

## Aspen C120 Flybridge

Welcoming the next generation of Larry Graf's evolutionary power proa

**HEN IT COMES TO** pleasure yacht design, there haven't been many big leaps in technology in recent history. The exception is Larry Graf's revolutionary power proa.

Graf founded Glacier Bay Catamarans in 1986 and grew that Washington-state company into the North America's largest power cat producer. When he sold out 20 years later, he founded Aspen Power Catamarans, now based in Burlington, Wash., and developed the power proa—perhaps the world's most fuelefficient hull design. For example, his 32-footer sips less than one gallon of diesel for every 3.2 miles travelled—at 16 knots. We were fortunate to be able to test his latest offering, the 40-foot C120.

**Design and Construction** The secret to Aspen's success is its patented proa hull. Unlike other power catamarans where both hulls are of equal size and shape and both hulls have motorsGraf's design incorporates two different sized full-displacement asymmetrical hulls shaped in part to compensate for the single engine's torque. Key is the portside hull, which is 35 percent thinner than the starboard, and because it is easier to drive a thinner hull, less power is needed. Overall, the twin hulls require 50 to 60 percent less power than competitive boats.

However, it's not only fuel efficiency that has made Graf's boats such a success. All three models are great looking, sleek designs—from their clipper bows through to their striking reverse transoms, and each has been meticulously engineered by Graf and his team of engineers, 3-D modelers and systems designers.

The structural integrity of the 40 is impressive. For example, each hull has three watertight bulkheads built from super-strong Coosa composite board as well as an impressive structural grid that joins the two hulls with supporting beams every three feet or less. The bows are reinforced with exceptionally strong Kevlar. Both hulls have double bottom construction and the single shaft, prop and rudder are protected from grounding and log damage behind an oversized keel and a solid "sand bar" between the bottom of the keel and the rudder. The hand-laid hulls are solid fibreglass below the waterline and cored above, as are the decks and hardtop. Graf takes great pride in using only the highest quality materials and build processes. Unfortunately, while Graf is happy to share the construction details, there simply isn't enough room here to do them justice.

**On Deck** The wide swim grid features pop-up cleats, something often forgotten, but great for tying up the dinghy. A dinghy can be stored either on the transom using snap davits (hinged) or hoisted aboard via an optional electric davit system.

The cockpit is built around a settee and gloss finished teak table. One handy feature is that the tabletop can be stored in a removable panel in the cockpit coaming to protect it from weathering. There is good storage for fenders, lines and whatnot in cockpit lockers and in hatches in the sole, which also provide access to the generator and engine.

One of our favourite cockpit features is the unique bar seating area. A large, hinged bulkhead window opens the saloon to the cockpit. Below that window is a high shelf and two swing-out bar stools. This makes a perfect counter from which to enjoy drinks and appies. There's even a handy cooler drawer between the two seats.

A ladder leads from the cockpit to the flybridge (the C120 is also available as a sedan). The steering console is to port with excellent visibility all round. It is surrounded on three sides by long settees and a sunpad with an adjustable backrest for forward or aftfacing seating. The test boat was not yet fitted with a radar arch, but it will incorporate a canvas Bimini top that can fold forward to cover the forward half of the flybridge.

The main cabin is slightly offset, with the starboard side deck (the side most often used for docking) an ample 13 inches wide and the port side 10 inches. Well-placed handrails make moving forward comfortable and safe.

Interior The interior of the test boat was a blend of off-white Ultraleather upholstery with dual-density foam, Amtico synthetic teak and holly flooring (which is more expensive and more durable than the real thing), teak cabinetry, Corian countertops, and white, foam-backed (sound deadening) vinyl wall treatments with leather accents. There are plenty of well-placed grabrails throughout the saloon, which make for safe movement in all weather. The cabin windows are all bonded glass with a ceramic solar guard coating that is said to reflect 50 percent of the sun's energy so that the interior stays much cooler on those hot summer days. Two of the saloon windows have smaller inset opening windows.



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The roomy and light-drenched saloon.
The starboard steps have unique hinged drawers that tilt out for wine storage underneath.
There's good storage in below-counter and wall-mounted cabinets.
The view from the head.
The master head is surprisingly roomy with a separate shower compartment and a teak grate floor and glass bowl sink.
The real treat is the full-width king-size master.

lights can be controlled by either a master switch or by turning a ring on the outside of each light. Depending on the amount turned, the lights offer two levels of white brightness and two levels of red (for night navigation).

The dinette has an electrically adjustable table and electric reclining seating. Press one button to lower the table and another to recline the bench seating and you can put your feet on the table and lounge in comfort.

The galley has the usual list of amenities, including a Force 10 propane stove/oven, separate Nova Kool fridge and freezer units and a drawer-type microwave. There's good storage in below-counter and ceiling-mounted drawers and cabinets.

At the forward end of the dinette, just behind the helm area is a flat screen TV that folds up into the headliner when not in use.

A quarter berth is located under the aft port side of the saloon. Steep, movable steps provide access from the saloon and a filler piece can be dropped into place to make it a six-foot, threeinch berth. It's a pretty tight space, but will be great fun for the kids. There's also access here to a big locker where all the safety equipment was stored on the test boat.

The teak-paneled helm console is cleanly laid out with room for two flat screen multifunction units and the standard switches, engine readouts, the electronic throttle/shifter and the bow and stern thrusters. The plush helm and companion bucket seats are by Bentley's and of fixed height and orientation. Adjacent is an opening window and a shallow pocket compartment with a Plexiglas lid. This will be a good place for tossing keys, wallets and so on.Visibility all around from the helm is superb.

The accommodation areas are accessed via steep steps from either side of the saloon. The area is well lit by opaque saloon skylights and a number of large, oval, opening portholes. The steps on the starboard side have unique hinged drawers that tilt out for wine storage underneath. High gloss flooring is used in the accommodation areas and fitted so that individual sections can be lifted to access storage and/or mechanical equipment.

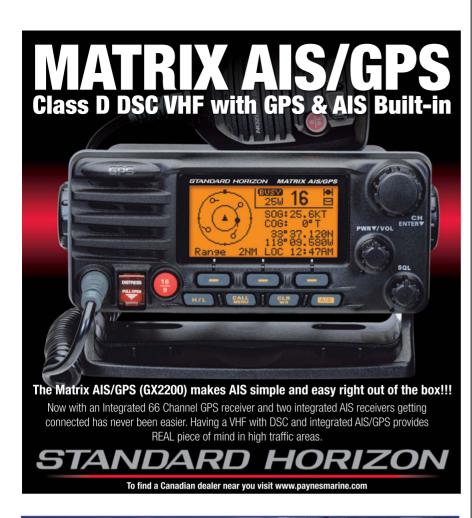
In the starboard hull is the aft stateroom with a raised queen bed, hanging locker and a bi-fold door for privacy. Forward of that is the master head which is surprisingly roomy with a separate shower compartment with a teak grate floor, glass bowl sink, Corian countertops, glass tile backsplash, opening port, ventilation fan and quiet, high-end Dometic toilet.

The real treat is the full-width, kingsize master berth in the bow, between the two hulls. It can be accessed from either the starboard steps (through the head) or directly via the portside steps. At its forward end is a 14-foot wide console with storage shelves and drawers and hanging lockers. It also hides a flat screen TV. There's more good drawer storage along the edge of the portside berth. Two large >



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overhead hatches provide plenty of light and ventilation. Aft of the master, on the port side, is another head, similar to the master, but with a shower curtain separating the shower from the toilet instead of a frameless glass door.

It is interesting to note that all the doors in the accommodation areas have top and bottom vents to help with ventilation and to help spread warm air throughout the accommodation spaces. This is another smart yet uncommon feature.

**Engine and Systems** Graf is extremely detail oriented and is proud of the hundreds of little things that make his yachts more technologically advanced than, according to him, anything else on the market, despite the increased cost for "better" materials. Again, there are too many innovative, unique and well-thought-out features to cover in this review.

Power is provided by a single Volvo D6 435-horsepower diesel (smaller 330- or 370-horsepower Volvo's are also available). The engine drives both a standard 110-amp alternator and an additional 210-amp alternator so there should be plenty of house-battery charging power. Up to three solar panels can be mounted on the flybridge for additional charging power. All wiring is tinned copper with both ends of every wire labeled and all connections and terminal ends are heat shrunk. A Kohler 5 kW generator is standard. The test boat was fitted with Webasto hydronic heating, which is much more efficient than reverse cycle air, and also one of the sources that can heat the 11-gallon hot water tank. PEX polyethvlene plumbing is used throughout. All hatches use stainless steel gas struts, instead of the more common, but less durable, automotive struts.

**Underway** Despite not yet having its engine soundproofing in place, the overall noise inside the saloon was surprisingly quiet, making it easy for normal conversation at all speeds. The bow and stern thrusters are operated through a Sidepower variable speed control unit. This is a relatively new product, but we're seeing it more and more as it gives much better control over the speed and power of the thrusters. It also has a "hold" feature, which keeps the boat pressed against the dock when engaged. This makes shorthanded mooring a snap. The Aspen 40 accelerated quickly—18 seconds from a standing start to reach our top speed of 23 knots—even with four passengers and half fuel and water. The ride was very comfortable despite a wind and tide driven chop of about a foot. Our turning radius was a very reasonable three or four boat lengths. In sharp turns, there was no slipping or prop cavitation. In straight-line running, the Aspen tracked arrow straight, showing that Graf got the asymmetrical hull design just right.

At a sedate 8.7 knots (1,500 rpm) we were burning 2.3 gallons per hour, which translates to an excellent 3.5 miles per gallon. At 2,000 rpm we were making 9.5 knots and getting 1.8 miles per gallon. At 2,500 rpm, our speed was 14.5 knots and we were getting 1.6 miles per gallon. Even at wide-open-throttle (3,500 rpm) we were still getting better than a mile per gallon. These are very good numbers as most fast monohulls of similar size use about a gallon for every mile travelled at cruising speeds and much more at high speeds. We sliced through some large wakes like they weren't even there. The 40 should handle well in all seas and all weather, as was evidenced when its smaller 32 foot sibling recently circumnavigated Vancouver Island non stop and charged through some pretty large open ocean wave conditions. Overall, the 40 handled more like a sporty speedboat than the relatively large yacht that it is. The only issue we had with the 40 was that at times the steering seemed to take a bit more muscle than we expected, especially when pulling out of high-speed, hard-over turns.

## THE SPECS

LOA	12.9 m	42' 6"
Beam	4.2 m	13' 10"
Draft	1.0 m	39"
Dry weight	10,206 kg	22,500 lbs
Fuel	681 L	180 USG
Water	303 L	80 USG
Black Water	189 L	50 USG
Std Power	330 hp Volvo	D6

## Built and Sold in the U.S. By

Aspen Power Catamarans Burlington, Wash. aspenpowercatamarans.com

Sold in Western Canada By

Yacht Sales West Vancouver 604-488-1202 **Concluding Remarks** The C120 is definitely a game changer in many ways. While the 28 and 32 were game changers in their size range (and Graf has the innovation awards to show it), the 40 (which is actually 42 feet, six inches overall) has done the same for those wanting a larger platform. Not only is there the fun factor—the sporty handling, the stable ride, the ease at which it glides through the water, the impressive acceleration and great

looks—it does all this while sipping fuel at about half the rate of similar sized yachts. And, underneath the hood, the C120 is absolutely packed with creative new technology and thoughtful innovations.

Finally, because the builder is in the Pacific Northwest, and is dedicated to providing top-notch service, help is right at hand. Price for the Aspen 40, as tested is US\$742,000 on either side of the border.



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