

JARCAT Cruising Catamarans



- CORAL COAST TWENTY NINE
- CORAL COAST TWENTY NINE at about 12 knots

Introduction

- The Cruising designs are prefixed by CC from "CORAL COAST" the term given to the beautiful Queensland coast.

CC29

The CC29 is our offshore cruising yacht. The central cockpit affords great security, keeps the big weights central for the best motion at sea, allows easy access to the foot of the mast and all sail controls. The diesel is mounted in a nacelle in the cockpit affording easy access. The propeller shaft simply lowered when needed imparts no drag or electrolysis when sailing but superb three blade performance when in use. The diesel tank is in a cockpit seat to avoid fumes or leakage into the living area. The water tanks are below the floors. Plenty of storage areas abound in all cabins.

The full size (mine is 4'8" * 7') double berths are aft on the bridge-deck. There is headroom in the hull alongside the berth. A large opening window doubles as a hatch aft. A sliding window into the cockpit and fixed windows along the cabin side. Lockers for clothes, life-jackets etc.

There is a single berth forward to starboard with a fridge/freezer under. The dinette forms another big double giving 7 berths.

The galley is to starboard, the dinette which can seat up to seven people is amidships and the chart/work area to port. Port-forward is the heads which can include a shower. Heights are such that an adult can see both sides and ahead whether standing in the hulls or seated at the dinette. A spacious feeling. Ventilation is via escape hatches in the cabin top, the cockpit doors and the aft cabin hatches. I also have an opening (sliding) side window.

My own CC29 "CORAL COASTER" was built in 1984. It has the original cutter rig which has proven to give sparkling performance without needing a large or strong crew. We covered 310 miles to Gladstone at an average of over 9 knots. Since then we have sailed to Lord Howe Island, 4 days out and 3 days back which is also good.

In 2000, three of the family sailed 700+ miles (open ocean) to New Caledonia for a holiday. We carried 160 litres of water, 75 litres of fuel, stores for a month plus spares and safety equipment. "Coral Coaster" was not down to the load water line! On the return passage we had the occasion to deploy a para-anchor for 36 hours as a storm passed. (Gusts 55knots plus breaking seas from two directions). We were quite comfortable. In another blow just before entering Moreton Bay we blew a batten & batten pocket right off the brand new mainsail.

We have sailed with 7 teenagers and three adults on bay cruises for five days at a time. Have entered local club races and simply cruised with my family & friends. We have sailed at up to 18 knots on many occasions and peaked at 25 knots. 12knots is common even to windward. We do not have a spinnaker.

TACK TRACK

The Tack Track has the forestay mounted to it. The track runs across the forward beam from side to side. The forestay carries the headsail. The headsail can be pulled to where it works best, operated from the cockpit. Thus on a reach we can have the genoa tack fully to windward and the clew sheeted on the downwind side of the cabin. Nearly four metres downwind. When working to windward the tack is about 700mm downwind of centre giving an excellent pointing ability.

The shallow 0.6m draft and the ability to dry out are well tested advantages. The ride is so level we don't even have edges on our laminex dinette table.

The MK11 has a "woodwing" rig and will perform to a higher standard without extra cost. Current CC29s are launching for around \$33000 Australian. 1000 hours is the estimated building time. Allow more if you intend fitting lots of drawers and cabinet doors. On "Coral Coaster" we only have a cutlery drawer, and open fronted shelf storage. One person can raise/lower the mast. (I keep "Coral Coaster" on a river 15 miles from the sea, the low bridges are not a major hassle).

The CC29 has a payload of one tonne to bring it down to load water line. This is quite good for a boat of this size. The dry weight of the CC29 is 1250kg, exceptionally light but very strong. The bridgedeck clearance under the CC29 is a huge 0.6m, again this leads to less bridge-deck slamming and improves performance.



Design Principles

"Modern" streamlined shapes.

Modern cats under 40' tend to have a cabin which rises out of the foredeck, very rounded gunwales, curved decks, aft cockpit which is often quite small. No fwd windows. Very tall rigs for performance. Round bilge hulls with under-hull rudders. Long sloped transoms and vertical stems. Little or no flare in the bows. Below 32' they are mostly open-bridgedeck designs.

The Reasoning behind the Coral Coast 29.

"Modern" Cats decks are usually curved. This leads to difficulty in working on deck in adverse conditions. Have you tried to get the winch handle to sit still on a slope? This is compounded when trying to deploy a para-anchor in a storm! When alongside a pontoon it can be difficult to access a cat with severely rounded gunwales. **CC29** is almost flat decked with square gunwales.

"Modern" Catamarans under 32' tend to be open bridgedeck designs with fine nets instead. One such cat flipped over backwards in a storm on Moreton Bay. The tall rig, netting, hull shape, skipper, I do not the cause. I use a coarse mesh net at the front of the **CC29** and it is surprising how much wind blows through it.

"Modern" Cats tend to have long fine foredecks (which are difficult to work on) and vertical stems with very little flare or reserve buoyancy where it is needed. Sugar-scoop transoms extend the length but do not give the lift a broad transom does. Thus we have a 32' long cat with the space of a 24' cat. Good for marketing and marina profits but not good for the owner's pocket.

"Modern" Cats tend to have foredecks rising aft to blend into the cabin. This eliminates the ability to see forward from inside the cabin.

"Modern" Cats tend to be claustrophobic. From the galley they may only allow visibility out the side. Similarly from a bunk. If they have a bridgedeck dinette you may only have a small view aft. In the **CC29** we can see out from the galley in all four directions. The berths have two direction view and the dinette has three directions. Very important in a bad anchorage.

"Modern" Cats fit underhull rudders. Inaccessible at sea. The **CC29** has transom hung rudders.

I trust the above gives an insight to why the CC29 is as it is. (Ditto the other JARCAT designs).

A few more notes on the CC29.

I designed the Coral Coast Twenty Nine as a capable offshore yacht for my own use. I chose 29' as a length capable of carrying an offshore payload for three adults on a circumnavigation. The beam needed to be restricted for travel in canals and locks but still better than 2:1 for stability. The cost had to be realistic. The building within my capabilities. The final cat needed to be able to survive a storm without too much help from its crew. Come the worst it should float high if inverted, affording some living space and the possibility of re-righting. Since I raced with the Queensland Multihull Yacht Club the cat needed to have a degree of performance.

The building time is about 1000 hours. At a cost using good materials of about \$33000 (building materials cost for Jack Langlois of Sydney in 2001). Including sails, everything.

(Comparable to the building cost and time of the plywood Trailer-tri 680)

The motor may be an outboard in the centre-cockpit well or, preferably, a diesel in the same well.

The diesel uses a long shaft which is simply raised to eliminate the drag of the big 3 bladed propeller when sailing

A TACK TRACK is fitted , which the headsail tacks to, gaining maximum performance from the sails on all points of sailing. Most JARCATS using a tack track will not need a spinnaker. With the three wire rig a spinnaker may be used in light conditions.

Construction is ply sheet over timber longitudinals on full width and height plywood bulkheads. Both hulls and the bridgedeck are built all in one piece at the one time. No lofting is required. A very strong, light, quick and fair method . Materials include 96 sheets of 8' * 4' plywood generally of 6mm & 9mm thickness. The exterior is epoxy-glassed and two-pack painted before turning over. (weight around 1200lbs). The final launch weight is 1250kg without extras. At load waterline the displacement is 2250kg. The W.E.S.T. technique may be applied.

The large central cockpit keeps the weight centred for the best performance. The mast and motor are there too. A low cabin top can be built over the cockpit if required, otherwise a soft bimini can be erected. The galley is 1.8 metres long, the table seats seven and there are seven full size berths. Plenty of space. Headroom is around 1.8 metres for over five metres of hull length. Windows all round means you can see out from anywhere, even the aft bunks !

Shallow solid keels add strength to the hull and offer protection from grounding or when drying out. The rudders are a little shallower than the keels. For accurate steering at all speeds, the low aspect rudders feature end plates which double as steps when boarding from a swim.

I have owned my cutter rigged CC29 since 1984. The peak speed reached is 25 knots. We covered Brisbane to Gladstone, over 300 miles, at an average of 9.25 knots. The Mk11 brings the first rig change. (the WOODWING and three wire rig.) With the cost of alloy masts going up, and availability of ready-made fittings diminishing I believe it is time we return to building our own. A light, well shaped, rotating mast and three wire rig is now cheaper than the cutter rig!

There is also a Coral Coast Twenty Nine aft cockpit available.

Summary of Designs

	J282	Jarcat 5	Jarcat 6	Jarcat 7	CC 24	CC 29	CC 30S
<i>Length</i>	2.4m	4.8m	6.2m	7.0m	7.2m	8.6m	9.2m
<i>Width</i>	1.2m	2.41m	2.5m	4.3m	3.8m	4.8m	4.8m
<i>Sail area</i>	35 sq'	145 sq'	220 sq'	300 sq'	240 sq'	420 sq'	420 sq'
<i>Weight</i>	~30 kg	290 kg	390 kg	415 kg	1000 kg	1250 kg	2000 kg