

# Sea Trial

## Fathom 40 Fast Trawler

BY SVEN DONALDSEN

**F**athom Yachts — a new boat-building enterprise based in Washington State, just north of Seattle — developed this state-of-the-art “fast expedition yacht” in record time. Barely 12 months passed from the day naval architect Greg Marshall (Victoria, B.C.) received the commission until the prototype hit the water. And during that inaugural year, the fledgling company not only tooled up from scratch to produce a complex, mid-sized cruiser, but also established a thoroughly modern plant that is presently turning out three to four boats per month.

The Fathom 40 has hit a sweet spot in the burgeoning market for manageable, offshore-capable cruisers. As of January, five stocking dealers service the West Coast, Michigan and Florida;

once the Fathom has made its East Coast debut at the Miami show, several more are expected to sign on. Factory production slots are filled through autumn, and the company’s three principals are already contemplating a second manufacturing facility.

Greg Marshall’s design office has earned a global reputation for handsome, easily driven hulls and highly optimized, 3-D space utilization. In broad strokes, the Fathom 40 is styled along workboat lines, but the look is softer and more streamlined. Virtually every exterior surface features compound curvature, both for aesthetic reasons and to improve structural stiffness.

Moreover, cored construction is employed throughout (except in the hull bottom, which consists of a thick, solid-glass layup). The Corecell sandwich pan-



SVEN DONALDSEN

**The chunky, trawlerlike appearance of the Fathom 40 (above) is deceptive. The boat's displacement is modest due to high-tech, cored construction, and it can cruise efficiently at 12-16 knots. The galley (right) and pilothouse (left) are both well planned and nicely finished.**

els offer superior thermal and acoustic insulation, extra structural stiffness and significant weight savings when compared to non-cored alternatives. In addition, Fathom 40s are built with a vacuum-assisted, resin infusion process that ensures uniform, void-free laminates with a very high glass-to-resin ratio.

Resin infusion is also an environmental boon because a dry laminate stack is preloaded into the mold and hermetically sealed inside a vacuum film before the first drop of catalyzed resin is pumped in. After infusion, the mold remains closed until the part has completely cured, so there’s hardly a whiff of styrene at Fathom’s plant. It’s a welcome change from the days when a major fiberglass shop could often be sniffed out from blocks away.

The Fathom 40 stands tall — there’s roughly eight feet of freeboard forward





## SPECIFICATIONS

**LOA:** 40' 4"

**Beam:** 14' 6"

**Draft:** 3' 6"

**Bridge clearance:** 15' 9"

**Displacement:** 24,000 lbs.

**Fuel capacity:** 400 gals.

**Power:** Single Cummins QSB5.9 diesel

**Information:** 360-336-5414

[www.fathomyachts.com](http://www.fathomyachts.com)

and nearly five feet aft — and its big, raised pilothouse is topped by a full-command flying bridge. The vessel's maximum beam is 14' 6" (not coincidentally the practical limit for highway transport), and the hull carries most of this beam both forward and aft. In sum, the Fathom 40 is pretty much the largest cruiser that can actually fit in a 40' slip. That finished production boats have been weighing in a bit below even Fathom's ambitious 24,000-pound displacement target is a credit to the company's workmanship and sophisticated construction methods.

Computer-aided design and manufacturing techniques played a vital role



SVEN DONALDSEN

in taking the Fathom 40 from rough sketches to finished product in scarcely more than a year. Nearby Janiki Industries — a pioneer in the use of robotic, five-axis routers to produce tooling (plugs and molds) — worked closely with Greg Marshall's office and Fathom's in-house computer-design expert, Scott Ellis. The company machined a complete set of molds capable of producing dozens of fiberglass parts, large and small. To the relief of all concerned, everything fit perfectly.

Fathom's Ellis, who was originally trained as an automotive design engineer, is largely responsible for developing

the onboard systems for the Fathom 40 — again, using advanced CAD techniques. The standard, single 425-hp Cummins common-rail diesel sits low in the bilges toward the longitudinal center of the full-width machinery room that lies beneath the saloon.

The propeller — well protected by a substantial keel — nestles into a shallow tunnel, both to reduce the boat's draft and to keep the driveshaft short (it's just seven feet long), thus minimizing noise/vibration. Twin 200-gallon welded-aluminum fuel tanks are mounted outboard, close to the chines. So although maximum headroom in the machinery compartment is less than five feet, there's ample space to access the engine from all sides.

The plumbing and electrical installations in this boat are a thing of beauty: short, neat hose and cable runs with readily accessible pumps, filters, etc. The entire engine compartment is heavily insulated with acoustic foam, and the 6-kW Northern Lights genset (located in the starboard aft corner of the machinery space) has its own supplemental sound enclosure.

## Creature Comforts

Accommodations are another highlight of the new Fathom 40. In brief, there's a spacious pilothouse featuring panoramic views, an L-shaped lounge seat, a sizable teak table and, to starboard, an interior command station. A curved staircase provides access to the saloon, which offers a large dinette that converts to an extra double berth, twin lounge chairs and huge, high-impact side windows by Diamond SeaGlaze.

A spacious single head, master stateroom and secondary cabin (with room for an optional office or a washer/dryer) are situated forward and beneath the pilothouse. Like the rest of the interior, these areas are finished in teak and Ultraleather upholstery, with sumptuous Ultrasuede headliners.

The step-down galley, open to the front of the saloon, is tricked out with granite countertops and a curved, composite backplash that looks like brushed stainless steel. A Nova Kool AC-DC fridge/freezer is standard. Fathom 40s destined for cool climates get a Force Ten propane stove and hydronic diesel heating; while the "tropical package," available for about \$10,000 more, substitutes an electric stove, reverse-cycle heating/air-conditioning, and a larger nine-kW genset to meet the system's added power demands.

The Fathom 40's elevated foredeck, accessed via the pilothouse through a portside sliding door, feels extremely secure, thanks to high bulwarks topped by sturdy stainless railings. Passage aft, alongside the saloon, seems a bit more precarious, mainly because the walkways are narrow in order to accommodate the generous width of the main living area.

Even when docking, however, it will rarely be necessary to traverse these side decks because the aft fenders can easily be deployed from the cockpit. To facilitate stern boarding and water sports, virtually the entire transom hinges down to become a three-foot-long extension of the cockpit sole. Although testing has shown that there's no risk of back-flooding when running with the transom down, most owners will probably elect to raise the transom gate for extra personal security.

Maneuvering the Fathom 40 at low



SVEN DONALDSEN

**Ease of access, especially for older owners, was a priority in developing the Fathom. Hence the power-assisted drop-down transom and the molded stairs leading to the flybridge.**

speeds is virtually foolproof, thanks to standard electric thrusters at both the bow and stern. And, with the Cummins ticking over at 1,200 rpm, the 12-ton cruiser slipped along at 6.7 knots with the Smartcraft fuel-flow meter showing just 1.7 gph. Achieving 3.94 mpg at this modest speed, this boat and its 400-gallon fuel load should have a very healthy 1,400-nautical-mile range (with a 10 percent reserve) for those intent on long passages.

Even more impressive (and more important to the average power cruiser) is the Fathom's relative efficiency when cruising at 10-12 knots (2,000-2,400 rpm). Fuel consumption will range from 1.4 to 1.1 mpg in this zone — substantially better than a typical "fast trawler" of similar size.

The prototype Fathom 40 topped out at about 19.2 knots (3,050 rpm; 22

gph), but according to Tracy Prescott, a subsequent production boat with an optimized prop achieves 20.5 knots at virtually the same displacement.

Easily as noteworthy as its efficiency is the exceptional quietness of the Fathom, even when the diesel is working hard. I measured just 71 dBA in the saloon at 2,800 rpm (16.1 knots) and just 73 dBA at wide-open throttle. Such low sound levels are rare except aboard large luxury yachts.

Currently priced at \$529,000 with the "Polar" package but no navigational electronics, the Fathom 40 is by no means the price leader in its market sector. On the other hand, when design excellence, build/equipment standards, seaworthiness and fuel efficiency are factored in, this new, all-American product is unquestionably a world-class effort. 