

On a different tack

Radical Bay 8000 – two rigs are better than one

By SEAN WOODS

INNOVATIVE concepts and cutting-edge designs are what drive technology forward. And in the sailing catamaran world, the Radical Bay 8000 is about as forward-thinking as you get.

Take its unique “biplane” rig – a single mast with fully battened mainsail on each of the two composite hulls; there’s nothing quite like it in the marina. But this cat isn’t just radical for the sake of being radical. It’s also surprisingly fast, and quite capable of kicking butt on race day.

Available in kit form, it’s easily dismantled for transporting, making it an ideal performance catamaran for budget-conscious sailors eager to explore our coastal and inland waters – or get serious with their opposition round the cans. The unusual sail plan makes the Radical Bay 8000 both safe and easy to handle.

Smart One, the first Radical Bay 8000 to be built by the world-renowned catamaran designer and former South African Jeff Schionning, makes a bold statement at its mooring in Simon’s Town, its two red free-standing carbon fibre rotating masts standing out like beacons in the forest of conventional aluminium poles.

It was imported from Australia by owner Klaus Scheid of Smart Yachting. An experienced multihull sailor, Scheid – a retired architect and town planner – was immediately struck by the simplicity of the biplane rig and the aesthetic appeal of the design when he first spotted it in 2000. “I was intrigued by this development in sailing and found the technological input fascinating... it fitted in perfectly with my philosophy.” More specifically, he wanted a fast, safe and uncomplicated boat that would help him promote catamaran ocean racing, especially among South African youth.

Scheid has been around, and he knows catamarans. He’s also lost one: back in 1988, he and his wife, Christine, lost their

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Smart One, the first Radical Bay 8000 to be built by world-renowned catamaran designer Jeff Schionning, leaves its Simon’s Town mooring with owner Klaus Scheid of Smart Yachting at the helm.



40-foot (about 12 m) catamaran while passing through the Bab-el-Mandeb straits separating the Red Sea and Indian Ocean (known as the "Gate of Tears" because of the shipwrecks littering the area).

Converts to the Radical Bay design say the biplane rig is so well suited to catamarans that they cannot fathom why it took so long to enter production.

The biplane's main advantage over more conventional rigging systems is that it splits the required sail area into two smaller, equal-sized units and places them on each hull rather than the centre of the craft, as on conventional catamarans. The boat becomes much easier to handle, but more importantly, the rig's centre of effort is significantly lowered, making for a much safer boat (the threat of capsizing, a cat sailor's worst nightmare, is dramatically reduced).

On her maiden passage, says Schionning, the Radical Bay handled like a dream. Sailed hard and fast, she showed no heeling tendencies at all. "It felt as though we were powered by a big outboard motor down at beam level. The huge safety margin gained by having the much lower centre of effort was very apparent."

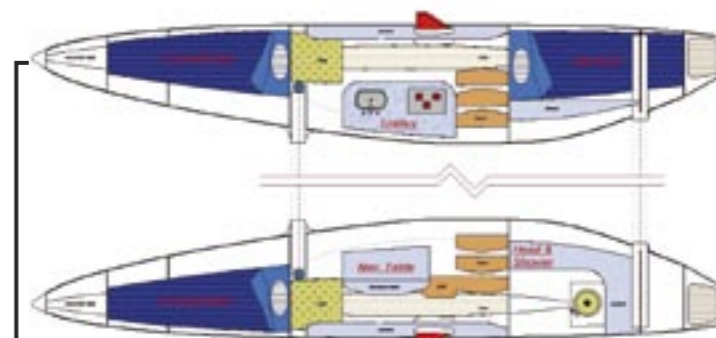
Because no rigging is needed to support the 8,5-m free-standing carbon fibre rotating masts, the space between hulls is free of obstructions, and the crew have plenty of uncluttered space in which to handle the sails. Each rig (including mast, boom and sail) is controlled by only four lines, three of them using cleats. There's only one winch, located in the centre of the main crossbeam for both masts.

Consequently, managing the two 20,5 m² fully battened sails is relatively uncomplicated. With three reefs to de-power the sails but only one reef per sail, that means reef 1 is one sail reefed, reef 2 is the other sail reefed, and reef 3 is one sail down. The lowered sails, controlled by lazyjacks, simply drop on to the flat tops of both booms.

Sailing with full mains or at any of the reef positions doesn't alter the steering balance, so there's really not that much to do other than hold on and enjoy the ride.

In heavy weather, the most practical sail configuration would involve reefing in the windward sail and lowering the entire sail on the leeward hull. The leeward hull, then functioning like an outrigger, doesn't allow the windward hull to lift – a great safety feature that makes it almost impossible to tip the boat over.

The rotating masts, with their fixed booms, make winging out both sails (for downwind sailing) particularly easy. Says Schionning: "There's no reason why these



Radical Bay 8000 specifications

Length.....	8 m
Beam.....	5,76 m
Draft.....	0,30 m
Headroom.....	1,7 m
Mast height.....	8,5 m
Sail area.....	41 m ²
Payload.....	300 kg
Displacement.....	1 100 kg
Bridge deck clearance.....	0,68 m
Fuel capacity.....	20 litres
Water capacity.....	50 litres
Motor.....	1 x 6,7 kW outboard
Sailing speed – Cruising.....	12 knots
– Top speed.....	20+ knots



Top: The small outboard motor, attached to a pivoting 2m-long marine-grade aluminium tube, is lowered to the correct height and retained by two wires fixed to the underside of the aft beam. Left: As no rigging is required to support the free-standing carbon fibre rotating masts, the space between hulls is free of obstructions.



Top: Only four lines are required to control each rig (including mast, boom and sail), while a single winch located in the centre of the main crossbeam services both masts. Clockwise from above left: The starboard (right) hull houses a cosy double bunk aft, a galley amidships and a big single bunk forward; DuFlex panels, designed to reduce construction times and to optimise structural weight in high performance composite structures, make for strong yet lightweight hulls; the port hull accommodates a large single bunk up forward, a fold-up table amidships (it doubles as a navigation station) and a chemical toilet and basin aft.

rigs should not be used on all our cats soon, as well as the bridgedeck cats." His new boat – the Wilderness 1230 – is a bridgedeck design.

When building *Smart One* in 2004, Schionning chose a simple hull form, opting for a Vee section up front to minimise slamming, and a flat exit to reduce hobby-horsing. A carefully calculated waterline beam-to-length ratio results in a very low drag ratio, helping to make this a very fast boat. Also, the asymmetric hulls, with their flared inner panels, benefit the design in a number of ways.

For starters, the internal space is more practical because the galley tops and lockers are set to one side of the walkway, allowing for wider bunks. But the most important function of the inner panels, which are carried right forward, is to provide reserve buoyancy and prevent the bows from being driven under. Dagger boards give directional stability when sailing upwind.

Two kick-up rudders, with blades set under the boat to increase efficiency and minimise aeration, are connected via a link bar, with a tiller extension to both cockpits.

The motor, attached to a pivoting two-

metre long marine-grade aluminium tube with a diameter of 100 mm, is lowered to the correct height and retained by two wires fixed to the underside of the aft beam. The tube also functions as the fuel tank, holding 20 litres.

You may be sailing a performance catamaran, but that doesn't mean you have to rough it. The starboard hull houses a cosy double bunk aft and a big single bunk forward. The galley, placed amidships, is equipped with a two-burner stove, sink and running water, lockers and shelves. The port hull accommodates a chemical toilet and basin (with room for a shower). A fold-up table amidships doubles as a navigation station, and there's another big single bunk up front.

She also comes with two water tanks and 12-volt power for the cabin, navigation and cockpit lights. The cockpits are comfortable and big enough for two (or three if you're feeling really friendly). In the balmy summer months, just hang a large awning between the booms to turn the trampolines into a huge entertainment area. Throw in a few beanbags, and you'll have the biggest, coolest entertainment area in the anchorage!

Although it's by no means the first

successful biplane catamaran design, the Radical Bay 8000 is believed to be the first to enter production, and is the only one available in kit form.

The light and strong twin composite hulls are manufactured from DuFlex rigid end-grain balsa-cored panels, laminated with a high-performance epoxy resin and reinforced by multiaxial E-fibreglass skins throughout. Here we're talking excellent mechanical properties, an extremely high strength-to-weight ratio, good thermal and sound insulation, high impact and fatigue resistance, and good moisture resistance. By all accounts, this is the most logical construction material for the home builder in search of a tough, durable performance catamaran with a good resale value.

The pre-cut kit includes all bulkheads, hull panels, furniture, resin and glass fibre as well as the marine-grade aluminium tubing for the crossbeams. It should take two competent people about 1 250 hours to complete and you should expect to pay about R200 000 (including freight and taxes). For more information on the Radical Bay 8000, contact Klaus Scheid at Smart Yachting on 021-786 2161 or visit www.smartyachting.com