that my earlier boats like the Brava range are so sought after on the used boat market: one owner recently told me he had completed over 17,000 sea miles to date. By removing the flybridge there is an immediate reduction in weight and complexity when compared to earlier boats like

the Bravas and this in combination with slightly wider hulls and therefore more carrying capacity, allows the 41 Sedan to feel and perform like the earlier 45ft boats. With no flybridge, the 41 Sedan will be able to access marina berths and waterfront homes upstream of bridges while still retaining excellent all-round visibility. The Pathfinder 41 Sedan like her larger sisters is a very capable and comfortable long-range cruiser that would be ideal for anywhere in Australian waters with the strength and ability to venture into the Pacific basin should you wish.

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