

# Morningstar 4.6m Offshore Cuddy Cabin

SYDNEY SOUTH

Gary Brown

gbrown1@iprimus.com.au



Ever since I was 14 I have always had some kind of boat. At the moment I have a 4.5m aluminium boat and I will always have an aluminium boat – that's just my preference.

When I was given the opportunity to test a couple of aluminium boats from Morningstar I jumped at the chance, as I had never heard of them before. When I arrived on the morning of the boat test I was met by Chris Tocchini.

He's clearly very proud of the range, and told me that the journey started in 2010 when Taiwanese-based company CadCam approached Australian boat builder Troy Munnery with plans to use their experience, knowledge and plant equipment to build an aluminium boat unlike any seen before.

The basic concept behind the design was to take the lessons learned from 20 years of metalworking in the car industry and build a boat hull stronger, tougher and smarter. The manufacture of the Morningstar boats uses 5083 alloy, which is stretch formed

and work hardened, to deliver a hull that is tougher than the original sheets it was formed from. By stretch forming the bottom of the hull from one 3mm sheet using a 150 tonne press, the need for a keel weld is removed from the hull (and therefore the key weakness), increasing the overall strength and durability of the boat.

Similarly, the two sides and transom are stretch formed thus creating a boat hull from four pieces.

This is not the only major advancement. Using the plant equipment employed for manufacturing car bodies, the company has also completely innovated the so-called 'stiffener' system used in small craft. The patented Origrad design of the internal framework is created by cutting a single 5083 sheet and then pressing pieces of the sheet to form the frame. This minimizes the number of welds and creates a repeatable, perfectly-fitting frame each time.

The combination of the four-piece stretch formed hull and the Origrad frame deliver a boat that looks great, is lightweight, super strong, tough and robust, and rides and performs almost like a fibreglass boat.



The boat sits near to level at rest, even with only the driver on board.

## SPECIFICATIONS

LOA: .....4.65m  
 LOA on trailer: .....6.3m (motor in locked position)  
 Beam: .....2.00m  
 Trailer width (outside of guard to outside): .....2.1m  
 Weight: .....390 kg  
 Max load: .....755kg  
 Max persons: .....5  
 Max outboard: .....60hp  
 Fuel tank: .....underfloor AT60 aluminium 60L  
 Steering system: .....mechanical  
 Bow rails: .....bow, side and aft  
 Prop size: .....13.5 x 15 alloy prop  
 Variable deadrise: .....19°  
 Depth at mid ships: .....700mm  
 Battery type and size: .....SeaMaster Gold MFM50  
 800MCA 640CCA sealed  
 Trailer: .....Mackay, braked and fully rolled

On closer inspection I was shown that the unique design of the aluminium plate formed hulls with a second reversed chine was like no other. During forming, thousands tonnes of force is applied on premium aluminium plates and the material becomes almost liquid-like, evenly spreading on dedicated design dies. Flat plates become complex shapes. This allows the single plate bottom of Morningstar Boats to incorporate reverse chines, strakes, and variable deadrise, and eliminate an external extrusion keel.

Additionally, side plates and gunwales can now be integrated into a streamlined shape with a second chine and flared bow. Together, these formed plates give the hull outstanding hydraulic properties, static and dynamic. That's why they call it the Hydro Hull.

Strength is another important characteristic of the hull. The formed plates act as a strong outer shell. This 'unibody' concept is popular with high-end sports cars, planes and top-end bicycles. No longer dependent on frames alone to provide structural strength, the net result is a stronger, lighter and more rigid integral structure. Special folding technology is also used to construct stiffeners and transom. Folded stiffener system and transom dramatically decrease welding and increase rigidity and durability.

## PERFORMANCE

It wasn't before long that we had the Morningstar 4.6m Cuddy Cabin at the ramp in the Pittwater rolling into the water and motoring through the 4 knot and 8 knot zone so that I could open up the throttle up.

I was very impressed by how dry the ride was as we headed up towards Barrenjoey Headland and turned out to sea, even though there was a fair bit of a northeasterly wind blowing. The second reversed chine on the boat was definitely doing its job by pushing the water and the spray back down towards the water's surface. The axe-like

forefoot and deep V give this boat a very smooth and soft entry into the water.

When turning the boat at top speed and going over the wakes of other craft there was no sideways slipping, creating a stable track as you turned.

The Honda F60hp four-stroke pushed the boat extremely easily out of the water and up onto the plane within approximately three to four times the boat's length. When you push the throttle, the outboard engine drives the boat forward, while the water gives the boat a lifting

help to conserve more lifting force and allow the boat to plane quicker and increase its cruising stability.

## SAFETY

At rest with two adults on board and on the same side of the boat there was a slight lean. This would be understandable when you have around 180kg on one side of the boat. The height of the gunnels from the floor allowed me to easily lean up against the side to brace myself.

There were no grab rails on the boat that I tested, but if you look closely at the photos



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**Top:** The second chine has been reversed. This, combined with the flared bow, pushes the spray down to give a stable and dry riding experience. **Bottom:** There's plenty of room behind the windscreen to mount your GPS/sounder, plus an area below to store an esky or two. There's also plenty more room to add more dials and switches to the console.

force to plane. Bow-to-aft reverse chines and strakes on the Morningstar bottom plate

with this article you will see there is a rectangle section that forms the top rail. This

gave me somewhere to hang onto, but if it was my boat I would get them to install a grab rail on the passenger's side at least.

At the rear of the boat there's a fold-down seat for a couple of extra passengers, who could hang onto the side rails while travelling.

#### ERGONOMICS

This boat comes with two side pockets at the back half of the boat, a five-tray storage system under each seat, a storage rack at the rear of the of the boat for PFDs and the battery, plus two small shallow storage trays under the cabin. I need a ton of storage though, so I'd get them to customise a storage box up the front in the cuddy section of the boat.

In the test boat the instrument panel contained a fuel gauge, rev counter, voltage gauge and a 12V socket. The five black switches from left to right are: nav lights, anchor light, bilge pump, live bait aerator and a spare switch. If you want a different layout, the guys at Enterprise Marine can customise the console to suit your preference.

The boat comes with a covered anchor well which can be accessed by climbing through the lockable hatch at the front of the cuddy cabin. If you frequently go on solo trips, I recommend that you change the lock to a double-sided one so you can access

the interior of the boat while launching.

Personally, I found the throttle position to be a bit too far back from the steering wheel when standing to drive the boat. When I was sitting it was OK though.

#### FISHABILITY

When taking a boat for a test drive you don't always get a chance to fish, but on this occasion I was able to troll a couple of lines out the back when a school of tailor showed up. The boat was very stable even though I was moving about a fair bit setting up the rods. There are four rod holders in total, one on either side of the rear of the boat and two on the self-draining cutting board.

If you are into live baiting for kingfish, mullet, sharks and so on, there is a plumbed 20L live well on the port side. The 3mm checker plate floor is self draining which makes it very handy if you want to hose out the boat while on the water. You could easily wash the floor down if you were to install a hose.

This boat is designed to take five adults and would fish four comfortably either trolling or drifting offshore or in the estuary. Anchoring up would also be a great option as two anglers could fish from the front two seats and the other two anglers could use the back bench seat.

There was plenty of room to mount a GPS sounder combo, compass and so forth up behind the windscreen. The CM500 seats with a five-tray compartment underneath were quite comfortable when driving and at rest.

#### NOISE

Many of the aluminium boats I have tested over the years have a fair amount of noise when travelling at speed. Even mine. Morningstar boats are constructed differently from conventional pressed our plate alloy boats, however. This construction, along with the one section flared sides and reversed chine, provides not only tremendous strength but

cuts down on the noise when travelling at speed and coming down off a wave or wake.

The only thing I would say about the 3mm checker plate floor is that if you dropped something metal on it this would send a fair amount of noise through the water, which could possibly scare off the fish. If you were really worried about this you could always carpet the floor.

The Honda F60hp four-stroke outboard is so quiet you can easily have a conversation while travelling.

The Morningstar Hydro Hull comes with a five-year warranty and the test boat also came with a water safety kit,



At the rear of the boat you'll find the alloy self-draining preparation board, a 20L live well and the fuel inlet.



Both the driver's and passenger's seats have a five-drawer storage compartment built in.



**460 Angler**



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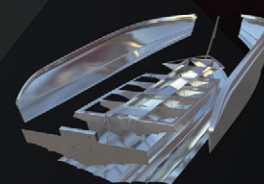
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