

review: Westcat 10m

Westcat 10

■ by BARRY WISEMAN



The Fremantle Volunteer Sea Rescue group's new 10 metre catamaran operating off the Perth metropolitan coast is the first fully surveyed fibreglass power boat in the southern hemisphere constructed using the vacuum infusion process, as Barry Wiseman reports.

Volunteers from the FVSR respond to about 500 incidents at sea each year, about 30 per cent of the total rescues off the West Australian coast.

They patrol the State's busiest waterways, from South Fremantle in Cockburn Sound, westward to Rottnest Island and beyond and north to City Beach, a coastal suburb. Together with Cockburn and Whitfords sea rescue, they make up the Metropolitan Sea Rescue Group attending what turns out to be most of the State's on-water emergencies due to the concentration of the population.

These waters also take in Gage Roads and the busy commercial shipping lanes into Western Australia's main port.

The seas off Fremantle can quickly turn nasty, whipped up by strong south-westerly winds often referred to as the 'Fremantle Doctor'. While a gentle breeze brings cool relief during hot summer days, it often blows to 20 or 30 knots by the afternoons, meaning most small pleasure craft need to head for home or take shelter in the northern bays of Rottnest Island 12 nautical miles off shore.

When breakdowns or capsizing occur in these conditions, personnel from the Fremantle rescue group need a fast, powerful and spacious workhorse.

Built and equipped to the tune of half a million dollars, the Westcat Marine 10 metre named R100 is powered by twin D6 310hp Volvo Penta inboard engines with Duo Prop stern drives and within

minutes is heading to the rescue, either from its headquarters at Challenger Harbour or while on routine patrol.

R100 was designed by Fremantle naval architect Mark Ellis and built by Graeme Wornes and his team from Westcat Marine in the Perth suburb of Kelmscott as a one-off project specifically to meet the needs of the FVSR. The company specialises in building 12 metre power catamarans and a smaller 7.5m model.

As is often the case, many rescue situations occur in atrocious weather conditions around the merciless reefs of Rottnest and neighbouring Garden Island. In between you have many reefs and Carnac Island. All can lay claim to ship wrecks large and small, dating back to the

The new 10 metre catamaran from Perth's Westcat Marine – patrolling the water off Fremantle.
(previous and below)





Westcat starboard rescue door with rear deck tow post. (above)

time of the early mariners and to modern day, despite the development of GPS/Chart plotter technology.

With its very deep bow which gives tremendous buoyancy to cope with big seas, the Westcat 10m also had to be able to manoeuvre within a confined space, often between jagged underwater rocks so rescue personnel could reach a stricken vessel and its crew.

The power cat handles with ease and was a dream to drive, with instant response from the hydraulic steering and throttle controls. Within seconds the sleek twin hulls are planing and as more power is applied the vessel lifts on top of the chop as the water tunnels to a clean exit aft with no back spray.

You don't realise the speed at which you are travelling until you step out onto the spacious back deck and the wind grabs you. With 30 knots registering on the GPS she turned 180 degrees without the slightest hint of leaning or digging in.

A focal point of the huge cabin is the large chart table used by rescue officers for plotting a course to a stricken vessel.

The day I joined R100, rescue officers Paul Chidley was the navigator while Frank Pisani manned the helm.

On the port side of the cabin there's a large built-in refrigerator, gas stove, and a big 'L' shaped lounge where the rescued can recover from their ordeal. The floor space is uncluttered to cater for any stretcher patients.

The aft deck measures more than 16 square metres and has huge under-floor storage lockers for vessel recovery equipment of all types, plus a sturdy tow post secured to the reinforced sub structure and carbon fibre frames.

Recovery from the water is via a door on the starboard side, only metres from the helm station where the skipper has full control of the vessel and clear visibility of the rescue operation.

The foredeck on the Westcat Marine 10m is roomy and surrounded by heavy duty stainless steel railing. A gate in the railing opens allowing access via the bow.

The R100 carries a lot of glass fibre in its construction, more than is actually required.

Working to the design requirement of architect Mark Ellis, the boys at Westcat Marine applied the amount of stitch fibre as directed so the top deck laminate measured 9.6 millimetres, but it was compressed to about 4mm thick when the vacuum infusion was applied. Extra layers of glass were added to bring the hull thickness to survey requirements. The surveyors are on hand to watch the process and use ultrasound equipment to check the thickness of the laminate.

Despite the extra glass, the dry weight of the R100 was kept to 7 tonnes due to the one-part-resin to one-part-glass ratio and the quality control that the process offers.

“We are saving around two tonnes of weight in the hull compared to conventional hand-lay or chopper gun-laying. The mould is gelcoated and then the layers of dry stitch fabric are rolled out covering all areas evenly. A flow medium which is approved by the Lloyd’s Registry is then applied. More fibre is added and the whole structure is sealed by a nylon film before a vacuum pump is used to suck all the air out. Resin is then injected into the laminate at 14.7psi which forces it to flow through the glass fibre to achieve a perfect resin-to-glass ratio,” said Graeme Wornes principle of Westcat Marine.

“When you’re hand laying or using a chopper gun it’s usually two parts of resin to one part of glass. So the infusion method gives us a high, even strength and a lot of control. You’re not worrying about the person on the chopper gun putting too much on in one spot or not enough. Because you’re rolling the stitch



Westcat's 10m radar. (above)



Navigation officer Paul Chidgey making good use of the specialised chart table. (above)



The R100 is equipped with an automatic radio frequency detective device on board. (above)



The large lounge inside the cabin. (above)

fabric out dry and cutting it to size you know how many layers you have and the exact thickness required by survey.”

The former aircraft engineer-turned-boat builder says as long as the correct number of glass layers have been installed, the vacuum infusion has virtually removed the human element from the process resulting in an even thickness and strength. The bottom hull thickness is 12 mm with overlapping occurring on the keel, chines and knuckle joints.

Survey officers also favour the process because they can see it in action and if it is carried out correctly there are no air bubbles in the laminate to weaken the structure.

This infusion system is very reassuring for the crews from the volunteer sea rescue group at Fremantle and skipper Frank Pisani is enthusiastic about the strength and performance of their new boat which is also fitted with high tech electronics, GPS and radar.

Imagine this. You set off at dawn from the mainland in your well equipped vessel planning to do a spot of fishing. A thick fog rolls in and you lose sight of land.

Your compass is playing up and you know you’re somewhere near the commercial shipping channel because you caught a glimpse of a big container ship not long before your vessel was enveloped in mist.

What do you do? Continue your heading and risk hitting a reef marked on the chart or stop and drift and wait for the fog to lift – but you also risk being hit by a freighter or another pleasure craft?

This is not make believe. This actually happened to a boater off Fremantle.

Fortunately he had a marine radio on board and he reported his predicament to the FVSRG.

There was no immediate threat to life but Watch Officer was not comfortable about leaving a person drifting in the vicinity of commercial shipping lanes, so Pasini and Chidgey were scrambled.

The catamaran is equipped with an automatic radio frequency detecting device worth \$20,000 and the ‘lost’

skipper was called on his marine radio and told to depress the transmit button on the microphone for five seconds.

Straight away the rescuers had a compass bearing on the drifting boat, plus the radar has a blimp of the screen. In fact there are two blimps.

Sure enough as the R100 nears the stranded pleasure boat in the fog a container ship is seen by the rescue vessel less than a kilometre away. The fisherman is escorted to safety.

“We are so passionate about people having radios on their boats, learning how to use them and making sure they work properly. In a distress situation we can save lives. By depressing the mic button for 5 seconds we can hone in on their position. People think their mobile phone can get them out of trouble, but we can’t track a phone signal,” Frank Pasini said.

The introduction of the Westcat Marine 10m to their fleet means the volunteers of the Fremantle sea rescue group can be on the scene of an incident much faster, respond to call-outs in ocean conditions which previously would have required a larger Water Police vessel, and know they have a customised vessel with the power and strength modern technology can deliver.

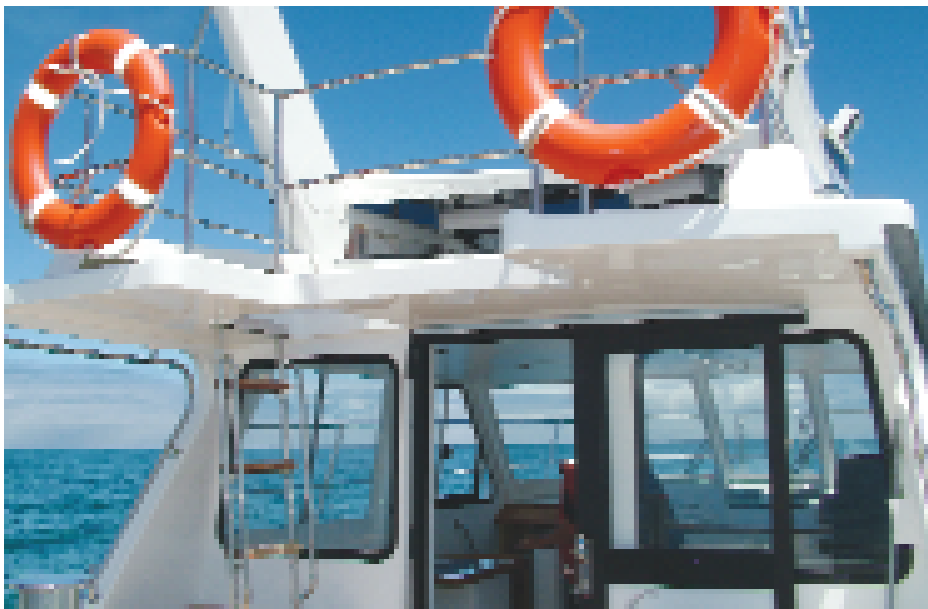
The next Westcat Explorer 40 pleasure craft should be rolling out of the factory before Christmas. With an overall length of 13.8 metres and 4.46m beam, the base price fitted with a pair of Yanmar Stern Drive engines is \$443,760.00, plus GST.

**Manufacturer: Westcat Marine,
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SPECIFICATIONS	
model	Westcat Marine R100
overall length	10 m
beam	4m
draft at rest	0.6m
weight	7 tonne (dry)
power	2 x 310 Volvo Penta stern drives



FVSRG skipper Frank Pisani urges skippers to learn and use their marine radios. (above)



Look-out provision on top of the R100's cabin. (above)



A gas stove, fridge and outside sink – some of the home comforts for rescue crews. (above)