

The Port Isaac 40 Charter Catamaran.

Although we have been building this cat for about 11 years now, it is still probably the best kept secret in the charter world. We can only build up to four Cats each year so I have always disliked the idea of taking orders from charter skippers knowing full well that their boat will not be finished for up to two years!! It could happen!

Power Catamarans have developed a charter Catamaran designed to give the absolute maximum fuel economy for skippers combined with an excellent turn of speed.

The boat gives just about perfect sea keeping and eliminates the pounding and slamming that some planing Catamarans still manage to produce.

The hull of the craft was designed by Crowther Catamarans in Australia, probably the worlds best known Catamaran designers with over 3000 designs completed in their long history. It was by no chance that this Cat was originally described as the most economical production cat in the world. The combination of speed and fuel economy, which until then had been impossible to attain, has now become the normal practice with our craft.

Top speeds are usually around the 32 knots mark but can go a little higher and can, of course, be set considerably lower. We could fit twin 120 hp engines and still achieve the good side of twenty knots flat out. No wasted energy. The ultra slim bows just slice through the water like a thoroughbred race boat. The Cat creates no fuss in the water, no big bow wave being pushed in front of the boat to show how much energy you really are wasting. Look at the section on **Comparison & Performance** to find out how much you may be pumping into thin air.

Our past experience with the build of almost 700 Offshore craft gives us an extremely reliable engineering base.

The interior is built to a commercial fishing standard with simple bunk seats, shower room and accommodation. (Many option)

Helm can be Single Station on the flying bridge or Single Station in the wheelhouse or can be configured for Dual Station on the flying bridge and wheelhouse in areas where the weather is more severe. (The U.K. for instance.)

The Walkaround wheelhouse has become the most economical style to supply.

Because this style of wheelhouse leaves no real access into the forward areas it gives no additional accommodation for over-nighting apart from within the Walkaround wheelhouse itself.

For wheelhouse control the forward windscreens are fitted with clear glass toughened windows, and tinted to the sides. Options are available for enclosed Flybridge control on some of our styles and it is generally thought that this is the best all round option for comfort and visibility on a dive boat, also extremely good for the whale watching type of craft where the flybridge can be extended considerably aft. It also leaves more space in the wheelhouse for passengers. (It only takes about ten minutes up on the Flybridge to realise that this is the ideal position on sunny days).

Whilst every effort is made to produce a catamaran that is affordable to the professional skipper, the build is strictly to the Code of Practice safety regulations, with full certification offered as an option. As you may expect, the code of practise heel test results in almost zero heel and the Cat will easily pass any safety regulations. Engines are normally of a lower horse power than that found in an equivalent monohull or some other, shall we say less than efficient, Catamarans, and can be of

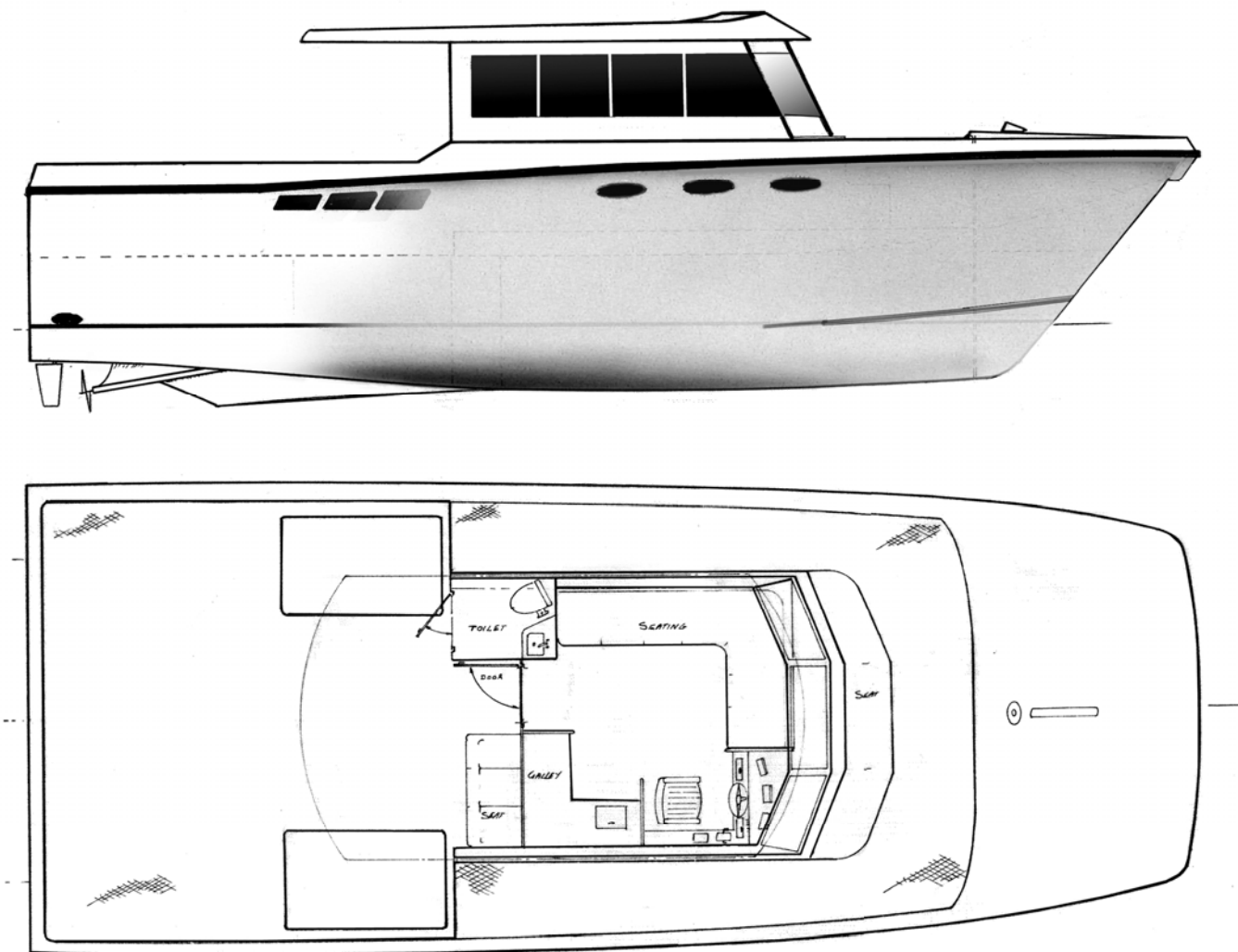
the naturally aspirated type, whilst still giving a top speed over 22 knots at a very low fuel consumption.

However, our standard engines will give 32knots top speed and will cruise at any speed from 10 knots to 27 knots

General Specifications

Length Overall	40ft 9in
Beam Overall	16ft 8in
Draft	3 ft 3 in
Displacement	9000 Kg
Fuel	300 gals plus
Berths	Up to 6
Top Speed from	20 knots to 34 knots
Engines from	100 hp 20 knots
Engines to	370 hp 34 knots

One of many variations of the Port Isaac 40 High Performance Catamaran



Port Isaac 40 Power Catamaran Walkaround



Comparison & Performance

Port Isaac 40 Power Catamaran 42ft by 16ft 6 inch.

Very fast and very economical. Will actually cruise at 25 knots all day and give you over 30 knots when you want it. Of course you don't have to cruise at 25 knots! Soft smooth riding and perfect sea keeping in any conditions you can go out in.

Economy:-

For instance most charter skippers would be very happy just to cruise around at 16 to 18 knots. All day Every day. At this speed you will only consume 1.56 litres per mile or in every day figures 2.9 miles per gallon.

Or 18 miles for 6.2 gallons.

Now at Cruising speed of 25 knots you will consume 2.48 litres per mile and return a figure of 1.83 miles per gallon

Or 18 miles for 9.8 gallons. A little more fuel but less time.

When we take the boat to 30 knots, consumption increases to 3.0 litres per mile or 1.5 miles per gallon.

Or 18 miles for 11.88 gallons. Not quite twice the fuel of the 18 knot speed but you get there in almost half the time. More fuel per hour but less time again.

The figures above are relative to our 12 m Catamaran fitted with twin engines 300 hp each or over.

Top speed over 30 knots. Cruise speed anything from 12 to 27 knots

You can see all this information on the Fuel & Speed Graph but I have clarified it for you with these figures.

Our consumption figures are the same for any horsepower engine and relative to speed. The only difference is that the top speed gets lower as the horse power is reduced and the top fuel consumption also get less as horse power is reduced.

As you get down to twin 220 hp engines the top speed will be reduced to a little over 28 knots (the top speed of the Blyth 11m Cat with twin 370 hp engines)!

You may compare these figures claimed by the Blyth 11m cat.

Twin 370 hp engines. Top speed a miserable 27.8 knots!

Our 12m Cat would be doing close to 35 knots. With this horse power. !

Our Catamaran will only be using 220 hp from each engine to produce 27.8 knots!

Quite a difference you will probably agree.

From this you can see that the main benefit of the well designed displacement Catamaran is the pure and simple economy of the whole thing. Couple this to the absolute smooth ride this style of hull gives you and you have a package that can never be beaten by a planing cat.

At 27 knots the Blyth cat will be using almost the maximum fuel consumption the engines can use, close to 26 gal per hour. Our cat only uses 19.8 gal to produce 30 knots+.

Or to put another way, our 12m catamaran would only use 16.75 gallons per hour.

It makes no difference whether we have 320 hp engines or 450 hp engines. The Catamaran would still only require 220 hp from each engine to give you 27.8 knots.

So you will see that if you use the boat for 1000 hours per year your fuel bill with the Blyth Cat 11m will be at the very least 25 % more expensive.

If both cats cruised all year at a steady 27.8 knots the Blyth cat would require 8,922 gallons of extra fuel! Quite a difference in the longer term. Close to 3000 gallon per year at a more sensible cruise speed.

Obviously no one is going to cruise around at 27.8 knots for a thousand hours but what it does mean is that you will be wasting at the very least, 25% of every single gallon you buy. How would you like to have your fuel bill at 25% discount every week?

You may Compare these figures given by SouthBoats.

Comparable size Boat is the 39 ft

Can be engined with a range of Scania engines from Twin 352 hp to twin 500 hp.

The twin 352 hp give the SouthBoats 39 a top speed of 24 knots. We would use twin 150 hp engines for this speed !

Our Catamaran would be doing 33.5 knots with the Twin 352 Caterpillar engines, we've already done it!

The twin 420 hp gave the SouthBoats a top speed of 26 knots.

It would appear that our Catamaran would use twin 190hp engines to reach this speed. With this 840 hp our Catamaran boat is doing 37 knots and will be way over powered for our own standard of efficiency.

This make 460 hp wasted !! Could this be the most inefficient boat ever.

The Gemini 10m Fast Cat.

Only 10m long and with twin 225 hp engine top speed of 23 knots is claimed.

Our catamaran will be doing over 28 Knots. Only 5 knots better but our boat is considerably bigger.

To sum up briefly look at the guide table below. Figures taken from manufacturers web sites.

Boat Type	Top Speed	Horse Power At top speed	Horse Power at 26 knots	Horse power at 18 knots
Port Isaac 40	32 knots	620hp	350hp	190hp
Blyth 11m	27.8 knots	740hp	650hp est.	340hp est.
Gemini 10m	23 knots	450hp	Unable	260hp est.
SouthBoats 39	26 knots	840hp	840hp	Who can tell!

Fuel economy is strictly related to horse power used.

Port Isaac 40 Charter Catamaran

Walkaround Version

Technical Data.

Hull

Hand laid moulded fibreglass construction.
Tri-axial, Bi-Axial and Uni-directional stitched fabric reinforcement.
30mm core stiffening on bridgedeck.

Gunwhale and Foredeck Moulding and Wheelhouse

Hand laid fibreglass incorporating Bi-Axial stitched fabric construction with stiffening core and insulation.
Moulded in quality non-slip finish.
Anchor Locker.
Concealed anchor roller, Cleat and Tie off point.
Bow cleats, 12" stainless steel
Spring cleats, 12" stainless steel
Stern cleats, 12" stainless steel with hawse pipe.
Forward Deck rails in stainless steel.

Cockpit.

Hand laid fibreglass over a 18mm Ply deck, with drainage scuppers to rules in force.
Moulded Inspection Hatches to engine rooms with wet storage area.

Flybridge. (Option)

Additional seating moulded in.
All engine instruments, alarms and controls.
Bridge ladder and safety rails, custom welded in Stainless Steel.

Electrical.

DC electrical distribution panel. Wired from battery to Navigation lights only.
Battery on/off switches with change over facility.
Anodes fitted.
Navigation lights to international standard. Wired ready for delivery trip
Electronics supply at helm

Mechanical.

Twin diesel engines. Iveco Nef 370 Hp each. (Standard)
Braided fuel lines. Water trap.
All under deck compartments gel coat finish.
Bilge pumps, two electric automatic, two manual hand pumps All by Jabsco
Note* Additional pumps will be required for code of practice.
Double stainless hose clamps on all underwater fittings.
Side exit exhaust with water lock. Special no smoke exhaust for Dive charter.
Single lever engine controls and cables.
Engine alarm system

Fresh water engine cooling.
Hydraulic steering system..
Stainless steel TeMet propeller shafts, and Nibral four blade propellers.
Nibral high performance spade rudders.
Stuffing boxes water injected.
Sea cocks and strainers, all bronze or stainless steel on all through hull fittings below water line.
Fuel Capacity 300 gal. Min
Fuel senders and gauges fitted.

Walkaround Wheelhouse

Helm and control position on raised area.
Helmsman's seat with storage under.
Engine instruments and hydraulic steering
Fuel gauge
Bilge alarms
Fixed tinted toughened glass windows to side and clear glass forward.
Bench seats
Kitchen area.
Door to cockpit.

Head Compartment.

On Deck Head fitted in this stage.
Doorway from main deck . Styles vary

Speed and Fuel Curves for Prowler Cat

